5 WAIKOLOA VILLAGE PLAN

5.1 CURRENT AND FUTURE PLANS AND DEVELOPMENTS

5.1.1 POPULATION

Table 5.1 Waikoloa Village Population

1990	2000
2,248	4,806

Source: US Census.

Based on building permit data from County files, it is estimated that the population of Waikoloa Village increased by about 2,000+ people between 2000 and 2007. By the end of 2007, the estimated population was thus about 7,000 people – an increase of over 200% in 17 years, and an average increase of about 280 people per year between 1990 and 2007.

5.1.2 LAND USE

Waikoloa Village is a rapidly growing community. Housing consists of single family homes and condominium units. House lots range from 7,500 square feet to 10,000+ square feet. Currently, Waikoloa Road is the only paved access road to Waikoloa Village from Queen Ka'ahumanu Highway and Māmalahoa Highway. The Waikoloa Shopping Center is located right off of Waikoloa Road at the southern end of the community. The shopping center includes a grocery store, gas station, and small shops and restaurants, and is the only commercial development within Waikoloa Village. The Waikoloa Village Golf course is also located at the southern end of the community. Residential subdivisions and town home condominiums are interspersed along the golf course's edges. Because it is a young, growing community, Waikoloa Village does not yet have a hospital or medical clinic, community center, or major commercial centers. Given the rapid increase in residential units at Waikoloa, additional public facilities and commercial businesses are needed.

Paniolo Avenue is the main road that runs through the center of Waikoloa Village in a generally north-south direction. Located at the northern end of Paniolo Avenue is Waikoloa Elementary and Middle School and several community churches. Community churches that do not have building locations currently meet at the school, the golf clubhouse, or at a local restaurant. The Hoʻoko Street Park is adjacent to Waikoloa Elementary and Middle School on the makai side of the school. The Waikoloa Community Park, the only other park in the village, is located between Puʻu Nani St. and Puʻu Nui St.



Paniolo Avenue fronting the Waikoloa Elementary and Middle School

There are several major developments that are planned in areas surrounding Waikoloa Village. Table 5.2 summarizes the planned build out of these projects (highlighted in gray) as well as the *potential* build out of other large-sized TMK parcels, given the current County Zoning for these parcels.

Figures 5.1 and 5.2 illustrate the General Plan LUPAG and County Zoning designations for Waikoloa Village and the surrounding area.

Table 5.2 Planned Build Out and Potential Future Buildout in Waikoloa Area

	Development			County	Planned	Potential	
TMK	Name	Owner(s)*	Acreage	Zone	Buildout	Buildout	Status
		Frank De Luz III Family					***
368001006	***	Lmtd. Partnership	100	A-5a	***	17 units	
		TriKohala Development					***
368001024	***	Company/ 1010 Puakō LLC	661	A-5a	***	112 units	
300001024		LLC	001	/\-Ja	2,406	112 units	
					residential		
		Bridge 'Āina Le'a LLC and		A-5a;	units planned;		Completed 1 mi. of
368001037		Banter Inc.	1,507	RA -1a	5 golf		the Hulu St.
368001038	Villages of 'Āina Le'a	Bridge 'Āina Le'a LLC and Banter Inc.	621	A-5a; RM-4; RM-7; RM- 14.5;	courses; 40-unit lodge; 234 acres of open		emergency access gravel rd; completed grading of 25 acre shopping center; awaiting approval of
300001030		butter me.	021	A-5a;	space; 26		Project District Zoning and UIC
				RM-4;	parks; 5-		permit
		Bridge 'Āina Le'a LLC and		RM-7; RM-	acre red ilima		
368001039		Banter Inc.	444	14.5;	preserve		
		TriKohala Development					***
368001059	***	Company/ Brilhante	100	A-5a	***	17 units	
		TriKohala Development Company/ 1010 Puakō					***
368001060	***	LLC	150	A-5a	***	25 units	

368002001	***	Waikoloa Mauka LLC	1,170	A-20a	***	49 units	

368002002	***	Waikoloa Mauka LLC	652	A-20a	***	27 units	

368002004	***	Waikoloa Prop.	652	A-20a	***	27 units	
368002005	***	Waikoloa Inv. Land Tr.	250	A-20a	***	10 units	***
		TriKohala Development					***
368002006	***	Company/ Globe Corp.	669	A-20a	***	28 units	
368002007	***	Pu uiwaiwa LLC	400	A-20a	***	17 units	***
		Kilauea Trust I, JMP, RCP, JBP, KBP Education					***
0.00000000	discon.	Trust(s), Waimea LTD			doct to		T T T
368002008	***	Partnership Kilauea Trust I, JMP, RCP,	343	A-20a	***	14 units	
		JBP, KBP Education					***
260002010	***	Trust(s), Waimea LTD	741	A 20-	***	21	
368002010	***	Partnership Kilauea Trust I, Waimea	741	A-20a	***	31 units	de tra
368002011	***	Ltd. Partnership	912	A-20a	***	38 units	***

Table 5.2 Planned Build Out and Potential Future Buildout in Waikoloa Area (Continued)

		dila Out alla i otelitiai i					
TMK	Development Name	Owner(s)*	Acreage	County Zone	Planned Buildout	Potential Buildout	Status
368002012	***	Pu uiwaiwa LLC	1,076	A-20a	***	45 units	***
368002013	***	Pu uiwaiwa LLC	803	A-20a	***	34 units	***
368002015	***	Waikoloa Village Association	1,690	Open	***		***
368002016	Waikoloa Highlands	Waikoloa Mauka LLC	744	RA -1a	398 Units	632 units	Final EIS Completed May 2007; Awaiting State LUC action on district amendment from Ag. to Rural
368002016	***	Waikoloa Mauka LLC	2,444	A-5a	***	415 units	***
368002017	***	Waikoloa Mauka LLC	2,153	A-5a	***	366 units	***
368002019	***	Waikoloa Village Association	4,908	Open	***	***	***
368002022	Waikoloa Heights	Waikoloa Heights Land Investors LP	867	RS-10	2,400 units.	3,210 units	Phase I increment One Subdivision Approved
368002026	Waikoloa Workforce Housing Project	Hawai'i Island Housing Tr. & Waikoloa Workforce Housing LLC	268	RS-10	1,200 units planned.	1,200 Units	Construction start June 2008
368002027	Wehilani: Makane Kai	Castle & Cook	256	RS-10	756 units.	1,115 units	Under Construction
368002028	***	Waikoloa Inv. Land Tr.	333	A-20a	***	14 units	***
368002029	***	Waikoloa Inv. Land Tr.	154	A-20a	***	6 units	***
368002030	***	Waikoloa Inv. Land Tr.	155	A-20a	***	6 units	***
368002032	***		49		***	181 units	***
368002033	***	Waikoloa Village Association	268	Open	***		***
26,9002040	***	Waikalaa Day	100	DC 10	***	666	***
368002040 368003032	***	Waikoloa Dev, Waikoloa Mauka LLC	180 57	RS-10 Open & Rm-1.5	***	666 units ?	Planned Shopping Center

TOTALS: 25,776 7160 8094

^{*}Based on information from Hawai'i County Real Property Tax Office. **BOLD** font indicates TMK parcels have received the necessary entitlements to develop. **Highlighted rows in gray**, in the table, indicates TMK parcels that are designated by the County LUPAG for Urban Expansion.

FIGURE 5.1: GENERAL PLAN LUPAG FOR WAIKOLOA VILLAGE AND SURROUNDING AREA

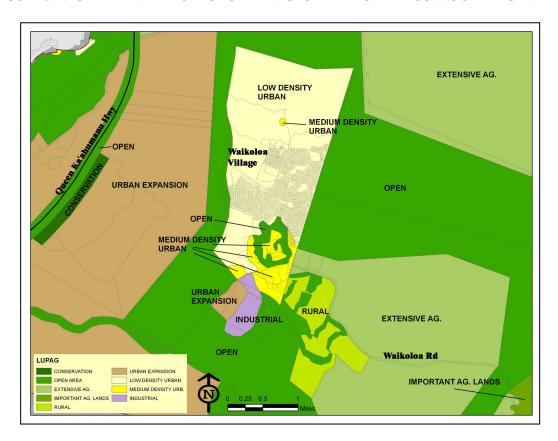
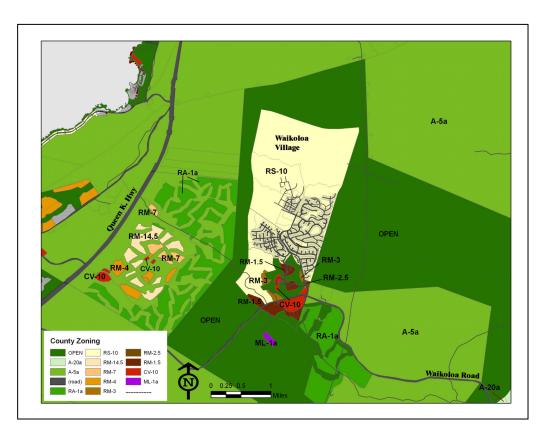


FIGURE 5.2: COUNTY ZONING FOR WAIKOLOA VILLAGE AND SURROUNDING AREA



5.2 WAIKOLOA VILLAGE TOMORROW: WAIKOLOA VILLAGE CONCEPTUAL PLAN & POLICIES

PURPOSE: The **Waikoloa Village Conceptual Plan** presents in graphic and narrative form general policies and strategies for the long-range – 20+ year look-ahead – future of Waikoloa Village, with emphasis on:

- o Providing needed community facilities for a growing town
- o Environmental Stewardship, Sense of Place, Open Space
- o Providing transportation and circulation improvements in a timely manner
- Affordable housing and smart growth

During the course of the Community Readiness Process and Waikoloa Focus Group meetings, these priority issues were consistently voiced.

This Conceptual Plan is presented as an important **linking step** between the Waikoloa Focus Group discussions and the resulting "Planning Notes" (November 2007) and the more detailed **Action Plans** that the CDP Team has developed for specific plan elements, including:

- 1. Construction of a second access road to Queen Ka'ahumanu Highway
- 2. Location and funding for a Waikoloa Community Center and Community Park
- 3. Location and potential phasing for a future Middle School, second Elementary School and High School

A note on the Conceptual Plan graphics and text: the graphic includes a variety of land use elements and ideas, including:

- Existing Land Uses (black text on the graphic)
- Projects planned by various agencies and land owners (blue text)
- Concepts and land uses recommended by the CDP (pink text)

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FIGURE 5.3: WAIKOLOA VILLAGE CONCEPTUAL PLAN

Page 95

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The Concept Plan text provided here addresses most of but not all of the elements shown on the graphic. The text also includes some policies and details that are not shown on the graphic. Thus, text and graphics are presented as mutually supporting planning tools, but are not intended to be "identical" in content.

Based on input from the Community Meetings and Focus Group Meetings, the South Kohala Steering Committee meetings, and planning studies undertaken to date, suggested overall Policies for Land Use and Environmental Management in Waikoloa Village are:

Waikoloa Policy 1. PROVIDE INFRASTRUCTURE AND FACILITIES FOR A GROWING **COMMUNITY** shall be an overarching planning policy for Waikoloa The County shall work closely with the Waikoloa Village Community and area developers such that funding for important infrastructure projects and community facilities is provided.

Waikoloa Policy 2. ENVIRONMENTAL STEWARDSHIP, SENSE OF PLACE, OPEN SPACE shall be an overarching land use policy for Waikoloa Village. Land use decisions shall be based on sustainable management of the open grass lands and natural resources of the Waikoloa area.

Waikoloa Policy 3. PROVIDE TRANSPORTATION AND CIRCULATION IMPROVEMENTS IN A TIMELY MANNER, including roadways, bikeways, and pedestrian paths, and with very high priority given to the construction of a second access road connecting Waikoloa Village to Queen Ka'ahumanu Highway.

Waikoloa Policy 4. ENCOURAGE AFFORDABLE HOUSING AND SMART GROWTH by concentrating development in areas that are already zoned for Resort, Residential, Commercial, and Industrial growth, or areas that are otherwise appropriate for businesses that address the needs of this community.

Important related strategies of the Waikoloa Village Conceptual Plan are summarized below.

PROVIDE NEEDED INFRASTRUCTURE AND COMMUNITY FACILITIES FOR A POLICY 1. **GROWING COMMUNITY**

Strategy 1.1 Plan, Fund, and Construct a Community Center and Community Park -- There has been considerable discussion within the Waikoloa community regarding the need for a Community Center and a Community Park. Currently, the Waikoloa Elementary and Middle School and the golf course clubhouse serve as community meeting places, and there are two small active recreation parks within the Village. However, this growing community needs a Community Center that is available for meetings and activities during the day and on weekends, together with an indoor gymnasium that can be used for both day time and evening organized sports such as basketball and volleyball.

The community also needs a larger Community Park of 15 to 20 acres that would have ball fields, soccer fields, and other active recreation facilities that the existing smaller parks cannot accommodate. It should be noted that the "Community Readiness Process" (CRP) found that parks and outdoor recreation were one of the highest community needs. Community members have also voiced the need for smaller playgrounds in addition to the need for a large community park.

The County's Kamakoa workforce housing project will include a 10,000 square foot Community Center and a 12-acre Community Park. These facilities will be constructed using County CIP funds, and will thus be open to all Waikoloa Village residents. However, this relatively small Community Center will not replace the need for a larger facility, including a full size gymnasium. And given the

Page 97

strong likelihood of continued growth at Waikoloa Village, a second Community Park will eventually be needed.

In January 2007, a "Community Center Planning Committee" was formed, consisting of a number of Waikoloa Village residents. Through a series of meetings and discussions, including extensive input from the Waikoloa community, the committee identified five alternative sites for a community center. In order of preference, these sites were:

- 1. Across from the Post Office on Waikoloa Mauka land, adjacent to the proposed housing for seniors;
- 2. Near the Waikoloa stables, either on WVA land or Waikoloa Mauka land;
- 3. Behind Waikoloa Hills on WVA land;
- 4. WVA land makai of Castle & Cooke's property with access off Waikoloa Road;
- 5. Other possible WVA-owned sites if the above sites should prove to be not feasible for various reasons.

Sites 1 through 4 are shown on the "WAIKOLOA CONCEPT PLAN" graphic on page 97. Please note that these sites are subject to change.

It should also be noted that the Committee determined that suggested sites at Hulu Street, Lina Poe Poe, and Wehilani did not meet the needs of the community, and that these sites be removed from further consideration. Also, in their April 2008 meeting, the Waikoloa Village Association Board approved allowing WVA land to be used for a community center.

The CDP provides some further details in terms of planning criteria for these important facilities. Community members have also suggested that an extensive system of walking/jogging trails, parks, and firebreaks be constructed around the perimeter of Waikoloa Village. This recreation/open space/firebreak system would thus have multiple dimensions and multiple community benefits. This concept is illustrated in the "Waikoloa Village Concept Plan" graphic. See the **Community Center and Community Park Action Program** for details.

Strategy 1.2 Plan, Fund, and Construct Needed Public Schools: Elementary, Middle, High - Waikoloa Elementary and Middle School is the only school in Waikoloa Village. The school services students from grades K-6. The school opened in the fall of 1994 with 320 students. The school's cafeteria was completed in 1997 and the library was completed in 2000. For school year 2007-08, the school expanded to the sixth grade. The plan is to phase in 7th and 8th grades over the subsequent two years. The school will then become a full Elementary and Middle School. With 75 employees, Waikoloa Elementary and Middle School is the largest employer in Waikoloa Village.

Additional facilities will be needed for the 8th grade classes, and DOE requested \$4.4 million from the State Legislature in the 2008 legislative session.

Table 5.3 School Enrollment

School Name	Grades	Enrollment (2006)	Enrollment Capacity
Waikoloa Elementary and Middle School	K-6	620	650

Sources: DHHL Lālāmilo / Pu'u Kapu Regional Community Development Plan; State Department of Education Facilities Development Branch

The Waikoloa Elementary and Middle School is nearing its physical capacity. The longer-range plan is to convert the existing school to a Middle School, and to construct a new Elementary School on a 12-acre site within the County's "Kamakoa" workforce housing project. This new Elementary School is on the DOE facilities plan for opening in 2014 – only 6 years from the present. Thereafter, as the population of Waikoloa Village continues to grow, there will be the need for at least one additional Elementary School, and eventually a High School. See the **Schools Action Program** in the next section of this Plan.

Strategy 1.3 Plan, Fund, and Construct a Community Library – There has been some discussion on the need for a public library at Waikoloa Village, including ideas for a "state of the art" facility that would include advanced computer hardware and software as well as traditional books and other reading materials. A modern library would certainly be an important facility and amenity for Waikoloa Village, and would enhance the Village's sense of community and identity. Options for a Library include: a stand-alone Library, a Library developed as part of the Community Center, or a Library attached to the Middle School.

Strategy 1.4 Develop a Major Commercial Center for Waikoloa Village with shops, stores, and small business opportunities – A mainland company, "Metric Holdings," with offices in Encino, CA, recently purchased the commercially zoned 45-acre parcel that is located within the "arc" of Pua Melia Road. This parcel is currently "anchored" by the Fire Station at the western end, and the Post Office at the eastern end. The developer's preliminary plans for this commercial site include a major grocery store, various shops and stores, a small hotel, a business park, and some kind of community gathering place. An "assisted living" project for senior citizens may also be part of the development program. Community members have also suggested that a police substation be located near the existing Fire Station, and that an "urgent care" facility be included in the shopping area. Metric Holdings has told the Waikoloa community that they plan to begin construction of the first phase of the project in 2008. The economic downturn that most areas of the U.S. are currently experiencing may delay the developer's construction plans. However, as the population and purchasing power of the Waikoloa Village community continue to grow, it is only a matter or time before a large commercial center of this kind becomes a reality.

This proposed 45-acre commercial center could eventually provide about 300,000 square feet of retail commercial space, assuming that about 2/3 of the site will be developed for retail, and the balance for offices, elderly housing, hotel, and other uses. Concern was raised by some community members that this amount of commercial acreage will not be enough to serve the growing Waikoloa Community. A general "rule of thumb" number for retail commercial demand is 30 square feet (sf) per capita. If the current population of Waikoloa Village is about 7,000 people, then the total demand for retail commercial space for that population would be about 210,000 sf. By 2020, the population of Waikoloa Village could be 10,000 to 15,000 people, and the demand for retail commercial would be about 300,000 to 450,000 square feet. Some percentage of this demand – 50% or more – would be met by regional shopping centers located in Waimea and Kona, while the balance of the demand would be met by Waikoloa-based commercial facilities. Given these numbers, it appears that the 45-acre commercial center at Waikoloa Village can provide for the population's local retail commercial needs for the next 15 to 20 years.

It should also be noted that Waikoloa Mauka LLC owns properties in the vicinity of the proposed commercial center that it may ask to be rezoned for commercial use. These additional sites could provide for still more retail commercial facilities.

South Kohala CDP FINAL

In addition, the developers of the "Waikoloa Heights" project have included a small commercial center in their Master Plan. This center would provide convenience shopping for the 1200 families that will some day live in the Kamakoa project, and the 2000 families that will live in Waikoloa Heights.

There is currently no set timetable for any of these "commercial" locations to be developed and there is no certainty that they will in fact be developed for commercial services, or for what types of businesses they may be developed. For this reason, the community should give consideration to allowing for additional commercial locations where small to medium-sized businesses could be established that serve the needs of the Waikoloa community. If appropriately located, these businesses would add to the sense of community and would reduce the amount of traffic to Waimea and Kona.

Strategy 1.5 Manage and Expand the Potable Water System – Potable water for Waikoloa Resort and Waikoloa Village is provided by the West Hawai'i Water Company, a privately owned company that is a subsidiary of the Waikoloa Development Company, which until recently owned approximately 20,000 acres of undeveloped land in and around the Waikoloa Village area. Most of this land was sold to other parties in 2007. The Water Company owns and operates groundwater wells, reservoirs, water transmission mains, and water distribution lines, and currently provides about 4.5 million gallons per day (mgd) to its users, which includes Waikoloa Resort. A new well was recently installed by the Water Company in anticipation of continuing population growth and increased potable water demand in Waikoloa Village. The existing wells draw water from the "Waimea Aquifer." Currently, this aquifer also serves some of the potable and non-potable water needs of Waimea Town. As the population of both Waimea and Waikoloa continue to grow, the availability of potable water may become a limiting factor.

West Hawai'i Water Company representatives recently confirmed that the company is being sold to a large California company that specializes in managing sewer and water systems. This sale is expected to be completed before the end of 2008. Water rates charged by the new owner will still be regulated by the Hawai'i Public Utilities Commission (PUC).

Strategy 1.6 Manage and Upgrade the Wastewater Treatment and Disposal Systems – Wastewater treatment for commercial, institutional, and multi-family land uses at Waikoloa Village is provided by two existing wastewater treatment plants (WWTP): the Auwaiakeakua WWTP ("A-Plant") and the Kamakoa WWTP ("K-Plant"). Both WWTPs, together with collection lines and effluent disposal fields, are owned and operated by the West Hawai'i Sewer Company, a subsidiary of the Waikoloa Development Company. West Hawai'i Sewer Company is currently expanding the A-Plant and is also designing a new K-Plant in order to service the County's Kamakoa Workforce Housing project, as well as other planned projects in the northern sector of Waikoloa Village.

West Hawai'i Sewer Company representatives recently confirmed that the company is being sold to a large California company that specializes in running sewer and water systems. This sale is expected to be completed before the end of 2008. Sewer rates charged by the new owner will still be regulated by the Hawai'i Public Utilities Commission (PUC).

All of the existing single family homes in Waikoloa Village, with the exception of the homes in the Paniolo Estates subdivision and the new homes in the Wehilani subdivision, utilize cesspools or septic tanks for their wastewater disposal. Although State Department of Health regulations continue to allow the use of septic tanks for lots of at least 10,000 square feet within subdivisions of 50 or fewer lots, there are now over 1,000 single family homes on cesspools or septic tanks within the Village, and **several thousand more homes are planned for development over the next 20 years.** The community should be concerned about the risks of environmental pollution from such a large and concentrated number of on-site sewage disposal systems. The County's proposed 1200 unit workforce housing project will be tied into a new wastewater treatment plant. Other large projects, including the Waikoloa Heights project of 2,000+ units, should also be required to tie into

a modern wastewater treatment plant. The new WWTP's could also be designed to produce "reclaimed water" that could be used for irrigation of parks and landscaped areas throughout the Village. The production and use of reclaimed water would allow the limited potable water aquifer to better serve the area's growing population.

Strategy 1.7 Provide more emergency facilities -- Currently the only existing shelter in Waikoloa Village is Waikoloa Elementary and Middle School. Waikoloa residents have expressed concern that the amount of shelter space that currently exists in the Village cannot accommodate the emergency needs of the current or future population. Also, in the event of tsunami or coastal flooding, people in the coastal areas of the district such as the Waikoloa Resort, Mauna Lani Resort, and Puakō may need to evacuate to Waikoloa Village. The existing emergency shelter space is totally inadequate to accommodate these potential evacuees.

Future civic buildings in Waikoloa Village, such as the community center, new high school, middle school, or elementary school, should be designed to serve as emergency shelters as well. These civic buildings should be built so that they are "disaster resistant."

Planning for future helipad facilities for medical emergencies should also be considered. Two possible locations for a helipad are near the existing fire station and near Ho'oko Park.

POLICY 2. ENVIRONMENTAL STEWARDSHIP, SENSE OF PLACE, OPEN SPACE

Strategy 2.1 Support Projects and Programs for Environmental Restoration and Alternative Energy The Waikoloa Village area once supported a native dryland forest ecosystem, and remnants of this forest can still be found, including specimens of the rare and endangered uhiuhi tree and the threatened native wiliwili. The Waikoloa Village Association (WVA) has approved a 15-year license agreement with the Waikoloa Village Outdoor Circle that sets aside 275 acres of WVA land for the "Waikoloa Dry Forest Recovery Project." The overall goal of this project is to preserve and restore the native dryland forest ecosystem within this 275-acre area. Waikoloa has many native trees and shrubs typically only found in the dryland forest, such as: La'au a tree that was used in part for Hawaiian medicine; A'ali'i a shrub that is used to adorn the hula dancer and can withstand any severe wind condition; Kauwila, an extremely hard wood, was used for traditional housing, weaponry and the canoe; 'Ohia a popular hard wood serving various needs, such as house beams, the canoe and a home for our endangered forest birds; Lama, another hard wood, was used for spears, sleds and home building. All of these dry land native plant species are found throughout the kula lands of Waikoloa and contain the spirit of the gods Laka, Kane, and Kanaloa. The County and other governmental entities should aid and support this program and any similar ecosystem restoration programs that may be initiated in this area of South Kohala.

The Waikoloa Village area also provides some special opportunities for the development of alternative energy resources, both at the scale of individual buildings as well as larger community scale energy facilities. The climate of this area of South Kohala is generally hot and dry, with a high level of solar energy. Trade winds are also stronger here than most other areas of the island, with wind speeds of 20 to 30 mph or higher being quite common. Individual solar hot water heating units would save home owners a significant amount of electrical power costs. Small-scale windmills and photovoltaic arrays on public buildings such as schools and community centers would also be cost effective. Larger scale photovoltaic "solar farms" and "wind farms" should also be considered, possibly to be sited on some of the WVA's 10,000 acres of open space lands. In 2007, the County Council passed a resolution requesting the County Planning Director to initiate an ordinance to amend the County Zoning Code in order to permit wind energy facilities in the Open zoned district. Much of the WVA lands are zoned "Open."

There are interesting possibilities for private/public partnerships for alternate energy development projects here, and it may be possible for Waikoloa Village to be largely "energy self-sufficient" sometime in the foreseeable future.

Strategy 2.2 Preserve Waikoloa's Scenic Views, Landscapes, and Pu'u -- Waikoloa is home to many beautiful sunsets and sunrises. Mauna Kea Mountain is clearly viewed from the dry slopes of Waikoloa, which provides many displays of cloud formations made from strong winds that are unique to the mountain. The view of the island of Maui from Waikoloa will allow a clear vision of Haleakala and the many pali to Hana. Waikoloa has as many pu`u if not more, than its sister town of Waimea, many of which have names that convey traditional stories of this ahupua'a. The pu'u named Hina'i in the vicinity of Waikoloa and several other pu'u in the district are being mined. Mining and also the encroachment of development have degraded the condition of several pu'u in the district. These pu'u should be protected and preserved in their natural state.

POLICY 3. PROVIDE TRANSPORTATION AND CIRCULATION IMPROVEMENTS IN A TIMELY MANNER

Strategy 3.1 Plan, Fund, and Construct a Second Access Road to Queen Ka'ahumanu Highway – Access to Waikoloa Village is provided by Waikoloa Road, a 2-lane regional arterial road that connects the Village to the Queen Ka'ahumanu Highway to the west (makai) and to the Māmalahoa Highway to the east (mauka).

The County recently funded the construction of an emergency evacuation road from Hulu Street to Queen Ka'ahumanu Highway. Construction of this road was completed in December 2006. In addition, the Planning Department initiated a study to assess alternative financing methods to construct a road that would connect Waikoloa Village to Queen Ka'ahumanu Highway.

A second connecting road to Queen Ka'ahumanu Highway is a top priority, both to accommodate increasing traffic volumes and, perhaps more importantly, to provide a second **emergency egress route** for Waikoloa residents. If feasible, the new access road should also provide pedestrian and bicycle facilities. The preferred general alignment for this second access road is shown on the Waikoloa Village Concept Plan graphic.

The most significant type of natural disaster that threatens the Waikoloa community is the threat of wildfires. The area's dry climate, combined with the highly flammable introduced vegetation consisting primarily of fountain grass and kiawe trees, and the frequency of high winds make the Waikoloa area especially prone to large-scale wildfires. A 2003 brush fire threatened Waikoloa Village. The fire burned all the way up to the elementary school. Another major fire in August 2005 burned some 20,000 acres to the east and south of Waikoloa Village. That fire burned to the very edge of the Waikoloa Road/Paniolo Avenue intersection, the main intersection in Waikoloa Village. In the case of the 2005 fire, fire fighters were able to control and eventually extinguish the blaze without injuries to people or damage to structures. However, the fire threat is an ever-present danger for the Waikoloa community, and a second access/egress road may well prove to be the difference between successful evacuation of the Village and injuries and even loss of life.

The County has recently retained a special consultant to develop a financing plan for this second access road, and a special committee is currently evaluating the preliminary financing plans. See the "Second Access Road Action Program" for more details.

Strategy 3.2 Fund and Construct the Paniolo Avenue Extension – Paniolo Avenue, a major 4-lane local collector road with a right-of-way of 80 feet, is the main collector roadway within Waikoloa Village. The County General Plan shows the eventual extension of Paniolo Avenue northward to Kawaihae Road, which would in effect make Paniolo Avenue a sub-regional arterial road. In the near term, the owner/developer of the "Waikoloa Heights" project is required by their development agreement to extend Paniolo Avenue from its present terminus at Hoʻoko Street up to and across Kamakoa Gulch, and eventually to the northern boundary of the Waikoloa Heights property. This extension would also provide for access to the County's Kamakoa workforce housing project. As of January 2008, the construction plans for the first phase of this extension, about one mile of road up to but not yet across Kamakoa Gulch, were still being reviewed by the County Planning

Department. According to representatives of the developer, construction was scheduled to begin in the second quarter of 2008.

Strategy 3.3 Upgrade the Emergency Access Road from Hulu Street to Queen Ka'ahumanu Highway—In December 2006, the County completed the rough grading of an unpaved "emergency access road" that extended from the terminus of Hulu Street about 2.5 miles westward and down slope to the Queen Ka'ahumanu Highway. The road traverses land that is proposed for development by Bridge 'Āina Le'a LLC. This road is intended to serve as an emergency egress route when there are natural disasters like wildfires that require evacuation of some or all of the Waikoloa community. The Bridge Company has apparently said that they will eventually pave this road, including the section of road that is on land owned by the Waikoloa Village Association, from the existing terminus at Hulu Street to the eastern boundary of the Bridge property. To date, however, the Bridge Company has not moved forward with construction of the first phase of their project. This emergency access road could also provide a mauka/makai route for walking and bicycling. At a minimum, the MOA should be amended between Bridge Āina Le'a LLC and the County to allow for this use. The paving of the roadway would create a more useful emergency route.

Strategy 3.4 Plan, Fund, and Construct Walkways and Bikeways – Most of the streets and roads in Waikoloa Village were constructed without sidewalks and bike lanes or bike paths. With the growing population and the growing awareness of the environmental and health benefits of walking and bicycling, there is a need to "retrofit" existing roads with sidewalks and bike lanes. Paniolo Avenue currently has a sidewalk on one side only. This main collector street, with its generous 80 foot right-of-way, is far too wide to be a safe roadway near an elementary school and park. Its design speed is greater than its posted speed of 35 mph. Consideration should be given to putting Paniolo Avenue on a "road diet" that would reduce it from four lanes to three, with landscaped medians and pedestrian refuges at the Pu'u Nui and Hulu, intersections. Such measures would considerably calm traffic. The additional right of way could be used to create a shared use non-motorized path with generous width.

Strategy 3.5 Develop a Master Circulation Plan for Waikoloa Village – The original Master Plan for the development of Waikoloa Village was commissioned by the original developer, Boise Cascade Corporation, in the 1960's. The Master Plan included concepts for a system of collector roads that would serve the various neighborhoods of the Village, including Paniolo Avenue and a parallel collector road that is now Laie Street. As of the end of 2007, the zoned acreage of Waikoloa Village had been only about 40% developed. As development proceeds, County planners would benefit from a fairly detailed Master Circulation Plan that would identify the main collector streets, bridges for gulch crossings, and requirements for connectivity between subdivisions. The Plan should include maps, cross-sectional and/or plan diagrams of typical roadway elements and dimensions, and guiding policies regarding connectivity and the separation of collector streets and residential neighborhoods. Future road planning should not adversely affect residential neighborhoods. The WVA and other community representatives should work with the County Planning Department and the County Department of Public Works to develop this Waikoloa Village Master Circulation Plan.

Strategy 3.6 Implement traffic safety improvements along Waikoloa Road - Portions of the two-lane Waikoloa Road are very hazardous. There are parts of the road that are curvy and steep. Furthermore, there are stretches of roadway with little or no paved shoulders, let alone any room on the roadway for bicyclists or pedestrians.

Several suggested traffic safety improvements for Waikoloa Road include:

- 1) Construct paved shoulders that are of a safe width
- 2) Construct separated bicycle and walking paths along the roadway
- 3) Construct truck runaway ramps in appropriate locations along the roadway.

POLICY NO. 4 ENCOURAGE AFFORDABLE HOUSING AND SMART GROWTH

Strategy 4.1 Implement the County's "Kamakoa" workforce housing project – This project will be a "first of its kind" in Hawai'i County, and in many ways, a first in the State of Hawai'i. The project will use the "land trust model" to ensure that home prices are affordable "in perpetuity." The land trust model includes leases instead of fee simple purchase of house lots and also limits the appreciation of property values – and thus keeps house prices affordable. The project will also use innovative "Community Facilities District" (CFD) financing to pay for most of the project's infrastructure. With a planned 800 for-sale and 400 rental units on 267 acres of land, for a gross density of about 4.5 units per acre, the project is significantly more dense and efficient than the typical 10,000 square foot lot development pattern in Waikoloa Village, which works out to about 3 units per acre. The higher density for this project is permitted under State Statute 201(H) that provides for waivers of certain County regulations if the project is an affordable housing project. The Kamakoa project also has a high level of amenities for home owners and renters, including a 10,000 square foot Community Center and 12-acre Community Park, a Daycare Center, a 12-acre site for a future Elementary School, and some 20-acres of trails and greenways. Overall, the project will provide affordable homes and rentals for Waikoloa area workers, and thus reduce the commuting time and expense for many people who have jobs at the resort or in Waikoloa Village.

Strategy 4.2 Plan and eventually develop some of the "Industrial" land near Waikoloa Village Center – The County General Plan "LUPAG" map for the Waikoloa area shows an "Industrial" parcel of about 200 acres adjacent to and to the southwest of the "Medium Density Urban" area that includes the site of the future shopping center. This industrial land, which is owned by the WVA, may provide some opportunities for light industrial development and local jobs sometime in the future. The development of some local jobs would have a positive impact on vehicular traffic during peak periods, and would also provide some economic balance for the Waikoloa community. Future uses of this industrial land could also include alternate energy generation facilities like photovoltaic "solar farms" or smaller scale "wind farms." Note, however, that the "Waikoloa Dry Forest Recovery Project" area is immediately adjacent to this industrial land, and that at least 2 rare *uhiuhi* trees and a number of the threatened *wiliwili* trees are found within the boundaries of the industrial land. Thus, any future industrial development should take care to preserve these important endemic trees.

Strategy 4.3 The visually and environmentally important open grasslands in the Waikoloa area should be protected from development that would have negative environmental impacts -- Waikoloa Village encompasses about 3,000 acres of land, most of which is zoned "RS-10" – single family lots, minimum lot size of 10,000 square feet. Approximately 60% of this already zoned land has yet to be developed. The potential "build –out" of this zoned land, including the County's workforce housing project, would add approximately 4,000 to 5,000 additional homes and some 10,000 people to the Village.

Waikoloa Village is surrounded by an irregularly shaped "buffer" of "Open" zoned land totaling about 10,000 acres, which is owned by the Waikoloa Village Association. To the west (*makaî*) of Waikoloa Village are several large land parcels owned by 1010 Puakō LLC and Bridge Company that are being planned for development. The Bridge lands have already been rezoned to "RA-1a" (Rural Agricultural 1 acre lots) and RM-4, RM-7, and RM-14.5 – Residential Multi-Family of various densities. The 1010 Puakō LLC parcels are still zoned A-5a (Agriculture 5-acre minimum lot size). Current zoning for the Bridge 'Āina Lea project would allow the construction of approximately 2,400 homes in the State "Urban" district and approximately 860 lots in the State "Agricultural" District, plus not more than 5 golf courses, a golf academy, a 40-unit "lodge," and retail commercial facilities. 1010 Puakō LLC has recently initiated discussions with the County regarding a possible "Planned Unit Development" (PUD) for their property. PUD is a special project design and approval process that allows for some variance from standard County design standards, including the possibility of clustering homes on smaller lots, thereby reducing infrastructure costs and increasing open space.

There are also extensive privately owned A-5a zoned lands to the east (*mauka*) and south of the Waikoloa Village area. Some of the large land parcels in this area are being proposed for future development. Rezoning of any of these parcels should not be approved unless and until concurrency requirements have been met, and until the land owner(s) can demonstrate in detail at least the following:

- Availability of adequate potable water source(s)
- o mitigation of adverse traffic impacts
- o mitigation of adverse visual impacts and night time light pollution
- o positive benefits to the community, including providing parks and shopping facilities, and construction of affordable housing

Owners of these large parcels should also be encouraged to develop "rural cluster" plans that would concentrate homes in "low impact" areas of the site, and set aside large tracts of open space lands that would be preserved via conservation easements or other means.

Strategy 4.4 Revise the County Subdivision Code and Planning Department policies and enforcement procedures to ensure that agricultural subdivisions are created for agricultural purposes and are not used for rural residential purposes without rezoning – State Land Use statutes restrict living units in the State "Agriculture" District to "farm dwellings." In practice however, the Hawai'i County Planning Department has approved many "agricultural subdivisions" in the State Agriculture District that are actually rural residential developments.

There is certainly a demand for and a place for rural residential projects. However, rural residential projects should be required to apply for and receive State Land Use "Rural" classification, and County "Rural Residential" Zoning designation. These entitlement applications would require public hearings and disclosure of project impacts as well as project benefits. As a corollary, any and all proposed agricultural subdivisions should be required to submit a farming plan for either commercial farming or subsistence farming together with their preliminary subdivision documents, and the Planning Department should design and implement a monitoring program that will ensure implementation of these farming plans. Note: these suggested amendments to County subdivision regulations have County-wide implications. The details of these amendments should therefore be developed in coordination with the other active CDP's – e.g., the North and South Kona CDP, the Puna CDP, and the North Kohala CDP.

Strategy 4.5 "Ag-zoned" lands west and south of Waikoloa Village that are designated as "Alternate Urban Expansion" lands in the County General Plan and "Ag-zoned" lands north of the Village shall remain in "A-5a" and "A-20a" zoning until already RS-zoned lands at Waikoloa Village have been substantially developed – The current County General Plan LUPAG map for the Waikoloa area includes over 7,000 acres of "Alternate Urban Expansion" land in the Waikoloa area. (See Table 5.2 and Figure 5.2 for reference) This designation is defined in the General Plan (page 14-7) as:" Allows 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 consensus of the Waikoloa community is that there is no need in this area of South Kohala for such a large amount of acreage to be designated "Alternate Urban Expansion." Undeveloped parcels within Waikoloa Village that are already zoned RS-10 will, at "build out," provide an additional 4,000 to 5,000 homes – thus more than doubling the population of Waikoloa Village. This development process may take 20-30 years to complete. Development of the 7,000+ acres of "Urban Expansion" lands would be **in addition to these 4,000 to 5,000 homes,** and would add something like:

- o 7,000 homes and 20,000 people, if developed at an average density of 1 unit per acre of land;
- o 14,000 homes and 40,000 people, if developed at an average density of 2 units per acre of land.

South Kohala CDP FINAL

The Bridge 'Āina Lea project is part of this "Urban Expansion" area, and has already received State Land Use Urban and County rezoning. However, the balance of the Ag-zoned "Urban Expansion" lands in this area should not be rezoned to a higher density until community needs for such rezoning can be clearly shown.

5.3 ACTION PROGRAMS FOR WAIKOLOA VILLAGE

This last section of the Waikoloa portion of the CDP presents several "Action Programs" for top priority projects. Limited time and funds for this CDP precluded the development of Action Programs for "all" of the Concept Plan policies and strategies. However, additional Action Programs can be developed in the future.

1. ACTION PROGRAM – CONSTRUCT SECOND ACCESS ROAD TO QUEEN KA'AHUMANU HIGHWAY

Current Status and the Need for Action

Access to Waikoloa Village is provided by Waikoloa Road, a 2-lane arterial road that connects the Village to the Queen Ka'ahumanu Highway to the west (*makai*) and to the Māmalahoa Highway to the east (*mauka*).

A second connecting road to Queen Ka'ahumanu Highway is needed, both to accommodate increasing traffic volumes and, perhaps more importantly, to provide a second **emergency egress route** for Waikoloa residents.

In 2005, the County retained an engineering company to develop an analysis of alternative routes for a second access road, and to develop preliminary cost estimates. As a result of that study, and related meetings with the Waikoloa community, a consensus on a preferred general road alignment was reached: the second access road will be constructed from the extension of Paniolo Avenue, through the "Waikoloa Heights" project, then through a strip of land owned by the Waikoloa Village Association, and finally through lands owned by 1010 Puakō LLC to Queen Ka'ahumanu Highway near the entrance to Mauna Lani Resort, a distance of



The northern end of Paniolo Avenue

approximately 3 miles. The estimated construction cost for this road was \$40,000,000 in 2005.

The County recently retained a special consultant to develop a financing plan for this second access road, and a special committee of Waikoloa community members is currently evaluating the preliminary financing plans. The consultant's draft report estimated annual costs to Waikoloa Village home owners as follows:

Existing Single Family Homes: \$90 per year
Existing Multi-Family Homes: \$45 per year
New Single Family Homes: \$1,463 per year
New Multi-Family Homes: \$731 per year

Although the annual cost to current residents is not that large, some community members have already voiced strong opposition to "more taxes."

There has also been some discussion with the developer of the Waikoloa Heights project to the effect that the developer might fund the construction of the road as part of "Phase 2" of this 2,000+unit project. In addition, there has been some recent discussion with the owner of the parcel

through which the second access road may pass, 1010 Puakō LLC, regarding possible construction of the road by that developer as part of their proposed "Planned Unit Development" project.

Another related issue that has been raised by members of the local non-profit organization known as "PATH" (Peoples Advocacy for Trails, Hawai'i) is the possibility of a bike path/jogging path adjacent to the second access road. This path would provide for an alternate means of circulation between Waikoloa Village and the Kohala resorts.

There are thus at present at least three strategies being considered for the financing and construction of this critical access road project, as follows:

- Strategy 1.1. Finance through a Community Facilities District (CFD), with construction to be coordinated by the County.
- Strategy 1.2. Financing and construction by the developer of the Waikoloa Heights project.
- Strategy 1.3. Financing and construction by 1010 Puakō LLC.

There may be an opportunity here for the County and the community to work with both developers, and to resolve a planning and financing strategy that works well for all parties. Provided below are some preliminary thoughts on how this partnering process could be designed.

- Who should take the lead? County Council Member for North and South Kohala, with the support of the Mayor's staff, the Planning Department, the Department of Public Works, and the Waikoloa community.
- What needs to be done? Form a "Waikoloa Village Second Access Road" working group chaired by the County Council Member and consisting of representatives from the Waikoloa Community, the Planning Department, the Department of Public Works, the Waikoloa Heights developer, and 1010 Puakō LLC. Through a series of meetings and discussions, work out how much funding each of the two developers can provide for the project, and the amount, if any, of the funding shortfall. If there is a funding shortfall, look at alternative funding mechanisms, including CFD, Improvement District (ID), County CIP, other. Based on all of the above, develop and resolve an overall funding strategy for the access road.
- When should actions be initiated? Discussions and negotiations involving the County and the two developers are already taking place. As of early May 2008, these discussions were ongoing, and no firm plans or commitments had been resolved.
- How much will the new access road cost? The 2005 Preliminary Engineering Study estimated a cost for the preferred access road alignment of approximately \$40,000,000. More precise cost estimates can be developed after preliminary engineering design work has been undertaken. This road will be a fairly costly project. However, it is of vital importance for the residents of Waikoloa Village, both in terms of day to day access to jobs and other destinations in the region as well as community safety.
- **Intended Outcome:** Construction of this second access road to Queen Ka'ahumanu Highway will greatly reduce the risk of a potential disaster and loss of life from a major wildfire or other natural catastrophe that might strike the growing but still relatively isolated community of Waikoloa Village. A second road will also accommodate some of the increased traffic to and from the Village as the population continues to grow.

2. ACTION PROGRAM – COMMUNITY CENTER AND COMMUNITY PARK

Current Status and the Need for Action

There has been considerable discussion within the Waikoloa community regarding the need for a Community Center and a Community Park.

Currently, the Waikoloa Elementary and Middle School serves as a community meeting place, and there are also two small active recreation parks within the Village. The golf course clubhouse is also used for various community meetings and functions. However, this growing community needs a Community Center that is available for meetings and activities during the day and on weekends, together with an indoor gymnasium that can be used for both day time and evening organized sports such as basketball and volleyball.

Based on the CDP meetings with the Waikoloa Community, it appears that there has been considerable discussion on the Community Center, but not so much on the Community Park. Depending on site location, however, there may be an opportunity to plan, design, and construct both the Center and the Park as one coordinated project.

Two of the major development companies that are proposing new luxury home projects in the area – Bridge Company and the developer of the Waikoloa Highlands project, Waikoloa Mauka LLC – have said that they would provide a total of about \$4.5 million for the design and construction of a Community Center at Waikoloa Village. As of early May 2008, however, neither of these developers had as yet actually committed any money to this project.

The community also needs a large Community Park of 10 to 20 acres that would have ball fields, soccer fields, and other active recreation facilities that the existing smaller parks cannot accommodate.

As previously discussed under Strategy 1.1, a committee of community volunteers has already done some planning for a Community Center. The Committee's recommended alternative sites are listed under Strategy 1.1.

The overall **strategy** for developing a Community Center and Community Park for Waikoloa Village should generally be similar to the strategy for the construction of the second access road: that is, there may be an opportunity here for the County and the community to work with both developers, and to resolve a planning and financing strategy that works well for all parties. Provided below are some preliminary thoughts on how this partnering process could be designed. The **Action Steps** could be as follows:

- Who should take the lead? County Council Member for North and South Kohala, with the support of the Mayor's staff, the Planning Department, the Department of Parks and Recreation, and the Waikoloa community.
- What needs to be done? Reconvene the "Waikoloa Community Center Planning Committee" and broaden its mission to include planning for a Community Park. Solicit and obtain the participation of the Planning Department, the Department of Parks and Recreation, Bridge Company, and Waikoloa Mauka LLC. Assuming the formation of the "SOUTH KOHALA CDP ACTION COMMITTEE, the "Community Center and Park Planning Committee" could be a subcommittee of the Action Committee. Through a series of meetings and discussions, work out how much funding each of the two developers can provide for the project, and the amount, if any, of the funding shortfall. If there is a funding shortfall, look at alternative funding mechanisms, including CFD, Improvement District (ID), County CIP, other. Based on all of the above, develop and resolve an overall funding strategy for the Community Center and Community Park.

The Committee also should revisit the five sites identified earlier by the Committee as preferred sites (as referenced in Strategy 1.1) as well as any other new alternative sites that may be presented, and should consider each of these sites' suitability for a combined Community Center and Community Park project. The Committee should discuss and agree upon the advantages and disadvantages of a combined project at each of these sites, and then agree upon which of these sites is best suited for these community facilities. It is also possible that the Committee will decide that the two facilities should be on separate sites.

Once the funding strategy has been worked out and a preferred site has been selected, design of the Community Center and/or of the Community Park can begin.

- When should actions be initiated? Discussions and negotiations involving the County, the Waikoloa Community, and the two developers are already taking place. As of early May 2008, these discussions included the possibility of developing the Community Center on lands owned by the Waikoloa Village Association.
- How much will the Community Center and Community Park cost? To date, there have been no architectural or landscape architectural plans developed for either the Community Center or the Community Park, and thus there are no official cost estimates.

Preliminary cost estimates developed for recreational facilities for the County's "Kamakoa Workforce Housing Project," to be constructed at Waikoloa Village beginning in mid 2008, included the following estimates:

•	Community Park of about 10 acres:	\$2,500,000
	(baseball field, soccer field, tennis courts,	
	Basketball courts, tot lot, picnic area,	
	restrooms, parking)	

- Community Center of about 10,000 sf (large meeting room, smaller activity rooms, offices for community programs, weights room, restrooms, parking)
- **Swimming Pool** of about 30 X 50 yards (including pool, pumps, equipment room, restrooms w/dressing areas, parking) \$3,000,000

These costs do not include land costs, design, permitting, or project management. It should be noted that all of the above recreational facilities within the Kamakoa project are being funded by the County of Hawai'i, will be managed by the County Department of Parks and Recreation, and will be open to all residents of Waikoloa Village. However, the planned Community Center at Kamakoa is relatively small at 10,000 sf.

The Kamakoa project also does not include a gymnasium. Assuming a basic gymnasium with full-size basketball court and bleacher seating on both sides, plus locker rooms, restrooms, equipment room, and weights room, the structure might be in the range of 25,000 square feet. If the square foot construction cost is \$300 to \$400 per square foot, the cost would be in the range of \$7,500,000 to \$10,000,000 – not including land costs, design, permitting, or project management.

• **Intended Outcome:** Construction of a Waikoloa Village Community Center and Community Park will greatly enhance Waikoloa Village's sense of community, and will provide many recreational programs and opportunities for all age groups.

ACTION PROGRAM – NEW ELEMENTARY SCHOOL, MIDDLE SCHOOL AND HIGH SCHOOL

Current Status and the Need for Action

As previously noted, the population of Waikoloa Village will continue to grow, and so there will be the need for at least one additional Elementary School, a Middle School, and eventually a High School. These schools are very important for this growing community, both as educational institutions and as strong signs of community identity and strength. The need for a Middle School will be met by expansion of the existing Elementary School to serve grades 6, 7, and 8, and the eventual conversion of this school to a full Middle School campus.

The CDP addresses possible site locations for these longer-range school needs. Some people have said: "The CDP is a County Plan. The schools are State schools, so why is the CDP addressing schools? The County has no say in the planning and construction of these State schools." This comment is not unreasonable. However, the Community can, working with land owners and County planners, preliminarily locate preferred sites for future schools, with reference to population centers, roadways, environmental constraints, and other factors.

The overall strategy for the CDP is thus to preliminarily locate sites for future schools that would best serve both the existing and future residents of Waikoloa Village. The Action Steps for this strategy are thus as follows:

- Who should take the lead? The initial identification of potential school sites will be done
 through the CDP process, with advice and input from the Waikoloa Village community
 members.
- What needs to be done? Some basic criteria for site sizes and site locations should be established. As of June 2008, the DOE has a new policy that provides size ranges for schools:

Elementary School

Site Size: (400 to 750 students) 8 to 15 useable acres.

Site Location: Not fronting on a highway or regional arterial roadway. Preferably fronting on a local collector road, in a residential neighborhood, with good access via local streets for cars and safe sidewalks and/or paths for children walking or bicycling to school.

The Elementary School site at the Kamakoa Workforce Housing Project is about 12 acres in size; with frontage on the "loop road" that provides access to the various neighborhoods within the project. The loop road and a system of sidewalks and recreational paths provide adequate and safe access to this site. The Elementary School at Kamakoa, together with the existing Elementary School/Middle School, will provide for the community's needs until such time as the Elementary School/Middle School is converted to a full Middle School campus.

Eventually, then, a second Elementary School site with similar characteristics needs to be located. Potential Elementary School sites include: (1) WVA land in the vicinity of the Castle and Cooke "Wehilani Kai" housing project and (2) land near the proposed small commercial center for the Waikoloa Heights project.

Note that the DOE currently has a second Waikoloa Elementary School programmed to open in 2014.

Middle School

Site Size: (500 to 1000 students) 15 to 20 useable acres.

Site Location: Preferably located with frontage on a major local collector street, but not on a highway or regional arterial road; at the edge of but not contained within a residential neighborhood.

The existing Waikoloa Elementary and Middle School, including its fairly large parking areas, currently occupies about six acres of land, not including the recently completed 3acre park. There remain approximately 14 acres that were originally intended for a future Waikoloa Middle School. However, the current plan is now to eventually convert the existing Elementary School to a Middle School. The total site size for the Middle School would thus be about 23 acres, which is within the current DOE site size standards. The site fronts on Paniolo Avenue, which is currently the primary collector street for Waikoloa Village. In the long range, however, Paniolo Avenue may become a regional arterial roadway, in which case traffic conditions in the vicinity of this school site may eventually be a problem.

Note: Currently, the DOE has a "Waikoloa Middle School" programmed for opening in 2018.

High School

Site Size: (800 to 1600 students) 45 to 55 useable acres

Site Location: Preferably located with frontage on a major local collector street or regional arterial road, but not on a highway; at the edge of but not contained within a residential neighborhood. Could be located between a residential neighborhood and a commercial or industrial area. For Waikoloa Village, a High School site with frontage on Waikoloa Road or on the planned "Second Access Road" would be preferred.

Currently, the DOE does not have a Waikoloa High School programmed.

Preliminary locations for a possible High School include: (1) Waikoloa Mauka lands in the vicinity of the existing Waikoloa Stables, (2) WVA lands on the north side of Waikoloa Road and just below the Wehilani Kai project, (3) a site within the Bridge 'Āina Lea project.

South Kohala CDP November, 2008 **FINAL**

Page 111

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