

IX. FORECAST

As seen earlier, the cycle for both the economy and real estate is coming off of a dramatic fall-off in overall activity and in values. Going forward, we believe the markets will right themselves and the county will resume the normal pattern of multi-year periods of both economic growth and job and personal income expansion. In turn, this will lead to housing demand. As seen in the past, the housing market will begin to overheat, manifested by rising housing prices that outrun people's rising incomes. This will lead again to an affordable housing 'crisis' – where demand outstrips supply. A major part of this problem, one of the county's own making, is that there will be limited amounts of land suitable and zoned for housing.

Given this, we believe the development this project will contribute to the satisfaction of housing demand, that has been deep and persistent, from both off-shore and on-island. We also believe that the development will be successful, particularly so in light of the coming up cycle in the housing market. Finally, the historically low level of permitting activity indicates there will little or no competitive interference coming in the short run from other housing development on the island.

The following table describes the potential pricing at the retail level for each product type in the development (note that, in the eventuality that some or all of the house/lot package units are sold as simple home sites, the prices will be lower, as reflected in the final column below).

KAPAA HIGHLANDS PRODUCT SALES PRICE PROJECTION

Housing Produced	Total Units	Retail Price Per Unit	Home Site Only Prices
A House Lot Package, Large Lots (10,000 sf)	36	\$800,000-\$950,000	\$266,000-\$316,000
A House Lot Package, Medium Lots (7,500 sf)	50	\$650,000-\$700,000	\$216,000-\$233,000
Multi-Family Dwellings (4 Plex, 8 DU/Ac)	500	\$250,000-\$350,000	
Affordable Housing Dwellings (12 DU/Ac)	183	\$125,000-\$175,000	

Given that these prices, particularly the affordable ones, are below the historical trend for housing, we expect that sales will start up strongly. We expect them then to hold this momentum over the first three years, coinciding with the market's expansion. Thereafter, they will experience a gradual fall-off, coinciding with the downturn in the cycle. After that, the market will recover, as will sales of the final units.

KAPAA HIGHLANDS PRODUCT CLOSING PROJECTION

Product	2016	2017	2018	2019	2020	2021	2022	2023
Large Lot Homes	11	9	9	7				
Medium Lot Homes	15	15	14	6				
Multi-Family Units	90	100	90	70	50	30	30	40
Affordable Housing Units	40	40	40	35	28			

Exhibit B

Kapa'a Highlands II Sustainability Plan

Kapa'a Highlands II Sustainability Plan

Table of Contents

Kapa'a Highlands II Sustainability Plan



Chapter	Page Number
1. Introduction	1
2. Sustainability Programs and Plans	10
3. Natural and Cultural Resources	17
4. Consistency with Regional Land Use Planning	18
5. Sustainable Design Features	20
6. Transportation	28
7. Economic Opportunities	30
8. Open Space and Parks	31
9. Water Management	32
10. Energy Management	35
11. Health and Active Lifestyles	37
12. Education	39
13. Housing	40
14. Social Sustainability	43

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Table of Contents

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Kapa'a Highlands II Sustainability Plan

Kapa'a Highlands II Project Information

Kapa'a Highlands II is a proposed development of a mix of single-family and multi-family residential, market and affordable rate homes. This 163-acre Ocean View "Planned" community is positioned to be the pride of Kapa'a. The development seeks to fill the housing needs of Kapa'a within the Urban Center of the district. Situated in close proximity to schools and commercial areas, Kapa'a Highlands II is proposed to be a sustainable community that preserves the rural character of Kapa'a while meeting its growing housing needs.

Kapa'a Highlands II has received letters of support from the County Mayor, County Planning Department and County Housing Department. Letters of approval have been received from the County Department of Public Works regarding wastewater, State Department of Transportation and the County Water Department.

Project Name:	Kapa'a Highlands Phase II
Location:	Wailua, Kaua'i, Hawai'i
TMK:	(4) 4-3-003:001
Total Area:	163-acres
Existing Use:	Vacant, undeveloped, former sugarcane land
County Zoning:	Agriculture
General Plan Land Use Designation:	Urban Center
State Land Use:	Agricultural
Approvals Required:	LUC Boundary Amendment; County Class IV Zoning & Use Permits; County Council Approval for Zoning Change; Building Permits
Project Components:	Mix of single-family and multi-family residential. Approximately 69-acres subdivided into: <ul style="list-style-type: none">• 86-single family (lots ranging from 5,000 to 8,000 SqFt.)<ul style="list-style-type: none">◦ \$180,000.00 to \$250,000.00• 683-multi-family (lots from 1-5 acre parcels)<ul style="list-style-type: none">◦ \$220,000.00 to \$450,000.00• Totals above include – 167-affordable units on site<ul style="list-style-type: none">◦ \$189,000.00 to \$363,000.00 Open space encompassing 14.3-acres including: <ul style="list-style-type: none">• 3.1-acre park adjacent to Kapa'a Middle School<ul style="list-style-type: none">◦ Relocation of County Swimming Pool• Greenways surrounding development Commercial Areas totaling 1.4-acres <ul style="list-style-type: none">• Stores, personal services• Land for police/fire sub-stations

Kapa'a Highlands II Sustainability Plan

Project

Components:

Infrastructure Improvements:

Water:

- Contributions to repairs of Kapa'a Sewer Treatment Plant
- Water Master Plan approved by County Water Department
- Well on site to be dedicated to County Water Department

Transportation:

- Dedication of Kapa'a By-Pass Road to the State
- Complete multi-modal roadway running thru the property
- Bus stops located along roadway
- Bike/Walking path



Aerial Image Overlooking Kapa'a Highlands II Project Area



Kapa'a Highlands II Sustainability Plan

This Kapa'a Highlands II Sustainability Plan is a comprehensive set of goals, strategies and actions focused on improving environmental quality, economic strength and social benefit within the Kapa'a Highlands II project, as well as the broader community.

This Plan serves as a roadmap guiding Kapa'a Highlands II toward a more sustainable future, with implementation of actions through a comprehensive, inclusive stakeholder process.

Before discussing the global context of "sustainability," we explore the Hawaiian view of "āina" – core to the term "sustainability."

In a traditional Hawaiian context, nature and culture are one and the same; there is no division between the two. The wealth and limitations of the land and ocean resources gave birth to and shaped the Hawaiian worldview. In Hawaiian culture, natural and cultural resources are one and the same.

All forms of the natural environment, from the skies and mountain peaks, to the watered valleys and lava plains, and to the shoreline and ocean depths are believed to be embodiments of Hawaiian gods and deities. (Maly)

'Āina – That Which Sustains the People

(Context, here, primarily provided from writings of Kepa Maly)

The 'āina, that which feeds, nourishes and sustains life (in English referred to as "land"), wai (water), kai (ocean), and lewa (sky) were the foundation of life and the source of the spiritual relationship between people and their environs. Hawaiian mo'olelo, or traditions, express the attachment felt between the Hawaiian people and the earth around them.

In any discussion of Hawaiian land - 'āina, that which sustains the people - and its place in culture, it is also appropriate to briefly discuss traditional Hawaiian land terms, as the terms demonstrate an intimate knowledge of the environment about them. In the Hawaiian mind, all aspects of natural and cultural resources are interrelated. All are culturally significant.

Hawaiian culture revolves around the value of "aloha 'āina" or love of the land. This love is not a passing sentiment, a summer fling or a fair weather affair. It is a deep-seated commitment to the wellbeing of the earth, which sustains us like a parent.

The Hawaiian concept of malama 'āina (literally, caring for or living in harmony with the land,) demands conservation, sustainable use and enhancement of the local, regional and global environment. By simply taking care and respecting the land, it will sustain life. This straightforward relationship has been honored for thousands of years, since the Polynesians followed the stars to the shores of Hawaii.

The traditional land use in the Hawaiian Islands evolved from shifting cultivation into a stable form of agriculture around 1200 AD (Kirch, 2000). Stabilization required a new form of land use. It is widely believed 'Umi a Līloa, the ruler of the Island of Hawai'i, was the first ruler to create the ancient Hawaiian land division, according to a chiefly management system, nearly 600 years ago.

Kapa'a Highlands II Sustainability Plan

This was the *ahupua'a* land use system, which consisted of vertical landscape segments from the mountains to the near-shore ocean environment, and into the ocean as deep as a person could stand in the water (Isabella Aiona Abbott).

For hundreds of years since, on the death of all *mō'ī* (kings or queens), the new monarch re-divided the land, giving control of it to his or her favorite chiefs. The common people never owned or ruled land.

In the term *ahupua'a*, the words *ahu* (stone altar or stone mound) and *pua'a* (pig) are combined. The *pua'a* was a carved wooden image of a pig head. These stone altars served as border markers and deposition places for offerings to the agricultural god *Lono* and a high chief (*ali'i nui*), who was the god's representative.

Each *ahupua'a* in turn was ruled by a lower chief, or *ali'i 'ai*. He in turn appointed a headman, or *konohiki*. The *konohiki* served as general manager responsible for the use of an *ahupua'a* as a resource system. He in turn was assisted by specialists, or *luna*. For example, the *luna wai* was responsible for the fresh water flow and irrigation system (Kamehameha Schools, 1994).

Manageable parcels of land would typically run *mauka* (upland) to *makai* (toward to ocean) and would be marked with stonewall alignments. Tenants cultivated smaller crops for family consumption, to supply the needs of chiefs and provide tributes.

Kapu (restrictions/prohibitions) were observed as a matter of resource and land management among other things. Access to resources was tied to residency and earned as a result of taking responsibility to steward the environment and supply the needs of *ali'i*. The social structure reinforced land management.

Sustainability – United Nations Context

In 1983, the United Nations Secretary General invited Norwegian Prime Minister Gro Harlem Brundtland to chair a World Commission on Environment and Development. The Report of the Brundtland Commission, *Our Common Future*, was transmitted to the General Assembly as an Annex to *document A/42/427 - Development and International Co-operation: Environment*, in 1987

Chapter 2, "Towards Sustainable Development" of the Brundtland "Our Common Future" defines "sustainable development" as:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

In its broadest sense, the strategy for sustainable development aims to promote harmony among human beings and between humanity and nature.

Kapa'a Highlands II Sustainability Plan

Sustainability in Hawai'i (Hawai'i 2050)

The following definition, vision and guiding principles are incorporated in the Hawai'i 2050.

Definition:

A Hawai'i that achieves the following:

- Respects the culture, character, beauty and history of our state's island communities
- Strikes a balance between economic, social and community, and environmental priorities
- Meets the needs of the present without compromising the ability of future generations to meet their own needs

Vision:

Living responsibly and within our own means is top-of-mind for all individuals and organizations. We learn about the virtues and values of a sustainable Hawai'i. As a result, our goals of economic prosperity, social and community well-being and environmental stewardship are in balance and achieved.

Hawai'i 2050 Guiding Principles of Sustainability

- Balance economic, social, community and environmental priorities.
- Respect and live within the natural resources and limits of our islands.
- Achieve a diversified and dynamic economy.
- Honor the host culture.
- Make decisions based on meeting the present needs without compromising the needs of future generations.
- Principles of the *ahupua'a* system guide our resource management decisions.
- Everyone — individuals, families, communities, businesses and government — has a responsibility for achieving a sustainable Hawai'i.

Sustainability in Hawai'i means achieving a quality of life that achieves the following goals:

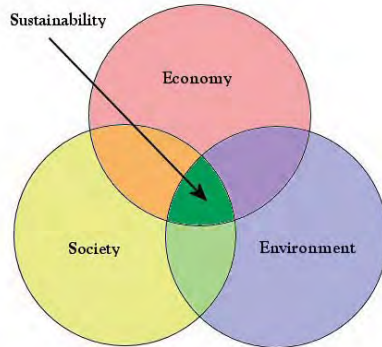
- It emphasizes respect for the culture, character, beauty and history of our state's island communities.
- It strikes a balance between economic prosperity, social and community well-being, and environmental stewardship.
- It meets the needs of the present community without compromising the ability of future generations to meet their own needs.

Typically, "sustainability" is depicted in a three-themed Venn diagram (noted below,) highlighting the economy, environment and society. The achievement of sustainable development requires integration of these components at all levels.

Kapa'a Highlands II Sustainability Plan

With respect to Kapa'a Highlands II, sustainable development is achieved when it is:

- economically feasible in order to be successful as a development, while also providing for economic opportunities for future generations who reside, work or visit Kapa'a Highlands II
- protecting and preserving the environment, for today and tomorrow, serving as a model for others to follow
- addressing the needs of a wide variety of people, including their cultural values, as well as providing opportunities for people to interact, grow and learn together



Sustainability is not contradictory to growth, profit and development. Sustainability means that we plan to our limits; sustainable community development draws from and gives back to local strengths, resources and uniqueness. Local development can become more sustainable by having a better environmental, economic and social balance.

Ultimately, a goal is to meld Hawaiian traditional wisdom with modern sustainability concepts and take an integrated approach in the design and operation at Kapa'a Highlands II. This plan was created to highlight the actions of the Kapa'a Highlands II development in terms of sustainability.

In developing this plan, a variety of recognized programs and plans were reviewed, summarized and their recommendations were incorporated into this plan. These include:

- Smart Growth
- SmartCode
- Hawai'i 2050 Sustainability Plan
- OEQC Sustainable Building Design Guidelines
- Hawaii BuiltGreen Program
- US Green Building Council Leadership in Energy and Environmental Design (LEED)
- Energy Star Program
- Whole Building Design Guide (WBDG,) of the National Institute of Building Sciences
- EPA Low Impact Development
- One Planet Living

Kapa'a Highlands II Sustainability Plan

Further discussion on these programs and plans follow in the next Chapter of this Kapa'a Highlands II Sustainability Plan. Following this are chapters addressing issue-specific sustainability concerns. These include:

- **Natural and Cultural Resources:** Protecting and preserving archaeological sites, trails and dryland forest, for present and future generations
- **Land Use:** Focuses on consistency with local land use planning, fulfilling the community's vision for development in the future
- **Design Features:** Incorporating design features to fit development into natural features, protecting the resources, while taking advantage of natural elements
- **Transportation:** Focuses on sustainable modes of transportation and an improved infrastructure including: multi-modal bicycle, pedestrian and vehicular infrastructure, complete streets, etc
- **Economic Opportunities:** Encourages a vibrant economy through diversity of employment and sustainable business opportunities
- **Open Space and Parks:** Encourages protection of urban open spaces by focusing on the urban landscaping, green spaces and mixed-use development and recreational opportunities
- **Water Management:** Focuses on reducing and conserving water use, as well as minimizing impacts to nearby ecosystems from source to stormwater systems
- **Energy Management:** Encourages energy conservation, energy efficiency and renewable energy
- **Health:** Encourages healthy lifestyles through places to walk and recreate, as well as provide state of the art medical facilities to address community needs
- **Education:** Encourages understanding and practice of sustainable lifestyles, as well as providing opportunities for life-long learning
- **Housing:** Responds to the market and demographic trends and community needs, providing a broad range of housing types and price points

Anticipated beneficial impacts from the Kapa'a Highlands II project include the following:

- Provision of 86 single family homes and 683 multi-family units
- Increased housing choices, including affordable housing
- Increase housing inventory to meet future demands
- Provision of 3.1-acre park with area for relocation of Kapa'a County swimming pool
- Planned growth in an area designated for urban growth by the General Plan of the County of Kaua'i
- Provision of a pedestrian and transit-friendly community

Kapa'a Highlands II Sustainability Plan

Kapa'a Highlands II will be a sustainable community and will incorporate the following:

Sustainability Programs and Plans: Kapa'a Highlands will incorporate the core principles of the various sustainability programs and plans.

Natural and Cultural Resources: No archaeological sites are known to exist on the property. Should any archaeologically significant artifacts, bones, or other indicators be uncovered during construction, Kapa'a Highlands II is committed to strict compliance with State laws and rules.

Land Use: Kapa'a Highlands is consistent with local land use plans including the General Plan of the County of Kaua'i, the Kapa'a Town Development Plan and the Kapa'a-Wailua Basin Community Plan.

Design Features: Kapa'a Highlands II will include sustainable design features including strategies to reduce solar heat gain through roofs, walls and windows; using site planning and landscaping to improve natural ventilation; daylighting design; and energy efficient light fixtures.

Transportation: Kapa'a Highlands II will incorporate bus stops into its road system; multi-modal interconnected roads; and complete streets design.

Economic Opportunities: Kapa'a Highlands proposes two areas for commercial uses which will provide a variety of job opportunities; construction and construction-related employment will have direct beneficial impact on the local economy during construction.

Open Space and Parks: Kapa'a Highlands II proposes open space and open greenway areas encompassing 14.3-acres including a 3.1-acre park for the proposed relocation of the Kapa'a county swimming pool.

Water Management: Kapa'a Highlands II will install water efficient fixtures, appliances and high efficiency toilets to reduce indoor water use.

Energy Management: Kapa'a Highlands II will incorporate energy conservation and efficiency measures; solar energy for water heating; encourage photovoltaic systems and other renewable energy sources.

Health: Kapa'a Highlands II's layout and design will create an opportunity for both residents and the community to have a positive effect on their health through walkable and bikable transportation options.

Education: Kapa'a Highlands II will coordinate with the DOE to ensure that the facility assessment policy is addressed. In addition, a 3.1-acre park will be included in the plan and the Kapa'a county swimming pool will be relocated within the park.

Housing: Kapa'a Highlands II conforms to the Kaua'i County Affordable Housing Ordinance No. 860 and offers a variety of housing types that will address a portion of the housing needs of the island.

Social: Kapa'a Highlands II promotes social sustainability through socially-focused actions that will support quality of life, sense of place and community livability for all residents and the community.

Kapa'a Highlands II Sustainability Plan

Sustainability Programs and Plans



In developing this Kapa'a Highlands II Sustainability Plan, a variety of recognized sustainability programs and plans were reviewed, summarized and incorporated into this plan. In part, the recommendations from these programs and plans serve as guides to the sustainability actions noted in this Plan.

These include:

- Smart Growth
- SmartCode
- Hawai'i 2050 Sustainability Plan (Hawai'i 2050)
- OEQC Sustainable Building Design Guidelines
- Hawaii BuiltGreen Program
- US Green Building Council Leadership in Energy and Environmental Design (LEED)
- ENERGY STAR Program
- Whole Building Design Guide (WBDG,) of the National Institute of Building Sciences
- EPA Low Impact Development
- One Planet Living
- Complete Streets

In this chapter, these various programs and plans are summarized.

As you will see, there are several consistent principles and themes that run through the various programs and plans. While some are broad-based and include several of these, others are focused on single issues.

Following are some of the consistent messages found in these programs and plans:

- Soft touch on the land
- Respect and protection of natural and cultural resources
- Use of natural elements (shading, ventilation, lighting, etc)
- Diversity of land uses, housing types, prices
- Live, work, play, shop and learn
- Walking, bicycle and transit transportation focused
- Reuse and minimization of waste
- Renewable and efficient electric
- People and community focused

Kapa'a Highlands II will implement, to the extent feasible and practicable, measures to promote energy conservation, sustainable design, environmental stewardship and protection of the natural and cultural resources into the project. These actions are in part, based on the recommendations noted in the following sustainability programs and plans.

Kapa'a Highlands II Sustainability Plan



Smart Growth Network

In 1996, the U.S. Environmental Protection Agency joined with several non-profit and government organizations to form the Smart Growth Network. The Network was formed in response to increasing community concerns about the need for new ways to grow that boost the economy, protect the environment, and enhance community vitality.

Smart growth refers to the management of growth to make it possible “for communities to grow in ways that support economic development and jobs; create strong neighborhood with a range of housing, commercial, and transportation options; and achieve healthy communities that provide families with a clean environment.” (Smart Growth Network)

There are 10 accepted principles that define Smart Growth

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions



SmartCode

The SmartCode is a form-based code that incorporates Smart Growth and New Urbanism principles. It is a unified development ordinance, addressing

development at all scales of design, from regional planning on down to the building signage.

The SmartCode is also a transect-based code. A “transect” is usually seen as a continuous cross-section of natural habitats for plants and animals, ranging from shorelines to wetlands to uplands. It is based on the rural-to-urban transect rather than separated-use zoning, thereby able to integrate a full range of environmental techniques.

The SmartCode is a model transect-based planning and zoning document based on environmental analysis. It addresses all scales of planning, from the region to the community to the block and building. The SmartCode is distributed by the nonprofit Center for Applied Transect Studies (CATS.)

Kapa'a Highlands II has incorporated the SmartCode principles and transects into its layout and design.

Kapa'a Highlands II Sustainability Plan



Hawai'i 2050 Sustainability Plan (Hawai'i 2050)

The Hawai'i State Plan, embodied in Chapter 226, Hawai'i Revised Statutes (HRS), serves as a guide for goals, objectives, policies, and priorities for the State.

The Hawaii State Planning Act (HRS 226) states that the State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in six major areas of statewide concern which merit priority attention: economic development, population growth and land resource

management, affordable housing, crime and criminal justice, quality education and principles of sustainability.

In 2005, the legislature authorized the creations of a task force to review the Hawaii state plan and the State's planning process and to prepare the Hawai'i 2050 Plan. The creation of the Hawaii 2050 sustainability plan raises questions about the long-term limits of growth in the State and highlights the need to begin planning and acting to assure Hawaii's future. Thus, the objectives of the Hawaii 2050 sustainability plan focuses on the revitalization of the State's long-term planning process to better guide the future development of Hawaii.

The Plan offers detailed strategic actions and indicators to serve as a guide towards meeting the Plan's sustainability goals. The Plan incorporates tangible targets and benchmarks. Priority actions for 2020, to be addressed immediately, include:

1. Increase affordable housing opportunities for households up to 140% of median income.
2. Strengthen public education.
3. Reduce reliance on fossil (carbon-based) fuels.
4. Increase recycling, reuse and waste reduction strategies.
5. Develop a more diverse and resilient economy.
6. Create a sustainability ethic.
7. Increase production and consumption of local foods and products, particularly agriculture.
8. Provide access to long-term care and elderly housing.
9. Preserve and perpetuate our Kanaka Maoli and island cultural values.

In 2011, the State established sustainability as a state priority by incorporating the Hawaii 2050 sustainability plan definitions, guiding principles and goals, into chapter 226, Hawaii Revised Statutes (the Hawaii state planning act).

"Sustainability" definition was added to the Planning Act as: “achieving the following:

- (1) Respect of the culture, character, beauty, and history of the State's island communities;
- (2) Striking a balance between economic, social, community, and environmental priorities; and
- (3) Meeting the needs of the present without compromising the ability of future generations to meet their own needs."

The Act also added “principles of sustainability” as one of the six major areas of statewide concern which merit priority attention, economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education and principles of sustainability.”

Kapa'a Highlands II Sustainability Plan



OEQC's Sustainable Building Design Guidelines

The Environmental Council, as part of a "Planner's Checklist," adopted Guidelines for Sustainable Building Design in Hawai'i (October 13, 1999.) These guidelines do not constitute rules or law. A sustainable building is built to minimize energy use, expense, waste and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawai'i's residents and visitors today without compromising the needs of future generations. Compared to conventional projects, a resource-efficient building project will:

1. Use less energy for operation and maintenance
2. Contain less *embodied* energy (i.e. locally produced building products often contain less *embodied* energy than imported products because they require less energy-consuming transportation.)
3. Protect the environment by preserving/conserving water and other natural resources and by minimizing impact on the site and ecosystems
4. Minimize health risks to those who construct, maintain and occupy the building
5. Minimize construction waste
6. Recycle and reuse generated construction wastes
7. Use resource-efficient building materials (e.g. materials with recycled content and low embodied energy, and materials that are recyclable, renewable, environmentally benign, non-toxic, low VOC (Volatile Organic Compound) emitting, durable, and that give high life cycle value for the cost.)
8. Provide the highest quality product practical at competitive (affordable) first and life cycle costs.

In the design and construction of Kapa'a Highlands II, Three Stooges, LLC will seek to implement feasible measures to conform to these general guidelines.



Hawaii BuiltGreen Program

The Hawaii BuiltGreen Program is a statewide program to "incentivize" the designing and building of energy and resource efficient homes in Hawaii. Originally developed in 2000 by a public/private partnership between the State Dept. of Business, Economic

Development & Tourism (DBEDT), USDOE and five other partners. Now promoted by the State, BIA, Hawaii utility companies and other organizations.

Hawai'i BuiltGreen is a self-certification program administered by the Building Industry Association of Hawai'i, which is a professional trade organization affiliated with the National Association of Home Builders. This is a local initiative based on homegrown knowledge of professionals familiar with the unique conditions of Hawaii. The Hawaii BuiltGreen program focuses on design choices through:

- Protecting Site Features and Functions
- Energy Performance and Comfort
- Health and Indoor Air Quality
- Durability and Materials Conservation
- Environmentally-Friendly Home Operations

Kapa'a Highlands II Sustainability Plan



US Green Building Council

Leadership in Energy and Environmental Design (LEED)

The US Green Building Council's Leadership in Energy and Environmental Design (LEED) program is a voluntary green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Specific LEED programs include:

- Homes
- Neighborhood Development
- New Commercial Construction and Major Renovation projects
- Existing Building Operations and Maintenance
- Commercial Interiors projects

LEED for Homes is a voluntary rating system that promotes the design and construction of high performance "green" homes. A green home uses less energy, water and natural resources; creates less waste; and is healthier and more comfortable for the occupants.

LEED for Neighborhood Development is a collaboration between the U.S. Green Building Council, the Congress for the New Urbanism and the Natural Resources Defense Council. The LEED for Neighborhood Development Rating System integrates the principles of smart growth and green building into the first national standard for neighborhood design. LEED for Neighborhood Development recognizes development projects that successfully protect and enhance the overall health, natural environment and quality of life of our communities. The rating system encourages urban smart growth best practices, promoting the design of neighborhoods that reduce vehicle miles traveled and communities where jobs and services are accessible by foot or public transit.



ENERGY STAR Program

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy.

In 1992, the US Environmental Protection Agency (EPA) introduced ENERGY STAR as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first labeled products. Through 1995, EPA expanded the label to additional office equipment products and residential heating and cooling equipment. In 1996, EPA partnered with the US Department of Energy for particular product categories.

The ENERGY STAR label is now on major appliances, office equipment, lighting, home electronics, and more. EPA has also extended the label to cover new homes and commercial and industrial buildings.



**National Institute of Building Sciences
Whole Building Design Guide (WBDG)**

The goal of 'Whole Building' Design is to create a successful high-performance building by applying an integrated design and team approach to the project during the planning and programming phases. The WBDG program is a collaborative effort among federal agencies, private sector companies, non-profit organizations and educational institutions. In buildings, to achieve a truly successful holistic project, these design objectives must be considered in concert with each other:

- Accessible: to address the specific needs of disabled people.
- Aesthetics: the physical appearance and image of building elements and spaces
- Cost-Effective: weighing options during concepts, design development and value engineering
- Functional/Operational: spatial needs and requirements, system performance durability and efficiency
- Historic Preservation: whereby building elements and strategies are classifiable into preservation, rehabilitation, restoration or reconstruction.
- Productive: physical and psychological comfort—including air distribution, lighting, workspaces, systems, and technology.
- Secure/Safe: physical protection of occupants and assets from man-made and natural hazards.
- Sustainable: Pertains to environmental performance of building elements and strategies.



Land Use and Development Practices - Low Impact Development (LID)

Land use practices can improve air quality, reduce stormwater runoff, increase energy efficiency and reduce greenhouse emissions to improve the quality of life for citizens. LID is a land development approach that allows land to be developed but in a manner that helps lessen potential environmental impacts. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product.

By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. LID has been characterized as a sustainable stormwater practice by the Water Environment Research Foundation and others.

In general, implementing integrated LID practices can result in enhanced environmental performance while at the same time reducing development costs when compared to traditional stormwater management approaches. LID techniques promote the use of natural systems, which can effectively remove nutrients, pathogens and metals from stormwater.

Conservation designs can be used to minimize the generation of runoff by preserving open space. Examples of Conservation Design include:

- Cluster development
- Open space preservation
- Reduced pavement widths (streets, sidewalks)
- Shared driveways



One Planet Living

One Planet Living is a vision of a sustainable world, in which people everywhere can enjoy a high quality of life within the productive capacity of the planet, with space left for wildlife and wilderness. Organizations around the world are using the one planet living approach to take measurable steps towards genuine sustainability. From zero carbon buildings to procurement policies that support the green economy, one planet living solutions are cost-effective, creative, inspirational and replicable.

- Zero Carbon - Making buildings more energy efficient and delivering all energy with renewable technologies
- Zero Waste - Reducing waste, reusing where possible, and ultimately sending zero waste to landfill
- Sustainable Transport - Encouraging low carbon modes of transport to reduce emissions, reducing the need to travel
- Sustainable Materials - Using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources
- Local and Sustainable Food - Choosing low impact, local, seasonal and organic diets and reducing food waste
- Sustainable Water - Using water more efficiently in buildings and in the products we buy; tackling local flooding and water course pollution
- Land and Wildlife - Protecting and restoring existing biodiversity and natural habitats through appropriate land use and integration into the built environment
- Culture and Heritage - Reviving local identity and wisdom; supporting and participating in the arts
- Equity and Local Economy - Creating bioregional economies that support fair employment, inclusive communities and international fair trade
- Health and Happiness - Encouraging active, sociable, meaningful lives to promote good health and well being



Complete Streets

Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Complete Streets make it easy to cross the street, walk to shops and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.

By adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability or mode of transportation. This means that every transportation project will make the street network better and safer for drivers, transit users, pedestrians and bicyclists – making your town a better place to live.

Kapa'a Highlands II Sustainability Plan

Natural and Cultural Resources



The preservation of the natural and cultural resources is essential for a prosperous and sustainable future. Kapa'a Highlands II holds respect for the culture and the environment and will interlink natural features and cultural features as core components of the community. Archaeological and cultural sites will be protected and maintained with appropriate treatment and buffers from adjacent uses, as necessary.

No archaeological or cultural historic sites are known to exist on the property.

Brief discussions separately with historians of the subject area, Randy Wichman, Walter Smith and Albert Fukushima, concluded that the subject property has been in sugar cultivation since the 1800s until the early 1990s.

Albert Fukushima, who was employed by Lihue Plantation and worked in the subject area, said that no evidence of artifacts, bones, or other indicators of previous historic on-site activity were uncovered during the cultivation of sugar. Randy Wichman and Walter Smith concurred that the subject land was consistently cultivated for sugar for nearly a hundred years.

In 1995 SHPD stated for the "Site Selection EIS" for the adjacent Kapa'a Middle School that the site may not be Archaeological or Historically rich because of the consistent cultivation of sugar for nearly a hundred years.

In the late 1999, the State Historic Preservation Division (SHPD) issued a letter of "no significance" to the potential developer at that time.

There exists sparingly, evidence of inactive sugar irrigation ditches. Nearly all have lost their banks and flattened out. Currently, SHPD has requested that the applicant record the locations of the remaining remnants of the former irrigation ditches prior to the development stages. The Applicant is committed to conducting an Archaeological Inventory Survey at the time of design and development phase in order to properly record the remains of the plantation irrigation ditches.

Should any archaeologically significant artifacts, bones, or other indicators of previous historic on-site activity be uncovered during construction, the Applicant is committed to their treatment being conducted in strict compliance with the requirements of SHPD.

Additionally, whenever existing rock walls must be removed, the rocks from these walls will be set aside and reused in the construction of new screen, buffer and retaining walls built within Kapa'a Highlands II. Whenever feasible, rocks from Kapa'a Highlands II will be used for such walls (minimize importation of rock from offsite).

Greenbelts

Greenbelts are undeveloped areas that surround the developed areas. Greenbelt is a strategic planning tool to prevent urban sprawl by keeping land permanently open. The purpose of the Greenbelt is to prevent urban sprawl, prevent neighboring towns from merging into one another, and to preserve the setting and the character of the area. Approximately 14.3-acres are proposed for open greenway areas.

Kapa'a Highlands II Sustainability Plan

Consistency with Regional Land Use Planning



Consistency with local land use planning documents is an essential element of sustainability. The local plans articulate and illustrate the community's vision. Without consistency with that vision, a development project cannot be sustainable.

Two primary planning documents address land use development in Kapa'a, the General Plan of the County of Kaua'i and the Kapa'a-Wailua Basin Community Plan.

Following are brief summaries of each.

The General Plan of the County of Kaua'i (General Plan)

The General Plan of the County of Kauai ("General Plan") was adopted in 1971 and updated in November 2000. The General Plan is a statement of the County's vision for Kaua'i and establishes strategies for achieving that vision. Section 7-1.2 of the amended Chapter 7 of the Kauai County Code states:

Pursuant to the provision of the Charter for the County of Kaua'i, the General Plan sets forth in graphics and text, policies to govern the future physical development of the county. The General Plan is intended to improve the physical environment of the County and the health, safety and general welfare of Kaua'i's people.

The General Plan states the County's vision for Kaua'i and establishes strategies for achieving that vision. The strategies are expressed in terms of policies and implementing actions. They may be augmented and changed as new strategies are developed.

The General Plan is a direction-setting policy document. It is not intended to be regulatory. It is intended to be a guide for future amendments to the lands regulations and to be considered in reviewing specific zoning amendment and development applications.

The vision, the maps and text policies, and the implementing actions are intended to guide the county actions and decisions. In addition, the maps and text policies are intended to guide the County in specific types of actions: making revisions to land use and land development Regulations; deciding on zoning changes; preparing and adopting Development Plans and Public Facility Plans; and preparing and adopting capital improvement plans.

The General Plan contains six major themes, each with various policies for implementation. The major themes are as follows:

1. Caring for Land, Water and Culture
2. Developing Jobs and Businesses
3. Preserving Kaua'i's Rural Character
4. Enhancing Towns & Communities and Providing for Growth
5. Building Public Facilities and Services
6. Improving Housing, Parks and Schools

Kapa'a Highlands II Sustainability Plan

In particular, the proposed reclassification of the Property responds and conforms to Theme No. 6. Market studies have shown that the population growth and correlating need and demand for housing is extremely high on Kaua'i.

The proposed reclassification, which will allow residents to purchase an affordable house and lot as well as allow other residents to purchase a lot to design and build their own homes, will present an opportunity to address the critical community need for residential housing. It should also be noted that the proposed development will assist in maintaining a viable economy as construction-related employment opportunities for residents would be generated.

Kapa'a-Wailua Basin Community Plan

The Kapa'a-Wailua Basin community plan outlines the regional issues and opportunities that will be subjects for future community planning. A "Build-Out Analysis" of the Kapa'a-Wailua Basin was prepared in the General Plan Update. As of 1998, this area had an estimated 4,700 dwelling units, making it the largest residential community on Kauai.

Based on the General Plan Land Use Map designations, the analysis found that an additional 4,000 units could be developed if the General Plan-designated lands were fully zoned, subdivided and built out. About 2,400 more units could be built in Urban Residential areas, about 500 more in Rural Residential areas and approximately 1,100 more units in the Agricultural areas. This would increase the housing units and population of the area by 85%.

The "Build-Out Analysis" specifically included the subject property as an "expansion area". The new General Plan Land Use Map designates the subject property as Urban Center.

The Kapa'a Highlands II project conforms to and implements the policies of the Kaua'i General Plan by developing within the designated Urban District, contiguous to Kapa'a town and its neighboring residential community.

Kapa'a Highlands II Sustainability Plan

Sustainable Design Features



Thoughtful planning of site, neighborhood and improvements design, incorporating mixed-use land uses, walkable streets, encouraging walking, bicycling and public transportation, and respect for the natural and cultural features creates opportunities for more environmentally-responsible and sustainable development. These sustainable neighborhoods are beneficial to the community, the individual and the environment.

Several sustainability programs and plans (noted previously in Chapter 2) identify and address a wide variety of design features that may be incorporated into a development project to enhance its sustainability. These items design features include:

- **Site Planning**
 - Respect for the Land – Work with topography
 - Siting - Proximity to mass transit, shopping, employment centers, recreation, schools
 - Interconnectivity – Connection with neighbors, Multi-modal transportation (to be discussed in another section of this Plan)
 - Intensity of Layout – Village Center; Clustering into compact villages
 - Natural/Cultural Resources – Protection of natural and cultural resources (to be addressed in another section of this Plan)
- **Improvements Planning**
 - Alternatives – Provide a range of housing options at various price levels (to be discussed in another section of this Plan)
 - Orientation – Ventilation; Take advantage of natural air flow
 - Shading – Eave overhang; Vegetation
 - Landscaping – Native plants; Low irrigation
 - Energy Efficiency – (to be discussed in another section of this Plan)

The objectives of Kapa'a Highlands II are to create an attractive masterplanned residential community with a variety of housing opportunities and mixed uses, as well as recreational resources.

Site Planning

As a mixed-use community, the objectives of Kapa'a Highlands II are to:

- Create a diverse, sustained community of mixed uses, including residential, retail and commercial spaces, recreational spaces, and open space.
- Cultivate intrinsic respect for the land and natural surroundings, develop an inherent Hawaiian sense of place and nourish a sustaining living environment.
- Provide housing for the working families of Hawai'i nearby areas of workforce demand, resultantly improving overall quality of life through the reduction of commuting and facilitation of everyday function.
- Openly embrace a diversity of people and activities through offering mixed uses and housing types.
- Contribute to the social fabric of the community by providing infrastructure and facilities, and by including recreational, and civic sites.
- Engender and incorporate intelligent, planned sustainability by design.
- Emphasize non-vehicular transit for mainstream community-wide travel.

Kapa'a Highlands II Sustainability Plan

Kapa'a Highlands II is strategically located north of Kapa'a town. The Kapa'a By-Pass Road separates the Kapa'a town and the Kapa'a Highlands II development. Kapa'a Highlands II is on the north-west corner of the Kapa'a By-Pass Road and Olohena Road. Olohena Road runs along and adjacent to the east and north boundaries of the Property. The Kapa'a Middle School is located on the northern end of the Property fronted by Olohena Road. The area also has a long-standing and growing residential base.

This area will continue to be the focus of such development as the Island's population grows. This region is also the near commercial and industrial heart of Kaua'i, serving the needs of the visitor, residents and other industries of the western half of the Island.

Kapa'a Highlands II is a compact, mixed-use, master-planned community offering a wide range of housing types and affordability, and a variety of businesses and employment opportunities with supporting retail, commercial, infrastructure, recreational and open space uses.

The Project proposes to develop Phase II of Kapa'a Highlands into an approximately 97-acre single-family and multi-family residential subdivision. Approximately 69-acres will be subdivided into single family lots ranging from 5,000 to 8,000 square feet and multi-family lots from 1-acre to 5-acre parcels. A total of 683 multi-family units and 86 single family units are planned. Open space encompassing 14.3-acres will be developed and associated infrastructure (e.g., new roadways, utilities, drainage, wastewater). Affordable housing will be provided in accordance with County of Kaua'i requirements.

A 3.1-acre park is proposed adjacent to the existing Kapa'a Middle School. The park will have an area for the county's proposed relocation of the Kapa'a county swimming pool. A 0.4-acre parcel is proposed for commercial use. A country type store and small personal service types of use are anticipated. A remnant parcel of a one acre on the Makai side of the Kapa'a Bypass road is also proposed as commercial use or for sub-stations for the police and fire departments. Approximately 14.3-acres are proposed for open greenway areas.

The site is presently fallow, undeveloped, and predominantly vegetated with weeds. The undesirable dumping of old cars, appliances, rubbish associated with undeveloped lands continue to exist on the property. The proposed project will increase the productive use of the property and significantly upgrade the immediate vicinity.

The proposed development will have minimal impact in terms of agriculture. Although the Property was previously used as part of large scale agricultural activities, it is presently fallow, and undeveloped. With the closing of the sugar plantations on Kaua'i, close proximity to existing residential areas, and demand for affordable housing, large-scale agricultural operations were not deemed feasible.

Construction of the proposed development will involve grading, excavation and trenching of presently undeveloped areas within the project site. The project will require alteration of existing landforms to create more efficient land development areas. Appropriate engineering, design and construction measures will be undertaken to minimize potential erosion of soils during construction.

On-Site grading and infrastructure improvements and residential construction will result in an increase in dust, storm run-offs and noise. The prevailing trade wind pattern is from the north-east directions. Potential airborne matters will generally be carried in the south-west direction, away from the school and existing residential areas. However, on occasions, the westerly winds may carry the potential

Kapa'a Highlands II Sustainability Plan

airborne matters towards the school and existing residential neighborhoods. Construction noise relating to infrastructure installations will be expected.

In the short term, during construction, measures will be taken to minimize impacts such as increased dust, noise and traffic. Construction activities shall comply with the provisions of Hawaii Administrative Rules, S-11-60.11.33 on Fugitive Dust. Dust preventive measures will include;

- Planning of construction phases to minimize the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes and locating of potential dust-generating equipment in areas of the least impact.
- Provide adequate water source at the site prior to start of construction.
- Landscape and provide rapid covering of bare areas developed during construction.
- Minimize dust from shoulders and access roads.
- Provide dust control measures during weekends, after hours, and prior to daily construction.
- Control dust from debris being hauled away from the site.

A national Pollutant Discharge Elimination System (NPDES) general permit will be acquired prior to construction to minimize storm run-offs during construction.

Mitigation measures will be instituted following site-specific assessments, incorporating structural and non-structural BMPs such as minimizing soil exposure and implementing erosion control measures such as silt fences and sediment basins. Following construction, erosion is anticipated to decrease since the soils will have been graded, built over, paved over or landscaped. Landscaping in turn will provide erosion control. Mass grading of the development areas will be in compliance with the County of Kaua'i's grading ordinance requirements and will require NPDES permit from the State DOH for storm water construction activities, including BMPs to minimize off-site impacts.

The Property is encompassed by the Kapa'a By-Pass Road to the south and Olohena Road to the east and the north side. The by-pass road is owned by the Applicant and the Applicant intends to dedicate said road to the Department of Transportation (DOT) for continued public use.

There is a round-about located at the south east corner of Olohena Road and the Kapa'a By-Pass Road. Kuhio Highway is accessible from the Property by driving south on Olohena and Kukui Street approximately 0.5 mile. The project will have a complete multi-modal roadway from the Kapa'a By-Pass Road running north through the Property to Olohena Road. A couple of bus stops will be located along the roadway. A bike/walking path is proposed from the south of the property to the Kapa'a Middle School located on the North portion of the Property.

Improvements Planning

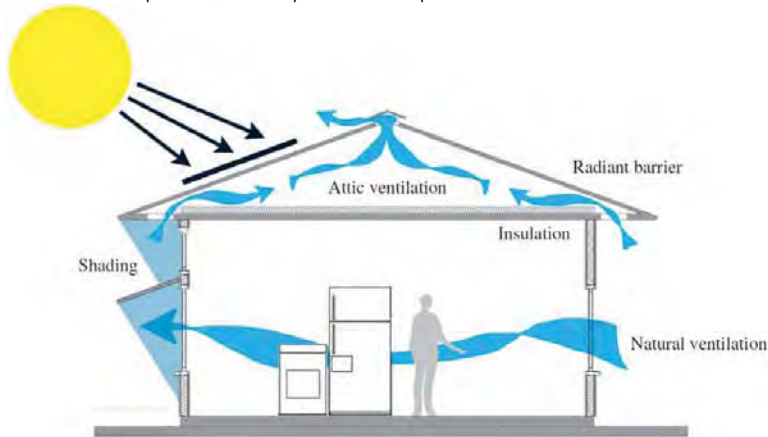
There are three major sources of unwanted heat in homes: direct solar impacts on a building and through windows and skylights; heat transfer and infiltration, of exterior high temperatures, through the materials and elements of the structure; and the internal heat produced by appliances, equipment and inhabitants.

Kapa'a Highlands II Sustainability Plan

The DBEDT Field Guide for Energy Performance, Comfort and Value in Hawaii Homes provides a number of recommended ways to incorporate effective design options to address home temperatures. These items to be considered in the development of Kapa'a Highlands II are summarized and illustrated below:

Design for Comfort and Value

- A. Control Heat Gain: Use strategies to reduce solar heat gain through roofs, walls and windows.
 1. Orient and arrange building to control heat gain
 2. Landscape and design outdoor surfaces to reduce air temperatures and glare; minimize paving area and use grassed and planted areas to provide lowered site temperatures, shade and evaporative cooling
 3. Shade roofs, walls and windows with:
 - a. Architectural elements such as eaves, awnings and carports, and
 - b. Window treatments such as blinds and shutters
 4. Use insulation and/or radiant heat barriers in roofs and walls exposed to the sun
 5. Use high performance windows (Low-e, spectrally selective, or tinted glazing) to keep solar heat out of interior spaces while admitting daylight
 6. Use light colored roofing and wall finishes
 7. Shade or insulate materials with high thermal mass, such as concrete floors, to avoid heat build-up and uncomfortably hot surface temperatures



- B. Use Natural Ventilation: Provide ample fresh air ventilation for living spaces and areas where hot air and humidity accumulate, such as attics, high ceiling spaces, kitchens, bathrooms and laundry areas.
 1. Orient buildings to maximize the cooling potential of prevailing winds and minimize morning and afternoon heat gain
 2. Design floor plans and opening placement and type to provide effective cross ventilation with good air circulation throughout room areas and at body level
 3. Provide generous screened openings well protected from the rain

Kapa'a Highlands II Sustainability Plan

4. Use architectural design elements such as vents and casement windows to improve interior air circulation
5. Enhance natural ventilation with fans as needed:
 - a. Use ceiling and whole house fans to provide comfort on warm, humid or still days
 - b. Use solar powered attic vent fans when appropriate and economically feasible



Shaded areas stay cooler

Consistent with the principles and recommendations noted in the DBEDT publication *Hawai'i Homeowner's Guide to Energy, Comfort & Value*, to the extent feasible and practical, Kapa'a Highlands II will incorporate the following:

Site Planning and Landscaping

Orientation of homes is important. Try to minimize the area of east- and west-facing walls and windows because they are difficult to shade from the sun.

Landscaping and the design of outdoor surfaces can reduce air temperatures and glare. Landscaping minimizes paving area provides lowered site temperatures, shade and evaporative cooling.

Low impact landscaping.

Selection and distribution of plants must be carefully planned when designing a functional landscape. Aesthetics are a primary concern, but it is also important to consider long-term maintenance goals to reduce inputs of labor, water, and chemicals. Properly preparing soils and selecting species adapted to the microclimates of a site greatly increases the success of plant establishment and growth, thereby stabilizing soils and allowing for biological uptake of pollutants. Dense, healthy plant growth offers such benefits as pest resistance (reducing the need for pesticides) and improved soil infiltration from root growth. Low impact landscaping can thus reduce impervious surfaces, improve infiltration potential and improve the aesthetic quality of the site.



Protect and retain existing landscaping and natural features. Select plants that have low water and pesticide needs, and generate minimum plant trimmings. Use compost and mulches. This will save water and time.

Examples of Low Impact Landscaping

- Planting native, drought tolerant plants
- Converting turf areas to shrubs and trees
- Reforestation
- Encouraging longer grass length
- Planting wildflower meadows rather than turf along medians and in open space

Control Heat Gain

By using strategies to reduce solar heat gain through roofs, walls and windows, a house can stay cool. Roofs, walls, windows and outdoor flooring can be shaded with architectural elements such as eaves, awnings and carports, and shutters.

Walls

Unshaded walls can get very hot and make your home uncomfortable. The best “cool wall” strategy is shading with overhanging eaves, lanais, or landscaping. If complete shade isn’t feasible, use insulation or radiant barriers in the exposed walls. Use a white exterior finish to improve cool wall performance.

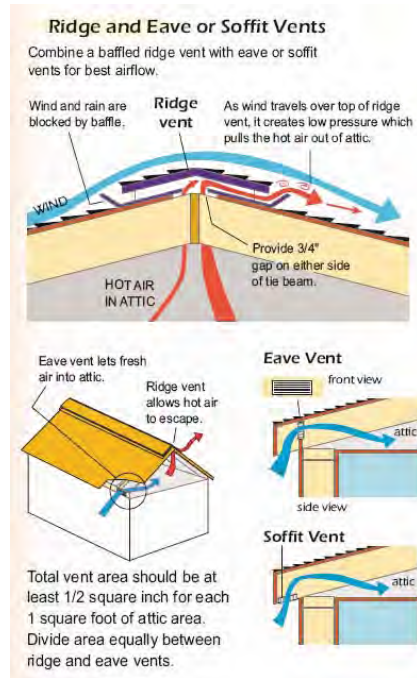
Windows

The use of high performance windows (Low-e, spectrally selective, or tinted glazing) helps keep solar heat out of interior spaces while admitting daylight. Overhangs, awning and trees can keep the sun from striking windows directly.

Roofs and Roofing Material

A cool roof is essential for a comfortable home. Insulation keeps roofs and homes cool by blocking heat on the roof thus, the attic, the ceiling and the rest of the house stay cool and comfortable. Installing a white roof will keep a home cooler.

Ventilation is another tool for keeping homes cool. For houses with attics good ventilation is recommended. Ridge and Eave or Soffit Vents work as well. If a ridge vent is not feasible, use a solar powered vent fan in combination with eave or soffit vents, to push warm air out of the house and attic.



Solar Water Heating

Minimizing the energy required for water heating is the most important energy saving step for a Hawaii home. Conventional water heating is a big expense and accounts for about 40% of the utility bill in a Hawaii house.

Hawaii was the first state in the nation to require solar water heaters in new home construction. Act 204 SLH 2008, requires all building permits for single-family homes issued after Jan. 1, 2010, to include solar water heaters. Exceptions are allowed where homes have poor sunlight; if it is cost-prohibitive after 15 years; when the dwelling has a substitute renewable energy source; or if there is an approved tankless water heater and another appliance, both powered by gas.

Additionally insulating hot water supply lines and pipes with at least ½" foam or 1" fiberglass insulation and setting heater thermostats adjustable for 120° or less, can add additional energy savings to a homeowner.

Photovoltaic systems

Alternative energy sources such as photovoltaics and fuel cells that are now available in new products and applications will be available as a house feature option. Renewable energy sources provide a great symbol of emerging technologies for the future.

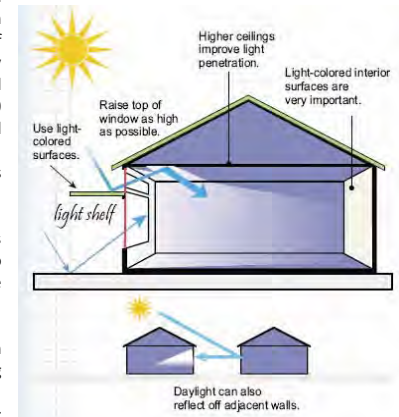
Lighting

Energy Efficient Light Design

Energy efficient light design features help minimize electric lighting energy demand and heat gain. An efficient lighting system uses fluorescent lamps as the primary light source and may selectively use incandescent (also halogen, a type of incandescent) for accent lighting and for applications where the light is usually off (like exterior lights on motion sensor controls). Modern fluorescent lighting can provide excellent color rendering and be free of flicker and hum. Additionally, start up is nearly instantaneous with electronic instant-start and rapid-start ballasts. Fluorescent lamps last 10 to 20 times longer than incandescents, saving energy all the while, so the lifetime cost is much lower and fluorescent lights do not emit as much heat as incandescents.

Providing controls such as timers, dimmers, sensors and separate fan/light controls to limit power use to the times and levels needed, also helps reduce lighting power consumption.

The use of solar powered landscape lighting when economically feasible is another energy saving design feature which can be used for both residential homes as well as business and civic buildings and spaces.



Daylighting

Daylighting is the use of natural sunlight to light interior spaces. Using controlled, filtered and indirect daylighting to light interior spaces reduces electric lighting loads. The effectiveness of daylighting can be increased with generous wall openings, open floor plans and light colored interior finishes.

Windows are usually a home's main source of daylight. Blocking direct sunlight and bouncing light on to the ceiling helps facilitate daylighting. Minimizing areas of east- or west-facing windows and using blue or green glass help.

Skylights (traditional, vented, tubular) can provide significant daylighting opportunities.

Light-colored interior finishes are critical for good light distribution thus, white ceiling is recommended.

Rooms with higher ceilings and narrow floor plans are easier to daylight. Consider several smaller skylights instead of one larger skylight for better light distribution.

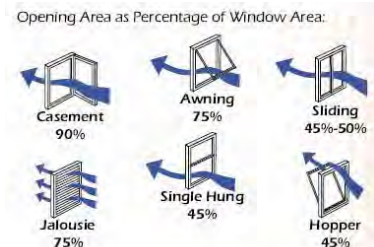
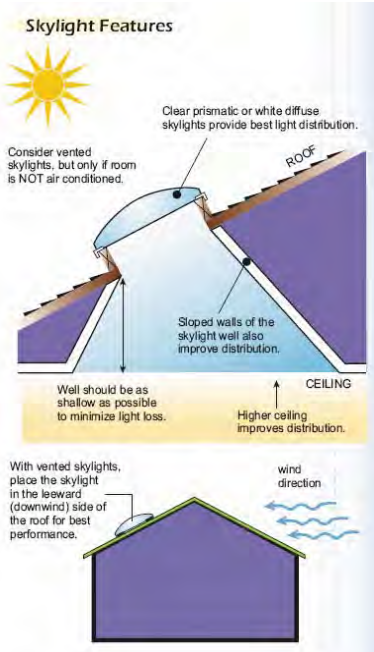
Natural Ventilation

Kapa'a Highlands II will optimize air-flow by designing homes that capture cooling breezes to keep homes comfortable. Utilizing natural ventilation also helps reduce health hazards such as mold and mildew.

Buildings should be oriented to maximize the cooling potential of prevailing winds and minimize morning and afternoon heat gain. Floor plan design will include effective cross ventilation with good air circulation throughout room areas and at body level.

Providing generous screened openings and using architectural design elements such as vents and casement windows will improve interior air circulation.

Ceiling fans are a great way to enhance natural ventilation. Use ceiling and whole house fans to provide comfort on warm, humid or still days.



Transportation



The Property is encompassed by the Kapa'a By-Pass Road to the south and Olohena Road to the east and the north side. The by-pass road is owned by the Kapa'a Highlands II which is working with the Department of Transportation (DOT) and has been allowing for the continuous public use of the road. The by-pass road is in the process of being dedicated to DOT. The agreement of transfer will include that all mitigating measures will be the shared responsibility of DOT and Kapa'a Highlands II.

There is a round-about located at the south east corner of Olohena Road and the Kapa'a By-Pass Road. Kuhio Highway is accessible from the Property by driving south on Olohena and Kūkuī Street approximately 0.5-mile. The project will have a main roadway from the Kapa'a By-Pass Road running north through the Property to Olohena Road. The roadway will follow the county's resolution for complete roads and as such will be a multi-modal roadway. A couple of bus stops will be located along the roadway. A bike/walking path from the round-about south east of the property will follow the bypass road, connect to the main road and continue to the Kapa'a Middle School located on the North portion of the Property. Kapa'a Highlands II is continuing to work with the DOT on potential traffic issues.

Transportation, housing, land use and infrastructure need to be integrated and incorporated into Kaua'i's long-term transportation policies as the population continues to grow in the years ahead. The Kaua'i General Plan, includes the following policies:

Bus Transit.

- Continue to operate The Kaua'i Bus; seek to increase ridership and expand service, subject to the availability of funds.
- Improve bus stops to increase safety and convenience of service.
 - Improvements to pullover areas along roadways in order to create safe and accessible bus stops.
 - Designated areas at housing projects (particularly those with elderly and disabled residents) that provide safe and accessible paratransit stops.

Bikeways.

- Support funding to develop Kaua'i's bikeway system to provide for alternative means of transportation, recreation, and visitor activities (economic development).

Regional Highways and Roads.

- Use General Plan policies concerning rural character, preservation of historic and scenic resources, and scenic roadway corridors as part of the criteria for long-range highway planning and design. The goal of efficient movement of through traffic should be weighed against community goals and policies relating to community character, livability, and natural beauty.
- Consider transportation alternatives to increasing the size and capacity of roadways. Alternatives include increased utilization of public transit.
- Planning for the Kapa'a By-Pass should incorporate connector roads between the By-Pass and the coastal highway and between the By-Pass and roads serving the valley.
- The State and the County should jointly undertake a study of the existing roadway network and the future transportation needs within the Kapa'a-Wailua homesteads area.

Kapa'a Highlands II Sustainability Plan

- Reserve corridors for future roadways as shown on the General Plan Land Use Map. The corridors are conceptual only and are subject to environmental assessment and evaluation of alternative alignments.

Kapa'a Highlands II is committed to Multi-modal, Interconnected and Concurrent Transportation for its residents and community.

Multi-modal Interconnected Roads and Streets

The proposed main complete, multi-modal roadway through the development will include bus stops, sidewalks and a bike and walking path connecting from Kapa'a Middle School down through the development to the round-about, facilitating green travel to and from Kapa'a's town core.

Kapa'a Highlands II incorporates multiple road interconnections with neighbors.

Kapa'a Highlands II will incorporate a system of interconnected roads that will provide residents alternative transportation routes within the project. The internal circulation pattern will provide safe and convenient choices for drivers, bicyclists and pedestrians.

Additional sustainable connectivity concepts including bikeways and walkways to and from the planned County pool, neighborhood commercial areas, the middle school and Kapa'a's town core are planned.

Complete Streets

Through recent legislation, the State of Hawaii Department of Transportation (HDOT) and county transportation departments are required to ensure the accommodation of all users of the road, regardless of their age, ability, or preferred mode of transportation. In addition, the concept of "Complete Streets" is prioritized where:

"(T)ransportation facilities ... are planned, designed, operated and maintained to provide safe access and mobility for all users, including bicyclists, pedestrians, transit riders, freight and motorists".

In addition to providing vehicle access, roadway networks are a vital part of the livability of our communities. Complete streets will provide an ease of use and access to destinations by providing an appropriate path of travel for all users, and enhance the ability to move people and goods throughout the state and its counties.

Additionally, complete streets principles will help contribute to a clean and secure energy future for Hawaii by offering flexibility and better accommodation for safe transit, walking, bicycling and alternate fuel vehicles that together, will decrease demand for imported oil.

Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and public transportation users of all ages and abilities are able to safely move along and across a complete street.

Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from transit stations.

Kapa'a Highlands II Sustainability Plan

Economic Opportunities



Kapa'a Highlands II provides significant, on-going economic and fiscal benefits for residents of Kaua'i, as well as for the County and State governments.

Development of facilities would generate employment and consequent income and taxes. In addition, by providing the opportunity for new residents to the Island of Kaua'i and generating additional real estate sales activity, the Project is expected to support long-term impacts, including additional consumer expenditures, employment opportunities, personal income and government revenue enhancement.

On a short-term basis, the proposed development will have a direct beneficial impact on the local economy during construction through construction and construction-related employment. It should also be noted that the proposed development will assist in maintaining a viable economy as construction-related employment opportunities for residents would be generated.

Over the long term, the residential homeowners will require various services related to home maintenance and improvement that will further support the local economy.

On-Site Employment Generators

Kapa'a Highlands II proposes two areas for commercial uses that, ultimately, will serve to promote and provide a variety of job opportunities. A 0.4-acre parcel is proposed for commercial uses such as a country store and small personal service type uses are anticipated. A 1-acre site on the Makai side of the Kapa'a Bypass Road is also proposed for commercial development or for use as sub-stations for the police and/or fire department.

Open Space and Parks



Kapa'a Highlands II holds respect for the environment by interlinking natural features and open space as core components of the community.

There are several parks within Kapa'a town, including a beach park. A County-owned 1.9-acre park is located within walking distance from the Property, just south east of the corner of Olohena Road and the by-pass road round-about. The park consists of a baseball field, football field, basketball courts, restroom facilities, picnic tables and a barbecue area.

Open space and open greenway areas encompassing 14.3-acres will be developed within the project. A 3.1-acre park is proposed within the project for outdoor recreation. Land for the proposed relocation of the Kapa'a county swimming pool will be available within the 3.1-acre park. The provision of a 3.1-acre park with a county swimming pool within the proposed development will provide residents with an opportunity for leisurely recreational activities.

Kapa'a Highlands II is conforms with HRS § 205-a-2(B) (3) (A) which states that CZM's objective is to "protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources."

The policies to achieve this objective are as follows:

1. Identify valued scenic resources in the coastal zone management area;
2. 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;
3. Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
4. Encourage those developments which are not coastal dependent to locate in inland area.

No scenic, historic, cultural spaces exist or will be created on the subject site and the site is well away from the shoreline. There are no natural wildlife, forest, marine, or unique ecological preserves on or near the subject site. Thus, open space and recreation will not be adversely affected. Park and beaches of Kapa'a are within walking distances from the project.

The proposed project will not adversely impact scenic or open space resources. The proposed project will not involve significant alteration of the existing topographic character of the site and will not affect public views to and along the shoreline.

Water Management



As an overarching philosophy in all source alternatives, Kapa'a Highlands II is committed to water conservation strategies to reduce consumption, conserve resources and minimize water use. The goal is to reduce the total water use through a combination of water saving equipment and strategies.

A number of measures may be implemented to facilitate conservation, including water restrictions during drier periods, public education and more efficient landscaping practices. Consumption could be significantly reduced through end-user conservation.

Efficient fixtures and appliances will reduce indoor water use. The water distribution system will be maintained to prevent water loss and homeowners and businesses will be encouraged to maintain fixtures to prevent leaks. Landscaping will emphasize climate-adapted native and other appropriate plants suitable for coastal locations. Best management practices will be designed and implemented to minimize infiltration and runoff from daily operations.

WaterSense



WaterSense, a partnership program by the U.S. Environmental Protection Agency, seeks to protect the future of our nation's water supply by offering people a simple way to use less water with water-efficient products, new homes, and services. WaterSense brings together a variety of stakeholders to:

- Promote the value of water efficiency.
- Provide consumers with easy ways to save water, as both a label for products and an information resource to help people use water more efficiently.
- Encourage innovation in manufacturing.
- Decrease water use and reduce strain on water resources and infrastructure.

The program seeks to help consumers make smart water choices that save money and maintain high environmental standards without compromising performance. Products and services that have earned the WaterSense label have been certified to be at least 20 percent more efficient without sacrificing performance.

If one in every 10 homes in the United States were to install WaterSense labeled faucets or faucet accessories in their bathrooms, it could save 6 billion gallons of water per year, and more than \$50 million in the energy costs to supply, heat, and treat that water!

Water Efficient Fixtures

Water is a finite resource—even though about 70 percent of the Earth's surface is covered by water, less than 1 percent is available for human use. Each American uses an average of 100 gallons of water a day at home. We can all use 30 percent less water by installing water-efficient fixtures and appliances. The average household spends as much as \$500 per year on their water and sewer bill and can save about \$170 per year by installing water-efficient fixtures and appliances.

Kapa'a Highlands II Sustainability Plan

Water-efficient fixtures reduce water and sewer costs, reduce demand on water supplies and treatment facilities, and reduce heating energy consumption and associated greenhouse gas emissions.

High efficiency toilets: (HETs) reduce flush volumes by no less than 20% compared to conventional ultra-low flow (ULFT) toilets. Dual-flush HETs allow users to choose one of two flushes: liquids or solids. In actual operation, dual-flush HETs average about 1.2 to 1.4 gpf. Pressure-assist HETs use a pressurized tank that creates for a more forceful flush with less water.



Faucets: Water flow is reduced by **Flow limiters** which are built into the faucet or are installed as after-market fittings. Aerators or laminar flow devices are types of flow limiters.

- Aeration injects air into the stream of water, displacing much of the water content.
- Laminar flow uses multiple small diameter parallel streams of water that are not aerated.

Flow control valves can limit water flow down to 1.5 to 0.5 gpm per side (hot and cold).

Showerheads: Federal law since 1994 mandates that all showerheads sold in the United States use 2.5 gpm or less. Despite this, some showerheads actually use much more than 2.5 gpm, and shower towers that include multiple showerheads or jets can total 12.5 gpm or more. A better option is a good quality low-flow showerhead designed to use 2.0 gpm or less while providing a satisfying shower.

Groundwater

A Water Master Plan has been approved, in concept, by the County Department of Water (DOW). Kapa'a Highlands II has a proven well site that will be dedicated to the DOW to feed the Department of Water's storage tanks and existing water system. Kapa'a Highlands II is committed to working with the DOW on pertinent water issues during the design and development phase.

The proposed water system will be subject to regulation as a public water system and will meet conditions of the State Department of Health, including HAR Chapter 11-20, 11-21 and 11-25.

Kapa'a Highlands, Phase II consists of approximate 97-acres on the eastern half of the 163.123-acres of Kapa'a Highlands. The proposed development is not anticipated to have significant adverse impacts on ground water because no active water systems are on the 97-acres. The irrigation facility for this former sugar land is no longer available.

A stream exists on Kapa'a Highlands I, flowing from north to south along the western border of the 163.123-acres of Kapa'a Highlands II. Kapa'a Highlands II is committed to keeping the flow of the stream consistent to prevent any potential health and mosquito problems associated with streams when not flowing naturally.

Kapa'a Highlands II Sustainability Plan

Storm and Surface Water Runoff

A Preliminary Drainage Report has been prepared. A detailed Drainage and Erosion Mitigation Plan will be prepared and submitted to the County Engineer for approval during the design and development stages. The Applicant will be providing major drainage improvements in connection with development of the property. Multiple detention ponds are proposed for the property. Additionally, a series of catch basins, drainage, pipes and culverts will be utilized to direct runoff to major drainage areas on the property.

The project's proposed drainage system will be designed to minimize impacts to near shore coastal waters. Water quality treatment and detention basins will be built to prevent runoff and sedimentation from impacting groundwater resources. Prior to the occupancy of any residential or commercial unit within the project, Kapa'a Highlands II shall implement and maintain storm and surface-water runoff BMPs, subject to any applicable review and approval of the State DOH, designed to prevent violations of State water quality standards as a result of storm-water discharges originating from the project. These BMPs will be documented in a declaration of covenants, conditions and restrictions that will be recorded against the property and will run with the land.

Potential water quality impacts during construction of the project will be mitigated by adherence to State and County water quality regulations governing grading, excavation and stockpiling. The County's grading ordinance includes provisions related to reducing and minimizing the discharge of pollutants associated with soil disturbing activities in grading, grubbing and stockpiling.

Construction BMPs will be utilized in compliance with County ordinances pertaining to grading, grubbing, stockpiling, soil erosion and sedimentation during construction. BMPs will also be implemented for long term development and operation of activities occurring on the site as part of pollution prevention measures.

BMPs include storm water runoff and non-storm water sources control measures and practices that will be implemented to minimize the discharge of erosion and other pollutants from entering into the receiving State waters. The erosion control plan for the proposed project include temporary and permanent control measures BMPs that will be implemented in accordance with Chapter 10 of the Hawai'i County Code.

Post construction BMPs to prevent erosion and storm water runoff after construction is completed includes the installation of drain inlets and shallow drywells within the project site, and landscaping and grassing of disturbed areas.

Prior to occupancy, Kapa'a Highlands II will implement and maintain storm and surface water runoff BMPs, subject to any applicable review and approval of the DOH. Those BMPs will be designed to prevent violations of State water quality standards as a result of stormwater discharges originating from the Project.

Wastewater

Kapa'a Highlands II The project will be contributing to the deferred maintenance and repair of the Kapa'a Waste Water Treatment plant. The project will not be a detriment to the capacity of the Plant.

Kapa'a Highlands II Sustainability Plan

Energy Management



Pursuant to Chapter 344 (State Environmental Policy) and Chapter 226 (Hawai'i State Planning Act), HRS, all Kapa'a Highlands II activities, buildings and grounds will be designed with a significant emphasis on energy conservation and efficiency. Efficient design practices and technologies will be the cornerstone of Kapa'a Highlands II's design phase. Buildings within Kapa'a Highlands II will further comply with the County of Kaua'i Energy Conservation Code (Kaua'i County Ordinance 890). Furthermore, solar water heaters will be utilized as made requisite under Section 196-6.5, HRS. Kapa'a Highlands II will confer with KIUC in regards to suggestions and proposals for customized demand-oriented management programs offering rebates for the installation of alternative energy efficient technologies and measures

	Kaua'i	Oahu	State
Medium Income (2009)	\$55,723	\$67,019	\$63,741
Electricity Price (May 2011)	44.27 cents/kWh	30.1 cents/kWh	-

Kapa'a Highlands II is committed to renewable energy and energy efficiently as ways to reduce environmental harm and self sufficiency. Kapa'a Highlands II will continue to improve programs and create new programs as the development is initiated.

Residents of the State of Hawaii pay the highest electricity rates in the US. The average American paid 10.5 cents/kWh in 2010. In the state of Hawaii, O'ahu currently has the lowest residential electricity rates, while Lana'i has the highest. Residential rates on Kaua'i average between 40-45 cents/kWh. Hawaii relies on imported oil for approximately 76% of its total electricity production. The price variation across the state is largely a result of difference in power plant efficiencies, power purchasing agreement and other infrastructure.

The Kaua'i Island Utility Cooperative ("KIUC") is the sole electric utility on Kaua'i. KIUC began serving the people of Kauai on November 1, 2002, when it purchased Kauai Electric from Connecticut-based Citizens Communications. KIUC is America's newest electric cooperative, but it's by no means the only one. It is one of approximately 900 electric cooperatives serving electric consumers in 47 states. Like all cooperatives, KIUC operates as a not-for-profit organization that is owned and controlled by the people it serves. KIUC serves over 23,300 customers with 92% of KIUC's electricity coming from the burning of imported fossil fuels.

In 2009 the State Legislature codified the need for energy efficiency by enacting the statewide energy efficiency portfolio standard with a target of reducing energy consumption by 30% of forecasted energy consumption by 2030 (4,300 GWh) and beginning the process for separating efficiency from the existing renewable portfolio standard.

Energy efficiency in homes and buildings

- Hawai'i Revised Statutes section 46-19.6 requires all county agencies to place a "priority on processing of permit applications for construction projects incorporating energy and environmental design building standards."

Kapa'a Highlands II Sustainability Plan

To reduce net energy consumption and demand, Kapa'a Highlands II will consider the implementation of elements of the United States Environmental Protection Agency (EPA) Energy Star Program; including efficient insulation, high performance windows, compact construction, efficient ventilation systems, and energy efficient lighting elements and appliances.

Kapa'a Highlands II will furthermore seek to harness energy conservations and technologies to facilitate the possibility of net energy metering in building design to empower residents and tenants to reduce their electricity costs and provide energy back to the grid.

Energy conservation and efficiency measures will be implemented and emphasized where applicable in the design of Kapa'a Highlands II. Energy-efficiency technologies to be considered include:

- Solar energy for water heating
- Photovoltaic systems, fuel cells, biofuels and other renewable energy sources
- Optimal utilization of daytime sunlight
- High efficiency light fixtures
- Roof and wall insulation, radiant barriers and energy efficient windows
- Optimized air-flow
- Installation of heat resistant roofing
- Intelligent Landscaping to provide for shading, dust control, and heat-mitigation
- Portable solar lighting (i.e. parking lots)

A photovoltaic system that can generate up to 1.18 MW of electricity is situated in Phase I of the Kapa'a Highlands project. Its operator entered into an agreement to sell to Kaua'i Island Utility Cooperative electricity generated from the solar farm for 20 years. "Creating more renewable energy alternatives is one of the most critical challenges we face," Kauai Mayor Bernard Carvalho said at a dedication ceremony for the solar farm.

The project spreads over five acres of a 165-acre property, and has 5,376 solar panels mounted on posts and piers. The panels average about 12-feet off the ground.



Health and Active Lifestyles



Through the layout and design of Kapa'a Highlands II, there is an overall opportunity for a positive effect on the health of its residents. Communities that make it easy and safe to walk and ride bikes are opening the door to a wide range of health benefits for their residents. They are reducing barriers to being physically active and helping individuals integrate physical activity into their daily lives.

Active living is a way of life that integrates physical activity into daily routines. For individuals, the goal is to get a total of at least 30 minutes of activity each day by, for example, walking, bicycling, playing in the park, working in the yard, taking the stairs, or using recreation facilities. For communities, the goal is to provide opportunities for people of all ages and abilities to engage in routine physical activity and to create places and policies that encourage better physical health.

The burden of physical inactivity:

The Problem:

- 25% of adults are sedentary
- 60% of adults not active enough

The Outcome:

- Obesity, cardiovascular disease, cancer, diabetes, depression
- Physical inactivity is a primary factor in over 250,000 deaths annually.
- Medical costs associated with physical inactivity and its consequences may exceed \$76 billion annually. (hawaii.gov/health/healthy-lifestyles)

Walkable and bikable communities increase active living. Active living can improve health by:

- Reducing the risk of dying prematurely.
- Reducing the risk of dying from heart disease.
- Reducing the risk of developing diabetes, colon cancer and high blood pressure.
- Reducing feelings of depression and anxiety.
- Helping control weight.
- Helping build and maintain healthy bones, muscles and joints.
- Promoting psychological well being. (Michigan Department of Community Health)

Growing body of evidence:

- San Diego study: 70 minutes more physical activity/week among residents in walkable neighborhood; 35% vs. 60% overweight (Saelens, Sallis, et. al. 2003)
- 6 lb weight difference in sprawling vs. compact counties
- King County study: 5% increase in neighborhood's "walkability index" correlated with 32% increase in active transportation; 0.23 point reduction in BMI (Frank, Sallis, et. al. 2006) (hawaii.gov/health/healthy-lifestyles)

Community Design Policies Work! The Task Force on Community Preventive Services concluded that:

- Community-scale policies & design are effective
 - Zoning for compact, mixed-use development
 - Transit-oriented development
 - Policies related to street design & connectivity

- Street-scale policies & design are effective:

- Traffic calming
- Street lighting
- Improving street crossings

(hawaii.gov/health/healthy-lifestyles)



Kapa'a Highlands II Sustainability Plan

Education



Schools servicing the project include Kapa'a Elementary, Kapa'a Middle School and Kapa'a High School.

Kapa'a Middle School borders the project site to the north. Kapa'a Elementary School and Kapaa High School share a campus which is approximately 2-miles from the project site.

Kapa'a Elementary School serves grades K-5 and is one of the largest elementary schools in the state. It shares a campus with Kapaa High School. Kapa'a Elementary School's capacity is 1,373 students, and the 2009/2010 school year enrollment was 827 students (Department of Education, 2010a).

Kapa'a Middle School, with facilities for 1,059 students, was opened in 1997 and has an enrollment of 652 students (Department of Education, 2010b).

Kapa'a High School currently has a student body numbering 1,033 with a capacity of 1,445 (Department of Education, 2010c).

The proposed project will generate increased demand on student enrollment within the region. Kapa'a Highlands II will coordinate with the DOE to ensure that the DOE's facility assessment policy provisions are appropriately addressed.

Additionally, a 3.1-acre park is proposed adjacent to the existing Kapa'a Middle School. The park will have an area for the county's proposed relocation of the Kapa'a county swimming pool. Kapa'a Highlands II also plans to develop a bike/walking path from the south of the property to the Kapa'a Middle School to facilitate biking and walking around the development.

Kapa'a Highlands II Sustainability Plan

Housing



Kapa'a Highlands II is a well located master planned project on the Island of Kaua'i targeting primary housing demand from local and in-migrant families, as well as offshore second home demand for view estate ownership. Located in the middle of the island, the project is close to the centers of employment and resort activity, plus the airport, beaches, shopping, recreation, etc. It sits above the historic town of Kapaa and below the foothills of the mountain chain that forms the island.

The proposed development, Kapa'a Highlands Phase II, will utilize 163-acres of land for single-family and multi-family residential and commercial purposes. Development of the Property will address a portion of the significant demand for affordable housing in the County of Kaua'i, without significantly affecting reserve areas for foreseeable urban growth.

Kapa'a Highlands II will respond to varying spectrums of demand for housing within Kaua'i by providing a wide range of housing opportunities inclusive of affordable housing alternatives. Kapa'a Highlands II will seek to create and sustain a mixed-income community allowing for unparalleled social diversity.

Affordable housing demands exhibited a significant upward trend over the last several years. Recent market studies have indicated a current shortage of single-family housing in the East Kaua'i area. The forecast is that demand for housing will continue to increase, especially in the area of affordable housing. The proposed development will assist in alleviating some of the current supply-and-demand pressures on Kaua'i's current housing market by providing a variety of additional housing products and opportunities for long-term local residents.

The Kawaihau Planning District has substantial capacity for additional residential development, as described in Section 6.2.3.1 (Build-Out Analysis) of the Kaua'i General Plan. "Lands previously designated for urban use but as yet mostly undeveloped include an area located near Kapaa, south of Olohena Road. This area was previously designated for Urban Mixed Use and is shown as Urban Center on the new GP Land Use Map. Owned partly by the State and partly by Amfac/JMB (or its successor), this "expansion area" for Kapa'a has already accommodated the Kapa'a Middle School."

In a 2010 letter to the applicant, the Planning Director wrote "We are writing in general support of Three Stooges LLC's petition to amend 97-acres in Kapaa to the Urban district. The proposed amendment is in conformance with the County of Kaua'i's General Plan and will provide 231 units of affordable housing. Affordable housing remains an acute need on Kaua'i, even with a falling real estate market and as such the County is generally supportive of any petition that proposes additional affordable housing, particularly when contiguous to developed urban areas, infrastructure and consistent with our General Plan."

Current Housing Stock

The housing stock on Kaua'i is primarily single family, 69%, with attached housing only at 31%. Around 40% of all single-family homes are built on lots sized less than 10,000 sf. The condominium stock is 64% fee-simple and 34% leasehold. It is also only 10% owner occupied, with the balance of the units investor-owned, either in a rental pool, or part of a hotel operation. About 30% of the condo units were built since 1990, with most of the rest around 25 years or more in age. 38% of the condominium units are one bedrooms, with two bedrooms at 45%.

Kapa'a Highlands II Sustainability Plan

Housing Mix

The target market for this development is relatively broad, as Kapa'a is arguably at the center of the island, with strong retail and recreational facilities, and easy commute to two out of the three major resort areas on the island. The demand for affordable housing is also significant. The proposed development will not only address a critical community need, it will also provide residents with a unique opportunity to purchase a lot and construct a home that best fits their needs on the proposed development's market-priced lots.

Kapa'a Highlands II – Market Housing Mix (2010 dollars)

Type	Average Sales Price	Lot Size	Total Units
Single-Family Lots	\$180,000 to \$250,000	5,000 to 8,000 Sq. Ft.	86-lots
Multi-Family Units	\$220,000 to \$450,000	1 to -acre Parcels	683-units

Kapa'a Highlands II – Affordable Housing Mix (2010 dollars)

Type	Average Sales Price	Lot Size	Total Units
Single-Family	\$189,000 to \$363,000	1,100 to 1,200 Sq. Ft. living area	13-lots
Multi-Family Units	\$189,000 to \$363,000	750 to 1,200 Sq. Ft. living area	154-units

Affordable Housing

An affordable housing element of the project is proposed and will conform to Kaua'i County Ordinance No. 860, Kaua'i's new housing policy wherein developers contribute up to thirty percent (30%) of the total residential units for affordable housing.

The Kaua'i housing policy provides incentives to developers who provide the required affordable units on-site and for providing single family affordable units. Kapa'a Highlands will be providing all of its affordable units on site and will include affordable single family units. This will reduce the number of affordable units required from approximately 205 units (30%) to approximately 167 units (21.7%), assuming a mix of 13 single family units and 154 multi-family units. The number of affordable units required will fluctuate depending on how many affordable single family units are provided. The proposed development will provide much needed affordable housing in the East Kaua'i region.

Kapa'a Highlands II Sustainability Plan

Under the proposed development's preliminary marketing concept, the affordable units are anticipated to be sold in the range of \$189,000.00 to \$363,000.00, which will be affordable to families earning from 80% up to 140% of the County's annual median income.

Anticipated Buyer Markets

The proposed products respond to the market opportunities identified above as follows:

Entry-level markets – Those units designated as affordable units, as well as many of the multifamily market units are conceived to appeal to entry-level markets, typified by the rapidly increasing 25- to 34-year-old Echo Boom cohort.

Move-up markets – Kapa'a Highlands II's single-family lot products could appeal to move-up markets and growing families.

- The first level move-up market, typified by persons aged 35 to 44, is projected to grow particularly rapidly in the 2020 to 2030 period as the Echo Boomers mature.
- A more affluent move-up market could also be attracted to the views, convenient location and lifestyle offerings at Kapa'a Highlands II.

Based on the Project location, development concept and the comparison projects surveyed, some 75% of Kapa'a Highlands II residents are anticipated to be long-term Island residents. However, some product types could also appeal to second home buyers, relocating retirees or others that may come from off-Island

There has been strong demand historically for these products offerings at these price ranges, and the future should be no different. The location is very desirable, particularly for local buyers, but also for offshore second homeowners who want to feel a part of a 'normal' (but new or upgraded) neighborhood (to say nothing of wanting to take advantage of the views).

Despite current economic conditions, there is capacity amongst prospective buyers, thanks to a strong build up in their own home equity. Coupled with a desire to secure a central location for their home, there should be a goodly number of lots purchased when they come to market (particularly if there is advanced notification).

Kapa'a Highlands II Sustainability Plan

Social Sustainability



A community is composed of people, as well as places where they live; it is as much a social environment as a physical development. Thus, communities must not only be environmentally sustainable, they must also be socially sustainable.

A socially sustainable development supports more equitable distribution of resources, supports diversity within the community, meets the basic needs of residents and invests in social and human capital, thereby sustaining the quality of life and community livability for all residents into the future.

Socially sustainable development includes the following:

- recognizes, respects and values cultural and social diversity;
- preserve and maintains a high quality of life for all of its residents;
- meets basic needs of food, shelter, education, work, income and safe living and working;
- is equitable, ensuring that the benefits of development are distributed fairly across society;
- promotes education, creativity and the development of human potential;
- preserves our cultural and biological heritage, thus strengthening our sense of connectedness to our history and environment;
- is democratic, promoting citizen participation and involvement;
- promotes the context of "Live Aloha," with people living together harmoniously and in mutual support and respect for each other

We saved the concept of Social Sustainability for the end of the analysis, to serve as a summary of the many socially-focused actions suggested in prior sections of this Sustainability Plan. Following are just a few of the issues previously mentioned:

- Affordable housing will be incorporated within the development, allowing for a diversity and mix of housing types and options
- Complete streets with walkways and bike lanes, allowing for slow movement through the neighborhoods for easy social interaction
- Space for the relocated County swimming pool
- Allocation for commercial spaces, affording project residents the opportunity to work near where they live
- Proximity to the Middle School affords multi-generational interaction and learning
- Cooperation with the State by making land available for the Kapa'a Bypass Road, helping regional residents
- Project layout and design will create an opportunity for both residents and the community to have a positive effect on their health through walkable and bikable transportation options.
- Consistency with long range planning documents, implementing the community's vision for the future

Exhibit C

Kapa'a Highlands Agricultural Master Plan