

DRAFT ENVIRONMENTAL IMPACT STATEMENT

THE VILLAGES OF ‘ĀINA LE‘A

Waikoloa, South Kohala District, Island of Hawai‘i
TMK: (3) 6-8-001: 25, 36, 37 (por.), 38, 39 and 40 (por.)
and (3) 6-8-002:19 (por.)



Accepting Authority: County of Hawai‘i Planning Department

Applicant: DW ‘Āina Le‘a Development, LLC
(Prior Applicant: Bridge ‘Āina Le‘a, LLC)

Prepared By:

J M Leonard Planning, LLC

May 2010

THE VILLAGES OF 'ĀINA LE'A

DRAFT ENVIRONMENTAL IMPACT STATEMENT

This DEIS has been submitted pursuant to Chapter 343, Hawai'i Revised Statutes; the Department of Health's Title 11, Chapter 200, Hawai'i Administrative Rules; the Environmental Impact Statement Rules of the Office of Environmental Quality Control; and the County of Hawai'i environmental reporting requirements as set forth in Sections 25-1-5, 25-2-42 and 25-6-44, Hawai'i County Code, and County Planning Department Rule 14.

Accepting Authority: County of Hawai'i Planning Department

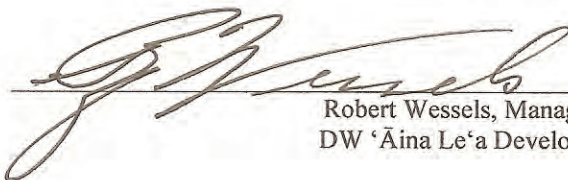
Applicant: DW 'Āina Le'a Development, LLC
(Prior Applicant: Bridge 'Āina Le'a, LLC)

Prepared By:

J M Leonard Planning, LLC

May 2010

This draft environmental impact statement and all ancillary documents were prepared under my direction or supervision and the information submitted, to the best of my knowledge, fully addresses document content requirements as set forth in Sections 11-200-17 and 11-200-18, Hawai'i Administrative Rules, as appropriate.



Robert Wessels, Managing Partner
DW 'Āina Le'a Development, LLC

[This page intentionally left blank]

TABLE OF CONTENTS

EXECUTIVE SUMMARY	vii
ES-1 APPLICANT ACTION AND PROJECT	vii
ES-2 PROJECT PURPOSE, NEED, AND OBJECTIVES	viii
ES-3 ALTERNATIVES TO THE PROPOSED ACTION	ix
ES-4 POTENTIAL ENVIRONMENTAL IMPACT	ix
ES-5 CONSISTENCY WITH LAND USE PLANS, POLICIES, AND CONTROLS	xiii
ES-6 REQUIRED PERMITS AND APPROVALS EXECUTIVE SUMMARY	xiii
ES-7 CUMULATIVE AND SECONDARY IMPACTS	xiii
ES-8 SUMMARY OF UNRESOLVED ISSUES	xiv
1 INTRODUCTION AND SUMMARY.....	1-1
1.1 LEGAL REQUIREMENT: COMPLIANCE WITH STATE OF HAWAI‘I AND COUNTY OF HAWAI‘I ENVIRONMENTAL LAWS	1-1
1.2 CHANGE IN SCOPE OR SIZE OF PROJECT	1-1
1.3 PROJECT DEFINITION.....	1-4
1.4 APPLICANT	1-4
1.5 LANDOWNER	1-5
1.6 PURPOSE AND NEED FOR THIS EIS.....	1-7
1.7 EIS ACCEPTING AUTHORITY	1-7
1.8 EIS PREPARER.....	1-8
1.9 STUDIES CONTRIBUTING TO THIS EIS.....	1-8
2 DESCRIPTION OF THE PROJECT	2-1
2.1 BACKGROUND INFORMATION.....	2-1
2.1.1 Location and Physical Setting	2-1
2.1.2 Previous Master Plans for 3,000 Acres Known as The Villages of ‘Āina Le‘a.....	2-2
2.1.3 Land-Use Approvals and Government Actions	2-3
2.2 PURPOSE AND NEED FOR REQUESTED PROJECT DISTRICT ZONING	2-8
2.3 PROJECT DESCRIPTION.....	2-8
2.3.1 Statement of The Villages and Project District Zoning Objectives	2-8
2.3.2 Project Description and Relationship to Proposed Project District Zoning	2-8
2.3.3 Affordable Housing Units	2-9
2.3.4 Residential Golf Community.....	2-10
2.3.5 Golf Course, Clubhouse, Golf Academy, Golf Lodge and Related Facilities	2-11
2.3.6 Commercial Village and Mixed-Use Center.....	2-11
2.3.7 Project Open Space, Parks and Historic/Cultural Sites	2-16
2.3.8 Project Access, Circulation and Roads	2-16
2.3.9 2.3.9 Project Water.....	2-17

THE VILLAGES OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

2.3.9.1 Domestic Water	2-17
2.3.9.2 Irrigation Water	2-17
2.3.9.3 Wastewater Treatment Plant (WWTP)	2-18
2.4 PROJECT AND PROJECT DISTRICT DEVELOPMENT STANDARDS	2-18
2.4.1 Project District Development Standards and Project Guidelines	2-18
2.5 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS	2-20
2.5.1 Development Phasing and Timetable	2-20
2.5.2 Preliminary Costs	2-21
3 DESCRIPTION OF AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES	3-1
3.1 CLIMATE	3-1
3.2 GEOLOGY AND TOPOGRAPHY	3-1
3.3 SOILS	3-2
3.3.1 U.S. Department of Agriculture (USDA)-Soil Conservation Service (SCS)	3-2
3.3.2 University of Hawai‘i Land Study Bureau (LSB) Detailed Land Classification	3-4
3.3.3 State Agricultural Lands of Importance to the State of Hawai‘i (ALISH)	3-6
3.3.4 Current Agricultural Activities on Property	3-8
3.4 NATURAL HAZARDS	3-9
3.4.1 Flooding	3-9
3.4.2 Tsunami	3-9
3.4.3 Hurricanes	3-9
3.4.4 Earthquakes	3-9
3.4.5 Volcanic Activity	3-11
3.4.6 Wildland Fires	3-13
3.5 HYDROLOGY AND WATER RESOURCES	3-14
3.6 BOTANICAL RESOURCES	3-20
3.7 AVIFAUNAL AND MAMMALS	3-22
4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES	4-1
4.1 HISTORICAL PERSPECTIVE OF REGION AND PROPERTY	4-1
4.2 ADJACENT USES AND LANDOWNERS	4-1
4.3 ARCHAEOLOGICAL AND HISTORICAL RESOURCES	4-3
4.4 CULTURAL RESOURCES	4-5
4.5 ORDNANCE AND EXPLOSIVES	4-7
4.6 ROADS AND TRAFFIC	4-8
4.7 NOISE	4-11
4.8 AIR QUALITY	4-12
4.9 VISUAL AND SCENIC RESOURCES	4-14
4.10 SOCIO-ECONOMIC ENVIRONMENT	4-16
4.10.1 Population and Socio-Economic Characteristics	4-17
4.10.2 Housing	4-18

THE VILLAGES OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

4.10.3	Social Context	4-18
4.10.4	Employment	4-19
4.10.5	Economic Factors and Government Revenues	4-20
4.11	INFRASTRUCTURE AND UTILITIES	4-21
4.11.1	Water System	4-21
4.11.2	Wastewater	4-23
4.11.3	Solid Waste.....	4-25
4.11.4	Drainage.....	4-26
4.11.5	Electrical and Communication Systems	4-28
4.12	Public Facilities and Services.....	4-30
4.12.1	Recreation.....	4-30
4.12.2	Fire and Emergency Protective Services	4-31
4.12.3	Police Services	4-31
4.12.4	Health Care.....	4-32
4.12.5	Schools.....	4-32
5	ALTERNATIVES DISCUSSION	5-1
5.1	NO ACTION/UNDEVELOPED	5-1
5.2	DEVELOP ACCORDING TO ORIGINAL MASTER PLAN	5-1
5.3	DEVELOP ACCORDING TO EXISTING ZONING.....	5-1
5.4	DEVELOP AT LOWER DENSITIES	5-2
5.5	POSTPONE FOR FUTURE STUDY	5-2
5.6	PREFERRED ALTERNATIVE	5-2
6	RELATIONSHIP OF PROJECT TO LAND USE PLANS, POLICIES AND REGULATIONS..	6-1
6.1	CHAPTER 343, HRS, ENVIRONMENTAL IMPACT STATEMENTS.....	6-1
6.2	CHAPTER 226, HRS, HAWAII STATE PLAN.....	6-1
6.3	CHAPTER 205A, HRS, COASTAL ZONE MANAGEMENT (CZM) ACT	6-4
6.4	CHAPTER 205, HRS, LAND USE	6-6
6.5	COUNTY GENERAL PLAN	6-6
6.5.1	Land Use Pattern Allocation Guide (LUPAG)	6-6
6.5.2	General Plan Goals and Policies	6-6
6.6	SOUTH KOHALA COMMUNITY DEVELOPMENT PLAN (CDP)	6-14
6.6.1	Waikoloa Village Area Plan	6-16
6.7	County Zoning Code	6-18
6.7.1	Rationale for Requested Project District Zoning	6-18
6.7.2	Purpose of Project District Zoning.....	6-18
6.7.3	Project District Zoning Criteria.....	6-19
6.8	Community Facilities District.....	6-20
6.9	Approvals and Permits	6-21
7	OTHER CONTEXTUAL ISSUES	7-1
7.1	RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY	7-1

THE VILLAGES OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

7.2	CUMULATIVE AND SECONDARY IMPACTS.....	7-2
7.3	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES	7-3
7.4	Probable Adverse Environmental Effects That Cannot Be Avoided	7-4
7.5	Unresolved Issues.....	7-5
7.5.1	Schools.....	7-5
7.5.2	Police, Fire and EMS Services	7-6
7.5.3	Medical Services	7-6
7.5.4	Water Resource Development.....	7-6
7.5.5	Mauka-Makai Connector Road	7-7
8	CONSULTATION.....	8-1
9	LIST OF PREPARERS	9-1
10	COMMENTS AND RESPONSES ON THE EISPN.....	10-1
11	REFERENCES	10-6

LIST OF TABLES

Table ES-1	Potential Environmental Impacts, Compliance and Mitigation Measures.....	x
Table 1	Parcels, Acreage, SLU, and Land Use	2-1
Table 2	Summary of Existing Land-Use Designations of the Property.....	2-2
Table 3	Existing Land-Use Approvals and Other Government Actions	2-7
Table 4a	Proposed Uses in Requested Project District Zoned Area.....	2-9
Table 4b	Proposed Uses in SLU Agricultural District.....	2-9
Table 5	Permitted Uses in the RS, RM and CV Districts	2-12
Table 6	Project District Zoning Development Standards Summary Table.....	2-19
Table 7	Summary of Groundwater Quality at Various Wells	3-15
Table 8	Estimated Potable Water Use Demand.....	3-16
Table 9	Estimated Average Non-potable Water Use Demand	3-16
Table 10	Archaeological and Historical Work of The Villages Since 1987.....	4-3
Table 11	Archaeological Sites, Function, Significance and Recommended Treatment	4-4
Table 12	Construction Employment	4-20
Table 13	Projected Wastewater Flows by Land Use	4-24
Table 14	Planned Developments in the Waikoloa Area	7-3

THE VILLAGES OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

LIST OF FIGURES

Figure 1	Island of Hawai‘i Regional and Location Map.....	1-2
Figure 2	Tax Map.....	1-3
Figure 3	Conceptual Master Plan.....	1-5
Figure 4	Project Utility Connections	1-6
Figure 5	Hawai‘i County General Plan.....	2-3
Figure 6	State Land Use Classification.....	2-4
Figure 7	South Kohala Community Development Plan.....	2-5
Figure 8	Hawai‘i County Zoning.....	2-6
Figure 9	Soil Conservation Service	3-3
Figure 10	Land Study Bureau.....	3-5
Figure 11	Agricultural Lands of Importance to the State of Hawai‘i.....	3-7
Figure 12	Flood Insurance Rate Map.....	3-10
Figure 13	USGS Volcanic Hazards Map	3-12
Figure 14	Adjacent Landowners.....	4-2
Figure 15	Visual Simulation.....	4-15

LIST OF APPENDICES – VOLUME II

Appendix A	Amended and Restated Purchase and Sale Agreement, excluding exhibits
Appendix B	Rezoning Ordinance No. 96-153
Appendix C	Agreement: County of Hawai‘i Water Board and Bridge ‘Āina Le‘a LLC
Appendix D	Preliminary Engineering Report
Appendix D1	Temporary, Phase 1 Wastewater Treatment Plant Design Report
Appendix E	Master Drainage Report
Appendix F	Assessment of the Potential Impact on Water Resources
Appendix G	Botanical Survey Report
Appendix G1	Botanical Preservation Plan/Agency Correspondence
Appendix H	Survey of the Avifauna and Feral Mammals
Appendix H1	Flora and Fauna Survey–Utility Corridors
Appendix I	Archaeological Inventory Survey Report/SHPD Correspondence
Appendix I1	Archaeological Assessment, Utility Corridor
Appendix J	Archaeological Data Recovery Report/SHPD Correspondence
Appendix K	Archaeological Burial Treatment Plan/SHPD Correspondence
Appendix L	Cultural Impact Assessment
Appendix L1	Cultural Impact Assessment First Addendum–Cattle Trail
Appendix L2	Cultural Impact Assessment Second Addendum–Utility Corridors
Appendix M	Traffic Impact Analysis Report
Appendix N	Noise Quality Impact Report
Appendix O	Air Quality Impact Report
Appendix P	Socio-Economic Assessment

THE VILLAGES OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

LIST OF ACRONYMS, ABBREVIATIONS AND TERMS

ALISH	Agricultural Lands of Importance to the State of Hawai‘i
CFD	Community Facilities District
CZM	Hawai‘i Coastal Zone Management
DEIS	Draft Environmental Impact Statement
DLNR	Department of Land and Natural Resources
DNL/Ldn	Day-Night average sound Level
DOH	State Department of Health
DPW	County of Hawai‘i Department of Public Works
DWS	County of Hawai‘i Department of Water Supply
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
FHA/HUD	Federal Highway Administration/Housing & Urban Development
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HAR	Hawai‘i Administrative Rules
HCC	Hawai‘i County Code
HELCO	Hawai‘i Electric Light Company
HRS	Hawai‘i Revised Statutes
ILWU	International Longshore and Warehouse Union
mgd	millions of gallons per day
MLR or ML	Mauna Lani Resort or Mauna Lani
msl	mean sea level
NFPA	National Fire Protection Association
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Services
OEQC	Office of Environmental Quality Control
PUC	Public Utility Commission
SHPD	State Historic Preservation Division
SLU	State Land Use
SLUC	State Land Use Commission
TIAR	Traffic Impact Analysis Report
TMK	Tax Map Key
UBC	Uniform Building Code
UFC	Uniform Fire Code
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
UXO	Unexploded Ordnance
WWTP	Wastewater Treatment Plant
makai	Seaward, or directionally towards the ocean
mauka	Inland, or directionally towards the mountains
ahupua‘a	Land division usually extending from the uplands to the sea

EXECUTIVE SUMMARY

This Draft Environmental Impact Statement (DEIS) has been prepared to provide the Hawai‘i County Planning Department and County Council and the public and interested parties with information regarding the potential impacts of the proposed DW ‘Āina Le‘a residential golf community in Waikoloa, South Kohala, Island of Hawai‘i (TMK: (3) 6-8-001:25, 36, 38, 39, and portions of 37 and 40 and of 6-8-002:19). The DEIS presents the existing environmental conditions, analyzes the potential effects of the Project, and identifies proposed measures to mitigate potential adverse effects.

ES-1 APPLICANT ACTION AND PROJECT

The action proposed by the new applicant, DW ‘Āina Le‘a Development, LLC, is the review of a Project District Zoning Application by the Hawai‘i County Council that would allow development of a residential golf community on 1,060 acres of land, including intersection improvements to the State’s Queen Ka‘ahumanu Highway, and the construction of a park and project-related infrastructure, including the construction of power- and water-related utilities and a wastewater treatment plant, on the adjacent lands. The Highway improvements and wastewater treatment plant have “triggered” State environmental law compliance.

It should be noted that land-use approvals for a residential golf community on 3,000 acres of land were secured in the late 1980s to the mid-1990s by the previous landowners, Bridge ‘Āina Le‘a, LLC. In February 2009, DW ‘Āina Le‘a Development, LLC and Relco Corp. purchased approximately 1,092 acres of the 3,000 acres. Project District zoning, which would affect about 1,060 acres of land in the State Land Use Urban area, is being requested to allow for greater planning flexibility in response to site considerations and changing market conditions.

The Project consists of developing approximately 790 single-family home sites, 1,047 multiple-family units, and up to 500 affordable/workforce housing units. Also included are a commercial village, mixed-use areas, one golf course, a golf lodge of up to 40 units, golf academy, golf clubhouse, parks and a preserve, recreational amenities, and related infrastructure, including a wastewater treatment plant.

Initially, 385 affordable/workforce housing units are being constructed onsite to comply with a condition imposed by the State Land Use Commission. When completed, those units will be sold under County’s affordable housing guidelines. Domestic water for the affordable housing project has been purchased from the private water purveyor, West Hawai‘i Water Company. Irrigation water for landscaping has been contracted by a separate agreement with the West Hawai‘i Sewer Company in exchange for an upgrade to the private wastewater treatment plant that would treat the R-2 quality water to an R-1 level.

Two parks and a botanical preserve were required to be set-aside as a condition of the 1993 zoning ordinance. The existing zoning approval contained a condition requiring that a 10-acre active park be developed in the first phase of development. However, the Applicant has offered to increase the size of the active park to 16 acres. The park will be maintained in private

THE VILLAGES OF 'ĀINA LE'A

Draft Environmental Impact Statement

ownership unless and until the County desires to take it over. A 16-acre nature park will be set aside in a later phase of development. A 5-acre preserve next to the nature park would protect *Abutilon menziesii*, a federally listed endangered species known as ko'olua'ula or red 'ilima. Probably due to a severe three-year drought in the late 1990s, the red 'ilima could not be found during field surveys conducted both in 2000 and in 2010 and is believed to have succumbed to the drought condition. A follow-up survey following a period of extended rain was recommended to confirm its presence and the need for the 5-acre-preserve area. This survey will be conducted prior to land alterations in the vicinity of the preserve. Appropriate action will be taken as recommended by the U.S. Fish and Wildlife Service and the State Department of Land and Natural Resources after review of the follow-up survey.

Sites for a public school and a community center on adjacent lands are being discussed with the Department of Education and the Department of Parks and Recreation, respectively, but the location and scope of the facilities has yet to be determined.

The County's domestic water system will be upgraded with the phased addition of up to four wells, transmission lines, and storage reservoirs. The upgrade will provide additional supply and back-up to the Lalamilo component of the County's South Kohala water system that does not currently exist.

A private wastewater treatment plant to service the remainder of the project will be constructed on adjacent property (portion of Parcel 40) owned by and developed under agreement with Bridge 'Āina Le'a. The facility proposes to use a membrane bioreactor process that will filter out suspended solids, including harmful microorganisms. This plant will be designed to produce R-1 quality water that can then be used for irrigation purposes.

Access to the Project from the Queen Ka'ahumanu Highway will be phased via two access points. Phasing would occur with development. The initial access will be at the Project's intersection with Mauna Lani Resort, which will be fully channelized and signaled. The second access road to the north is proposed to provide a mauka-makai connection with the Waikoloa Village community at Hulu Street. The specific alignment of the second road has yet to be determined, although negotiations with the County and community representatives have been ongoing for several years. Interior project roads would be constructed to meet with the requirements of the County Department of Public Works.

THE VILLAGES OF ‘ĀINA LE‘A

Draft Environmental Impact Statement

ES-2 PROJECT PURPOSE, NEED, AND OBJECTIVES

The Project integrates a proposed inland residential community with the surrounding communities of Waikoloa Village, Puakō and the coastal resorts. The primary objectives of the Project and Project District zoning are to:

- Implement the Project as an integral and contributing part of the Puakō, Mauna Lani and Waikoloa communities.
- Provide recreational amenities, self-contained commercial facilities, and adequate infrastructure to service the new community.
- Design and implement the Project in a manner that is sensitive to the environmental and scenic resources of the area.
- Plan to provide connectivity of roads and other crucial infrastructure systems.
- Be responsive to the changing demands and needs of the global and local markets.

ES-3 ALTERNATIVES TO THE PROPOSED ACTION

Alternatives to the desired action that have been considered are:

- 1) No action/undeveloped
- 2) Develop according to original master plan
- 3) Develop to existing zoning
- 4) Develop at lower densities
- 5) Postpone action for future study
- 6) Preferred alternative

ES-4 POTENTIAL ENVIRONMENTAL IMPACTS

Hawai‘i Administrative Rules Title 11, Chapter 200, EIS Rules, direct the focus of the environmental analysis such that special emphasis is placed on environmental resources that are rare or unique to the region and the project area, including natural or human-made resources of historic, archaeological, cultural or aesthetic significance. The potential impacts of the Project are evaluated within the framework of compliance with applicable rules, regulations, and requirements for the project type and location.

During construction of the Project there will be temporary adverse impacts due to noise, traffic, and dust. There is also a potential for construction-related accidents, including fire and the accidental release of hazardous materials or solid waste such as construction materials. Through compliance with all applicable rules, regulations, and requirements for the Project, these potential temporary impacts should be minimal.

Potential longer-term Project impacts are summarized in Table ES-1.

THE VILLAGES OF ‘ĀINA LE‘A

Draft Environmental Impact Statement

Table ES-1
Potential Environmental Impacts, Compliance and Mitigation Measures

SUBJECT	POTENTIAL ENVIRONMENTAL IMPACT	COMPLIANCE AND MITIGATION MEASURES
SOILS	Project-related construction could result in soil loss through soil erosion and fugitive dust generation. There would be no negative impacts to agriculture as the property has little agricultural value based on soil and site characteristic and no existing agricultural use.	Compliance with industry best management practices and State and County regulations, including adherence to Erosion Control Plans in compliance with Chapter 10, Erosion and Sedimentation, of the County Code; and HAR Chapter 55, Title 11 of the State Department of Health (Water Pollution Control).
NATURAL HAZARDS		
Hydrology and Water Resources	Water resources in the region, with implementation of Project-related improvements, are more than sufficient to meet the both the potable and irrigation needs of the Project. Brackish water resources in the area of the Project corridor could be insufficient to meet the needs of future development of other adjacent lands without a coordinated resource conservation plan.	Water conservation to be encouraged through the use of drought-tolerant plants and trees, mulching landscaped areas, and applying project-wide conservation strategies. Reclaimed wastewater will also be used to supplement irrigation water requirements. The Applicant will work with regional and government stakeholders to develop long-term resource conservation plan to address short- and long-term efforts towards resource sustainability.
Flooding	While Project development will remain outside the areas of existing drainage ways that transect the property, drainage crossings will be required for project roadways and utilities.	Compliance with federal, state, and county regulations in the permitting, design, and construction of drainage way crossings. Improvements and drainage related structures to conform to standards set forth in Chapter 27 relating to Flood Plain Management.
Tsunami	No impacts are anticipated.	
Hurricane	Although infrequent, hurricanes can impact the area.	Compliance with County Building Department and Uniform Building Code (UBC) requirements.
Earthquakes	The entire Island of Hawai‘i is designated in Seismic Probability Rating Zone 4, the highest rating. This includes areas at risk of major earthquake damage, especially structures that are poorly designed or built.	Compliance with County Building Department and Uniform Building Code (UBC) requirements.
Volcanic Activity	Project area is designated in Lava Hazard Zone 3 (on a scale from 1 to 9) indicating an area of relatively low potential for lava hazard.	Preparation and compliance with a County-required Emergency Preparedness and Response Plan in coordination with the County Civil Defense Agency.
Wildfires	Wildfires pose a frequent threat to the South Kohala area.	Golf lakes and natural buffers mauka and makai of the development area can supplement community fire protection measures. Access roads, water supply, and buildings to be designed and constructed in compliance with the County regulations and Uniform Fire Code requirements. Creation of the planned mauka-makai connector road will enhance the emergency access capability of the area. Applicant will also work with the Hawaii Wildfire Management Organization to coordinate wildfire protection strategies.
Botanical Resources	A federally listed endangered species, <i>Abutilon menziesii</i> —known as ko‘olua‘ula or red ‘ilima, was found on the Property, although follow-up surveys in 2000 and 2010, after periods of severe drought, did not find this plant.	A 5-acre plot, including a buffer area, has been identified for preservation. The plot will be resurveyed prior to land alterations in the vicinity and following a period of extended rain, when rainfall will improve the growing possibilities.

THE VILLAGES OF 'ĀINA LE'A

Draft Environmental Impact Statement

SUBJECT	POTENTIAL ENVIRONMENTAL IMPACT	COMPLIANCE AND MITIGATION MEASURES
Avifaunal & Mammals	The Property is not a habitat for any endangered species of bird or mammals. No endangered species were identified on the Project site. Endangered seabirds, though not observed, could fly over the Property.	Adherence to existing County lighting requirements to minimize the potential for disorienting endangered seabirds that might fly over the development area.
Archaeological Resources	Protection of the two archaeological sites identified on lands mauka and makai of the Project development area require adherence to existing and approved protection and mitigation plans. During development there is the potential for inadvertent archaeological or historical discoveries to be uncovered during the course of construction.	Adherence to the provisions of all protection and mitigation plans approved by the State Historic Preservation Division. Should any inadvertent archaeological or historical discoveries be encountered in the course of development, work in the affected area would cease and the State Historic Preservation Division would be immediately notified for review and assessment.
Cultural Resources	Minimal cultural impacts are anticipated. Portions of a cattle-drive trail have been identified on a small section of Property.	Portions of the cattle drive trail will be preserved and integrated within the Project where possible.
Ordnance and Explosives	Property is in the Former Waikoloa Maneuver Area where unexploded ordnance has been found.	The U.S. Army Corps of Engineers is implementing an unexploded ordnance and munitions removal and remediation program for the Property. Survey of the full property will be phased to precede development. Sales documents will disclose the potential for the presence of UXO in the area.
Roads and Traffic	Potential impacts to existing and planned intersection levels of service without sufficient traffic mitigation measures in place.	A broad range of traffic-related improvements, as recommended by the Traffic Impact Assessment Report, are planned as part of the development, including a mauka-makai connector road to Waikoloa Village.
Noise Quality	Potential impacts to noise sensitive areas within the development from traffic along major project roads.	Appropriate setbacks and other mitigation measures will be incorporated in the planning and design of residential structures situated along major Project roadways.
Air Quality	No significant long-term impacts anticipated	
Visual and Scenic Resources	The visual character of the site when viewed from surrounding areas will be changed from an open, undeveloped area to a more urban and landscaped environment.	An average 1,200-foot wide, open space buffer established along the property boundary with Queen Ka'ahumanu Highway will preserve the mauka view corridor. Waikoloa Village is approximately 1 mile from the Project. The Project setbacks and open space elements, and a 35-foot building height limit combine to minimize the potential impacts to the view planes from the surrounding areas.
Socio-economic Environment	At build-out, the Project would have a marked impact on the socio-economic character of the area. While providing employment and adding to the public infrastructure and recreational, commercial, and public service opportunities of the region, area residences have expressed particular concern regarding housing, traffic impacts and the provision of public facilities and services in proportion to the growing development of the area.	In addressing the potential socio-economic impacts of the Project, the Applicant has committed to providing immediate affordable housing, traffic, park improvements, a school site, and, as required by zoning approvals, contributions to the provision of County roadway, recreational, solid waste, police, and fire facilities and services. The applicant has also committed to providing areas for additional police, fire, and EMS facilities within the Project, should these be needed.

THE VILLAGES OF ‘ĀINA LE‘Ā

Draft Environmental Impact Statement

SUBJECT	POTENTIAL ENVIRONMENTAL IMPACT	COMPLIANCE AND MITIGATION MEASURES
INFRASTRUCTURE AND UTILITIES		
Water System	Project water system will be integrated with and enhance the capacity of the DWS South Kohala System. A dual potable/irrigation water system is planned. Measures are needed to protect against the potential of cross contamination between the potable and irrigation water systems.	Compliance with State and County regulations in the design and construction of all water system improvements. Compliance with HAR Section 11-21 related to Cross Contamination and Backflow Control.
Wastewater	A Wastewater Treatment Plant will be constructed to meet the full needs of the Project.	Compliance with State and County regulations in the design and construction of WWTP and collection system.
Solid Waste	At build-out the, Project could potentially generate up to 10 tons of solid waste impacting the County facilities in the area.	Applicant will prepare and implement a County approved Solid Waste Management Plan aimed at implementing strategies to reduce the amount of solid waste directed to the local landfill. Contributions to support needed improvements to County solid waste facilities will also be made through meeting the “fair-share” contribution requirements imposed as part of zoning approvals.
Drainage	A Drainage Master Plan projects that, at build-out, approximately 20,000 cubic feet of storm water runoff will be generated within the project during each 50-year storm event.	All development-generated runoff must be retained onsite through the use of drywells, bio-swales and detention/retention basins. The Drainage Master Plan recommends a strategy and drainage system to handle the runoff onsite.
Electrical & Communications	The Project will initially draw electricity from the South Kohala substation. The increase in electrical demands will require the construction of a substation onsite to handle the Project demand.	The Applicant will coordinate the construction of a new onsite substation with HELCO.
PUBLIC FACILITIES AND SERVICES		
Recreation	The new residential population generated by the Project will significantly impact parks in the area.	Applicant is required to develop a 10-acre active park as part of the Phase 1 development, but has offered to increase the park’s size to 16 acres. The park will be privately held and maintained until the County desires ownership. A 16-acre passive park is also to be set aside, and will be privately maintained. Providing land for a community center is also being discussed with the Department of Parks and Recreation.
Police, Fire and Emergency Protective Services	The Project will contribute to the growing demand for police, fire, and emergency medical services.	The Project will contribute to expanding public service requirements in the area though the fair-share contribution requirements that are imposed at the time of zoning approvals. Applicant would also provide areas within the commercial portion of the Project for use as sites for additional police, fire and EMS facilities, if needed.
Health Care	Access to medical and urgent care facilities has been identified as a concern of area residents. Existing facilities are located a considerable distance away in Waimea and Kailua-Kona.	Applicant has proposed that a privately operated urgent care medical service facility could be located within the Commercial Center portion of the Project and has had discussions with potential urgent care providers in assessing their interest, capabilities, and siting needs.
Schools	The new residential population, at build-out, is projected to produce approximately 1,000 school-aged children that would feed into the Waikoloa Elementary/Intermediate School and Kealahou High School.	The Applicant is required by the LUC to set aside a maximum of 16 acres of land towards a public school site as may be determined by the DOE. However, the Applicant has set aside 32 acres as a potential school site. The DOE has made no commitment as to the timing or type of school at the site.

THE VILLAGES OF 'ĀINA LE'A

Draft Environmental Impact Statement

ES-5 CONSISTENCY WITH LAND USE PLANS, POLICIES, AND CONTROLS

The proposed Project is consistent with the goals, objectives and policies of the Hawai'i State Plan and the Coastal Zone Management Act.

The Project is consistent with the existing State Land Use Urban and Agricultural classifications.

The Project is consistent with the General Plan, which identifies the area for Urban Expansion and the area of the highway buffer as Conservation. The Project supports numerous goals, policies, and objectives of the General Plan relating to the Economic Element, Environmental Quality, Flooding and Other Natural Hazards, Historic Sites, Natural Beauty, Natural Resources and Shoreline, Housing, Education, Protective Services, Water, Sewer, Recreation, Transportation, and Land Use.

The proposed Project is consistent with the South Kohala Community Development Plan, which designates the Project site and surrounding area for planned development of 3,000 or more units, five golf courses, golf academy, commercial villages and a 40-unit lodge.

The existing zoning within the Project Site is a combination of Multiple-Family Residential (RM-4, RM-7, RM-14.5), Village Commercial (CV-10), Residential-Agricultural (RA-1a), and Agricultural (A-5a) zoning designations. With the submittal of the planned rezoning application, the Applicant will be requesting that the existing zoning be changed to Project District zoning.

ES-6 REQUIRED PERMITS AND APPROVALS

The proposed Project has received several land-use approvals, including State Land Use approval that placed the affected portions in the SLUC Urban District and County zoning, and subdivision approvals. The primary discretionary approval being sought will be a request for a change of the existing zoning designations to a Project District zoning, after which appropriate site plan approval, subdivision and plan approvals will be sought from the County Planning Department. Additionally, Special Permit approval will be required from the County Leeward Planning Commission for construction of the Wastewater Treatment Plant in the State Agricultural District. A broad range of permit and plan approvals will be also be required from Federal, State and County agencies for the construction of the various elements of the project infrastructure, including those related to utility stream crossings, well and pump installations, wastewater plant design and construction, highway related improvements, grading and grubbing, roadways, drywells, utilities, and solid waste disposal, water, sewerage, and drainage systems.

ES-7 CUMULATIVE AND SECONDARY IMPACTS

In general, West Hawai'i and the Project area in particular has experienced and is expected to experience continued growth, which is driven primarily by a growth in the visitor industry and associated real estate. The Villages project and the other ongoing and planned developments in the area will be a part of that growth and change. The most apparent change in the socio-economic environment will be the visual impact to the landscape as a more urbanized

THE VILLAGES OF ‘ĀINA LE‘Ā

Draft Environmental Impact Statement

environment replaces what are now primarily undeveloped and vacant lands. The Project, when examined in conjunction with the other planned growth in the area, is expected to have long-term cumulative impacts on traffic, water resources, and solid waste facilities. There will also be an increase demand for public facilities and services, including recreational facilities, schools, medical services, and police and fire protection. While the Project will be accompanied by appropriate mitigation measures to address these impacts, and the accompanying economic development will generate jobs and provide additional tax revenues to help fund needed public facilities and services, the jobs created through this development and the infrastructure that is created can serve as attractors for new residents to the area and potential development of adjacent lands.

ES-8 SUMMARY OF UNRESOLVED ISSUES

Those issues that remain unresolved primarily focus on the provision of public facilities and services to the area in response to the needs of this and other developments in the area. For instance, while the Applicant will be setting aside as much as 32 acres for a potential school site, it remains up to the State Department of Education as to when this would be constructed and whether this would be a middle or high school facility. Similarly, while areas for police, fire, and emergency services can be accommodated within portions of the project, if needed, it remains with the respective agencies to decide if construction of new facilities or expansion of existing facilities is preferable. So, while the Project may commit to contribute to the provision of expanded public facilities through numerous means, including “fair-share” requirements that are imposed at the time of zoning approval, provision of land or infrastructure development and the manner in which such facilities are to be developed has yet to be determined. Along the same vein, a decision on the location of the planned mauka-makai roadway connection from Queen Ka‘ahumanu Highway to Waikoloa Village has yet to be made and will be dependent upon further discussions with the County and Waikoloa Village representatives, along with the availability of the planned Community Facilities District funding required for its design and construction. Lastly, while an assessment of the water resources in the area indicates there to be sufficient resources to meet the needs of this Project, the assessment notes that the available ground water resource in the area of the Project corridor may be insufficient to meet the requirements of future development on adjacent and nearby lands without the development of a coordinated water management strategy to insure that water use is maintained at sustainable levels.

1 INTRODUCTION AND SUMMARY

1.1 LEGAL REQUIREMENT: COMPLIANCE WITH STATE OF HAWAI'I AND COUNTY OF HAWAI'I ENVIRONMENTAL LAWS

The State of Hawai'i environmental review procedures and requirements are set forth in Chapter 343, Hawai'i Revised Statutes (HRS), and the Department of Health's (DOH) Title 11, Chapter 200, Hawai'i Administrative Rules (HAR), Environmental Impact Statement Rules of the Office of Environmental Quality Control (OEQC).

The County of Hawai'i environmental reporting requirements are set forth in Sections 25-1-5, 25-2-42 and 25-6-44, Hawai'i County Code (HCC), and County Planning Department Rule 14.

This DEIS has been prepared pursuant to the aforementioned State and County laws and administrative rules.

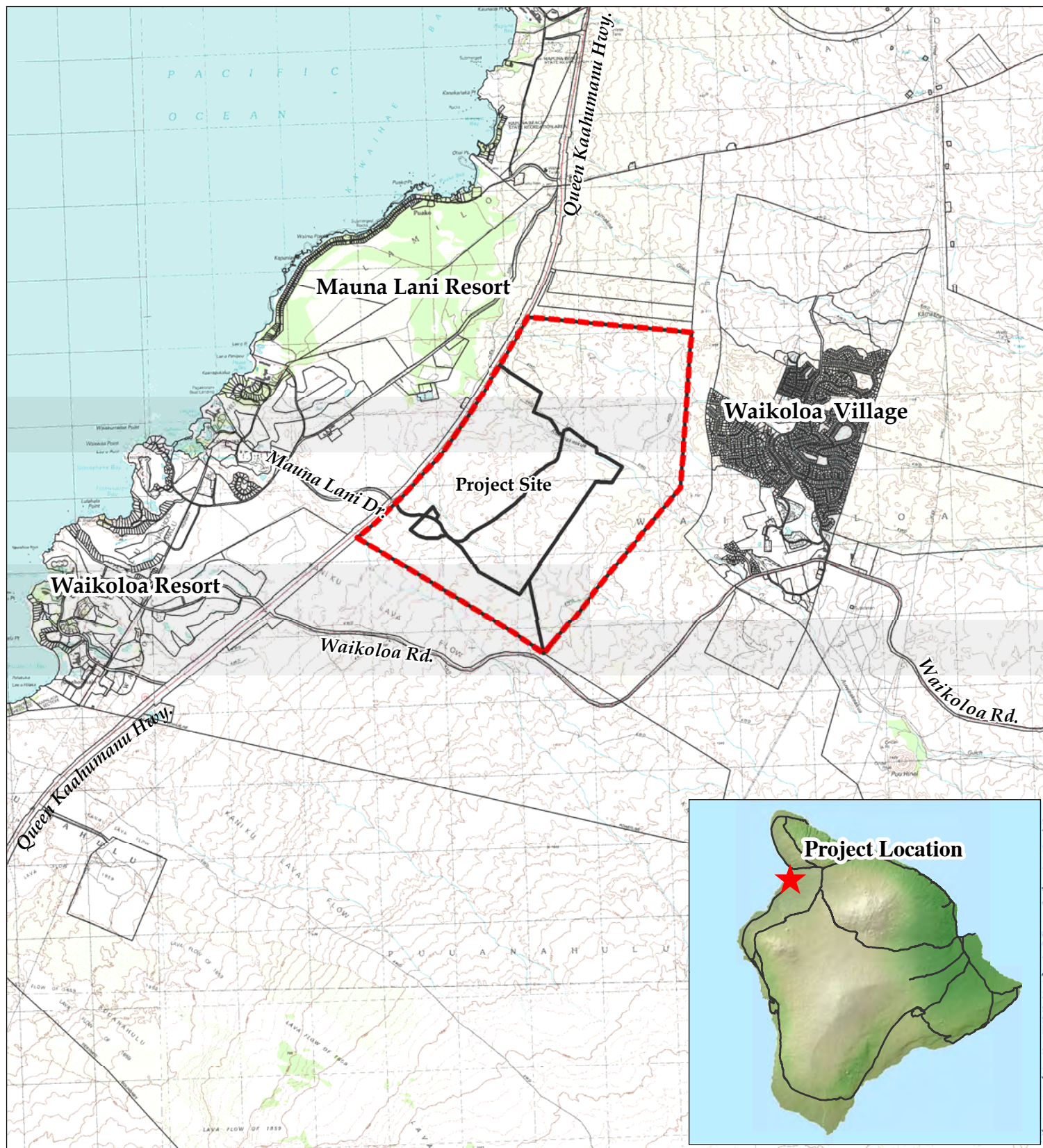
This DEIS was preceded by The Villages of 'Āina Le'a Environmental Impact Statement Preparation Notice ("EISPN"), with notice of availability published in OEQC's December 8, 2007 issue of *The Environmental Notice*. Copies of the EISPN were provided to appropriate government agencies and organizations. The public comment period for the EISPN ended on January 7, 2008. Applicable comments on the EISPN have been incorporated into this DEIS. Copies of the distribution list, substantive comment letters and responses are included in Chapter 11.

1.2 CHANGE IN SCOPE OR SIZE OF PROJECT



The November 2007 Environmental Impact Statement Preparation Notice (EISPN) was prepared for The Villages of 'Āina Le'a, which was an overall master planned residential golf community on 3,000 acres of land at Waikoloa, Island of Hawai'i, State of Hawai'i. The land was previously entirely owned by Bridge 'Āina Le'a, LLC, ("Bridge").

The scope of the project covered in this DEIS has been reduced in area due to the purchase of approximately 1,092 acres of the 3,000 acres by DW 'Āina Le'a Development, LLC and Relco Corp ("Applicant") in 2008. These lands are now identified by TMK: (3) 6-8-001:25, 36, 38, and 39 ("Applicant's Property"). This DEIS will describe the project proposed by the Applicant on its land and portions of the adjacent Bridge properties, identified as portions of TMKs (3) 6-8-001: 40 and 37, totaling a project area of approximately 1,128 acres, collectively referred to as the "Project" for the purposes of this DEIS. The Project will also require the construction of certain power and water utilities that cross over the adjacent Waikoloa Village Association lands, identified as portions of TMK (3) 6-8-002:19

Figure 1 illustrates the region and location of the Applicant's Property. Figure 2 is a tax map showing the configuration of the recently consolidated/resubdivided properties at Waikoloa, Island of Hawai'i, Judicial District of Hawai'i. The Applicant still intends to seek rezoning of 1,060 acres of its Urban lands to a Project District zoning, which would provide greater planning

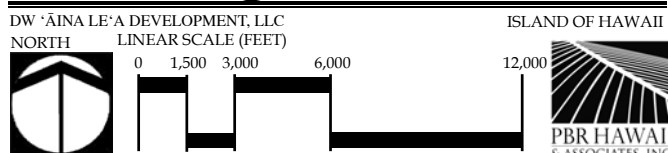


Legend

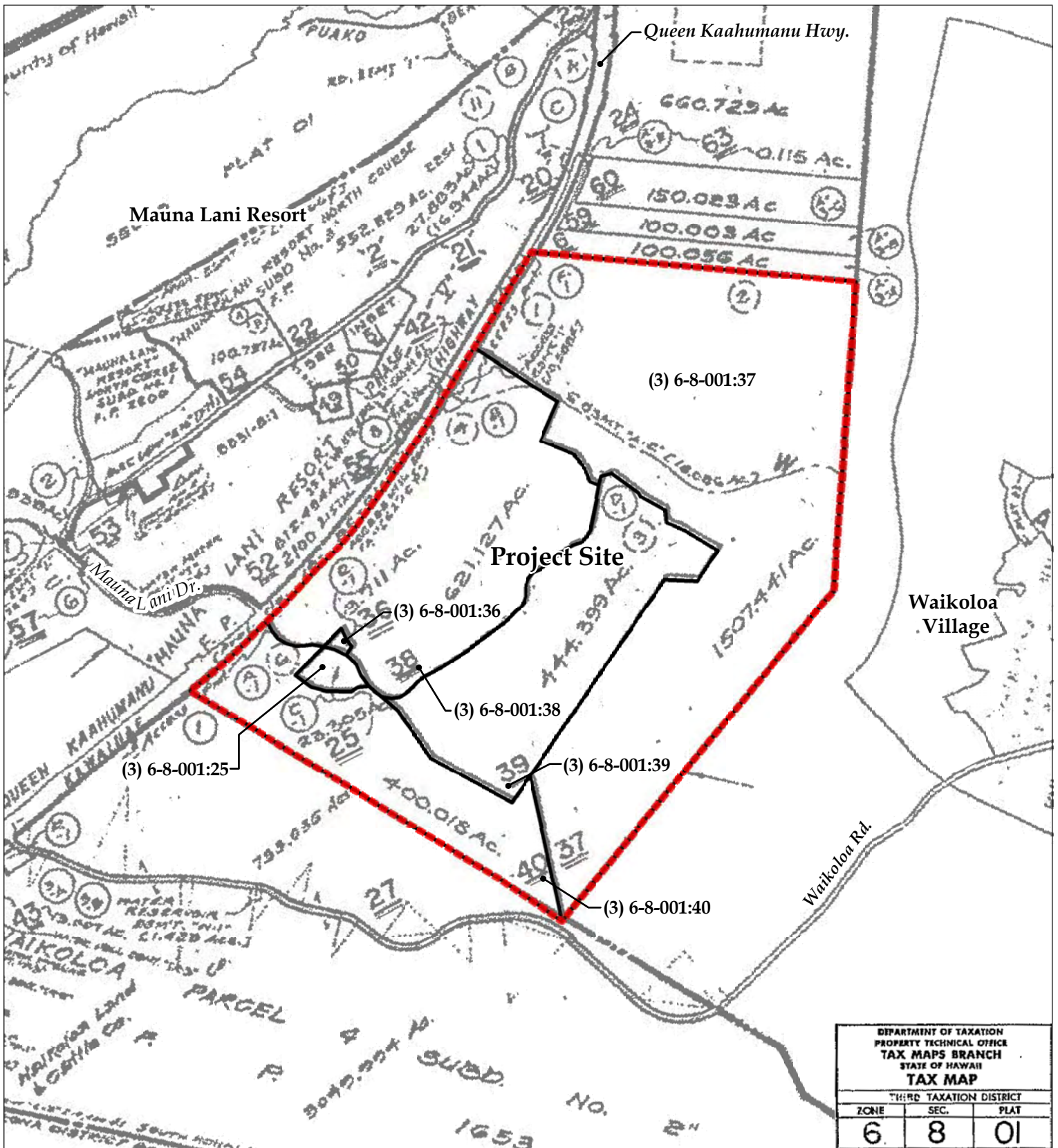
-  Property Boundary
-  Hawai'i County TMK

Source: U.S. Geological Survey Map (GIS), Hawaii County 2009 Tax Map Key (GIS)
 Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 1
 Island of Hawai'i Regional and Location Map
The Villages of 'Āina Le'a



05/03/2010



Legend

 Property Boundary

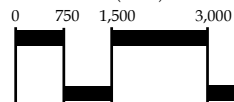
FIGURE 2

Tax Map Key Parcels

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC
NORTH LINEAR SCALE (FEET)

ISLAND OF HAWAII



6,000



Source: Hawaii County Tax Map Key 2009

Disclaimer: This graphic has been prepared for general planning purposes only.

05/03/2010

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

flexibility in responding to various site and market considerations. The planned Project District zoning would apply only to the applicant's development of its Urban lands and related infrastructure and community facilities on adjacent Agricultural lands, which would be separate from any future action or development of the adjacent Bridge lands. A detailed description of the Project and the requested Project District zoning is found in Chapter 2 of this DEIS.

1.3 PROJECT DEFINITION

The "Project" proposed by the Applicant includes approximately 790 single-family residential lots, 1,047 multiple-family residential units, 125 residential units in a mixed-use (commercial/residential) setting, up to 500 affordable/workforce housing units and a golf course with driving range, clubhouse and amenities. It also includes a golf lodge of up to 40 units, a golf academy, a commercial village, a mixed-use core, parks and open space, and related infrastructure, including a wastewater treatment plant. The Master Plan for the project is shown conceptually in Figure 3. The terms "Project site" and "The Villages" will also be used in this DEIS to refer to the Project.

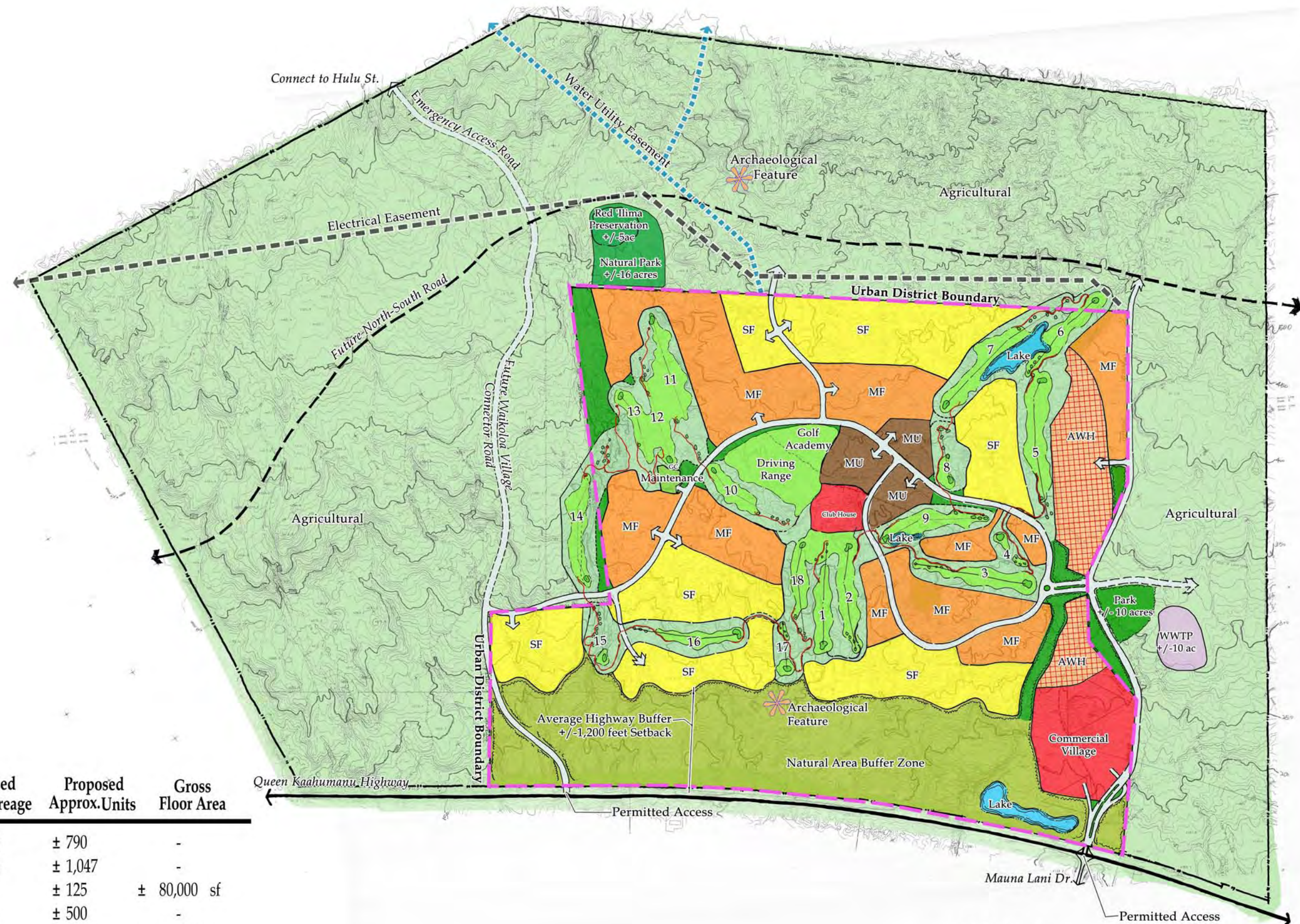
The term "Project District zoning" refers to the specific County zoning district that is being requested. The Project District zoning request covers 1,060 acres of Urban land on which most of the Project will be built. In addition to the development within the Project, certain power and water utility connections will be made to the project from HELCO and Waikoloa's existing utility systems in the area. These utility corridors, which extend over the adjoining Waikoloa Village Association property (TMK 6-8-02:19) would allow for power and water utility lines, water tanks, and utility access road improvements. The location and alignment of the electrical power and water utility associated with the Project are shown in Figure 4, Villages of 'Āina Le'a Project Utility Connections.

1.4 APPLICANT

The Project is an applicant action by DW 'Āina Le'a Development, LLC, to develop a residential golf community and related infrastructure on approximately 1,128 acres of land. The Applicant is a limited liability company incorporated on June 12, 2007 under the laws of the State of Nevada and is qualified to do business in Hawai'i. The Applicant is a sole purpose entity formed to purchase and develop the lands that comprise The Villages of 'Āina Le'a. It should be noted that Bridge is no longer the applicant for the Project.

The contact information for the Applicant is:

DW 'Āina Le'a Development, LLC
Mr. Robert Wessels, Managing Partner
68-4747 Queen Ka'ahumanu Highway
Kamuela, Hawaii 96743



Land Use Summary

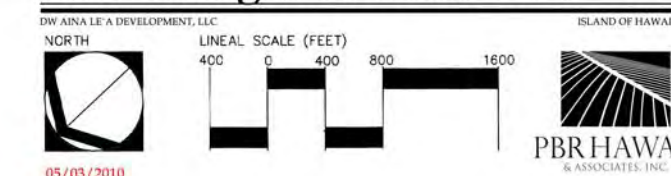
(Land Within Urban District)

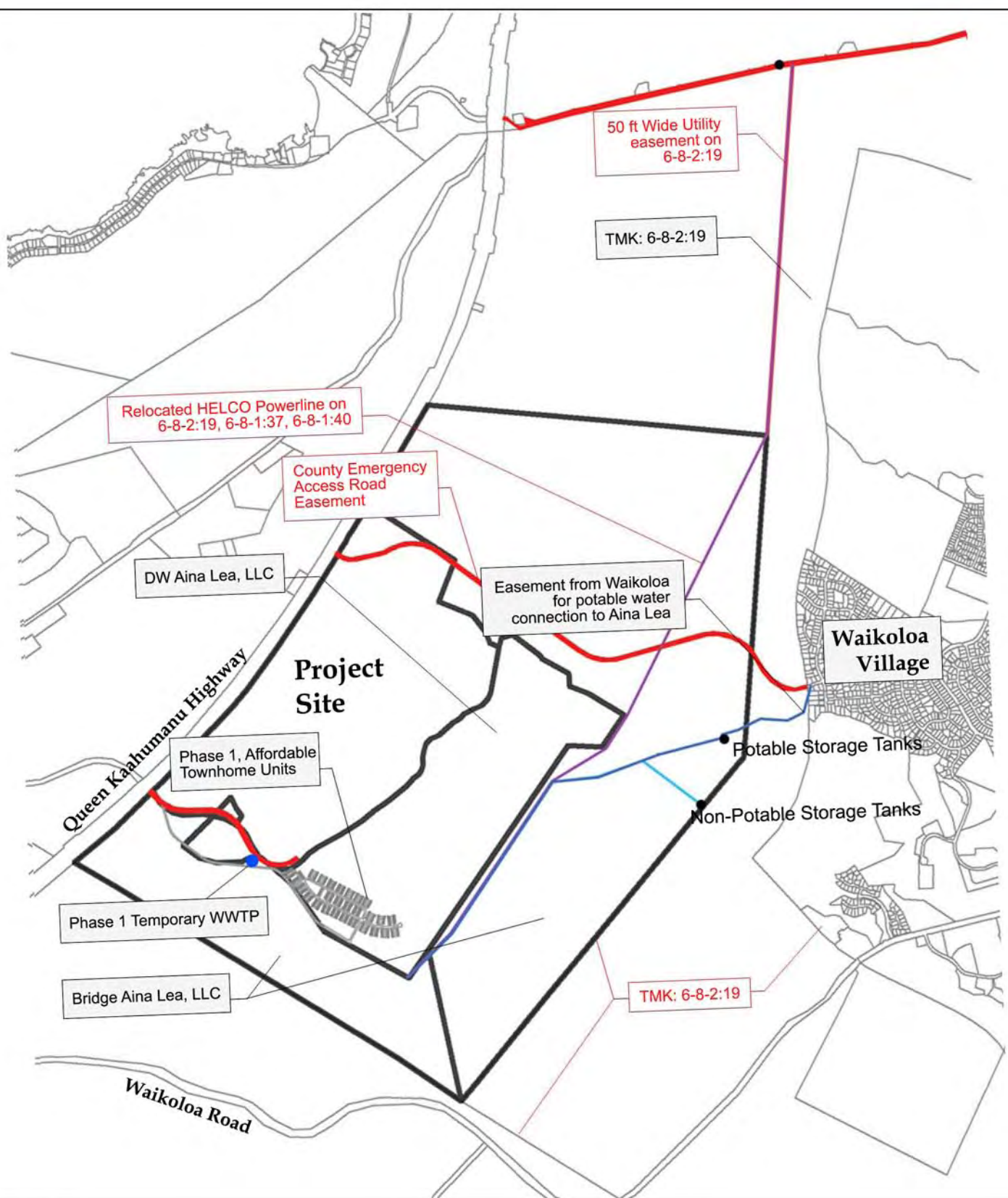
Land Use	Proposed Approx. Acreage	Proposed Approx. Units	Gross Floor Area
SF	± 255	± 790	-
MF	± 165	± 1,047	-
MU	± 25	± 125	± 80,000 sf
AWH	± 46	± 500	-
C	± 36	-	± 340,000 sf
Golf Course (GC)	± 218	-	-
Club House	± 4	-	-
Highway Buffer	± 234	-	-
Parks / Open Space	± 37	-	-
Major Roadways	± 40	-	-

Total : ± 1,060* ± 2,462 ± 420,000 sf

* Note: The Village of 'Aina Le'a project area includes the use of lands outside the Urban District for infrastructure and active and passive park uses, for a total project area of approximately 1,128 Acres.

FIGURE 3
CONCEPTUAL MASTER PLAN
The Villages of 'Aina Le'a





Legend


 Hawai'i County TMK

FIGURE 4

Project Utility Connections

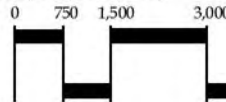
The Villages of 'Aina Le'a

DW 'AINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH

LINEAR SCALE (FEET)



Source: Hawaii County Tax Map Key 2009. Utility map prepared by SSFM International.

Disclaimer: This graphic has been prepared for general planning purposes only.

05/03/2010

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

1.5 LANDOWNER

DW 'Āina Le'ā Development, LLC and Relco Corp., (DW) are the owners of 1,092 acres of land in the State Land Use Urban and Agricultural Districts by an executed Amended and Restated Purchase and Sale Agreement ("Amended Agreement") with Bridge. The Amended Agreement assigns rights, title, and interest in the Property through an installment sale. A redacted copy of the February 9, 2009 Amended Agreement is found in Appendix A.

The two main principals of Relco Corp. are Robert Wessels, President, and Steve Dunnington, Project Manager. Relco was incorporated in 1992 following 14 years of operating as a building partnership in Arizona and California.

1.6 PURPOSE AND NEED FOR THIS EIS

The preparation of the DEIS is being undertaken to address future requirements prompted by the Project District zoning under Chapter 343-5(a)(1), HRS, involving the use of State or County lands. While improvements to the State's Queen Ka'ahumanu Highway are required by Condition O of Ordinance No. 96-153 to mitigate traffic impacts generated by the original project, this DEIS will cover these and any additional infrastructural improvements, including the planned construction of a WWTP on the adjacent property (Parcel 40), that may trigger Chapter 343, HRS compliance. No State or County funds will be used to develop the Project.

The preparation of this DEIS will support the Project District zoning Application, requested amendments to Conditions of Ordinance No. 96-153, and all subsequent permits and applications, including but not limited to, special permit, subdivision, plan approval, grading, grubbing and infrastructural construction drawings for the approximately 1,128-acre Project area. This DEIS is not intended to support any permits or approvals that may be required for the potential development of agricultural lots, golf courses and related infrastructure on the remaining Bridge lands that make up the balance of the original 3,000-acre property.

This DEIS will also serve as the County Environmental Report to supplement the Project District Zoning Application pursuant to Chapter 25, HCC.

1.7 EIS ACCEPTING AUTHORITY

The accepting authority for the EIS is the County of Hawai'i Planning Department which can be contacted at:

County of Hawai'i Planning Department
Bobby Jean Leithead-Todd, Planning Director
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720
Phone: (808) 961-8288 Fax (808) 961-8742

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

1.8 EIS PREPARER

The EIS preparer for the Project is James Leonard of J M Leonard Planning, LLC, whose contact information follows:

J M Leonard Planning, LLC
James M. Leonard
1100 Ainalako Road
Hilo, Hawai'i 96720
Email address: jmleonard@mac.com

1.9 STUDIES CONTRIBUTING TO THIS EIS

This DEIS was developed with the information contained in technical studies, which have been appended in the document and are listed in the Table of Contents. The following environmental studies are included in the appendices of this DEIS:

- Air Quality Study
- Archaeological Inventory and Data Recovery Surveys
- Archaeological Burial Treatment Plan
- Avifauna and Feral Mammals Survey
- Botanical Survey Report / Preservation and Mitigation Plan
- Cultural Impact Assessment
- Master Drainage Report
- Noise Quality Study
- Preliminary Engineering Study
- Socio-Economic Analysis Survey
- Traffic Impact Analysis Report
- Water Resources Assessment

[This page intentionally left blank]

THE VILLAGE OF ‘ĀINA LE‘A
Draft Environmental Impact Statement

2 DESCRIPTION OF THE PROJECT

2.1 BACKGROUND INFORMATION

2.1.1 Location and Physical Setting

The Villages is located on six (6) parcels of land totaling approximately 1,128 acres in South Kohala, Waikoloa, Island of Hawai‘i, TMK Nos. (3) 6-8-001: 25, 36, 38, 39, and portions of 37 and 40 (see Figures 1 and 2).

Table 1 below lists the acreage associated with each Project parcel, the SLU district classification, and the requested or permitted land uses.

Table 1
Parcels, Acreage, SLU, and Land Use

TMK	ACREAGE	SLU	PROJECT RELATIVE TO LAND USE REQUESTS
6-8-001:25	±27.016	Urban	County Project District zoning Requested
6-8-001:36	±61.387	Urban	Affordable Housing Under Construction (County Project District zoning Requested)
6-8-001:38	±621.127	Urban/Ag	County Project District zoning Requested/ Golf Course (portion)-Permitted (UP 90)
6-8-001:39	±383.012	Urban/Ag	County Project District zoning Requested/ Golf Course (portion), Passive Park, Preserve-Permitted
PROJECT SUBTOTAL	±1,092.542		“Applicant Property”
6-8-001:37(por)	±15.000	Ag	Golf Course (portions). Permitted (UP 90)
6-8-001:40 (por)	±10.000	Ag	WWTP-County Special Permit Required
6-8-001:40 (por)	±10.000	Ag	Active Park-Permitted Use
PROJECT SUBTOTAL	±35.000	Ag	By Amended Agreement w/Bridge ‘Āina Le‘a
PROJECT TOTAL	±1127.542		Also referred to as “Project” or “The Villages”

The Property is located mauka, or east, of the Queen Ka‘ahumanu Highway, generally between the entrance to Mauna Lani Resort and moving north towards the entrance to Puakō in the land division of Waikoloa and district of South Kohala. It is bounded by the Queen Ka‘ahumanu Highway to the west or makai direction, and by privately owned lands to the north, east, and south. The Property’s frontage along the Queen Ka‘ahumanu Highway is nearly two miles in length.

The Property rises gently to moderately from east to west at about a 7 percent slope. Elevations range from 150 feet above mean sea level (msl) at the western boundary adjacent to the Queen

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Ka'ahumanu Highway and 700 feet at the eastern boundary of the Property. The Property is located approximately 9,000 feet mauka of the shoreline and is not a coastal property. The Property is generally an open expanse of 'a'a and pāhoehoe lava flows with limited vegetation. Construction of the affordable housing units has begun on approximately 61 acres (TMK: 6-8-001:36) as permitted under the existing zoning and subdivision approvals.

2.1.2 Previous Master Plans for 3,000 Acres Known as The Villages of 'Āina Le'ā

The overall master plan for The Villages encompassed 3,000 acres of land, of which approximately 1,060 acres was classified in the State Land Use Urban District.

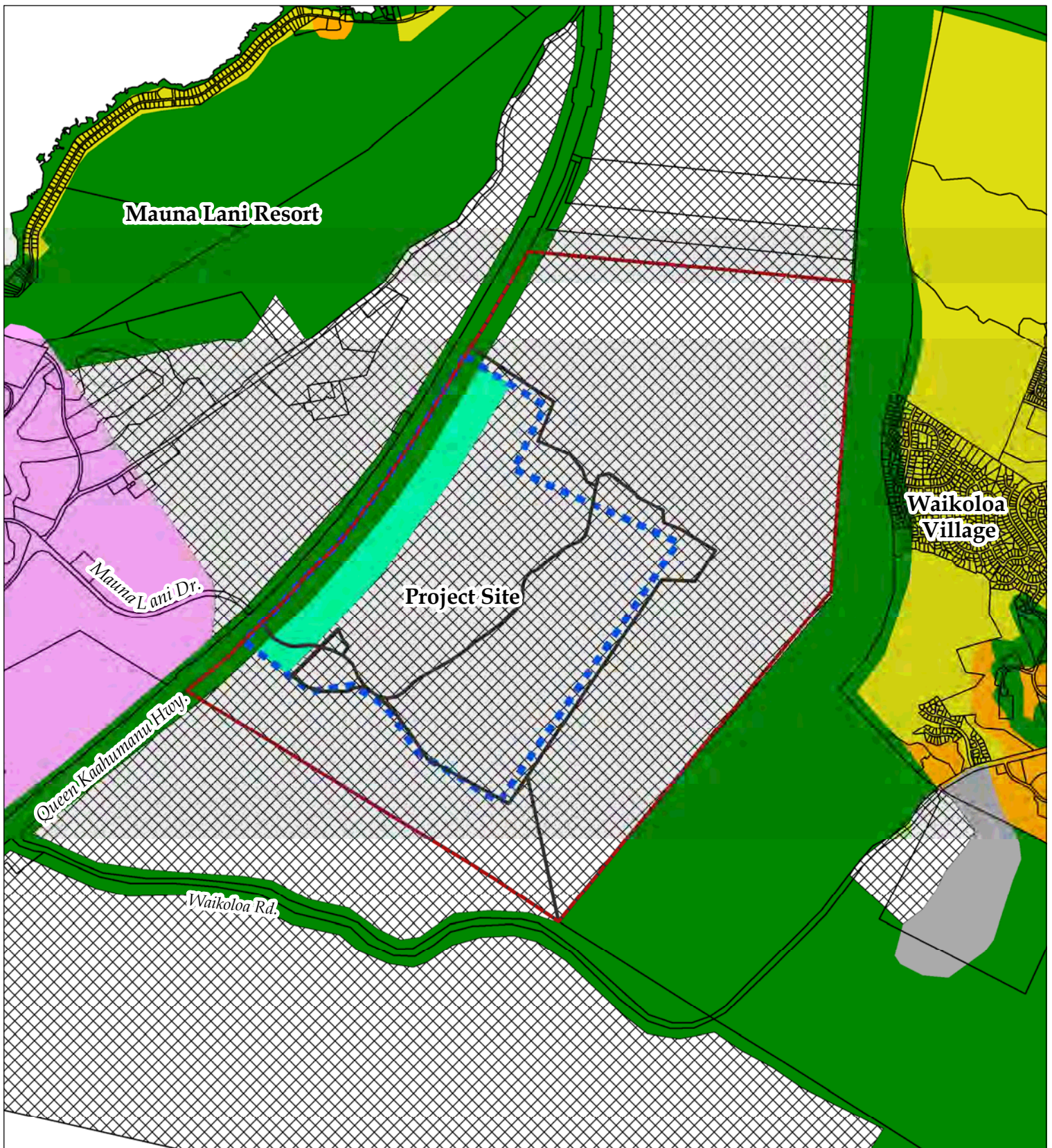
The original master plan in the early 1990s proposed the development of six golf villages that would include six 18-hole golf courses and associated recreational amenities, a golf academy, a total of 3,220 multiple-family residential and agricultural lots/units, and commercial uses.

In 1999, Bridge Puakō, LLC requested rezoning of the 1,060-acre Urban area to a Project District zone, but the application was later withdrawn. In 2007, successor landowner Bridge 'Āina Le'ā submitted a Project District rezoning application that was returned to Bridge for compliance with Chapter 343, HRS.

Table 2 contains a summary of the current land-use designations for the property.

Table 2
Summary of Existing Land-Use Designations of the Property

Type	Designation
General Plan LUPAG Map Designations (see Figure 5)	Urban Expansion Area and Conservation (Highway Buffer)
State Land Use (SLU) (see Figure 6)	Urban (1,060 acres)/Agricultural (±68 acres)
South Kohala Community Development Plan (CDP) (see Figure 7)	Planned Development: 3,000 acres; 3,000+ units; 5 golf courses; golf academy; commercial villages; 40-unit lodge
County Zoning (see Figure 8)	Multiple-Family Residential (RM-4) Multiple-Family Residential (RM-7) Multiple-Family Residential (RM-14.5) Village Commercial (CV-10) Residential-Agricultural (RA-1a) Agricultural (A-5a)
Special Designations	
Special Management Area: No	
Shoreline Setback Area: No	



Legend

- | | | | |
|--|-------------------------|--|----------------------|
| | Property Boundary | | Industrial |
| | Hawaii County TMK 2009 | | Low Density Urban |
| | Urban District Boundary | | Medium Density Urban |
| | Conservation | | Open Area |
| | Resort Node | | |
| | Urban Expansion | | |
- Source: Hawaii County GIS Data
 Disclaimer: This graphic has been prepared for general planning purposes only.

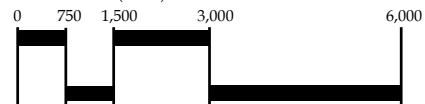
FIGURE 5

Hawaii County General Plan

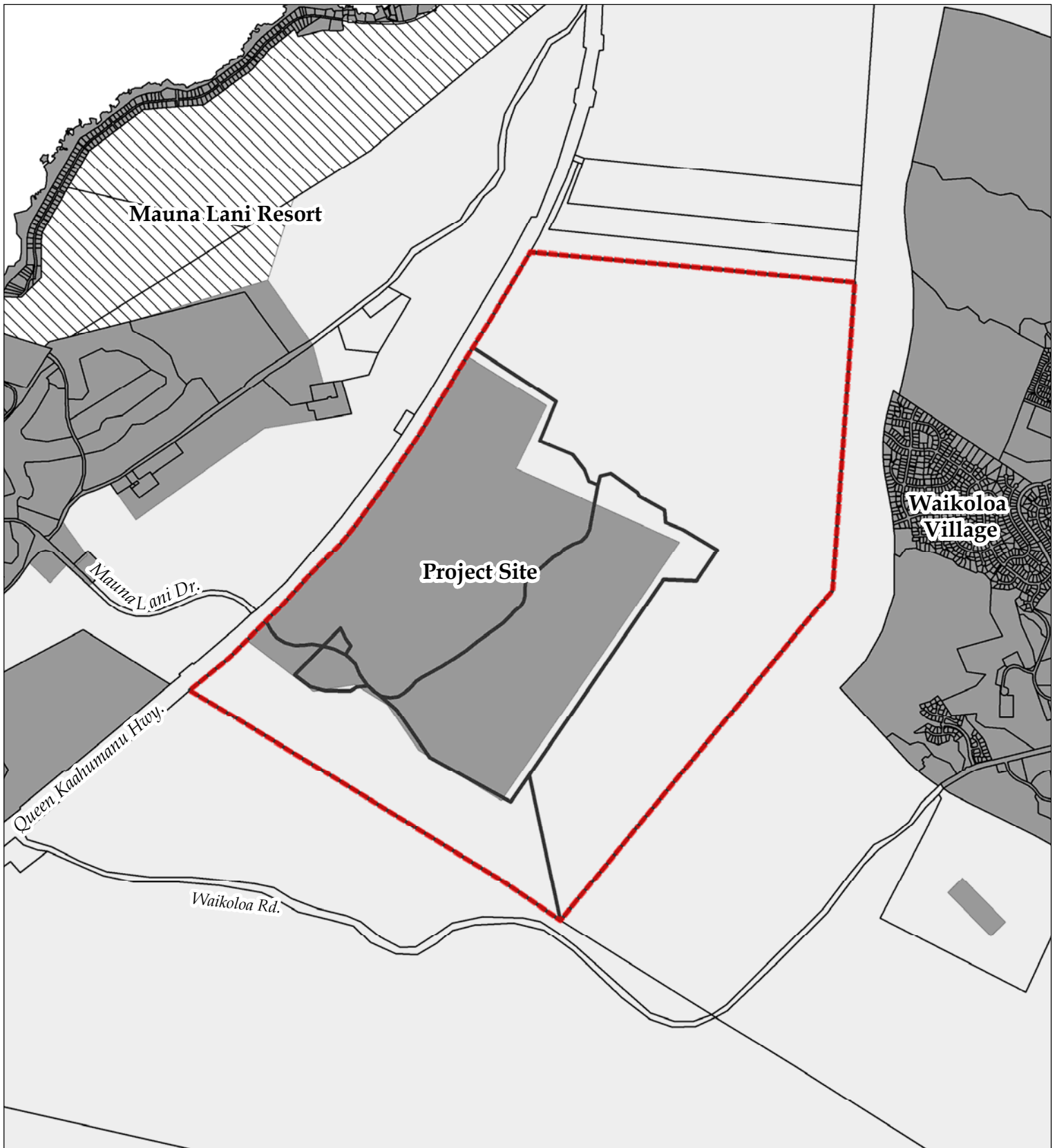
The Villages of Āina Le'a

DW ĀINA LE'A DEVELOPMENT, LLC
 NORTH LINEAR SCALE (FEET)

ISLAND OF HAWAII



05/03/2010



Legend

- Property Boundary
- Hawaii County TMK 2009

State Land Use Districts

- Agriculture
- Conservation
- Rural
- Urban

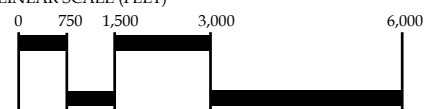
FIGURE 6

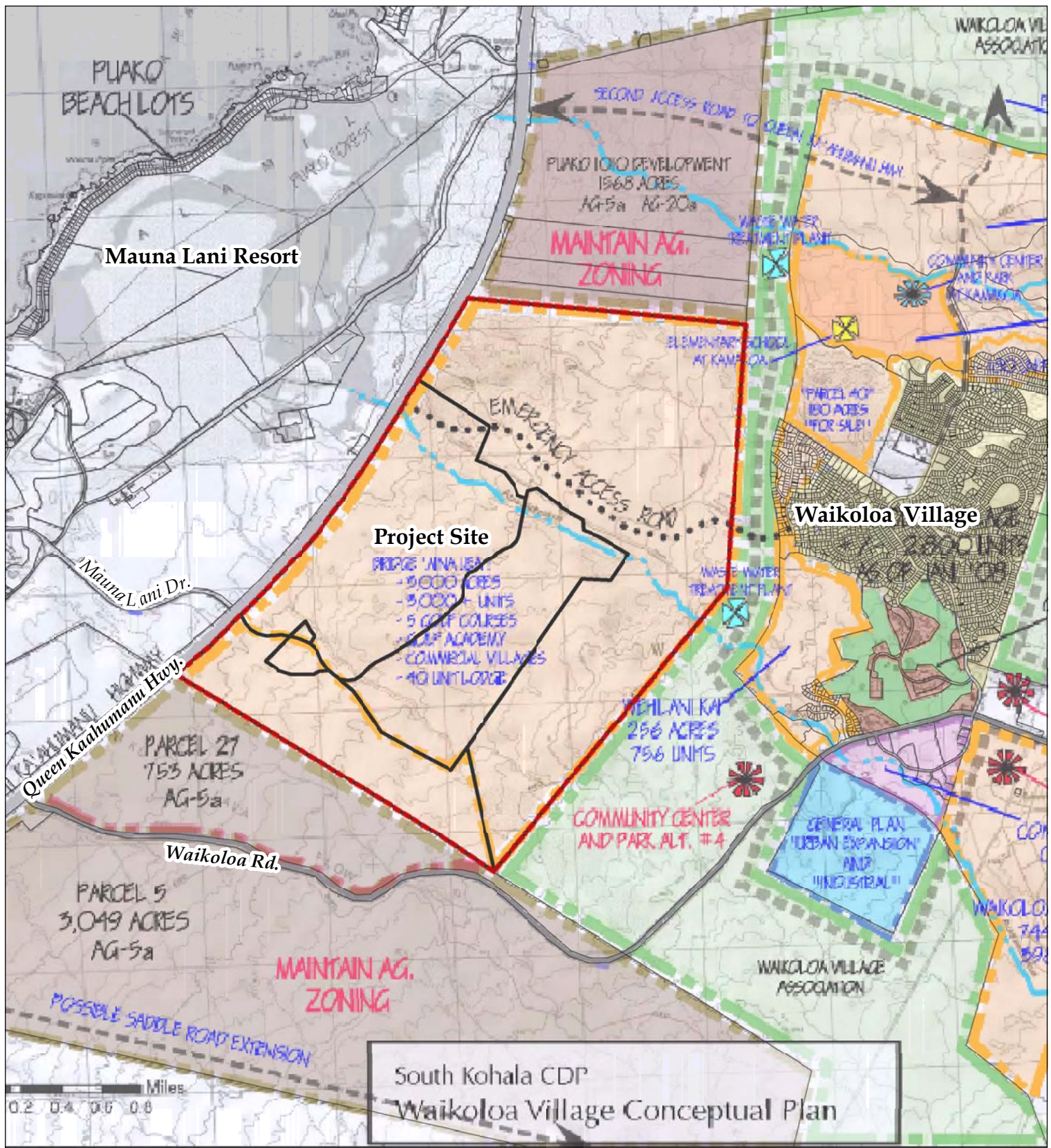
State Land Use Classification

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC
NORTH LINEAR SCALE (FEET)

ISLAND OF HAWAII





Legend

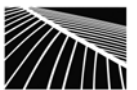
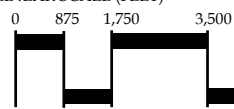
- Property Boundary
- Hawai'i County TMK 2009

FIGURE 7

South Kohala Community Development Plan The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC
NORTH LINEAR SCALE (FEET)

ISLAND OF HAWAII

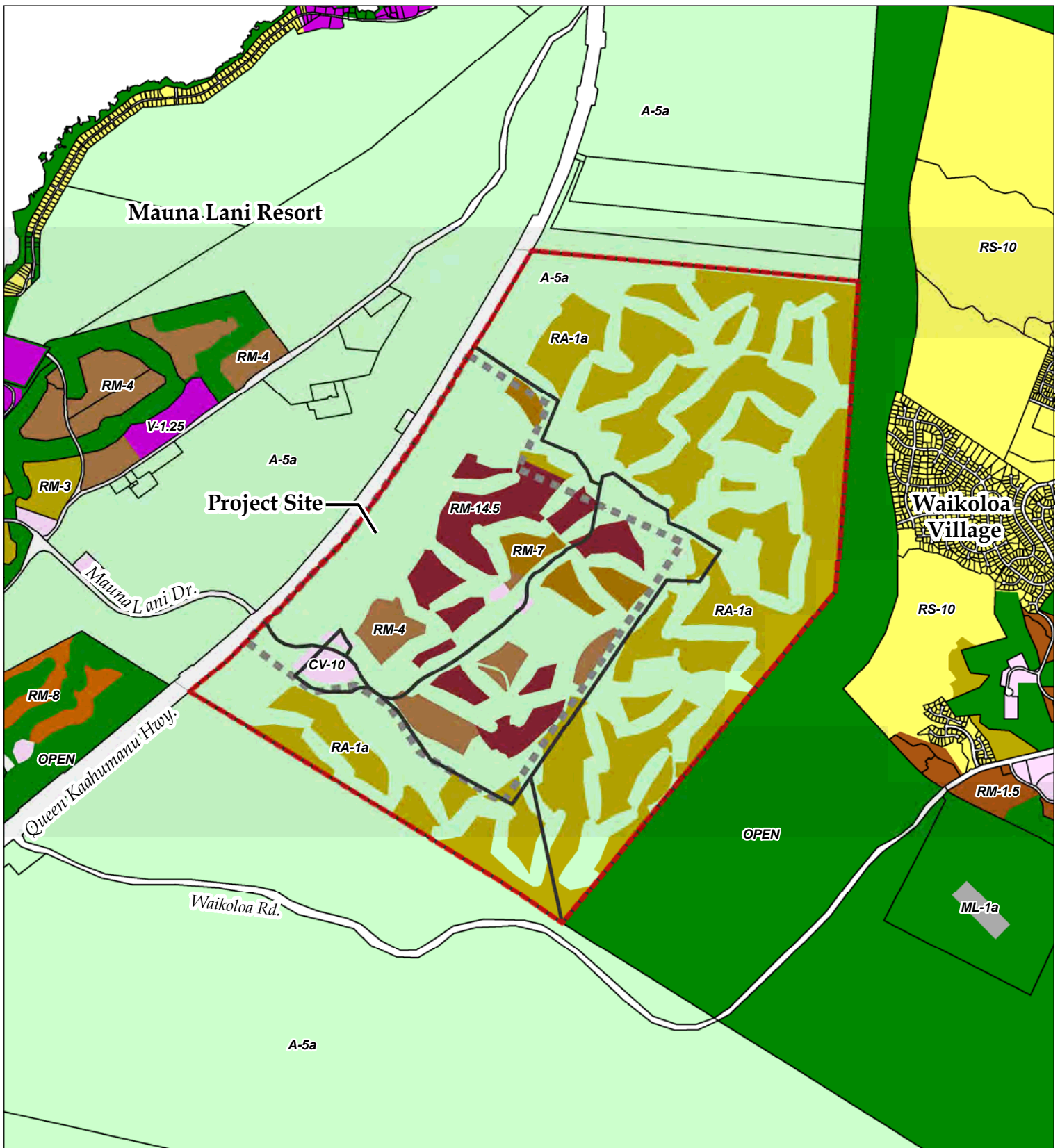


PBR HAWAII
& ASSOCIATES, INC.

Source: Hawai'i County 2009 Tax Map Key (GIS), South Kohala Community Development Plan 2008

Disclaimer: This graphic has been prepared for general planning purposes only.

05/03/2010



Legend

	Property Boundary		ML-1a		RM-1.5		RM-7
	Urban District Boundary		OPEN		RM-14.5		RM-8
	Hawai'i County TMK 2009		CV-10		RM-3		RS-10
	(road)		CV-15		RD-3.75		RM-4
	A-5a		V-1.25				

Source: Hawaii County GIS Data Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 8

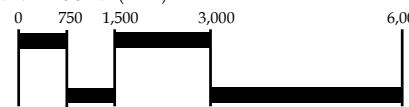
Hawai'i County Zoning

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH LINEAR SCALE (FEET)



05/03/2010

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

2.1.3 Land-Use Approvals and Government Actions

The major entitlements for the original project were secured in the latter part of the 1980s and early 1990s. Numerous government actions have been requested and secured towards implementing that project. Table 3 outlines the major government approvals for the Project and the original Villages obtained to date.

Table 3
Existing Land-Use Approvals and Other Government Actions for the Project
and The Villages

EFFECTIVE DATE	LAND USE/OTHER REQUEST	ACREAGE	ACTION
1-17-1989	State Land Use Boundary Amendment from Agricultural to Urban	1,060 acres (Project area)	Decision & Order Docket No. A87-617 Note: On 4-30-2009, LUC voted by oral motion to revert Urban District area to original Agriculture classification. On 6-5-2009, LUC voted to stay or hold the reversion of the Urban classification to Agriculture. On 8-27-2009, LUC voted to rescind motion to revert Urban District area to Agriculture classification.
7-9-1991	Amended 1-17-1989 Decision & Order	1,060 acres (Project area)	Approved name change, modification of conditions
12-11-1991	Use Permit Application for six golf courses & related improvements	3,000 acres (Villages)	Approved UP No. 90
1993	County Rezoning from Unplanned to RA-1a, RM-4.0, RM-7, RM-14.5, CV-10	3,000 acres (Villages)	Approved Ord. No. 93-1
12-5-1996	Amendments to Conditions of Ordinance No. 93-1	N/A	Approved Ord. No. 96-153
9-19-1996	Amendments to Conditions of Use Permit No. 90	N/A	Approved
11-2000	Non-significant Zoning Amendments		Approved
11-25-2005	Amendment to SLUC Conditions 1 (affordable housing) & 8 (community benefit assessment)		Approved amendment to Condition 1 & denied amendment to Condition 8
2006	Resolution of Intention to Establish Community Facilities District (CFD)	1,060 acres	Approved Council Resolution 486-06
12-28-2006	CFD No. 1 Report filed by Department of Public Works to County Council	1,060 acres	County Council acceptance of filed report.

2.2 PURPOSE AND NEED FOR REQUESTED PROJECT DISTRICT ZONING

As a result of numerous meetings with the Waikoloa community over the years and the refinement of the overall master plan to address community, environmental, and siting concerns, it was determined that the existing zoning should be amended to accommodate the revised conceptual master plan. Thus, the Applicant is requesting that its zoning be amended to the County's Project District zoning in the Urban area, which would provide greater flexibility for site planning, infrastructure, and changing marketing considerations. The major modifications include a future east-west (mauka-makai) connector road to facilitate regional traffic circulation. There has also been a conceptual adjustment to including single-family residences in the project; to the siting of the single- and multi-family residential, and commercial development areas; and removing one proposed golf course.

These modifications necessitate a request for Project District zoning in the SLU Urban area and amendments to the existing zoning Ordinance No. 96-153. It is important to note that development could still be achieved under the existing CV, RM, RA, and A zoning designations though the result would be less desirable.

2.3 PROJECT DESCRIPTION

2.3.1 Statement of The Villages and Project District Zoning Objectives

The objectives of The Villages and Project District zoning are to:

- ❖ Implement the Project as an integral and contributing part of the Puakō and Waikoloa communities.
- ❖ Provide recreational amenities (tennis, a golf course, park and bicycle paths), self-contained commercial facilities, and adequate infrastructure to service the community.
- ❖ Design and implement the Project in a manner that is sensitive to the environmental, scenic, and cultural resources of the area.
- ❖ Plan to provide regional connectivity of roads and other crucial infrastructure systems.
- ❖ Be responsive to the ever-changing market demands of the global and local communities.

2.3.2 Project Description and Relationship to Proposed Project District Zoning

The Villages would be developed as an integrated golf residential community focused around an 18-hole golf course and golf academy with a village center at the "heart" of the development. The Conceptual Master Plan illustrated in Figure 3 provides a visual depiction of the proposed Project consistent with the above-described objectives.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

Table 4a outlines the proposed uses, corresponding acreages and unit count in the requested Project District zoned area. Table 4b lists the proposed uses, approximate acreage, and permitting status of that portion of the Project in the SLU Agricultural District. A description of The Villages' components follows.

Table 4a
Proposed Uses in Requested Project District Zoned Area

Proposed Uses	Proposed Approximate Units/Lots	Proposed Approximate Acreage	Approximate Gross Floor Area
Single Family Residential (RS)	790 lots	255	
Multiple Family Residential (RM)	1,047 units	165	
Mixed Use	125 units	25	80,000 sq. ft.
Affordable/Workforce Housing	up to 500 units	46	
Commercial Village		36	340,000 sq. ft.
Golf Course/Driving Range		218	
Golf Clubhouse		4	
Parks/Open Space		37	
Highway Buffer		234	
Major Roadways		40	
TOTAL	2,462 units/lots	1,060	420,000 sq. ft.

Table 4b
Proposed Uses in SLU Agricultural District

Proposed Uses	Approximate Acreage	Comment
Active Park	10	Required by Ord 96-153, permitted
Passive Park	16	Required by Ord 96-153, permitted
Wastewater Treatment Plant	10	Special Permit needed
Portions of Golf Course	32	Permitted, Use Permit No. 90
TOTAL	68 acres	

2.3.3 Affordable Housing Units

The Applicant is constructing up to 500 affordable housing units as part of the proposed development. Since up to 1,962 market residential units are planned, potentially 392 affordable units would be required under the County's current 20 percent affordable housing policy.

The Applicant has executed contracts to design and build at least 385 residential townhouse units, which will be sold under the County of Hawai'i's affordable housing guidelines. Infrastructure development and initial construction are underway at the date of this writing. The Applicant has negotiated an agreement with a company to price and build the townhouse units.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Construction of the first increment of 32 affordable townhouse units are expected to be completed in March of 2010 and the full 385 units completed by November 2010 in compliance with the amended Condition 1 of the State Land Use Commission (SLUC) Decision and Order. Sales of the affordable units are expected to start in the first half of 2010 and be released and sold in an orderly basis, in accordance with the requirements of the SLUC.

The Applicant has contracted with private water purveyor, West Hawai'i Water Company, to purchase up to 200,000 gallons of potable, domestic water per day at Public Utility Company (PUC) rates for a five-year period. The water would be supplied through a connection at the end of Hulu Street, and may become a permanent source for up to 432 townhouse units pending PUC approvals. In a separate agreement with West Hawai'i Sewer Company, the Applicant would install equipment at the Waikoloa Sewer Plant A that will upgrade the R-2 water to R-1 in exchange for approximately 200,000-250,000 gallons of recycled water per day. The recycled water will be used to irrigate landscaping along roadways and at the affordable housing project. An access road from Queen Ka'ahumanu Highway will be constructed to the affordable housing meeting with the requirements of the Departments of Public Works and Transportation.

Discussions are also underway with the International Longshore and Warehouse Union (ILWU), the largest private-sector union in Hawai'i, and/or another non-profit entity to provide workforce housing within The Villages.

2.3.4 Residential Golf Community

Following completion of the affordable townhouse units, the Applicant will focus on phasing the development of market residential pads for approximately 790 single-family home sites and 1,047 multi-family units. The residential uses will offer a mixture of lots, homes, apartments, townhouses, condominiums and other unit types. The single-family dwellings are planned to be custom-built by different developers and/or individual lot owners, subject to design covenants. The multi-family units will be constructed over time by the Applicant and/or its successors or assigns.

All lots and units constructed within the proposed Project District zoned area will be consistent with the standards contained in the Zoning Code summarized in Table 5 for single- and multiple-family structures and/or lots. These standards relate to lot size, setbacks, and heights. None of the single-family residential lots would be smaller than the allowable 7,500 square feet; however, the Applicant will apply for a Cluster Plan Development or Planned Unit Development permit in the event smaller lots are deemed appropriate and/or desired.

Permitted uses in the single-family and multiple-family residential zoned districts are provided in Table 6.

The residential density will be capped at 2,462 units/lots in the Project District zoned area, which includes affordable/workforce housing. This results in a residential density of about 2.32 units per acre over the proposed Project District zoned area.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

As required by the County's Zoning Code, a more detailed master plan will be submitted to the Planning Department for review and approval before specific development permits can be secured.

2.3.5 Golf Course, Clubhouse, Golf Academy, Golf Lodge and Related Facilities

The focal point of The Villages is an 18-hole golf course, a golf academy, driving range, and clubhouse with pro shop, restaurant, tennis courts and a swimming pool. To minimize disturbing the existing terrain, the golf course will be sculpted to take advantage of the natural environment. Natural features such as lava outcroppings and drainage ways are to be incorporated into the golf course. A major portion of the golf course is planned in the Project District Urban area with small portions in the SLU Agricultural District. While the golf course is currently approved under County Use Permit No. 90, which includes a deadline for construction of the course by the end of 2011, the golf course will be included as a permitted use of the Project District approval being sought from the County, thereby bringing timetable for construction of the course in line with the Project construction timetable.

A golf lodge with up to 40 units is planned in close proximity to the golf course and clubhouse. The golf lodge will complement the activities of the golf course and a golf academy by housing guests, players, and academy students and professionals. Depending upon the final golf course layout, the lodge may need to be moved to the mixed-use center.

2.3.6 Commercial Village and Mixed-Use Center

A 36-acre commercial village comprised of approximately 340,000 square feet of gross floor area will be located near the entrance to The Villages. The commercial center will provide retail and shopping opportunities for residents of the community, visitors, and residents in the surrounding region. It would be setback approximately 500 feet from the highway.

The commercial village will be developed incrementally in response to market demand. Nevertheless, a detailed land-use master plan would be submitted to the Planning Department in accordance with the requirements of the Zoning Code prior to the specific development of any portion of this area so that access, landscaping, and related issues can be specifically addressed. Tentative commercial uses could include restaurants, market, bank, department store, retail shops, medical facilities, and drug store. Office uses to support the on-site retail facilities, residents, and surrounding resort population are likely to be established.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Permitted uses in the Village Commercial zone district are provided in Table 5.

Table 5
Permitted Uses in the RS, RM, and CV Districts

Permitted Uses in RS District
Section 25-5-3

- (a) The following uses shall be permitted in the RS district:
 - (1) Adult day care homes.
 - (2) Cemeteries and mausoleums, as permitted under chapter 6, article 1 of this Code.
 - (3) Community buildings, as permitted under section 25-4-11.
 - (4) Crop production.
 - (5) Dwellings, single-family.
 - (6) Family child care homes.
 - (7) Group living facilities.
 - (8) Home occupations, as permitted under section 25-4-13.
 - (9) Meeting facilities.
 - (10) Model homes, as permitted under section 25-4-8.
 - (11) Neighborhood parks, playgrounds, tennis courts, swimming pools, and similar neighborhood recreational areas and uses.
 - (12) Public uses and structures, as permitted under section 25-4-11.
 - (13) Temporary real estate offices, as permitted under section 25-4-8.
 - (14) Utility substations, as permitted under section 25-4-11.
- (b) In addition to those uses permitted under subsection (a) above, the following uses may be permitted in the RS district, provided that a use permit is issued for each use:
 - (1) Bed and breakfast establishments as permitted under section 25-4-7.
 - (2) Care homes.
 - (3) Churches, temples and synagogues.
 - (4) Crematoriums.
 - (5) Day care centers.
 - (6) Golf courses and related golf course uses, including golf driving ranges, golf maintenance buildings and golf club houses.
 - (7) Hospitals, sanitariums, old age, convalescent, nursing and rest homes.
 - (8) Major outdoor amusement and recreation facilities.
 - (9) Mortuaries.
 - (10) Schools.
 - (11) Telecommunication antennas and towers.
 - (12) Yacht harbors and boating facilities.
- (c) Buildings and uses normally considered directly accessory to the uses permitted in this section shall also be permitted in the RS district.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Permitted Uses in the RM District
Section 25-5-32

- (a) The following uses shall be permitted in the RM district:
 - (1) Adult day care homes.
 - (2) Bed and breakfast establishments, as permitted under section 25-4-7.
 - (3) Boarding facilities, rooming, or lodging houses.
 - (4) Cemeteries and mausoleums, as permitted under chapter 6, article 1 of this Code.
 - (5) Commercial or personal service uses, on a small scale, as approved by the director, provided that the total gross floor area does not exceed one thousand two hundred square feet and a maximum of five employees.
 - (6) Community buildings, as permitted under section 25-4-11.
 - (7) Crop production.
 - (8) Dwellings, double-family or duplex.
 - (9) Dwellings, multiple-family.
 - (10) Dwellings, single-family.
 - (11) Family child care homes.
 - (12) Group living facilities.
 - (13) Home occupations, as permitted under section 25-4-13.
 - (14) Meeting facilities.
 - (15) Model homes, as permitted under section 25-4-8.
 - (16) Neighborhood parks, playgrounds, tennis courts, swimming pools, and similar neighborhood recreational areas and uses.
 - (17) Public uses and structures, as permitted under section 25-4-11.
 - (18) Temporary real estate offices, as permitted under section 25-4-8.
 - (19) Time share units situated in any of the following:
 - (A) Areas designated as resort under the general plan land use pattern allocation guide (LUPAG) map.
 - (B) Areas determined by the director to be within resort areas identified by the general plan land-use element, except for retreat resort areas.
 - (C) Areas determined for such use by the council, by resolution.
 - (20) Utility substations, as permitted under section 25-4-11.
- (b) In addition to those uses permitted under subsection (a) above, the following uses may be permitted in the RM district, provided that a use permit is issued for each use:
 - (1) Care homes.
 - (2) Churches, temples and synagogues.
 - (3) Crematoriums.
 - (4) Day care centers.
 - (5) Golf courses and related golf course uses, including golf driving ranges, golf maintenance buildings and golf club houses.
 - (6) Hospitals, sanitariums, old age, convalescent, nursing and rest homes.
 - (7) Major outdoor amusement and recreation facilities.
 - (8) Mortuaries.
 - (9) Schools.
 - (10) Telecommunication antennas and towers.
 - (11) Yacht harbors and boating facilities.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

- (c) Buildings and uses normally considered directly accessory to the uses permitted in this section shall also be permitted in the RM district.

Permitted Uses in CV District
Section 25-5-122

- (a) The following uses shall be permitted in the CV district:
- (1) Adult day care homes.
 - (2) Amusement and recreation facilities, indoor.
 - (3) Art galleries, museums.
 - (4) Automobile sales and rentals.
 - (5) Automobile service stations.
 - (6) Bars.
 - (7) Bed and breakfast establishments, as permitted under section 25-4-7.
 - (8) Boarding facilities, rooming, or lodging houses, provided that the maximum density shall be one thousand two hundred fifty square feet of land area per rentable unit or dwelling unit.
 - (9) Business services.
 - (10) Cemeteries and mausoleums, as permitted under chapter 6, article 1 of this Code.
 - (11) Churches, temples and synagogues.
 - (12) Commercial parking lots and garages.
 - (13) Community buildings, as permitted under section 25-4-11.
 - (14) Convenience stores.
 - (15) Crop production.
 - (16) Day care centers.
 - (17) Dwellings, double-family or duplex, provided that the maximum density shall be one thousand two hundred fifty square feet of land area per rentable unit or dwelling unit.
 - (18) Dwellings, multiple-family, provided that the maximum density shall be one thousand two hundred fifty square feet of land area per rentable unit or dwelling unit.
 - (19) Dwellings, single-family.
 - (20) Family child care homes.
 - (21) Farmers markets. When the vending activity in a farmers market involves more than just the sale of local fresh and/or raw produce, plant life, fish and local homegrown and homemade products for more than two days a week, the director, at the time of plan approval, shall restrict the hours of use, maintenance and operations and may require improvements as determined appropriate to ensure its compatibility with the existing character of the surrounding area.
 - (22) Financial institutions.
 - (23) Group living facilities.
 - (24) Home occupations, as permitted under section 25-4-13.
 - (25) Hospitals, sanitariums, old age, convalescent, nursing and rest homes and other similar uses.
 - (26) Hotels, when the design and use conform to the character of the area, as approved by the director.
 - (27) Laboratories, medical and research.
 - (28) Lodges.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

- (29) Manufacturing, processing and packaging light and general, except for concrete or asphalt products, where the products are distributed to retail establishments located in the immediate community, as approved by the director.
- (30) Medical clinics.
- (31) Meeting facilities.
- (32) Model homes, as permitted under section 25-4-8.
- (33) Mortuaries.
- (34) Neighborhood parks, playgrounds, tennis courts, swimming pools, and similar neighborhood recreational areas and uses.
- (35) Offices.
- (36) Personal services.
- (37) Photography studios.
- (38) Public uses and structures, as permitted under section 25-4-11.
- (39) Publishing plants for newspapers, books and magazines, printing shops, cartographing, and duplicating processes such as blueprinting or photostating shops, which are designed to primarily serve the local area.
- (40) Repair establishments, major, when there are not more than five employees, as approved by the director.
- (41) Repair establishments, minor.
- (42) Restaurants.
- (43) Retail establishments.
- (44) Schools.
- (45) Telecommunication antennas, as permitted under section 25-4-12.
- (46) Temporary real estate offices, as permitted under section 25-4-8.
- (47) Theaters.
- (48) Utility substations, as permitted under section 25-4-11.
- (b) In addition to those uses permitted under subsection (a) above, the following uses may be permitted in the CV district, provided that a use permit is issued for each use:
 - (1) Crematoriums.
 - (2) Golf courses and related golf course uses, including golf driving ranges, golf maintenance buildings and golf club houses.
 - (3) Major outdoor amusement and recreation facilities.
 - (4) Yacht harbors and boating facilities.
- (c) Residential uses in connection with the operation of any permitted uses shall be permitted in the CV district.
- (d) Buildings and uses similar to the permitted uses listed in subsection (a) above shall be permitted in the CV district, as approved by the director.
- (e) Buildings and uses normally considered accessory to the uses permitted in this section shall also be permitted in the CV district.

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

A mixed-use center of approximately 25 acres is planned in the central core of the Project District and would contain about 125 residential units and 80,000 square feet of gross floor area. This center will provide the flexibility of having nearby commercial/residential activities as needed by the community. The Applicant would like to retain the flexibility of transferring residential units from other residential areas to the mixed-use center as necessary.

2.3.7 Project Open Space, Parks and Historic/Cultural Sites

Approximately 234 acres of open space will be set aside to provide a buffer along Queen Ka'ahumanu Highway.

A 10-acre active park was initially planned on the adjoining Parcel 40 over which the Applicant has management control pursuant to its Amended Agreement with Bridge, but the Applicant has offered to expand that park to 16 acres. The active park will be developed in the first phase.

A 16-acre natural park for passive uses and 5-acre red 'ilima preserve will be set aside in the later phase of the development as required by Ordinance No. 96-153. The Applicant will work with a botanist to resurvey the plot to determine the existence of the red 'ilima and to develop an interpretation and public education program, as appropriate. The park and preserve are anticipated to be available when the adjacent phasing is developed. The active and passive parks will be maintained in private ownership unless and until the County desires to take them over.

Archaeological Site 22514 will be preserved when its interface with the golf course is known in accordance with approvals from the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD).

2.3.8 Project Access, Circulation and Roads

There are two approved permitted access points along the Queen Ka'ahumanu Highway. These accesses have temporary access pads on the highway. The northern temporary access serves as the egress for the County's Waikoloa Village Emergency Evacuation Access Road, which extends by way of an easement for 2.13 miles from the highway to the end of Hulu Street in Waikoloa Village. The Waikoloa Village Emergency Evacuation Access Road provides more than 5,000 Waikoloa residents with an alternative exit in case of fire, flooding or other disasters. Currently, the public transit serving the area of Waikoloa Village is a single bus route provided by the Hawai'i County Mass Transit Agency between The Villages and Kailua-Kona with a morning pick up and afternoon drop off at the Waikoloa Post Office.

Access to the Project will be phased from Queen Ka'ahumanu Highway via the two permitted points. Phasing would occur with actual development. The initial access will be at the Project intersection with Mauna Lani Resort, which will be fully channelized and signaled. These improvements will be installed and operational at the completion of Phase I development.

A connector road beginning at the northern access point on Queen Ka'ahumanu Highway traversing a portion of the Property extending to Waikoloa Village's Hulu Street is shown on the Conceptual Master Plan. The specific location and alignment of this road is still under discussion with the County and community representatives. The connector road is planned to be

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

constructed in conjunction with the Phase 1 development and the planned Community Facilities District (CFD) bond funding.

All other interior roads would be constructed to meet with the requirements of the County Department of Public Works (DPW). Since some of the roads will be private, the Applicant may consider modification of the road standards in an effort to create a neighborhood ambiance.

2.3.9 Project Water

2.3.9.1 Domestic Water

The County of Hawai'i's public domestic water system does not serve the Project site. For the affordable housing units, up to 200,000 gallons of domestic water per day will be purchased at a PUC-approved rate under contract with the private purveyor, West Hawai'i Water Company, Inc. (WHWC) Any permanent arrangement with WHWC to provide domestic water to the affordable housing units or various phases of the Project must be approved by the Public Utilities Commission. In either circumstance, the Applicant will construct the water system and its connection at Hulu Street at its own expense.

To meet the potable water system requirements for the Project, by Agreement with the County Board of Water Supply (see Appendix C), the Applicant will develop and construct up to four wells in the 'Ouli Well Field along with related transmission and storage improvements in the 'Ouli corridor to the south and parallel to the Waimea-Kawaihae Road. As described in *Assessment of the Potential Impact on Water Resources of the Development of the 'Āina Le'a Village Project* (see Appendix F), domestic water from the 'Ouli wells would be added into the Lalamilo component of DWS' existing South Kohala system. By terms of the Agreement, one of these wells will be considered standby and 20 percent of the capacity of the three remaining wells would be reserved for DWS. The maximum day supply available to the Applicant is estimated to be between 2.4 to 2.9 mgd. This is equivalent to an average day supply of 1.61 to 1.96 mgd by DWS' design standards, sufficient to meet the projected average daily use of approximately 1.32 mgd.

It is likely that a time extension to the Water Supply Agreement will be requested along with other construction-related revisions.

The addition of the 'Ouli wells and system improvements will provide much-needed backup and redundancy to the existing DWS water system serving Mauna Lani, Mauna Kea, Kawaihae and Puakō. A detailed discussion of the potable water system for the project is found in Section 4.11.1.

2.3.9.2 Irrigation Water

The Project golf course and road landscaping will be irrigated with a blend of brackish water from onsite wells and reclaimed, recycled wastewater that will be distributed by way of separate irrigation transmission system. The recycled wastewater (up to 250,000 gallons of discharge water) will be provided by Agreement with the West Hawai'i Sewer Company (WHSC). The

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Applicant intends to upgrade the WHSC 'Auwaiakeakua Waste Water Treatment Plant (WWTP) to begin treating the R-2 quality water for R-1 quality output. The R-1 treatment will eliminate the need for cesspools at the 'Auwaiakeakua WWTP. An estimated average use of 0.527 gpd non-potable water is calculated for the Project (see Appendix F, Table 3).

2.3.9.3 Wastewater Treatment Plant (WWTP)

The Applicant is planning to construct a private WWTP on approximately 10 acres of land on the adjacent Parcel 40 to the south over which the Applicant has control by Amended Agreement, as shown on the Conceptual Master Plan in Figure 3 (also shown as Phase 2 & 3 WWTP in Figure C-001, "Civil Phase Development Plan," Appendix D2). Initially, a "packaged" WWTP is planned in the area mauka of the planned commercial village and would be sized to serve the initial 385 affordable townhouse units (see "Phase 1 WWTP" in Figure C-001, Appendix D2). Design of this initial treatment facility can be compartmentalized so as to be potentially relocated and integrated as part of the permanent project WWTP. Both the temporary and permanent WWTPs would use a membrane bioreactor process to treat wastewater at an R-1 tertiary quality level to permit effluent reuse for golf course and landscape irrigation and future construction dust control. The combination membrane and biological process filters out suspended solids and pollutants, including nitrogen, phosphorous, and microorganisms such as viruses, bacteria and parasitic cysts. The WWTP would be designed for an average dry weather flow liquid capacity of about 2.0 mgd, and designed to handle a peak flow rate of 10.5 mg (see Appendix D). A detailed discussion about the WWTP is found in Section 4.11.2.

2.4 PROJECT AND PROJECT DISTRICT DEVELOPMENT STANDARDS

2.4.1 Project District Development Standards and Project Guidelines

Development of The Villages will be guided by a set of standards that will be made a part of the Project District zoning. For the most part, the standards are comparable to those required in the Zoning Code. These standards are outlined in Table 6, entitled "Project District Development Standards Summary Table."

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Table 6
Project District Zoning Development Standards Summary Table

DESIGN PARAMETERS	SINGLE-FAMILY	MULTI-FAMILY	COMMERCIAL
Proposed Uses	Single-Family	Duplex and Multi-Family	Commercial Center or Mixed Use Node, Lodge, Club, Clubhouse, Golf Academy
Comparable Zoning	RS	RM	CV
Permitted Uses	Same as RS zoning district, except for golf course and related uses which are added as a permitted use.	Same as RM zoning district, except for golf course and related uses which are added as a permitted use.	Same as CV zoning district, except for golf course and related uses which are added as a permitted use.
Permitted With Use Permit	Same as RS zoning district, except for golf course and related uses, which are permitted uses, as noted above.	Same as RM zoning district, except for golf course and related uses, which are permitted uses, as noted above.	Same as CV zoning district, except for golf course and related uses, which are permitted uses, as noted above.
Height Limit	Same as RS zoning district (35 feet).	Same as RM zoning district (45 feet)	Same as CV zoning district (35 feet).
Minimum Building Site Area	7,500 square feet	7,500 square feet	7,500 square feet
Minimum Front and Rear Yards	Same as RS zoning district. For 7,500-9,999 sf lots: 15 feet For 10,000-19,999 sf lots: 20 feet For 20,000 sf or greater lots: 25 feet	Same as RM zoning district (20 feet).	Same as CV zoning district (15 feet)
Minimum Side Yards	Same as RS zoning district. For 7,500-9,999 sf lots: 8 feet for one story, 10' for two stories. For 10,000-19,999 sf lots: 10 feet for one story plus 1 additional foot for each additional story. For 20,000 or greater lots: 15 feet.	Same as RM zoning district. 8 feet for one story building, plus an additional 2 feet for each additional story.	Same as CV zoning district. None, except where adjoining building site is RS or RM & where side yard adjoins side yard of a building site in RS-or RM, there shall be a side yard conforming to side yard requirements for the adjoining use.
Other Regulations	a) More than one main building permitted. b) Distance between main buildings = 15 feet. c) Exceptions may be approved by director.	a) More than one main building permitted. b) Distance between main buildings = 15 feet. c) Plan approval required for new buildings & additions to existing buildings. d) Director may approve exceptions.	a) Landscape front yards. b) Plan approval required for new structures & additions to existing structures. c) Exceptions to the regulations may be approved by director.

In addition, the Project will be guided by the following sustainable planning and building design guidelines:

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

- Conduct site planning to preserve existing resources and natural features
- Promoting a “walkable community” through efficient land use centered on a mixed-use village center
- Promote the use of LEED principles in the planning, design, construction, and operation of Project buildings
- Provide a bicycle and pedestrian paths along certain roads within the Project
- Employ natural cooling techniques in building design, orientation, and the use of landscaping
- Encourage the use of renewable energy devices such as solar water heaters and photovoltaics
- Incorporate water-efficient landscaping and landscape methods to minimize evaporation, reduce weed growth and retard erosion
- Irrigate roadside landscaping and the golf course with non-potable water or reclaimed water when feasible
- Use pervious paving instead of concrete or asphalt paving where permitted
- Use natural or grass swales to control water runoff

In addition, covenants, conditions, and restrictions (CC&R's) and design guidelines will be developed and used for this Project.

2.5 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS

2.5.1 Development Phasing and Timetable

Phase I of The Villages will include development of at least 385 three- and four-bedroom affordable townhouse units, internal roads and infrastructure to the affordable units, active park and the WWTP. Construction will take place in the three-year period commencing February 2009 through 2012. The sale of the townhouses would commence when affordable housing agreements and procedures to be developed with the County are final.

Other phases and their components include:

Phase II:	Single- and Multiple-Family Residential building pads and infrastructure
Phase III:	Commercial; Golf Course; passive park/preserve; infrastructure
Phase IV:	Single- and Multiple-Family Residential; golf academy; lodge; infrastructure

With the exception of Phase I, the development of various uses in each phase will be flexible depending upon economic forces and marketing conditions.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

The development timetable for Phases II and beyond is estimated to be completed based upon open market conditions extending to at least the year 2015.

2.5.2 Preliminary Costs

The construction cost for The Villages over a 10-year build out schedule is estimated at \$2.56 billion.

The establishment of a Community Facilities District (CFD), pursuant to Hawai'i County Council Resolution No. 486-06, will assist in the financing of prescribed special improvements in the Project by authorizing the levy of a special tax and the issuance of bonds secured by proceeds of the special tax. The special improvements include roads, water system, sewer system, solid waste facilities, electric and telephone systems, infrastructure design, park and recreational facilities, police and fire facilities, and other county/public infrastructure.

The Applicant has received initial approval from the County Council, in the form of a Resolution of Intent, to proceed with the creation of a Community Facilities District (CFD) and the issuance of CFD bonds in the face amount of up to \$100 million. The bonds are expected to yield in excess of \$85 million after reserves and offering costs. The proceeds from the bonds would be applied to infrastructure development and will be repaid over time from assessments made to the individual home or lot owners after purchase.

The Applicant is working with the County Finance Department and its underwriters to proceed with CFD process by advancing \$75,000 to the County to pay for the costs and expenses related to the formation of the CFD and the issuance of the bonds.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

3 DESCRIPTION OF AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

3.1 CLIMATE

Existing Conditions

The Project is located on the northwestern side of the island of Hawai'i occupying a portion of the lower northwestern slope of Mauna Kea. Much of the western coast of the island of Hawai'i is sheltered from the northeasterly trade winds by high mountains. Winds in Kohala vary substantially over short distances and short periods of time caused by topographic effects. When trade winds are strong, high winds from the east or northeast can sweep through the saddle between Kohala Mountains and Mauna Kea. In the winter, storms can bring very strong "Kona" winds from the south or southwest for brief periods. When trade winds or Kona winds are absent or faint, local winds such as land or sea breezes in the form of downslope or upslope winds, respectively, tend to dominate the wind pattern for the area. During these times, winds typically move onshore from the west during the daytime and offshore at night and during early morning hours. Wind speeds predominantly vary between about 5 and 15 mph; however, prolonged periods of higher or lower wind speeds do occur.

The Project area receives approximately 9 inches of rainfall annually. The mean annual temperature is about 75 degrees Fahrenheit with an average high of 83 degrees Fahrenheit and an average low of 67 degrees Fahrenheit. Relative humidity is about 40 percent during the late morning and afternoon hours.

Potential Impacts and Mitigation

Development of the Project is not expected to have an impact on climatic conditions and no mitigation measures are planned. Landscaping and shade trees in parks and common areas will be planted throughout the Project to give relief and shade to pedestrians, bicyclists and park users.

3.2 GEOLOGY AND TOPOGRAPHY

Existing Conditions

The Project area is gently to moderately sloping from east to west at an average grade of about 7 percent. Elevations range from 150 feet above msl at the western boundary adjacent to the Queen Ka'ahumanu Highway and 700 feet at the eastern boundary of the Property. Although slopes within the project site range from 6 to 20 percent, the steeper sloped areas are generally associated with the gulch areas and rock outcroppings.

The Project site is bounded to the north by the 'Auwaiakeakua Gulch. The area north of this gulch, which is owned by Bridge, is characterized by gently rolling hills. There are some trees in this area and large boulders. Because of the boulders and terrain near the makai end of the site,

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

views of the interior portion of the site from the Queen Ka'ahumanu Highway are somewhat obscured.

The soil north of the Gulch is characterized by stony very fine sandy loam while the soil in the southern section is characterized by 'a'a lava flows from the eruptions of Mauna Loa volcano located 36 miles southeast of the Property.

Potential Impacts and Mitigation

While the Project will cause some change in the topography of the Property through the preparation and construction of building pads, the golf course and infrastructure, the overall development is expected to adhere to the general topographic character of the site. The location of land uses during the detailed planning and siting of facilities will avoid changes in topography as much as possible. The golf course design in particular will use existing terrain and vegetation to enhance golf play and the scenery. Appropriate engineering, design and construction measures will utilize the natural slopes and features in the design of the golf course and in village planning efforts to minimize grading.

Information on existing drainage conditions and erosion control are provided in Sections 3.3 and 4.11.4, respectively.

3.3 SOILS

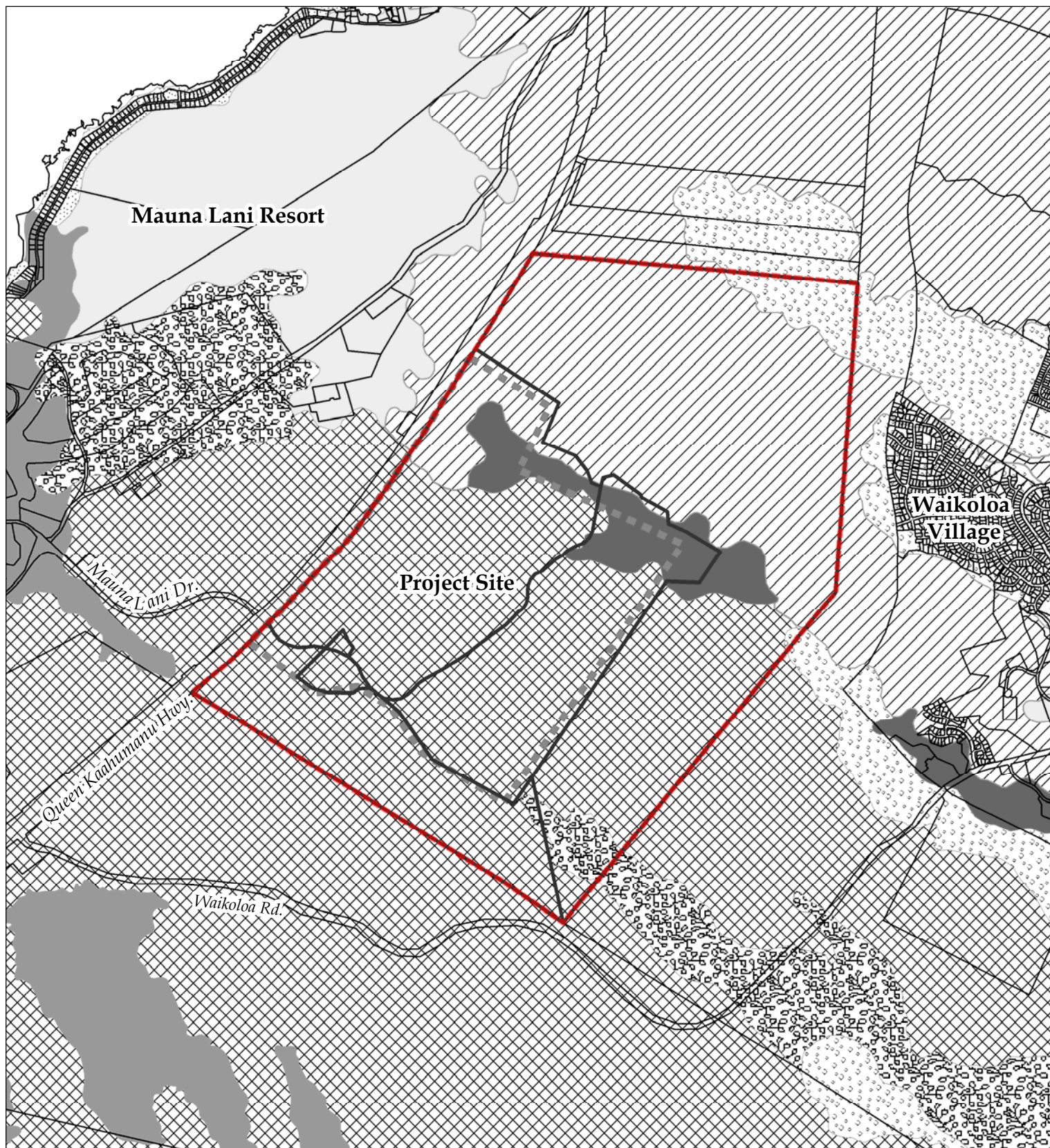
Existing Conditions

3.3.1 U.S. Department of Agriculture (USDA)-Soil Conservation Service (SCS)











The USDA-SCS Soil Survey classifies the soil in the Project area as being of the Kawaihae and Puakō series. Specific soil types are described below and are shown in Figure 9.

Kawaihae extremely stony very fine sandy loam, 6 to 12 slopes (KNC). The Kawaihae soil series consists of somewhat excessively drained extremely stony soils that formed in volcanic ash. These soils have a very thin surface layer of fine sandy loam over silt loam and loam. KNC is found on the leeward coastal plains of Mauna Kea at elevations ranging from sea level to 1,500 feet. Permeability is moderate, runoff is medium, and the erosion hazard is moderate.

Lava Flows (rLV). Approximately 80 percent of the soils located on the Project site are 'a'a lavas, which has practically no soil covering and is bare of vegetation, except for mosses, lichens, ferns, and a few small trees. These soils are described as having limitations of stony shallow soils along with drought conditions.



Legend

-  Property Boundary
-  Urban District Boundary
-  BEACHES
-  KAMAKOHA VERY FINE SANDY LOAM, 0 TO 10%
-  KAWAIHAE EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 12%
-  LAVA FLOWS, AA
-  LAVA FLOWS, PAHOEHOE
-  PUU PA EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 20%
-  ROCK LAND
-  VERY STONY LAND

Source: State GIS Data

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 9

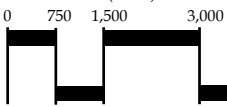
Soil Conservation Service

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH LINEAR SCALE (FEET)



05/03/2010

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Pu'u Pa Extremely stony very fine sandy loam (PVD). This soil type is extremely stony, very fine sand loam found on 6 to 20 percent slopes. In a representative profile, the surface layer is very dark brown, extremely stony, very fine sandy loam about 6 inches thick. The next layer is dark brown and dark yellowish brown, very stony, very fine sandy loam about 34 inches thick. It is underlain by fragmented 'a'a lava. The agricultural capability subclass of PVD is severely limited by stony shallow soils together with drought conditions, which make them generally unsuitable for cultivation.

Very stony land (rVS). These types of soils consist of very shallow soil material and a high proportion of 'a'a lava outcrops. The dominant slope is between 10 and 15 percent. Soil material between the lava outcrops and in the cracks of the lava run between 5 to 20 inches deep. Vegetation may be a sparse cover in dry areas to dense stands of ohia and tree fern in areas of high rainfall. On The Villages site, vegetation is quite sparse. The erosion hazard is slight and the soil type is unsuited for machine tillability.

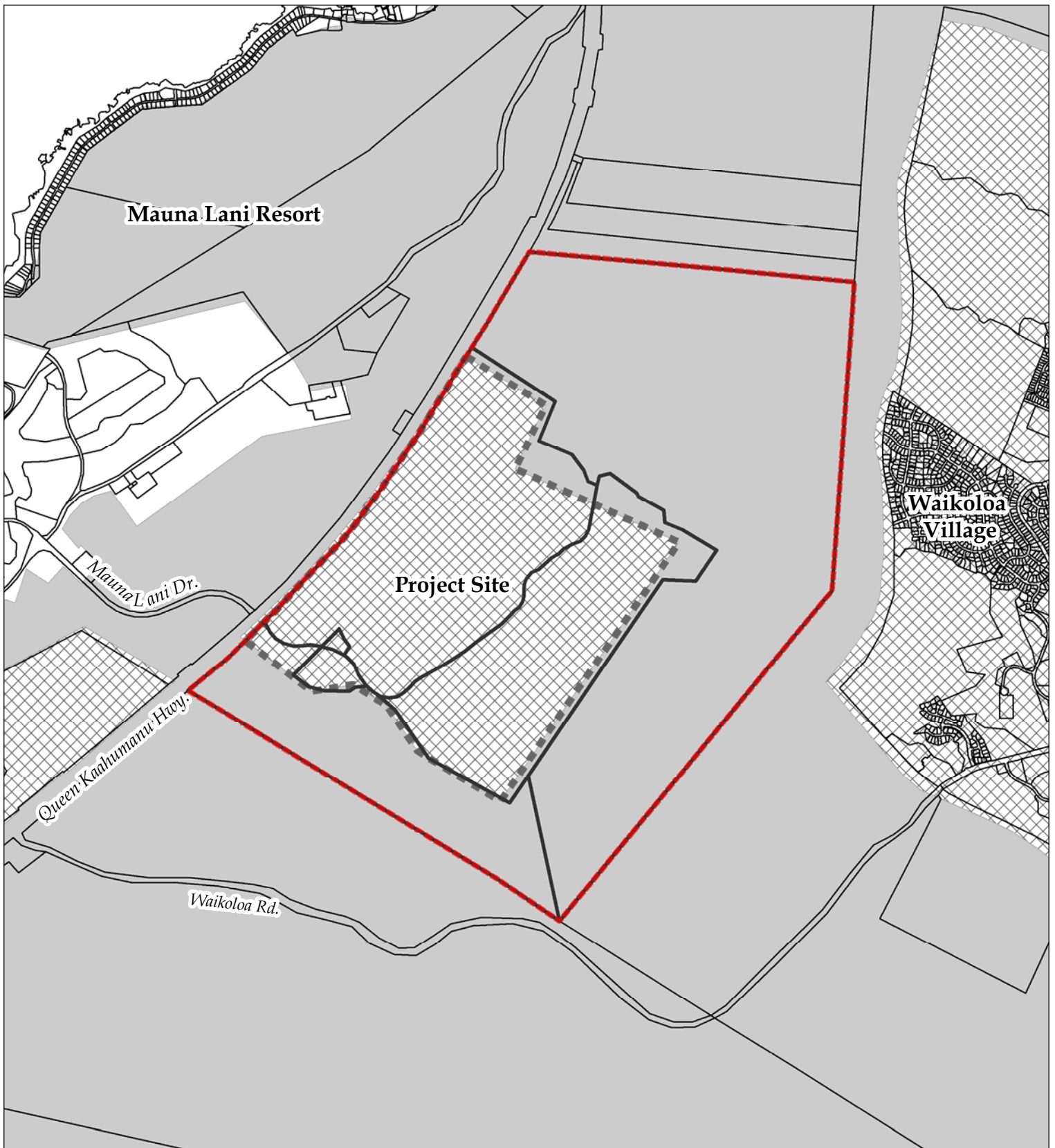
A soils investigation titled *Geotechnical Engineering Reconnaissance Puakō Residential Golf Community* was prepared for The Villages site in October 7, 1991. The Geotechnical Engineering Reconnaissance report indicated that surface soils appear to occur only in the northern portion of the site. A thin cover of wild grasses with scattered thickets of kiawe trees are found on the northern portion of the site. The southern portion is exposed with 'a'a lava flows. Boulders and cobblestones can be found under the wild grasses.

According to the *Preliminary Engineering Report for The Village of 'Āina Le'ā* prepared by SSFM International, Inc. dated July 2009, soils conditions have not changed from 1991 to present. The Preliminary Engineering Report is included in Appendix D.






3.3.2 University of Hawai'i Land Study Bureau (LSB) Detailed Land Classification

The University of Hawai'i LSB Detailed Land Classification system classifies soils by land type according to an overall crop productivity rating with and without irrigation, and for selected crop productivity ratings for seven crops. The LSB ratings range from "A" to "E" with "A" being the best or most productive and "E" being only marginally suitable for agricultural use. Soils in urban areas are "Not Classified."

The LSB identifies most of the Property's soil as "Not Classified." A small portion of land in the SLU Agricultural District is classified "E" or very poorly suited for agricultural purposes, as illustrated in Figure 10.



Legend

-  Property Boundary
-  Urban District Boundary
-  Hawai'i County TMK 2009
- Land Classification**
-  Type E: Very Poor
-  Not Classified

Source: State GIS Data

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 10

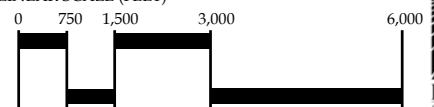
Land Study Bureau

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH LINEAR SCALE (FEET)



05/03/2010

3.3.3 State Agricultural Lands of Importance to the State of Hawai'i (ALISH)

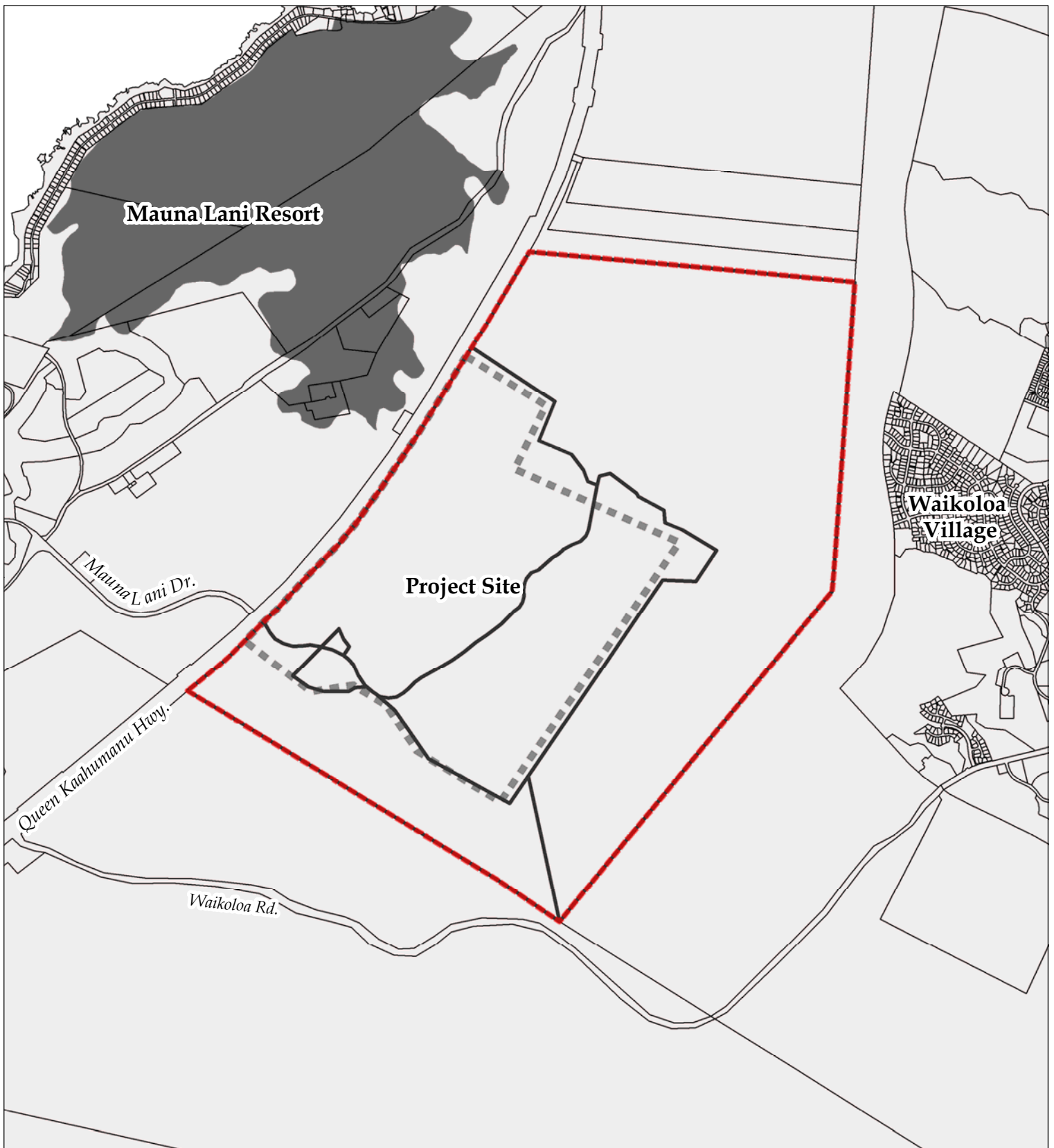
The State's ALISH system was developed by the State Department of Agriculture in 1977. The ALISH system rates agricultural land throughout the state as Prime, Unique or Other Lands. The rest of the lands are not classified.

Prime Agricultural Land is best suited for the production of food, feed, fiber and forage crops. These lands have soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed by modern farming methods.

Unique Agricultural Land can be used for specific high-value crops. This land has a special combination of soil quality, growing season, temperature, drainage, moisture supply, humidity, sunlight, or other conditions that favor the production of a specific crop of high quality and/or high yield when the land is treated and managed by modern farming methods. Coffee, watercress, and taro are examples of such crops.

Other Agricultural Land is also of statewide or local importance for production of food, feed, fiber, and forage crops. These lands can be farmed satisfactorily by applying more fertilizer and other soil additives, drainage improvements, erosion control practices and flood protection to produce good crop yields.

The Project site is not classified under the ALISH system (see Figure 11).



Legend

- Property Boundary
- Urban District Boundary
- Hawai'i County TMK 2009

ALISH Classification

- Other ALISH
- Unclassified

Source: State GIS Data

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 11

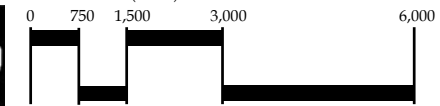
Agricultural Lands of Importance to the State of Hawai'i (ALISH)

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH LINEAR SCALE (FEET)



05/03/2010

3.3.4 Current Agricultural Activities on Property

There is no agricultural activity on the site due in large part to the absence of arable soil.

Potential Impacts and Mitigation

To address short-term impacts, soil erosion prevention and fugitive dust protection will be practiced and mitigation measures will be provided including, but not limited to, the following:

- All grading operations will be conducted in a manner that will ensure full compliance with dust, erosion, and sedimentation control standards set forth in Chapter 10, HCC, Erosion and Sedimentation Control.
- Limiting grading to not more than 20 acres at a time until dust and erosion controls are provided.
- Minimizing time of exposed graded areas.
- Grading perpendicular to slopes, as much as possible, as opposed to grading along the slopes.
- Watering soils during construction and stockpiling phases of the Project to minimize dust.
- Trucks transporting soils would be covered to minimize soil loss.

Coastal water quality should not be impacted by increased levels of fugitive dust resulting from construction due to its distance from the coastline (over 1.5 miles).

Long-term impacts of construction on unsuitable soils will be mitigated through the performance of soil engineering performed at specific sites as building pads are developed.

Recommendations will be made for mitigating building types and locations. This could include removing unsuitable soils under planned foundations and/or specific foundation designs. Further discussion can be found in Section 4.11.4.

Soils as an Agricultural Resource.

Given the land's limited resource value from an agricultural perspective, the Project should have little, if any, direct negative agricultural impact. There are no crops being grown or grazing being conducted on the Property.

The introduction of non-potable water to the Property will stimulate gardening activities on individual lots. The Project does have potential positive indirect agricultural impact of stimulating the use of locally grown agricultural products in the planned restaurants on site, as well as increasing the demand for landscape plants and turf throughout the Project.

3.4 NATURAL HAZARDS

Existing Conditions

3.4.1 Flooding

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) designates the Property in "Zone X" (areas determined to be outside the 500-Year Flood Plain/Minimal Flooding Area). This classification is partly the result of the area not being fully surveyed in the past. Figure 12 depicts the "Zone X" FEMA classification, which is confirmed in an EISPN comment letter from the Department of Land and Natural Resources dated January 11, 2008 included in Chapter 11.

The presence of 'Auwaiakeakua Gulch and its Northern Tributary along the northern boundary of the Property, South Stream and Puakō Gulch No. 4 is discussed in Section 4.11.4.

3.4.2 Tsunami

A tsunami is a sequence of ocean waves generated by vertical movements of the sea floor resulting from earthquakes, volcanic activity or large submarine landslides. The waves sweep inland potentially causing loss of life and damage to property.

The Project site is more than 1.5 miles inland from the coastline at elevations of 150 to 700 feet above msl, and is not within a tsunami inundation or evacuation zone.

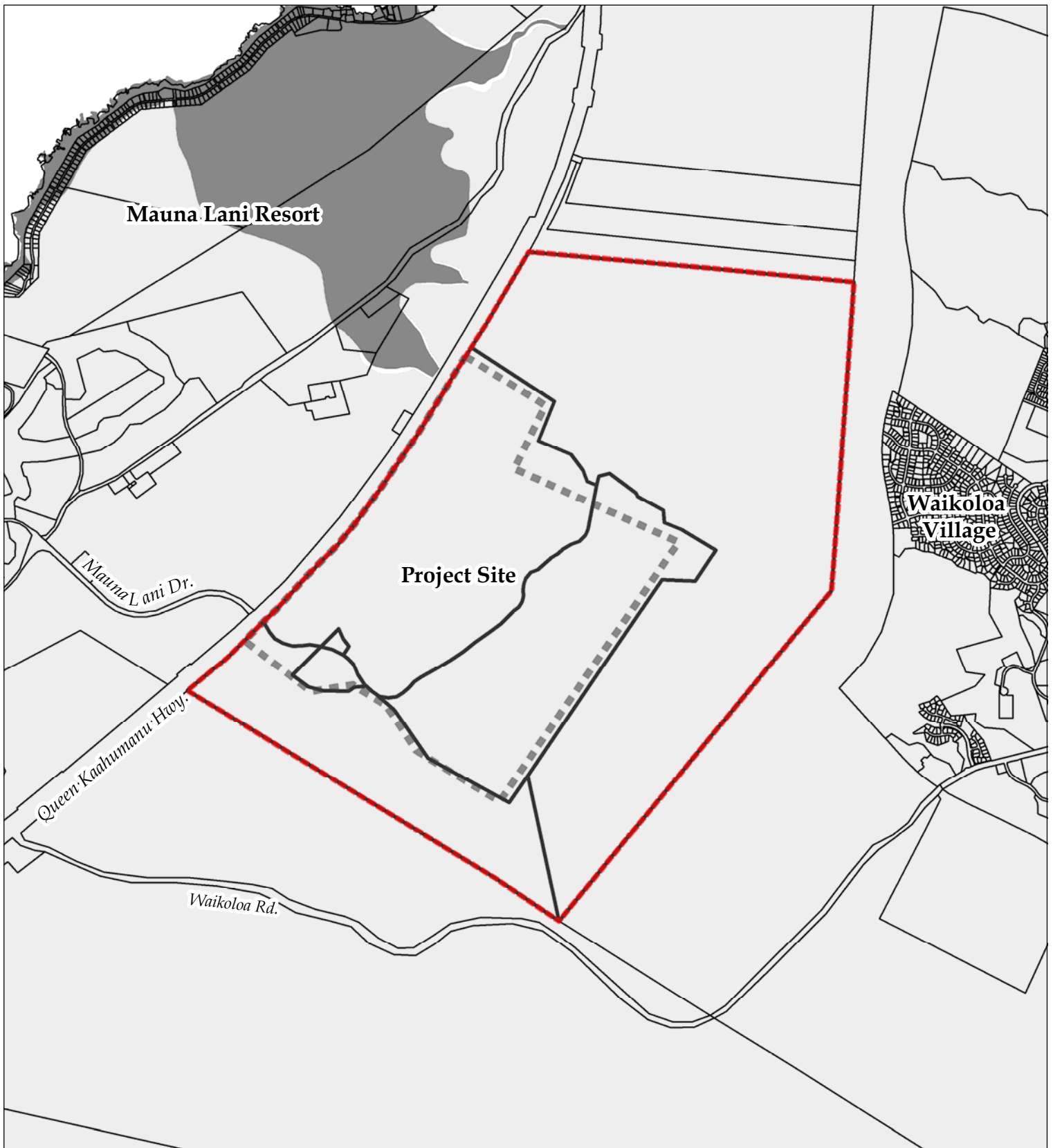
3.4.3 Hurricanes

The Kohala Coast is potentially susceptible to hazards from Pacific hurricanes generated off the Coast of Mexico. Oahu Civil Defense data shows hurricanes approaching within 75 nautical miles of Hawai'i on an average of once every 10 years. Based on historical records and more modern computer simulations of hurricane tracks, Hawai'i County is at risk of impact from hurricanes. Hurricane-related hazards include damage from high winds in excess of 74 mph and flooding due to heavy rainfall. Storm surge, while also an associated hurricane hazard, is not a potential threat to the Project site, as the site is located more than a mile inland from the shore.






3.4.4 Earthquakes

According to the Seismic Probability Rating in the Uniform Building Code, the entire island of Hawai'i is designated in Zone 4. Zone 4 is the highest zone designation on a scale from 0 to 4. Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

On October 15, 2006, the Big Island experienced its most recent major earthquake, which registered a magnitude of 6.7 followed by a 6.0 magnitude aftershock. The earthquake



Legend

-  Property Boundary
-  Urban District Boundary
-  Hawai'i County TMK 2009
-  Zone A: 100 Year Floodplain
-  Zone X: Outside Floodplain/Minimal Flooding Area

Source: State GIS Data

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 12

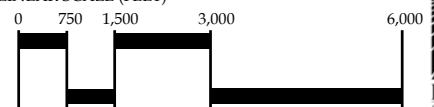
Flood Insurance Rate Map

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC

ISLAND OF HAWAII

NORTH LINEAR SCALE (FEET)



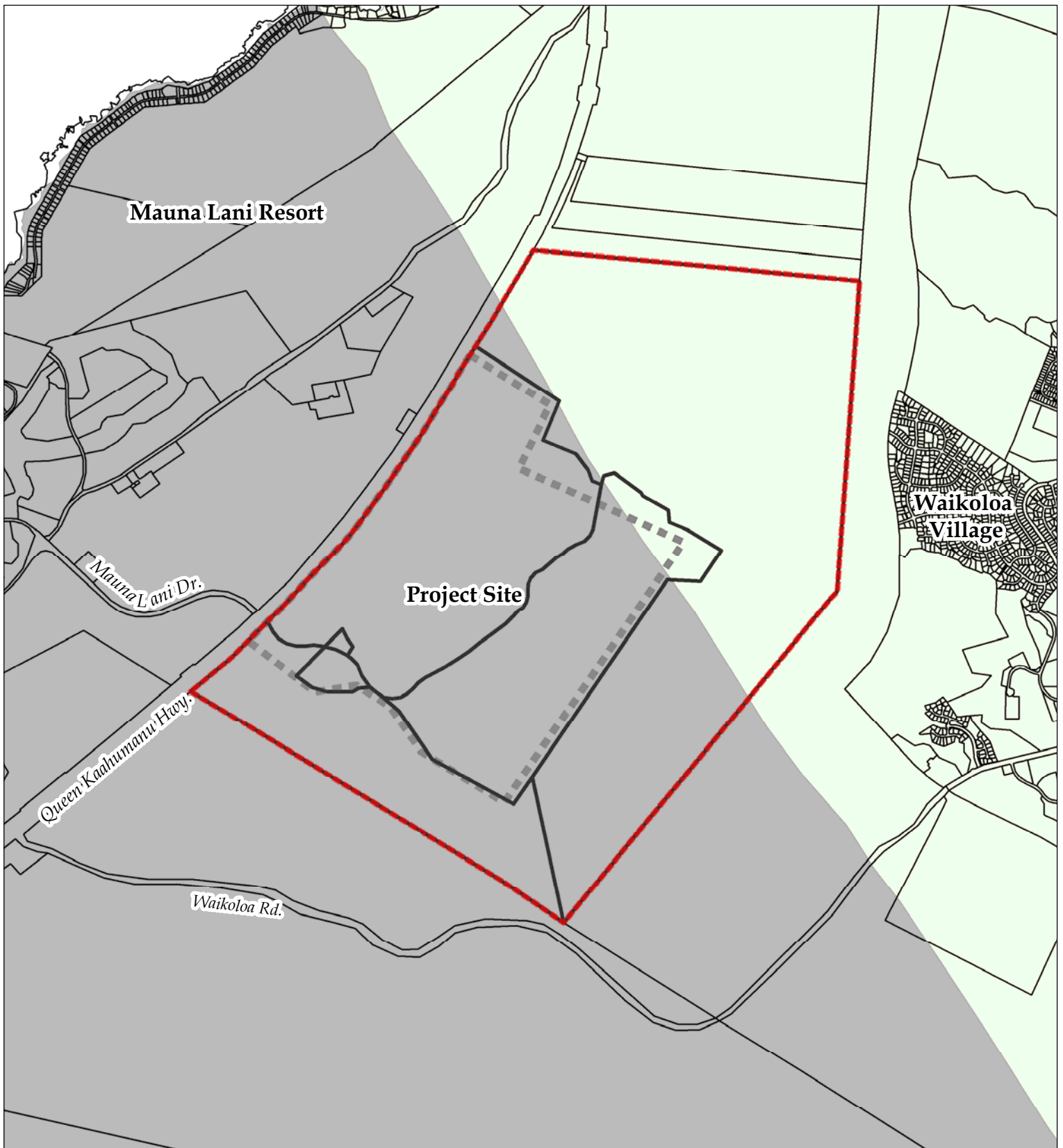
05/03/2010

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

caused damage to piers at Kawaihae Harbor, the Kohala Ditch irrigation system, a Waimea water reservoir, and numerous private structures in North and South Kohala. No damage was evident on the subject Property.

3.4.5 Volcanic Activity

The U.S. Geological Survey (USGS) has identified nine volcanic hazard zones for the island of Hawai'i with Zone 1 representing the most hazardous areas and Zone 9 the least hazardous areas. The Property is largely situated in lava hazard Zone 3, as shown in Figure 13. A relatively small area in the northeastern corner of the site lies in hazard Zone 8.



Legend

- Property Boundary
- Urban District Boundary
- Hawai'i County TMK 2009

Volcanic Hazard Zone

Hazard Zones are ranked from 1 (highest) to 9 (lowest)

- 3
- 8

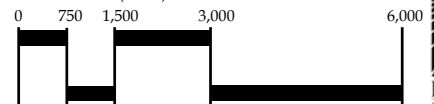
Source: State GIS Data Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 13

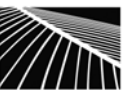
USGS Volcanic Hazards Map

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC
NORTH LINEAR SCALE (FEET)



ISLAND OF HAWAII



PBR HAWAII
& ASSOCIATES, INC.

05/03/2010

3.4.6 Wildland Fires

Wildland fires are a relatively frequent natural hazard faced by the residents, businesses, and wildlife of South Kohala. The region's gusty winds and arid, hot climate coupled with the fountain grass and dry vegetation increases the incidence of wildfires.

Using FEMA grant funds, the Hawai'i Drought Committee and the DLNR-Commission on Water Resource Management commissioned the preparation of a report to address County-wide drought issues. Composed of representatives from the federal, state and county government and private organizations, the Hawai'i Drought Committee proposed, among other recommendations, wildfire mitigation strategies in its *2004 County of Hawai'i Drought Mitigation Strategies*. Wildland fire strategies included establishing firebreaks around roads and communities in North and South Kohala and continuing the development and maintenance of a GIS map and database identifying various wildland fire protection resources.

The Waikoloa Emergency Access Road, which traverses northern portions of the Project site, provides emergency relief for Waikoloa Village residents when natural hazards or human activities force evacuation.

Potential Impacts and Mitigation

Natural hazards are difficult to predict, but would pose a risk of life and property should any occur within the Project site.

The proposed Project should not exacerbate any natural hazard conditions in the area and should improve the ability of emergency response agencies to respond to potential threats, as noted below with regards to potential wild-land fires.

If required, an emergency preparedness and response plan for the Project will be coordinated with the Civil Defense Agency.

Flooding and Tsunami. The Project is designated outside the 500-year flood plain (Zone X), and is located outside designated tsunami zones. A preliminary master drainage plan has been prepared to assess drainage system needs. Detailed drainage plans and reports will be prepared in conjunction with site plan approvals or grading permits, as required. Any improvements and structures will conform to the standards set forth in Chapter 27, HCC, relating to Floodplain Management.

No significant improvements or habitable buildings will be built within areas affected by the 'Auwaiakeakua Gulch, the North Tributary, Puakō Gulch No. 4 or South Stream.

Further discussion on flooding, drainage, and storm water management is provided in Section 4.11.4.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Hurricane, Earthquakes and Volcanic Activity. Mitigation of hazard associated with hurricanes includes adherence to County building codes and standards in order to minimize potential damage to structures. All buildings and structures within the proposed project would be designed and constructed in compliance with applicable building codes and standards.

Wildland Fires. The Project will also contain fire prevention measures, including access roads in accordance with the Uniform Fire Code (UFC) Section 10.207, water supply for fire suppression in accordance with UFC Section 10-301(c) and buildings under construction in compliance with the standards of UFC Article 87.

Artificial lakes, the golf course, the wide natural buffer along the highway frontage, open space and parks, and landscape plantings will be created as part of the Project. The Applicant has also committed to work with the Hawaii Wildfire Management Organization to identify potential actions for a coordinated strategy for wildfire protection in the area. Together, these measures will improve the community's fire protection efforts by providing natural and man-made firebreaks and increasing water resources and emergency access for fire protection in the Project area.

Additionally, development of the connector road as part of the project along the alignment of the emergency access road will improve its function in providing an alternative route for evacuation in the event of potential wildfires threatening Waikoloa Village, thereby improving safety conditions for area residents.

3.5 HYDROLOGY AND WATER RESOURCES

Three studies have been conducted of the water resources of the region in conjunction with the prior applications for the property's 1989 State Land Use Boundary amendment, the 1991 change of zone request and for the subject EIS. These include: 1) *Water Supply for Signal Puakō Properties* by John F. Mink dated February 1988; 2) *Water Resources and Supply for Puakō Residential Golf Community* by Water Resources Associates dated March 1992; and 3) *Assessment of the Potential Impact on Water Resources of the Development of the 'Āina Le'a Village Project in South Kohala, Hawai'i*, dated July 2009 and prepared by Tom Nance Water Resource Engineering. A copy of the later is included with the Preliminary Engineering Report, in Appendix D.

Existing Conditions

Groundwater Occurrence. Groundwater on the South Kohala coast occurs as a freshwater "lens" floating on saline water in a basal aquifer. The South Kohala aquifer extends from the coastline to at least four miles inland. Some general characteristics of this groundwater occurrence, based on studies of the water resources in the area, are as follows:

- The groundwater stands about 1.5 to 2.0 feet above the ocean level along the makai end of the project site and about 3 feet above ocean level along the inland end of the site. The groundwater level moves up and down semi-diurnally with the ocean tide, and, more significantly, it moves up and down with longer term

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

- fluctuations in the ocean's mean water level due to large-scale meteorological events.
- The ocean's tidal variation is transmitted inland as a pressure wave in the basal groundwater. For locations inland of the project site, the tidal-driven water level variations are indiscernible and longer-term groundwater level variations do occur at these inland wells.
- Most well water temperatures in the region are affected by geothermal heating. Groundwater temperatures generally range from the high 70s to the low 80s F, with the highest temperature (95.2F) found in the vicinity of Kawaihae Harbor along the Waimea-Kawaihae Road.
- Generally, the permeability of the substrate at most well locations in the area is very high, enabling large capacity wells to be developed with relatively modest draw-downs.

Groundwater Flow Rate. The total groundwater flow rate in the nine-mile coastal segment between Kawaihae Harbor to the north and 'Anaeho'omalū Bay to the south is estimated to be in about 90 million gallons per day (mgd). Pumpage for all wells located in the area is approximately 15 mgd. The remaining 75 mgd discharges into the marine environment. The groundwater flowing directly beneath the 1.6-mile-wide urbanized area of the project site and the approximately 2.9-mile project area is projected to be about 11 mgd and 20 mgd, respectively.

Existing Groundwater Quality. A summary of the existing groundwater quality at wells located down gradient (directly makai and north and south of the site), onsite, and directly up gradient of the site, from the *Nance Assessment*, is shown below in Table 7.

Table 7
Summary of Groundwater Quality at Various Wells

Location of the Wells	Nitrate NO ₃	Phosphate PO ₄	Salinity parts/1000
Down gradient			
Directly Makai	120.00	1.82	1.963
To the North	90.75	2.03	1.284
To the South	47.17	1.61	1.563
Onsite	72.96	1.04	2.059
Directly Up Gradient	94.66	2.28	0.379

Source: *Assessment of the Potential Impact on Water Resources of the Development of the 'Āina Le'a Village Project*, Nance, Table 12

This *Assessment* notes that (1) the salinity of the Project's on-site well is higher than surrounding wells, which is a result of the lower groundwater flow rate beneath the Project site; (2) nitrogen levels are exceptionally low on-site and to the south of the Project site compared to regional averages; and (3) the nutrient levels down gradient of the Waikoloa Village golf course and Waikoloa WWTPs are lower than levels up-gradient. The *Nance Assessment* concludes that this lack of an identifiable impact from Waikoloa Village generally and its disposal of wastewater specifically on regional groundwater quality is significant.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

Potable, Domestic Water Use. 'Āina Le'a has entered into an agreement with the County Department of Water Supply (DWS) to develop up to four wells in the 'Ouli parcel in the area of the Waimea-Kawaihae Road, and related reservoir and transmission improvements in the area south and parallel to the Waimea-Kawaihae Road. Potable water from the 'Ouli wells would be added into the DWS' South Kohala System, thereby enabling the 'Āina Le'a project to draw its potable water supply from the DWS' existing system in the Lalamilo corridor. A copy of the Agreement with DWS is found in Appendix C. By the terms of this agreement, one of the wells would be considered a standby well and 20 percent of the capacity of the three remaining wells will be reserved for DWS. Based on the projected well pump capacities, the maximum daily supply available to the 'Āina Le'a project would be in the range of 2.4 mgd to 2.9 mgd. This is equivalent, by DWS standards, to an average daily supply of 1.61 mgd to 1.96 mgd, which is sufficient to meet the projected Project domestic water requirements of approximately 1.32 mgd, as detailed in Table 8.

Table 8
Estimated Potable Water Use Demand in Urban Project District

Land Use	Number	Unit	GPD/unit	Year-Round Demand (gpd)
Single Family Residential	790	Units	600	474,000
Multi-Family	1,047	Units	500	523,500
Mixed Use (MF Res)	125	Units	400	50,000
Affordable Housing	500	Units	400	200,000
Commercial	340,000	sq. ft.	121/1000 ft	40,800
Mixed Use (Commercial)	80,000	sq. ft.	120/1000 ft	9,600
Golf Course Clubhouse				15,000
Parks/Open Space				10,000
TOTAL GPD FOR URBAN PROJECT DISTRICT AREA				1,322,900

Source: Assessment of the Potential Impact on Water Resources, Nance, July 2009

Non-Potable Water Use. The non-potable use to irrigate the project golf course and roadway areas would be provided by onsite brackish wells and reclaimed domestic wastewater. As noted, 'Āina Le'a has an agreement to upgrade the existing West Hawai'i Sewer Company's (WHSC) 'Auwaiakeakua WWTP to produce R-1 quality water for the use of up to 200,000 gallons of the treated effluent for irrigation purposes. Treated effluent would also be available from an on-site Project WWTP. The total non-potable water demand to irrigate the Project's 18-hole golf course and roadways is project at approximately 0.53 mgd, as shown in Table 9.

Table 9
Estimated Average Non-potable Water Use Demand in Urban Project District

Uses	Estimated Irrigated Area	GPD/acre	Average Water Use (gpd)
Golf Course	90 acres	5,500	495,000
Roadways	8 acres	4,000	32,000
TOTAL PROJECT	98 acres		527,000

Source: Assessment of the Potential Impact on Water Resources, Nance, July 2009

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Storm Water Runoff. Although there are four culverts at the Queen Ka'ahumanu Highway that were designed to receive runoff from mauka lands, only two northern culverts have had runoff reach or pass through them since the early 1970s: at 'Auwaiakeakua and at the unnamed gulch to the north. On the southern half of the project site where most of the ground surface consists of 'a'a lavas, Nance notes that the drainageways delineated on the USGS map are not actually storm water gulches but rather the lateral boundaries of various lava flows that appear to be drainageways in aerial photos. The two gulches that cross the north end of the project do convey runoff through the project site, beneath Queen Ka'ahumanu Highway and onto the Puakō Flats area makai of the highway. The lavas in the areas of these two gulches makai of the project site are older with a greater coverage of ash deposits and runoff from the gulches leaving the project area is infrequent, occurring typically less than once every three years.

Potential Impacts and Mitigation

Four activities associated with Project construction and full build-out have the potential of affecting the region's water resources:

- Use of potable and brackish-quality groundwater.
- Disposal of domestic wastewater.
- Percolation of excess landscape irrigation water to the underlying groundwater.
- The collection and disposal of storm water runoff.

The discussion below explains the potential impacts these activities could have on the region's hydrology and water resources.

Use of Potable, Domestic Water. The Project will impact the South Kohala water resources by increasing the demand for potable water. According to the Nance Assessment, projected potable water demands of the Project are estimated to be 1.323 mgd. Table 8 above provides a summary of the estimated potable water use demand by land use based primarily on actual consumption rates in the neighboring Waikoloa Village, which are higher than DWS standards.

To conserve potable water, a dual water system using non-potable water for irrigation purposes is planned. Because brackish and recycled water will be used for irrigation, a water reuse plan will be developed. The plan will include information about the irrigation system design, system management, public education, and other information required by the Hawai'i Department of Health's "Guidelines for the Treatment and Use of Recycled Water," May 15, 2002 edition, or any newer adopted edition and subsequent adopted revisions of the guidelines.

Water conservation will also be encouraged and practiced through the use of drought-tolerant plants and trees and mulching in common areas, roads, and parts of the golf course; installing water conservation devices on showers and toilets; and applying other acceptable conservation methods.

The Assessment concludes that "[b]ased on the range of supply to be provided by the 'Ouli wells, the available supply from the 'Ouli wells will be adequate for the urbanized area."

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Use of Non-potable, Brackish Water. Non-potable water uses, listed above in Table 9, include irrigation of roadside landscaping and an 18-hole golf course. It is planned that effluent from wastewater treatment will be used for irrigation to be supplemented by brackish water wells. The non-potable and recycled water demand of the Project is estimated to be 0.53 mgd.

The Nance *Assessment* calculated that within the 3.6-mile coastal segment makai of the project area between Hohai Point at Puakō Bay and Makaiwa Bay fronting the Mauna Lani Resort, the total (natural) groundwater flow rate is on the order of 35 to 40 mgd, and, accounting for the ongoing pumpage of wells in the area, a safe developable long-term brackish water supply is projected to be in the range of 12 to 18 mgd.

Groundwater Flow Rate. The Project will extract groundwater from wells in the 'Ouli parcel for potable use and onsite for (brackish) irrigation use. It will also return water to the underlying groundwater as excess applied irrigation water and discharge from individual wastewater disposal systems at the adjoining Bridge development. According to the *Assessment*, there will be a total reduction in potable and non-potable ground water flow rate of 2.67 to 3.01 mgd at full build-out (including the projected uses within the adjoining Bridge property), and an estimated 0.35 to 0.50 mgd of water will be returned to the ground water. The net decrease in flow rate is calculated to be about 2.6 to 3.3 percent of the total estimated regional coastal discharge of 75 mgd along the shoreline between Kawaihae Harbor and Anaeho'omalū Bay. Within the mauka-makai corridor of the 3,000 combined 'Āina Le'a and Bridge project area, the net decrease of ground water is estimated to be in the order of 0.6 to 0.7 mgd or 3 percent of the corridors' groundwater flow rate.

The *Assessment* concludes that the most significant long-term issue of the Project is the sufficiency of the ground water flow rate in the groundwater's mauka-makai corridor to accommodate the Project and the combined planned uses by other developments. It concluded that the "safely developable long-term supply is probably on the order of 12 to 18 mgd" of a total 35 to 40 mgd supply. Excessive pumpage would probably result in an increase in salinity levels. The existing pumpage rate is almost 10 mgd in the mauka-makai corridor. Irrigating the Project's one golf course would account for 0.37 mgd or a little over 1 percent of the total future usage in the mauka-makai corridor.

The *Assessment* projects a regional use of 23.3 mgd, including an additional golf course at Mauna Lani Resort, the 1010 Puakō project and other planned development projects drawing from potable wells. The Nance *Assessment* notes that should all projected regional development be implemented, it is questionable whether the projected regional use of water from within this mauka-makai corridor would be sustainable, beyond the proposed Villages of 'Āina Le'a Project.

Nance notes that this potential shortfall could be offset, to some extent, by maximizing irrigation reuse of treated wastewater effluent from Waikoloa Village and MLR.

As mentioned in Section 2.3.9 of this DEIS, the Applicant intends to blend water from its irrigation well with R-1 treated effluent from the West Hawai'i Sewer Company. Additionally, the Applicant plans to construct a WWTP on the adjacent lands that would be designed so that the treated effluent would be brought to R-1 standards to be reused for irrigation purposes within

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

the project. This reuse will mitigate impact to the ground water flow rate to the degree the Project contributes to the shortfall.

Further, the Applicant will work with regional and government stakeholders to develop long-term resource conservation plan to address short- and long-term efforts towards resource sustainability.

Nutrient Additions of the Project to Ground Water. According to Nance's *Assessment*, a 0.2 to 2.2 percent increase in nitrogen concentration in the ground water is projected to occur at full build out. A decrease in phosphorous of 3.9 to 4.4 percent in the ground water is calculated. This decrease in phosphorous is projected to result from the amount of phosphorus in the groundwater withdrawn for irrigation purposes being greater than the amount returned to the groundwater via excess landscape irrigation and the discharge for individual wastewater systems in the adjoining agricultural-zoned areas.

The Applicant will implement a water-quality monitoring program with the operation of the golf course as required by the golf course use permit. This program will involve monitoring for nutrients such as nitrogen and phosphorous to minimize the excess application of fertilizers to the golf course. Best management practices for golf courses and landscaping will be employed to reduce excessive nutrient applications.

Treatment and Disposal of Domestic Wastewater. It is estimated that 35 percent of the 0.29-0.63 mgd potable water use for the Project would become wastewater. The entire Project will be connected to a wastewater treatment plant (see discussion in Sections 2.3.9 and 4.11.2). Effluent will be treated to an R-1 level and reused for golf course and landscaping irrigation. As it is reused and applied for irrigation purposes, the R-1 treated effluent is projected to have no measurable direct impact on water quality other than reducing the potential irrigation demand for the project from the brackish well sources.

Percolation of Excess Golf and Landscape Irrigation Water. The Nance *Assessment* assumed that 10 percent of the irrigation water used for the golf course and landscaping would reach groundwater. This percolated water collects dissolved fertilizer through the plant root zone and soil. The use of best golf course and landscape management practices should help to mitigate nutrient additives to the ground water. As noted above, a water-quality monitoring program, as required as part of rezoning approvals, would monitor for nutrients in the soil substrate and reduce the potential excess nutrient applications.

Collection and Disposal of Storm water Runoff. In reference to the management of storm water runoff, a Preliminary Master Drainage Plan was prepared for the Project by SSFM, a copy of which is included as Appendix E. The design intent of the Preliminary Master Drainage Plan is to utilize retention basins and drywells throughout the project so that there is no increase to the runoff leaving the site as a result of the development. In evaluating the potential impacts to water quality from surface runoff, the Nance *Assessment* concludes that, given the high permeability of the ground surface and the relatively sparse nature of the planned development, this objective of the drainage plan seems achievable and there should be no change in the quantity or impact to the water resources as a contribution of surface runoff leaving the site.

3.6 BOTANICAL RESOURCES

Existing Conditions

A *Botanical Survey Report of the Puakō Residential Golf Community* was prepared by Evangeline J. Funk in February 1991 (see Appendix G). The survey identified four vegetation types on The Villages site: 1) Prosopis/Fountain Grass, 2) Prosopis/Grass, 3) Savanna, and 4) Prosopis/Chenopodium.

Within the Prosopis/Grass vegetation type, large colonies of the fern species *Ophioglossum polyphyllum* were found. It should be noted that at the time of the survey *Ophioglossum polyphyllum* was incorrectly known as *Ophioglossum concinnum* and it is now known that the plant is neither endemic, as originally thought, nor is it rare, and can be found in profusion in many areas of Hawai'i.

In 1991, 15,000 fern plants were actually recorded, but the count was eventually abandoned because of the size of the transects and large number of small plants to count. Funk's assessment conservatively estimated at least 60,000 fern plants on The Villages site. At that time, *Ophioglossum* was a Category I species, which meant that the U.S. Fish and Wildlife Service believed it had enough substantial information on biological vulnerability and threat to support proposals to list it as an endangered or threatened species. Category I plants were not protected under the Endangered Species Act of 1973. The *Report* stated that the listing of this species as a Category I taxon should be reconsidered based on the large numbers of plants found on The Villages site and on other sites. It recommended that the *Ophioglossum* could be preserved if some areas were left undisturbed. However, as noted below in a discussion of the *Botanical Preservation and Mitigation Plan*, that recommendation has been rendered moot by subsequent study of the plant.

The red 'ilima (*Abutilon menziesii*) was found in the Project area, just mauka of the Urban District site. This species, also known as ko'oloa'ula, is a federally listed endangered species. The last known collection of the plant came from the Puakō area in 1956. The *Abutilon menziesii* is a member of the hibiscus family, has heart-shaped leaves, produces maroon-petaled flowers, and is propagated by seed and cuttings. The 1991 survey found a population of 38 individual plants (20 adults and 18 seedlings) within a 30 square foot area. The plant was not mapped to avoid removal by plant collectors. The *Report* recommended protection and preservation of the red 'ilima and its habitat. Propagation and planting by the developer were suggested.

The survey located a native plant, *Jacquemontia ovalifolia*, also known as pa'uohi'iaka or the native morning glory, near the highway. The southeast corner of the wide, 'a'a lava field was also home to the native *Erythrina sandwicensis* Degener or wiliwili tree. It was recommended that these native plants also be made part of the project's landscaping.

In September 2000, Dr. Funk prepared a *Botanical Preservation and Mitigation Plan for Endangered Species Found on the Proposed Villages of 'Āina Le'a Development Site* (see Appendix G).

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

This *Botanical Preservation and Mitigation Plan* cited Warren Herbert Wagner, Jr., Ph.D., a world authority on fern taxonomy, as saying, “*Ophioglossum concinnum* [now known as *Ophioglossum polyphyllum*] was far from being an Hawaiian endemic” and “there is no reason to regard it as endangered or threatened.” The plant species is no longer listed on the endangered or threatened species list, and no longer requires a preservation plan.

With regards to the red 'ilima, an exhaustive search of the area by Dr. Funk in 2000 found that the plants had probably succumbed to the hot dry conditions caused by three years of drought. Because there was a possibility that viable seeds could survive the drought and new plants could be produced under normal weather conditions, Dr. Funk recommended the area be set aside for a future botanical survey when weather conditions improve. In the meantime, it was recommended that the land within 500 feet of the location where the *Abutilon menziesii* had been previously found should not be disturbed. The preservation area is located approximately one-quarter mile south of the Waikoloa Emergency Access Road corridor and mauka of the Urban District. The 2000 survey found no other threatened or endangered species on the Property.

More recently in the vicinity of the Project, a flora survey was conducted in January 2010 by Geometrician Associates in the area of the proposed water and electrical utility corridors located on lands to the east (mauka) and north of Bridge's property. The Geometrician survey (*Survey*, located for reference in Appendix G) found no threatened or endangered species of plants in the corridor. The *Survey* also re-examined the area of the preservation area, noted above, and found no evidence of the red 'ilima in the area where it had initially been identified. The *Survey* described the preserve area and the areas of the utility corridors as being dominated by kiawe trees (*Prosopis pallida*) and buffel grass (*Cenchrus ciliaris*).

Potential Impacts and Mitigation

The Project may impact the *Abutilon menziesii*, a federally listed endangered plant species which was identified on the Property. As noted above, this species has not been found in two subsequent botanical surveys of the area over the course of nearly 10 years. A further botanical survey of the area will be conducted following a period of extensive rainfall to determine if a seed bank or seedlings of the species are still present. This plant species, if located, will be preserved by the Applicant within the 5-acre preserve area that has been designated for this purpose prior to land alterations in the associated development phase, using preservation protocols developed in consultation with the DLNR and the U.S. Fish and Wildlife Service.

To minimize adverse impacts on the vegetative resources of the site, erosion control measures will be taken during the construction phase to avoid impacts to the undisturbed vegetation areas. Re-vegetation will be timed so that soil exposure will be kept to a minimum. The Applicant will also implement a landscaping program that uses numerous native plants, such as the wiliwili tree and the native morning glory, which are climatically suitable to the semi-arid environment, as recommended by Dr. Funk in the Botanical Preservation and Mitigation Plan.

Letters from the U.S. Department of the Interior, Fish and Wildlife Service dated October 12, 2000, and from the DLNR, Division of Forestry and Wildlife dated November 15, 2000, both

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

agree with Dr. Funk's preliminary preservation and protection recommendations for the *Abutilon menziesii* (see Appendix G).

3.7 AVIFAUNAL AND MAMMALS

Existing Conditions

In January 1991, a *Survey of the Avifauna and Feral Mammals at Puakō, South Kohala, Hawai'i* was conducted of The Villages area by Phillip Bruner (see Appendix H). The *Survey* did not find any rare or endangered animal species on the site. The only native bird species found were the migratory Pacific Golden Plover and the Ruddy Turnstone. Bruner concluded that the "conversion of this site into golf course and residential property should result in an increase in the population of plover and turnstone."

Although the short-eared owl or *pu'eo* and Hawaiian hawk or *io* were not observed, both birds may occur on occasion or may forage in this area, according to Bruner.

A number of exotic birds were observed or are expected to be within this area. These include the gray francolin, spotted dove, common myna, and yellow-billed cardinal, among others. The small Indian mongoose, feral cats, and feral goats were among the feral mammal species identified in the survey. The endemic and endangered Hawaiian Hoary Bat was not observed in the field survey despite evening searches of the area.

A subsequent Fauna Survey conducted in January 2010 by Geometrician and Associates, LLC (see Appendix G) of the areas of the Project utility corridors located directly east and northeast of the Project found the animal species in these areas to be all exotic species, similar to findings of the initial Bruner Survey, and no rare or endangered animal species were located within the utility corridor areas.

Although not detected in the latter survey of the property, which took place in daylight, the only native Hawaiian land mammal, the Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), may be present in the general area, as it is present in many areas on the island of Hawai'i and has been observed in kiawe scrub vegetation in Kona. They may forage for flying insects over portions of the project area on a seasonal basis, though the extremely dry character of the site and the lack of dense vegetation provide little in the way of attractive food resources for a bat.

Potential Impacts and Mitigation

No native landbirds were detected and are unlikely to be found on the Project site, other than perhaps the Short-eared Owl (*Asio flammeus sandwichensis*) called *pu'eo*. This diurnal bird of prey is regularly seen within the grasslands of North and South Kohala but was not noticed during either of the faunal surveys of the property. There is some possibility the development of the property may temporarily displace *pu'eo*. Any such disturbance, however, would be of a temporary nature, as there is abundant additional suitable habitat within the Waimea plains area into which any displaced owls could move. This species is currently widespread in Kohala and

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

does not have special protective status under either the State or Federal endangered species statutes.

Additionally, it is possible that small numbers of the endangered endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened Newell's Shearwater (*Puffinus auricularis newelli*) overfly the project area between the months of May and November. Hawaiian Petrels were formerly common on the Island of Hawai'i. Newell's Shearwater populations have dropped precipitously since the 1880s (Banko 1980, Day et al., 2003). This pelagic species nests high in the mountains in burrows excavated under thick vegetation, especially *uluhe* (*Dicranopteris linearis*) fern. Newell's Shearwater was listed as a threatened species by the USFWS in 1975 and by the State of Hawai'i in 1973.

The primary cause of mortality for both Hawaiian Petrels and Newell's Shearwaters is thought to be predation by alien mammalian species at their nesting colonies. Collision with man-made structures is considered to be another significant cause of mortality of these seabird species in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds often collide with manmade structures, and if they are not killed outright, the dazed birds become easy prey for feral mammals. There is no suitable nesting habitat within or close to the project area for either of these pelagic seabird species.

The Project will cause some measure of disruption of wildlife use of the site, especially during the construction phase. According to the Bruner study, most birds and feral mammals are expected to migrate to neighboring undeveloped areas during this period. When the project is completed, however, it is anticipated that the site will be attractive to many birds.

In that outdoor lighting within the project may attract Hawaiian Petrels and Newell's Shearwaters, which may become disoriented by the lighting, to mitigate the potential downing of Hawaiian Petrels and Newell's Shearwaters by their interaction with outdoor lighting, no unshielded construction or equipment maintenance lighting would be permitted after dark between the months of April and October. All permanent lighting should be shielded in conformance with Hawai'i County Outdoor Lighting Ordinance (Hawai'i County Code Chapter 9, Article 14), which requires shielding of exterior lights so as to lower the ambient glare.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

4.1 HISTORICAL PERSPECTIVE OF REGION AND PROPERTY

Based upon archaeological and cultural studies, the Waikoloa region can generally be divided into three major cultural or historic phases: the indigenous Hawaiian occupation prior to 1850, the ranching period from 1850 to 1940, and the military and modern use after 1940.

When the first American ships arrived on the islands in 1790, the life of crewmate Isaac Davis was spared, and he eventually became allied with King Kamehameha I in his conquest of the islands. Later, another crewman, John Young, was captured by Kamehameha, but eventually joined the unification forces. When the island was successfully unified in 1790 under Kamehameha, Davis and Young were rewarded with land: Young was given 'Ouli and the ahupua'a of Kawaihae 2. Davis received the less productive lands of Waikoloa. During the Great Mahele, the children of Davis and Young received a significant amount of land in the region.

Waikoloa was later purchased by Parker Ranch as noted in a 1901 Government Survey Map.

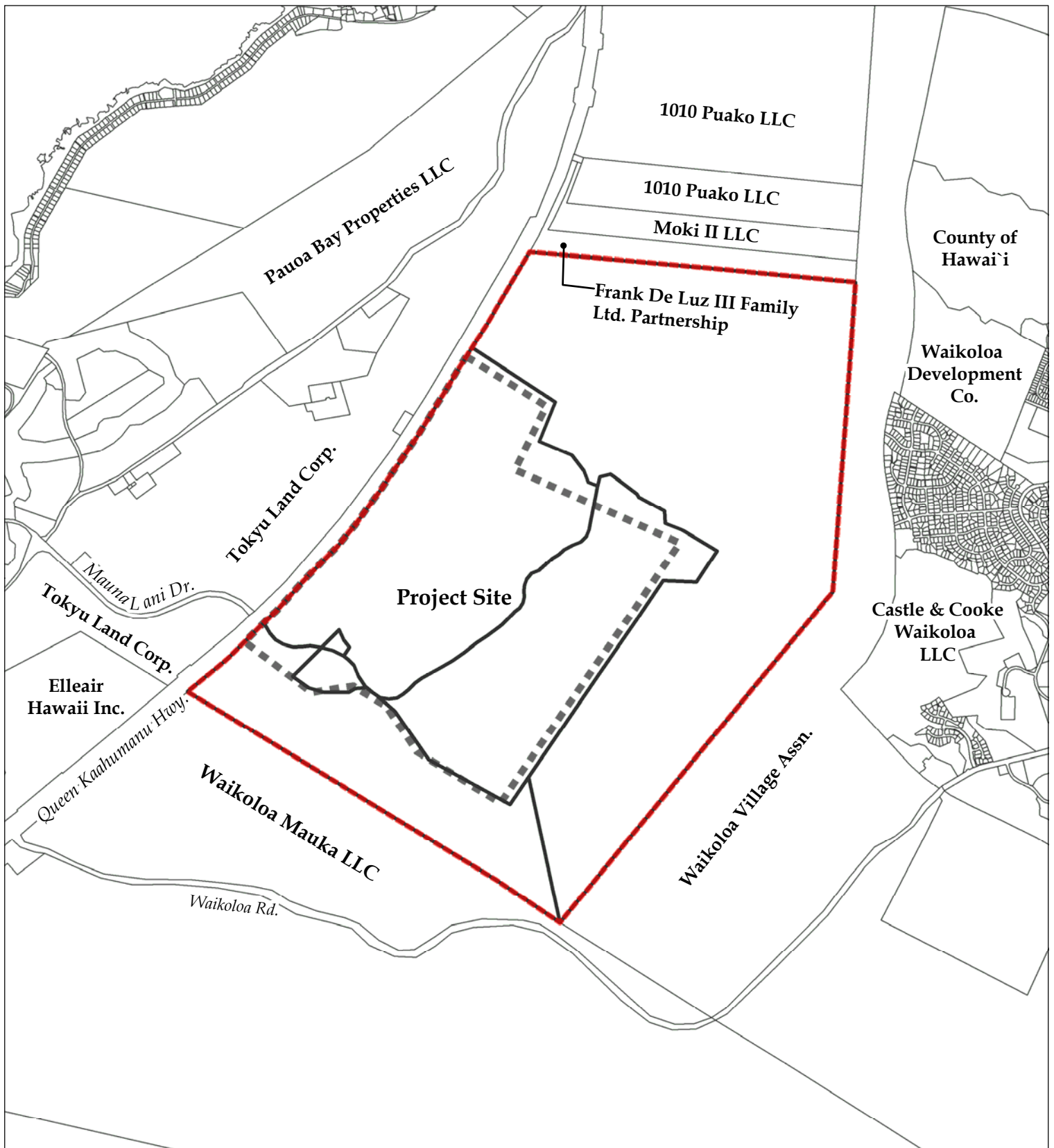
In December 1943, the U.S. Navy acquired 91,000 acres of land from Parker Ranch. Portions of the land were used as an artillery and naval gun firing range while other sectors were used frequently for troop maneuvers and weapons training. In 1946, the military returned the land to Parker Ranch and, in 1960, Parker Ranch sold approximately 3,000 acres to Nansay Hawai'i, Inc. Ownership of the 3,000 acres in the last 48 years transferred from Nansay (Signal Puakō Corporation-limited partner) to Puakō Hawai'i Properties, to Bridge Capital LLC., to Bridge 'Āina Le'a, and then to the Applicant (1,092 acres).

4.2 ADJACENT USES AND LANDOWNERS

Lands in the immediate area are vacant. Mauna Lani Resort and its related facilities are nearly a mile from Queen Ka'ahumanu Highway. The County of Hawai'i's South Kohala Fire Station is situated west (makai) of the highway and across from the Property's northwestern boundary.

The Property is surrounded to the north, south, and east by lands owned by Bridge. Lands north of the Bridge property are owned by Frank De Luz III Family LP, Tri-Kohala Development/Moki II LLC and Tri-Kohala Development/1010 Puakō LLC; to the south by Waikoloa 3784 LLC; and to the east by Waikoloa Village Association (see Figure 14). There is no visible active use of these properties, although portions of the project infrastructure (power, potable and non-potable water) easements and related improvements are planned on the Waikoloa Village Association lands that are situated between Waikoloa Village and the Project.

The Property is part of the South Kohala local community consisting of Waikoloa, Mauna Lani, Hapuna, and Mauna Kea resorts, the residential-resort community of Puakō and Waikoloa Village. Waikoloa Village is less than one-half mile away from the Property's easternmost boundary.



Legend

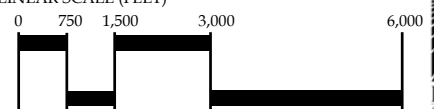
- Property Boundary
- Urban District Boundary
- Hawai'i County TMK 2009

FIGURE 14

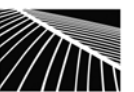
Adjacent Landowners

The Villages of 'Āina Le'a

DW 'ĀINA LE'A DEVELOPMENT, LLC
NORTH LINEAR SCALE (FEET)



ISLAND OF HAWAII



PBR HAWAII
& ASSOCIATES, INC.

05/03/2010

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

4.3 ARCHAEOLOGICAL AND HISTORICAL RESOURCES

Existing Conditions

Numerous surveys and archaeological work have been performed of the Kohala district. The work shows the initial occupation of the 'Anaeho'omalu coast occurred between A.D. 900 and 1000. Population increased gradually after around A.D. 1200. Permanent habitations were formed around the bays and inland areas with greater rainfall were used to grow agricultural crops. Trails would link the coastal regions to upland areas where temporary habitation sites were found to shelter people working the fields. The Property is located in what archaeologists call a "transitional zone," which is a region between the coast and the upland zone.

The Property and the larger 3,000-acre Villages site have been the subject of several archaeological studies. Table 10 below is a partial list of the archaeological work conducted and prepared for the Property and/or The Villages site.

Table 10
Archaeological and Historical Work of The Villages Since 1987

TITLE OF REPORT	DATE	CONSULTANT	COVERAGE AREA
<i>An Archaeological Reconnaissance Survey at TMK: 6-8-01:25, 36-42, District of South Kohala, Ahupua'a of Waikoloa, Island of Hawai'i.</i>	1987	Archaeological Consultants of Hawai'i	1,000-acre Urban area (Applicant's Property)
<i>Archaeological Survey and Evaluation Puakō Residential Golf Community South Kohala, Hawai'i Island</i>	Revised August 1992	Ogden Environmental and Energy Services	2,000-acres Ag area Bridge property; however, report included survey results of entire 3,000-acre area
<i>An Archaeological Inventory Survey Report for the Bridge 'Āina Lea Residential Golf Community Development Located at TMK: 6-8-01:25, 36, 37, 38, 39 & 40 (Pors), in the Ahupua'a of Waikoloa, District of South Kohala, Island of Hawai'i</i>	Revised December 2002	Archaeological Consultants of the Pacific	1,000-acres Urban area (Applicant's Property) and Power Line Corridor
<i>Burial Treatment Plan, Site 15033, Land of Waikoloa, South Kohala District, Island of Hawai'i (TMK: 6-8-01:37)</i>	February 2004	Haun & Associates	TMK: 6-8-01: 37 (por) Agricultural Area Bridge property
<i>Archaeological Data Recovery Report for the Bridge 'Āina Le'a Residential Golf Community Development Located at TMK:6-8-1:25, 36, 37, 38, 39 & 40</i>	Revised September 2005	Archaeological Consultants of the Pacific	3,000 acres; Feature 22514:A

The December 2002 *Archaeological Inventory Survey* of the Project site performed by Archaeological Consultants of the Pacific (see Appendix I) identified ten sites comprised of thirteen individual features, including a rock shelter previously identified in the 1987 survey, C-shaped walls with associated ahu, four independent ahu and a stone-covered hearth. The rock shelter, C-shaped walls with ahu and the stone-covered hearth were believed to have been utilized for temporary habitation during the pre-Contact Period. The four independent ahu were believed to be boundary markers for pasturelands used in the post-Contact Period. A modern fire

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

pit, a possible lithic extraction site, and a possible trail segment were encountered but later determined not to represent significant historic properties. The specific site numbers and features are described in Table 11 below:

Table 11
Archaeological Sites, Function, Significance and Recommended Treatment

Site No.	Description	Function	Significance Criteria	Recommended Treatment
Site 22509	Stone-covered heart	TH	NLS	NFW
Site 22510	C-shaped wall w/ahu	TH	D	NFW
Site 22511	Three stone ahu	Ag/BM	NLS	NFW
Site 22512	C-shaped wall w/ahu	TH	D	NFW
Site 22513	C-shaped wall w/ahu	TH	D	NFW
Site 22514	Rock shelter, C-shaped wall w/ahu	TH	D	DR
Site 22515	C-shaped wall w/ahu	TH	D	NFW
Site 22516	C-shaped wall w/ahu	TH	D	NFW
Site 22517	Ahu	Ag/BM	NLS	NFW
Site 22518	C-shaped wall w/ahu	TH	D	NFW

Source: Archaeological Inventory Survey, Revised December 2002

Function Code: **TH** - Temporary Habitation; **Ag** - Agriculture; **BM** - Boundary Marker. Significance Criteria Code: **D** - Site has yielded or is likely to yield information important in prehistory or history; **NLS** - No Longer Significant.

Recommended Treatment Code: **NFW** - No Further Work; **DR** - Data Recovery.

Based on the results of the Survey, it was recommended that mitigation of potential “adverse effects” on significant historic properties be implemented. Mitigation of the measures would consist of data recovery and preservation of Site 22514, which would be presented in separate documents. The DLNR-Historic Preservation Division (SHPD) approved the December 2002 *Archaeological Inventory Survey* in a letter dated July 1, 2003 (see Appendix I).

In September 2005, Archaeological Consultants of the Pacific, Inc. prepared *An Archaeological Data Recovery Report for the Bridge 'Āina Le'a Residential Golf Community Development Located at TMK: 6-8-01: 25, 36, 37, 38, 39, & 40 in the Ahupua'a of Waikoloa, District of South Kohala, Island of Hawai'i* (see Appendix J). Data recovery found that the rock shelter, Site 22514, was recurrently used from as early as A.D. 1300s. The presence of faunal remains indicates that the rock shelter was “occupied by people carrying out the traditional Hawaiian practice of harvesting seabirds,” quoting Dr. Alan Ziegler. Also, artifacts like a grinding stone, basalt platform, and echinoderm spine abraders implies that tool manufacturing took place here. Kukui nut shell fragments were found, which suggests that kukui nut oil may have been extracted at the shelter. A preservation plan was recommended for the rock shelter. DLNR-SHPD approved the 2005 *Report* in a letter dated October 27, 2005 (see Appendix J).

On the Bridge property in the Agricultural District, a burial was identified (Site 15033). A burial treatment plan was prepared in February 2004 for Bridge by Hahn & Associates (see Appendix K). The burial, with a recommended 20-foot buffer, is located more than 1,000 feet from the Project Site, and over 900 feet, at the closest point, from the alignment of the Water Utility Corridor, shown in Figure 4, that extends from Waikoloa Village to the Project Site through

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

portions of the adjacent Waikoloa Village Association lands (TMK 6-8-02:19) and Bridge property (TMKs 6-8-01: 40 and 37).

While the electrical power utility corridor had been subject of the initial 2002 Archaeological Inventory Survey listed above, the alignment of the water utility corridor had not been known at the time and was, more recently, subject of an Archaeological Reconnaissance Survey (*Reconnaissance Survey*), conducted by Haun & Associates in January 2010 (see Appendix I). The Haun *Reconnaissance Survey*, similar to the previous electrical utility corridor survey, found no archaeological sites or features within the area of the utility corridor.

Potential Impacts and Mitigation

The DLNR-SHPD determined the collection of archaeological surveys and reports to be sufficient. With the implementation of a treatment and preservation plan, archaeological impacts should be mitigated.

Site No. 22514, the rock shelter with cultural and invertebrate/vertebrate remains, will be preserved in place adjacent to the golf course, in the area of the Highway Buffer area. A preservation plan will be prepared for review and approval by the DLNR-SHPD when its interface with the golf course or residential pad is determined.

The Project will not impact Site 15033, a burial outside of the Project site on Parcel 37 owned by Bridge. The Burial Treatment Plan accepted and approved by the State Burial Council will be implemented by Bridge, its successors or assigns when its plans proceed.

4.4 CULTURAL RESOURCES

Existing Conditions

A *Cultural Impact Assessment* of the proposed Project dated August 2007 was conducted by Helen Wong Smith (see Appendix L). An *Addendum* to the Cultural Impact Assessment was also prepared in July 2009 to address the possible existence of a cattle trail on the Project site (see Appendix L).

The cultural assessment reviewed a wide range of written material, including archaeological reports, government and historical records, Hawaiian language sources, and transcripts of a long series of interviews with native Hawaiians who resided and worked the lands.

Cultural features have been found for the general Waikoloa area, but not specific to the project area. Most cultural sites in this section of South Kohala are located between the 40- and 280-foot elevations with the greatest amount near gullies and gulches. The *Assessment* says that, with the exception of one burial, archaeological surveys uncovered remains of remnants of military operations from World War II. As discussed in the previous Section 4.3, the burial is outside the current Project site.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Nevertheless, in preparing the burial treatment plan discussed above in Section 4.3, legal notices were published in newspapers of local and statewide distribution requesting that any person having any information concerning the unmarked grave in the 3,000-acre Villages area contact the Office of Hawaiian Affairs, the project archaeologist and/or DLNR-SHPD's Burial Sites Program. No individuals claiming lineal descent responded to the notices.

In an EISPN comment letter from Deborah Chang dated January 7, 2008, it was requested that the cultural impact assessment research whether a portion of a major, historic mauka-makai trail is located on the properties (see Chapter 11).

An Addendum to Cultural Impact Assessment for DW 'Āina Le'a dated July 2009 located a portion of a cattle trail beginning at the Puakō Gate makai of the Property some 120 yards of the Queen Ka'ahumanu Highway near the 72-mile marker. A segment of the cattle trail traverses the Property parallel to the 'Auwaiakeakua Gulch. The identification was made through a combination of sources: from recollections by Robert "Sonny" Keakealani, Jr.'s (Uncle Sonny) of the accounts of his father, from Robert Keakealani, Sr., who traversed the trail, from an on-site visit, and from prior SHPD communication in 1992 that concluded the trail was historic "from the ranching era or when the area was used for military training during the early part of this [20th] century." This conclusion was reinforced by the review of two maps, one from the 1800s and the other from 1928, neither of which indicated the trail. According to the *Addendum*, the trail was used by cowboys of Pu'uwa'awa'a Ranch to drive cattle from the base of Pu'u Ku'ainiho to the Puakō Gate. Uncle Sonny had not traveled the cattle trail, but was informed by his father that it was not utilized after the 1930s when cattle were shipped out of Kawaihae or Kailua instead of Puakō. In its 1992 letter, SHPD concludes that "due to its recent age, our office believes that it does not constitute a significant historical site, hence not worthy of further recordation, data recovery or preservation." (see Appendix L).

A further addendum to the Cultural Impact Assessment Report was prepared in January 2010 by Haun & Associates (see Appendix L) to review the areas of the utility corridors, which were not considered in the prior Wong-Smith Assessment Report. As part of the *Haun Assessment*, two previously unidentified sites were noted along the HELCO easement. These sites are described as a small circular enclosure and a small mound, both overlooking a gulch, approximately 138 feet apart. The sites were described as being similar to other WWII military training-related sites described in prior studies of the area and were determined to be related to the same military training-related activities. The archival research and field inspection conducted as part of the *Haun Assessment* of the utility areas did not identify any culturally significant resources in the utility corridors or any additional evidence that they were currently being used for any traditional cultural practices.

Potential Impacts and Mitigation

Given the information gathered for the *Cultural Impact Assessment* report and *Addendum*, the Project could impact a historic mauka-makai cattle trail. Otherwise, cultural impacts should be minimal.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

A segment of a historic mauka-makai cattle trail traverses portions of the Property parallel to the 'Auwaiakeakua Gulch. While the trail has limited value from an historical perspective, based on the assessment of the State Historical Preservation Division, it may be of some cultural significance in providing a linkage with past ranching activities that occurred in the area. Portions of the cattle trail can be preserved and integrated into the development, where appropriate, and interpretive signage can be installed. In this manner, its cultural significance will be retained.

The Project is located more than 1,000 feet west of a burial site on an adjacent parcel of land not owned by the Applicant. A water utility corridor that traverses the adjacent property to serve the project was examined as part of a subsequent cultural impact assessment work performed by Haun & Associates (see Appendix L) and was confirmed to be, at its closest point, more than 900 feet from the burial site. The *Haun Assessment* notes that the burial site is the only culturally significant site identified by previous studies in the vicinity of the Project. A Burial Treatment Plan for this site, which is included for reference as Appendix K, was prepared Haun & Associates (2004) and approved by SHPD and the Hawai'i Island Burial Council (SHPD LOG NO. 204.2992, DOC NO. 0410KL01). The *Haun Assessment* concludes that adherence to the Burial Treatment Plan will assure that the burial site will not be impacted by the Project development.

4.5 ORDNANCE AND EXPLOSIVES

Existing Conditions

The Property is within the Former Waikoloa Maneuver Area (FWMA), a 123,000-acre area used during World War II by the U.S. military as a training camp and artillery range. The FWMA encompasses the communities of Waikoloa, Waimea, Kawaihae and portions of the Kohala Coast. Live ordnance has since been found in the FWMA prompting intermittent clean-up activity over the years. In 1992, the U.S. Army Corps of Engineers (USACE) determined that the FWMA was eligible for federal funds to conduct phased field investigations, engineering evaluation/cost analysis, and remediation/removal of potential unexploded ordnance (UXO). USACE conducted field investigations in the late 1990s and a time-critical removal action was completed in 2001. Areas of highest risk, such as schools and residential communities, were swept for UXO first. The next phase is to remediate the undeveloped areas within the FWMA.

The Applicant and Bridge have given the USACE permission to enter the Project and Villages sites for the purpose of conducting UXO/explosive removal and investigation. According to a January 2010 conversation with the USACE Military Munitions Response Program (MMRP) Manager, the contract was awarded in the latter half of 2009 and the task of surveying the property is ongoing and will be phased so as to precede the phases of development.

Potential Impacts and Mitigation

The presence of UXO and other military debris on the Property will be significantly reduced with the remediation and UXO removal program commissioned by the USACE. Remediation

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

and removal is ongoing and should be completed over the complete Project site in the next few years. There is still a possibility that UXO or military debris could be found on the Property during on-site construction. Construction personnel will be trained to recognize and immediately report to the Army any suspected munitions encountered. The notice of public findings of the Honolulu Engineer District will be made available to lot buyers as part of the sales program.

4.6 ROADS AND TRAFFIC

A Traffic Impact Analysis Report for The Villages of 'Āina Le'a, was prepared in July 2009 by SSFM International (see Appendix M). The 2009 TIAR identified current traffic and roadway conditions, forecasted future traffic conditions with and without the proposed Project, analyzed existing and future traffic conditions, and analyzed future conditions with traffic generated by other adjacent properties with unscheduled plans. The information below is obtained from this TIAR.

Existing Conditions

Roadways. Access to the Project would be from the Queen Ka'ahumanu Highway, a two-lane, limited access, Class I State highway between Kawaihae and Kailua-Kona. It has a posted speed limit of 55 miles per hour and a two-way capacity of 2,000 vehicles per hour. The roadway is in a 350-foot right-of-way at the Waikoloa Road intersection and is in a 425-foot wide right-of-way at the Mauna Lani Drive intersection. Intersections on the Queen Ka'ahumanu Highway in this area are fully channelized and signalized where warranted.

One intersection is with Waikoloa Road forming a signalized T-intersection. Waikoloa Road is a two-lane County road that runs between the Queen Ka'ahumanu Highway and Māmalahoa Highway. Waikoloa Road is the only mauka-makai road running between the two major highways for miles. Waikoloa Road also serves as the only ingress/egress for the Waikoloa Village community. The posted speed limit is 55 mph with the exception of the Waikoloa Village urban area where the speed limit is reduced to 35 mph and Waikoloa Road turns into a four-lane divided road.

Mauna Lani Drive, which is across and on the makai (west) side of the Project's southern access point, is a two-lane private road providing the only access to Mauna Lani Resort. Mauna Lani Drive is not signalized, but has separate turning lanes on all approaches of this T-intersection. The posted speed limit is 35 mph to the security gate on Mauna Lani Drive where it decreases to 25 mph. A portion of the Waikoloa Emergency Evacuation Road traverses the northwest corner of the property. This gravel, gated road built by the County in 2006 connects Waikoloa Village to the Queen Ka'ahumanu Highway at the Project's northern access point.

Existing and Projected Traffic Conditions Without Project. Using traffic counts taken by the DOT, daily traffic volumes at the Queen Ka'ahumanu Highway-Kawaihae Road intersection approximately seven miles to the north have increased more than 12 percent over an eight-year period from 1998 through 2004. This represents an average annual increase of 1.5 percent per year. This percentage was used to extrapolate the projected traffic increase to the year 2020.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Existing conditions at the Queen Ka'ahumanu Highway-Waikoloa Road and Queen Ka'ahumanu Highway-Mauna Lani Drive intersections are generally good during peak morning and afternoon hours. However, the left-turn movement from Mauna Lani Drive onto Queen Ka'ahumanu Highway in the afternoon peak hour is at Level of Service (LOS) D.

Background Traffic Without Project. The 2009 TIAR estimates approximately 1,445 single-family units and 173 multi-family units would be constructed in the vicinity by 2012. Between 2012 and 2020, about 1,600 single-family units have been planned in the area. The planned development projects include Castle and Cooke, Sunset Ridge, Kilohana Kai, Waikoloa Heights, Waikoloa Highlands and Lot 28. Commercial projects were not included in the count because it was felt that they would attract trips from within the Project rather than from outside the Project. The background traffic forecast without the Project shows high volumes traveling between Waikoloa Road and the southern leg of Queen Ka'ahumanu Highway.

Even without the Project, there will be deterioration in traffic conditions by 2012 (see TIAR-Table 13). The left turn off Waikoloa Road intersection shows a LOS F for the morning peak hour and a LOS F for northbound through traffic on Queen Ka'ahumanu Highway in the afternoon peak hour.

Additionally in 2012, the left-turn from Mauna Lani Drive for both morning and afternoon peak hours is predicted to be LOS F. The right-turn from Mauna Lani Drive indicates a LOS F for the afternoon peak hour.

In 2020, the Queen Ka'ahumanu Highway-Waikoloa Road intersection will experience further deteriorated traffic conditions without the Project (see TIAR-Table 14, page 42). The northbound through movement would have a LOS F for the morning and afternoon peak, and the southbound movement would have a LOS F for the afternoon peak hour.

At the Queen Ka'ahumanu Highway-Mauna Lani Drive intersection, the traffic conditions for the Mauna Lani Drive approach, without the Project, is projected to be LOS F for the morning and afternoon peak hours.

Potential Impacts and Mitigation

Phase I Project - Year 2012. The 2009 TIAR calculated the Project to generate 216 trips in the morning peak and 263 trips in the afternoon peak in the year 2012. With the Project, several intersections along Queen Ka'ahumanu Highway will experience LOS F (see TIAR-Table 15, page 43). These include the northbound through lane at Waikoloa Road intersection at afternoon peak hour; the left-turn from Waikoloa Road at morning peak hour; left-turn eastbound, through, and right-turn eastbound traffic at Mauna Lani Drive-new Project Access Road at morning and afternoon peak hours; and left-turn westbound at morning and afternoon peak hours from the new Project Access Road.

Project Build-out - Year 2020. Upon full build-out in 2020, the Project is projected to generate 1,738 trips in the morning peak and 3,078 trips in the afternoon peak. Because of the Project's proposed residential, commercial, retail, and mixed uses, it is expected that there will be a

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

reduction in the number of trips leaving the Project onto regional roads. In 2020, the Project is expected to generate 1,662 trips from outside the Project in morning peak and 2,504 trips in afternoon peak. By 2020, there will also be a higher diversion to the new northern Project road from Waikoloa Road by Waikoloa Village residents.

Certain intersection movements in 2020 will have congestion problems at full build-out (see TIAR-Table 16, page 44). The Project intersection with Mauna Lani Drive shows that eastbound and westbound side street approaches will have a LOS F for both morning and afternoon peak hours. Northbound left-turn traffic in the morning peak hour and southbound left turn traffic in the afternoon peak hour will experience a LOS F.

At the Waikoloa Road intersection on Queen Ka'ahumanu Highway, the northbound and southbound through movements will have a LOS F at both peak hours.

The new northern Access Road intersection will operate at acceptable levels of service in 2012 with two lanes and in 2020 with four lanes according to the TIAR.

Mitigation for Phase I in 2012 and Build-out in 2020. The 2009 TIAR recommends the following measures to mitigate the effects of the Project on traffic flow:

1. Add a right turn lane on Queen Ka'ahumanu Highway at Mauna Lani Drive northbound.
2. Add a right turn lane on Queen Ka'ahumanu Highway at the northern access to the Project in the northbound direction.
3. Install a traffic signal at the intersection of Queen Ka'ahumanu Highway and Mauna Lani Drive to coincide with the completion of the proposed Project's Phase I completion date. The Project/Mauna Lani Drive intersection should have three Project approach lanes, with lanes for left turns and through movements and a channelized right-turn lane.
4. Install a traffic signal at the intersection of Queen Ka'ahumanu Highway and the new north access roadway to the Project when it is opened to traffic flow in the year 2012. The northern access intersection should have two approach lanes with a lane for left turns and a channelized right-turn lane.
5. Comply with AASHTO Green Book and Hawai'i DOT standards in the design of the intersections.

In providing the projected traffic conditions at build-out, the TIAR assumed that all the above mitigation measures would be completed at the completion of Phase I and that, by the Project build-out, which is projected to be completed by 2020, an additional through lane would be added in each direction on Queen Ka'ahumanu Highway as part of the State's planned improvements to this corridor.

New Project Road Intersection. The Applicant intends to construct a fully channelized and signalized intersection at the Queen Ka'ahumanu Highway-Mauna Lani Drive intersection in conjunction with construction of the Project's first phase.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Northern Access Road and Intersection. The Conceptual Master Plan shows a proposed Future Waikoloa Village Connector Road traversing the northwestern portion of the Property continuing mauka through the adjacent Bridge property to eventually connect to Hulu Street in Waikoloa Village.

The Applicant has been involved in negotiations with the County and Waikoloa Community representatives on the location of this northern access road. A decision on location and alignment of this second access road has not been made due to remaining technical and design questions. When the negotiations are completed, the Applicant can finalize the design plans and proceed to construct this road.

The intersection of Queen Ka'ahumanu Highway and the Project's northern access roadway will need to be signalized when warranted.

Further, should the State establish a fair-share program for a grade-separated interchange in this area that would affect and/or benefit this Project and the fair-share amount is determined prior to start of the Project, the Applicant would be willing to participate in the program.

4.7 NOISE

Existing Conditions

The existing noise environment within the project site consists of ambient noise levels resulting from wind and foliage, birds, and distant traffic and aircraft noise. The noise descriptor currently used by federal agencies to assess environmental noise is the Day-Night Average Sound Level (DNL or Ldn). The DNL values represent the average noise during a typical day of the year. Within the Project area, noise from vehicular traffic is most evident near the highway and probably contributes the most to noise levels, but noise levels at the project site are relatively low (between 45 and 50 DNL) due to the large setback distances from Queen Ka'ahumanu Highway. As a point of reference, DNL exposure levels of 55 or less are typical of quiet rural or suburban areas and DNL exposure levels of 65 are representative of densely developed urban areas and areas fronting high volume highways. The value of 65 DNL is also used as a federal regulatory threshold for determining the necessity for special noise abatement measures in applications where there is funding assistance from federal agencies, such as Federal Housing Administration, Housing and Urban Development (FHA/HUD).

A 1985 acoustic study has been updated by Y. Ebisu. The update, its findings, conclusions and recommendations are found in Appendix N.

Potential Impacts and Mitigation

Over the long term, Traffic noise levels are projected to increase along Queen Ka'ahumanu Highway by 4.1 to 4.3 DNL during the project development period (2009-2020) as a result of both Project and non-Project traffic. However, Project residents should not be impacted by traffic noise given the large setback distances from the highway. Likewise, other residential developments in the area are significantly setback from the highway and are not expected to be

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

impacted by this increase in traffic noise. The dominant traffic noise sources within the project site could be the two planned access roads. Setbacks from the two new access roads within the project, the use of sound-attenuating berms, landscaping, or design measures can help to minimize the traffic noise impacts to noise sensitive properties along these two roads within the project.

Noise levels will increase in the short-term during construction of the infrastructure and, then intermittently, with construction of homes, commercial buildings, and golf course, however, construction noise levels from the project are not expected to exceed the existing traffic noise levels of approximately 60 DNL from the highway at the existing fire station. The other noise sensitive development outside the Project, within Waikoloa Village and Mauna Lani Resort, are at least a mile from the project site. Those likely to be most impacted by the construction related noise would be those new residents and visitors to the Project. To mitigate noise impacts during the construction period, compliance with State Department of Health (DOH) noise regulations will be enforced.

For the long-term operational control and mitigation, the design and siting of the public structures (clubhouse, commercial buildings) and the possible WWTP will take into account ways to minimize noise impacts. These include the proper siting of air conditioning units, exhaust fans, and the use of sound insulation and landscaping. The WWTP would be located away from sensitive residential areas and sited with significant buffer areas.

4.8 AIR QUALITY

Existing Conditions

An *Air Quality Study (Study)*, dated January 2010, was prepared for the Project by B.D. Neal and Associates (see Appendix O).

Air quality in the vicinity of the Project is affected by emissions from natural, agricultural and/or vehicular sources. The most dominant factor affecting air quality has been the volcanic emissions (“vog”) that come from Kilauea Volcano located more than 50 miles away to the Kona and Kohala regions. In addition, depending upon the prevailing wind direction, emissions from vehicles traversing Queen Ka‘ahumanu Highway, a major arterial roadway abutting the Project, may be carried over the Project site.

There are no major industrial sources of air pollution in the project area. The nearest major industrial source of air pollution is the Hawai‘i Electric Light Company’s (HELCO) Keahole Power Plant, which is located about 20 miles to the south. Air pollution emissions from the Keahole Power Plant consist mostly of sulfur dioxides and oxides of nitrogen.

The State DOH operates a network of air quality monitoring stations throughout the State. Unfortunately, limited data is available for Hawai‘i Island, and less for the South Kohala area. From the period of 2002 to 2006, the DOH operated an air quality monitoring station in the Kealahou area, about 30 miles south of the Project site, where measurements for sulfur dioxide and particulate concentrations were taken. Monitoring of particulate matter was discontinued at

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

this site during June 2000. Measurements of sulfur dioxide concentration at the DOH site were consistently low, with average concentrations of 8-13 $\mu\text{g}/\text{m}^3$, about 10-15 percent of the State and National standard. Annual average particulate concentrations for the year 2000 was 18 $\mu\text{g}/\text{m}^3$ or about 36 percent of the State and National standards. There were no violations of State or National standards during the 2000 monitoring period.

In terms of potential Project-generated impacts to air quality, increases in carbon monoxide levels from Project-generated vehicular traffic would be of potential concern, with the highest concentrations expected to be found at the Waikoloa Road and Mauna Lani Drive intersections with Queen Ka'ahumanu Highway. According to the *Air Quality Study*, the current (2009) highest estimated one-hour concentration of 3.2 $\mu\text{g}/\text{m}^3$ is projected to occur during the morning peak traffic period, at the intersection of Queen Ka'ahumanu Highway and Waikoloa Road intersection.

Potential Impacts and Mitigation

Short-term direct and indirect impacts on air quality could occur from project construction activities, both from fugitive dust caused by 1) vehicular movement and soil excavation, and 2) from exhaust emissions for the on-site construction equipment. Indirectly, there could also be short-term impacts from slow-moving construction equipment traveling to and from the project site, from a temporary increase in local traffic caused by commuting construction workers, or from the disruption of normal traffic flow caused by lane closures during the construction of intersection improvements along the highway.

Related to the potential for fugitive dust generation, State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. A dust control plan will be implemented to ensure compliance with state regulations. The dust control plan will include watering active work areas, covering open-bodied trucks, and limiting the amount of grading to be performed at one time. Exhaust emissions can be mitigated by moving construction equipment and workers to and from the site and scheduling highway-related improvements during off-peak traffic hours.

Long-term impacts on air quality will come in the form of vehicular traffic emissions coming to and from the development. According the Neal Study, at build-out at the Project, with projected traffic mitigation measures in place, the predicted highest concentration of carbon monoxide (6.9 $\mu\text{g}/\text{m}^3$) would occur during the morning peak period at the Mauna Lani Drive and Queen Ka'ahumanu Highway intersection. Projections of carbon monoxide concentration were calculated for all major intersections and other concentration at build-out were estimated to range between 2.6 and 6.0 $\mu\text{g}/\text{m}^3$. Peak-hour concentrations at all intersection were estimated to remain well within State and Federal standards. Additionally, the worst-case eight-hour carbon monoxide concentrations for the intersections of Mauna Lani Drive and Waikoloa Road and the highway were predicted to range from 1.6 and 1.9 $\mu\text{g}/\text{m}^3$, respectively, both within the State standard of 5 $\mu\text{g}/\text{m}^3$ and the Federal limit of 10 $\mu\text{g}/\text{m}^3$.

Indirect impacts on air quality would come primarily from the emissions generated by the utility company in supplying the project with electricity, and from the disposal of solid waste materials

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

generated by the project. The Air Quality Study estimates the magnitude of these emissions to be relatively small, however, indirect emissions from the project electrical demands could be reduced somewhat by encouraging energy-saving features to be part of the project planning and individual building design, including use of solar water heaters and photovoltaics, use of natural ventilation and lighting, and use of insulation and landscaping to reduce indoor heat-gain. Conversely, reduction of Project-generated waste through development and participation in community wide recycling program can help to reduce the energy use and emissions generated for solid waste disposal. Additionally, there is the potential for impacts to air quality in the form of potential odors from the operation of the project WWTP, although with proper operation siting of the facility with appropriate buffer areas, the potential for odor-related impacts can be minimized.

4.9 VISUAL AND SCENIC RESOURCES

Existing Conditions

The Property is bounded by undeveloped properties to the north, south, and east, and the Queen Ka'ahumanu Highway on the makai side. The land has an average 7 percent slope from east to west (mauka to makai). The mauka end has a varying elevation of 700 feet above msl, dropping to 150 feet at the makai end. Looking to the east (mauka), there are views of portions of the foothills of Waimea, Kohala Mountain, Hualalai and Mauna Kea.

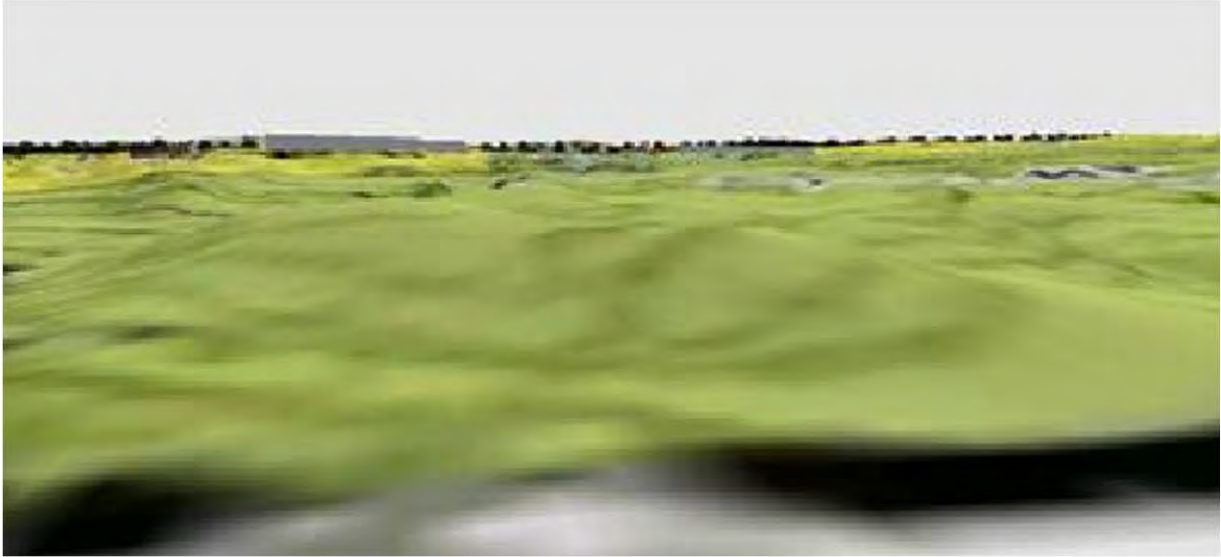
The Property is not specifically listed in the County General Plan as an example of an area of natural beauty in the District of South Kohala. However, the General Plan does state broadly that the viewplane along Queen Ka'ahumanu Highway looking mauka and makai is an example of natural beauty. The Property is adjacent and mauka of the Queen Ka'ahumanu Highway.

A buffer comprised of approximately 225 acres of the Property's frontage along Queen Ka'ahumanu Highway for an average width of 1,200 feet is required in Condition 3 of the State Land Use Commission Decision and Order of July 9, 1991. The purpose of the buffer area is to protect natural open space and scenic views.

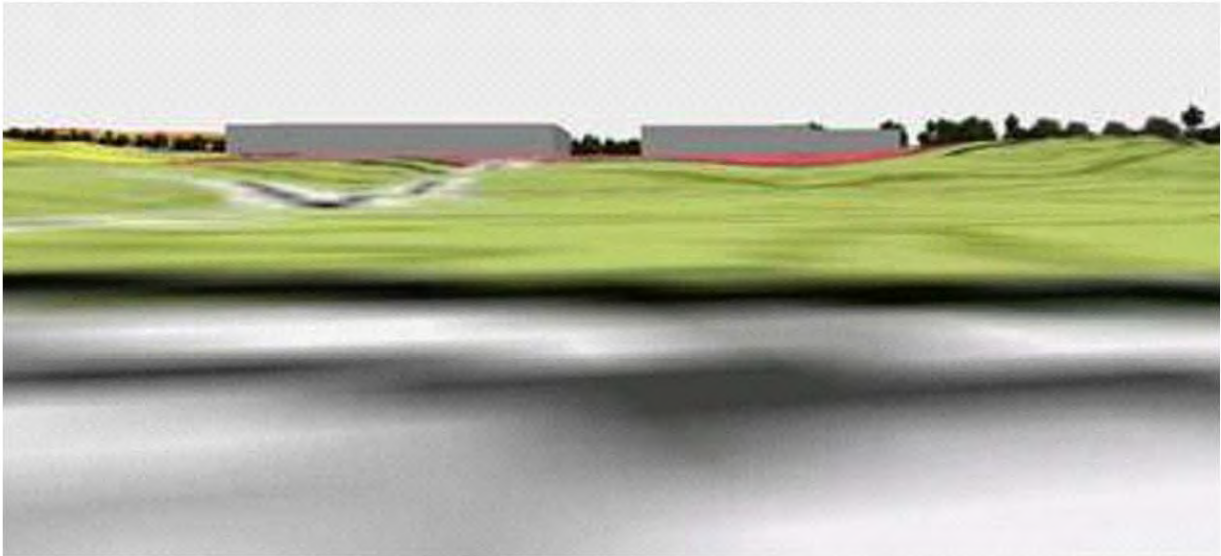
Potential Impacts and Mitigation

Development of the golf course and structures on the Property will generate some measure of visual impacts. The area will be transformed from a vacant, lava field to varying islands of vegetative oases and buildings. The objective of the Project is to minimize disruption to the arid, rocky landscape.

Visual simulations of the Project from three different locations along the highway are provided in Figure 15. These simulations reveal that the gentle rising topography of the Project site, the average 1,200-foot wide highway buffer, and the proposed low-rise structures in the Project will not significantly interfere with the mauka views along the highway. It should be noted that the visual simulations presented here provide a general sense of distance and scale of the structures and their relation to mauka views from Queen Ka'ahumanu Highway. The structures themselves have yet to be designed, so the architectural and landscaping detail of these structures is not available. The visual impact of these structures can be further offset through the use of colors, materials, massing, and landscaping design of the structures.



Looking from Queen Ka’ahumanu Highway at Project’s golf course, residences and buffer from northern end of Property.



Looking from Highway at Project’s commercial, housing, and highway buffer from southern end of Property.



Looking from Queen Ka’ahumanu Highway at Project golf course, highway buffer and residences mid-property.

Source: The visual simulation images are provided by SSFM International.
 Disclaimer: This graphic has been prepared for general planning purposes only.



THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

To further mitigate the potential long-term visual impact of the development, the following mitigation measures are proposed:

Structure, Use and Design Standards. Structures and uses will be governed by a set of standards that will be made a part of a proposed Project District ordinance or will be regulated by the existing Zoning Code. These standards specified in Table 5 will address structure height, setbacks, and required parking as well as the type of uses permitted in the Project. It should be emphasized that structures in the Project would not exceed a 45-foot height limit.

Open Space Buffers. There will be an average 1,200-foot wide buffer from the Queen Ka'ahumanu Highway that is intended to impart a sense of open space in this area and minimize the potential visual impacts of the Project when viewed from the highway.

Preservation of Natural and Cultural Features. The 'Auwaiakeakua Gulch and other drainageways would be incorporated into the Project. Furthermore, the major archaeological feature on the Property, which includes a rock shelter and ahu, will be preserved. A 5-acre preserve for the red 'ilima area is designated within a 16-acre nature park.

Landscaping. Landscaping would be introduced throughout the Project to soften views of the buildings. The County Planning Department's Landscape Rule No. 17, which encompasses location and environmentally consistent vegetation, will be followed.

4.10 SOCIO-ECONOMIC ENVIRONMENT

Hawai'i County is divided into nine geographical judicial districts, which differ in land area, population, and numerous socio-economic and environmental characteristics. Socio-economic data is drawn from census tracts/blocks within these nine divergent districts.

Hawai'i County contains nearly twice the area of the other Hawaiian Islands combined. The massive size can be problematic when delivering public services to the rural communities, but is a factor in creating a sense of the island's vast open spaces.

The Project lies between the Waikoloa and Mauna Lani Resort areas on the makai side and Waikoloa Village on the mauka side.

Development of the West Hawai'i resorts experienced rapid growth in the 1980s, and again from 2002 to 2006. Tourism in Hawai'i County contributes the largest proportion of jobs, and the South Kohala visitor industry dominates the economic landscape, with few employment opportunities in other industry sectors.

A Socio-Economic Impact Assessment of The Villages of 'Āina Le'a, dated August 2009, was prepared by SMS Researching and Marketing Services, Inc. (see Appendix P). As part of their assessment, SMS conducted several interviews with community representatives and leaders to identify potential social impacts of the project on the community. The information below is found in the SMS *Assessment* where extensive discussion on socio-economic context and impact occurs.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

4.10.1 Population and Socio-Economic Characteristics

Existing Conditions

The Project is in the geographical district of South Kohala, which had a total resident population of 13,079 in 4,648 households in the year 2000. This accounts for about 10 percent of the County's population. South Kohala's population was projected to be 17,600 residents in 2009 of which about 4,000 were expected to be school-age children (5-17 years old).

The South Kohala population is divided almost equally between males and females. Twenty-four percent of the Kohala population are seniors compared to the County's 25 percent.

South Kohala residents have a median income of \$71,548 and a per capita income of \$31,808. This represents the highest median income and the second-highest per capita income in the County.

Potential Impacts and Mitigation

The *SMS Assessment* projects that the Project will potentially house up to 5,780 residents. If homes built on the Property have the same average household size as the rest of the County, this would represent a 44 percent increase over South Kohala's 2000 population.

As an inland community, the Project will probably not be a tourist-dominated community like Waikoloa and Mauna Lani Resorts. The *Assessment* predicts:

In all likelihood, 'Āina Le'a will develop into a diverse community whose members work throughout the region, from Kamuela to Kailua-Kona, both in and out of the visitor industry. They will be the new residents of the Waikoloa region as perceived by Hawai'i County planners two decades ago. As such, 'Āina Le'a will probably develop a character somewhere between that of Mauna Lani and Waikoloa Village. The community will have a more defined town center and will offer a wide array of commercial, recreational, and public services.

The Project will impact the social character of the region, particularly for nearby Waikoloa residents. Public services such as safety, security, education, and health services would be provided commensurate with the new development to mitigate negative impacts that might be generated by the Project. These public services and facilities include a community center, school site, parks for the Project and the region, and planned construction of a new mauka-makai road connecting Waikoloa Village to Queen Ka'ahumanu Highway. These services or facilities are discussed in applicable sections of this DEIS.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

4.10.2 Housing

Existing Conditions

South Kohala is made up of two larger villages, Waimea and Waikoloa, the port town of Kawaihae and the rural areas in between. There are also small resident populations within the nearby resorts (Waikoloa, Mauna Lani, Hapuna, and Mauna Kea), although the majority of their populations is comprised of transient visitors and those who own property but reside there for only short periods of the year.

Development of the Waikoloa Village started in the early 1970s concurrent with the opening of the Waikoloa Village Golf Course. By the year 2000, Waikoloa Village had grown to house over 4,800 residents in about 1,750 homes. It is the only village of its size in the region for at least 15 miles. In part because it is a relatively new community and because of its remote location, Waikoloa Village is somewhat isolated with respect to access to public services.

Waimea is located approximately 21 miles north of the 'Āina Le'a site. It is headquarters for Parker Ranch and for two of the observatories on Mauna Kea. Unlike the plantation towns, which cluster around mills and nearby commercial areas, Waimea spreads along its major roadways. As a ranch town, Waimea remained relatively small until the early 1980s, at which time the population grew quickly from 1,179 to approximately 8,600 residents in 2006. The population of Waimea has continued to grow in the current decade but at a slower pace. Waimea is the center of retail, health, and government facilities for the surrounding region.

Potential Impacts and Mitigation

At build-out, the Project will provide up to 2,462 residential units, 20 percent of which would be priced in the “affordable” range under the guidelines of the County’s affordable housing policy. Workforce housing units are also contemplated to alleviate housing shortage for construction laborers and Project workers. A development of this scale will impact the development pattern of the area, providing a mix of housing types that would generally be of a character between that found at Mauna Lani Resort and Waikoloa Village, but with a more defined town core and with a broader range of commercial and recreational amenities and public services.

Overall, the Project will provide a spectrum of housing opportunities to satisfy some of the housing preferences and needs of existing and future residents of the region. In response to the community needs and requirements of the SLUC approvals, the initial development will consist of 385 affordable housing units in a town-home configuration.

4.10.3 Social Context

Existing Conditions

The Villages of 'Āina Le'a is bordered on its makai side by Queen Ka'ahumanu Highway and on the mauka side by Waikoloa Village. Between those two borders, it extends from the entrance of the Mauna Lani Resort at the south to the area mauka of Puakō at the north.

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Makai of the highway and along the beach, the residential component of Mauna Lani Resort consists of predominately time-share and vacation rental units, where as Waikoloa Village is a predominately middle-class residential community developed principally over the last two decades. 'Āina Le'ā is expected to be a complex and mixed community linking these two existing areas.

Potential Impacts and Mitigation

The 'Āina Le'ā project will potentially be one of the County's largest single developments, eventually housing as many as 5,780 people and serving the residents and surrounding area with commercial centers, a civic center, a community center and a range of recreational amenities. As such, there is little question that the development will impact the people who live and work in the area and those who eventually work and reside within the project itself.

As part of its Assessment, SMS notes that the residents of the Hawai'i County and the Project area have expressed concern about the pace of development in their communities and its effect on local infrastructure. SMS notes that this same opinion was expressed repeatedly in interviews conducted with community leaders and public officials and has been voiced at community meetings throughout the Island, as well as within numerous public opinion surveys. More specifically, residents of the area identified three perceived community needs: 1) a secondary access road for Waikoloa Village, 2) a community center, and 3) better access to public services, primarily those pertaining to public safety, namely police and fire protection, and emergency medical services. Others expressed the need for additional commercial and light-industrial services in the area. The most critical problems expressed by area residents were the lack of affordable housing and rising traffic congestion.

As noted above, both issues of housing and traffic congestion are addressed as part of the initial phase of development with the construction of 385 affordable housing units and broad array of roadway and other improvements aimed at minimizing the potential traffic related impacts and improving traffic circulation in the area. Additionally, the commercial village and mixed-use core, portions of which are planned as part of the initial phases of development, are expected to add to the range of commercial and public service opportunities in the area.

4.10.4 Employment

Existing Conditions

The leisure and hospitality industry in Hawai'i County accounts for the largest portion of jobs; 22 percent, followed by government, which accounts for 20 percent. County officials believe that diversifying the economy is crucial to the economic health of the County and have been working to accomplish that objective. In fact, since the early 1990s up until 2007, Hawai'i County has witnessed an annual job growth in virtually every industry.

Employment countywide has fluctuated widely over the last decades, as reflected by the County unemployment rates, which ranged from 4.0 percent in 1990, a high of 10.8 in 1994 and a low of

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

2.8 percent in 2005. More recently, with the current economic downturn, the County unemployment rate has risen to 10.4 percent, according the Bureau of Labor Statistics.

Potential Impacts and Mitigation

Direct workforce is projected to be 8,054 person-years of construction-related employment as listed in Table 12 below.

Table 12
Construction Employment

JOB TYPES	PERSON-YEARS OF EMPLOYMENT
Direct Employment	8,054
Indirect & Induced Employment	9,189
Subtotal	17,243
On-island total	14,567

Source: Socio-Economic Impact Assessment, SMS Research & Marketing

The *SMS Assessment* projected that The Villages would support 17,243 indirect and induced person-years of employment, that is, the additional jobs created both indirectly through construction-related subcontractors and that are induced from retail-service jobs generated from construction worker spending. Direct construction earnings over the first nine years of the project are projected to total \$1.23 billion (2009 dollars). Cumulative indirect and induced earnings are anticipated to be \$550.8 million and \$581.9 million, respectively. Further, the SMS Assessment notes that construction spending will have a positive impact on the economy by creating much-needed jobs and spending in related industries.

4.10.5 Economic Factors and Government Revenues

Existing Conditions

From the early 1980s to 1990, the State's economy grew quickly. In the 1990s that growth began to stagnate and the first seven years of the last decade witnessed very slow growth. By 2000, the State economy had returned to a healthier and more stable growth rate and in 2007, the State's unemployment rate increased by 1.4 percent. There was a decline in job growth in 2009 and experts are predicting an upward recovery period during 2010 and a stabilization of the 2008 growth rate by 2012.

The visitor industry has been the backbone of both the State and Hawai'i County's economic growth. Visitor arrivals and hotel occupancy rates have risen steadily from the beginning of the decade to 2005 and have remained steady up to the end of 2007. However, the number of average visitors across the State dropped by 10.6 percent in 2008. In addition, the number of visitors that visited the Big Island dropped by 18.4 percent, from 2007 to 2008. Hawai'i County's share of the statewide visitor count also declined slightly in the past two years, during which there was a 1.8 percent decrease in visitor arrivals.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

The South Kohala visitor plant is the Big Island's most valuable travel infrastructure and has played a leading role in the industry growth and the local Kohala economy over the past decade.

Potential Impacts and Mitigation

The Project will have a significant positive impact on state and county government revenues, employment opportunities, and personal income. Total construction costs for the Project are estimated to be in the order of \$5.3 billion. This level of construction will generate \$196.5 million in direct state tax revenues according to the *SMS Assessment*. Indirect and induced impact of the Project will result in \$233.3 million in state tax revenues. The *SMS Assessment* projects that a total \$429.8 million in direct and indirect State taxes will be produced by the Project.

In addition, the estimated new homes within Project are projected to generate approximately \$12.8 million in new County property tax revenues.¹ The property values that were part of the County property tax projections were based on nearby Waikoloa Village homes and units and, whereas the property values of the Project homes are expected to be higher than the surrounding Waikoloa Village homes, it is likely that property taxes from the Project are likely to be higher than the amount provided here.

In addition, an estimated \$102 million in general excise taxes would be produced from the sales of homes, in addition to about \$74 million in construction workers' income taxes that is expected to be generated to the State over the period of the Project development.

4.11 INFRASTRUCTURE AND UTILITIES

4.11.1 Water System

Existing Conditions

There is no County water system servicing the Project site.

The Project will receive its domestic water from the County's South Kohala system via infrastructure improvements constructed by the Applicant pursuant to a Water Development Agreement (see Appendix C). The Agreement obligates the Applicant (successor to Bridge) to develop, construct and/or install up to four wells at the 'Ouli Well Field, which includes the existing well (State No. 6046-01). The initial construction increment would include development and outfitting of three wells—the existing well and two new wells.

¹Estimates are based on the Project's market study estimates of potential unit sizing and pricing, in combination with the value per square feet of neighboring Waikoloa Village homes applied to the different sized units.

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Potable water from the 'Ouli wells would be added to the Lalamilo component of DWS' South Kohala system, which would enable the Applicant to draw potable water from that system. The Agreement requires, at no cost to the County, the installation of pumps, transmission lines, storage tanks and all other necessary improvements to enable delivery of water from the 'Ouli wells into DWS' existing system in the South Kohala coastal area, which will be conveyed to the County upon completion. The County will be allocated 20 percent of the combined capacity of three wells, excluding the standby well. The maximum daily supply available to the Applicant would be from 2.4 to 2.9 mgd. Using DWS design standards, this is equivalent to an average daily supply of 1.61 to 1.96 mgd.

Initially, prior to the development of the 'Ouli wells, the project will obtain approximately 0.2 mgd from the West Hawai'i Utilities that is intended to service the initial 385 affordable town home units. Water transmission from the Waikoloa water system will be provided via a 12-inch water line connection to the system at Hulu Street within a 30-foot water utility easement that extends through the Waikoloa Village Association and adjoining "Bridge" lands. The improvements will include the construction of additional storage tanks at the approximately 620-foot elevation.

Non-potable water required to irrigate the project golf course and roadways, estimated to be approximately 0.54 mgd for The Villages project, would be provided by onsite brackish wells and reclaimed domestic wastewater.

Potential Impacts and Mitigation

An Assessment of the Potential Impact on Water Resources of the Development of the 'Āina Le'ā Village Project dated July 2009 by Tom Nance Water Resource Engineering estimates potable water use demand for the Project to be about 1.32 mgd with a peak-hour demand of about 4.0 mgd (see Appendix F).

Based on the agreement with the County Department of Water Supply (DWS), 'Āina Le'ā to develop up to four wells in the 'Ouli parcel, one of which will serve as a back-up well, and related reservoir, storage, and transmission improvement in the 'Ouli corridor that would be integrated as part of the DWS South Kohala System. According to the agreement, 20 percent of the capacity of remaining three wells will be reserved for the DWS. In addition to meeting the full needs of the proposed project, development of the four wells and the related improvements within the 'Ouli parcel will broaden and enhance the County water system in the area, bringing additional resources to meet the County demands in the area with no cost to the County.

According to the *Assessment*, the ground water resources at 'Ouli should be adequate to meet the potable water demand of the proposed project. A more comprehensive discussion of the potential impacts and proposed mitigation measures is found in Section 3.5 of this DEIS relating to Hydrology and in Appendix F.

As noted above, the irrigation water for the project would be provided from a combination of on-site brackish wells and reclaimed wastewater. The Nance *Assessment* notes that the cumulative impacts on the demands for water resources by existing, planned and proposed projects in the

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

project area will require a coordinated effort on the part of stakeholders, government and communities to solve the region's known water challenges. The Applicant has committed to work with government, landowners, and the community towards this end.

As noted in the DOH's EISPN comment letter dated January 7, 2008, the construction of new potable wells, storage and transmission systems connecting to the County water system must comply with Hawai'i Administrative Rule §11-20-29 entitled "Rules Relating to Potable Water Systems." Pursuant to the rules, an engineering report would be commissioned to identify potential sources of contamination and evaluate measures to reduce or eliminate the potential for contamination. In meeting this requirement, a source water assessment and protection plan will be prepared for DOH approval.

To reduce the amount of draw to available water resources, it is proposed that a combination of brackish water and treated wastewater effluent be used to irrigate golf courses and landscaped areas. Care will be taken in the design and operation of the potable and non-potable systems to prevent cross-connection and the possibility of backflow from the non-potable system to the potable system. Full compliance with HAR §11-21 relating to "Cross Connection and Backflow Control" will be met.

4.11.2 Wastewater

Existing Conditions

There is no County wastewater facility in this region.

Communities in this area are served by private wastewater treatment plants or individual wastewater systems (IWS), such as cesspools or septic tanks. Wastewater treatment of Waikoloa Village's multi-family, commercial, and institutional uses are performed by two private WWTPs mauka of the Project site—the 'Auwaiakeakua WWTP and the Kamakoa WWTP. Individual family residences are served by IWSs. Mauna Lani Resort's effluent is treated at its private WWTP makai of the Project site. Homes in Puakō are served by IWSs.

The DOH states in its January 7, 2008, EISPN comment letter that the project is located in both the Non-Critical Wastewater Disposal Area and Five-Acre Lot Exception Area.

Potential Impacts and Mitigation

The construction of a private WWTP for the Project will not impact the County's sewerage system as no municipal system or sewage line services the area. The Applicant is proposing to construct a private WWTP on approximately 10 acres of land that is under the control of the Applicant, near the southwestern boundary of the Project boundary.

According to the *Preliminary Engineering Report* dated July 2009 prepared by SSFM International, the Project will generate an estimated average wastewater flow of 1.23mgd. Table 13 below provides the projected daily usage by land use.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Table 13
Projected Wastewater Flows by Land Use

Land Use	No. of Units	Per-capita / Unit	Estimated Population	GPD per person	Est. Ave. Wastewater Flow (GPD)
Single Family	790	4	3,160	112	353,920
Multi-Family	1,047	4	4,188	112	469,000
Mixed Uses	125	4	500	112	280,000
Affordable Housing	500	4	1,540	112	123,200
Commercial	36 ac	140/cap/ac	5,040	112	5,040
Golf Course C.H.	4 ac	200/cap/ac	800	25	800
TOTAL					1,232,000

Proposed Wastewater Treatment Plant. The Applicant is planning to construct a private WWTP on approximately 10 acres of land on the adjacent Parcel 40 to the south over which the Applicant has control by Amended Agreement, as shown on the Conceptual Master Plan (see Figure 3). Initially, a “packaged” WWTP is planned in the area mauka of the planned commercial village and would be sized to serve the initial 385 affordable townhouse units (see Phase 1 WWTP in Figure C-001, “Civil Phase Development Plan,” Appendix D2). Design of this initial treatment facility can be compartmentalized so as to be potentially relocated and integrated as part of the permanent project WWTP. Both the temporary and permanent WWTPs would use a membrane bioreactor process.

The Project’s proposed WWTP would utilize a membrane bioreactor system to treat wastewater at an R-1 tertiary quality level to permit effluent reuse for golf course and landscape irrigation and future construction dust control. The combination membrane and biological process filters out suspended solids and pollutants, including nitrogen, phosphorous, and microorganisms such as viruses, bacteria and parasitic cysts. Some advantages of the membrane bioreactor system over a conventional system are its more robust biological process, superb water quality, and smaller facility footprint. The projected design average flow for the Project is estimated to be 1.23 mgd, with an estimated maximum flow rate of 5.8 million gallons or 6.5 mg with estimated infiltration/inflow included. The WWTP would be designed for an average dry weather flow liquid capacity of about 2.0 mgd, and designed to handle a peak flow rate of 10.5 mg (see Appendix D).

The permanent WWTP will be installed mauka of the Highway Buffer and south of the main project access road, as shown in the Conceptual Master Plan, Figure 3, within a 10-acre site in order to provide for ample buffers from other uses. The WWTP will be properly sited and landscaped to reduce visibility from the highway. The location of the WWTP some distance from the property lines coupled with landscaping and technological advances will mitigate potential concerns over noise and potential odors.

The collection system will consist of a network of gravity sewers, force mains, and sewage pumping stations all within sewer and roadway easements. Within the Preliminary pipe sizes will likely range from 8-inch to 12-inch mains and 4-inch to 6-inch sewer laterals. The onsite

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

wastewater collection system is proposed to be dedicated to the County, and therefore design and construction of the collection system will be in accordance with County of Hawai'i standards.

After the secondary treatment, effluent will be treated within the plant's water recycling section. The treated effluent will be used to irrigate roadside landscaping and the golf course, thereby helping to reduce the demands on the brackish water resources in the area. The WWTP will treat its effluent at an R-1 level, which will allow reuse and will avoid potential adverse impacts to the down-gradient MLR golf course irrigation wells.

Because of the technology of the membrane bioreactor system, the liquid sludge produced by the WWTP will be minimal. What liquid sludge is produced will be disposed of in a manner meeting Department of Environmental Management and State Department of Health regulations and requirements.

The Project's WWTP will comply with the requirements in DOH HAR §11-62 relating to "Wastewater Systems." The DOH notes in its EISPN comment letter dated January 7, 2008, that injection wells used for the subsurface disposal of wastewater, sewage effluent, or surface runoff are subject to HAR §11-23 relating to "Underground Injection Control." The Project will comply with the environmental regulations and UIC permitting under this rule.

4.11.3 Solid Waste

Existing Conditions

The County does not provide waste collection services. Private refuse companies haul about 50 percent of the waste generated by residents to the County landfills. The rest of the waste is self-hauled and deposited at County transfer stations. The County has a landfill in Hilo serving East Hawai'i and a landfill in Pu'uana'hulu serving West Hawai'i.

Private haulers servicing the Project's residents and commercial activities would use the Pu'uana'hulu Landfill, which is located about four miles away. Approximately 385 tons of trash per day is accepted from commercial haulers and individuals. There is more than 12 million cubic yards of permitted air space at this landfill.

For residents who wish to self-haul refuse, the Puakō transfer station is located about two miles from the Project site. The transfer station has been improved with perimeter fencing and concrete pads for recycling bins.

Potential Impacts and Mitigation

According to a *Preliminary Engineering Report* dated July 2009 prepared by SSFM International (see Appendix D), the Project would generate about 10 tons of trash per day based on an average generation rate of 2.5 pounds per capita per day. This per capita figure was based on a study of Kailua, Puakō and Waimea, which showed the average daily pounds of trash generated were 2.09, 2.25, and 2.42 pounds per day, respectively.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Short-term impacts of Project construction waste due to site preparation and project construction will be mitigated by requiring contractors to remove all debris from the Property for disposal at the nearby landfill.

The generation of 10 tons of trash per day at full build-out will impact the County's nearest Puakō transfer station and the nearby Pu'uanaulu landfill. Residential refuse generated by the Project will either be collected by a private hauler, who will use the landfill, or be taken by individual households to the Puakō transfer station. Commercial and retail establishments will use private haulers who will deposit the refuse at the landfill. While it is likely that private haulers will be used by many of the Project residents, it is anticipated that local transfer stations will experience an increase in trash volume over time.

The Applicant is already required by a condition of the existing zoning ordinance to prepare a solid waste management plan for review and approval of the Department of Public Works. The plan, in part, will address education and availability of reuse and recycling as methods of reducing a person's contribution to the waste stream. In addition, the Applicant is required by zoning ordinance to pay its fair share contribution for solid waste facilities. These mitigation measures combined with the heightened awareness and concern for our island environment by the community will help to mitigate impacts of the Project on the County's solid waste facilities.

4.11.4 Drainage

Existing Conditions

Regional and Off-Site Drainage

The Property is located in the Pohakuloa regional watershed, which has a tributary area of about 507 square miles. Only a fraction of the Pohakuloa watershed drains to the Project site. Within this regional watershed, there are four major stream watersheds that enter the larger 3,000 acre property: Puakō Gulch No. 4, 'Auwaiakeakua Gulch-North Tributary, 'Auwaiakeakua Gulch, and an unnamed gulch called "South Stream" for purposes of this DEIS. The North Tributary joins with the main 'Auwaiakeakua Gulch forming three streams that discharge along the western boundary of the Project site at the highway. Six minor off-site watersheds also drain to the site. There are a total of eight culverts that drain away from the larger 3,000-acre site, five of which drain the 1,060-acre Urban area. These culverts discharge to streams makai of the highway flowing to the ocean through the Puakō Road floodplain.

Focusing on the undeveloped 1,060-acre Urban area, the current (undeveloped) watershed flows at Queen Ka'ahumanu Highway are calculated at 404 cubic feet per second (cfs) for 50-year flows. The on-site streams and channels are few and generally undefined.

Potential Impacts and Mitigation

In the short-term, grading, grubbing and stockpiling work on the Project will involve land disturbing activities that could result in soil erosion, some removal of existing vegetation, and changes to existing ground conditions, including relocating, removing, stockpiling and soil

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

replacement. The contractor will be required to perform all grading, grubbing and stockpiling operations in conformance with applicable provisions of the County Code and Chapter 55 (Water Pollution Control) of Title 11, Administrative Rules, State Department of Health, and any subsequent amendments to these requirements. Additionally, an Erosion Control Plan will be required by the County prior to issuance of grading approvals, in compliance with Chapter 10 of the Hawai'i County Code, "Erosion and Sedimentation Control."

For all grading and grubbing operations, soil erosion prevention and fugitive dust protection mitigation will be practiced through the implementation of best management practices that would include but not be limited to:

- Implementation measures such as limiting grading to not more than 20 acres at a time until dust and erosion control measure are provided
- Minimizing the time graded areas are open
- Grading, as much as possible, parallel to slope contours, as opposed to grading up and down slopes
- Retaining existing vegetation until just prior to the start of construction in the area
- Construction of drainage control features such as erosion control fences
- Using temporary area sprinklers in non-active construction areas when existing vegetation has been removed
- Using water trucks during construction period for dust control
- Using temporary berms and cut-off ditches for control of erosion
- Use of watering or other erosion control methods on graded areas in anticipation of weekends and holidays
- Implementing the use of sedimentation basins
- Sodding and planting cut and fill slopes that are subject to erosion
- Using slope stabilization materials when needed

Over the long-term development, the Project will result in the construction of impermeable surfaces that potentially generate storm water runoff, such as buildings, roads, and parking areas. Road and building pad construction will also change existing on-site drainage patterns.

The County of Hawai'i requires that, for new developments, the project retain any increase in peak flow and runoff volume for up to the 50-year storm. That is, for an undeveloped site, the storm water discharge from the property for up to the 50-year storm event cannot exceed that which occurred prior to development.

To meet this requirement, a July 2009 *Master Drainage Report for The Villages of 'Āina Le'a* was prepared by SSFM International for the purposes of 1) identifying and quantifying existing and future conditions and 2) planning drainage facilities to ensure that storm water runoff rates and volumes leaving the site are at or below the pre-existing conditions. A copy of the SSFM Drainage Report (*Report*) is included for reference as Appendix E of this DEIS.

The *Report* calculates an increase in the 50-year peak storm flows from the planned build-out of the Project to be in the order of 1,552 cubic feet per second (cfs).

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

To mitigate long-term impacts associated with full build-out conditions, on-site drainage facilities will be designed for the 10-year or 50-year storm as required by the County. These facilities would include, but are not limited to, drywells, culverts, storm drains, catch basins, and roadway swales. The Project storm water conveyance systems would discharge into the golf course and/or the Highway Buffer area makai of the Project. The master planned drainage facilities would also include retention facilities for the full development. These retention facilities would be constructed within each pre-development land-use area in order to mitigate potential increases to the flow and volume of runoff from each land-use area.

The Project will comply with the requirements of Chapter 27, HCC, relating to Floodplain Management. Broadly, this means that the Project will not encroach on the 100-year flood plain and development will be elevated above the 100-year base flood elevation. Should there be any temporary crossings of drainage channels, the modifications will be requested by the contractor and a detailed design prepared and submitted to the County for its review and approval. There are projected to be eight crossings of major streams at build-out. The crossing (culvert) structures would be designed as part of the engineering in conjunction with the planning and design of each phase or increment of development. All improvements related to stream crossings will meet the permitting requirements pertaining to compliance with Sections 404 and 401 of the Clean Water Act, as administered by the U.S. Army Corps of Engineers and State Department of Health, respectively.

To mitigate the concern over storm water pollutants and its potential impact on water quality, retention and infiltration using open basins and/or drywells is proposed, and all developed areas of the site will be designed to drain into detention basins or drywells. The retention portion of the detention basins provides an effective storm water treatment. That is, the use of vegetated swales, infiltration facilities, drywells, detention/retention ponds, and other filtering systems, as proposed in the Drainage Master Plan, will help to control and reduce pollutants.

It should be noted that soil erosion is an ongoing process that is taking place in most undeveloped areas, such as the Project site. According to the SSFM *Report*, the soil erosion potential at the Project Site is estimated to decrease by about 12 percent, or and estimated 15,342 tons per year, as a result of the reduction of erodible surfaces, planting of temporary grasses, reduction of the length and slope of overland flow, construction of the drainage system and the increase in landscaped area that, in turn, reduces the amount of bare ground.

4.11.5 Electrical and Communication Systems

Existing Conditions

There is currently no permanent power at the Project site.

The Hawai'i Electric Light Company (HELCO) supplies electricity to approximately 79,000 customers in the County via a distribution system consisting of a series of transmission lines and transmission/distribution substations. HELCO's power generation system presently has a total firm capacity of 276.4 megawatts (MW). Electricity in the County is generated by HELCO power plants and by independent power producers, Puna Geothermal Venture and Hamakua

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Energy Partners, from whom HELCO purchases a portion of its power. Wind and hydroelectric also provide HELCO with energy for its system. Through the State's Integrated Resource Planning process, HELCO has identified other alternative and renewable energy resources, such as photovoltaic, solar thermal, wind, geothermal, and hydro systems for meeting the near- and long-term electrical energy needs of the County.

Electrical power to serve the Project would be brought from an existing HELCO substation (Mauna Lani substation) located near the intersection of Ho'ohana Street and Puakō Beach Drive with Queen Ka'ahumanu Highway. Power would be transmitted on overhead lines to the site via a planned electrical utility corridor that extends mauka from the substation and then south to the Project site, within the lands owned by the Waikoloa Village Association, makai of Waikoloa Village. A map showing the route of the proposed utility easements is shown in the Figure 4. While the transmission lines to the Project will be overhead lines, within the Project the balance of the lines would be placed underground.

Telephone services will be available to the Project through the use of HELCO's poles or by sharing direct burial trenches and concrete encased ducts for electrical lines.

Potential Impacts and Mitigation

The 2,462 residential units are estimated to produce an electrical demand of 7.386 megawatts. The commercial electrical load cannot be calculated at this time without greater detail of the nature of the retail establishments.

Initially, the Project will receive its power via the existing Mauna Lani substation. However, the Mauna Lani substation will be inadequate to serve the full Project development. At the appropriate time, the Applicant will construct a new substation along the utility corridor, approximately 250 feet mauka of the Project site, and transfer the substation facility to HELCO. The planning, timing, design and location of the new substation will be closely coordinated with HELCO. In that the proposed utility corridor for overhead power transmission is located approximately a mile mauka of Queen Ka'ahumanu Highway, and far removed from public roadways and residential areas of Waikoloa Village, and the balance of the power lines within the project would be placed underground, the visual impact of these lines when viewed from public areas is expected to be negligible.

Where appropriate, a broad range of energy-efficient measures will be encouraged in the design and operation of the Project, including the analysis of siting buildings to maximize the use of natural lighting and ventilation, encouraging the use of solar photovoltaic and water heating systems and energy conservation measures, installing water-conserving fixtures, and use of mulching to reduce evaporation.

No significant off-site improvements are required by Oceanic Time-Warner for television cable connections and mitigation measures are not required. A connection to the existing cable system on the makai side of the highway near Mauna Lani Drive, if required, would be made in conjunction with planned intersection improvements in this area so as not to cause further traffic disruption. The Project will comply with the rules and regulations of the utility companies.

4.12 Public Facilities and Services

4.12.1 Recreation

Existing Conditions

There are a myriad of public recreational activities in the region. These include small boat harbors, hiking trails, beaches, state and county parks, and archaeological and cultural activities, many within 10 miles of the Property.

The closest community facilities are located in Waikoloa Village with a four-acre neighborhood park and a recently constructed community park next to Waikoloa Elementary School. A 12-acre park is also planned within in the County's Kamakoa affordable housing project in the Waikoloa Village, although development on the project has slowed in the last year and it is uncertain when the community facilities there will be completed.

District-wide recreation facilities include the County's Waimea Park with a community center, playfields, tennis courts and a playground. Also within Waimea, the Waimea Elementary and Intermediate School has a playground and gymnasium used during school hours. After school hours, the County jointly operates the recreational facilities. Additionally, a 25-acre district park is proposed by Parker Ranch for meeting a requirement of its zoning ordinance. Site selection is currently underway.

The State's Hapuna Beach State Recreation Area and the County's Samuel Spencer Beach Park are major beach parks with water-oriented recreation and overnight cabins or campsites, respectively. Public access and parking are also available to the beaches in the area at Anaeho'omalū, Mauna Lani, and Mauna Kea.

There is a small boat harbor at Kawaihae Harbor and a small boat ramp at Puakō.

Potential Impacts and Mitigation

The Project proposes diverse recreational amenities on-site for its residents and guests such as bike/jogging trails, a golf course, swimming pools, tennis courts, and picnic/barbecue areas. Further, while a 10-acre active park is required by the existing zoning ordinance, the Applicant has offered to expand that to 16 acres. A 16-acre passive park is also planned to mitigate impacts the Project may have on existing park and recreational resources. The parks will be maintained by the Applicant or a successor homeowner association, unless and until the County exercises the option of ownership.

The Applicant has also been in discussion with the Department of Parks and Recreation to provide land for a community center, which if accepted would be located adjacent to the planned 16-acre active park in the area just south of the main access road and mauka of the Highway Buffer area, as indicated in the Conceptual Master Plan, Figure 3.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

While the project is expected to impact the local recreational facilities, it also includes a broad range of recreational elements aimed primarily at the project residents but also adding to the public recreational facilities of the region, thereby mitigating this impact to a large degree.

4.12.2 Fire and Emergency Protective Services

Existing Conditions

The South Kohala Fire Station, directly across from the Project on the makai side of the Queen Ka'ahumanu Highway, provides full-time fire, emergency medical, hazardous material, and aero-medical services. It is staffed by an average of six full-time fire personnel. Back-up emergency response is provided by Waikoloa Fire Station and Waimea Fire Station. Waikoloa Fire Station is a full-service fire station with five FTE personnel, and Waimea Fire Station is the region's main fire station about 30 minutes away. With the added support of the volunteer firemen in the region, the area is currently adequately served.

Potential Impacts and Mitigation

While the region appears to be adequately served by the existing fire and emergency service, these facilities will need to be expanded in order to handle the planned 2,230 additional homes planned at 'Āina Le'a. The State revenues from the development taxes and new County property taxes generated from the development will aid in this expansion. The Applicant, as required by zoning approvals, will also be providing "fair-share" contributions for the expansion of fire-related facilities. Additionally, the Applicant has offered to provide areas within the commercial portion of the Project for additional fire and EMS units, as needed.

4.12.3 Police Services

Waimea Police Station provides the first response to the South Kohala region with an area coverage of 688 square miles—an area larger than the island of Oahu. Waimea Police Station is staffed by 32 officers, but is currently four to five officers short of a full complement.

A police substation is located at the South Kohala Fire Station and a mini-station is at the Waikoloa Village Golf Course. The mini-station is generally unmanned. Supplemental backup comes from Kapa'au in North Kohala or from Kailua-Kona with a response time of about 45 minutes.

Potential Impacts and Mitigation

The existing police resources serving the area will need to be expanded to meet the needs of the planned Project development. Community leaders who were interviewed in the course of the SMS *Assessment* indicated that they were hopeful that the development at 'Āina Le'a would lead to the full staffing of the Waikoloa substation on a permanent basis. As in the case of fire- and EMS-related facilities, to meet prior zoning approval requirements the Applicant will provide its "fair-share" contributions for the expansion of police-related facilities. The applicant has also

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

committed to provide areas within the commercial portion of the Project for additional police-related facilities, should these be needed.

4.12.4 Health Care

Emergency services are provided through the Fire Department's emergency medical unit located directly across from the Project at the South Kohala Fire Station.

The closest hospital is the private North Hawai'i Community Hospital, which includes the Lucy Henriques Medical Center, in Waimea, approximately 18 miles from the Project. The Hospital provides private, full service, acute care and 24-hour emergency health services. Three other hospitals within 40 miles of the Waikoloa region offer emergency and urgent care services, acute care, and long-term care. These are the Kona Community Hospital (located approximately 40 miles away), Kohala Hospital (35 miles), and Hale Ho'ola Hamakua (32 miles). Across the County, critical care hospitalization decreased 17 percent between 1995 and 2005, while long-term care admissions more than doubled between 1993 and 2005. In 2006, there was an average of 2.3 beds per 1,000 people. No new facilities are planned, but zoning has been approved for the potential expansion of the North Hawai'i Community Hospital in Waimea.

Potential Impacts and Mitigation

According to the SMS Assessment, area residents and community leaders expressed a strong interest in an urgent care clinic and basic health care services within the Waikoloa region. The Applicant has been interviewing several medical providers about a potential clinic that can be built as part of the project and serve both local residents and visitors to the area. In addition, the Applicant has proposed that a privately operated urgent care medical service facility be located within the commercial center portion of the Project, which would serve an important need of the local residents and alleviate some of the burden on hospitals of the area.

4.12.5 Schools

There are three public schools serving students in the Waikoloa region: Waikoloa Elementary and Intermediate School (K-8) located in Waikoloa Village, Waimea elementary School (K-5) located in Kamuela, and Kealahou Elementary school (K-5) and Kealahou High School (9-12) located just north of Kailua-Kona.

School-aged children living in The Villages would attend public school at Waikoloa Elementary and Intermediate School in the Waikoloa Village, and at Kealahou High School approximately 25 miles to the south. Waikoloa Elementary and Intermediate School is completing its transition to an intermediate school in the 2009-2010 school year by the addition of classrooms for the eighth grade.

Six private schools in the region offer an alternative to public education in different grade levels.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Potential Impacts and Mitigation

The number of students will rise as new residents move into the Project. It is estimated that potentially 1,000 students could be added from the Project to the educational system, according to the SMS *Socio-Economic Impact Assessment*. This number assumes that the demographic profile will be similar to the Waikoloa Village community, although marketing will be directed to buyers who would use the units as second homes.

The DOE's optimum class size for grades 4 through 12 is 26 students for every teacher (26:1). Waikoloa public schools have an average of 15 students per classroom, but data from the 2007 South Kohala CDP school profile shows that maximum capacity will be reached for Waikoloa Elementary School with the addition of 210 more students. Waimea Middle School will reach maximum capacity with 420 more students.

While the LUC condition requires only 16 acres for a school site, the Applicant has set aside 32 acres outside the Urban Land Use District for a school to be developed by the Department of Education. The area is large enough to develop a middle or high school. The planned site is in the area adjacent to the proposed 16-acre active park and offers the opportunity of co-use of the athletic fields that are required for a high school program. The revenue the State will receive in taxes from the development will aid in the funding for these facilities.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

5 ALTERNATIVES DISCUSSION

Title 11, DOH, Chapter 200, EIS Rules, Section 11-200-17(f), provides that “known feasible” alternatives to the proposed project be limited to those that would allow the objectives of the Project to be met while minimizing potential adverse environmental impacts.

The following alternatives are presented for this discussion:

- 1) No Action/Undeveloped
- 2) Develop According to Original Master Plan
- 3) Develop According to Existing Zoning
- 4) Develop at Lower Densities
- 5) Postpone for Future Study
- 6) Develop According to Preferred Alternative

5.1 NO ACTION/UNDEVELOPED

The No Action alternative would mean the Property would be left undeveloped. No Action would place the Applicant in a position of non-compliance with approved zoning and land-use entitlements. Furthermore, this alternative does not meet the Project objectives to develop village communities as an integral and contributing part of the Puakō and Waikoloa communities. The Waikoloa community is in need of regional road networks. Mauka-makai and north-south regional connectivity would not be realized under the No Action alternative. Similarly, other regional projects connected with the Project, such as a redundant County water system, park and public school sites, would not be implemented.

5.2 DEVELOP ACCORDING TO ORIGINAL MASTER PLAN

The original conceptual master plan for 3,000 acres proposed six golf courses, a golf academy, 3,220 residential and rural-residential units/lots, and a commercial area. This master plan will not meet the County's or community's goal of greater roadway connectivity nor will it meet the objectives of the Project while responding to the current market conditions. Moreover, the original master plan would not contribute to an efficient use of land through a more compact urban development, as represented in the current master plan. The original master plan was developed at a time when there was a far greater demand for golf use, which no longer is the case.

5.3 DEVELOP ACCORDING TO EXISTING ZONING

The existing zoning in the 1,060-acre Urban District alone would allow development of a maximum density of about 3,436 units/lots and two golf courses. However, the rigid zoning lines discourage creative community planning and efficient site planning. The impact on the environment would be greater, as the current zoning does not provide the same flexibility of responding to site conditions. The current zoning also does not allow for a more flexible and integrated approach to site planning which is integral to smart-growth site design.

5.4 DEVELOP AT LOWER DENSITIES

The alternative of developing at lower residential densities is not feasible given the cost to develop needed infrastructure for the Project. The community infrastructure includes expanding the County water system to the benefit of the region, provision of up to 500 affordable housing units, roadways built to County and State standards, State highway intersection improvements, improving regional connectivity, creation of a new wastewater treatment facility and upgrading existing wastewater treatment systems to allow for the use of reclaimed water, creation of a dual water system to convey non-potable water for irrigation purposes, donation of up to 32 acres towards a public school site, and the set-aside of park, community center and nature preserve sites.

5.5 POSTPONE FOR FUTURE STUDY

The alternative to postpone for future study contradicts the goal of providing a residential community with affordable housing units, regional water and roadway systems, and a school site. The Property is uniquely situated to provide community transitioning between the resorts and Waikoloa Village. The Applicant has committed to building the affordable housing units on-site as required by the State LUC. Postponing the Project would not be an act of good faith. A thorough study of the Project's social, economic, and environmental considerations have been undertaken and point to the overall positive impact that the Project would have for the area.

5.6 PREFERRED ALTERNATIVE

The preferred alternative that seeks a change from the current to a Project District zoning has been chosen because it would provide the applicant the flexibility to respond to market demands, project design considerations, and evolving community needs. Maintaining the numerous zoning classifications on the Property will affect the siting of any future projects, such as roadways, the golf course, commercial nodes, affordable housing projects, and residential communities. The previous landowner received one non-significant zoning boundary amendment approval from the Planning Director. If the current zoning classifications are not changed, it is highly probable that non-significant zoning requests would be frequent and time-consuming for Planning Department staff. The preferred alternative would be to align the goal of the Project with the goals of the Project District zoning. That is, to provide for a flexible and creative planning approach and in locations of specific uses and mixes of structural alternatives. The Applicant seeks to provide a quality and meaningful approach to building The Villages of 'Āina Le'a community.

6 RELATIONSHIP OF PROJECT TO LAND USE PLANS, POLICIES AND REGULATIONS

6.1 CHAPTER 343, HRS, ENVIRONMENTAL IMPACT STATEMENTS

Compliance with Chapter 343, HRS, is required as described in Section 1.1 of this DEIS.

6.2 CHAPTER 226, HRS, HAWAI'I STATE PLAN

The Hawai'i State Plan (Chapter 226, HRS) is the comprehensive statewide planning document that serves to guide long-range development in the State by describing desired future growth for Hawai'i residents and providing goals, objectives and policies intended to shape the direction of public and private development.

There are three overall themes of the Hawai'i State Plan: (1) Individual and family self-sufficiency; (2) social and economic mobility; and (3) community or social well-being. The Plan sets three goals to meet the overall themes in Section 226-4:

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

Discussion: The Project meets those goals through the providing of short- and long-term employment for present and future generations, increasing State and County tax revenues, and contributing to the diversity, growth and stability of the community and region as discussed in Section 4.10 of this DEIS.

The arid, lava environment will be replaced with a contributing community networked by roads, community parks, a 32-acre school site, and a series of pedestrian and bicycle pathways. The planned expansion of the County's water system will bring essential redundancy and backup that is presently lacking in the Lalamilo component of the South Kohala system. Allowing the County to construct the Waikoloa Emergency Access Road on portions of the Property is an example of community responsibility already exhibited.

In the short-term, potable and non-potable water for the affordable housing units will be purchased from the West Hawai'i Water Company. For non-potable water, the Applicant will install equipment at the Waikoloa Sewer Plant A to convert the R-2 water to R-1 water in exchange for output. The R-1 treatment will eliminate the need for cesspools at the Waikoloa

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

Sewer Plant A. From a long-term perspective, wastewater may be treated at an on-site WWTP and reused for irrigation on the golf course and landscaped common areas to reduce potable water demand.

Other relevant portions of the Hawai'i State Plan include the following from Section 226-19, HRS, relating to Housing:

Objective a.1: [Provide] greater opportunities for Hawai'i's people to secure reasonably priced, safe, sanitary, livable homes, located in suitable environments that satisfactorily accommodate the needs and desire 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 Hawai'i's population.

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

Policy b.1: Effectively accommodate the housing needs of Hawai'i's people.

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

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

Policy 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.

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

Discussion: The Project is consistent with the housing objectives and policies of the State Plan. It will include 1,962 residential units on vacant land that has been designated for urban use. The Project will also include up to 500 affordable housing units in West Hawai'i where there is a strong demand for such housing, particularly in the South Kohala and North Kona districts where employment is centered in the resort industry. The affordable units will provide housing opportunities close to work for such employees, particularly those who currently commute from other parts of the island, including many from East Hawai'i.

Also relevant is the following from Section 226-5 relating to population:

Policy b.1: Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

- Policy b.2: Encourage and increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.
- Policy b.3: Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.
- Policy 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.

Discussion: The project's commercial and recreational components will fulfill the State Plan's population goals by providing increased opportunities in an area where they are currently limited. The provision of a school site will expand educational opportunities. Discussions are also underway for the possible provision of workforce housing which would further expand residential inventories in the area for workers currently commuting to the resorts.

Also relevant is Section 226-12 relating to scenic, natural beauty and natural resources:

- Policy b.1: Promote the preservation and restoration of significant natural and historic resources
- Policy 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.

Discussion: In support of the State Plan's objective of enhancing Hawai'i's scenic assets, the average 1,200-foot wide highway open space buffer fronting the Project will protect the scenic corridor and mauka viewplanes. Additional discussion of the Project's impact on scenic viewplanes and proposed mitigation is found in Section 4.9 of this DEIS.

An archaeological inventory survey, an archaeological data recovery report, and a cultural impact assessment have been prepared for the Project. The Project will promote the preservation of a shelter and ahu, and portions of a cattle-drive trail on the property. Discussion on historic and cultural resources is found in Sections 4.3 and 4.4 of this DEIS.

Portions of Section 226-104 on population growth and land resources priority guidelines are also relevant:

- Policy b.6: Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.
- Policy b.12: Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate project 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.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Discussion: The Project is located in an area designed for Urban Expansion by the County General Plan LUPAG Map and designated as Urban by the State Land Use Commission.

The Property does not serve as critical habitat for endangered or threatened wildlife other than the endangered red 'ilima. . The red 'ilima could not be found during subsequent field surveys in 2000 and in 2010 and is believed to have succumbed to the drought conditions. A follow-up survey following a period of extended rain was recommended to confirm its presence. This survey will be conducted prior to land alterations in the vicinity of the preserve.

If it is determined that the species has not succumbed to drought in the project area, it will be protected through establishment of a recommended 5-acre preserve. A preservation and interpretation plan, in consultation with the U.S. Fish and Wildlife Service and State Department of Land and Natural Resources, will be prepared based upon a follow-up survey to locate the plant.

The Project is consistent with the above-stated guidelines of the State Plan and will contribute to a stronger economy and provide enhanced economic, educational and recreational opportunities and a greater diversity of housing.

6.3 CHAPTER 205A, HRS, COASTAL ZONE MANAGEMENT (CZM) ACT

The CZM area is defined in Chapter 205A, HRS, as all lands of the State of Hawai'i with the exception of forest reserves. The Property is in the CZM area, but is outside the County's Special Management Area.

The objectives of the CZM Program are to provide the public with recreational opportunities, protect historic resources, protect scenic and open space resources, protect coastal ecosystems, provide facilities for economic development, reduce hazards, and manage development. Specific CZM objectives and policies that apply to the Project are discussed below:

Historic Resources:

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

Policy A: Identify and analyze significant archaeological resources.

Policy B: Maximize information retention through preservation of remains and artifacts or salvage operations.

Policy C: Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion: The Project will support the above-stated objective and policies of the CZM. An archaeological inventory survey, an archaeological data recovery report, and a cultural impact

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

assessment have been prepared for the Project. These studies have identified two archaeological sites, which will be preserved, and a historic cattle drive trail, portions of which will be integrated into the Project where appropriate.

Scenic and Open Space Resources

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

Policy 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.

Policy D: Encourage those developments that are not coastal dependent to locate in inland areas.

Discussion: The Project, which is located approximately 9,000 feet from the shoreline, will feature an average 1,200-foot wide open space buffer along the mauka side of the Queen Ka'ahumanu Highway, which will protect the scenic corridor and mauka view planes. The design of the golf course, coupled with the siting of buildings in the Project pending approval of the Project District zoning, will promote and ensure open space and minimize alteration of existing public views.

Coastal Ecosystems

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

Policy D: 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.

Policy E: Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and non-point source water pollution control measures.

Discussion: The Project will meet the objectives and policies of the CZM program through the use of bio-swales, bio-filtration and detention basins, which will reduce peak discharge rates and filter runoff to down-gradient areas. During construction activities, best management practices and erosion control measures will also be implemented. The establishment of a groundwater quality, monitoring program for the golf course will provide data and monitoring information to protect degradation of the ground water resources. Proposed drainage and erosion control measures are discussed in Section 3.4.1 and Section 4.11.4, respectively.

6.4 CHAPTER 205, HRS, LAND USE

The State Land Use Law establishes the State Land Use Commission (LUC) and authorizes the Commission to designate all lands into one of four districts: Urban, Rural, Agriculture, and Conservation.

Approximately 1,060 acres of the Property were classified Urban by the LUC in 1989. The balance of the Property, 1,940 acres, is in the Agriculture District.

On April 30, 2009, the LUC voted by oral motion to revert 1,060 acres in the Urban District to its original Agricultural classification after the LUC approved a motion to “show cause” why the reversion should not be approved. On June 5, 2009, the LUC voted to stay or hold the acceptance of the findings of fact, conclusions of law, and decision and order for the reversion. On August 27, 2009, the LUC voted to rescind its motion to revert the Urban classification to Agriculture, which allows the Applicant to proceed with its Project District Zoning Application.

6.5 COUNTY GENERAL PLAN

6.5.1 Land Use Pattern Allocation Guide (LUPAG)

The Hawai‘i County General Plan is the policy document guiding the long-range comprehensive development of the island of Hawai‘i, providing direction for balanced growth of the County. The Plan contains goals, policies, and standards concerning twelve functional areas as well as a series of maps referred to as General Plan Land Use Pattern Allocation Guide (LUPAG) Maps.

The General Plan (LUPAG map and document) designates the subject site as Urban Expansion. The designation “[A]llows for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.”

The General Plan also designates a band of Conservation land along the Property’s frontage with Queen Ka‘ahumanu Highway. Conservation is described as “Forest and water reserves, natural and scientific preserves, areas in active management for conservation purposes, areas to be kept in a largely natural state, with minimal facilities consistent with open space uses, such as picnic pavilions and comfort stations, and lands within the State Land Use Conservation District.”

The Project’s Conceptual Master Plan delineates a natural buffer of open space fronting the highway with an average depth of 1,200 feet, and a mixed-use development within the Urban designated portion of the property, which is consistent with the General Plan’s designation of Conservation.

6.5.2 General Plan Goals and Policies

The Project is consistent with the following goals, policies and objectives of the General Plan relating to the respective elements:

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Economic Element

- Goal a: Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.
- Goal c: Strive for diversity and stability in the economic system.
- Goal g: Strive for full employment.
- Policy c: Encourage the development of a visitor industry that is in harmony with the social, physical, and economic goals of the residents of the County.
- Policy d: Require a study of the significant cultural, social and physical impacts of large developments prior to approval.

Discussion: A socio-economic study included in the Appendices was performed for the Project. It found positive economic benefits would be generated in the form of direct, indirect, and induced employment, government revenues, and personal income. The Project's golf academy will attract golf professionals and students from around the world leading to an increase in visitor opportunities. Additional discussion of the Project's impact on the local economy and proposed mitigation is found in Section 4.10.

A cultural impact assessment was performed of the area, and portions of a historic cattle drive trail will be integrated into the Project where possible. Additional discussion of the cultural resources and the Project's impact is found in Chapter 4 of this DEIS.

Environmental Quality

- Policy j: Require golf courses to implement best management practices to limit leaching of nutrients to groundwater in areas where they may affect streams or coastal ecosystems.

Discussion: Best management practices will be adopted for the operation of the golf course to curb leaching of nutrients to the ground water. The tertiary treatment of effluent will also significantly reduce the amount of nutrients that would filter to the ground water. Ground water quality monitoring is required as part of the approved Use Permit. Additional discussion of the Project's impact on environmental quality and proposed mitigation is found in Section 3.5 of this DEIS.

Flooding and Other Natural Hazards

- Goal a: Protect human life.
- Goal c: Control pollution.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

- Goal e: Reduce surface water and sediment runoff.
- Goal f: Maximize soil and water conservation.
- Policy d: Any development within the Federal Emergency Management Agency designated flood plain must be in compliance with Chapter 27.
- Policy 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.
- Policy h: Develop a comprehensive program for the coordinated construction of a drainage network along a single drainage system.
- Policy m: Encourage grassed shoulder and swale roadway design where climate and grade are conducive.
- Policy 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.
- Policy q: Consider natural hazards in all land-use planning and permitting.

Discussion: The Project's coordinated drainage system will meet the above-stated goals and policies of the General Plan. A drainage master plan has been prepared to ensure that development-generated runoff will be disposed of in a manner acceptable to the Department of Public Works as a single drainage system. Recommended drainage controls include grassed shoulders and swales and natural retention/detention basins, which act as biofilters for improved ground water quality.

Historic Sites

- Policy 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.
- Policy n: Consider requiring Cultural Assessments for certain developments as part of the rezoning process.

Discussion: The Project will have minimal impact on identified historical resources. An archaeological inventory survey, an archaeological data recovery report, and a cultural impact assessment have been prepared for the Project. The two archaeological sites of historical significance identified, both of which are located outside the proposed development areas, will be preserved and protective measures will be implemented in accordance with the approved

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

mitigation plans. Portions of a historic cattle-drive trail located on the property will be integrated into the Project where possible. These actions support the above-stated General Plan policies.

Natural Beauty

Goal b: Protect scenic vistas and view planes from becoming obstructed.

Policy f: Consider structural setback from major thoroughfares and highways and establish development and design guidelines to protect important view planes.

Discussion: The average 1,200-foot wide highway open space buffer fronting the Project will protect the scenic corridor and mauka view planes. Additional discussion of the Project's impact on scenic view planes and proposed mitigation is found in Section 4.9.

Natural Resources and Shoreline

Goal d: Protect rare or endangered species and habitats native to Hawai'i.

Goal e: Protect and effectively manage Hawai'i's open space, watersheds, shoreline, and natural areas.

Goal 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, siltation, or failure in the event of an earthquake.

Policy d: Encourage the use of native plants for screening and landscaping.

Discussion: If the endangered red 'ilima in the project area has not succumbed to drought it will be preserved in a recommended 5-acre preserve. A preservation and interpretation plan will be prepared based upon a follow up survey to locate the plant. The recommendations of a drainage master plan will be followed to protect and manage watersheds and natural areas of the Property. These actions are consistent with the above-stated goals and policies of the General Plan.

Housing

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

Goal c: Maintain a housing supply that allows a variety of choices.

Goal d: Create viable communities with affordable housing and suitable living environments.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

- Goal e: Seek 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.
- Goal h: Make affordable housing available in reasonable proximity to employment centers.
- Policy s: Utilize financing techniques that reduce the cost of housing, including the issuance of tax-exempt bonds and the implementation of interim financing programs.
- Policy v: Work with, encourage and support private sector efforts in the provision of affordable housing.
- Policy 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.
- Policy y: Aid and encourage the development of a wide variety of housing to achieve a diversity of socio-economic housing mix.

Discussion: The Project is consistent with the housing objectives and policies of the General Plan. Its 1,962 residential units will include up to 500 affordable residential units, to be built on land that is currently vacant and designated for urban use, will provide housing for a diverse socio-economic mix in West Hawai'i where such housing is in strong demand, particularly near the resort employment centers in South Kohala and North Kona.

Public Facilities-Education

- Goal a: Encourage the provision of public facilities that effectively service 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.
- Policy b: Coordinate with appropriate State agencies for the provision of public facilities to serve the needs of the community.

Discussion: Through the provision of 32 acres of land to the State Department of Education, the Project will meet the General Plan's state course of action for South Kohala that calls for the supporting of development of an intermediate or middle school in Waikoloa.

Public Facilities-Protective Services

- Policy m: Consider the proximity to fire stations in approving any rezoning to permit urban development.

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

Discussion: The Project is in keeping with this General Plan policy regarding proximity to fire stations. A full-service fire station with aero-medivac helicopter service is located across the Queen Ka'ahumanu Highway from the Project site. The Waikoloa Village fire station would also provide response in an emergency. A condition of the current zoning requires a per unit fair share contribution for police and fire facilities. Should the requested Project District zoning be approved, the Applicant anticipates inclusion of the fair share contribution as one of the conditions of the new zoning ordinance for the project.

Public Utilities-Water

- Policy b: All water systems shall be designed and built to Department of Water Supply standards.
- Policy c: Improve and replace inadequate systems.
- Policy 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.
- Policy k: Promote the use of ground water sources to meet State Department of Health water quality standards.

Discussion: The project will be consistent with the plan's policies and as well as the desired course of action for South Kohala which is to seek alternative sources of water for the district's water system. Proposed water system improvements, which will include wells, transmission lines, and storage tanks, will be constructed to Department of Water Supply standards and will be dedicated to the County. This upgrade will ensure essential backup to the Lalamilo component of the South Kohala system that currently does not have redundancy. The development of ground water sources will meet the State Department of Health water quality standards.

Public Utilities-Sewer

- Policy 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.
- Policy e: Plans for wastewater reclamation and reuse for irrigation and biosolids composting (remaining solids from the treatment of wastewater is processed into a reusable organic material) shall be utilized where feasible and needed.
- Policy f: Require major developments to connect to existing sewer treatment facilities or build their own.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Discussion: A private WWTP will be installed to treat wastewater from the Project at an R-1 level. The membrane bioreactor process is an effective treatment process for removing solids and unwanted nutrients. The effluent will be reused and mixed with brackish water to irrigate the golf course and landscaping.

To irrigate the affordable housing landscaping and roads, the Applicant plans to upgrade the West Hawai'i Sewer Company WWTP to an improved R-1 level. This will eliminate the cesspool disposal at the WWTP and provide further protection to the ground water quality for ML's down-gradient irrigation wells.

The construction of a private WWTP will support the above-state General Plan policies.

Recreation

Goal a: Provide a wide variety of recreational opportunities for the residents and visitors of the County.

Goal c: Provide a diversity of environments for active and passive pursuits.

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

Policy o: Develop facilities and safe pathway systems for walking, jogging, and biking activities.

Discussion: The Applicant was required by the existing zoning approval to provide a 10-acre park but has offered to expand the size of that park to 16 acres. It will be located on the adjacent Parcel 40 for active public park and recreational uses, meeting the above goals and policies of the General Plan as well as a stated course of action for South Kohala specifically to encourage the establishment of neighborhood park. The Park will be privately maintained until the County requests its dedication. A separate 16-acre park site will also be available to the public for passive recreational uses. It will be privately held and maintained pending a request from the County to assume ownership. The Applicant is also in discussion with the Department of Parks and Recreation to provide land for a community center for the district.

Transportation

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

Policy j: Transportation and drainage systems shall be integrated where feasible.

Policy j: Encourage the development of walkways, jogging, and bicycle paths within designates areas of the community.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Discussion: The Project will meet the General Plan's goals and policies regarding transportation as it will be developed with appropriate, safe interior roads meeting with the requirements of the County Department of Public Works as well as bicycle and pedestrian paths. The Project will be accessed from two locations on Queen Ka'ahumanu Highway, one of which is fully channelized and signaled. A second access road further north is proposed to provide a mauka-makai connection with the Waikoloa Village community.

Land Use-General

- Policy 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.
- Policy f: Encourage the development and maintenance of communities meeting the needs of its residents in balance with the physical and social environment.
- Policy j: Encourage urban development within existing zoned areas already served by basic infrastructure, or close to such areas, instead of scattered development.

Land Use-Commercial

- Goal a: Provide for commercial developments that maximize convenience to users.
- Policy a: Distribution of commercial areas shall meet the demands of neighborhood, community and regional needs.

Land Use-Multiple Residential

- Goal a: To provide for multiple residential developments that maximize convenience for its occupants.
- Goal b: To provide for suitable living environments that accommodate the physical, social and economic needs of the island residents.
- Policy a: Incorporate reasonable flexibility in applicable codes and ordinances to achieve a diversity of socio-economic housing mix.
- Policy c: Encourage flexibility in the design of residential sites, buildings and related facilities to achieve a diversity of socio-economic housing mix and innovative means of meeting the market requirements.
- Policy h: Require developers to provide basic infrastructure necessary for development.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Land Use–Single-Family Residential

- Goal a: To maximize choices of single-family residential lots and/or housing for residents of the County.
- Goal 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.
- Policy 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.
- Policy i: Require developers to provide basic infrastructure necessary for development.

Discussion: The Project is consistent with the land-use objectives and policies of the General Plan. As previously discussed, it will include a variety of infrastructure components including roadways and water and wastewater facilities. A commercial component will meet the demands of neighborhood, community and regional needs. Its residential units, which will be located near work centers at South Kohala resorts, will include a mix of single- and multiple-family residences, including up to 500 affordable housing units.

6.6 SOUTH KOHALA COMMUNITY DEVELOPMENT PLAN (CDP)

The General Plan now requires that Community Development Plans be adopted by the County Council as an ordinance, giving the CDP the force of law. This is in contrast to plans created over past years, which were adopted by resolution and served only as guidelines or reference documents to decision-makers. The South Kohala CDP was adopted by the County Council in November 2008. The version referenced in this Environmental Assessment is at: <http://www.hcrc.info/community-planning/south-kohala-cdp/skcdpfinaldraft11.18.08.pdf>. The South Kohala CDP “is intended to be the forum for translating South Kohala’s community input into Policies and Action Plans that shape the future land use of the district” South Kohala district-wide policies are intended to address four priority issue areas: Preserve Culture/Sense of Place, Transportation, Emergency Preparedness, and Environmental Stewardship/Sustainability. From these, policies and planning strategies have been developed for four specific communities in the district: Waimea, Waikoloa Village, Kawaihae, and Puakō. The Project is included as part of the Waikoloa Village Area Plan.

Applicable district-wide policies and sub-policies are discussed below:

District-wide

General Policy 2: Provide for the Transportation and Circulation Needs of the South Kohala Community and for Commuters To/From South Kohala.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

Sub-policy 2.1: New major roads in the District shall incorporate “complete street” standards, including provisions for vehicular traffic, pedestrians, bicycles, and public transportation, except in the case of mitigation factors.

Sub-policy 2.2: Establish bicycle, pedestrian, and equestrian travel ways to link up the communities within the District (Waikoloa Village, Waimea, Puakō, Kawaihae, and the resort nodes) while also establishing alternative travel ways within the individual communities.

Discussion: Appropriate roads in the Project will be designed to enable safe access for pedestrians, bicyclists, motorists and bus riders. A goal of the Project District is to provide interconnective roadway systems with neighboring properties. With the development of the Project, a mauka-makai connection with Waikoloa Village will be realized. A continuing north-south roadway system will depend on development of Bridge property and adjacent property owners to the north of the DW 'Āina Le'a property.

General Policy 3: Provide affordable and workforce housing resources for low and moderate income individuals, families, and for those residents of South Kohala with special needs.

Sub-policy 3.1: The County shall establish policies and programs for the implementation of affordable and workforce housing projects in those areas of the island where such projects are most needed, including Waimea and Waikoloa Village.

Discussion: At least 385 affordable housing units are being constructed within the Project site. The provision of onsite workforce housing is being discussed with the County.

General Policy 4: Develop programs and standards that will protect the South Kohala community from natural hazards, including major storms, flooding, tsunami, lava flows, and wildfires.

Sub-policy 4.1: The County shall develop plans and programs for emergency routes so that people can safely move away from life-threatening natural hazards.

Sub-policy 4.3: Government agencies should consider providing more emergency shelter facilities in South Kohala.

Discussion: The County constructed a critical emergency access road for Waikoloa Village residents on portions of the Project site with the approval of the prior landowner. If a school is constructed on the Applicant's Property, it can be designated as an emergency shelter by the Civil Defense Agency.

General Policy 5: Develop guidelines and programs that promote environmental stewardship and the concept of sustainability.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Sub-policy 5.1: Proposed uses of natural resources shall be duly evaluated by the responsible public entities to ensure that each such use is consistent with the sustainable long-term health of the eco-system, including the direct and indirect impact on coastal waters.

Sub-policy 5.3: Ensure the quality of South Kohala's ground water resources and marine resources.

Discussion: The Project will meet the CDP's policies regarding natural resources and the environment, including its water sources. The Applicant has entered into an agreement with the County Department of Water Supply to develop up to four wells and related infrastructure improvements. A portion of the water will be added to the DWS system, bolstering the supply of its Lalamilo component. The projected domestic water requirements for the Project are well below the anticipated maximum pumping capacity, and the Project will have only a negligible impact on groundwater resources. Non-potable water for irrigation of the golf course and landscaping areas will be derived from onsite brackish wells and reclaimed domestic wastewater.

6.6.1 Waikoloa Village Area Plan

The CDP projects Waikoloa Village area having a planned buildout of 7,160 units or lots, and a potential buildout of 8,094 units or lots given the current County zoning of area parcels.

The Waikoloa Village Conceptual Plan is a graphic and narrative depiction of general policies and strategies for the long-range (20+ years) future of Waikoloa Village with emphasis on the following:

- Providing needed community facilities for a growing town
- Environmental stewardship, sense of place, open space
- Providing transportation and circulation improvements in a timely manner
- Affordable housing and smart growth

The CDP designated the former Bridge 'Āina Le'ā Villages as a planned development project with the following features:

- 3,000 acres
- 3,000+ units
- 5 Golf Courses
- Golf Academy
- Commercial Villages
- 40 Unit Lodge

Policy 1: Provide needed infrastructure and community facilities for a growing community.

Strategy 1.2: Plan, fund and construct needed public schools—elementary, middle, and high.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Discussion: LUC Condition No. 7 requires the Applicant to donate, if needed, a maximum of 16 acres of land for public school site(s) as the DOE determines. The Applicant has made a commitment of up to 32 acres in the Agricultural District. The exact location and purpose (middle or high school) have yet to be decided.

Strategy 1.6: Manage and upgrade the wastewater treatment and disposal systems.

Discussion: In addition to constructing the Project's own wastewater treatment plant, the Applicant will upgrade the 'Auwaiakeakua WWTP from R-2 to R-1 treatment for water reuse on landscaped roadways and affordable housing sites. The upgrade will eliminate that plant's current effluent disposal field, thereby improving the impacts of the existing Waikoloa WWTP on the environment.

Strategy 1.7: Provide more emergency facilities.

Discussion. If a school is constructed on the donated acreage to DOE, the public school could be a designated emergency facility in the case of certain emergencies.

Policy 2: Environmental stewardship, sense of place, open space.

Strategy 2.2: Preserve Waikoloa's scenic views, landscapes, and pu'u.

Discussion. The Project will preserve scenic view corridors through its average 1,200-foot wide Highway Buffer. Additional discussion is found in Section 4.9.

Policy 3: Provide transportation and circulation improvements in a timely manner.

Strategy 3.3: Upgrade the emergency access road from Hulu Street to Queen Ka'ahumanu Highway.

Discussion: The CDP suggests that the Memorandum of Agreement between Bridge and the County for the emergency access road should be amended to allow for walking and bicycling. Further, the CDP says paving the access road would create a more useful emergency route. Unless funding is accelerated, any improvements of the emergency access road to County standards would be done concurrent with the phasing of that portion of the development.

Policy 4: Encourage affordable housing and smart growth.

Discussion. The Project's requested Project District rezoning will contain at least 385 affordable housing units and will allow the Project to be designed under smart growth principles, such as the siting and clustering of buildings that would reduce infrastructure costs and increase open space.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

6.7 County Zoning Code

In 1993, Ordinance No. 93-1 rezoned 3,000 acres of land, including the 1,060-acre Property, to Multiple-Family (RM-4, RM-7, and RM-14.5), Village Commercial (CV-10), and Residential-Agriculture (RA-1a). In 1996, amendments to conditions of Ordinance No. 93-1 were approved by Ordinance No. 96-153 (see Appendix B). Minor zoning changes were requested and approved by the Planning Director in November 2000.

A five-year extension of time to comply with Condition C (submit subdivision plans/secure final subdivision approval) was granted by the Planning Director and extended this date until September 21, 2009, which was met through submission and receipt of final subdivision approval in 2009 for the first phase of development.

The County Council's Resolution No. 229-00 authorizes the establishment of timeshare units on the Project site. The Applicant acknowledges that approval of this use is still needed from the State Land Use Commission, however inclusion of timeshare units is no longer being considered as part of the planned development.

6.7.1 Rationale for Requested Project District Zoning

The Applicant is seeking rezoning of 1,060 acres from the existing RM, CV, RA and A zoning designations to a Project District zoning to allow for greater flexibility in site planning and project implementation.

6.7.2 Purpose of Project District Zoning

According to Chapter 25, Division 4, Hawai'i County Code, the purposes of the Project District are as follows:

“to provide for a flexible and creative planning approach rather than specific land-use designations for quality developments. It will also allow for flexibility in location of specific uses and mixes of structural alternatives. The planning approach would establish a continuity in land uses and designs while providing for a comprehensive network of infrastructural facilities and systems. A variety of uses as well as open space, parks, and other project uses are intended to be in accord with each individual project district objective....”

Discussion: The Applicant desires the flexibility afforded by the Project District zoning to help determine the exact location of the recreational amenities such as the golf course, natural buffers, access, roadways, and residential and commercial pods. Further, the zoning will allow the developer to determine the mix of residential units as dictated by market forces and other planning and technical considerations. If this was a small, single-use project, the development constraints provided by zoning designations with specific metes and bounds description would not be as problematic. For a project of this size and complexity, however, the Project District zoning designation provides the needed design and site planning flexibility while assuring that public concerns, such as access and associated infrastructure requirements, are addressed.

6.7.3 Project District Zoning Criteria

The criteria for a Project District zoning and the requested Project's relationship are:

a. whenever the public necessity and convenience and the general welfare require that a comprehensive planning approach for an area be adopted.

Discussion: In this situation, the size of the Property (1,060 acres) fulfills the minimum requirement of 50 acres to apply for the Project District zoning. Having only a singular use, such as a golf course or a multiple-family project, would not warrant a Project District application. However, the Project proposes five different uses: commercial, golf course, single-family residential, multiple-family residential, and mixed commercial/residential. Under traditional zoning, these uses would require respective separate zonings and corresponding metes and bounds description—similar to the existing zoning for the Property. These separate zonings are impractical and not conducive to a comprehensive planning approach that can be adjusted for market demands and/or community considerations.

The Project District provides the needed flexibility that would avoid having to proceed with constant amendments to the base ordinance to accommodate field, design, and market changes. As mentioned above, minor zoning amendments were already requested and approved in 2000.

Through conditions of approval, all of the required infrastructure and associated concerns will be addressed and the requested land uses would be allowed under a density cap, which traditional zoning does not carry.

b. consistency with the intent and purposes of the Zoning Code and the County General Plan.

Discussion: All of the standards and criteria for the respective land uses outlined in the Zoning Code will be met. Amending the existing zoning districts to a Project District comports with the purpose of the Project District quoted in Section 6.7.2 above, which is to “establish a continuity in land uses and designs while providing for a comprehensive network of infrastructural facilities and systems.”

The proposed Project design criteria and development standards contained in Section 2.4 of this DEIS are similar to the Zoning Code. For example, a single-family residential dwelling will still have to meet the appropriate setback and height limits of the single-family zoning. Likewise, the parking requirement for the commercial center or the height of the golf clubhouse must be consistent with the commercial standards of the Zoning Code.

The Project site has been designated an Urban Expansion area in the County's General Plan. All requested uses for the Project District are permitted in the Urban Expansion designation. Additional analysis of the Project's consistency with applicable goals and policies of the General Plan is found in Section 6.5.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

c. will not result in a substantial adverse impact upon the surrounding area, community or region.

Discussion: While there will be impacts, the significant impacts can be mitigated. Other impacts will be beneficial. Discussion of the existing conditions of the environment, potential impacts, and proposed mitigation measures can be found in Chapters 3 and 4 of this DEIS.

As noted throughout this DEIS, the Project will construct a portion of connector roads through the property, provide its own infrastructure, contribute towards the affordable housing program, provide public recreational areas, set aside land for a public school facility, and generate needed employment and tax revenues.

A monitoring program to address ground water quality concerns will be undertaken. An archaeological site will be preserved. Any endangered red 'ilima located on the Project site will be protected and preserved for future interpretation and education.

Should the Project District be approved, the Applicant, pursuant to Section 25-6-46 and 47, HCC, will submit the required site plan for review and approval by the Planning Director. This process will enable the County to assure that the Project is developed in a manner that addresses all infrastructural and environmental concerns.

6.8 Community Facilities District

In 2006, the County's first Community Facilities District No. 2006-1 was petitioned by Bridge. The Council approved the petition pursuant to §32-21 HCC when it adopted Resolution No. 486-06. In accordance with the resolution, a December 2006 facilities district report was prepared and forwarded to the Council. The Applicant has advanced \$75,000 to the County Finance Director, and has agreed to pay all costs and expenses related to the formation of the Community Facilities District and the issuance of the bonds.

An explanation of the Project's community facilities district is found in Section 2.5.2 of this DEIS.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

6.9 Approvals and Permits

The Project will need a number of approvals and permits. The approvals are administrative in nature except for the Project District zoning and the Special Use Permit from the Planning Commission for the WWTP. While the Property is already zoned for the proposed uses, the preferred Project District zoning would fulfill the County's goal of roadway connectivity while providing design flexibility that could better address community visual concerns and the Project's marketability. Anticipated approvals or permits are listed below:

State Department of Land and Natural Resources-Commission on Water Resource Management:

- Well Construction Permit
- Pump Installation Permit

State Department of Health:

- Wastewater Treatment Plant
- National Pollution Discharge Elimination System Permit (Form C for >1 acre of land disturbance, Form F if hydro-testing waters will be discharged, Form G if groundwater is encountered)
- Potable Water System Approval
- Underground Injection Control
- Clean Water Act Section 401 Water Quality Certification

State Department of Transportation:

- Permit to Perform Work Within a State Right-of-Way
- Storm Water Drainage Connection Permits

Hawai'i County Council:

- Project District Zoning Application (Preferred Zoning)
- Amendments to Conditions of Ordinance No. 96-153

Hawai'i County Leeward Planning Commission:

- Special Permit for WWTP

County Planning Department

- Project District Site Plan
- Plan Approval
- Subdivision Approval

County Department of Public Works

- Grading, Grubbing, and Stockpiling Permits
- Building Permits
- Drainage System Improvements
- Subdivision Construction Plans
- Drywell Construction Permits

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

County Department of Water Supply

- Water Master Plan
- Water System Construction Plans

County Department of Environmental Management

- Solid Waste Disposal Permit
- Reclaimed Wastewater Use Permit
- Solid Waste Management Plan

US Army Corps of Engineers:

- Section 404 Permit Approval, if it is determined that storm waters discharge into navigable waters

7 OTHER CONTEXTUAL ISSUES

7.1 RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Hawai'i Administrative Rule §11-200-17(j) requires a brief discussion of the “extent to which the proposed action involves tradeoffs between short-term losses and long-term losses, or vice versa, and a discussion of the extent to which the proposed action forecloses future options, narrows the range of beneficial uses of the environment, or poses long-term risks to health or safety....”

The short-term use and long-term productivity relationships are described below in the context of the four specific areas of potential concern, as described in the Hawai'i State Office of Environmental Quality Control (OEQC) Guidelines for EIS review. The following discussion addresses each of these potential areas of concern.

Narrowing the range of beneficial uses of the environment. The existing environment consists of a primarily rocky landscape dominated by broken 'a'a lavas with a cover of primarily scrub vegetation with little or no current agricultural use or potential value. The primary value of the land currently is in providing an open landscape for those living in or traveling through the area. The project location and proposed highway setbacks will help preserve the sense of open space and minimize the potential visual impacts of the project. Additionally, the Project will expand the range of beneficial uses of the environment by improving roadway networks and traffic flow in the area and providing opportunities for additional commercial, recreational and public service opportunities to the benefit of the residents and visitors to the area.

Long-term risks to health and safety. The proposed project is not expected to generate risks to health and safety. The project will comply with all drainage, natural hazard building codes, solid and liquid waste disposal requirements and water quality standards. The anticipated infrastructure improvements to area roadways are expected to enhance the safety of area residents by improving the emergency access capability in the region. All structures will be built to current building and safety codes and the Project will not generate any significant impacts to the environment that may pose potential long-term health or safety risks.

Foreclosure of future options. Currently, the range of potential uses for the property without infrastructure is quite limited. The development of the project infrastructure in a master-planned environment will broaden the future options for recreational, commercial and community service facilities. One of the objectives in obtaining the proposed Project District zoning is to provide greater planning flexibility to respond to changing economic and market demands, thus broadening the options to respond to changing community needs and market expectations.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Trade-offs among short- and long-term gains and losses. Construction-related activities will result in minor short-term impacts, and project implementation will result in long-term loss of open space and the natural environment. Potential short- and long-term negative impacts can be offset by planned mitigation measures, as discussed in this DEIS. Furthermore, long-term benefits in the form of increased affordable housing opportunities, commercial, recreational and public service opportunities, job creation; improved traffic circulation; and tax revenues to the County and State outweigh the potential short and long-term losses. The Project design is intended to complement the natural landscape planning guides and intended to encourage a sustainable approach to design and development of the Project.

Short-term losses attributable to the Project will result during Project construction. The impacts to air and noise quality can be mitigated by following government regulations and industry standards.

The Project will, in the long-term, contribute substantial economic, public infrastructure and other benefits as discussed in this DEIS. By providing a diverse mix of residential housing units with an eventual focus on an international golf academy, the Project will serve an important planning link by infilling the area with contributing community members and public facilities.

7.2 CUMULATIVE AND SECONDARY IMPACTS

In general, West Hawai'i and the project area are expected to continue to change with the expansion and infill development that takes place within existing communities and surrounding areas. The West Hawai'i population is forecasted to increase by 37 to 53 percent by 2020. It is expected that the economy will continue to be driven primarily by growth in the visitor industry and associated recreational real estate and West Hawai'i is expected to continue to attract the majority of Island visitors. The Villages project and those ongoing or planned projects will be part of this overall growth and change. Those planned developments in the Project area and within and surrounding Waikoloa Village that have initiated development or received development approvals include Castle and Cook's Wehilani and Makani Kai developments, Waikoloa Heights, the County's Waikoloa Workforce Housing Project, the Waikoloa Mauka development and possible development of the Bridge lands surrounding the project site. While the timing for these developments and whether they will be developed to the scale initially planned is not known, together they present the potential for significant change to the Project area. Combined with The Villages project, they represent the possible addition of approximately 7,754 planned housing units in the Project area, as shown in Table 14.

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

Table 14
Planned Developments in the Waikoloa Area

Planned Development	Existing Zoning	Planned Build-out (Housing Units)	Status
Villages of 'Āina Le'ā	Multiple	2,462	Seeking Project District zoning
Bridge 'Āina Le'ā, LLC	RA-1a	538	Unknown
Waikoloa Mauka	RA-1a	398	Unknown
Waikoloa Heights	RS-10	2,400	Initial Subdivision Increment Approved
Waikoloa Workforce Housing	RS-10	1,200	Construction started on initial subdivision infrastructure
Castle & Cook	RS-10/MF	756	Completed initial SF/MF increments
TOTAL		7,754	

Source: Table 5.2, Planned and Future Build-out in the Waikoloa Area, South Kohala Community Development Plan, Nov. 2008

The most apparent cumulative change in the socio-economic environment will be the visual impact as more urbanized areas replace underdeveloped or vacant land. There will be an increase in the resident population. These developments are expected to have long-term cumulative impacts, such as increased traffic and the need for more potable water. The cumulative impact of all the projects will also create the need for additional improvements to regional infrastructure. There will be an increased need for recreational areas and facilities and the demand for shoreline access will continue to grow. The demand for increased public services, including schools, police and fire protection, and medical services will increase in proportion to the population increases. However, development of these projects, as is the case for The Villages project, will be accompanied by appropriate mitigation measures to address impacts. Correspondingly, the accompanying economic development will expand employment opportunities for South Kohala residents and will provide additional tax revenue to the State and County governments to fund needed public services.

7.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Hawai'i Administrative Rule §11-200-17(k) requires the "identification of unavoidable impacts and the extent to which the action makes use of non-renewable resources during phases of the action, or irreversibly curtails the range of potential uses of the environment..." Resources that are irreversibly or irretrievably committed are those that cannot be recovered if the project is implemented.

The commitment of resources can be classified into 1) industrial-related resources, such as construction equipment, fuels, labor, and capital, and 2) project-related resources, such as natural resources and land.

THE VILLAGE OF 'ĀINA LE'A

Draft Environmental Impact Statement

Industrial-related resources will be utilized during construction of the Project's roads, water and wastewater systems, associated infrastructure, golf course, and residential and commercial buildings. When the Project is fully realized, the Property will be precluded from being developed for other uses or from being retained in its undeveloped, natural state.

The commitment of resources should also be assessed in light of anticipated community or regional benefits from the Project. The positive benefits discussed in detail in the DEIS include, but are not limited to, direct and indirect socio-economic gains of employment, government revenues, and a range of housing units.

There will be a commitment of an estimated domestic water demand of 1.32 mgd by the Project. The sustainable yield of the ground water supply will not be significantly impacted, and improvements to the County's water system will create essential redundancy or backup for its users. Upgrading Waikoloa Village's wastewater plant from an R-2 to an R-1 quality level eliminates the current use of cesspools as a method of treatment.

The Project will also increase demand and contribute to regional demands on public services. The set-aside of land for schools and parks and the required fair share contributions for fire, police, and solid waste are intended to mitigate these impacts. In addition, there will be an increase in state and county tax revenues to help compensate government services.

At the time, construction of at least 385 affordable housing/workforce townhouse units has commenced. An average 1,200-foot wide buffer along the highway preserves an open space corridor and to some extent protects the sense of space.

7.4 Probable Adverse Environmental Effects That Cannot Be Avoided

Adverse impacts can be divided into short and long-term effects. Short-term effects are generally associated with construction and prevail only for the duration of the construction period. Long-term effects generally following completion of the improvements, related to either their existence or to the operation of the new facilities and are permanent. Effects that can be considered potentially adverse and unavoidable during the construction phase include air quality, noise quality, and traffic related impacts.

Construction impacts to air quality are relatively short-term and temporary. If mitigation measures are not provided, significant airborne, fugitive dust emissions will result from earth-moving, cement-mixing and rock-crushing activities. HAR Section 11-60.1-33, however, prohibits the generation of fugitive dust without taking reasonable precautions to limit these emissions. As a result, significant fugitive dust-generating activities will be minimized through the mitigation measures identified in Section 4.8 of this DEIS. Vehicular emissions will also result from the combustion of fossil fuels in the operation of construction equipment and vehicles of commuting construction workers. These vehicular emissions are expected to be temporary, dispersed and of no measurable consequence to air quality in the area.

There will also be noise-related impacts from the operation of equipment and construction activities. The noise-related impacts that would be generated during the construction period

THE VILLAGE OF 'ĀINA LE'Ā

Draft Environmental Impact Statement

were studied as part of the air and noise quality impact studies conducted for this DEIS and were projected to not exceed ambient noise levels when measured from the nearest receptor site (Mauna Lani Fire Station) and the residential areas of Mauna Lani and Waikoloa, which, being more than a mile away, are not expected to be adversely affected. The impact to noise quality would be limited to a temporary degradation of the acoustical environment in the immediate vicinity of the Project site. Additionally, there will be traffic related impacts, primarily related to the improvements to highway intersections that will generate temporary slowing of traffic in the area during the construction of these improvements.

After development, any long-term impact on air quality resulting from vehicular emissions from Project-related vehicular traffic should be insignificant. Worst-case concentrations of carbon monoxide are projected to remain well within both the State and Federal ambient air quality standards. Development of the project will result in the loss of a natural open space as well as minimal impacts on existing view-sheds. However, the planned setbacks from existing roadways and developed areas help to minimize these impacts. Furthermore, there will be an increase in structural density and human activity, as well as the replacement of the existing natural environment with a developed landscaped environment. Solid waste and wastewater will be generated on-site, and energy and water will be consumed.

7.5 Unresolved Issues

The consultation process for the project has yielded input from a broad range of agencies, private interest groups and individuals, and has been instrumental in identifying areas of particular concern. In most instances, these issues have been addressed through the planning of the project, as discussed in the previous sections. However, there are some issues that remain unresolved at this time pending further planning studies and design, and agency and community interaction. In most cases these issues involve the development of public services or infrastructure that will be implemented by or with the State or County agencies responsible for these services. In other cases they require further planning before a final determination can be made between alternative approaches.

7.5.1 Schools

The project will generate additional students that will attend area schools. In addressing this issue, the Applicant has designated 32 acres to be set aside as a school site, adjacent to the planned 16-acre active park so that there is an opportunity for use of the ball fields by the school, as required by a high school facility. However, it is not known at this time when the DOE would proceed with the school development on this site, or whether this facility would be a middle or high school facility. Planning for this facility is tied to the DOE's long-range planning for schools in the area and affected by the changing demands in the affected areas. The Applicant is in ongoing discussions with the DOE to insure that the planning for the project and proposed school site is in concert with DOE plans and responsive to the regional needs.

7.5.2 Police, Fire and EMS Services

Development of the 'Āina Le'ā project will generate the need for additional police, fire safety, and emergency medical services in the area. While both Fire and EMS facilities and services are available at the Mauna Lani Fire Station located less than a mile from the project site, and the area is served by the South Kohala Police Station in Waimea and to a limited extent by the mini-substation located within Waikoloa Village, there will be a need to expand upon the capacity of these services in relation to the growing needs of this and other developments in the region. The monetary contributions required to address these facility and service requirements are met, in part, by the additional County taxes generated through the development and the fair-share contributions that are required as part of the Project's zoning approvals. Discussions will continue with the County Police and Fire Departments in order to reach agreement concerning the increased needs for these public services and potential contributions necessary towards meeting the needs.

7.5.3 Medical Services

Through interviews and discussions with community leaders and residents, the lack of medical facilities or community clinics with urgent care services was identified as one of the key community concerns. The Applicant has proposed that a privately operated urgent care medical service facility could be located in the commercial center of the project, and has had discussions with providers of these services who have expressed an interest in locating in the area. Such facilities can be tailored to meet the needs of the local residents and visitors alike. However, the timing, location and capacity of these facilities are not known at this time and will require ongoing follow-up with potential developers and service providers to ensure that their unique requirements can be accommodated in the planning and design of the commercial facilities.

7.5.4 Water Resource Development

Considerable study has been directed toward the analysis of the water demands of the project and the potential impact these demands and uses will have on the resources of the region. The potable water requirements are being met through an agreement with the Department of Water Supply to develop a series of wells at 'Ouli, including a back-up well, and a storage and transmission system that will be integrated as part of the DWS South Kohala System. Through this agreement, the Applicant's portion of the projected yield of these wells is more than sufficient to meet the projected needs of the Project.

The non-potable water requirements will be met through a combination of on-site brackish wells and the reuse of R-1 quality effluent from both nearby and on-site wastewater treatment plants. The water quality study prepared for the Project, however, indicates that while more than adequate to meet the needs of the project and existing uses, the available ground water resources within the mauka-makai corridor of the Project are likely insufficient to meet the projected needs of the future development in the region. To some extent the potential long-term demands on the available resources can be offset through wastewater reuse and implementing water conservation practices, as are proposed for the 'Āina Le'ā project. Such practices will need to be coordinated and widespread in order to meet the full needs of the future development in a sustainable

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

manner. The Applicant has committed to work with regional and government stakeholders to develop a long-term resource conservation plan to address short- and long-term efforts towards resource sustainability.

7.5.5 Mauka-Makai Connector Road

A mauka-makai connector road connecting from Queen Ka'ahumanu Highway to Waikoloa Village is planned as part of the Project, generally along the alignment of the existing emergency access road shown on the Conceptual Master Plan. This road would serve as a second (northern) access to the Project and its construction is planned to coincide with completion of the first phase of development. The design and construction of this road would be financed as part of the planned Community Facilities District (CFD) financing. A decision on the location for the intersection with Queen Ka'ahumanu Highway and the road alignment, however, has yet to be made and is dependent upon further planning and design-related questions. The Applicant is involved in discussions with County and Waikoloa Community representatives on the location of this northern access road. Following a consensus with the County and Waikoloa Community representatives on the road location, further engineering study, and completion of the CFD financing, the Applicant can then move forward with the design and construction this road.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

THE VILLAGE OF 'ĀINA LE'Ā
Draft Environmental Impact Statement

8 CONSULTATION

The following agencies, organizations or individuals were consulted during the preparation of the DEIS by email, telephone, or in person. This list does not include contacts made by other EIS study contributors, the landowner, or the planning consultant. Consulted parties who received the EISPN are listed in Chapter 10.

Federal

U.S. Army Corps of Engineers-Honolulu District

State

Department of Education

Office of Environmental Quality Control

Department of Land and Natural Resources-State Historic Preservation Division

County

Planning Department

Department of Environmental Management-Solid Waste

Fire Department

Police Department

Department of Water Supply

Utilities

Hawaiian Electric Light Company

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

9 LIST OF PREPARERS

The DEIS has been prepared by J M Leonard Planning, LLC, 1100 Ainalako Road, Hilo, Hawai'i, 96720.

Technical consultants were commissioned to prepare assessments of environmental factors for the Project. These consultants, their company affiliation, and area of study or assistance follow:

CONSULTANTS	AREA OF STUDY OR SPECIALTY
Archaeological Consultants of the Pacific	Archaeological Inventory Survey Data Recovery Plan
BD Neal & Associates	Air Quality Assessment
Evangeline J. Funk, PhD	Botanical Survey
Geometrician Associates	Flora/Fauna Studies
Haun & Associates	Archaeology Reconnaissance Survey Burial Treatment Plan Cultural Impact Assessment Addendum
Helen Wong Smith	Cultural Impact Assessment
Makani Resources, Constance R. Kiriū	EIS Preparation
PBR Hawai'i	Conceptual Master Planning
Phillip L. Bruner	Avifaunal and Feral Mammal Survey
SMS Research Marketing Services	Socio-Economic report
SSFM International	Traffic Impact Analysis Preliminary Engineering Master Drainage Report
Tom Nance, Water Resources Engineering	Water Resource Assessment
Y. Ebisu & Associates	Noise Quality Report

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

10 COMMENTS AND RESPONSES ON THE EISPN

The following agencies, organizations and individuals were mailed the EISPN for comment and, where applicable, the date of the comment or request letter is listed. In several cases, only comment letters or emails were received. Substantive comment letters or emails and responses are located on the following pages.

	AGENCY/ORGANIZATION/INDIVIDUAL	DATE EISPN MAILED	COMMENT / REQUEST LETTER DATE
	FEDERAL		
1	US Army Corps of Engineers	12/03/2007	
2	US Fish and Wildlife Service	12/03/2007	
3	US Department of the Interior-U.S. Geological Survey, Pacific Islands Water Science Center	12/03/2007	12/11/2007
4	US National Marine Fisheries Service	12/03/2007	
5	US Natural Resources Conservation Service	12/03/2007	
	STATE		
6	Office of the Governor	12/03/2007	
7	Department of Agriculture	12/03/2007	
8	Department of Business, Economic Development and Tourism–Office of Planning	12/03/2007	
9	Department of Business, Economic Development and Tourism–Strategic Industries Division	12/03/2007	12/18/2007
10	Department of Business, Economic Development and Tourism-Hawai'i Housing Finance and Development Corporation	12/03/2007	12/31/2007
11	Department of Health-Office of Environmental Quality Control	Via Planning Dept	
12	Department of Health-Environmental Health Admin	12/03/2007	1/07/2008
13	Office of Hawaiian Affairs	12/03/2007	1/02/2008
14	Department of Hawaiian Home Lands	12/03/2007	
15	Department of Labor and Industrial Relations	12/03/2007	
16	Department of Land and Natural Resources	12/03/2007	1/11/2008
17	Department of Land and Natural Resources – Historic Preservation Division	12/03/2007	
18	Department of Public Safety	12/03/2007	
19	Department of Transportation	12/03/2007	12/28/2007
20	State Land Use Commission	12/03/2007	
21	University of Hawai'i–Environmental Center	12/03/2007	
22	University of Hawai'i–Water Resources Research Center	12/03/2007	
	HAWAII COUNTY		
23	Office of the Mayor	12/03/2007	

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

	AGENCY/ORGANIZATION/INDIVIDUAL	DATE EISPN MAILED	COMMENT / REQUEST LETTER DATE
24	Planning Department	11/07/2007	
25	Department of Public Works–Building Division	12/03/2007	
26	Department of Public Works–Engineering Division	12/03/2007	
27	Department of Public Works–Highways Maintenance Division	12/03/2007	
28	Department of Public Works–Traffic Division	12/03/2007	
29	Department of Environmental Management–Solid Waste Division	12/03/2007	12/07/2007
30	Department of Environmental Management–Wastewater Division	12/03/2007	12/07/2007
31	Department of Finance–Real Property Tax Office	12/03/2007	
32	Fire Department	12/03/2007	12/12/2007
33	Office of Housing and Community Development	12/03/2007	
34	Mass Transit Agency	12/03/2007	
35	Department of Parks and Recreation	12/03/2007	1/17/2008
36	Police Department	12/03/2007	
37	Department of Research and Development	12/03/2007	
38	Department of Water Supply	12/03/2007	1/08/2008
39	South Kohala Community Development Plan Steering Committee	12/03/2007	
	ORGANIZATIONS, INDIVIDUALS AND INTERESTED PARTIES		
40	Hawai'i Island Community Development Corporation	12/03/2007	
41	Hawai'i Leeward Planning Conference	12/03/2007	
42	Kona-Kohala Chamber of Commerce	12/03/2007	
43	Mauna Kea Community Association		1/7/2008
44	Mauna Lani Resort	12/03/2007	
45	Mauna Lani Resort Association	12/03/2007	12/17/2007
46	Mauna Lani Homeowners Association	12/03/2007	
47	Puakō Community Association	12/03/2007	1/03/2008
48	Waikoloa Community Development Corporation	12/03/2007	
49	Waikoloa Land Company	12/03/2007	
50	Waikoloa Outdoor Circle	12/03/2007	
51	Waikoloa Village Association	12/03/2007	
	LIBRARIES		
52	Hawai'i Documents Center, Hawai'i State Library	12/03/2007	
53	Bond Memorial Library	12/03/2007	
54	Thelma Parker Memorial Library	12/03/2007	
55	Kailua-Kona Library	12/03/2007	
	NEWS MEDIA		
56	Hawai'i Tribune-Herald	12/03/2007	

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

	AGENCY/ORGANIZATION/INDIVIDUAL	DATE EISPN MAILED	COMMENT / REQUEST LETTER DATE
57	West Hawai'i Today	12/03/2007	
	ELECTED OFFICIALS		
58	State Senator Paul Whalen, District 3	12/03/2007	
59	State House Representative Cindy Evans, District 7	12/03/2007	
60	County Council Chair Pete Hoffmann, District 9	12/03/2007	
	UTILITIES		
61	Hawaiian Electric Light Company	12/03/2007	
62	Oceanic Time-Warner	12/03/2007	
63	Hawaiian Telcom	12/03/2007	
64	Waikoloa Water Company	12/03/2007	
	OTHER ORGANIZATIONS/INDIVIDUALS RECEIVING EISPN OR COMMENTING ON EISPN OR PROJECT		
65	Roger and Diane Kanealii (via email)		12/07/2007
66	Jennifer Grossart (via email)		12/19/2007
67	Michael Reimer, Ph.D. (via email)		12/19/2007
68	Betty Nanimae'ole Springer (via email)		12/21/2007
69	Catherine Rosasco Mitchell (via email)		12/31/2007
70	Deborah L. Chang, Island Transitions LLC		1/07/2008
71	Jason Masters (via email)	12/12/2007	
72	Environment Hawai'i	12/22/2007	
73	Kirk McKinney (via email)	12/13/2007	
74	Race A Randle (via email)	12/17/2007	

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

CORRESPONDENCE

January 7, 2008

Planning Department
County of Hawaii
101 Pauahi Street, Suite 3
Hilo, Hawaii 96742

John K. Baldwin
Bridge Aina Le'a, LLC
2500 Kalakaua Avenue, # 2404
Honolulu, Hawaii 96815

Constance R. Kiriū
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

Re: EISPN for Villages of `Aina Le'a, Waikoloa, South Kohala, Island of Hawai'i

Dear Sir or Madam:

Mauna Kea Community Association ("MKCA") is the duly constituted master association for the Mauna Kea Resort's residential property owners. Many of the members of MKCA are long-term residents and/or property owners in the West Hawaii area and frequent users of Ka'ahumanu Highway, Kawaihae Road, and other public roadways in the area. The members of MKCA are also recreational users of beaches, trails, parks, and other public and private recreational resources and facilities in the area.

The purpose of this letter is to request, pursuant to Hawaii Administrative Rules § 11-200-15(b) that MKCA become a consulting party to any Environmental Assessment or Environmental Impact Statement relative to the proposed "Villages of `Aina Le'a" project and for other development in TMK Nos. (3) 6-8-001: 25, 36, 37, 38, 39, and 40.

Please direct all relevant correspondence, notices, hearing notices, or other information relative to the EIS and any and all land use or permit applications relative to the above-referenced project to:

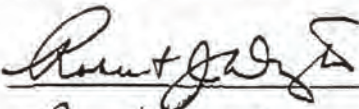
Planning Department
Bridge Aina Le'a, LLC
Makani Resources
January 7, 2008
Page 2

Mauna Kea Community Association
c/o Kathy Cooley
Certified Management, Inc.
75-169 Hualalai Road
Kailua-Kona, Hawaii 96740-1742

Thank you for your attention to this matter. Please contact me if you have questions or require additional information.

Very truly yours,

MAUNA KEA COMMUNITY ASSOCIATION

By: 
Its President

cc: Sidney Fuke

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Mauna Kea Community Association
c/o Kathy Cooley
Certified Management, Inc.
75-169 Hualalai Road
Kailua-Kona, HI 96740-1742

Dear Ms. Cooley:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated January 7, 2008, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your request.

The Mauna Kea Community Association will be recognized as a Consulting Party and included in the EIS process.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", with a long horizontal flourish extending to the right.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

Roy A. Vitousek III

Direct Line: (808) 329-5811

Direct Fax: (808) 326-1175

E-mail: rvitousek@ca des.com

December 17, 2007

Planning Department
County of Hawaii
101 Pauahi Street, Suite 3
Hilo, Hawaii 96742

John K. Baldwin
Bridge Aina Le'a, LLC
2500 Kalakaua Avenue, # 2404
Honolulu, Hawaii 96815

Constance R. Kiriu
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

Re: EISPN for Villages of 'Aina Le'a, Waikoloa, South Kohala, Island of Hawai'i

Dear Sir or Madam:

The purpose of this letter is to request, pursuant to Hawaii Administrative Rules § 11-200-15(b) that the Mauna Lani Resort Association ("MLRA") become a consulting part to any Environmental Assessment or Environmental Impact Statement relative to the proposed "Villages of 'Aina Le'a" project and for other development in TMK Nos. (3) 6-8-001: 25, 36, 37, 38, 39, and 40.

Please direct all relevant correspondence, notices, hearing notices, and the like to:

Sandra A. Patton
Resort Association Partners, LLC
68-150 Ho'ohana Street
Kohala Coast, Hawaii 96743

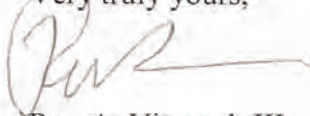
and

Roy A. Vitousek III, Esq.
Cades Schutte LLP
75-170 Hualalai Rd., Ste. B-303
Kailua-Kona, Hawaii 96740

Planning Department
Bridge Aina Le'a, LLC
Makani Resources
December 17, 2007
Page 2

Thank you for your attention to this matter. Please contact me if you have questions or require additional information.

Very truly yours,



Roy A. Vitousek III

for

CADES SCHUTTE

A Limited Liability Law Partnership

RAV:bah

cc: Sandra A. Patton
Sidney Fuke

\\manageDB:805837.1

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Sandra A. Patton
Resort Association Partners, LLC
68-150 Ho'ohana Street
Kohala Coast, HI 96743

Roy A. Vitousek III, Esq.
Cades Schutte LLP
75-170 Hualalai Rd., Ste. B-303
Kailua-Kona, HI 96740

Dear Ms. Patton and Mr. Vitousek:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated December 17, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your request.

The Mauna Lani Resort Association will be recognized as a Consulting Party and included in the EIS process.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", is written over a light gray rectangular background.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

PHONE (808) 594-1888

FAX (808) 594-1865



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

HRD07/3409

January 2, 2008

Constance Kiriū
Makani Resources
195 Makani Circle
Hilo, HI 96720

RE: Request for comments on the Environmental Impact Statement Preparation Notice for the Villages of 'Āina Le'a, Waikōloa, Hawai'i Island, TMKs: (3) 6-8-001:25, 36, 37, 38, 39, 40

Dear Constance Kiriū,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced Environmental Impact Statement Preparation Notice for the Villages of 'Āina Le'a, a proposed 3,000-acre development project featuring five golf courses; a golf academy; lodge; 2,406 multi-family and single family units; 863 rural-agricultural lots; and commercial features. OHA offers the following comments.

We request the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the development of the project, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.


Furthermore, we request the applicant to analyze the effect the project will have on Native Hawaiian traditional and customary rights and offer appropriate mitigation measures, in accordance with Ka Pa'akai O Ka 'Āina v. Land Use Comm'n, 94 Haw. 31, 47 (2000). We ask the applicant to consult with Native Hawaiian cultural practitioners about the project. We also look forward to reviewing the project's burial treatment plans and any other archaeological and historical resource plans associated with the development.

Constance Kiriū
Makani Resources
January 2, 2008
Page 2

We appreciate the applicant's plan to establish a five-acre preserve for the endangered Ko'olua'ula. However, we ask for more detail about the preserve, its interpretation and public education elements, and how it will be managed and maintained. In addition, the fact that 60,000 *ophioglossum consinnum* plants have been identified on the project site may indicate that the area represents an important habitat for this fern that the U.S. Fish and Wildlife Service has said is eligible to be placed on the "proposed endangered species" list. As such, we ask that this species' habitat be preserved and protected to the highest extent possible. In addition, we support the applicant's plan of using the fern in landscaping for the project.

Thank you for the opportunity to comment. We look forward to reviewing and commenting on the Draft Environmental Impact Statement for this project when it becomes available. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at sterlingw@oha.org.

Sincerely,



Clyde W. Nāmu'o
Administrator

C: Christopher J. Yuen, Planning Director
County of Hawai'i Planning Department
101 Pauahi Street, Suite 3
Hilo, HI 96720

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Clyde W. Nāmu‘o
Administrator
Office of Hawaiian Affairs
711 Kapi‘ōlani Boulevard, Suite 500
Honolulu, HI 96813

Dear Mr. Nāmu‘o:

SUBJECT: Comment to the EISPN, Villages of ‘Āina Le‘a, Waikoloa, South Kohala, Island of Hawai‘i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated January 2, 2008, regarding the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ‘Āina Le‘a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ‘Āina Le‘a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your request.

Cease work. The Applicant will assure that contractors will cease work in the affected area if iwi kūpuna or Native Hawaiian cultural or traditional deposits are found during the Project’s development. Further, appropriate agencies will be contacted pursuant to applicable law. This stop-work requirement is currently a condition of zoning Ordinance No. 96-153, and is expected to be included in a Project District zoning ordinance, if approved.

Cultural Impact Assessment. A *Cultural Impact Assessment for the Ahupuaa of Waikoloa, District of South Kohala* dated August 2007 was prepared by Helen Wong Smith, MLIS, CA for the Applicant. The *Assessment* concluded that the Project would have minimal impact on Hawaiian cultural resources, beliefs and practices. The *Assessment* is found in Appendix L, and cultural resources discussion occurs in Chapter 4.3.

Burial. As noted in the Draft EIS, the burial (Site 15033) is located on adjacent property owned by Bridge, and located approximately 1,000 feet mauka of the Applicant's property. As a water utility corridor is planned across the Bridge property, providing a water utility connection from Waikoloa Village to the Project, both the water utility corridor and Site 15033 were recently surveyed to determine their precise location. The Site was found to be approximately 900 feet from the utility corridor at its closest point. Thus, the Project will not affect Site 15033.

Archaeological and Historical Resources. A discussion and analysis of the archaeological and historical resources of the area is included in Chapter 4.2 and Appendices I, J, and K of the Draft EIS.

Botanical Preserve. Evangeline Funk prepared a preliminary *Botanical Preservation and Mitigation Plan* for the *Abutilon menziesii* or the red 'ilima. Ms. Funk was not able to locate the red 'ilima because of three years of severe drought and wind conditions at the plant's habitat. The Plan recommended a 500-foot buffer area around the location of the red 'ilima and further site follow-up when the weather improves. When and if the red 'ilima plants are found, a final preservation and mitigation plan would be prepared incorporating recommendations of the U.S. Fish and Wildlife Service.

Ms. Funk also stated that the *Ophioglossum concinnum* (fern) had been de-listed as an endangered or threatened species, and would not require a preservation plan.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with the first name "James" and last name "Leonard" clearly legible.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



Print - Close Window

From: "Engelhard, Patricia" <PENGELHARD@co.hawaii.hi.us>
To: "makaniresources@yahoo.com" <makaniresources@yahoo.com>
CC: "Komata, James" <JKOMATA@co.hawaii.hi.us>, "Mizuno, Pamela" <PMizuno@co.hawaii.hi.us>
Subject: Prep Notice for EIS-Villages of 'Aina Le'a - TMK 3-6-8-01:25,36,3 7,38,39,40
Date: Thu, 17 Jan 2008 10:49:12 -1000

Hi Connie,

We thought we were out of the woods on this one because we only recently talked with Sidney Fuke and Aaron Chung about this project as it relates to a community center proposed by the folks in Waikoloa. The comment date has passed, we know, but we're providing our comments anyway. In reading page 31 of your submittal, James noticed this statement: "A 10 acre active park and a 16-acre passive park, which will be dedicated to the County are planned within the Project." Sid never mentioned any passive park, probably because he knows we don't do passive parks. The County is in charge of active recreation, as you know. So we don't want a passive park and would object to that. If they would like to do 26 acres of active parks that would be fine and we need more discussion about that prospect.

Thanks for reading this.

Pat Engelhard

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Robert A. Fitzgerald, Director
Department of Parks and Recreation
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Fitzgerald:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

This is in response to an email from former Director Patricia Engelhard dated January 17, 2008, regarding the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your request.

We have noted the Department of Parks and Recreation's objection to passive parks, preferring instead 26 acres of active parks. However the requirement for a 16-acre passive park and a 10-acre active park was a condition of zoning Ordinance No. 96-153. As such, the parks will be retained by the landowner or a future homeowner-type of association unless and until the County wishes to take them over.

The Applicant has discussed with the Department of Parks and Recreation the possibility of locating a community center on its property, adjacent to the area of the active park, to supplement the recreational facilities in the district. Additionally, the Applicant is proposing to expand the active park area to 16 acres.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

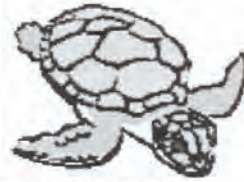
Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

cc: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

Puako
COMMUNITY ASSOCIATION



January 3, 2008

Mr. Christopher J. Yuen
Planning Director
County of Hawaii
101 Pauahi Street
Hilo, Hawaii 96720

Mr. Sidney Fuke
Planning Consultant
100 Pauahi Street, Suite 212
Hilo, Hawaii 96720

Ms. Constance R. Kiri
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

John K. Baldwin, Managing Director
Bridge Aina Lea, LLC
250 Kalakaua Avenue, #2404
Honolulu, Hawaii 96815

Re: Villages of Aina Lea, EIS Preparation Notice (TMK: (3) 6-8-001: 25, 36, 37, 38, 39, 40

Dear Madame and Sirs:

The Puako Community Association requests that it be recognized as a Consulting Party in the above matter. Please continue to keep us informed about the development and forward the EIS Draft when available.

Aloha,


Robert Shallenberger
President

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Robert Shallenberger
President
Puako Community Association
P.O. Box 44345
Kawaihae, HI 96743

Dear Mr. Shallenberger:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated January 3, 2008, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your request.

The Puako Community Association will be recognized as a Consulting Party and included in the EIS process.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", is written over a light gray rectangular background.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

Pacific Islands Water Science Center

677 Ala Moana Blvd., Suite 415

Honolulu, HI 96813

Phone: (808) 587-2400/Fax: (808) 587-2401

December 11, 2007

Mr. John K. Baldwin, Managing Member
Bridge Aina Lea, LLC
2500 Kalakaua Avenue, #2404
Honolulu, Hawai'i 96815

Dear Mr. Baldwin:

Subject: Environmental Impact Statement Preparation Notice (EISPN)
Village of 'Āina Le'
Island of Hawai'i, South Kohala District
TMK: (3) 6-8-001:25, 36, 37, 38, 39, 40

Thank you for forwarding the subject EISPN for review and comment by the staff of the U.S. Geological Survey, Pacific Islands Water Science Center. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document.

We appreciate the opportunity to participate in the review process.

Sincerely,

Gordon Tribble
Center Director

cc: Ms. Constance Kiriu
Makani Resources
195 Makani Circle
Hilo, Hawai'i 96720

Mr. Christopher J. Yuen, Planning Director
County of Hawai'i Planning Department
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Gordon Tribble, Center Director
Pacific Islands Water Science Center
U.S. Geological Survey
United States Department of the Interior
677 Ala Moana Blvd., Suite 415
Honolulu, Hawai'i 96813

Dear Mr. Tribble:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated December 11, 2007 in response to the Environmental Impact Statement Preparation Notice for this project. We regret that you were unable to review the EISPN due to prior commitments and lack of available staff.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we would like to thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS. We look forward to any comments that you and your office might have on the Draft EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



January 7, 2008

Mr. John K. Baldwin
Managing Member
Bridge Aina Le'a, LLC
2500 Kalākaua Ave., No. 2404
Hon., HI 96815

SUBJECT: EIS Preparation Notice for Villages of `Āina Le'a

Dear Mr. Baldwin:

As you prepare the above-referenced Draft Environmental Impact Statement, please research as part of your cultural resources assessment whether a portion of a major, historic *mauka-makai* trail is located on the subject properties. The trail was used to drive cattle from the ranch formerly in Pu'u Anahulu and Pu'u Wa'awa'a, North Kona District, all the way down to Puakō and Kawaihae. Mr. Sonny Keākealani, currently a resident of Waimea, has personally used that trail when he worked for that ranch and would be the most knowledgeable about the trail's location and historic use. You may contact me if you need assistance in contacting Mr. Keākealani.

The fascinating history of ranching on the island of Hawai'i includes a special legacy of long-distance trails that are worthy of preservation, interpretation, and use. Historic trails and routes can be successfully integrated into new developments, especially when identified early in the planning process.

Thank you for your consideration of my comments.

Sincerely,

c: Hi. County Planning Dept.
✓ Makani Resources
OEQC
Nā Ala Hēle

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Deborah Chang
Island Transitions LLC
P.O. Box 202
Paʻauilo, HI 96776-0202

Dear Ms. Chang:

SUBJECT: Comment to the EISPN, Villages of ʻĀina Leʻa, Waikoloa, South Kohala, Island of Hawaiʻi, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated January 7, 2008, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ʻĀina Leʻa development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ʻĀina Leʻa Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comment requesting research into the possible existence of a historic cattle trail on the properties.

An *Addendum to the Cultural Impact Assessment* for the project was prepared by Helen Wong Smith, MLIS, CA, in July 2009. Ms. Wong Smith and archaeologist James Head were accompanied by Sonny Keakealani to the Puakō Gate near the Queen Kaʻahumanu Highway and then mauka along Highway 19 to a flat area beneath Puʻu Kuʻaʻāniho where cattle were rounded prior to being driven to the Puakō Gate. A possible ahu (or cairn), which may have marked the cattle trail, was also located in the area. Although Mr. Keakealani had not traversed the trail himself, he identified the trail through the recollections from his father, Robert Keakealani, Sr.

Mr. Keakealani recommended returning to the plain after a fire when the lack of grass could reveal the cattle trail. In the meantime, he suggested Ms. Wong Smith and Mr. Head follow the fence line from the Puakō Gate to determine the full extent of the cattle trail. GPS coordinates were taken along the fence line and mapped in relation to the subject properties.

DW ʻĀina Leʻa, LLC will incorporate portions of the historic cattle trail into the design of the project components where possible. The discussion about the historic cattle trail occurs in Chapter 4.4 of the EIS. The Cultural Impact Assessment and Addendum are found in Appendix L.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT **SOLID WASTE DIVISION**

COUNTY OF HAWAII – 108 RAILROAD AVENUE – HILO, HI 96720
HILO (808) 961-8514 WAIMEA (808) 887-3018 KONA (808) 327-3507
Fax: 961-8553 887-3025 327-3506

DATE: December 7, 2007

TO: Bobby Jean Leithead-Todd
DIRECTOR

FROM: Michael Dworsky
CHIEF

SUBJECT: **Prep Notice for an Environmental Impact Statement Villages of `Āina Le`a (TMK (3) 6-8-001:25, 36, 37, 38, 39, 40)**

Please incorporate the comments from the Solid Waste Division into the appropriate response from the Department to the Applicant, Accepting Authority and EIS Preparer. They are as follows:

Applicant

Bridge Aina Lea, LLC
2500 Kalakaua Ave., #2404
Honolulu, HI 96815
John K. Baldwin, Managing Member

Accepting Authority

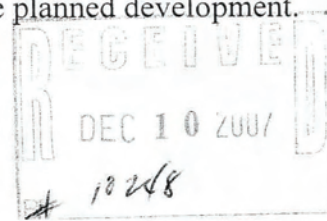
County of Hawai'i Planning Department
101 Pauahi Street, Suite 3
Hilo, HI 96720
Christopher J. Yuen, Planning Director

EIS Preparer

Constance Kiriu
Makani Resources
195 Makani Circle
Hilo, HI 96720

The Solid Waste Division has reviewed the subject request and has the following comments to offer:

The proposed site is to develop 2,406 residential units, 863 residential-agricultural lots, and 385 affordable housing units to be built within 3,000 acres of land. A project of this size will require a Solid Waste Management Plan (enclosed). A development of this size will need to address the collection of solid waste within the development. The current transfer station at Puako is not sized to accept an additional load of over 2,400 vehicles hauling individual residential garbage and recyclables. A development of the size proposed needs to address how a curbside recycling and garbage collection program utilizing automated mechanical trucks can be instituted to serve the planned development.



- A Solid Waste Management Plan will need to be prepared and submitted in accordance with the enclosed 'Solid Waste Management Plan – Guideline'.
- Commercial operations may not use transfer stations for disposal.
- The plan should maximize the principles of recycling, reuse, and reduce in lieu of putting materials in the Landfill.
- Ample room should be provided for recycling.

enclosures

Harry Kim
Mayor



Bobby Jean Leithead-Todd
Director

Nelson Ho
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
25 Aupuni Street • Hilo, Hawai'i 96720-4252
(808) 961-8083 • Fax (808) 961-8086

September 14, 2007

SOLID WASTE MANAGEMENT PLAN
Guidelines

INTENT AND PURPOSE

This is to establish guidelines for reviewing solid waste management plans, for which special conditions are placed on developments. The solid waste management plan will be used to: (1) encourage recycling and recycling programs, (2) predict the waste generated by the proposed development to anticipate the loading on County transfer stations, landfills and recycling facilities, and (3) predict the additional traffic being generated because of waste and recycling transfers.

REPORT

The consultant's report will contain the following:

1. Description of the project and the potential waste it may be generating: i.e. analysis of anticipated waste volume and composition. This includes waste generated during the construction and operational phases. Greenwastes will be included in this report for both construction grubbing and future operational landscape maintenance.
2. Description and location of the possible sites for waste disposal or recycling. We will not allow the use of the County transfer stations for any commercial development; commercial development as defined under the policies of the Department of Environmental Management Solid Waste Division.
3. Since the Department of Environmental Management promotes recycling, indicate onsite source separation facilities by waste stream; i.e. source separation bins of glass, metal, plastic, cardboard, aluminum, etc. Provide ample and equal space for rubbish and recycling.
4. Identification of the proposed disposal site and transportation methods for the various components of the waste disposal and recycling system, including the number of truck traffic and the route that truck will be using to transport the waste and recycled materials.

5. The report will include any impacts to County waste and recycling facilities, and the appropriate mitigation measures. All recommendations and mitigation measures will be addressed.
6. Description of the waste reduction component that analyzes techniques to be employed to achieve a reduction goal.
7. Analysis will be based on the highest potential use or zoning of the development.

REQUIREMENTS AND CONDITIONS

1. A solid waste management plan will be done for all commercial developments, as defined under the policies of the Department of Environmental Management, Solid Waste Division.
2. We will require the developer to provide or resolve all recommendations and mitigation measures as outlined in the report; besides any conditions placed on the applicant by the Department of Environmental Management.
3. A licensed environmental or civil engineer will draft and certify the solid waste management plan.

If you have need additional information, please contact Michael Dworsky, P.E., Solid Waste Division Chief at 808-961-8515.

CONCUR:



Bobby Jean Leithead-Todd
DIRECTOR

10/13/03
Revised 09/14/07

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Lono Tyson, Director
Department of Environmental Management
County of Hawai'i
108 Railroad Avenue
Hilo, Hawaii 96720

Attention: Michael Dworsky

Dear Mr Tyson:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for forwarding a copy of Solid Waste Division Chief Michael Dworsky's memorandum dated December 11, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Applicant will prepare a Solid Waste Management Plan in accordance with the County's Solid Waste Management Plan's Guidelines for the Department's review and approval. The project's Solid Waste Management Plan will address the collection of solid waste within the development, including how a curbside recycling and garbage collection program utilizing automated mechanical trucks might be instituted to serve the development. The project's Solid Waste Management Plan will maximize the principles of recycling, reuse, and reduce in order to decrease the amount of materials placed in the Landfill. The Plan will also restrict commercial operations from using transfer stations for trash disposal and will encourage ample space for recycling.

The Applicant is required by Ordinance No. 96-153 to contribute its fair share contribution towards solid waste facilities in the amount of \$99.29 per multiple-family residential unit and \$145.62 per single-family residential unit. These amounts are required to be adjusted based on the percentage change in the Honolulu Consumer Price Index (HCPI). If the Project District Zoning is approved, it is anticipated that a fair share contribution will be required for solid waste services. The Draft EIS contains a discussion in Section 4.11.3 about the Puako Transfer Station and the required fair share contribution.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", with a long horizontal stroke extending to the right.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

Harry Kim
Mayor



Bobby Jean Leithead-Todd
Director

Nelson Ho
Deputy Director

County of Hawai'i

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

25 Aupuni Street • Hilo, Hawai'i 96720

(808) 961-8083 • Fax (808) 961-8086

http://co.Hawaii.hi.us/directory/dir_envmng.htm

December 7, 2007

Mr. John K. Baldwin
Bride Aina Lea, LLC
2500 Kalakaua Avenue, #2404
Honolulu, Hawai'i 96815

**SUBJECT: Preparation Notice for an Environmental Impact Statement
Villages of Ainalea, South Kohala District, Hawai'i
TMK: (3) 6-8-001-25, 36, 37, 38, 39, 40**

Dear Mr. Baldwin,

Based on our review of the subject notice, we offer the following comments:

If applicant decides to construct a wastewater treatment plant (WWTP) on site, no liquid wastewater sludge generated from the subject development can be disposed of at the County's Kealakehe Wastewater Treatment Plant (WWTP). Applicant must either dispose liquid sludge elsewhere or construct a sludge-handling facility to dispose sludge in a municipal landfill. Kealakehe WWTP is experiencing heavy sludge accumulation within the plant that is having an adverse impact on our treated effluent. The sludge accumulation is caused primarily from liquid waste sludge being hauled to the plant from existing private individual wastewater systems and private treatment plants located throughout the west side of Big Island.

Should you have any questions or comments, please do not hesitate to call me at 808-961-8513.

Sincerely,

A handwritten signature in black ink, appearing to read "Bert Saito".

BERT SAITO, P.E.
Division Chief

cc: Bobby Jean Leithead Todd, Director, Department of Environmental Management

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Lono Tyson, Director
Department of Environmental Management
County of Hawai'i
108 Railroad Avenue
Hilo, Hawaii 96720

Attention: Bert Saito, P.E., Division Chief

Dear Mr. Tyson:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your department's comments dated December 7, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Applicant plans to construct the Project's wastewater treatment plant on-site. Regarding your comments about the disposal of the WWTP solids, the proposed membrane bioreactor treatment facility is expected to generate minimal liquid sludge. What little liquid sludge is produced will be disposed of in a manner meeting Department of Environmental Management and State Department of Health regulations and requirements. A full discussion of the wastewater system proposed for the Project is found in Section 2.3.9.3 and 4.11.2 of the Draft EIS.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



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

In reply, please refer to:
EPO-07-225

January 7, 2008

Ms. Constance Kiriū
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

Dear Ms. Kiriū:

SUBJECT: Environmental Impact Statement Preparation Notice for Villages of Aina Lea
Waikoloa, South Kohala, Island of Hawaii, Hawaii
TMK: (3) 6-8-001: 025, 036, 037, 038, 039 and 040

Thank you for allowing us to review and comment on the project. The document was routed to the various branches of the Department of Health (DOH) Environmental Health Administration. We have the following Safe Drinking Water Branch, Wastewater Branch and General comments.

Save Drinking Water Branch

1. We understand that the applicant, Bridge Aina Le'a, is proposing to develop approximately 3,000 acres in the Waikoloa area consisting of: Infrastructure improvements, subdivision of property, five golf courses, a golf academy, a 40-unit lodge, up to 3,269 multi-family and single-family units, 863 agricultural lots, commercial uses, and other related improvements. At this time, the applicant has stated that the proposed water system will be constructed per county standards and will be dedicated to the Hawaii County Department of Water Supply.
2. All projects that propose the development of new sources of drinking water serving a public water system must comply with the terms of Section 11-20-29 of the Hawaii Administrative Rules, Title 11, Chapter 20, titled "Rules Relating to Potable Water Systems." This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.
3. The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may

be required by the Director of Health for this submittal or additional tests required upon his or her review of the information submitted.

4. Furthermore, all sources of public water systems must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water.
5. The document does mention that the applicant plans to use brackish and/or reclaimed water for non-potable water uses such as irrigation. If the applicant proposes the use of dual water systems or the use of a non-potable water system in proximity to an existing potable water system to meet irrigation or other needs, he or she must be careful in the design and operation of these systems to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the potable system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the potable water supply. In addition, backflow devices must be tested periodically to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent inadvertent consumption of non-potable water. Compliance with Hawaii Administrative Rules, Title 11, Chapter 11-21 titled "Cross Connection and Backflow Control" is required.

Should you have any questions regarding the drinking water system, please contact Mr. Kumar Bhagavan of the SDWB Compliance Section at 586-4258 in Honolulu.

Underground Injection Control

Injection wells used for the subsurface disposal of wastewater, sewage effluent, or surface runoff are subject to environmental regulation and permitting under Hawaii Administrative Rules, Title 11, Chapter 23, titled "Underground Injection Control" (UIC). The Department of Health's approval must be first obtained before any injection well construction commences. A UIC permit must be issued before any injection well operation occurs. Authorization to use an injection well is granted when a UIC permit is issued to the injection well facility. The UIC permit contains discharge and operating limitations, monitoring and reporting requirements, and other facility management and operational conditions. A completed UIC permit-application form is needed to apply for a UIC permit.

A UIC permit can have a valid duration of up to five years. Permit renewal is needed to keep an expiring permit valid for another term.

Questions about UIC may be directed to Mr. Chauncey Hew at 586-4258.

Ms. Kiriu
January 7, 2008
Page 3

Wastewater Branch

The document proposes to develop a 3,000 acre parcel in South Kohala with infrastructure improvements, subdivision of property, five (5) golf courses, gold academy, 40-unit lodge, up to 3,269 multi-family and single-family units, 863 rural-agricultural lots, commercial uses, and related improvements/uses.

The project is located in the both the Non-Critical Wastewater Disposal Area (Non-CWDA) and Five (5) Acre Lot Exception Area.

Amendments to Hawaii Revised Statutes (HRS) include language which triggers the need of an environmental assessment. One of the triggers in Section 343-5a is the construction of a wastewater treatment unit serving 50 dwelling units or more. If a new wastewater treatment plant (WWTP) is proposed, the EIS should contain sufficient information on this matter such as that the requirements of HRS 343 are addressed.

The current design capacity of the Mauna Lani Resort private WWTP is 0.750 MGD. The existing Mauna Lani WWTP is insufficient to handle the proposed 1.86 MGD flow for this development. Therefore, the Department cannot concur with the EIS notice until sufficient information is provided regarding the treatment and disposal of wastewater.

All wastewater plans must meet Department's Rules, HAR Chapter 11-62, "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. If you have any questions, please contact the Planning & Design Section of the Wastewater Branch at 586-4294.

General

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

Ms. Kiriu
January 7, 2008
Page 4

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

Sincerely,

A handwritten signature in black ink, appearing to read "Kelvin H. Sunada", written in a cursive style.

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB
WWB

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

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

Dear Mr. Sunada:

SUBJECT: EISPN for Villages of ‘Āina Le‘a, Waikoloa, South Kohala, Island of Hawai‘i

Thank you for your letter dated January 7, 2008, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ‘Āina Le‘a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ‘Āina Le‘a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

Safe Drinking Water

The development of new sources of drinking water serving the County’s public water system will comply with Section 11-20-29, Hawaii Administrative Rules (HAR), Title 11, Chapter 20, titled “Rules Relating to Potable Water Systems.”

An engineering report addressing the requirements set forth in Section 11-20-29 will be submitted to the Department of Health for its approval. The report will identify all potential sources of contamination and will evaluate alternative control measures that could be implemented to reduce or eliminate the potential for contamination. Water quality analyses will be submitted as part of the report to demonstrate compliance with all drinking water standards. Additionally, a source water assessment will be undertaken as part of a Source Water Protection Plan to delineate a source water protection area.

The dual water system for potable and non-potable water will be designed and operated to prevent cross-connection and possible contamination of the potable system. All non-potable spigots and irrigated areas will be clearly labeled with warning signs to prevent inadvertent consumption of non-potable water. The Applicant or its representatives will comply with Chapter 11-21, Title 11, HAR, titled "Cross Connection and Backflow Control."

Underground Injection Control

An Underground Injection Control permit will be applied for in compliance with Chapter 23, Title 11, HAR, before any injection well construction commences.

Wastewater

Thank you for confirming that the project is located in both the Non-Critical Wastewater Disposal Area (Non-CWDA) and Five (5) Acre Lot Exception Area.

The DEIS will contain information related to the proposed wastewater treatment plant, its impacts, and proposed mitigation measures.

The Applicant currently proposes to construct an onsite wastewater treatment plant, which will meet the requirements of Chapter 11-62, Title 11, HAR, titled "Wastewater Systems."

Information about the proposed wastewater treatment plant, its impacts, and proposed mitigation measures can be found in Sections 2.3 and 4.11 of the DEIS.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington/DW 'Āina Le'a Development



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

BRENNON T. MORIOKA
ACTING DIRECTOR

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

IN REPLY REFER TO:

STP 8.2728

December 28, 2007

Mr. John K. Baldwin
Managing Member
Bridge Aina Lea, LLC
2500 Kalakaua Avenue, #2404
Honolulu, Hawaii 96815

Dear Mr. Baldwin:

Subject: Bridge Aina Lea, LLC
Villages of Aina Lea
Environmental Impact Statement Preparation Notice (EISPN)
TMK: 6-8-001: 25, 36, 37, 38, 39, 40

Thank you for requesting our review of the subject project.

Our comments are as follows:

1. The Villages of Aina Lea project will impact Queen Kaahumanu Highway at the two proposed accesses.
2. We understand that, as the applicant, your firm is preparing a Traffic Impact Analysis Report (TIAR) covering the impacts from the project itself and the project's contribution to the cumulative impact on the affected roads and highways, and that the TIAR will be included in the forthcoming Draft EIS. We are particularly interested in the impacts and the recommended mitigation measures. The Draft EIS should discuss the inclusion of the Waikoloa Village Emergency Evacuation Access Road into one of the proposed access points for the Villages of Aina Lea to Queen Kaahumanu Highway, and the configuration and planning for the other proposed access, which will form a junction with the existing access for Mauna Lani Resort.
3. In the Draft EIS, the components, units, phasing and timetables of the project should be described in detail and the overall project should also be discussed relative to the past, current and future development projects and growth for the area.
4. We are an interested party and look forward to receiving at least four (4) copies of the Draft EIS.

Mr. John K. Baldwin

Page 2

December 28, 2007

STP 8.2728

We appreciate the opportunity to provide comments.

Very truly yours,



for

BRENNON T. MORIOKA, PH.D., P.E.
Acting Director for Transportation

c: Christopher Yuen, Hawaii Planning Department
Constance Kiriū, Makani Resources

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

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

Dear Mr. Morioka:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated December 28, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Draft EIS discusses the Project components, units, phasing and timetables in the project description found in Chapter 2. Past, current and future development projects are discussed in the *Traffic Impact Analysis Report* (TIAR), Appendix M, as well as in Chapter 4.6 of the Draft EIS. The TIAR addresses the cumulative impact on the affected roads and highways and proposed mitigation measures. The proposed project roadways include the Waikoloa Village Emergency Access Road, which will serve as one of the Project's access points at Queen Ka'ahumanu Highway. The alignment of this road and location of its intersection with Queen Ka'ahumanu Highway, however, have yet to be determined, as these are subject to further discussions with the County and Waikoloa Village representatives. The planned intersection improvements for the Emergency Access Road, as well as the planned configuration for the project southern access that will form a junction at the existing access for the Mauna Lani Resort, are also described in the TIAR and Chapter 4.6.

We acknowledge that the DOT is an interested party which will receive four copies of the Draft EIS.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

LINDA LINGLE
GOVERNOR



ORLANDO "DAN" DAVIDSON
EXECUTIVE DIRECTOR

STATE OF HAWAII

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION

677 QUEEN STREET, SUITE 300
Honolulu, Hawaii 96813
FAX: (808) 587-0600

IN REPLY REFER TO:

07:PEO/151

December 31, 2007

Mr. John K. Baldwin, Managing Member
Bridge Aina Lea, LLC
2500 Kalakua Avenue, #2404
Honolulu, Hawaii 96815

Dear Mr. Baldwin:

Re: Environmental Impact Statement Preparation Notice (EISPN) for the Village of
Aina Le'a, South Kohala District, TMK (3) 6-8-001:25, 36-40

We have reviewed the subject EISPN and note the following:

- The proposed Village of Aina Le'a will offer approximately 2,406 residential units in the Project District Urban area and maintain 863 residential-agricultural lots in the Agricultural District. It appears that the master plan includes the provision of 385 affordable housing units.
- The Applicant intends to comply with the County of Hawaii's housing policy in the provision of the affordable housing units.

Please provide more information on the affordable units, particularly in relationship to the Hawaii State Plan policy of increasing homeownership and rental opportunities and choices in terms of quality, location, cost densities, style and size of housing.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dan Davidson".

for Orlando "Dan" Davidson
Executive Director

c: Christopher Yuen, County of Hawaii Planning Department
✓Constance Kiriū, Makani Resources

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Karen Seddon
Executive Director
Hawaii Housing Finance and Development Corporation
Department of Business, Economic Development and Tourism
677 Queen Street, Suite 300
Honolulu, HI 96813

Dear Ms. Seddon:

SUBJECT: Comment to the EISPN, Villages of ‘Āina Le‘a, Waikoloa, South Kohala, Island of Hawai‘i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

This is in response to a letter from the prior HFDC Director, Dan Davidson, dated December 31, 2007, regarding the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ‘Āina Le‘a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ‘Āina Le‘a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Applicant will provide a minimum of 385 affordable housing units onsite in compliance with a condition of the State Land Use Commission and with the County Housing Code. In addition, the Applicant is in discussions with a non-profit organization to provide work-force housing on-site. Information about the Project’s onsite affordable housing units is found in Chapters 2.3 and 4.10.2 of the Draft EIS.

The discussion of affordable housing in relation to the Hawaii State Plan policy of increasing homeownership and rental opportunities is found in Chapter 6.2 of this Draft EIS.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR

STRATEGIC INDUSTRIES DIVISION
235 South Beretania Street, Leio papa A Kamehameha Bldg., 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3807
Fax: (808) 586-2536
Web site: www.hawaii.gov/dbedt

December 18, 2007

Ms. Constance R. Kiriū
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

Dear Ms. Kiriū:

Re: Environmental Impact Statement Preparation Notice (EISPN)
Village of Aina Le'a, Island of Hawaii South Kohala District
Tax Map Key: (3) 6-8-001:25, 36, 37, 38, 39, 40

Thank you for the opportunity to review the EISPN for the Village of Aina Le'a, Island of Hawaii, for infrastructure improvements, subdivision of property, five golf courses, golf academy, 40-unit lodge, up to 2,406 multi-family and single-family units, 863 rural-agricultural lots, commercial uses, related improvements/uses.

We would like to call your attention to: (1) State energy conservation goals; and, (2) energy and resource efficiency and renewable energy and resource development.

- 1. State energy conservation goals.** Project buildings, activities, and site grounds should be designed and/or retrofit with energy saving considerations. The mandate for such consideration is found in Chapter 344, HRS ("State Environmental Policy") and Chapter 226 ("Hawaii State Planning Act"). In particular, we would like to call to your attention HRS 226 18(c) (4) which includes a State objective of promoting all cost-effective energy conservation through adoption of energy-efficient practices and technologies.
- 2. Energy and resource efficiency and renewable energy and resource development.** We call your attention to the need for actions to enhance the sustainability of the development, including construction activity pollution prevention, green architecture, photovoltaic energy, solar water heating, and water conservation measures.

Constance R. Kiriu
December 18, 2007
Page 2

We, therefore, encourage the parties to this development to make a commitment to energy and resource efficiency and include requirements that take into consideration Leadership in Energy and Environmental Design (LEED) Neighborhood Development standards which integrate the principles of smart growth, urbanism, and green building.

Our website (<http://www.hawaii.gov/dbedt/info/energy/efficiency/>) provides detailed information on guidelines, directives and statutes, as well as studies and reports on aspects of energy efficiency. Please also do not hesitate to contact Carilyn Shon, Energy Efficiency Branch Manager, at telephone number 587-3810, for additional information on green buildings, energy efficiency, and renewable energy resources.

Sincerely,



Maurice H. Kaya
Chief Technology Officer

c: OEQC
Bridge Aina Lea, LLC
County of Hawaii Planning Department

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Maurice H. Kaya, Chief Technology Officer
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Kaya:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated December 18, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

We acknowledge the mandate for considering energy efficiency in project design of buildings, activities and site grounds found in Chapter 344, Hawai'i Revised Statutes ("State Environmental Policy"), and Chapter 226, Hawai'i Revised Statutes ("Hawai'i State Planning Act"). Thank you for calling our attention to Section 226-18(c)(4), Hawai'i Revised Statutes, which includes a State objective of promoting cost-effective energy conservation through the adoption of energy-efficient practices and technologies. The discussion of the Hawai'i State Plan is provided in Chapter 6 of the Draft EIS.

We also recognize the need for actions to enhance the sustainability of the development by encouraging a commitment to energy and resource efficiency and including requirements that consider Leadership in Energy and Environmental Design (LEED) Neighborhood Development standards. Information on your website provides information on guidelines, directives and statutes on energy efficiency to assist us with this effort. The Applicant understands the value of sustainable development and will encourage the application of energy and resource efficient guidelines throughout the project.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

LINDA LINGLE
GOVERNOR OF HAWAII



LAURA H. THULEN
CHAIRPERSON
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 11, 2008

Bridge Aina Lea, LLC
2500 Kalakaua Avenue #2404
Honolulu, Hawaii 96815

Attention: Mr. John Baldwin

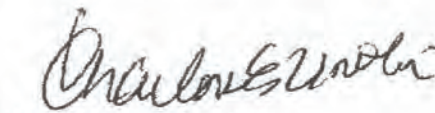
Gentlemen:

Subject: Preparation Notice for an Environmental Impact Statement, Villages of
Aina Le'a, South Kohana, Hawaii, Tax Map Key: (3) 6-8-1:25, 36, 37, 38,
39, 40

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

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

Sincerely,


Morris M. Atta
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII



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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 6, 2007

MEMORANDUM

From: PO:

DLNR Agencies:

- ☐ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☐ Office of Conservation & Coastal Lands
- ☒ Land Division - Hawaii District

To: FROM: Morris M. Atta *Charlene*
SUBJECT: Preparation Notice for an Environmental Impact Statement, Villages of Aina Le'a
LOCATION: South Kohala, Hawaii, TMK: (3) 6-8-1:25, 36, 37, 38, 39, 40
APPLICANT: Makani Resources on behalf of Bridge Aina Lea, LLC

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by January 3, 2008.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

- ☐ We have no objections.
- ☐ We have no comments.
- ☒ Comments are attached.

Signed: *[Signature]*
Date: 11/1/08

COMMISSION ON WATER RESOURCE MANAGEMENT

07 DEC 7 AM 39

RECEIVED

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

LAURA H. THIELEN
CHAIRPERSON
MEREDITH J. CHING
JAMES A. FRAZIER
NEAL S. FUJIMURA
CHIYOME L. FUKINO, M.D.
DONNA FAY K. KIYOSAKI, P.E.
LAWRENCE H. MIIKE, M.D., J.D.
KEN C. KAWAHARA, P.E.
DEPUTY DIRECTOR

January 9, 2008

REF:

TO: Morris Atta, Acting Administrator
Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Preparation Notice for EIS, Villages of Aina Le'a

FILE NO.:

R

RECEIVED
LAND DIVISION
2008 JAN -9 P 3:46
DEPT. OF LAND & NATURAL RESOURCES
HAWAII STATE OF HAWAII

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at <http://www.hawaii.gov/dlnr/cwm>.

Our comments related to water resources are checked off below.

- ☐ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- ☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- ☐ 3. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM: Additional information and forms are available at www.hawaii.gov/dlnr/cwm/forms.htm.

- ☐ 4. The proposed water supply source for the project is located in a designated ground-water management area, and a Water Use Permit is required prior to use of ground water.
- ☒ 5. A Well Construction Permit(s) is (are) required before the commencement of any well construction work.
- ☒ 6. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

DRF-IA 03/02/2006

January 9, 2008

- ☐ 7. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
- ☐ 8. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- ☐ 9. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a stream channel.
- ☐ 10. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- ☐ 11. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- ☐ 12. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.
- ☐ 13. We recommend that the report identify feasible alternative non-potable water resources, including reclaimed wastewater.
- ☐ OTHER:

If there are any questions, please contact Ryan Imata at 587-0255.

LINDA LINGLE
GOVERNOR OF HAWAII



LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
REGISTRATION AND RESOURCES MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 6, 2007

MEMORANDUM

TO: **DLNR Agencies:**
_ Div. of Aquatic Resources
_ Div. of Boating & Ocean Recreation
x Engineering Division
_ Div. of Forestry & Wildlife
_ Div. of State Parks
_ Commission on Water Resource Management
_ Office of Conservation & Coastal Lands
x Land Division – Hawaii District

RECEIVED
LAND DIVISION
2007 DEC 14 P 4:04
DEPT OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

FROM: *for* Morris M. Atta *Charlene*
SUBJECT: Preparation Notice for an Environmental Impact Statement, Villages of Aina Lea
LOCATION: South Kohala, Hawaii, TMK: (3) 6-8-1:25, 36, 37, 38, 39, 40
APPLICANT: Makani Resources on behalf of Bridge Aina Lea, LLC

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by January 3, 2008.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed: *C. T. Attia*
Date: 12/14/07

07 DEC 08 0903 ENGINEERING

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
REF: PrepNoticeEISVillagesAinaLea
Hawaii.365

COMMENTS

- (X) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone X. The National Flood Insurance Program does not have any regulations for developments within Zone X.
- () Please take note that based on the map that you provided the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ____.
- () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ____.
- () Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

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

- () Mr. Robert Sumimoto at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
- () Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
- () Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- () Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
- () The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- () The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

- (X) **Additional Comments:** Please correct information on page 21, first paragraph, of the document. Reference to Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM), instead of U.S. Corps of Engineers FIRM.

- () Other: _____

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

Signed: _____

ERIC T. HIRANO, CHIEF ENGINEER

Date: _____

12/14/07

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

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

Dear Mr. Atta:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated January 11, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

Commission on Water Resource Management (CWRM). The Applicant is in agreement with the promotion of efficient use of Hawai'i's water resources through conservation measures and appropriate resource management. A detailed discussion of the project's impact on water resources and proposed mitigation measures is found in Chapter 3.5–Hydrology and Water Resources.

We acknowledge the permits required by CWRM which have been listed in Chapter 6.9 – Approvals and Permits.

Engineering Division. Thank you for confirming that the Project site is located in Flood Zone X. Also, all references to Flood Insurance Rate Maps have been corrected to show that they are the product of the Federal Emergency Management Agency.

Thank you for reviewing the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

345 KĒKŪANAO'A STREET, SUITE 20 • HILO, HAWAII 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

January 8, 2008

Ms. Constance Kiriu
Makani Resources
195 Makani Circle
Hilo, HI 96720

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

APPLICANT – BRIDGE AINALEA, LLC

PROJECT: VILLAGE OF AINALEA

TAX MAP KEY 6-8-001:025, 036, 037, 038, 039, AND 040

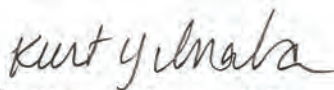
We have reviewed the subject Environmental Impact Statement Preparation Notice and have the following comments.

Please be informed that the applicant, Bridge Ainalea, LLC, has executed a Water Agreement with the Water Board outlining the necessary offsite water system improvements at the Ouli Well Field with connection to the Department's existing Lalamilo Water System to provide water for the proposed development.

Prior to granting water service for the development, all necessary water system improvements must be completed and dedicated to the Water Board.

Should there be any questions, please contact Mr. Finn McCall of our Water Resources and Planning Branch at 961-8070, extension 255.

Sincerely yours,


for Milton D. Pavao, P.E.
Manager

FM:dfg

copy – Bridge Ainalea, LLC
Planning Department

... Water brings progress...

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Milton D. Pavao, P.E.
Manager
County Department of Water Supply
345 Kekūanao‘a Street, Suite 20
Hilo, HI 96720

Dear Mr. Pavao:

SUBJECT: EISPN for Villages of ‘Āina Le‘a, Waikoloa, South Kohala, Island of Hawai‘i

Thank you for your letter dated January 8, 2008, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ‘Āina Le‘a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ‘Āina Le‘a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Water Agreement executed between the Water Board and the former applicant, Bridge Aina Le‘a, is included as Appendix C of the Draft EIS.

The Applicant understands that all necessary water system improvements must be completed and dedicated to the Water Board before it is granted water service.

Thank you for reviewing the EISPN and for your comments. Your letter will be included in the EIS.

Sincerely,



James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW ‘Āina Le‘a Development

Harry Kim
Mayor



Darryl J. Oliveira
Fire Chief

Glen P.I. Honda
Deputy Fire Chief

County of Hawai'i
HAWAII FIRE DEPARTMENT
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 981-8394 • Fax (808) 981-2037

December 12, 2007

Ms. Constance Kiriu
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT
PROJECT: VILLAGE OF AINA LEA
SOUTH KOHALA DISTRICT
TAX MAP KEY: (3) 6-8-001:25, 36, 37, 38, 39, 40

In regards to the above-mentioned environmental impact statement, we offer the following response:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

"Fire Apparatus Access Roads

"Sec. 10.207. (a) General. Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) Where Required. Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"EXCEPTIONS: 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).



"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"**EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

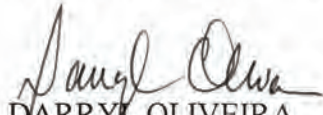
"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with NFPA 1142.

Based on historical area data and evidence that illustrates the potential threat and impact by wildland fire, recommendations would be to include wildfire as a potential hazard and to consider establishing fuel management strategies or measures to minimize or reduce threat or impact. This may include green belts or "Firewise" flora, fire breaks, etc.



DARRYL OLIVEIRA
Fire Chief

DO:lpc

CC: County of Hawaii Planning Department, Christopher Yuen
Bridge Aina Lea, LLC, John Baldwin

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Darryl J. Oliveira, Fire Chief
Fire Department
25 Aupuni Street, Suite 103
Hilo, HI 96720

Dear Chief Oliveira:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter dated December 12, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

The Project will be developed in accordance with UFC Section 10.207 relating to Fire Apparatus Access Roads. The Project's water supply will comply with NFPA 1142.

The Draft EIS identifies wildland fires as a potential hazard in Chapter 3.4, and discusses the existing conditions, potential impacts and proposed mitigation measures.

Thank you for reviewing the EISPN. A copy of your letter and this response will be included in the EIS.

Sincerely,



James M. Leonard

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington/DW 'Āina Le'a Development



Print - Close Window

From: "Jennifer Grossart" <Jegrossart@hawaii.rr.com>**To:** makaniresources@yahoo.com**Subject:** aina lea proposal**Date:** Wed, 19 Dec 2007 08:59:28 -1000

The Aina Lea proposal in South Kohala needs to go before the South Kohala Development Steering Committee before any more time or money is wasting on it. Even before the huge increase of plans for this development (as announced) the CDP was not happy with the scope of this development. Now what is being planned is out of the question. Contact mail@townscapeinc.com to find out what the community is willing to put up with in new development. They have been hired by the county to help plan the future of this area. Your plans don't fit. Jennifer Grossart, Waikoloa HI

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Jennifer Grossart
Jegrossart@hawaii.rr.com

Dear Ms. Grossart:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your email of December 19, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

You stated that the "Aina Lea proposal in South Kohala needs to go before the South Kohala Development Steering Committee before any time or money is wasted on it." You further recommend we contact mail@townscapeinc.com to "find out what the community is willing to put up with in new development."

The EISPN was transmitted to the South Kohala Development Steering Committee, which did not submit comments on the EISPN. Since the 2007 distribution of the EISPN, the South Kohala Community Development Plan (CDP) was officially adopted as Ordinance No. 08-159 effective December 1, 2008.

The community concerns as reflected in the goals and strategies of the South Kohala CDP were considered in the planning for the Village of 'Āina Le'a. The Draft EIS includes a discussion of the relationship and consistency of the proposed project with the South Kohala CDP in Section 6.6.

Regarding the scope of the development, the project received its land use approvals and permits in the latter part of the 1980s and early 1990s. The Applicant will be requesting a change of zoning from the existing Multiple-Family Residential, Village Commercial, Residential-Agricultural, and Agricultural zone districts to the Project District Zone.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Bob Wessels and Steve Dunnington, DW 'Āina Le'a Development LLC



Print - Close Window

Date: Fri, 7 Dec 2007 22:40:51 -1000 (HST)
Subject: Resort development -Waikoloa
From: "DIANE KANEALII" <kanealii@ilhawaii.net>
To: makaniresources@yahoo.com

Dear Constance Kiriū,

We are writing to comment on the proposed development of the Waikoloa by Bridge Aina Lea LLC. We are lifelong residents of the Big Island and live

in the Kawaihae area. Our concerns about the development are based on the

long term effects of over development related to water, waste and infrastructure to support 4,132 residences in one area not to mention all

the other growth that is planned for this area.

1. Water-Everyone keeps telling us there is plenty of water for the next

100 years. One hundred years is only about 1 and 1/4 generation, then what? Being an island, we can't simply divert water from some other place

or haul it in. If our water meter is correct, we use about 20,000 gallons

of water a month. There are 2 of us in the house, do about 2 loads of laundry per week and irrigate 12 coconut trees, a 10x10 garden and a small

yard about 25 sq feet and a few more plants. We have drip irrigation for

15 minutes 2 times per day. How much water will over 4,000 residences use

not to take in to consideration 5 golf courses, swimming pools and other

resort type of activities. Are there plans for the developer to use reclaimed water?

2. Sewage Waste-Do the developers plans include a sewage processing plant

and use the filtered water for irrigation? Is the developer going to drill

another well or is the county going to put in a water line?

Who will pay for the cost to provide water to this development?

3. Infrastructure-Public facilities in this area are very limited. Does the developer have plans to build schools, community centers, playgrounds,

healthcare facilities, fire departments and roads that will be available for public use? The population growth, even if they are just visiting for

short periods of time affect all of us who live here. They all utilize the

beaches, parks, roads, postal services as well as emergency and medical facilities, which are in great demand and very limited here on the island.

4. Solid waste-How does the county plan to deal with the solid waste problem. We have limited access to dump sites and recycling programs.

What

are they going to do with all the trash? Is the developer required to contribute to a fund to assist the county to deal with these issues?

5. Compliance to county codes for affordable housing requirements-we feel that if this project is approved by the county, they should be held to the requirements of 820 affordable homes or the 20 % standard. Why would the county even consider allowing for anything less? If the rules don't have to be followed but negotiated between the county and developers than whay even have rules and or standards to follow? Our elected officials are put in office to protect our interests and act in the best interest of our residents, not to line the pockets of the developers who are here today to make their money, leave their mark on our land and move on to make more money.

6. Roads-Getting in and out of Kailua Kona is already a problem. How will the County deal with the traffic congestion and will the developer be required to contribute the already planned by pass highway and or other roads to prevent the traffic problems as seen on 'Oahu, Maui and Kauai. Each automobile on the road also contributes to carbon monoxide emmissions, how can we continuously ignore the problems of overdevelopment by allowing these huge projects that have short term gains for our residents?

We would like to see the county support self sufficiency and promotion of our own products vs becoming more and more dependant upon tourism. We understand that we can not stop growth and what is called progress, but we should have a say on how we grow and hopefully our leaders have learned from the mistakes that have occured on 'Oahu, where they have sewage spills, horrible traffic problems, trash with no where to go that continuously contaminate our waters, land, oceans and air. No one wants to see that happen here and feel it can be prevented with proper planning and limiting growth to preserve this land for the future generations.

We believe that all development must look at the impact it will have on our resources and community and put back into the community more than it takes.

Thank you for taking the time to read this letter and please take these thoughts into consideration when reviewing the EIS.

Sincerely,

Roger and Diane Kanealii

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Roger and Diane Kanealii
kanealii@ilhawaii.net

Dear Roger and Diane Kanealii:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your email of December 7, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

Water. In terms of potential water use, at build-out the Village of 'Āina Le'a is projected to have an average daily use of approximately 1.32 million gallons a day (MGD) of potable water and approximately 0.527 MGD of non-potable water for irrigation of the roads, common areas and golf course. The irrigation requirements of the project will be met through the use of reclaimed water from the Project's and nearby wastewater treatment plants (WWTP) and from brackish wells developed on site. We should point out that the Village of 'Āina Le'a Project is confined to primarily the Urban portion of the property on approximately 1,128 acres and includes the development of only one golf course, not five golf courses which were part of an earlier proposal by the prior owner that involved a considerably larger property area. All the water related infrastructure (wells, tanks, transmission lines, etc.) for the Project is to be constructed by the developer. The potable water system will eventually be integrated as part of the Department of Water Supply's South Kohala System and a portion of the water developed will be used by the County to help meet the regional demands.

Wastewater. The developer will be constructing its own wastewater treatment plant and will be using the reclaimed water to supplement the irrigation water system.

Public Facilities. In reference to the need to address the project's impact on community facilities, especially in the context of the existing community needs, the Applicant has set aside 32 acres for a potential school site and an additional 16 acres for an active park and community center site. Additionally, the Applicant will contribute its "fair-share" amount for police and fire facilities, solid waste services, parks, and roads as required by zoning Ordinance No. 96-153 or future zoning approvals.

Solid Waste. The developer recognizes the additional demands of this project will have on the solid waste facilities of the area and has committed to encouraging waste recycling throughout the project through participation with County-initiated programs and ensuring there are adequate areas planned to accommodate community-wide recycling programs. As noted above, there will be a “fair-share” contribution requirement of the project to address the Project’s impact to regional solid waste facilities. A discussion of the Project’s impact to the County’s solid waste facilities and proposed mitigation measures is found in Section 4.11.3 of the Draft EIS.

Affordable Housing. The developer will comply with the County’s affordable housing requirements. A minimum of 20 percent of the units developed as part of the Project will meet the affordable housing guidelines. In fact, the initial development will include the construction of up to 400 affordable townhome units. Information about the Project’s onsite affordable housing units is found in Section 2.3 of the DEIS.

Roadways and Traffic Circulation. In addressing road and traffic related improvement planned as part of the Project, a *Traffic Impact Analysis Report* (TIAR) was prepared as part of the Project EIS. The TIAR looked at the project’s cumulative impact to area roadways in the context of the existing and projected development in the region and recommended potential mitigation measures to be implemented in order to address the Project’s traffic-related impacts. All roadway improvements will be designed to meet the State Department of Transportation and County Department of Public Works requirements. A full discussion on the project’s potential traffic related impacts and recommended mitigation is found in Section 4.6 of the DEIS. A copy of the full TIAR is included as Appendix M.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Bob Wessels and Steve Dunnington, DW ‘Āina Le‘a Development

HutchinsonBlackandCook

Attorneys at Law

Baine P. Kerr
kerr@hbcboulder.com

December 15, 2009

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Constance Kiriū
Makani Resources
195 Makani Circle
Hilo, HI 96720

Re: EIS for Village of Aina Lea

Dear Ms. Kiriū:

Confirming my recent e-mail, please include us on your notice and comment list and please send the draft EA/EIS as soon as available to 411 Spruce St., Boulder, CO 80302. If you need more information, please let me know.

Very truly yours,

Baine P. Kerr /tc/
Baine P. Kerr

BPK/tmc

cc: Cindy Carlisle



921 Walnut St., Suite 200, Boulder, CO 80302 | Tel (303) 442-6514 | Fax (303) 442-6593 | Toll Free (800) 303-6514
www.hbcboulder.com

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Baine P. Kerr
411 Spruce Street
Boulder, CO 80302

Dear Mr. Kerr:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your letter of December 15, 2009, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

This is to confirm that your name has been added to the notice and comment list for the Draft EIS for the Village of 'Āina Le'a. We look forward to any comments that you might have on the Draft EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", with a long horizontal flourish extending to the right.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development



Print - Close Window

To: makaniresources@yahoo.com
From: "Catherine Rosasco Mitchell" <Info@FeldenkraisInterest.com>
Subject: Aina Lani subdivision
Date: Mon, 31 Dec 2007 14:47:55 -1000

Aloha Constance,

Seems we, the human race, continues to grow needing more and more land. Like technology it isn't going to go away... so let us look at QUALITY OF LIFE
What would seem most profitable for all parties included... community, developers, affordable housing?

In ten years:

FUEL PRICES WILL RISE
MORE PEOPLE MEANS MORE POLLUTION WATER, LAND, AIR
MEDICAL CARE WILL RISE
RETIRED PEOPLE WILL RISE
DEFICIT WILL RISE OR NEED TO BE HANDLED

Costs need to stay at a minimum, for the environment as well as the people.

May we think SUSTAINABILITY...

if there must be golf courses can they be ORGANICALLY cared for?

Can energy come from wind or sun or other (see China's new sustainable metropolitan city)

If there is so many dwelling needed can they be built as community (with privacy) and save on land area.

Please consider what happen on the other islands... we come here to be rural. How can we grow and maintain that feeling?

One way is to THINK HAWAIIAN... with Hooponopono ways, with concepts that address 7 generations in the future, with respect to the Aina, the Kai, the Air.

Deep sigh.

With ALOHAAAAaaaa

Catherine & The Team

Wellness Through Movement
for Children

FeldenkraisInterest.com
Info@FeldenkraisInterest.com
www.FeldenkraisInterest.com

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Catherine Rosasco Mitchell
Info@feldenkraisInterest.com

Dear Ms. Mitchell:

SUBJECT: Comment to the EISPN, Villages of ‘Āina Le‘a, Waikoloa, South Kohala, Island of Hawai‘i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

This responds to your email dated December 31, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the ‘Āina Le‘a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW ‘Āina Le‘a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

Your general comments reflect many of the same concerns expressed by others in the community. We note that a Socio-economic Impact Study was prepared by SMS Research, Inc. as part of the Project EIS. The SMS study addresses the potential social and economic impacts of the project and recommends measures to mitigate those impacts. As part of the SMS Study, several interviews were conducted with members of the community and community leaders to gain a full appreciation of the community concerns. You mention the need to plan with sustainability in mind, use of alternative energy sources, and planning communities to save on land. These are all items that are integral to the planning and design of the Village of ‘Āina Le‘a Project. The sustainable planning and building design guidelines for the project are described in Section 2.4.1 of the Draft EIS, and include the following:

- Conduct site planning to preserve existing resources and natural features
- Promote a “walkable community” through efficient land-use centered on a mixed-use Village Center.
- Promote the use of LEED principles in the planning, design, construction, and operation of Project buildings
- Provide bicycle and pedestrian paths along certain roads within the Project
- Employ natural cooling techniques in building design, orientation, and the use of landscaping

- Encourage the use of renewable energy devices such as solar water heaters and photovoltaics
- Incorporate water-efficient landscaping and landscape methods to minimize evaporation, reduce weed growth and retard erosion
- Irrigate roadside landscaping and the golf course with non-potable water or reclaimed water when feasible
- Use pervious paving instead of concrete or asphalt paving where permitted
- Use natural or grass swales to control water runoff

We thank you for reviewing the EISPN and for your comments. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Robert Wessels and Steve Dunnington, DW 'Āina Le'a Development

Michael Reimer, Ph.D.
75-6081 Ali'i Drive RR-103
Kailua-Kona, Hawaii 96740
GeoMike5@att.net
December 19, 2007

Constance R. Kiriū
Makani Resources
195 Makani Circle
Hilo, Hawaii 96720
makaniresources@yahoo.com
808-959-1803

Dear Mrs. Kiriū,

I am pleased to have this opportunity to comment on the EIS Preparation Notice for the Bridge 'Āina Le'a Project. My comments are strictly to help improve the preparation of the draft EIS. Where I did provide an example, it was carefully screened to not have any detrimental impact on the provision of affordable housing.

I believe you have compiled a document that can fairly be said is a good initial beginning toward an EIS. I recognize the difficulty as I am sure you do, that you have had to address issues and studies related to this project that were performed or prepared more than a decade ago. There have been many legislation changes in the intervening years that may make many of the assumptions and presumptions moot. Certainly, there is a Community Development Plan in preparation and it would be proper for the EIS to address issues as they are being prepared for inclusion in that document. A conservative approach would be to recognize and address the sense of the residents and administration for developments of this magnitude.

The Villages of 'Āina Le'a is a massive project. When completed, it will rival or may even exceed in size Waikoloa Village. It is therefore not so much a vacation resort as it is a village. It is important, therefore that this simple realization be addressed in the draft EIS.

There are five issues I included in the discussion that do not readily have a topical area in the EISPN. Those issues are: Waikoloa Emergency Access Road; the proximity of the Villages of 'Āina Le'a to Waikoloa Village; unexploded ordinance; hurricanes; and; parking. I placed these discussions in sections 2.02, 2.03, 2.03, 3.05, and 3.14, respectively.

I hope my comments are useful to you as you prepare the draft EIS.

Sincerely yours,
Michael Reimer
Michael Reimer, Ph.D.
Kailua-Kona
GeoMike5@att.net

COMMENTS ON THE VILLAGES 'ĀINA LE'A – Environmental Impact Statement Preparation Notice (EISPN)

Prepared by Michael Reimer

December 19, 2007

Kailua Kona, Hawaii

GeoMike5@att.net

The concept of the Villages of 'Aina Le'a (hereafter, the Project) properly requires an Environmental Impact Statement (EIS) as it is a large project that will involve substantial impact to the County of Hawaii, including alterations to state and county lands.

The Project usage is currently addressed as a resort but its sheer magnitude, over 3,200 residences and lots, makes it rival some of the largest communities on the west side of the Big Island. Because of this, the EIS must address the impact of such a community on the land that it occupies and the surrounding environs.

The purpose of my remarks is to provide commentary and suggestions on some issues in the EISPN. I hope they will be useful in the preparation of the draft EIS.

General Description of Project (2.):

Overall Master Plan and Project Description (2.02)

Waikoloa Village Emergency access road:

When this road was constructed, it was noted that it was for the singular purpose of allowing Waikoloa Village residents to use it makai for emergency evacuation. For example, it was cited that this road would not be used by contractors as Waikoloa Village expanded. This EISPN suggests (2.02, ¶7) that it will be used for access to the Project, a contrasting usage to the original intent and the access road could be clogged with usage by Project residents! The stated restricted usage of the emergency access road would at this time seem to preclude that site being used for access to the Project and must be addressed in the draft EIS. Any agreement to the contrary should be presented.

While this seems to be an incompatible use at this time, a resolution is easily achievable and will be also addressed in later issues in this discussion. As the Project property is within about 600 meters of Waikoloa Village, a connector road could be built just south of the access road, eventually intersecting with the future north-south road (Figure 5). This concept is further discussed in 2.03 and should be included in the draft EIS.

Adjacent Uses: (2.03)

I believe the discussion here gives a misleading impression on proximity. It states that Mauna Lani is one mile (1.6 kilometers) from the highway but fails to note that Waikoloa Village is only approximately 600 meters away. I believe an existing major development within that distance must be considered adjacent.

This proximity to Waikoloa Village is significant in that many resources can be shared. This is mentioned in the case of schools but must be expanded considerably in the draft EIS. County services can be shared such as police, fire, health, transportation links, libraries, recreational facilities, and so forth. Such cooperation can prevent the duplication of effort and services and have a great minimizing effect on the negative environmental impacts introduced by development. In addition, sharing of common services has the potential of saving much investment capital for the Developer and perhaps the savings can be applied to the affordable housing section. This proximity to Waikoloa and efforts to share facilities must be amplified in the draft EIS.

Unexploded Ordinance (2.03):

This area if not used directly was proximal to a firing range used by the U.S. Military during World War II. Acknowledgment of the military presence is noted several times in the EISPN in Section 3, particularly in 3.09. Developments in the area, including those at Waikoloa approximately 600 meters mauka have periodically uncovered unexploded ordinance. This was an issue for the placement of the Emergency access road recently completed and was addressed in the EIS for that emergency access road.

Therefore, the issue of unexploded ordinance must be addressed in the draft EIS.

Summary Description of affected environment, potential impacts and mitigation (3.):

Climate (3.01):

Mention of the general wind speed and direction would be important as it will relate to the issue of dust. A source of this information could be the nearby commercial helicopter business or perhaps even at one of the commercial establishments of the Kawaihae Harbor. It is possible that either may have a recording station and perhaps retain records.

Topography, Potential Impacts and Mitigation (3.02):

The topography has been described as gently to moderate sloping. It is stated that the golf courses will use the existing gentle slopes. Does that mean that only the moderate sloping areas will be modified? This is important as it will relate to flood control particularly around the mapped flood zones or channels. This should be addressed in the draft EIS.

Soils and Agriculture Potential (3.03):

The general soil depth should be presented. Some estimate of the amount of fill to be brought in and its source should be given for the entire project.

If this project is going to be developed over 10 years, the characterization of construction activities as being short-term is misleading. As this relates to dust control, more than offshore

water quality will be impacted. If the wind direction is dominantly on-shore, Waikoloa Village will be impacted. Common procedures for dust control should be contemplated and discussed.

Natural Hazards (3.05):

In an interesting twist to tsunami hazards, although there is a low probability of direct tsunami impact, there is a rather large indirect impact. That will be the project village could find itself a source of short-term and perhaps long-term relief for individuals fleeing the shore line resorts and dwellings. This possibility should be addressed. It may well be that one or more of the golf courses could become a temporary "tent city" for refugee relief. This is where the emergency access road(s) should be marked and be made available. In other words, this should not be a locked gate community! See comments on 2.02 above.

Further, the issue of response and mitigation to a hurricane event should be addressed.

Botanical Resources (3.06):

It may be prudent to add the U.S. Geological Survey to the list of agencies to be contacted regarding the preservation of the red 'ilima. That agency has a biological section that deals with a variety of issues from endangered or rare species to flu epidemics.

Archaeological and Historical Resources (3.08):

The June 1987 survey by the Archaeological Consultants of Hawaii, Inc. should be included in the appendix of the Draft EIS. Were any additional sites found and identified in the 3 surveys conducted after the 1992 survey performed by Ogden Environmental and Energy Services Company and the US Army Corps of Engineers report of January 2002?

Noise (3.10):

Noise is of course a distance related perception. A reference to the estimation of the noise increase of 1 dBA, as well as the 65 Ldn FHA/HUD noise standard should be noted in the Draft EIS. It should be noted that 24 CFR Part 51 Subpart B, Noise abatement and control sets 55 Ldn as a goal for exterior noise and 45 Ldn as a goal for the interior (see 24 CFR 51.101(a)(8 and 9)). Of course a study can be performed and the results included in the draft EIS.

Air Quality (3.11):

The draft EIS should mention air quality related to the potential WWTP on the SW property.

Socio-Economic Environment (3.12):

The draft EIS should discuss the reasons, disadvantages, or advantages for placing the affordable housing in a single area rather than integrating it throughout the complex.

Transportation and Traffic (3.14):

Traffic loads have greatly increased since 1999. Reliance on a 1999 report would therefore be inadequate.

Any agreements between the developer and the State or County for use of the emergency access road should be revealed and identified in the draft EIS.

Although likely contained in the 2007 TIAR prepared by SSFM International Inc., a discussion of public transportation should be included in the draft EIS.

The impact of commercial establishments on traffic should be addressed, especially if the developer seeks to establish a large complex perhaps with superstore anchors.

I include here the issue of parking that is absent in the EISPN. Adequate parking must be addressed in the draft EIS. Recent testimony before the County Council on a bill to increase parking designations, by a representative of a professional group dealing with development design, suggested that parking lots contribute to global warming and water runoff and thus should be limited. Although a highly arguable issue, the draft EIS should include a discussion of how a parking area contributes more to global warming than a dark lava field that it replaces. Similarly, there are options of permeable paving material for parking lots that are now available and that should be discussed. As mentioned in the comment on section 3.15.03, unless there are enforceable restrictions on occupancy of high density housing, the parking demand could easily exceed two cars per unit. At a minimum, the draft EIS should discuss how the spill-over parking will be addressed.

The responsibility for the maintenance of the roads in the complex should be addressed in the draft EIS.

Water System (3.15.01):

The draft EIS runs a risk here of relying on reports that were prepared 15 years ago. Many things have changed including water conservation measures, particularly for golf courses.

The use of non-potable water for irrigation is mentioned as being a combination of WWTP and brackish water. The source of the brackish water should be mentioned as well as the source of waste water if the Mauna Lani WWTP is used.

A groundwater basin for this area is mentioned covering a large area from Kawaihae to 'Anaeho'omalu Bay. What is the fraction of the 3,000 acre development to the entire basin area and how does this relate to the development's percentage of sustainable use yield? These issues should be addressed in the draft EIS.

Utilities 3.15.02:

The draft EIS should include specific details on how the project development will actively address residential needs. For example, there is a County energy plan being developed and it will clearly include suggestion to save power on hot water heating. The draft EIS should include measures that the developer will undertake when building residences to address energy conservation needs. For example, hot water heat has been identified in the Kohala Center-Yale University cooperative study as consuming 40 percent of residential energy.

Recreation 3.15.03:

This topic brings forth one area that I take exception to the project description in the EISPN. It is the statement concerning the resident profile. Its claims appear to be based on the statement that the development will attract second home buyers, retirees and professionals. While this may be true, I believe there is a difference in an owner profile and a resident profile. Unless the declaration and covenants of this development specifically indicate with enforceable provisions that the units are available only to Island residents and not investors, then my division of owner and resident is germane and applies to schools, road and traffic, and public services and so forth. Even if rental of the units is allowed, then the declaration and covenants must severely limit with enforceable provisions the number of occupants per unit. This is important to the issue of providing adequate parking for the development, both for residential and commercial areas.

Investors are looking for renters. Frankly, a study should be done to help quantify the numbers likely to be projected and then reported in the draft EIS. It is known from empirical evidence that developments in and near the Kailua Village have a high investor percentage with as many as 50 percent of the units being rentals.

If the reference to harbor facilities here is Kawaihae Harbor, there are currently major issues with any expanded use of that facility including private recreational boating activities.

It is noted in the EISPN that parks and trails are expected to be turned over to the County for maintenance. If this is a covenant community with association dues or fees, why would the parks not be maintained by the association? If a County facility, it must be open to all County residents and visitors, as well. If the County refuses to accept this responsibility, is there any impact on the General Plan to not provide these recreational facilities? This should be addressed in the draft EIS.

Wastewater (3.15.04):

The statement regarding impact being nonexistent on public sewerage systems because there are no facilities is somewhat flippant. Waste water treatment must be addressed in any event and it appears that the draft EIS will do so.

Fire and Police Services (3.15.06):

Any existing nearby fire and police services will be inadequate when the community of over 3,000 residences is built. As the development is of major size, the concept as mentioned to provide and even construct structures for additional fire and police protection is critical and necessary. Additional special needs, if required, should be addressed. For example, if the developer plans a multi-story structure, a large enclosed mall, or even a superstore, it may be prudent for developer to provide through donation a special snorkel-ladder unit to assist adequate fire protection.

The response time of 30 minutes for a back up fire protection is inadequate. Technically, it may be possible for the fire unit across from the development to expand to two stations as it will be required to provide current protection as well as protection for this large Project. Establishing a volunteer fire department could be considered. These issues should be discussed in the draft EIS.

Health Care (3.15.07):

Similar to police and fire protection, reliance on existing area health care facilities is inadequate. They will have to expand to address the increased impact of the large development. Hospitals in the area are mentioned but it must be recognized that there is a great difference in what treatment can be expected from those facilities. For example, the North Kohala Hospital cannot provide the same level of emergency room service that the Kona Community Hospital can but access to the latter, if by highway, could be over 1-hour away.

The EISPN says it "...will present mitigation measures, if any." This is seemingly a statement of frustration. It will be interesting to see how the draft EIS addresses the health care issue. A community of mostly retirees will require specialized health care. Yet the presence of the anticipated younger population within the affordable housing establishes a health care mix requirement. There are many things a developer can do to provide increased health care services even within the current "crisis" situation of the County, to prevent an additional overload that a development of this size will create.

A recent conference convened by the Mayor presented many issues of the current status of health care on the Big Island. The draft EIS should thoroughly and in expanded detail discuss the impact and mitigation of this issue in view of the impact from the Project.

Schools (3.15.08):

Similar to my concern expressed in 3.15.03, I disagree with the statement that the impact on schools because of the anticipated demographics of the project will be small. Even if I could support the EISPN suggestion however, I would argue that just one additional classroom of students would have a major impact on the existing school system. Also, busing children to Kealahou High School will have a major impact on traffic.

Of course, the declaration and covenants could declare this an adult community. However, even if the affordable housing section was exempted from the exclusion of children, it is possible that there could be an additional 500 or more students seeking a school system.

I am pleased that the EISPN recognizes this potential impact, mentions possible cooperation with Waikoloa, and suggests setting land aside for educational purposes. It also states the draft EIS will contain results of studies from discussions with DOE.

Anticipated Approval and Permits Needed (4.):

Community Development Plans (4.06):

I am pleased that the draft EIS will identify plans either completed or in progress. I would hope that the draft EIS will take into consideration the directions such plans are suggesting, even though they may not be completed before the draft EIS.

Significance Criteria and Findings (6.):

In view of the foregoing comments, I believe some of the 13 findings must be modified.

-END-

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Michael Reimer, Ph.D.
75-6081 Ali'i Drive, RR-103
Kailua-Kona, HI 96740
GeoMike5@att.net

Dear Dr. Reimer:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your email of December 19, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

Waikoloa Emergency Access Road. A northern access road, generally in the location of the current Waikoloa Emergency Access Road alignment, is planned as part of the project. The location of its intersection with Queen Ka'ahumanu Highway and the alignment for this mauka-makai road has yet to be determined and is subject to further discussions with the County and representatives of Waikoloa Village. There are no plans to use the existing unimproved Emergency Access Road alignment to provide construction access to the Project. Currently all construction-related access is through the southern access road that intersects with Queen Ka'ahumanu Highway across from the Mauna Lani Resort access. The projected traffic movements for this road, at build-out, and recommended intersection improvements, are contained in an updated (September 2009) Traffic Impact Assessment Report prepared for the Project EIS by SSFM International. A copy of the TIAR is found in Appendix M and a complete discussion of the Project's traffic-related impacts and recommended mitigation measures are found in Section 4.6 of the Draft EIS.

Adjacent Uses. The location of the project and its relationship to Waikoloa Village and other adjacent uses are discussed in Section 4.2 of the DEIS. We should point out that the Applicant's property and proposed development area is more than a mile from Waikoloa Village at its closest point. Your point, however, is well taken and there are opportunities for shared uses of facilities. As an example, a water utility connection with Waikoloa Village is planned to serve the initial phase of affordable town-home units. The Applicant also plans to upgrade the existing 'Auwaiakeakua WWTP serving Waikoloa Village in order to use the treated effluent as a source of brackish water for irrigation within the Project. It is also anticipated that both the commercial and public facilities that will be developed as part of and in conjunction with the Village of 'Āina Le'a will be of benefit to all residents of the area.

Unexploded Ordnance. The use of the area by the U.S. military during World War II and the potential presence of Unexploded Ordnance (UXO) in the area are discussed in Section 4.5 of the DEIS. Survey of the area by the U.S. Army Corps of Engineers is currently underway and will cover the full development area ahead of development.

Climate. You mention that the general speed and direction of wind in the area is important as it relates to the issue of dust. Climatic data, including wind conditions, are addressed in Section 3.1 of the DEIS. Several measures are planned to address the potential for dust generation during construction, a detailed discussion of which is found in Section 4.8 of the Draft EIS.

Topography, Potential Impacts and Mitigation. The statement within the EISPN that the golf course will use the existing gentle slope was intended to indicate that the golf course will be designed in relation to the existing topography so as to impart a natural feel to the golf experience and minimize the amount of grading required. No development within the existing floodways is planned, other than the potential infrastructure and project roadway crossings, where needed, that would be implemented in accordance with all State and Federal permitting requirements. The requirements for floodway mapping and proposed drainage related improvements for the Project are contained in a *Conceptual Master Plan Drainage Report* that was prepared for the Project, a copy of which is found in Appendix E of the DEIS. A full discussion of the potential impacts regional drainage conditions and proposed mitigation measures is found in Section 4.11.4.

Soils and Agriculture Potential. A complete description of the soil characteristics is found in Section 3.3 of the DEIS. The amount of fill material to be brought to the project is not known at this time but it is anticipated to be minimal as most fill material is expected to be generated onsite through the development of a comprehensive grading plan. In your comments you state that the characterization of construction activities being short-term may be misleading, in that the project will be developed over a ten-year period. Your point is well taken, however, the term "short-term" is used here relative to the full life of the community and is intended only to make a distinction between those impacts that occur during the construction period and those that occur following development. The measures for dust control are addressed and are discussed in Section 4.8 of the Draft EIS.

Natural Hazards. With regards to the potential for the property to be used as an evacuation site in the event of a tsunami, we note that, as part of this development, the Applicant has set aside 32 acres for use as a potential school site. DOE-developed school facilities could be designed to also serve as an emergency evacuation center. The development of the project-related roads, including the Waikoloa Emergency Access Road, will enhance the emergency evacuation capability of the area. It is expected that these roads will all be well marked and accessible. The Village of 'Āina Le'a community will be accessible and is not planned to be a gated community.

Botanical Resources. We appreciate your suggestion to use the U.S. Geological Survey as a potential resource agency regarding the red 'ilima. We note that the Botanical Survey and Botanical Preservation Plan were reviewed and commented on by the U.S. Department of Interior, Fish and Wildlife Service (FWS) and the State Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR-DFW). We will include the U.S. Geological Survey, along with the U.S. Department of Interior, FWS, and the State DLNR-DFW in our distribution list for the notice of availability of the EIS.

Archaeological and Historical Resources. As pointed out in the EISPN, there have been several archaeological surveys and reports prepared regarding the subject property. While it would not be practical to include all of these with the EIS, each subsequent archaeological survey report includes review and summary of all previous work on the affected property. The most recent Archaeological Inventory Report includes a summary of the findings of the prior archaeological work, including the 1987 Archaeological Consultants of Hawaii (ACH) Report. We also note that the 1987 ACH was an Archaeological Assessment to determine if sites of potential historical significance were present. Because the 1987 Assessment Survey identified one site of potential historical significance, a complete Archaeological Inventory Survey of the Project area was conducted, which was the subject of the 2002 Archaeological Consultants of the Pacific (ACP) Archaeological Inventory Survey Report. A copy of the 2002 ACP Report is found in Appendix I and a full discussion of the archaeological resources found on site and recommended protection/mitigation measures is found in Section 4.1 of the Draft EIS.

Noise. An estimation of increase in noise levels and reference to the FHA/HUD noise standard, as you suggested in your comments, are included in the Draft EIS. A Noise Quality Impact Study was conducted for the project. A copy of the Study is included as Appendix N and a complete discussion on the potential noise related impacts is found in Section 4.7 of the Draft EIS.

Air Quality. An Air Quality Impact Study was conducted for the Project. A copy of the Study is found in Appendix O and a discussion on the potential impacts to the ambient air quality from the Project development, including the WWTP, is found in Section 4.8 of the Draft EIS.

Socio-Economic Environment. The issue of potentially concentrating the affordable housing in one location rather than being spread throughout the development is discussed in the EIS. While a minimum of 20 percent of the units will be provided meeting the County Affordable Housing Guidelines, the majority will be built as part of the first increment of development, as required by the conditions of the State Land Use Commission, with specific timetable for

development, thereby limiting the Applicant's ability to construct the housing proportionally in conjunction with the phases of development.

Transportation and Traffic. The Traffic Impact Assessment Report,(TIAR), that is included with the Draft EIS, was updated by SSFM in September 2009. An agreement with the County for the development and use of the Waikoloa Emergency Access Road is identified in the Draft EIS as is a discussion on the availability of public transportation in the area. A copy of the TIAR Report and a full discussion of the Project's traffic related impacts and proposed mitigation measures are found in Appendix M and Section 4.6 of the Draft EIS, respectively. In your comments you point to the potential for parking areas to contribute to global warming. In this aspect the option of using porous paving materials and landscaping in parking areas, where practicable, will be encouraged throughout the project. The type and design of the commercial facilities that would be part of the commercial center are not known at this time so we are unable to comment on the parking requirements for these uses.

Water System. *The Water Resources Assessment (Assessment)* that was prepared as part of this EIS was updated by Tom Nance Water Resource Engineering in July 2009 and therefore does include current information. The *Assessment* examines the impact of the project on both the potable and non-potable (brackish) water resources in the affected areas. Nance's *Assessment* estimates that the projected use of brackish water from the development of on-site wells would potentially reach 0.53 MGD, which is equivalent to about 3.5 percent of the projected sustainable yield of the ground water resources in the area. A full discussion of the Project's potential impacts on the ground water resources is found in Section 3.5 of the Draft EIS. As noted above, the other source of brackish water for the Project irrigation system will be from reclaimed (R-1 quality) water from both on-site and Waikoloa Village wastewater treatment plants.

Utilities. In answer to your question, the Draft EIS addresses the energy needs of the project both related to the method by which electrical power will be delivered to the project and also the means by which a reduction of energy use can be achieved through the adoption of sustainability practices in the planning and design of community infrastructure and buildings. The sustainable planning and building design guidelines for the project are described in Section 2.4.1 of the Draft EIS, and include the following:

- Conduct site planning to preserve existing resources and natural features
- Promote a "walkable community" through efficient land-use centered on a mixed-use Village Center.
- Promote the use of LEED principles in the planning, design, construction, and operation of Project buildings
- Provide bicycle and pedestrian paths along certain roads within the Project
- Employ natural cooling techniques in building design, orientation, and the use of landscaping
- Encourage the use of renewable energy devices such as solar water heaters and photovoltaics
- Incorporate water-efficient landscaping and landscape methods to minimize evaporation, reduce weed growth and retard erosion

- Irrigate roadside landscaping and the golf course with non-potable water or reclaimed water when feasible
- Use pervious paving instead of concrete or asphalt paving where permitted
- Use natural or grass swales to control water runoff

Recreation. You make a valid point regarding the difference between the owner and resident profile as some units that are owned by second-home buyers, retirees, and professionals could be rented for periods of time. In fact, it is expected that a good portion of the Project residents will work in the area. As you point out in your letter, developers of both the residential and commercial areas will need to take this particular demographics of the project residents into consideration when planning the parking for these areas. Regarding your comment on the dedication of the parks and trails to the County, we should clarify that the Park areas planned as part of the Project will be maintained by the developer or its successor homeowner association, unless or until the County exercises its option of ownership. A discussion on the Project's impact on recreational facilities in the area and proposed mitigation measures is found in Section 4.12.1 of the DEIS.

Wastewater. The issue of wastewater treatment is addressed in Sections 2.3.9.3 and 4.11.2 of the DEIS. As noted previously, the development will be constructing its own wastewater treatment plant and will be upgrading one of the existing wastewater treatment plants serving Waikoloa Village so that the effluent from both plants can then be used to supplement the irrigation needs of the project.

Fire and Police Services. While the existing fire and police services serving the area may be sufficient to meet the current requirements, it is recognized that these services and facilities may need to be expanded to meet the needs of the Project. While the developer will be required to contribute to the provision of fire and police services through "fair-share" contributions that are imposed as conditions of zoning approval, the developer will need to work with the Police and Fire Departments on an on-going basis to insure that the growing needs in the area for emergency services and protective care are met. A discussion of the Project's impact on the area's fire and police services and proposed mitigation measures is found in Sections 4.12.2 and 4.12.3 of the DEIS.

Health Care. As part of the SMS Socio-Economic Impact Study, several interviews were conducted with area residents, community leaders and representatives and the issue of access to urgent and emergency care facilities in the area was often mentioned as an area of concern. You will note that one of the elements proposed for development in the initial phase of development is a commercial center. The Applicant is looking for a privately operated urgent-care medical service facility which could be located in the Project's Commercial Center, and has had discussions with providers of these services who have expressed an interest in locating to the area. Based on these early discussions, it is felt that these facilities can be tailored to meet the particular needs of the surrounding area. A discussion on the Project's potential impact on area health-care facilities and proposed mitigation measures is found in Section 4.12.4 and a copy of the SMS Study is found in Appendix P of the DEIS.

Schools. The Project's impact on the area schools was also evaluated as part of a SMS Study. The SMS Study estimates that at build-out, the resident population of the Village of 'Āina Le'a could potentially generate an additional 1,000 students to the educational system. The Project's potential impact on the regional schools and proposed mitigation measures are discussed in Section 4.12.5 of the Draft EIS.

Community Development Plans. The proposed development and its relationship to the policies and directions expressed in the South Kohala Community Development Plan is discussed in Section 6.6 of the DEIS.

Significance Criteria and Findings. It is not clear from your comment which of the findings you find disagreement with. These same aspects of the Project are also evaluated in the context of the DEIS with the benefit of the full range of professional studies that form a basis for analyzing the Project's potential environmental impacts and recommended mitigation measures.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "James M. Leonard", with a stylized, flowing script.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Bob Wessels and Steve Dunnington, DW 'Āina Le'a Development



Print - Close Window

From: "Betty Murray Springer" <irishmomtx@att.net>
To: makaniresources@yahoo.com
CC: phoffmann@co.hawaii.hi.us, kapilago@co.hawaii.hi.us, fholschuh@co.hawaii.hi.us
Subject: Ref: Villages of Aina Lea project
Date: Fri, 21 Dec 2007 13:11:32 -0600

In reference to Villages of 'Aina Lea per news article:
<http://www.westhawaiiitoday.com/articles/2007/12/07/local/local02.txt>

I am not against development, but I am against poorly thought out development that will negatively affect this island.

Until there is a viable plan in place in conjunction with the Villages of 'Aina Lea project to provide adequate roadways (including traffic on the Queen Ka'ahumanu highway), this project should not be approved. This means not just a plan on paper to be eventually ignored, but a plan with actual start & completion dates for improvements. And the plan needs to be funded and the dates need to be met.

Before this project should be considered for approval, there needs to be an acceptable plan agreed to by the developer that will address the increased affect on the public schools; the hospitals & health care services; libraries; parks; recreational facilities; police & fire services; water & electricity service; and on & on. We can NOT continue to put these increased demands on all these services like there is some never ending supply.

I think it should be a priority of the County Council every time a project comes before them that all the department heads for fire, police, water, public works, etc. should have to review the project's plans and submit an analysis (to the public) as to how that project will affect those services. We need to know how many additional fire/police personnel will be needed to service the increased demand. We need to know how much more water & electricity demand will result from the project. And we need to know the costs to meet those demands & how the developer is going to participate to offset those requirements. You simply cannot put 4,000+ houses down without expecting it to adversely affect all those services (along with schools, medical, etc). You cannot put 5 golf courses down without having a horrendous affect on the water supply on this island. You cannot clear this amount of land without expecting significant drainage problems. You cannot put this many new residents in an area without it affecting the needs of the schools, police, fire, EMS, etc.

We need to WAKE UP and realize we are killing our island by over development without adequate planning. And a plan "on paper" doesn't solve the problem... it needs to be put into ACTION. We need our County government to be accountable and, most importantly, we need the developers to be accountable.

This project just has so many negative connotations to it for this area at this time, I really hope the Council will take a LONG hard thought provoking look at this. In addition to all the obvious impacts stated above, I am very concerned about the significant decrease in the number of affordable housing units now proposed for this project.

Aside from EIS consideration, maybe what our County government should be looking at is tax breaks & other incentives designed to draw BUSINESSES to this island that will employ people at decent wages (not minimum housekeeping & service industry wages). We need major businesses that will employ our people with college degrees so that they don't have to leave the islands & go to the mainland in order to find a job utilizing their skills. Until we draw businesses that can provide higher level jobs, we are only fooling ourselves into thinking "everything is fine". We need to get serious about encouraging higher level education for our young people, and there needs to be jobs out there for them to work toward & look forward to.

Thanks for your time and consideration.

Betty Nanimae'ole Springer
69-200 Pohakulana Place, #O-22
Waikoloa, Hawai'i 96738

J M LEONARD PLANNING, LLC

1100 Ainalako Road • Hilo, HI 96721 • Tel (808) 896-3459 • E-mail: jmleonard@mac.com

May 6, 2010

Betty Nanimae'ole Murray Springer
69-200 Pohakulana Place, #O-22
Waikoloa, Hawai'i 96738
irishmomtx@att.net

Dear Ms. Springer:

SUBJECT: Comment to the EISPN, Villages of 'Āina Le'a, Waikoloa, South Kohala, Island of Hawai'i, TMK (3rd) 6-8-001: 25, 36, 37, 38, 39 and 40

Thank you for your email of December 21, 2007, in response to the Environmental Impact Statement Preparation Notice for this project.

Please note that the applicant for the 'Āina Le'a development has changed following the purchase of 1,092 acres of the original 3,000 acres by the new applicant, DW 'Āina Le'a Development, LLC and Relco Corp.

As the preparer of the EIS for the new applicant, we are responding to your comments.

We acknowledge your concern that a viable plan should be in place in conjunction with the Villages of 'Āina Le'a to provide adequate roadways (including traffic on Queen Ka'ahumanu Highway) and to address the increased impact on public schools, hospitals and health care services, libraries, parks and recreational facilities, police and fire services, water and electricity services and other services.

While the focus of your letter is directed to government policy makers, we will answer those issues in which we have been involved.

As a matter of background, the project received its land use approvals and permits in the latter part of the 1980s and the early 1990s. The Applicant, through its consultants, has been working with State and County government agencies and the Waikoloa community to modify the original plans to address some of the community concerns. These include the elimination of the second golf course in the State Land Use Urban area, the inclusion of more north/south and mauka/makai roads to facilitate regional traffic circulation, and the identification of a school and community center site on the property. These modifications warrant a change of the existing zoning to a Project District Zoning, which would provide greater flexibility in addressing a range of site planning, marketing, and regional infrastructure considerations.

Roads and Traffic. DW ‘Āina Le‘a has been working with the State Department of Transportation-Highways Division to coordinate its intersection improvements, which include a fully channelized intersection and street lights, with the State’s regional planning efforts. In addition, the Project’s major internal roadways are planned to improve regional traffic circulation. The Applicant also assigned an easement to the County of Hawai‘i to allow the construction of a portion of the Waikoloa Emergency Access Road corridor over its property.

Schools and Libraries. The Applicant is working with the State Department of Education and community representatives to identify a school site on the property. While the State Land Use Commission has required that 16 acres be set aside for a public school site, the Applicant has set aside 32 acres for a potential school site. It has not been determined whether a public library would be located within this school site.

Parks and Recreational Facilities. The Applicant is working with the County Department of Parks and Recreation and community representatives to identify a site within the Project for a community center for recreational activities. In addition, although a condition of the County zoning approvals already granted requires that the developer provide a 10-acre active park, the Applicant has offered to set aside 16 acres for active park use. The Project’s plans include bikeways and pedestrian paths throughout the Village, and will include small open-space areas and parks for its residents.

Hospital and Health Care Services. The Applicant is looking for a privately operated urgent care medical service facility could be located in the Project’s Commercial Center, and has had discussions with providers of these services who have expressed an interest in locating to the area. Such facilities can be tailored to meet the particular needs of the surrounding area.

Electricity. Electricity for the project will initially be provided from Hawai‘i Electric Light Company’s Mauna Lani Substation via a utility corridor that will extend approximately 2.7 miles to the project site. To meet the needs of the full project development, the Applicant will be constructing a new substation in the area just mauka of the project site. The planning, timing and design of the new substation will be coordinated with HELCO in conjunction with the phasing of the Project. The developer will be responsible for providing all electrical utility improvements required for the Project.

Housing. The Applicant is in the process of constructing at least 400 affordable housing units in accordance with the County’s affordable housing guidelines.

Moreover, the Applicant is prepared to contribute its fair share amount for police and fire facilities, solid waste services, parks, and roads as required by zoning Ordinance No. 96-153 or a future zoning approvals.

The discussion about the public infrastructure and services noted above, the project impacts, and proposed mitigation measures are found in Chapter 4 of the Draft EIS.

Thank you for taking the time to respond to the EISPN. Your letter will be included in the EIS.

Sincerely,

A handwritten signature in dark ink, reading "James M. Leonard". The signature is fluid and cursive, with a long horizontal stroke at the end.

James M. Leonard, AICP

c: Bobby Jean Leithead-Todd, Planning Department
Katherine Kealoha, OEQC
Bob Wessels and Steve Dunnington, DW 'Āina Le'a Development

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

[This page intentionally left blank]

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

11 REFERENCES

- Baker, H.L. et al. *Detailed Land Classification, Island of Hawai'i*. Land Study Bureau, University of Hawai'i. 1965.
- Bauer, Glenn R. for the State Commission on Water Resource Management. *A Study of the Ground-Water Conditions in North and South Kona and South Kohala Districts, Island of Hawai'i, 1991-2002*. September 2003.
- County of Hawai'i Department of Water Supply. *Draft Water Use and Development Plan Update*.
- Geometrician Associates. *Waikoloa Emergency Road, South Kohala, Hawai'i, Final Environmental Assessment*. October 2006.
- Hawai'i County Code, Chapter 25, Zoning. <http://www.co.hawaii.hi.us/planning/rules.htm>
- Hawai'i County Planning Department. *The General Plan, County of Hawai'i*. Hilo. 2005.
- Hawai'i County, South Kohala Community Development Plan.
<http://www.hcrc.info/community-planning/south-kohala-cdp>. November, 2008.
- Heliker, C. *Volcanic and Seismic Hazards on the Island of Hawai'i*. Washington: U.S. GPO. 1990.
- Juvik, Sonia P. and James O. Juvik, eds. *Atlas of Hawai'i*. 3rd Edition. 1998.
- Ogden Environmental and Energy Services. *Archaeological Survey and Evaluation, Puakō Residential Golf Community, South Kohala, Hawai'i Island*. April 1991.
- Pukui, Mary Kawena and Samuel H. Elbert. *Hawaiian Dictionary*. 1986.
- Pukui, M. S. Elbert and E. Mo'okini. *Place Names of Hawai'i*. University of Hawai'i Press, Honolulu. 1976.
- State of Hawai'i-Commission on Water Resource Management. *Water Resource Protection Plan*. June 2008.
- State of Hawai'i Department of Agriculture. *Agricultural Lands of Importance to the State of Hawai'i*. 1977.
- State of Hawai'i Department of Transportation-Highways Division. *Storm Water Permanent Best Management Practices Manual*. March 2007.
- State of Hawai'i, Hawai'i Revised Statutes, Chapter 205A, Coastal Zone Management Act.

THE VILLAGE OF 'ĀINA LE'A
Draft Environmental Impact Statement

State of Hawai'i, Hawai'i Revised Statutes, Chapter 226, Hawai'i State Plan.

State of Hawai'i, Hawai'i Revised Statutes, Chapter 343, Environmental Impact Statements.

Tom Nance Water Resource Associates. *Water Resources and Supply for Puakō Residential Golf Community, South Kohala, Hawai'i.* March 1992.

U.S. Department of Agriculture, Soil Conservation Service In Cooperation with the University of Hawai'i Agriculture Experiment Station. *Soil Survey of Islands of Kauai, Oahu, Maui and Lanai, State of Hawai'i.* 1972.

U.S. Dept. of Commerce, Bureau of the Census. 2001. <http://factfinder.census.gov/>.

U.S. Army Corps of Engineers. *Phase II Engineering Evaluation/Cost Analysis, Former Waikoloa Maneuver Area and Nansay Sites, Island of Hawai'i, Hawai'i.* January 2002.

U.S. Army Corps of Engineers. *Phase III Engineering Evaluation/Cost Analysis Work Plan, Former Waikoloa Maneuver Area, Island of Hawai'i, Hawai'i.* January 2004

U.S. Department of Agriculture. *Soil Survey of the Island of Hawai'i, State of Hawai'i.* 1973.

Wolfe, E.W., and J. Morris. *Geologic Map of the Island of Hawai'i.* USGS Misc. Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey. 1996.

Internet Websites

<http://www.hawaii.gov/dbedt/info/energy/efficiency/>
www.state.hi.us/health/environmental/env-planning/landuse/landuse.html