

**Revised Application for  
Affordable Housing  
Development Pursuant to  
Section 201H-38, Hawai`i  
Revised Statutes**

**KULA RIDGE AFFORDABLE  
HOUSING SUBDIVISION  
(TMK (2)2-3-001:174 and 023 (por.))**

**Prepared for:**

**Kula Ridge, LLC**

**August 2010**

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by Munekiyo & Hiraga, Inc.**



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for  
Kula Ridge Affordable Housing Subdivision  
TMK (2)2-3-001:174 and 023 (por.)**

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**1. OVERVIEW OF REVISED  
APPLICATION AND  
DISCUSSION OF KEY ISSUES**

# **Overview of Revised Application and Discussion of Key Issues**

## **KULA RIDGE AFFORDABLE HOUSING SUBDIVISION (TMK (2)2-3-001:174 and 023 (por.))**

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**Kula Ridge, LLC**

**August 2010**

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# OVERVIEW OF REVISED APPLICATION AND DISCUSSION OF KEY ISSUES

## I. INTRODUCTION

A Section 201H-38, Hawai'i Revised Statutes (HRS) application for the Kula Ridge project was filed with the Maui County Council by the Department of Housing and Human Concerns on October 6, 2008. This initial application was filed following the publication of a Chapter 343, Hawaii Revised Statutes, Final Environmental Assessment (Finding of No Significant Impact) on September 8, 2008.

The proposed action, as reflected in the initial Section 201H-38, HRS application calls for the development of a 116 lot subdivision, of which 70 house-lot packages are set aside as affordable or workforce housing. Of the 70 affordable units, 59 are allocated to the Kula Ridge project, with 11 set aside for the adjacent Kula Ridge Mauka Agricultural Subdivision. The adjacent Kula Ridge Mauka Subdivision is a proposed 21-lot agricultural subdivision which will be subject to the County of Maui's Workforce Housing Policy (Chapter 2.96 Maui County Code), and will be required to provide 11 affordable units. See **Exhibit 1**. It is noted that the Kula Ridge Mauka Subdivision is proposed by an ownership entity separate and distinct from Kula Ridge LLC (the applicant for this Section 201H-38, HRS application).

At its October 21, 2008 meeting, the Council's Policy Committee recommended the resolution to disapprove the Section 201H-38, HRS project. Concerns raised during the Committee's deliberations included the viability and cost of providing water to project residents, the need for sidewalks along Lower Kula Road and the need for a comfort station in the 3-acre park.

## II. HOUSING PRODUCT MODIFICATION FOR PROJECT

This revised application for a Section 201H-38, HRS affordable housing project has been prepared to reflect housing product modifications to the Kula Ridge site plan. Product modifications are limited to the provision of senior affordable living duplex units as part of the proposed Kula Ridge Affordable Housing Project at Tax Map Key (2)2-3-001:174 and 023 (por.). See **Exhibit 2**. The site plan does not change in terms of internal roadway layout and subdivision lot configuration, or total unit count (i.e., 116 units). However, in order to



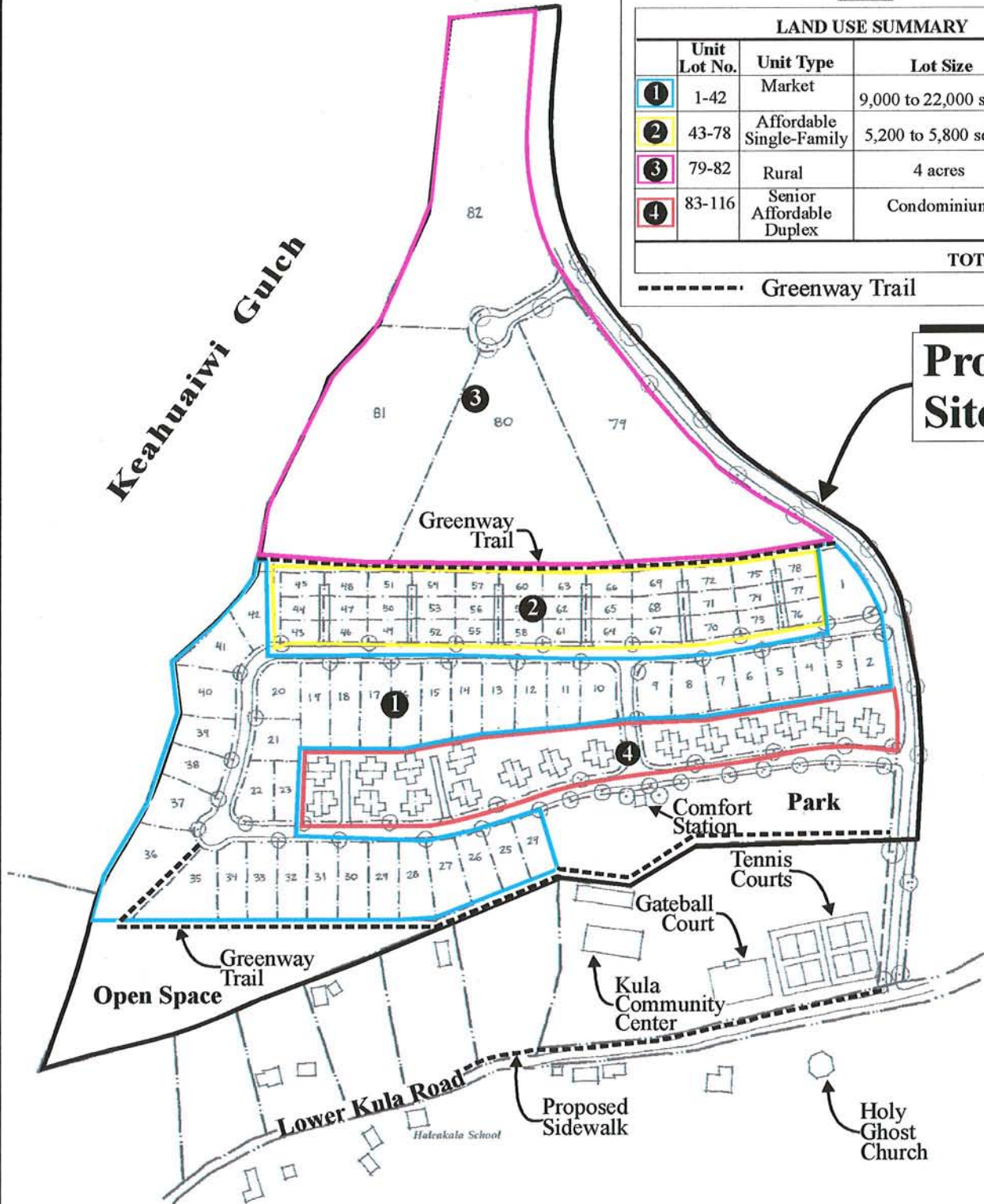


**KEY**

LAND USE SUMMARY				
	Unit Lot No.	Unit Type	Lot Size	Quantity
①	1-42	Market	9,000 to 22,000 sq. ft.	42
②	43-78	Affordable Single-Family	5,200 to 5,800 sq. ft.	36
③	79-82	Rural	4 acres	4
④	83-116	Senior Affordable Duplex	Condominium	34
<b>TOTAL</b>				<b>116</b>

----- Greenway Trail

**Project Site**



Source: Architectural Design & Construction, Inc.

**Exhibit 2 Proposed Kula Ridge Affordable Housing Subdivision Revised Conceptual Site Plan**

NOT TO SCALE



Prepared for: Kula Ridge, LLC



Nishikawa/KulaAH 1107/New201H/revisedsite

accommodate the 34 affordable senior duplex units, the smaller affordable lots designated along the western boundary of the property (i.e., the “four packs”) have been converted to duplex units. See **Exhibit 3**. The senior duplexes are located along the project’s western boundary to provide contiguous access to the park site and the Kula Community Center. Refer to **Exhibit 2**.

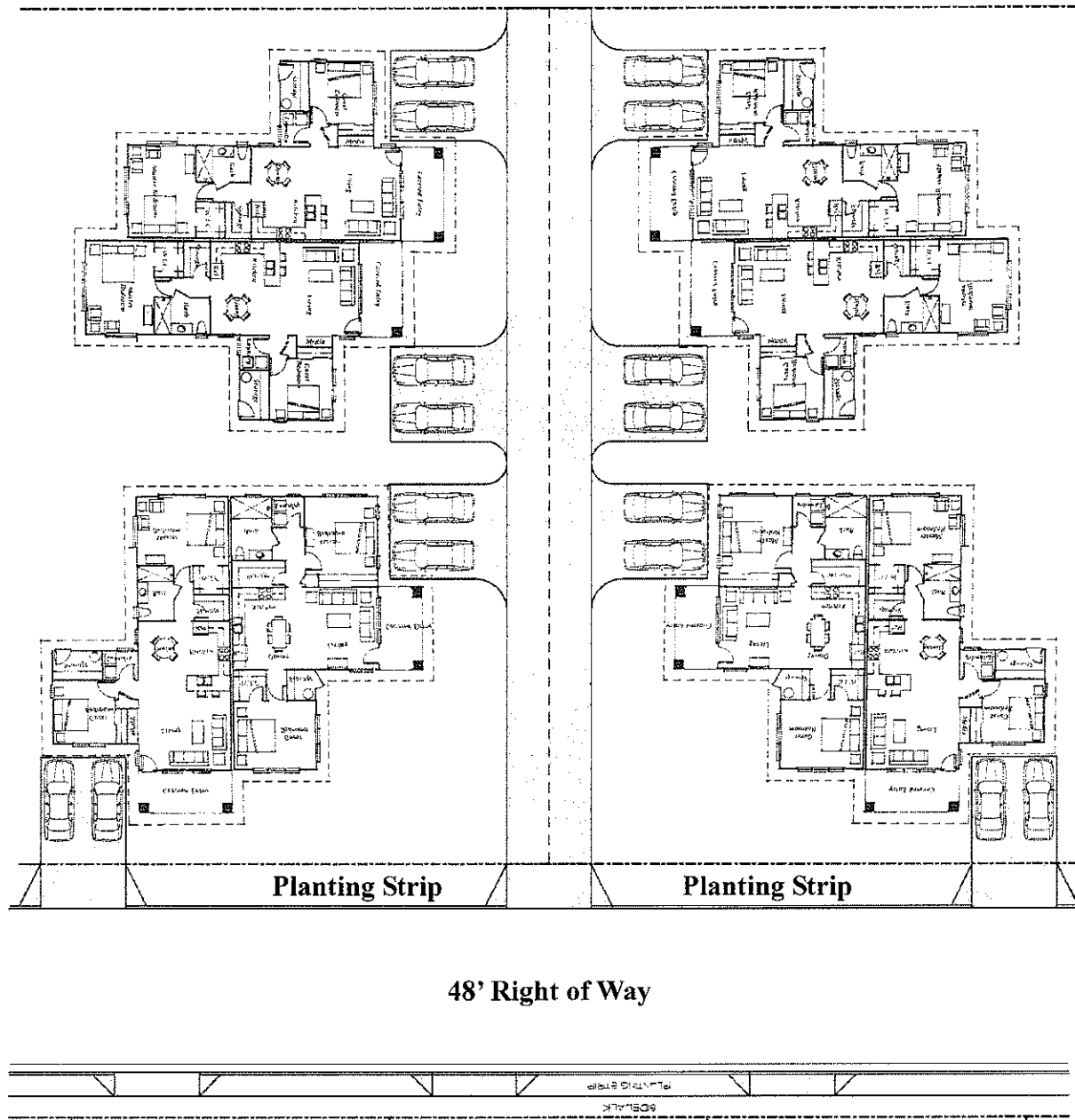
To summarize, 34 single-family affordable house-lot packages which were previously reflected in the initial Section 201H-38, HRS application have been substituted with 34 affordable duplex units targeted to seniors, ages 55 and older. Thus, there are still a total of 70 affordable house lot packages proposed for the project, with 34 proposed for senior residents of the community.

### **III. AFFORDABLE HOUSING PROGRAM UPDATE**

As previously noted, of the 70 affordable house lot packages, 11 (eleven) will be set aside to meet workforce housing requirements for the Kula Ridge Mauka Subdivision. Therefore, 59 affordable house lot packages are set aside for the Kula Ridge project. In the initial Section 201H-38, HRS application, all 59 affordable units were of the single-family product type and all were proposed to be sold to families earning between 100 percent and 140 percent of the Maui County median income.

Kula Ridge LLC now proposes to modify the product mix for the 59 affordable units in order to reach the senior segment of the market (those 55 years of age and older) falling within a lower bracket of the County’s median income. The total number of units in the project remains unchanged at 116. However, in order to reach the senior market, 34 single-family affordable units have been replaced by 34 senior duplex units. It is noted that should the County Council desire, the site plan can be modified to accommodate four (4) more affordable senior housing units for a total of 63 affordable units.

**Table 1**, below, summarizes the revised affordable housing program for the 59 Kula Ridge units.



Source: Architectural Design & Construction, Inc.

# Exhibit 3 Proposed Kula Ridge Affordable Housing Subdivision Duplex Site Plan

NOT TO SCALE

Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaAH 1107/New201H/duplexsite

**Table 1**

PROPOSED AFFORDABLE HOUSING PROGRAM FOR KULA RIDGE SUBDIVISION					
Target Income Group	Original Section 201H-38, HRS Application		Revised Section 201H-38, HRS Application		
	Product Type	Number of Affordable Units	Product Type	Number of Affordable Units	Sales Price Range <sup>a</sup>
80% to 100% of Median Income	No products intended for this income group	0	Duplex Senior Residential Units	17	\$237,660.00 to \$297,075.00
100% to 120% of Median Income	Single Family House/Lot Packages	29	Duplex Senior Residential Units	17	\$297,075.00 to \$356,490.00
			Single Family House/Lot Packages	12	\$349,500.00 to \$419,400.00
120% to 140% of Median Income	Single Family House/Lot Packages	30	Single Family House/Lot Packages	13	\$419,400.00 to \$489,200.00
<b>TOTAL</b>	----	<b>59</b>	----	<b>59<sup>b</sup></b>	----

<sup>a</sup> Based on 2009 U.S. Department of Housing and Urban Development Income Guidelines at a prevailing interest rate of 5.5 percent. Actual prices to be based on affordable sales price guidelines and prevailing interest rate at the time of marketing of units.  
<sup>b</sup> Should the County Council desire, the site plan can be adjusted to add up to four (4) more senior duplex units for a total of 63 affordable units.

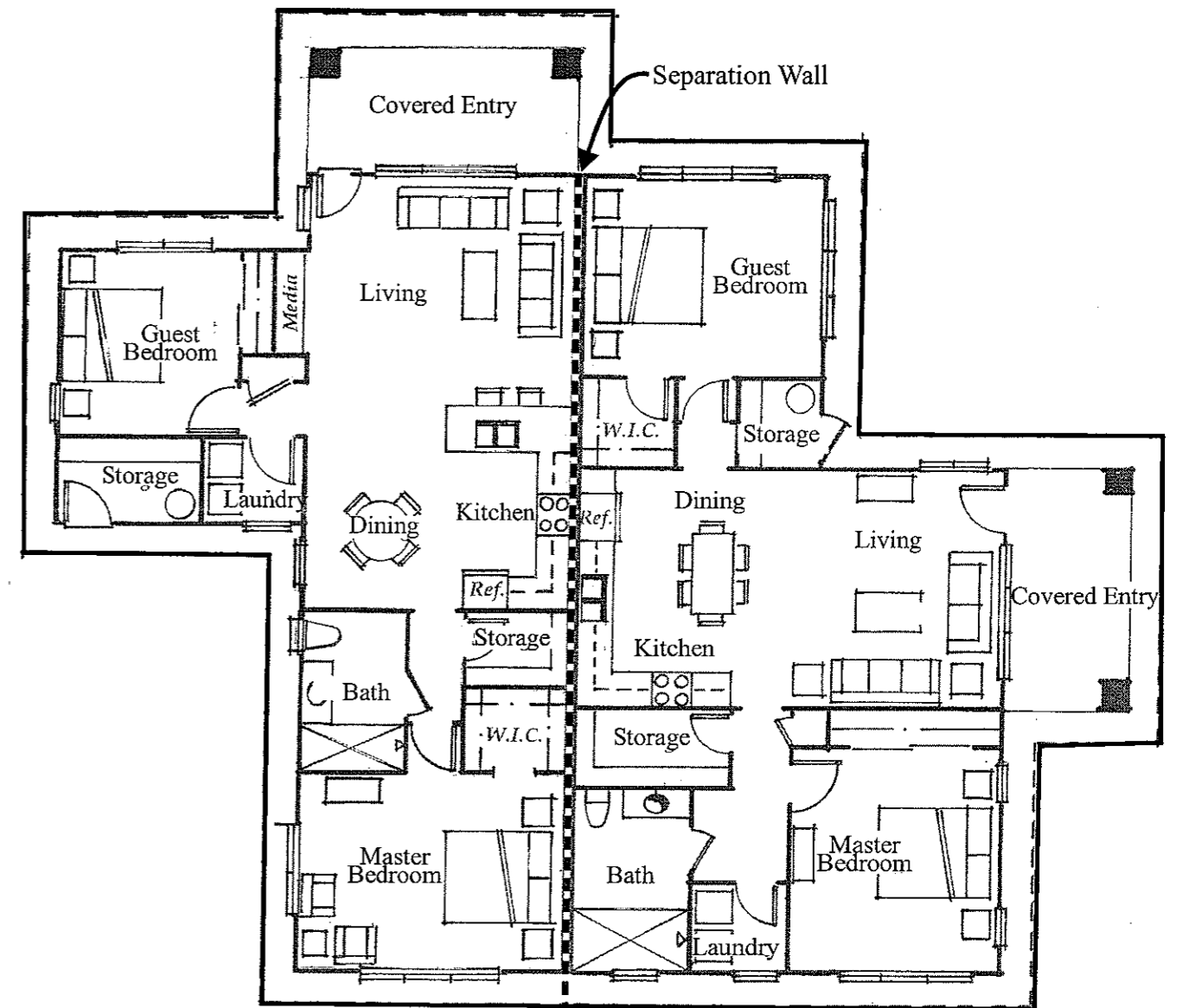
Continued coordination with the County of Maui, Department of Housing and Human Concerns will be carried out to establish specific terms and conditions for affordable sales price distribution, applicant selection process, and marketing requirements.

**IV. PLANS AND ELEVATIONS FOR DUPLEX UNITS**

Plans and elevations for the proposed duplex units have been included in this revised Section 201H-38 application. See **Section 5** of this application (Preliminary Plans and Description of Materials for Affordable Units). House models for each senior housing unit will provide an enclosed living area of approximately 1,164 square feet (s.f.) of living area and are depicted in **Exhibit 4** and **Exhibit 5**.)



**Typical Elevation**



**Floor Plan**

Source: Architectural Design & Construction, Inc.

Exhibit 4

Proposed Kula Ridge Residential Affordable Housing Subdivision  
Duplex Plan 1

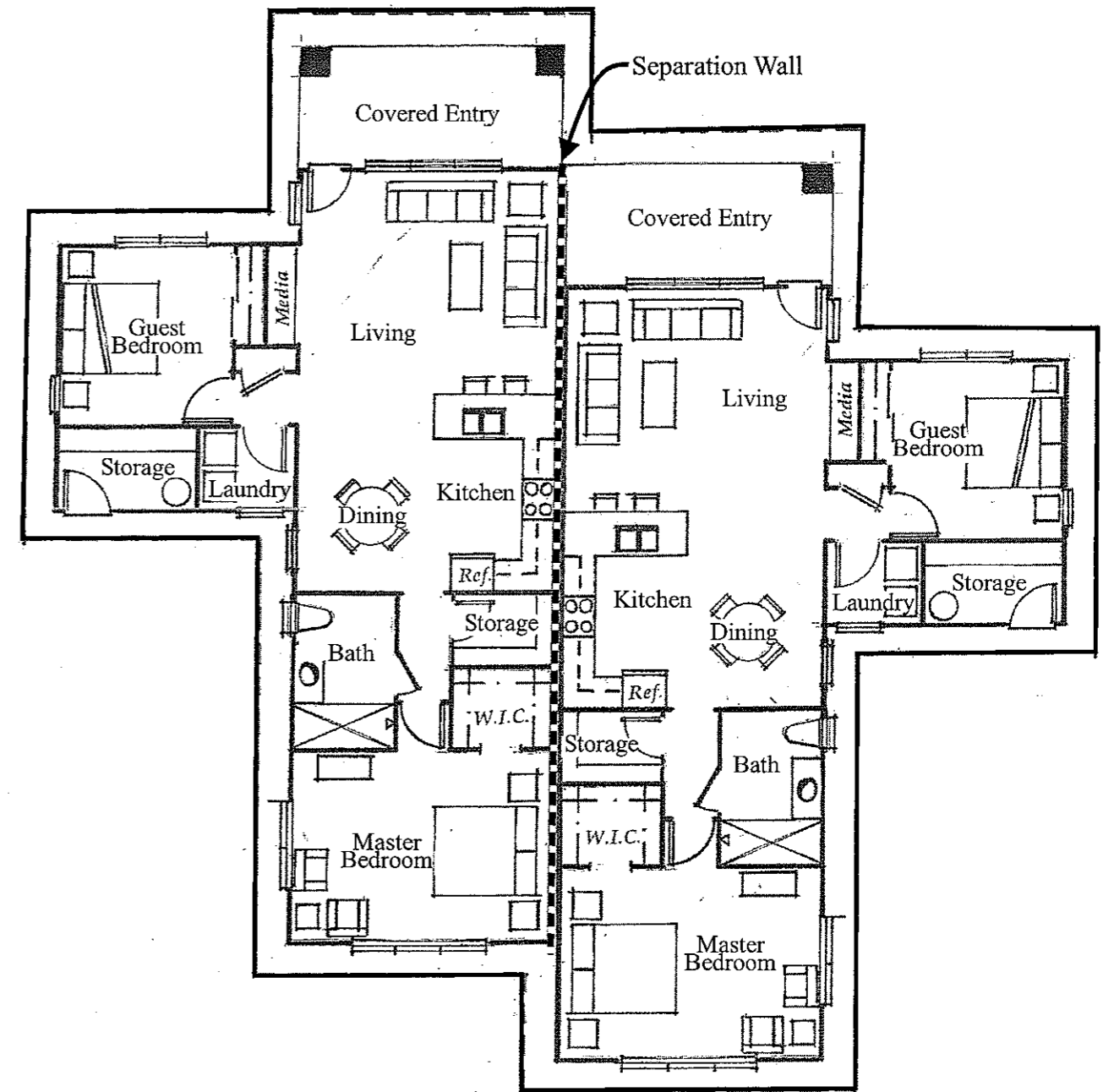
NOT TO SCALE

Prepared for: Kula Ridge, LLC





**Typical Elevation**



**Floor Plan**

Source: Architectural Design & Construction, Inc.

Exhibit 5

Proposed Kula Ridge Residential Affordable Housing Subdivision  
Duplex Plan 2

NOT TO SCALE

Prepared for: Kula Ridge, LLC



## V. WATER SOURCE

Kula Ridge LLC has entered into an agreement with Piiholo South LLC to secure water from their recently completed well at Piiholo in the Makawao-Pukalani-Kula Community Plan area. The well is identified as State Well No. 5118-04. See **Exhibit 6**. The test well has been installed and tested at a yield rate of 1.7 million gallons per day. Kula Ridge LLC and Kula Ridge Mauka, LLC will pay a pro-rata share of well construction costs for the water allocation. Both entities have entered into a water source agreement with Piiholo South LLC to have 120,000 Gallons Per Day (GPD) allocated to the Kula Ridge and Kula Ridge Mauka subdivisions. See **Section 6** of this application (Agreement Regarding Water Source for Projects). Piiholo South, LLC has separately expressed its written commitment to provide water to the Kula Ridge affordable housing project. See **Section 7**. The Department of Water Supply has indicated its willingness to negotiate with Piiholo South, LLC towards achieving a satisfactory and reasonable source agreement. See **Section 8**.

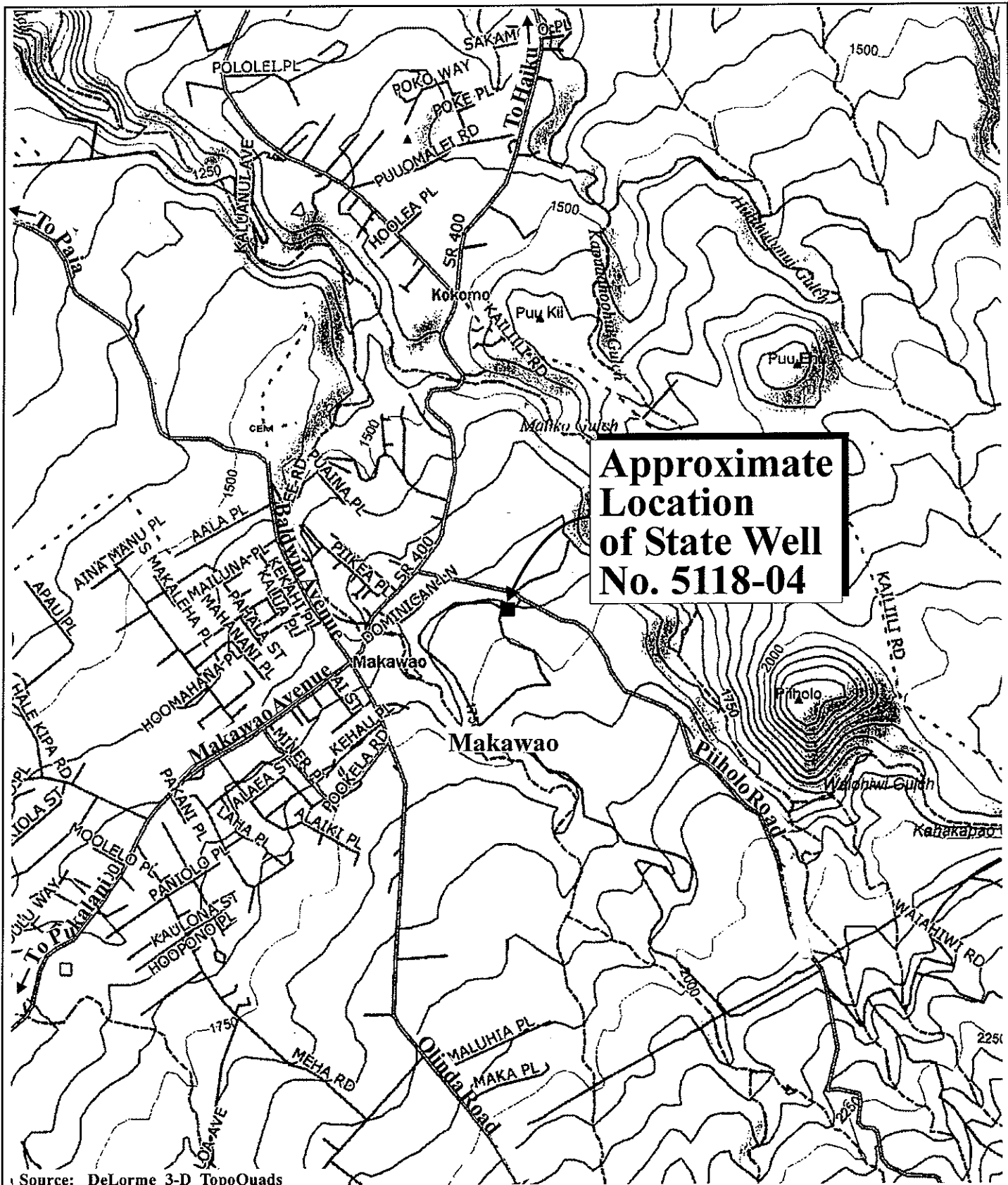
The applicant will undertake coordination with Piiholo South LLC and the Department of Water Supply regarding the assignment of source allocation credits to Kula Ridge and Kula Ridge Mauka, as well as standard requirements and improvements needed for the delivery of water to the project sites.

## VI. TRAFFIC

Since the filing of the initial Section 201H-38, HRS application, additional coordination with the State of Hawai'i, Department of Transportation (DOT) was carried out regarding proposed revisions and the consideration to provide a south-bound left-turn lane along Kula Highway at the northern intersection with Lower Kula Road. As such, the Traffic Impact Assessment Report (TIAR) prepared by Wilson Okamoto Corporation was revised to align with the recommendations proposed by the State DOT. A copy of the revised TIAR is provided in **Section 9** (Revised Traffic Impact Report) of this application.

The proposed site plan adjustments do not change the total unit count, except that the product allocations have been revised to include 34 affordable senior duplex units. It should be noted that senior housing will have a lesser degree of impacts to the environment as senior residents are expected to own fewer automobiles. As such, the proposed revisions to the affordable housing project is not expected to have an effect on the revised TIAR.

The revised TIAR maintains the recommendations advanced in the original TIAR and also provides the following recommendation:



**Approximate  
Location  
of State Well  
No. 5118-04**

Source: DeLorme 3-D TopoQuads

**Exhibit 6 Proposed Kula Ridge Residential  
Workforce Housing Subdivision**  
Location of Water Source

NOT TO SCALE



Prepared for: Kula Ridge, LLC



Nishikawa\KulaA\H\New2011\watersource



6. *Consider providing an exclusive southbound left-turn lane along Kula Highway at the northern intersection with Lower Kula Road to minimize the impact of turning vehicles on through traffic along the highway.*

As mentioned in the Final Environmental Assessment, agreement on the mitigation measures and improvements to be implemented by the applicant will be coordinated with the DOT Highways Division during the applicant's engineering design process. DOT approval will be required prior to finalizing plans and the undertaking of any roadway and intersection improvements.

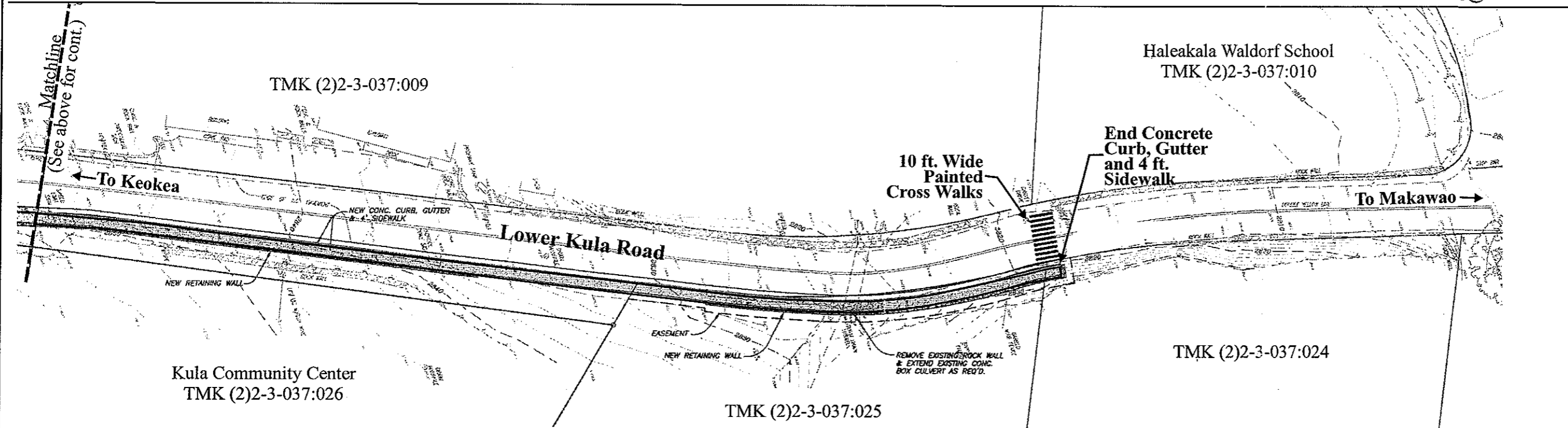
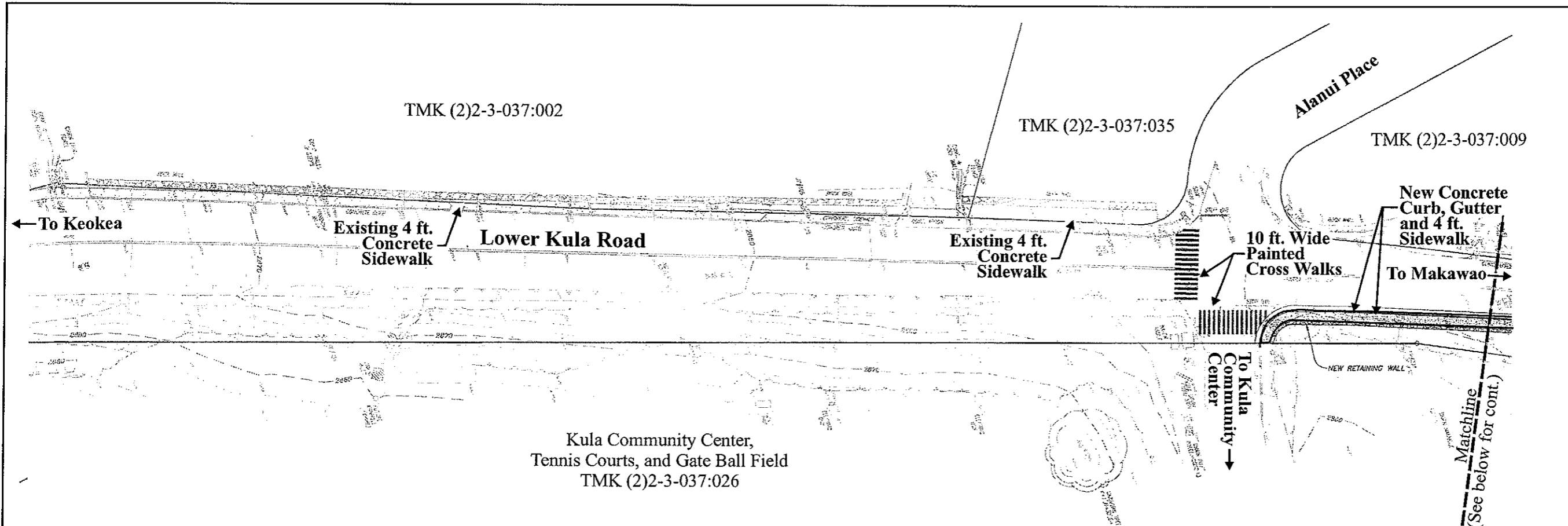
It is noted that additional traffic count data was obtained by Wilson Okamoto Corporation on September 2-3, 2009 to address comments received from the Kula Community Association regarding traffic counts associated with the Haleakala Waldorf School in the morning and after school hours. See **Section 10**. The results of the most recent supplemental traffic counts conclude that:

*With the implementation of the recommendations included in the traffic impact study, the proposed Kula Ridge development is not expected to have a significant impact on vehicular and pedestrian traffic operations in the vicinity of project site during school peak periods.*

## **VII. PEDESTRIAN ACCESS ALONG LOWER KULA ROAD TO HALEAKALA WALDORF SCHOOL**

Kula Ridge LLC engaged the services of Otomo Engineering and Akamai Land Surveying to undertake a pedestrian pathway feasibility study along Lower Kula Road, between the project's main access road and Haleakala Waldorf School. The results of the study yielded a basis of design which defines the feasibility parameters for a pedestrian sidewalk. See **Exhibit 7**. The proposed sidewalk measures approximately four (4) feet wide and 530 feet long. The sidewalk will be located along the property frontage of TMKs (2) 2-3-037:026 (Parcel 26), 025 (Parcel 25), and 024 (Parcel 24). Coordination with property owners of Parcel 25 and Parcel 24 has been undertaken with respect to the proposed sidewalk design and the development of easements to allow for the construction of the sidewalk and related improvements on the subject parcels.

Kula Ridge LLC will pay for sidewalk improvements along its property frontage, which encompasses the Kula Community Center frontage. In addition, Kula Ridge LLC will pay for design and construction work for the balance of the walkway, up to Haleakala Waldorf School. Related improvements include the construction of a new concrete curb and gutter,



Source: Otomo Engineering, Inc.

# Exhibit 7

## Proposed Kula Ridge Residential Workforce Housing Subdivision Concrete Sidewalk Plan

NOT TO SCALE



Prepared for: Kula Ridge, LLC



Nishikawa\KulaAH\1107\New2011\Sidewalk

a new retaining wall on Parcel 26 and Parcel 25, and the striping of three 10 feet wide crosswalks across Lower Kula Road.

### **VIII. COMFORT STATION IN 3-ACRE PARK**

To ensure applicable park assessment requirements are met, Kula Ridge LLC will utilize a 3-acre portion of the project area for park site. In addition to the 3-acre park, Kula Ridge LLC will construct a comfort station within the park site. Refer to **Exhibit 2**. A pedestrian walkway will also be created between the Kula Community Center and the 3-acre park site to allow connectivity between the facilities and the residential area. Kula Ridge LLC has undertaken coordination with the Department of Parks and Recreation regarding the acceptance and dedication of the 3-acre park, and comfort station to the County of Maui.

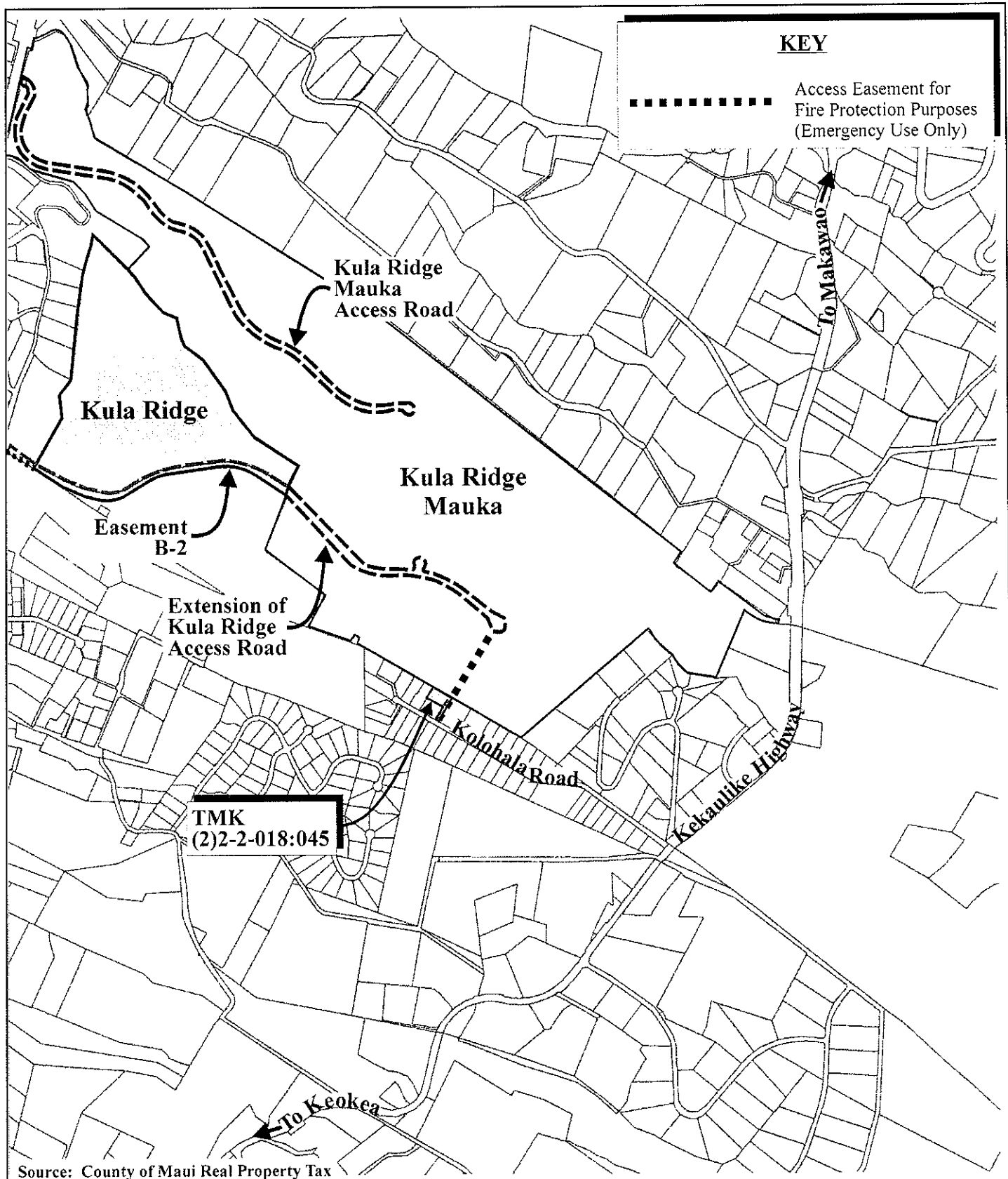
### **IX. EMERGENCY FIRE ACCESS ROAD**

An emergency access easement for fire protection purposes will be made available via an extension of the main access road off of Lower Kula Road. Refer to **Exhibit 1**. The fire access road will traverse through the adjacent Mauka Subdivision, exiting through TMK (2) 2-2-018:045 at Kolohala Drive. TMK (2)2-2-018:45 is owned by Kula Ridge Mauka, LLC, traversing southward to Kolohala Road, a privately maintained roadway. See **Exhibit 8**. Kolohala Road provides access to Kekaulike Highway to the east. The emergency access easement will be utilized for emergency access (e.g, fire truck access) only.

### **X. PROJECT ACCESS CONTROL**

An easement located on the Kula Ridge Mauka subdivision, identified on TMK (2) 2-3-001:023, is proposed to be subdivided consolidated with the Kula Ridge subdivision on TMK (2) 2-3-001:174. The easement is identified as Easement “B-2”. Refer to **Exhibit 1**.

See **Section 11** of this application for the subdivision map. Easement “B-2” will be built to Maui County roadway standards and is intended to be dedicated to the County of Maui for access purposes. The acquisition and consolidation of Easement “B-2” into the Kula Ridge Affordable Housing Project site provides Kula Ridge, LLC the site control needed to facilitate roadway construction and dedication.



**Exhibit 8**

**Proposed Kula Affordable Housing Subdivision**  
**Detail of Proposed Fire Access Easement**

NOT TO SCALE



Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaAH 1107/fireaccess

## **XI. REVISIONS TO SECTION 201H-38, HAWAII REVISED STATUTES EXEMPTIONS**

During the Council's review of the Section 201H-38, HRS exemptions, questions were raised regarding the need for an exemption from Maui County Code (MCC), Chapter 14.12, relating to Water Availability. In recognition of these concerns brought forward by the Council, the applicant has deleted this exemption. Additionally, an exemption from Hawai'i Administrative Rules (HAR), Title 11, Chapter 62, Wastewater Systems has also been deleted since private wastewater systems fall under the jurisdiction of the State of Hawai'i, Department of Health (DOH). It should be noted that the applicant was granted a variance from the State DOH to utilize Individual Wastewater Systems (IWS) on residential lots less than 10,000 square feet. Furthermore, the IWS for each lot meets the requirements of HAR, Title 11-62, Section 33.1. (b)(2).

It should also be noted that exemptions to Title 19, MCC, Zoning are being sought to support the timely implementation of the project. See **Section 11** of this application (Section 201H-38, Hawai'i Revised Statutes Exemptions).

## **XII. SUMMARY**

Kula Ridge LLC is filing a revised Section 201H-38, HRS application for consideration by the Maui County Council. The revised application incorporates new housing product types containing affordable senior duplex units. In addition, issues raised during the Council's review of the initial Section 201H-38, HRS application are being addressed by the revised application. Key issues relate to the exemption from MCC, Chapter 14.12 (Water Availability), water source to service the project, pedestrian walkway options along Lower Kula Road, and the provision of a comfort station within the 3-acre park site.

## **2. LETTERS OF AUTHORIZATION**

# Kula Ridge, LLC

1849 Wili Pa Loop Wailuku, Maui, Hawaii Phone (808) 986-8300 Fax (808) 986-8301

September 17, 2008

Ms. Lori Tsuhako, Interim Director  
Department of Housing and Human Concerns  
200 South High Street  
Wailuku, HI 96793

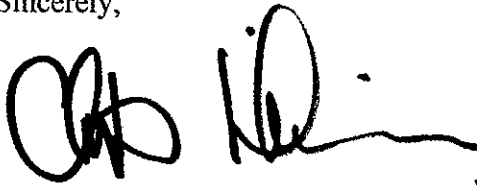
Subject: Proposed Kula Ridge Affordable Housing Project at  
TMK (2) 2-3-001: 174, Kula, Maui, Hawaii

Dear Ms. Tsuhako,

Kula Ridge, LLC hereby authorized Munekiyo & Hiraga, Inc. to prepare, file, process and obtain all necessary approvals for the implementation of the proposed project, including, but not limited to, approval for development of the project pursuant to Section 201H, Hawaii Revised Statutes.

Should you have any questions, or require additional information, please do not hesitate to contact me at 986-8300.

Sincerely,



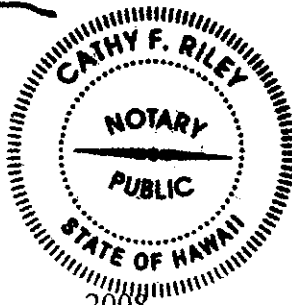
Clayton Nishikawa

State of Hawaii

County of Maui

Subscribed and sworn to me

This 17th day of September, 2008.



  
\_\_\_\_\_  
Print name Cathy F. Riley

Notary Public, State of Hawaii

My commission expires: 10/02/2009

Date of Document: 09/17/2008

Number of Pages: 01

Document Description:

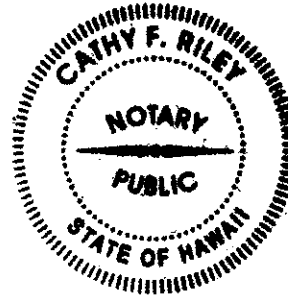
Kula Ridge LLC Letter of Authorization to the  
Department of Housing and Human Concerns.



Cathy F. Riley, Commission Number 05-606

State of Hawaii, County of Maui, Second Judicial Circuit

My commission expires on 10/02/2009





*Kula Ridge Mauka, LLC*

June 4, 2009

Ms. Lori Tshako, Director  
Department of Housing and Human Concerns  
County of Maui  
200 South High Street  
Wailuku, Hawaii 96793


SUBJECT: Proposed Kula Ridge Affordable Housing Project at TMK (2) 2-3-001:174, Kula, Maui, Hawai'i

Dear Ms. Tshako:

As the Managing Member of TMK (2) 2-3-001:023 (Parcel 23), abutting and adjacent to the subject parcel, I hereby authorize Munekiyo & Hiraga, Inc. and Kula Ridge LLC to prepare, file, process and obtain all necessary permits and approvals for the proposed project pursuant to Section 201H-38, Hawaii Revised Statutes (HRS). The application, pursuant to Section 201H-38, HRS, includes a portion of Parcel 23 for reconsolidation into the Kula Ridge Subdivision at TMK (2) 2-3-001:174, Kula, Maui, Hawaii. Final subdivision approval is pending for Parcel 23.

Should you have any questions, or require additional information, please do not hesitate to contact me at 986-8300.

Very truly yours,

  
Kula Ridge Mauka, LLC  
Managing Member

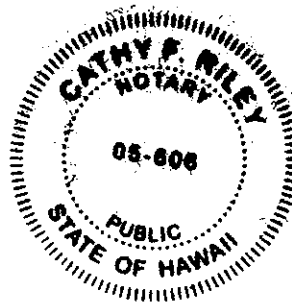
Notary Certification Attached

Kula Ridge Mauka, LLC

Subscribed and sworn to before me this

4th day of June, 2009.

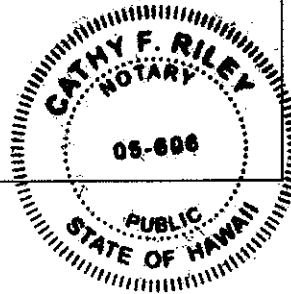
Print Name: Cathy F. Riley  
Notary Public, State of Hawaii



My commission expires:

**CATHY F. RILEY**  
My commission expires 10/02/2009

Doc. Date: June 4, 2009 # Pages: 2 including this one  
 Notary Name: Cathy F. Riley  
Second Circuit  
 Doc. Description:  
Kula Ridge Mauka letter to  
Lori Tsubako, County of Maui (Stamp or Seal)  
Dept. of Human Concerns re Proposed Kula Ridge  
Affordable Housing Project.  
Cathy F. Riley June 4, 2009  
 Notary Signature Date  
 NOTARY CERTIFICATION



### **3. LAND OWNERSHIP DOCUMENTATION**

**LANDOWNERSHIP DOCUMENT FOR TMK (2)2-3-001:174**



R-1260 STATE OF HAWAII  
 BUREAU OF CONVEYANCES  
 RECORDED  
 OCT 14, 2005 08:02 AM  
 Doc No(s) 2005-209685



/s/ CARL T. WATANABE  
 REGISTRAR OF CONVEYANCES

20 1/2 22

CTax (30): \$10500.00

LAND COURT SYSTEM

REGULAR SYSTEM

Return by Mail ( ) Pickup ( ) To:

Kula Ridge, LLC  
 Attn: Clayton Nishikawa  
 655 Maakani Street  
 Wailuku, HI 96793

TG: 200534538-5

TGE: A52040472  
 Michael Gamberdell

RS (1)

(2) 2-3-001-174

Area Assessed: 48.117 acres

Total No. of Pages: 214

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS:

THAT HELEN TROY VON TEMPSKY, DEBORAH A. VON TEMPSKY and ALEXA V. T. DUDOIT, Co-Trustees of the Raymond M. Von Tempsky Trust, dated May 14, 1979, as amended April 11, 1983 and amended by the declaration dated January 22, 1993, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 93-015776, with full power to purchase, sell, mortgage, dispose or otherwise hypothecate real property, whose address is 460 Mauna Place, Kula, Maui, Hawaii 96790, hereinafter called the "Grantor", in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration to it paid by KULA RIDGE, LLC, a Hawaii Limited Liability Company, whose principal place of business and post office address is 1849 Wili Pa Loop, Wailuku, Maui, Hawaii 96793, hereinafter called the "Grantee", the receipt of which is hereby acknowledged, does hereby grant and convey unto the Grantee, as tenant in severalty, the premises more particularly described in Exhibit "A" attached

hereto and by this reference incorporated herein; subject, however, to all encumbrances noted on said Exhibit "A" (hereafter the "Property".)

AND the reversions, remainders, rents, issues and profits thereof, and all of the estate, right, title and interest of the Grantor, both at law and in equity, therein and thereto.

TO HAVE AND TO HOLD the same, together with the improvements thereon and the rights, easements, privileges and appurtenances thereunto belonging or appertaining, unto the Grantee, according to the tenancy aforesaid, forever.

AND THE GRANTOR for itself and its successors does hereby covenant with the Grantee, and its heirs, personal representatives, successors and assigns, that it has good right to convey said premises; that the interest of the Grantor is free and clear of all encumbrances, except as herein mentioned and current real property taxes, if any, which are to be prorated as of the date of recording of this instrument, and it will warrant and defend the same unto the Grantee and its heirs, personal representatives, successors and assigns, against the lawful claims and demands of all persons, except as aforesaid.

IT IS MUTUALLY AGREED that the terms "Grantor" and "Grantee", as and when used hereinabove or hereinbelow shall mean and include the masculine or feminine, the singular or plural number, individuals, trustees or corporations, and each of their respective successors in interest, heirs, representatives, administrators and permitted assigns, according to the context thereof, and that if these presents shall be signed by two or more Grantors or by two or more Grantees, all covenants of such parties shall be and for all purposes, deemed to be joint and several.

IT IS MUTUALLY AGREED that Grantee is and hereby assumes all of Grantors' obligations under Grantors' agreement as amended and modified with the County of Maui Board of Water Supply in which it was agreed, amongst other things, that the County of Maui issue final subdivision approval, without requiring the sub-dividers G&R Von Tempsky, to construct the required fire protection improvements, but instead would allow the sub-dividers to defer the construction of said fire protection requirement improvements until a later time. Grantee hereby agrees to hold Grantors harmless from any further

obligation under said agreement including, without limitation, any obligation to contribute to the cost of said improvements, whether or not they benefit any other parcels owned by Grantors.

IT IS MUTUALLY AGREED that Grantee shall have no right, without Grantors' consent, which may be withheld in Grantors absolute discretion to further develop the Property into more than five (5) agricultural lots, each consisting of no less than four (4) acres and that Grantee further agrees that a view plain corridor and construction limitation easements restricting the construction of any improvements that would block and/or obscure the view from the property located at 460 Mauna Place, Kula, Maui, Hawaii, 96790 to the Catholic Church (aka the Round Church) shall be observed and enforced, and providing further that there shall not be visible from 460 Mauna Place, Kula, Maui, Hawaii, 96790 more than five (5) structures and/or homes.

IT IS MUTUALLY AGREED Should Grantee, or Grantee's successor-in-interest ever desire to further develop the Makai portion of the Property to the maximum permitted by the Community Plan, the County of Maui has heretofore stated that it will require that the Property owner convey three (3) acres of the property adjacent to Kula Community Center to Maui County, as a condition of any approval by Maui County for any such further development. Further, if Grantee, or Grantee's successors-in-interest ever desire to so fully develop said Makai portion of the Property then, in such event, Grantee or Grantee's successor in interest shall pay Grantors or Grantors' successor in interest an amount equal to five percent (5%) of the gross sales price, or other consideration received by Grantee or Grantee's successor in interest, for the sale or lease of any of the so fully-developed Makai portion of the Property.

The parties hereto agree that this instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding all of the parties are not signatory to the original or the same counterparts. For all purposes, including, without limitation, recordation, filing and delivery of this instrument, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.


IN WITNESS WHEREOF, the Grantor and the Grantee have hereunto executed these presents this 12 day of October, 2005.

  
HELEN TROY VON TEMPSKY

DEBORAH A. VON TEMPSKY  
  
ALEXA V. T. DUDOIT

Co-Trustees of the Raymond M. Von Tempsky Trust, dated May 14, 1979, as amended April 11, 1983 and amended by the declaration dated January 22, 1993, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 93-015776

Grantor

  
KULA RIDGE, LLC, a Hawaii Limited Liability Company,  
By: ADC Development, LLC,  
Its Manager  
By: Clayton Nishikawa,  
It's Manager

Grantee



IN WITNESS WHEREOF, the Grantor and the Grantee have hereunto executed these presents this \_\_\_ day of October, 2005.

HELEN TROY VON TEMPSKY



DEBORAH A. VON TEMPSKY

ALEXA V. T. DUDOIT

Co-Trustees of the Raymond M. Von Tempsky Trust, dated May 14, 1979, as amended April 11, 1983 and amended by the declaration dated January 22, 1993, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 93-015776

Grantor

KULA RIDGE, LLC , a Hawaii Limited Liability Company,  
By: ADC Development, LLC,  
Its Manager  
By: Clayton Nishikawa,  
It's Manager

Grantee



STATE OF HAWAII )  
 ) SS.  
COUNTY OF HONOLULU )

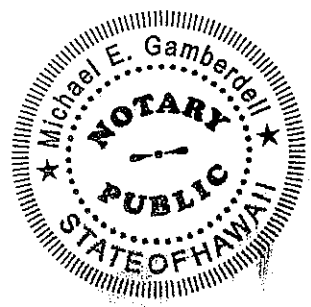
On this \_\_\_\_\_ day of October, 2005, before me personally appeared HELEN TROY VON TEMPSKY, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing instrument as the free act and deed of such person(s), and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.

\_\_\_\_\_  
Print Name: \_\_\_\_\_  
Notary Public, State of Hawaii.  
  
My commission expires: \_\_\_\_\_

STATE OF HAWAII )  
 ) SS.  
COUNTY OF ~~HONOLULU~~ <sup>MAUI</sup> )

NP

On this 7 day of October, 2005, before me personally appeared DEBORAH A. VON TEMPSKY, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing instrument as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.



Michael E. Gamberdell  
Print Name: \_\_\_\_\_  
Notary Public, State of Hawaii.  
  
My commission expires: \_\_\_\_\_

**Michael E. Gamberdell**  
**Expiration Date: November 23, 2007**



EXHIBIT "A"

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Number 7453, Land Commission Award Number 8452, Apana 21 to A. Keohokalole) situate, lying and being at Kealahou 3 and 4, Makawao, District of Kula, Island and County of Maui, State of Hawaii, being LOT 2 of the "G AND R VON TEMPSKY TRUST SUBDIVISION" and thus bounded and described as per survey dated December 16, 1996,

Together with Easement "B-1" for access and utility purposes, and with Easements C-1, C-2, C-3, C-4, C-5 and C-6 for waterline purposes;

Together also with Easement "B-2" for access and utility purposes

BEING THE PREMISES ACQUIRED BY EXCHANGE DEED

GRANTOR : HELEN TROY VON TEMPSKY, MS. DEBORAH A. VON TEMPSKY, and ALEXA V.T. DUDOIT, trustees of the Raymond M. Von Tempsky Trust, dated May 14, 1979, as amended by the amendment dated April 11, 1983, a short form of which is recorded as Document No. 93-015776, with full power to purchase, sell, mortgage, dispose or otherwise hypothecate real property, ROBERT GORDON VON TEMPSKY, JR., and MARY B. VON TEMPSKY as Trustees of the R. Gordon Von Tempsky, Jr. Trust established by Trust Agreement dated

April 11, 1979, as restated by instrument dated December 11, 1996, with full power to sell, mortgage, lease, and otherwise hypothecate real property, and ROBERT GORDON VON TEMPSKY, JR., and MARY B. VON TEMPSKY as Trustees of the Mary B. Von Tempsky Trust established by Trust Agreement dated November 25, 1991, as restated by instrument dated December 11, 1996, with full power to sell, mortgage, lease and otherwise hypothecate real property.

GRANTEE : HELEN TROY VON TEMPSKY, MS. DEBORAH A. VON TEMPSKY, and ALEXA V.T. DUDOIT, trustees of the Raymond M. Von Tempsky Trust, dated May 14, 1979, as amended by the amendment dated April 11, 1983, a short form of which is recorded as Document No. 93-015776, with full power to purchase, sell, mortgage, dispose or otherwise hypothecate real property

DATED : April 4, 1997, April 14, 1997 and April 21, 1997

RECORDED : Document No. 97-088514

SUBJECT, HOWEVER, TO:

1. Reservation in favor of the State of Hawaii of all mineral and metallic mines.
2. Any and all existing roadways, trails, easements, rights-of-way, flumes and irrigation ditches.
3. Grant in favor of Maui Electric Company, Limited and Hawaiian Telephone Company, now known as Hawaiian Telcom, Inc., dated August 3, 1961, recorded in Liber 4132 at Page 175; granting a perpetual right and easement to build, construct, reconstruct, rebuild, repair, maintain and operate pole and wire lines and/or underground power lines,

etc., for the transmission of electricity, over, across, through and under Easement "1", being more particularly described therein.

4. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS

DATED : August 18, 1982  
RECORDED : Liber 16584 Page 24

5. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : AGREEMENT

DATED : June 16, 1987  
RECORDED : Liber 20818 Page 234  
PARTIES : ROBERT GORDON VON TEMPSKY, JR., and RAYMOND M. VON TEMPSKY, "Owners", and DEBORAH A. VON TEMPSKY, "Applicant", and the COUNTY OF MAUI and its DEPARTMENT OF WATER SUPPLY, "County"  
RE : Owners and Applicant agree to hold the County, its employees and assigns, harmless from damages, injury, etc., resulting from the inadequacy of the existing County water system and the County's approval of Building Permit to construct a dwelling on subject land

6. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : SUBDIVISION AGREEMENT (AGRICULTURAL USE)

DATED : as of October 5, 1993  
RECORDED : Document No. 93-184216  
PARTIES : HELEN TROY VON TEMPSKY, DEBORAH A. VON TEMPSKY, and ALEXA V. T. DUDOIT, Trustees of the Raymond M. von Tempsky Trust dated May 14, 1979, as amended by the Amendment dated April

11, 1983, and ROBERT GORDON VON TEMPSKY, JR. and MARY B. VON TEMPSKY, as Trustees of the R. Gordon von Tempsky, Jr. Trust, established by Trust Agreement dated April 11, 1979, as amended by instrument dated April 26, 1982, made by Robert Gordon von Tempsky, Jr., as Settlor, "Owners", and COUNTY OF MAUI, through its Department of Public Works, "County"

7. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : MODIFICATION OF  
SUBDIVISION REQUIREMENTS AGREEMENT

DATED : December 19, 1994  
RECORDED : Document No. 95-074002  
PARTIES : HELEN TROY VON TEMPSKY, DEBORAH A. VON TEMPSKY and ALEXA V. T. DUDOIT, Trustees of the Raymond M. Von Tempsky Trust dated May 14, 1979, as amended by the amendment dated April 11, 1983, ROBERT GORDON VON TEMPSKY, JR. and MARY B. VON TEMPSKY, Trustees of that certain unrecorded Restates Revocable Trust Agreement of Robert Gordon Von Tempsky, Jr. dated April 22, 1992, and the BOARD OF WATER SUPPLY of the County of Hawaii

Said above instrument was amended by AMENDMENT OF THE MODIFICATION OF SUBDIVISION REQUIREMENTS AGREEMENT dated October 16, 2001, recorded as Document No. 2001-199376.

8. UNRECORDED LEASE

LESSORS : RAYMOND M. VON TEMPSKY TRUST dated May 14, 1979, by its Trustees, HELEN TROY VON TEMPSKY, ALEXA V.T. DUDOIT and DEBORAH A. VON TEMPSKY  
LESSEE : TED RODRIGUES  
DATED : April 1, 2003



TERM : month to month starting April 1, 2003

Leasing and demising that certain parcel of land situate at Kealahou, Kula , County of Maui, State of Hawaii, as marked and shown on the map attached thereto as Exhibit "A". Reserving, however, unto the Lessors, their successors and assigns, a right of way for animal and vehicular traffic over the established roads, ways, paths and trails on said property.

Said Lease is subject to any matters arising from or affecting the same.

9. UNRECORDED LEASE

LESSORS : RAYMOND M. VON TEMPSKY TRUST dated May 14, 1979, by its Trustees, HELEN TROY VON TEMPSKY, ALEXA V.T. DUDOIT and DEBORAH A. VON TEMPSKY

LESSEE : THOMAS OHARA

DATED : December 1, 2004

TERM : one year starting from January 1, 2005 and ending December 31, 2005

Leasing and demising that certain parcel of land situate at Kealahou, Kula , County of Maui, State of Hawaii, as marked and shown on the map attached thereto as Exhibit "A". Reserving, however, unto the Lessors, their successors and assigns, a right of way for animal and vehicular traffic over the established roads, ways, paths and trails on said property.

-Note:- Exhibit "A" referred to above has not been provided to Title Guaranty of Hawaii, Inc. for it's review.

Said Lease is subject to any matters arising from or affecting the same.

- 10 Any other unrecorded leases and matters arising from or affecting the same.
- 11 Claims arising out of customary and traditional rights and practices, including without limitation those exercised for subsistence, cultural,

religious, access or gathering purposes, as provided for in the Hawaii Constitution or the Hawaii Revised Statutes.

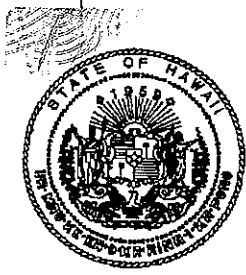
12. Encroachments or any other matters which a correct survey or archaeological study would disclose.

END OF EXHIBIT "A"

Tax Map Key: (2) 2-3-001-174

**LANDOWNERSHIP DOCUMENT FOR PARCEL 23**

RECEIVED  
NOV 22 2006



R-525 STATE OF HAWAII  
BUREAU OF CONVEYANCES  
RECORDED  
SEP 07, 2006 08:01 AM  
Doc No(s) 2006-164428



35 2/5 Z9

/s/ CARL T. WATANABE  
REGISTRAR OF CONVEYANCES

CTax (30): \$32118.00

LAND COURT SYSTEM  
Return by Mail ( ) Pickup ( ) To:  
Mr. CLAYTON NISHIKAWA  
KULA RIDGE MAUKA LLC  
1849 WILI PA LP  
WAILUKU, HI 96793

REGULAR SYSTEM  
TG: 200615818 - S  
TGE: A6-205-0093  
Michael E.  
Gamberdell

RS  
2

Tax Key: (2) 2-3-001-023

Total No. of Pages:35

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS:

That MARY B. VON TEMPSKY, as Trustee of the R. Gordon Von Tempsky, Jr. Trust, dated April 11, 1979, as amended, (for the benefit of Von Tempsky FP, a Hawaii limited partnership), with full powers to sell, mortgage, lease or otherwise hypothecate real property, and MARY B. VON TEMPSKY, as Trustee of the Mary B. Von Tempsky Trust, dated November 25, 1991, as amended, with full powers to sell, mortgage, lease or otherwise

272 acru

hypothecate real property, both of whose address is 41 Nonohe Pl., Paia, Maui, Hawaii 96779, hereinafter called the "Grantor," in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration to Grantor paid by KULA RIDGE MAUKA LLC, a Hawaii limited liability company, whose address is 1849 Wili Pa Lp Wailuku, Hawaii 96793, hereinafter called the "Grantee," the receipt whereof is hereby acknowledged, does hereby grant and convey unto the Grantee, as a tenant in severalty, the real property described in Exhibit "A" attached hereto and by this reference incorporated herein; subject, however, to all encumbrances noted on said Exhibit "A".

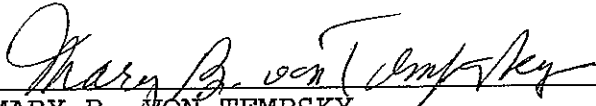
TO HAVE AND TO HOLD the same, together with any improvements thereon and the rights, easements, privileges, and appurtenances thereunto belonging or appertaining unto the Grantee, the heirs, representatives, administrators, successors and assigns of the Grantee, forever.

AND the Grantor covenants with the Grantee that the former is now seised in fee simple of the property granted; that the latter shall enjoy the same without any lawful disturbance; that the same is free from all encumbrances, except the liens and encumbrances hereinbefore mentioned, and except also the liens and encumbrances created or permitted by the Grantee after the date hereof; and that the Grantor will WARRANT and DEFEND

the Grantee against the lawful claims and demands of all persons claiming the whole or any part of the above bargained and granted lands and premises.

The terms "Grantor" and "Grantee", as and when used herein, or any pronouns used in place thereof, shall mean and include the masculine or feminine, or neuter, the singular or plural number, individuals or corporations, and their and each of their respective successors, heirs, personal representatives, and permitted assigns, according to the context hereof. If these presents shall be signed by two or more Grantors or by two or more Grantees, all covenants of such parties shall for all purposes be joint and several.

IN WITNESS WHEREOF, the Grantor has executed these presents on this \_\_\_\_\_ day of AUG 29 2006, 2006.

  
\_\_\_\_\_

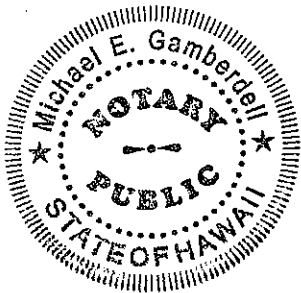
MARY B. VON TEMPSKY  
Trustee of the R. Gordon Von  
Tempsky, Jr. Trust, dated April  
11, 1979, (for the benefit of Von  
Tempsky FP a Hawaii limited  
partnerhip)

  
\_\_\_\_\_

MARY B. VON TEMPSKY  
Trustee of the Mary B. Von Tempsky  
Trust dated November 25, 1991

STATE OF HAWAII                    )  
  )  SS.  
COUNTY OF MAUI                    )

On this \_\_\_\_\_ day of AUG 29 2006, 2006, before me personally appeared MARY B. VON TEMPSKY, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing instrument as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.



*Michael E. Gamberdell*  
Print Name: \_\_\_\_\_  
Notary Public, State of Hawaii.  
My commission expires: \_\_\_\_\_  
Michael E. Gamberdell  
Expiration Date: November 23, 2007

EXHIBIT "A"

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Number 7453, Land Commission Award Number 8452, Apana 21 to A. Keohokalole and Royal Patent Number 4388, Land Commission Award Number 8452, Apana 6 to A. Keohokalole) situate, lying and being at Kealahou 3 and 4, Makawao, District of Kula, Island and County of Maui, State of Hawaii, being LOT 1 of the "G AND R VON TEMPSKY TRUST SUBDIVISION" and thus bounded and described as per survey dated December 12, 1996, to-wit:

Beginning at the southwesterly corner of this parcel of land, on the northeasterly boundary of Grant 11,988 to Louis Kaai Fernandez, said point being also the southeasterly corner of the Lot Randal and Dora Von Tempsky Memorial Park Lot (Tax Map Key: (2) 2-3-037:026), the coordinates of said point of beginning referred to Government Survey Triangulation Station "KIKALAPUU" being:

7,434.26 feet south  
327.94 feet east

and running by azimuths measured clockwise from true South:

1. 208° 53' 00" 61.28 feet along said Randal and Dora Von Tempsky Memorial Park Lot (Tax Map Key: (2) 2-3-037: 026) and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a 3/4-inch pipe at the southwest corner of Lot 2



of said G and R  
Von Tempsky Trust  
Subdivision;

2. 304° 22' 00" 202.00 feet along said  
Lot 2 of the G  
and R Von Tempsky  
Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe;

Thence along same on the arc of a curve to the  
left, concave northeasterly with a radius of  
559.00 feet, the chord azimuth and distance  
being:

3. 297° 47' 30" 128.02 feet to a 3/4-  
inch pipe;
4. 291° 13' 00" 151.09 feet along said  
Lot 2 of the G  
and R Von Tempsky  
Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 2 to  
A. Keohokalole to  
a 3/4-inch pipe;

Thence along same on the arc of a curve to the  
left,, concave northerly with a radius of  
299.00 feet, the chord azimuth and distance  
being:

5. 267° 12' 00" 243.39 feet to a 3/4-  
inch pipe;

6. 243° 11' 00" 244.15 feet along said Lot 2 of the G and R Von Tempsky Trust Subdivision and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a 3/4-inch pipe;

Thence along same on the arc of a curve to the right, concave southeasterly with a radius of 551.00 feet, the chord azimuth and distance being:

7. 251° 40' 00" 162.57 feet to a 3/4-inch pipe;

8. 260° 09' 00" 338.08 feet along said Lot 2 of the G and R Von Tempsky Trust Subdivision and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a 3/4-inch pipe;

Thence along same on the arc of a curve to the right, concave southerly with a radius of 661.00 feet, the chord azimuth and distance being:

9. 282° 07' 30" 494.70 feet to a 3/4-inch pipe;

10. 304° 06' 00" 257.69 feet along said Lot 2 of the G and R Von Tempsky

Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe;

11. 204° 04' 00" 198.54 feet along same  
to a 3/4-inch  
pipe at the top  
of Kehuaiwi  
Gulch;

Thence along same and the top of said Kehuaiwi  
Gulch for the next ten (10) courses:

12. 125° 47' 30" 440.69 feet along same  
to a 3/4-inch  
pipe;

13. 143° 51' 00" 299.40 feet along same  
to a 3/4-inch  
pipe;

14. 160° 24' 00" 163.95 feet along same  
to a 3/4-inch  
pipe;

15. 145° 56' 00" 325.75 feet along same  
to a 3/4-inch  
pipe;

16. 131° 23' 00" 184.45 feet along same  
to a 3/4-inch  
pipe;

17. 161° 48' 00" 157.60 feet to a cross  
chiseled in rock;

18. 168° 07' 00" 99.75 feet along same  
to a 3/4-inch  
pipe;

19.	111°	46'	30"	114.20 feet along same to a 3/4-inch pipe;
20.	140°	25'	00"	246.90 feet along same to a 3/4-inch pipe;
21.	148°	11'	00"	213.45 feet to a found 3/4-inch pipe at the southeast corner of Parcel B, Former Quarry Site (C.S.F. 19,425), land owned by the State of Hawaii;
22.	223°	53'	00"	284.59 feet along said Parcel B, Former Quarry Site (C.S.F. 19,425), land owned by the State of Hawaii to a found to a 3/4-inch pipe;
23.	139°	33'	00"	85.55 feet along same to a found 3/4-inch pipe;
24.	120°	46'	00"	274.65 feet along same to a found 3/4-inch pipe;
25.	123°	34'	00"	196.50 feet along same to a found 3/4-inch pipe;
26.	152°	00'	00"	158.30 feet along same to a 3/4-inch pipe;
27.	139°	30'	00"	152.70 feet along same to a found 3/4-inch pipe;

28.	106°	44'	00"	385.50 feet along same to a 3/4-inch pipe on the northeasterly boundary of an existing 25-ft. wide right-of-way;
29.	130°	33'	30"	25.58 feet along said existing 25-ft. wide right-of-way to a 3/4-inch pipe;
30.	129°	07'	00"	85.88 feet along same to a P.K. nail;
31.	121°	49'	00"	68.82 feet along same to a 3/4-inch pipe;
32.	109°	36'	00"	54.63 feet along same to a 3/4-inch pipe;
33.	95°	28'	30"	72.48 feet along same to a 3/4-inch pipe on the easterly boundary of Kula Highway, F.A.P. No. BF-037-1(1);
34.	196°	11'	00"	154.56 feet along same to a 3/4-inch pipe on the easterly boundary of Kula Highway, F.A.P. No. BF-037-1(1) to a 3/4-inch pipe;
35.	286°	11'	00"	10.00 feet along same to a 3/4-inch

				pipe;
36.	196°	11'	00"	475.67 feet along same to a 3/4-inch pipe at the south corner of Remnant 34-A of said Kula Highway, F.A.P. No. BF-037(1);
37.	210°	23'	00"	48.74 feet along said Remnant 34-A of said Kula Highway, F.A.P. No. BF-037(1) to a 3/4-inch pipe;
38.	126°	46'	30"	23.46 feet along same to a 3/4-inch pipe on the easterly boundary of said Kula Highway, F.A.P. No. BF-037-1(1);
39.	196°	11'	00"	162.83 feet along said easterly bound of Kula Highway, F.A.P. No. BF-037-1(1) to a 3/4-inch pipe;
40.	196°	11'	00"	40.00 feet along same to a 3/4-inch pipe;
41.	196°	11'	00"	116.00 feet along same to a 3/4-inch pipe;
42.	286°	11'	00"	30.00 feet along same to a 3/4-inch pipe;
43.	196°	11'	00"	90.13 feet along same to a found cross

chiseled in rock  
in the middle of  
Hapapa Gulch;

Thence along the middle of said Hapapa Gulch  
and along Grant 3899 to Kaupalolo for the next  
twelve (12) courses:

44.	263°	09'	20"	36.08 feet to a cross chiseled on rock;
45.	245°	31'	40"	168.16 feet to a cross chiseled in rock;
46.	291°	01'	00"	61.11 feet to a 3/4- inch pipe;
47.	323°	56'	10"	120.32 feet to a P.K. nail;
48.	343°	52'	50"	76.45 feet to a 3/4- inch pipe;
49.	343°	49'	20"	150.29 feet to a 3/4- inch pipe;
50.	338°	19'	00"	184.27 feet to a 3/4- inch pipe;
51.	16°	45'	10"	27.72 feet to a cross chiseled in rock;
52.	358°	43'	10"	107.43 feet to a 3/4- inch pipe;
53.	15°	09'	00"	70.28 feet to a cross chiseled in rock;
54.	354°	59'	40"	26.64 feet to a P.K. nail;
55.	322°	33'	20"	14.87 feet to a 3/4- inch pipe at the most westerly corner of Lot 12- A-2 of the Choda

Farm Subdivision,  
being also the  
most westerly  
corner to Grant  
3898 to  
Halaulani;

56. 342° 27' 00" 224.94 feet along said Lot 12-A-2 of the Choda Farm Subdivision and said Grant 3898 to Halaulani to a 3/4-inch pipe;
57. 302° 22' 00" 715.31 feet along same and along Parcel C-1 of the Kemitani Subdivision and along Grant 3897 to H.K. Kanahuna to a found 1/2-inch pipe at the westerly corner of Parcel 85 of Tax Map Key: (2) 2-3-001;
58. 303° 23' 00" 371.25 feet along said Parcel 85 of Tax Map Key: (2) 2-3-001 and along Grant 3897 to H.K. Kanahuna to a found 1/2-inch pipe at the westerly corner of Lot 14 of the Pulehuiki and Kamehameiki Homesteads, being also the westerly corner of Grant 3896 to Kauhi;



59. 303° 22' 00" 1,657.19 feet along Lots 14 and 15 of said Pulehuiki and Kamehameiki Homesteads, along said Grant 3896 to Kauhi and along Grant 3895 to Mahuna to a found concrete monument at the Westerly corner of Lot 1 of the Otomo-Kawamoto Subdivision, being also the westerly corner of Grant 3894 to Pauole;
60. 309° 14' 00" 465.10 feet along said Lot 1 of the Otomo-Kawamoto Subdivision and said Grant 3894 to Pauole to a found 3/4-inch pipe at the westerly corner of Lot 2 of said Otomo Kawamoto Subdivision;
61. 309° 14' 30" 930.41 feet along Lots 2 and 3 of said Otomo-Kawamoto Subdivision, said Grant 3894 to Pauole and along Grant 3893 to John Rego to a found 3/4-inch pipe at the westerly corner of Lot 4 of said Otomo-Kawamoto

Subdivision;

62. 309° 17' 00" 515.53 feet along Lot 4 of said Otomo-Kawamoto Subdivision and said Grant 3893 to John Rego to a found 3/4-inch pipe at the westerly corner of Lot 18-A of said Pulehuiki and Kamehameiki Homesteads, being also the westerly corner of Grant 3892 to Andre Manoel;
63. 308° 52' 30" 802.60 feet along Lots 18-A, 18-B and 18-C of said Pulehuiki and Kamehameiki Homesteads and said Grant 3892 to Andre Manoel to a found 1/2-inch pipe at the westerly corner of Lot 19-A-2 to said Pulehuiki and Kamehameiki Homesteads, being also the westerly corner of Grant 4765 to Manuel Mareira;
64. 309° 15' 00" 750.30 feet along Lots 19-A-2, 19-A-1 and 19-B of said Pulehuiki and Kamehameiki Homesteads and

along said Grant  
 4765 to Manuel  
 Mareira to a  
 found 3/4-inch  
 pipe on the  
 northwesterly  
 boundary of  
 Parcel 16 of Tax  
 Map Key: (2) 2-3-  
 012 and at the  
 westerly corner  
 of Grant 4338 to  
 J.J. dos Santos;

- |     |      |     |     |        |  |
|-----|------|-----|-----|--------|--|
| 65. | 38°  | 17' | 00" | 107.10 | feet along said<br>Parcel 16 of Tax<br>Map Key: (2) 2-3-<br>012 and along the<br>remainder of said<br>Royal Patent<br>4388, Land<br>Commission Award<br>8452, Apana 6 to<br>A. Keohokalole to<br>a found 3/4-inch<br>pipe;             |
| 66. | 309° | 17' | 00" | 402.00 | feet along same<br>to a found 3/4-<br>inch pipe;   |
| 67. | 219° | 17' | 00" | 108.09 | feet along same<br>to a found 3/4-<br>inch pipe at the<br>easterly corner<br>of Parcel 37 of<br>said Tax Map Key:<br>(2) 2-3-012, said<br>point being on<br>the southwesterly<br>boundary of said<br>Grant 4338 to<br>J.J. dos Santos; |
| 68. | 308° | 59' | 00" | 612.80 | feet along said<br>Parcel 37 of said   |

Tax Map Key; (2)  
2-3-012 and said  
Grant 4338 to J.  
J. dos Santos to  
a 3/4-inch pipe  
at the westerly  
corner of Grant  
3874 to Chi Lung;

69. 289° 33' 00" 117.42 feet along said  
Grant 3874 to Chi  
Lung (land owned  
by R. Gordon Von  
Tempsky Trust) to  
a 3/4-inch pipe  
on the westerly  
boundary of  
Kekaulike  
Highway, F.A.P.  
No. 13-A;

70. 3° 34' 30" 42.22 feet along said  
westerly boundary  
of Kekaulike  
Highway, F.A.P.  
No. 13-A to a  
3/4-inch pipe at  
the easterly  
corner of Lot 1  
of the Cameron-  
Tallmadge  
Subdivision;

Thence along said Lot 1 of the Cameron-  
Tallmadge Subdivision and along the remainder  
of said Royal Patent 4388, Land Commission  
Award 8452, Apana 6 to A. Keohokalole, on the  
arc of a curve to the left, concave  
southwesterly with a radius of 30.00 feet, the  
chord azimuth and distance being:

71. 133° 42' 37" 38.68 feet to a 3/4-  
inch pipe;

72. 93° 34' 30" 70.00 feet along same  
Lot 1 of the

Cameron-Tallmadge  
Subdivision and  
along the  
remainder of said  
Royal Patent  
4388, Land  
Commission Award  
8452, Apana 5 to  
A. Keohokalole to  
a found 1/2-inch  
pipe;

Thence along same on the arc of a curve to the  
right, concave northeasterly with a radius of  
370.00 feet, the chord azimuth and distance  
being:

- |     |      |     |     |        |   |
|-----|------|-----|-----|--------|---|
| 73. | 106° | 20' | 15" | 163.47 | feet to a<br>found 1/2-inch pipe;   |
| 74. | 119° | 06' | 00" | 156.87 | feet along said<br>Lot 1 of the<br>Cameron-Tallmadge<br>Subdivision and<br>along the<br>remainder of said<br>Royal Patent<br>4388, Land<br>Commission Award<br>8452, Apana 6 to<br>A. Keohokalole to<br>a found 1/2-inch<br>pipe; |
| 75. | 24°  | 56' | 00" | 631.08 | feet along same,<br>along Lot 2 of<br>said Cameron-<br>Tallmadge<br>Subdivision and<br>along the<br>remainder of said<br>Royal Patent<br>7453, Land<br>Commission Award<br>8452, Apana 21 to<br>A. Keohokalole to                 |

a found 3/4-inch pipe at the top of Keahuaiwi Gulch, being also the northerly boundary of Lot 5 of the Hoi Hoi Subdivision;

76. 100° 59' 15" 260.00 feet along Lots 5 and 4 of said Hoi Hoi Subdivision, along said top of Keahuaiwi Gulch and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a found 3/4-inch pipe;
77. 135° 04' 15" 103.61 feet along said Lot 4 of the Hoi Hoi Subdivision, along said top of Keahuaiwi Gulch and along the remainder of said Royal Patent 7453, land Commission Award 8452, Apana 21 to A. Keohokalole to a found 1/2-inch pipe;
78. 150° 12' 15" 97.11 feet along same to a 3/4-inch pipe at the easterly corner to Lot 13-B of the Kealahou Acres;

79.	130°	33'	15"	101.76 feet along said Lot 13-B of the Kealahou Acres, along said top of Keahuaiwi Gulch and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a 3/4-inch pipe;
80.	138°	14'	15"	100.00 feet along same to a 3/4-inch pipe;
81.	143°	24'	15"	100.00 feet along same to a 3/4-inch pipe;
82.	50°	36'	15"	265.05 feet along said Lot 13-B of the Kealahou acres and along the remainder of said Royal Patent 74583, Land Commission Award 8452, Apana 21 to A. Keohokalole to a found 1/2-inch pipe at the northerly corner of Lot 13-A of said Kealahou Acres;
83.	50°	36'	15"	304.95 feet along Lots 13-A of said Kealahou Acres and along the remainder of said Royal Patent 7453,

Land Commission  
Award 8452, Apana  
21 to A.  
Keohokalole to a  
found 3/4-inch  
pipe at the  
northerly corner  
of Lot 12-B of  
said Kealahou  
Acres.

- |     |      |     |     |   |
|-----|------|-----|-----|---|
| 84. | 50°  | 36' | 15" | 858.02 feet along Lots<br>12-B and 12-A of<br>said Kealahou<br>Acres and along<br>the remainder of<br>said Royal Patent<br>7453, Land<br>Commission Award<br>8452, Apana 21,<br>to A. Keohokalole<br>to a found 3/4-<br>inch pipe on the<br>northeasterly<br>boundary of Lot<br>3-A of the<br>Kealahou Farm<br>Lots Subdivision,<br>being also the<br>northeasterly<br>boundary of Grant<br>8107 to Satoichi<br>Haramoto; |
| 85. | 119° | 58' | 00" | 35.95 feet along said<br>Lot 3-A of the<br>Kealahou Farm<br>Lots Subdivision<br>and along said<br>Grant 8107 to<br>Satoichi Haramoto<br>to a 3/4-inch<br>pipe;  |
| 86. | 120° | 50' | 44" | 22.42 feet along same   |



					to a found 1/2-inch pipe at the easterly corner of Lot 3-B of said Kealahou Farm Lots Subdivision;
87.	120°	59'	20"	469.50	feet along Lots 3-B, 3-C, 3-D and 4-A of said Kealahou Farm Lots Subdivision and along said Grant 8107 to Satoichi Haramoto to a found 1/2-inch pipe at the easterly corner of Lot 4-B of said Kealahou Farm Lots Subdivision;
88.	120°	50'	44"	1,059.30	feet along Lots 4-B, 5-B-1, 5-A, 6-B, 6-A-1 and 6-A-2 of said Kealahou Farm Lots Subdivision and along Grant 8107 to Satoichi Haramoto to a found 3/4-inch pipe at the easterly corner of Parcel 33 of Tax Map Key: (2) 2-2-011, being also the easterly corner of Grant 11988 to Louis Kaai Fernandez;
89.	113°	20'	20"	170.01	feet along said Parcel 33 of Tax

Map Key: (2) 2-2-011 and said Grant 11988 to Louis Kaai Fernandez to a 3/4-inch pipe at the southerly corner of Lot 6 (Tank Lot) of said G and R Von Tempsky Subdivision;

- |     |      |     |     |   |
|-----|------|-----|-----|---|
| 90. | 203° | 20' | 20" | 50.00 feet along said Lot 6 (Tank Lot) of the G and R Von Tempsky Trust Subdivision and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to a 3/4-inch pipe; |
| 91. | 113° | 20' | 20" | 50.00 feet along same to a 3/4-inch pipe;   |
| 92. | 23°  | 20' | 20" | 50.00 feet along same to a 3/4-inch pipe on the northeasterly boundary of said Parcel 33 of Tax Map Key: (2) 2-2-011 and said Grant 11988 to Louis Kaai Fernandez;  |
| 93. | 113° | 20' | 20" | 415.00 feet along said Parcel 33 of Tax map Key: (2) 2-2-   |

011 and said  
 Grant 11988 to  
 Louis Kaai  
 Fernandez to a  
 3/4-inch pipe at  
 the southeasterly  
 corner of Lot 3  
 of sad G and R  
 Von Tempsky Trust  
 Subdivision;

- |     |      |     |     |        |   |
|-----|------|-----|-----|--------|---|
| 94. | 215° | 45' | 30" | 321.25 | feet along said<br>Lot 3 of the G<br>and R Von Tempsky<br>Trust Subdivision<br>and along the<br>remainder of said<br>Royal Patent<br>7453, Land<br>Commission Award<br>8452, Apana 21 to<br>A. Keohokalole to<br>a 3/4-inch pipe; |
| 95. | 127° | 57' | 00" | 645.00 | feet along same<br>to a 3/4-inch<br>pipe;   |
| 96. | 204° | 04' | 00" | 513.54 | feet along same<br>to a 3/4-inch<br>pipe;   |
| 97. | 124° | 06' | 00" | 267.60 | feet along same<br>to a 3/4-inch<br>pipe;   |

Thence along same on the arc of a curve to the  
 left, concave southerly with a radius of 605.00  
 feet, the chord azimuth and distance being:

- |     |      |     |     |        |  |
|-----|------|-----|-----|--------|--|
| 98. | 102° | 07' | 30" | 452.78 | feet to a 3/4-<br>inch pipe;                           |
| 99. | 80°  | 09' | 00" | 338.08 | feet along said<br>Lot 3 of the G<br>and R Von Tempsky |

Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe;

Thence along same on the arc of a curve to the  
left, concave southeasterly with a radius of  
495.00 feet, the chord azimuth and distance  
being:

100. 71° 40' 00" 146.05 feet to a 3/4-  
inch pipe;

101. 63° 11' 00" 244.15 feet along said  
Lot 3 of the G  
and R Von Tempsky  
Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe;

Thence along the same on the arc of a curve to  
the right, concave northerly with a radius of  
355.00 feet, the chord azimuth and distance  
being:

102. 87° 12' 00" 288.97 feet to a 3/4-  
inch pipe;

103. 111° 13' 00" 151.09 feet along said  
Lot 3 of the G  
and R Von Tempsky  
Trust Subdivision  
and along the  
remainder of said  
Royal Patent

7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe;

Thence along same on the arc of a curve to the  
right, concave north-easterly with a radius of  
615.00 feet, the chord azimuth and distance  
being:

104. 117° 47' 30" 140.84 feet to a 3/4-  
inch pipe;
105. 34° 22' 00" 5.00 feet along said  
Lot 3 of the G  
and R Von Tempsky  
Trust Subdivision  
and along the  
remainder of said  
Royal Patent  
7453, Land  
Commission Award  
8452, Apana 21 to  
A. Keohokalole to  
a 3/4-inch pipe  
on the  
northeasterly  
boundary of  
Parcel 8 to Tax  
Map Key: (2) 2-2-  
011, being also  
the northeasterly  
boundary of said  
Grant 11988 to  
Louis Kaai  
Fernandez;
106. 124° 22' 00" 196.15 feet along said  
Parcel 8 of Tax  
Map Key (2): 2-2-  
011 and said  
Grant 11988 to  
Louis Kaai  
Fernandez to the  
point of

beginning and  
containing an  
area of 272.956 /  
acres, more or  
less;

Together with Easement "B-1", affecting the Randal  
and Dora Von Tempsky Memorial Park Lot (Tax Key: (2)  
2-3-037: 026), for access and utility purposes, to-  
wit:

Beginning at the southeasterly corner of this  
easement, on the north-easterly boundary of Grant  
11988 to Louis Kaai Fernandez, said point also being  
the southeasterly corner of said Randal and Dora Von  
Tempsky Memorial Park Lot (Tax Map Key (2): 2-3-037:  
026) and the southwest corner of Lot 3 of said G and  
R Von Tempsky Trust Subdivision, the coordinates of  
said point of beginning referred to Government  
Survey Triangulation Station "KIKALAPUU" being:

7,434.26 feet south  
327.94 feet east

and running by azimuths measured clockwise from true  
South:

1. 121° 52' 00" 321.40 feet along said  
Grant 11988 to  
Louis Kaai  
Fernandez and  
along Parcel 8 of  
Tax Map Key: (2)  
2-2-011 to a  
point on the  
easterly boundary  
of Lower Kula  
Road;
2. 197° 15' 00" 81.05 feet along said  
easterly boundary  
of Lower Kula  
Road;

Thence along the remainders of said Randal and Dora Von Tempsky Memorial Park Lot (Tax Map Key : (2) 2-3-037: 026) and said Royal Patent 7453, Land Commission Award 8452, Apana 21 to a. Keohokalole, on the arc of a curve to the left, concave northeasterly with a radius of 30.00 feet, the chord azimuth and distance being:

3. 339° 33' 30" 36.68 feet;
4. 301° 52' 00" 246.00 feet along the remainders of said Randal and Dora Von Tempsky Memorial Park Lot (Tax Map Key : (2) 2-3-037: 026) and said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole;
5. 281° 00' 00" 67.06 feet along same to a point on the westerly boundary of Lot 2 of said G and R Von Tempsky Trust Subdivision;
6. 28° 53' 00" 80.00 feet along said Lots 2 and 3 of the G and R Von Tempsky Subdivision and along the remainder of said Royal Patent 7453, Land Commission Award 8452, Apana 21 to A. Keohokalole to the point of beginning and containing an

area of 0.441  
acre, more or  
less.

BEING THE PREMISES ACQUIRED BY EXCHANGE DEED

GRANTOR : HELEN TROY VON TEMPSKY, MS.  
DEBORAH A. VON TEMPSKY, and ALEXA  
V.T. DUDOIT, trustees of the  
Raymond M. Von Tempsky Trust,  
dated May 14, 1979, as amended by  
the amendment dated April 11,  
1983, a short form of which is  
recorded as Document No. 93-  
015776, with full power to  
purchase, sell, mortgage, dispose  
or otherwise hypothecate real  
property, ROBERT GORDON VON  
TEMPSKY, JR., and MARY B. VON  
TEMPSKY as Trustees of the R.  
Gordon Von Tempsky, Jr. Trust  
established by Trust Agreement  
dated April 11, 1979, as restated  
by instrument dated December 11,  
1996, with full power to sell,  
mortgage, lease, and otherwise  
hypothecate real property, and  
ROBERT GORDON VON TEMPSKY, JR.,  
and MARY B. VON TEMPSKY as  
Trustees of the Mary B. Von  
Tempsky Trust established by Trust  
Agreement dated November 25, 1991,  
as restated by instrument dated  
December 11, 1996, with full power  
to sell, mortgage, lease and  
otherwise hypothecate real  
property

GRANTEE : ROBERT GORDON VON TEMPSKY, JR.,  
and MARY B. VON TEMPSKY as  
Trustees of the R. Gordon Von  
Tempsky, Jr. Trust established by  
Trust Agreement dated April 11,  
1979, as restated by instrument  
dated December 11, 1996, with full



power to sell, mortgage, lease, and otherwise hypothecate real property; and ROBERT GORDON VON TEMPSKY, JR., and MARY B. VON TEMPSKY as Trustees of the Mary B. Von Tempsky Trust established by Trust Agreement dated November 25, 1991, as restated by instrument dated December 11, 1996, with full power to sell, mortgage, lease and otherwise hypothecate real property, as equal tenants in common

DATED : April 4, 1997, April 14, 1997 and  
April 21, 1997  
RECORDED : Document No. 97-088514

SUBJECT, HOWEVER, to the following:

1. Reservation in favor of the State of Hawaii of all mineral and metallic mines.
2. Location of the boundary of Hapapa Gulch and the effect, if any, upon the area of the land described herein, and the free flowage thereof.
3. Location of the boundary of Keahuawi Gulch and the effect, if any, upon the area of the land described herein, and the free flowage thereof.
4. Any and all existing roadways, trails, easements, rights-of-way, flumes and irrigation ditches.
5. Grant in favor of Maui Electric Company, Limited and Hawaiian Telephone Company, now known as Hawaiian Telcom, Inc., dated August 3, 1961, recorded in Liber 4132 at Page 175; granting a perpetual right and easement to build, construct, reconstruct, rebuild, repair,

maintain and operate pole and wire lines and/or underground power lines, etc., for the transmission of electricity, over, across, through and under Easement "1", being more particularly described therein.

6. Abutters' rights of vehicle access into and from the Lower Kula Road (F.A.P. No. BF-037-1 (1)), except where access is permitted, in favor of the State of Hawaii, as conveyed by DEED dated January 23, 1962, recorded in Liber 4357 at Page 90.
7. Grant in favor of Maui Electric Company, Limited, dated March 13, 1978, recorded in Liber 13521 at Page 90; granting a perpetual easement of right-of-way over, under and across Easement "12" (25 feet wide) for pole and wire lines, being more particularly described therein.
8. Grant in favor of Hawaiian Telephone Company, now known as Hawaiian Telcom, Inc., dated April 20, 1979, recorded in Liber 13686 at Page 468; granting a perpetual right and easement to build, construct, reconstruct, rebuild, repair, maintain and operate pole and wire lines and/or underground lines, etc. for the transmission and distribution of electricity.
9. Grant in favor of Maui Electric Company, Limited and Hawaiian Telephone Company, now known as Hawaiian Telcom, Inc., dated June 4, 1979, recorded in Liber 13940 at Page 125; granting a perpetual right and easement to build, construct, reconstruct, rebuild, repair, maintain and operate pole and wire lines and/or underground power lines, etc., for the transmission of electricity.
10. Grant in favor of GTE Hawaiian Telephone Company Incorporated, dated September 14, 1981,

recorded in Liber 16030 at Page 312; granting a perpetual right and easement to build, construct, reconstruct, rebuild, repair, maintain and operate pole and wire lines and/or underground lines, etc., for the transmission and distribution of electricity.

11. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : DECLARATION OF COVENANTS,  
CONDITIONS AND RESTRICTIONS

DATED : August 18, 1982  
RECORDED : Liber 16584 Page 24

12. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : AGREEMENT

DATED : June 16, 1987  
RECORDED : Liber 20818 Page 234  
PARTIES : ROBERT GORDON VON TEMPSKY, JR.,  
and RAYMOND M. VON TEMPSKY,  
"Owners", and DEBORAH A. VON  
TEMPSKY, "Applicant", and the  
COUNTY OF MAUI and its DEPARTMENT  
OF WATER SUPPLY, "County"  
RE : Owners and Applicant agree to hold  
the County, its employees and  
assigns, harmless from damages,  
injury, etc., resulting from the  
inadequacy of the existing County  
water system and the County's  
approval of Building Permit to  
construct a dwelling on subject  
land

13. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : SUBDIVISION AGREEMENT

(AGRICULTURAL USE)

DATED : as of October 5, 1993  
RECORDED : Document No. 93-184216  
PARTIES : HELEN TROY VON TEMPSKY, DEBORAH A. VON TEMPSKY, and ALEXA V. T. DUDOIT, Trustees of the Raymond M. von Tempsky Trust dated May 14, 1979, as amended by the Amendment dated April 11, 1983, and ROBERT GORDON VON TEMPSKY, JR. and MARY B. VON TEMPSKY, as Trustees of the R. Gordon von Tempsky, Jr. Trust, established by Trust Agreement dated April 11, 1979, as amended by instrument dated April 26, 1982, made by Robert Gordon von Tempsky, Jr., as Settlor, "Owners", and COUNTY OF MAUI, through its Department of Public Works, "County"

14. The terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained in the following:

INSTRUMENT : MODIFICATION OF SUBDIVISION REQUIREMENTS AGREEMENT

DATED : December 19, 1994  
RECORDED : Document No. 95-074002  
PARTIES : HELEN TROY VON TEMPSKY, DEBORAH A. VON TEMPSKY and ALEXA V. T. DUDOIT, Trustees of the Raymond M. Von Tempsky Trust dated May 14, 1979, as amended by the amendment dated April 11, 1983, ROBERT GORDON VON TEMPSKY, JR. and MARY B. VON TEMPSKY, Trustees of that certain unrecorded Restates Revocable Trust Agreement of Robert Gordon Von Tempsky, Jr. dated April 22, 1992, and the BOARD OF WATER SUPPLY of the County of Hawaii

Said above instrument, was amended by AMENDMENT OF THE MODIFICATION OF SUBDIVISION REQUIREMENTS AGREEMENT dated October 16, 2001, recorded as Document No. 2001-199376.

15. DESIGNATION OF EASEMENT "C-1" (10-foot wide)

PURPOSE : waterline  
SHOWN : on map prepared by Bruce R. Lee,  
Land Surveyor, with Newcomer - Lee  
Surveyors, Inc., dated April 12,  
1993, last revised September 19,  
1996

16. DESIGNATION OF EASEMENT "C-5"

PURPOSE : waterline  
SHOWN : on map prepared by Bruce R. Lee,  
Land Surveyor, with Newcomer - Lee  
Surveyors, Inc., dated April 12,  
1993, last revised September 19,  
1996

17. DESIGNATION OF EASEMENT "C-6" (10-foot wide)

PURPOSE : waterline  
SHOWN : on map prepared by Bruce R. Lee,  
Land Surveyor, with Newcomer - Lee  
Surveyors, Inc., dated April 12,  
1993, last revised September 19,  
1996

18. DESIGNATION OF EASEMENT "B-2" for access and utility purposes, being more particularly described in Exhibit "D" of instrument recorded as Document No. 97-088514.

Said Easement "B-2" is subject to the access and utility rights in favor of Lots 2 and 3 of the "G and R Von Tempsky Trust Subdivision", as granted in instrument recorded as Document No.

97-088514.

19. GRANT

TO : BOARD OF WATER SUPPLY of the  
County of Hawaii, a political  
subdivision of the State of Hawaii

DATED : July 6, 1999

RECORDED : Document No. 99-132043

GRANTING : nonexclusive easements for  
waterlines and related purposes,  
over, under, across and through  
said Easements "C-1" (10-feet  
wide), "C-5" (10-feet wide) and  
"C-6" (10-feet wide), each being  
more particularly described  
therein

END OF EXHIBIT "A"

Tax Key: (2) 2-3-001-023

## **4. FINAL ENVIRONMENTAL ASSESSMENT**

# **Final Environmental Assessment**

## **PROPOSED KULA RIDGE RESIDENTIAL WORKFORCE HOUSING SUBDIVISION (TMK 2-3-01:174)**

**Prepared for:**

**Kula Ridge, LLC**

**July 2008**





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- Appendix B.** Proposed Section 201H-38, HRS Exemptions
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- Appendix F.** State Historic Preservation Division Letter Dated February 27, 2007
- Appendix G.** Traffic Impact Assessment Report, July 2006
- Appendix G-1.** Supplemental Traffic Assessment
- Appendix H.** Preliminary Engineering and Drainage Reports, September 2006
- Appendix H-1.** Preliminary Grading and Best Management Practices Plan
- Appendix I.** Department of Health, Wastewater Branch Individual Wastewater Systems Variance Approval Letter, IWS Project Plan, and Findings of Fact and Conclusions of Law
- Appendix J.** Meeting Minutes With Residents Dated July 13, 2006

## **Executive Summary**

**Project Name:** Kula Ridge Residential Workforce Housing Subdivision

**Type of Document:** Final Environmental Assessment

**Legal Authority:** Chapter 343, Hawai`i Revised Statutes

**Agency Determination:** Finding of No Significant Impact

**Applicable Environmental Assessment Review “Trigger”:** Use of State and County rights-of-way for intersection improvements

**Location:** Maui Island  
Waiakoa, Kula  
TMK 2-3-01:023 and 174

**Applicant:** Kula Ridge, LLC  
1849 Wili Pa Loop  
Wailuku, Hawai`i 96793

**Approving Agency:** County of Maui  
Department of Housing and Human Concerns  
One Main Plaza  
2200 Main Street, Suite 546  
Wailuku, Hawai`i 96793-2155  
Contact: Vanessa Medeiros  
Telephone: (808) 270-7805

**Consultant:** Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawai`i 96793  
Contact: Rowena Dagdag  
Telephone: (808) 244-2015

**Project Summary:** The applicant is proposing the development of an approximately 116-lot single-family residential subdivision consisting of 70 affordable house-lot units and 46 market-priced lots, with onsite infrastructure improvements. Other improvements include site grading, and utilities installation covering water and drainage systems. The Department of Health has granted permission to utilize individual wastewater systems.

# **I. PROJECT OVERVIEW**



# I. PROJECT OVERVIEW

## A. BACKGROUND

The applicant, Kula Ridge LLC, proposes to develop the Kula Ridge Residential Workforce Housing Subdivision Project in Kula, Maui, Hawai'i (TMK (2) 2-3-001:174). See **Figure 1** and **Figure 2**. For clarity purposes, the proposed Kula Ridge Residential Workforce Housing Subdivision Project is referred to as the "Ridge Project". Situated on the southwestern flank of Haleakala, the project site is currently undeveloped and vegetated with pasture grass. The subject property is approximately 48.12 acres in size and was formerly used as pasture land.

To the north of the site is Keahuaiwi Gulch. See **Figure 3**. Vacant pasture land bounds the property to the south. The Kula Community Center, Gateball Field and Tennis Courts and the Holy Ghost Church are located to the immediate west of the property along Lower Kula Road. Single-family residences are also found along the western boundary of the project site.

Bordering the project site to the north and east, is the proposed Kula Ridge Mauka subdivision. Refer to **Figure 1**. Kula Ridge Mauka is proposed to be a 21-lot agricultural subdivision at TMK (2) 2-3-001:023 (hereafter referred to as "Mauka Subdivision") and is owned by a separate entity, Kula Ridge Mauka LLC. Refer to **Figure 1**.

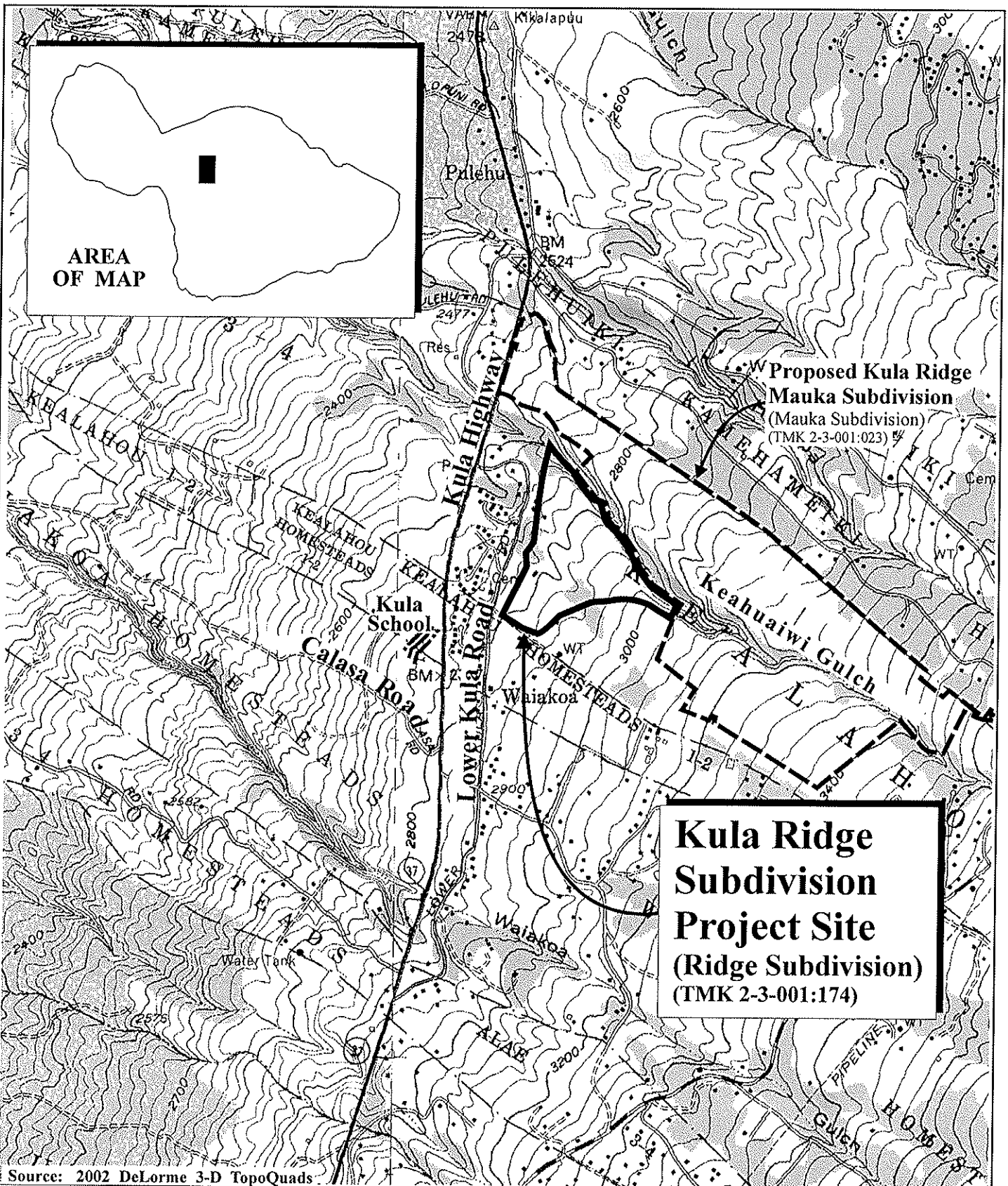
The land underlying the Ridge Project site lies within the State "Agricultural" district and is designated for "Rural" and "Single-Family" uses by the Makawao-Pukalani-Kula Community Plan. County zoning for the property is "Interim".

Kula Ridge, LLC is the fee owner of the Ridge Project lands.

## B. PROPOSED ACTION

The Ridge Project involves the development of approximately 116 improved lots with approximately 70 lots set aside for workforce housing or affordable house-lot packages.

The Ridge Project will provide 59 workforce housing units for the project's proposed 116 lots, meeting the County's affordability criteria for Section 201H-38, Hawai'i Revised

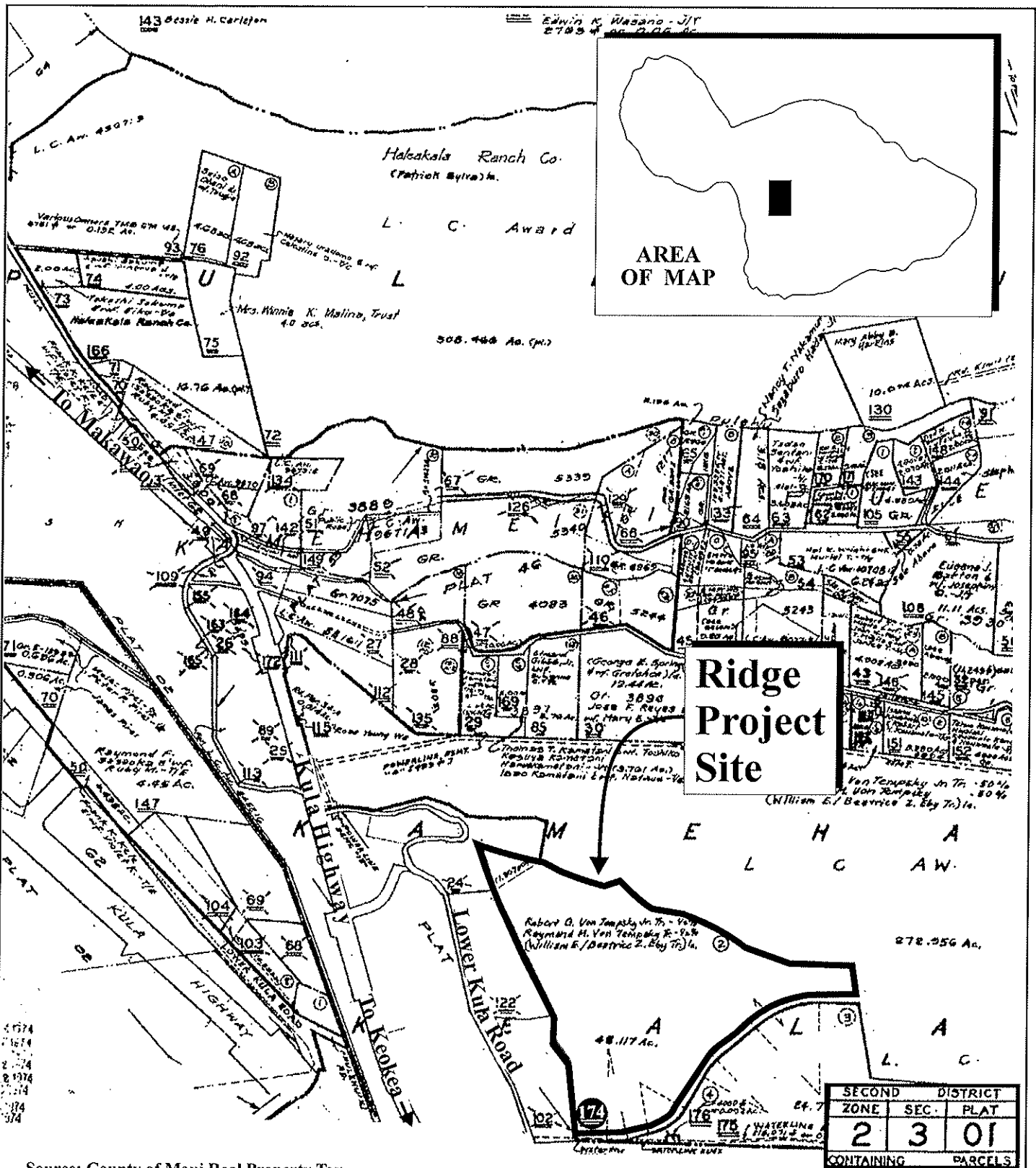


Source: 2002 DeLorme 3-D TopoQuads

Figure 1 Proposed Kula Ridge Residential Workforce Housing Subdivision Regional Location Map

NOT TO SCALE





**Figure 2 Proposed Kula Ridge Residential Workforce Housing Subdivision**  
 Tax Map for Proposed Subdivision

NOT TO SCALE



Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaAIRTaxMap

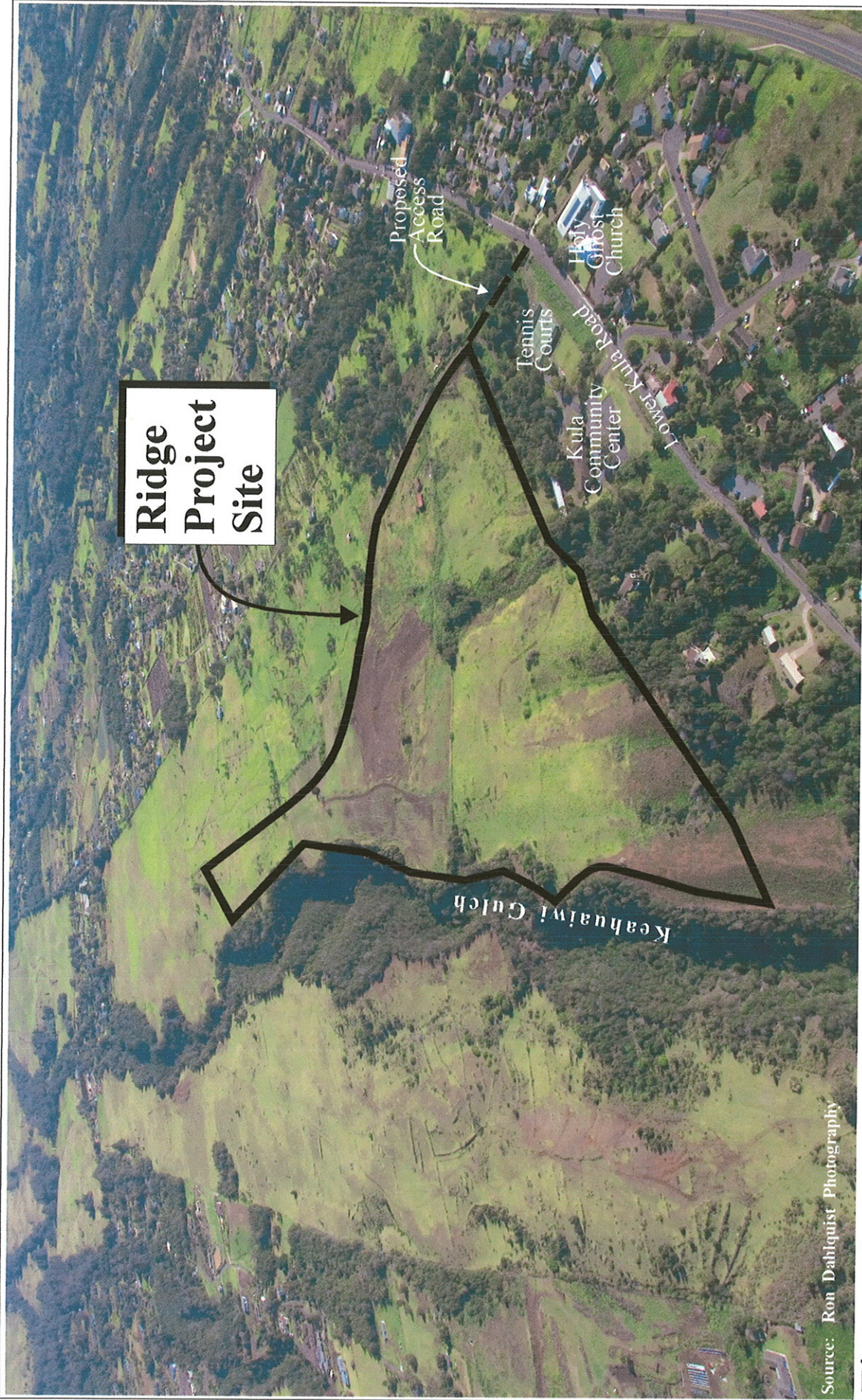


Figure 3

# Proposed Kula Ridge Residential Workforce Housing Subdivision Aerial Photograph of Project Area

NOT TO SCALE



Prepared for: Kula Ridge, LLC



MUNEKIYO & HIRAGA, INC.

Statutes (HRS) projects. The remaining 11 workforce housing units will meet the requirements of the County of Maui Residential Workforce Housing Policy (RWHP) for the adjacent Mauka Subdivision. The affordable house-lot units are proposed to be integrated with market priced lots. See **Figure 4**.

**1. Workforce Housing Overview**

A summary of the project development for both the Ridge Project and Mauka Subdivision projects are provided in **Table 1**.

**Table 1**

<b>PROJECT DEVELOPMENT SUMMARY</b>				
<b>Project Name</b>	<b>Total Number of Lots in Development</b>	<b>Affordable Housing Requirement</b>	<b>Number of Affordable Units Provided</b>	<b>Number of Market Units</b>
Ridge Project	116	58	59*	46
Mauka Subdivision	21**	11	11***	21**
<b>TOTAL</b>	<b>137</b>	<b>69</b>	<b>70</b>	<b>67</b>
* Meets the affordability criteria for §201-H-38, HRS projects. ** Project development on TMK (2)2-3-001:023. *** Affordable Housing Units to be provided on TMK (2)2-3-001:174.				

The workforce housing lot sizes are proposed to be a minimum of approximately 4,600 square feet (s.f.) with a zero-lot line concept proposed for the homes.

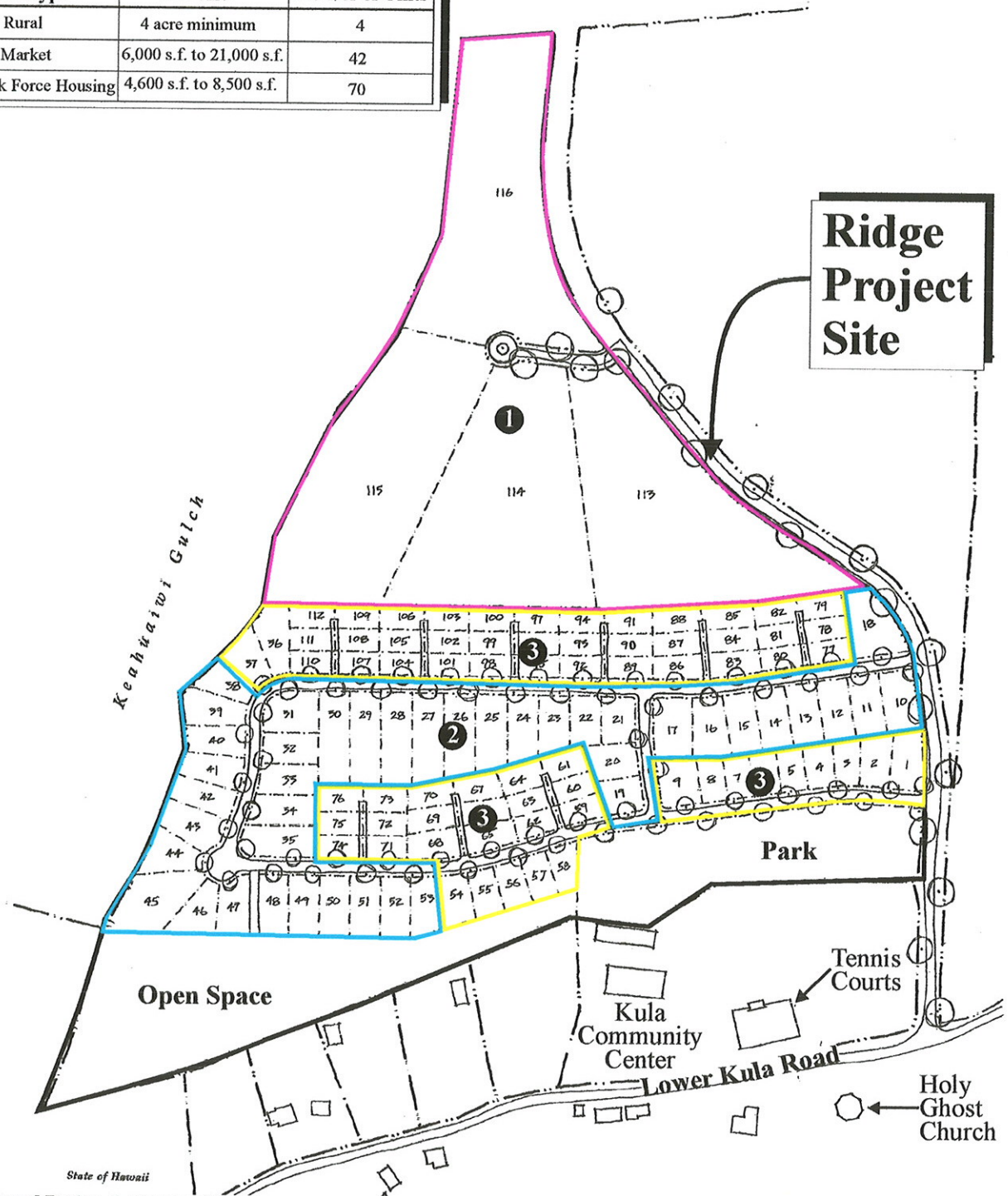
Sales prices, based on 2007 income guidelines, are projected to range from \$234,685.00 to \$490,900.00 for the house-lot packages. House models for the workforce housing units will provide approximately 1,200 s.f. of living area and are depicted in **Figure 5, Figure 6, Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, and Figure 13**. Preliminary construction specifications for these units are included in this document as **Appendix “A”**.

**a. Ridge Project’s Affordable Housing Component**

The Ridge Project will provide 59 workforce housing units and is proposed as a 51 percent affordable housing project.

**KEY**

LAND USE SUMMARY			
	Lot Type	Lot Size	Number of Units
①	Rural	4 acre minimum	4
②	Market	6,000 s.f. to 21,000 s.f.	42
③	Work Force Housing	4,600 s.f. to 8,500 s.f.	70



Source: Architectural Design & Construction, Inc.

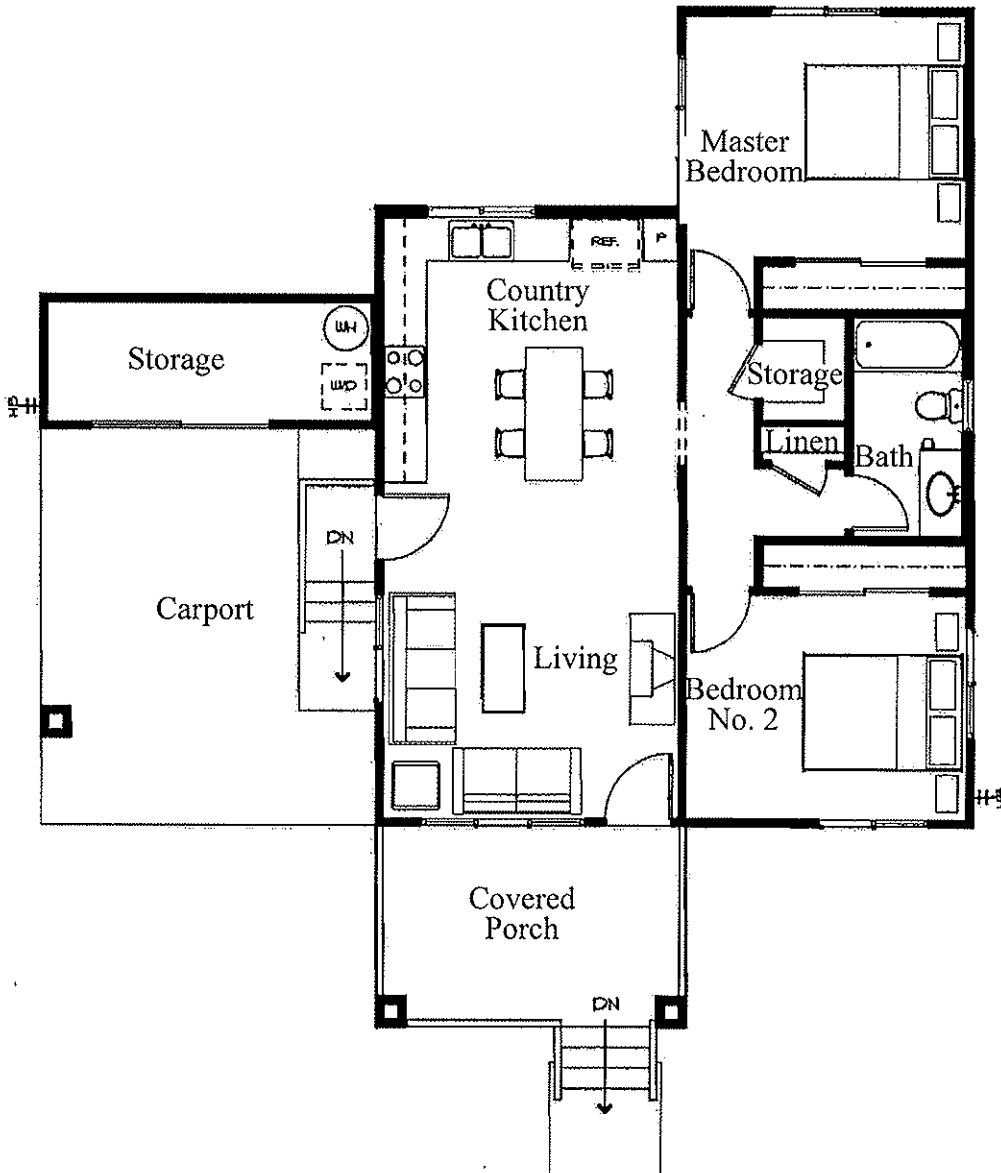
**Figure 4 Proposed Kula Ridge Residential Workforce Housing Subdivision Conceptual Site Plan** NOT TO SCALE



Prepared for: Kula Ridge, LLC

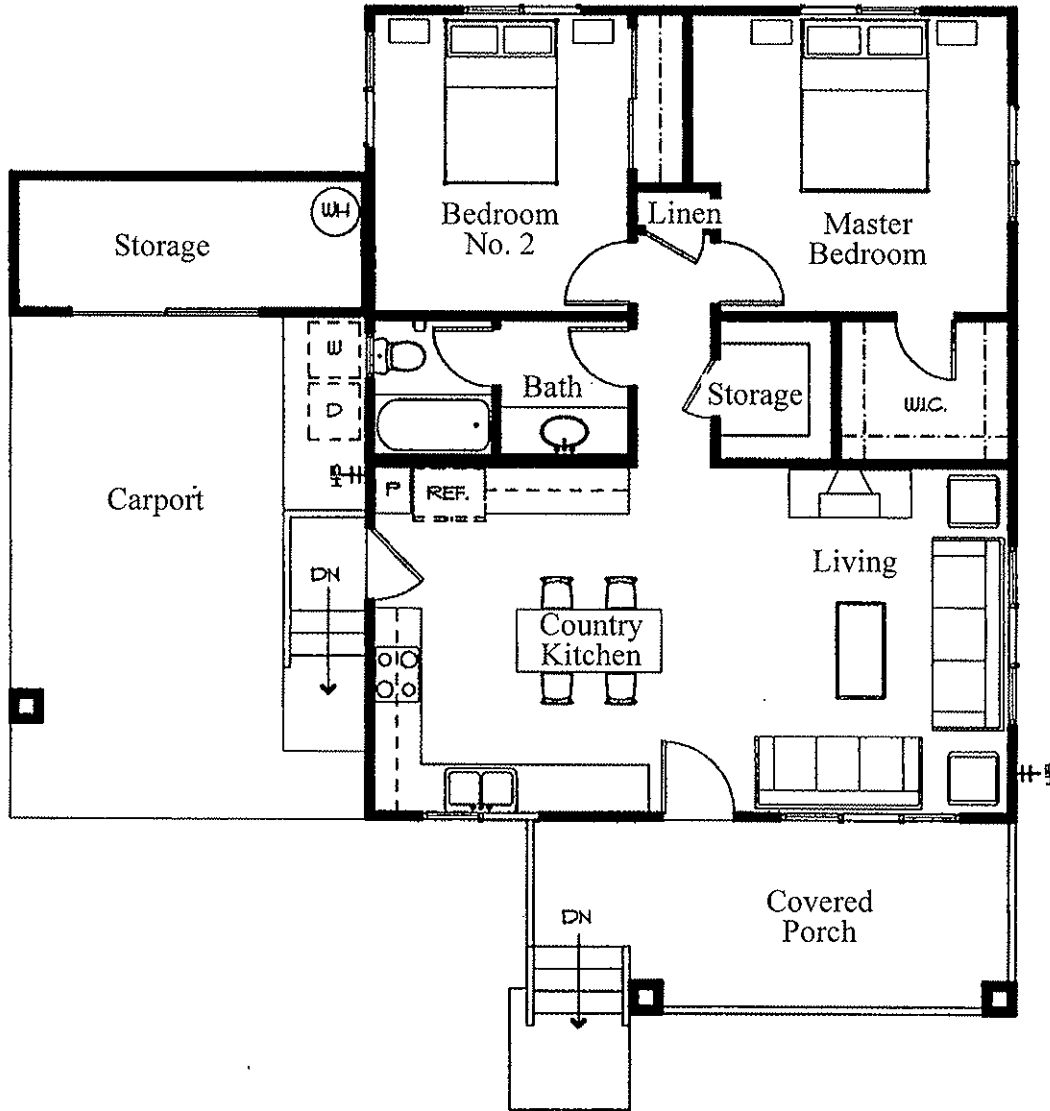
MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaAH/ConceptSite



Source: Architectural Design & Construction, Inc.

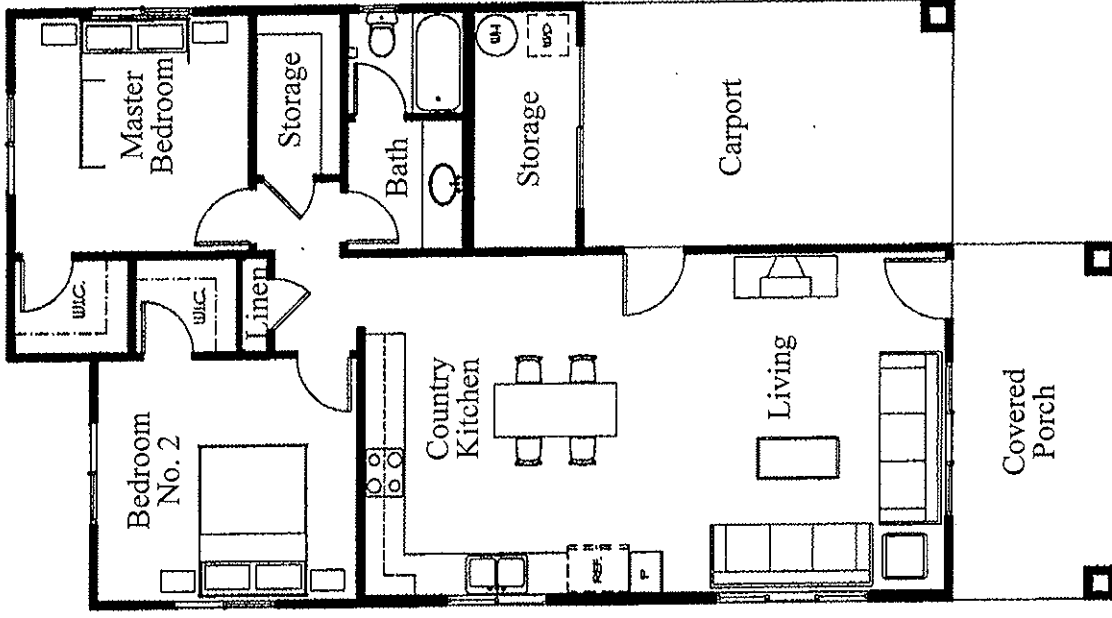
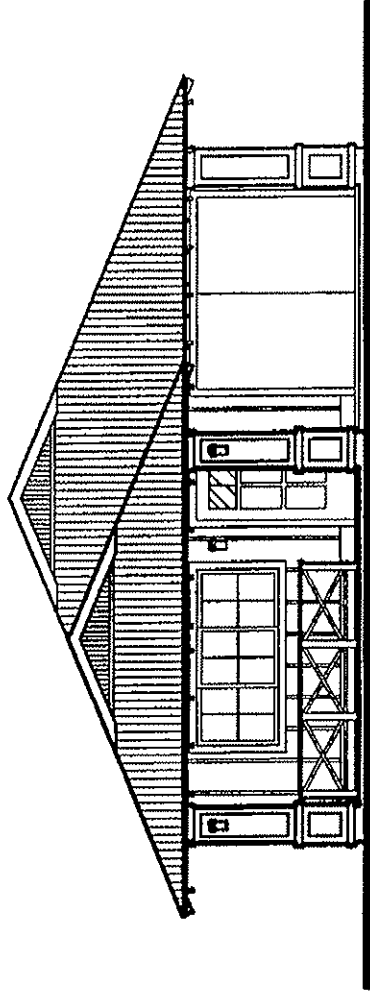
Figure 5 Proposed Kula Ridge Residential Workforce Housing Subdivision **NOT TO SCALE**  
House Model A



Source: Architectural Design & Construction, Inc.

Figure 6 Proposed Kula Ridge Residential Workforce Housing Subdivision NOT TO SCALE  
House Model B





Source: Architectural Design & Construction, Inc.

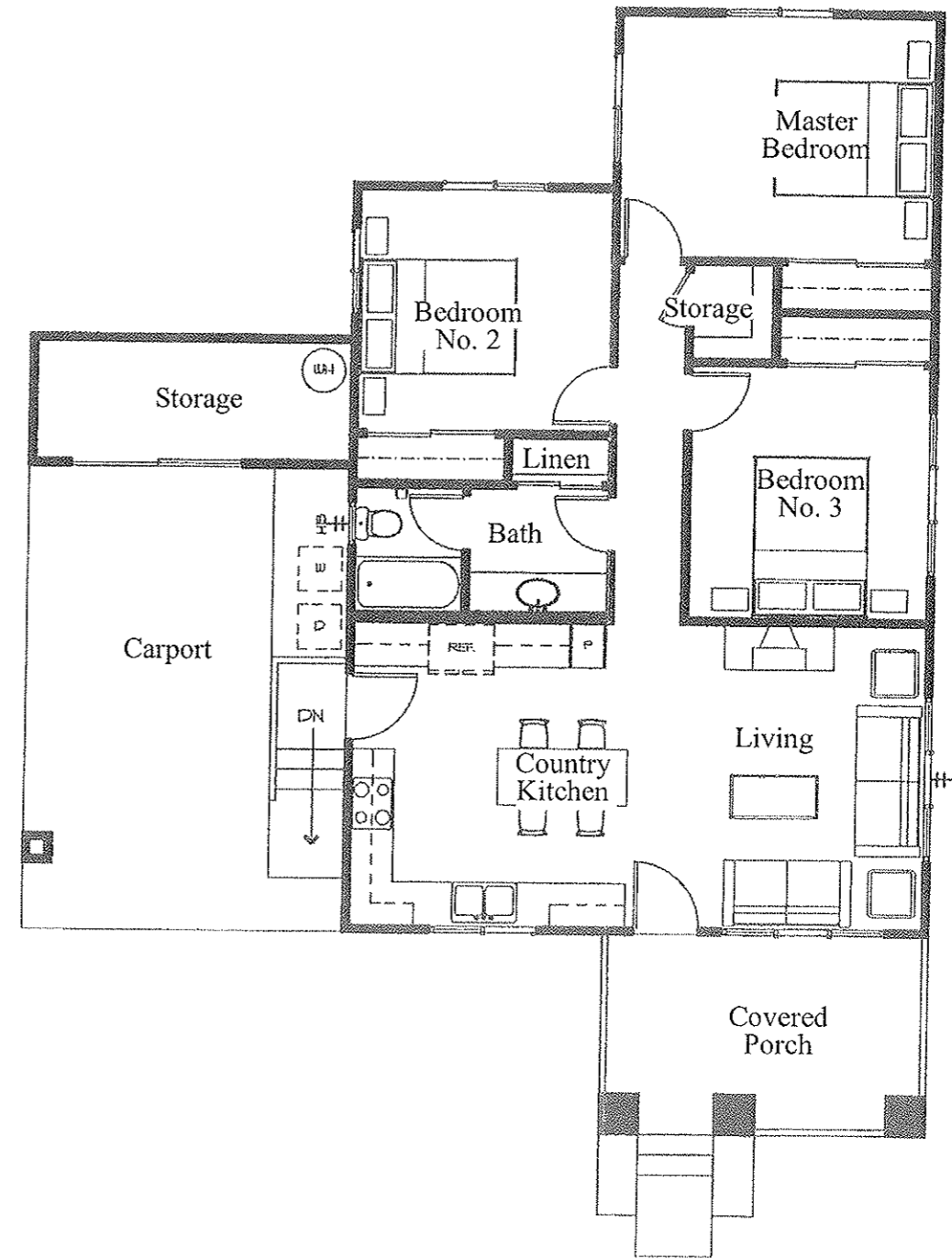
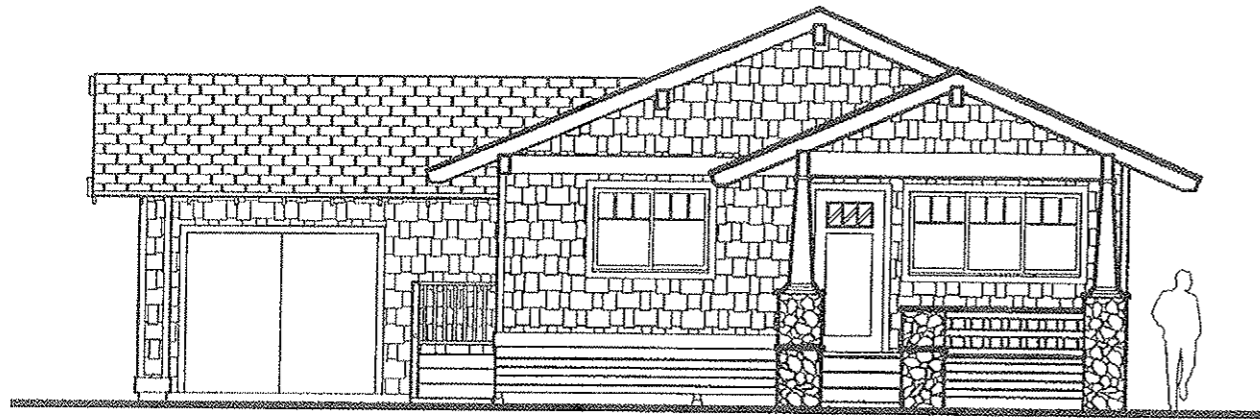
# Figure 7 Proposed Kula Ridge Residential Workforce Housing Subdivision House Model C

NOT TO SCALE

Prepared for: Kula Ridge, LLC



MUNEKIYO & HIRAGA, INC.  
Nishikawa/KulaARPlanC



Source: Architectural Design & Construction, Inc.

Figure 8

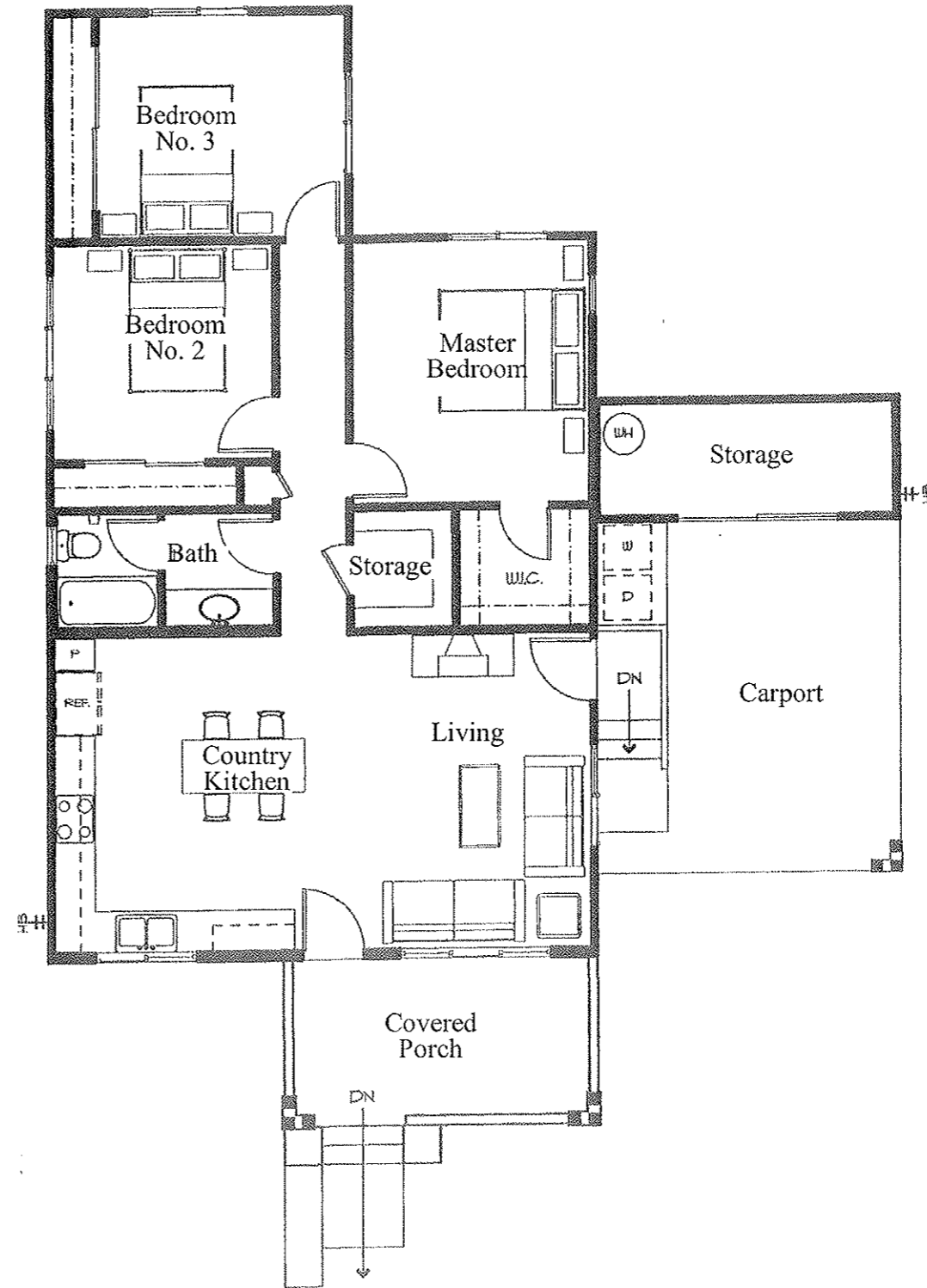
Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model D

NOT TO SCALE

Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaA/HouseD

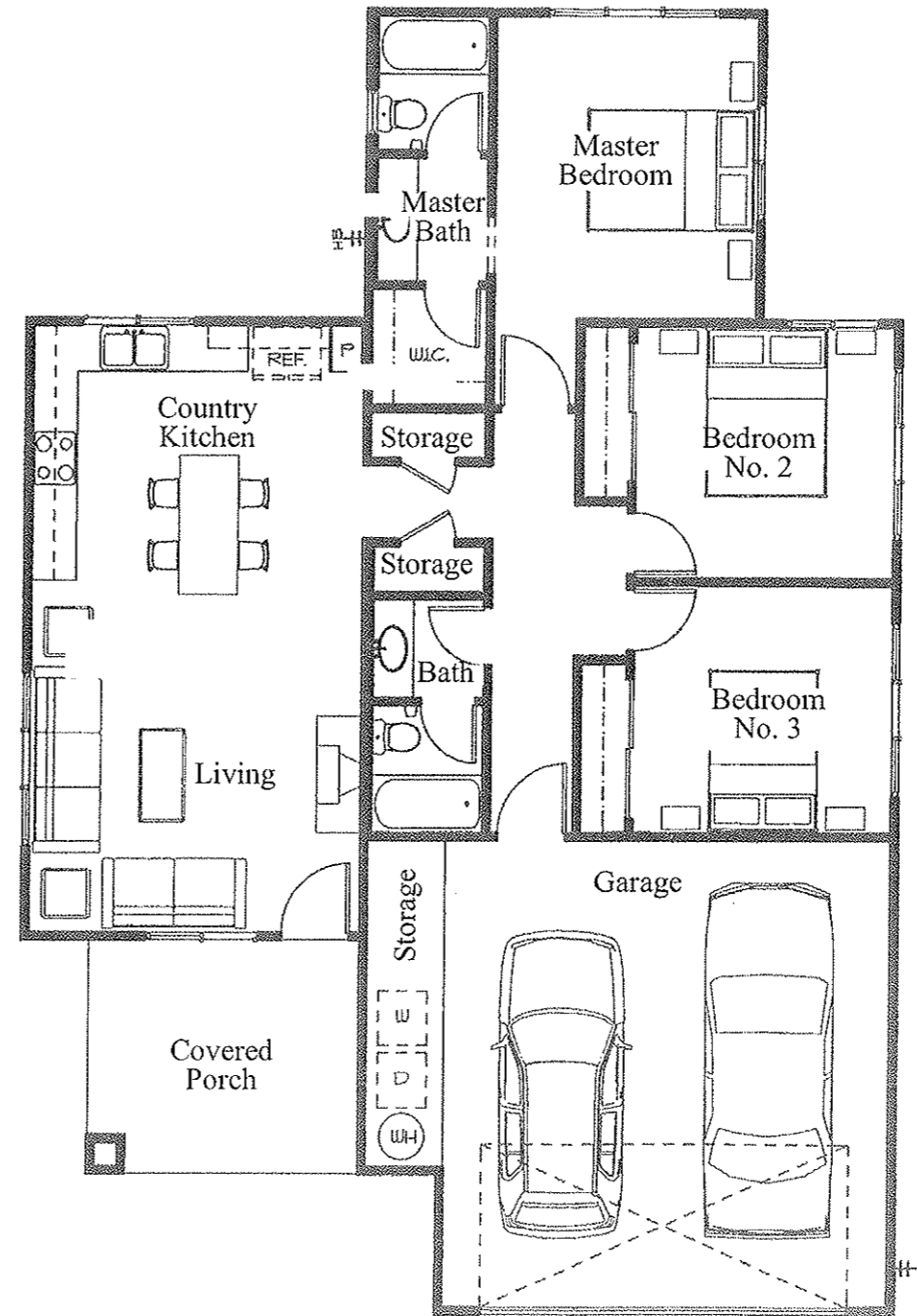
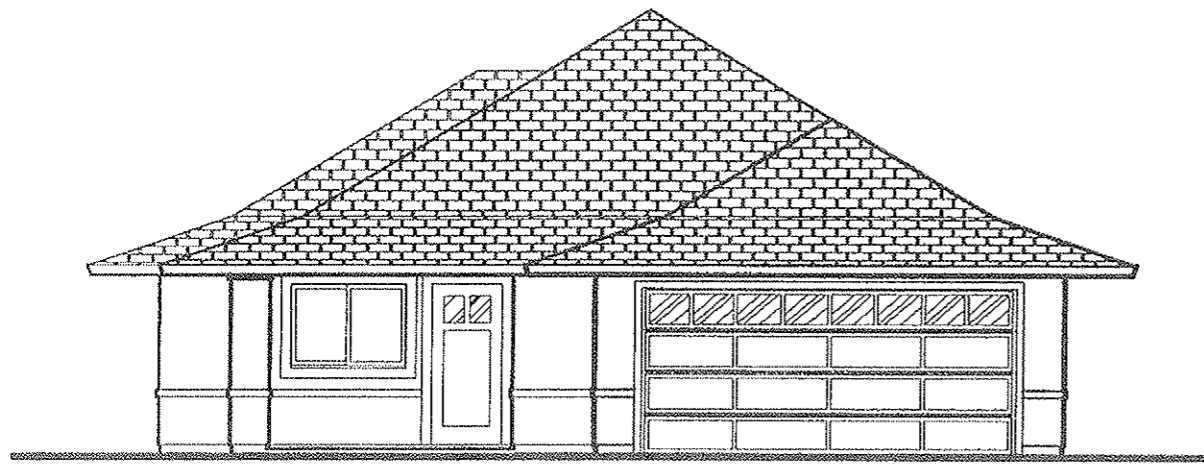


Source: Architectural Design & Construction, Inc.

Figure 9

Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model E

NOT TO SCALE



Source: Architectural Design & Construction, Inc.

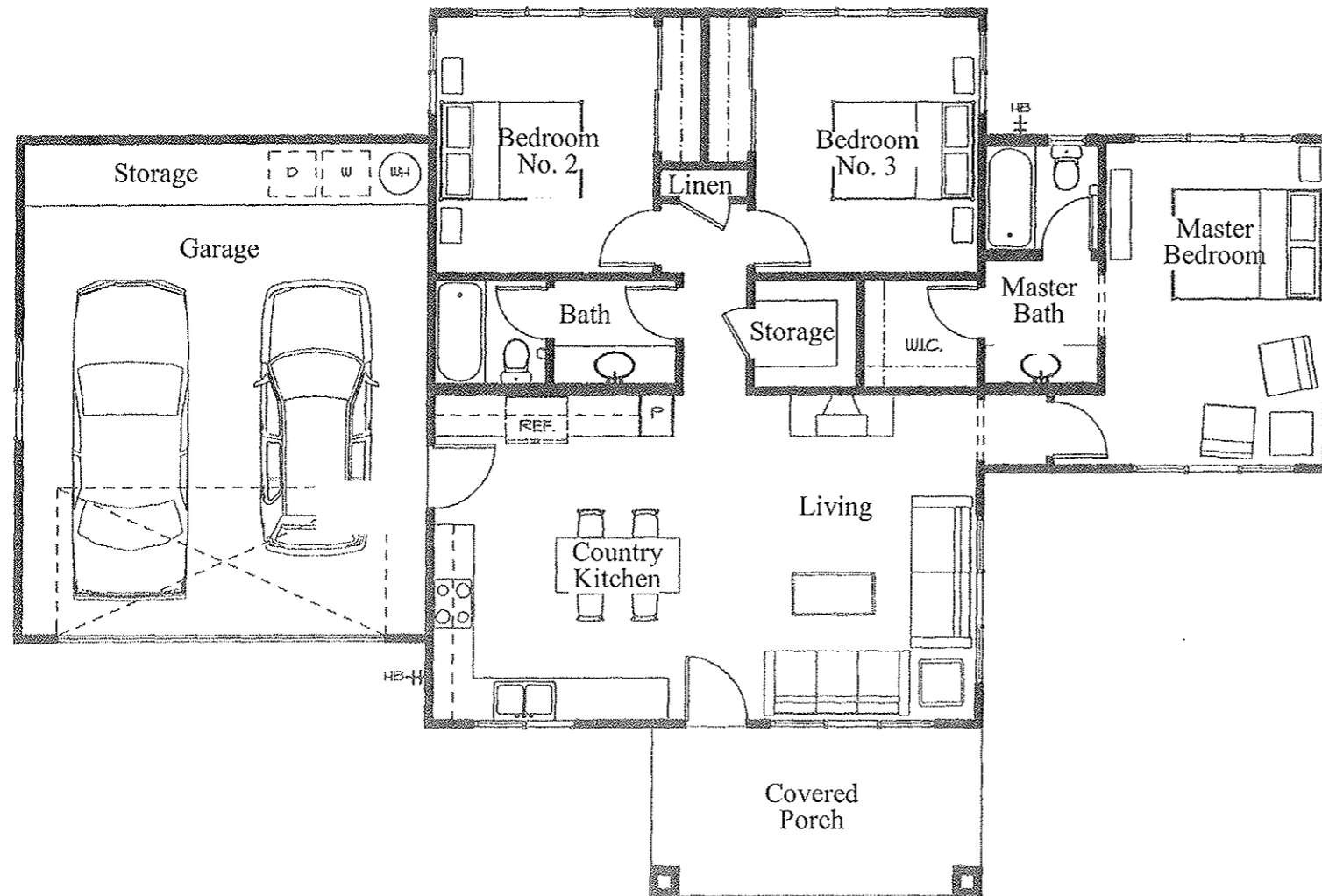
Figure 10

Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model F

NOT TO SCALE

Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

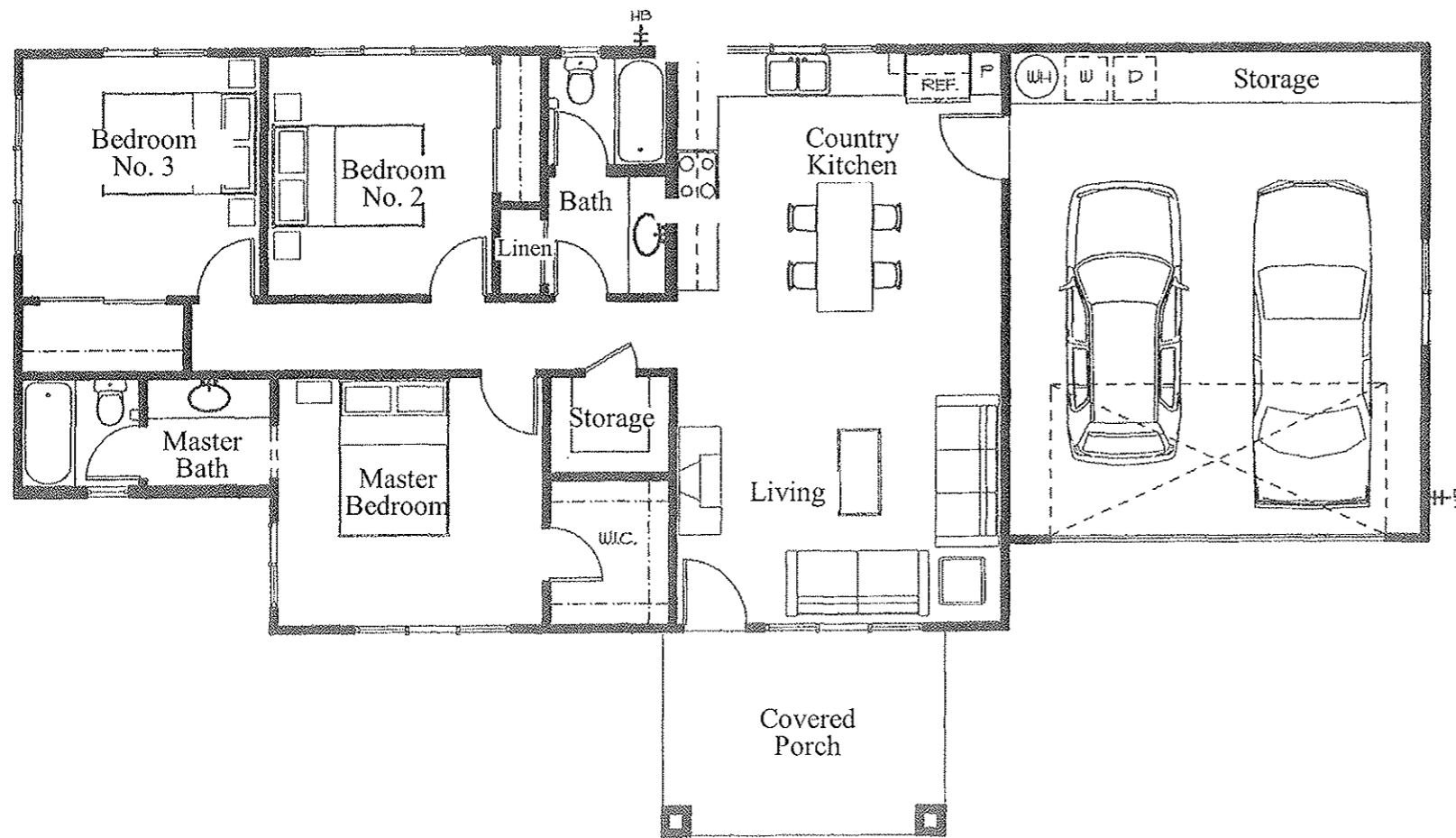
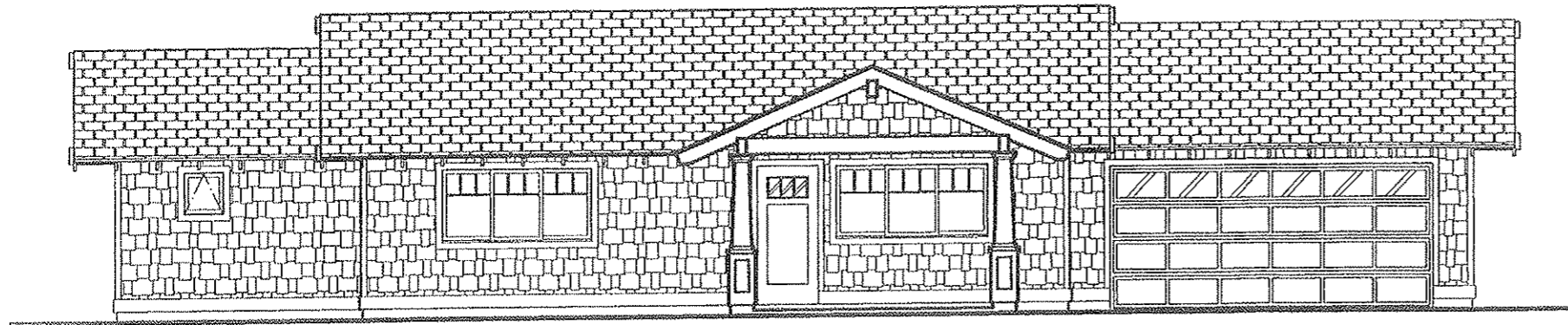


Source: Architectural Design & Construction, Inc.

Figure 11

Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model G

NOT TO SCALE



Source: Architectural Design & Construction, Inc.

Figure 12

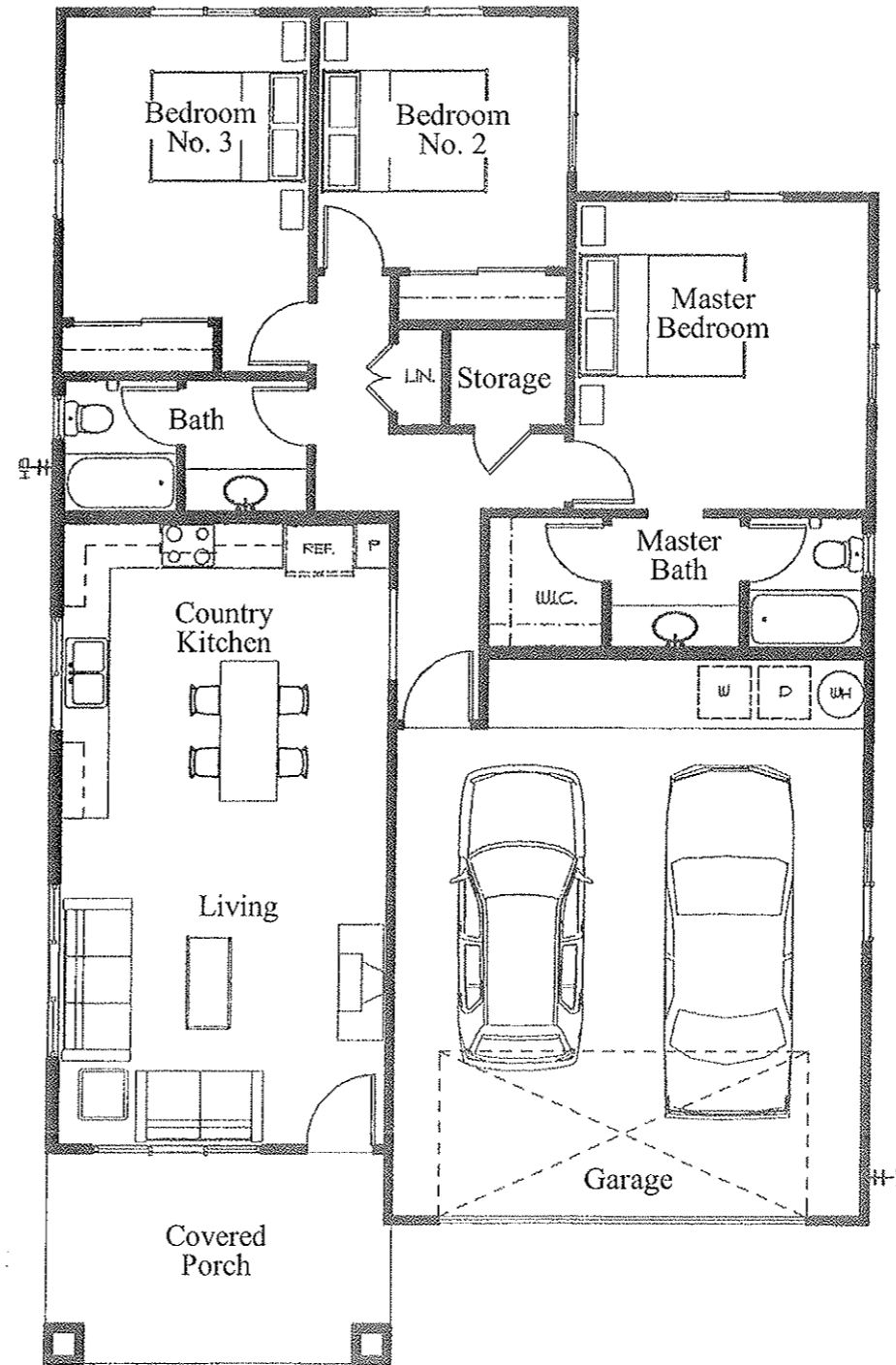
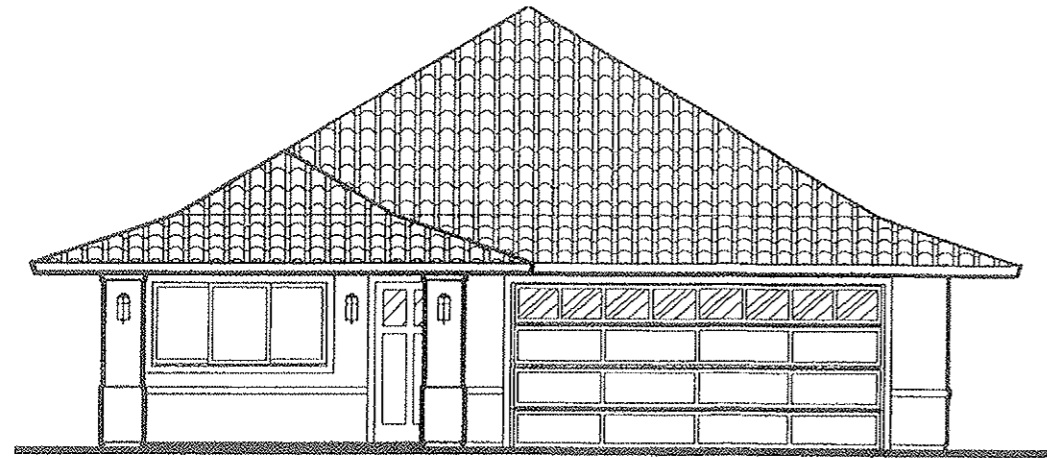
Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model H

NOT TO SCALE

Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.

Nishikawa/KulaA/HouseH



Source: Architectural Design & Construction, Inc.

Figure 13

Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
House Model J

NOT TO SCALE

The Ridge Project will be initiated upon receipt of State Land Use Commission approvals, the Section 201H-38, HRS and related construction plan approvals, with completion of the project anticipated within 12 months of the start of construction.

b. **Mauka Subdivision Workforce Housing Component**

The Mauka Subdivision's 11 workforce units will meet the County's RWHP requirements for that project's proposed 21 agricultural lots. Kula Ridge Mauka LLC has entered into an agreement with Kula Ridge LLC to provide 11 workforce housing units on the Ridge Project site for this purpose.

2. **Market Housing Component for the Ridge Project**

The remaining lots within the Ridge Project consist of approximately 42 residential lots to be sold at market price on the order of 6,000 s.f. to 21,000 s.f. These lots have an estimated sales price range of \$350,000.00 to \$450,000.00 based on current market conditions and will be sold as lots only with restrictions on further subdividing.

As shown in **Figure 4**, the project also includes four (4) large lots accessed via a separate cul-de-sac (Lot Nos. 113, 114, 115 and 116). These lots have an estimated average sale price of \$1.2 million. Development on these lots will be restricted to one (1) main dwelling unit and one (1) accessory dwelling unit. These restrictions have been developed in coordination with the County Department of Housing and Human Concerns.

3. **Onsite Work and Infrastructure Improvements**

A 3-acre park site is proposed to be dedicated to the County of Maui. The location of the park provides for a park area adjacent to the Kula Community Center.

Acreage distributions for the Ridge Project are summarized in **Table 2**.



**Table 2**

<b>LAND USE ALLOCATIONS</b>	
<b>Land Use</b>	<b>Approximate Acreage</b>
Affordable Housing	9.25
Market Priced Housing	27.37
Parks	3.0
Right-of-way/Common Areas	3.5
Open Space	5.0
<b>Total</b>	<b>48.12</b>

Proposed improvements include site grading and utilities installation covering onsite water and drainage systems. A variance has been granted by the Department of Health to utilize individual wastewater systems. Electrical, telephone and cable utility systems will be placed underground.

**4. Offsite Improvements**

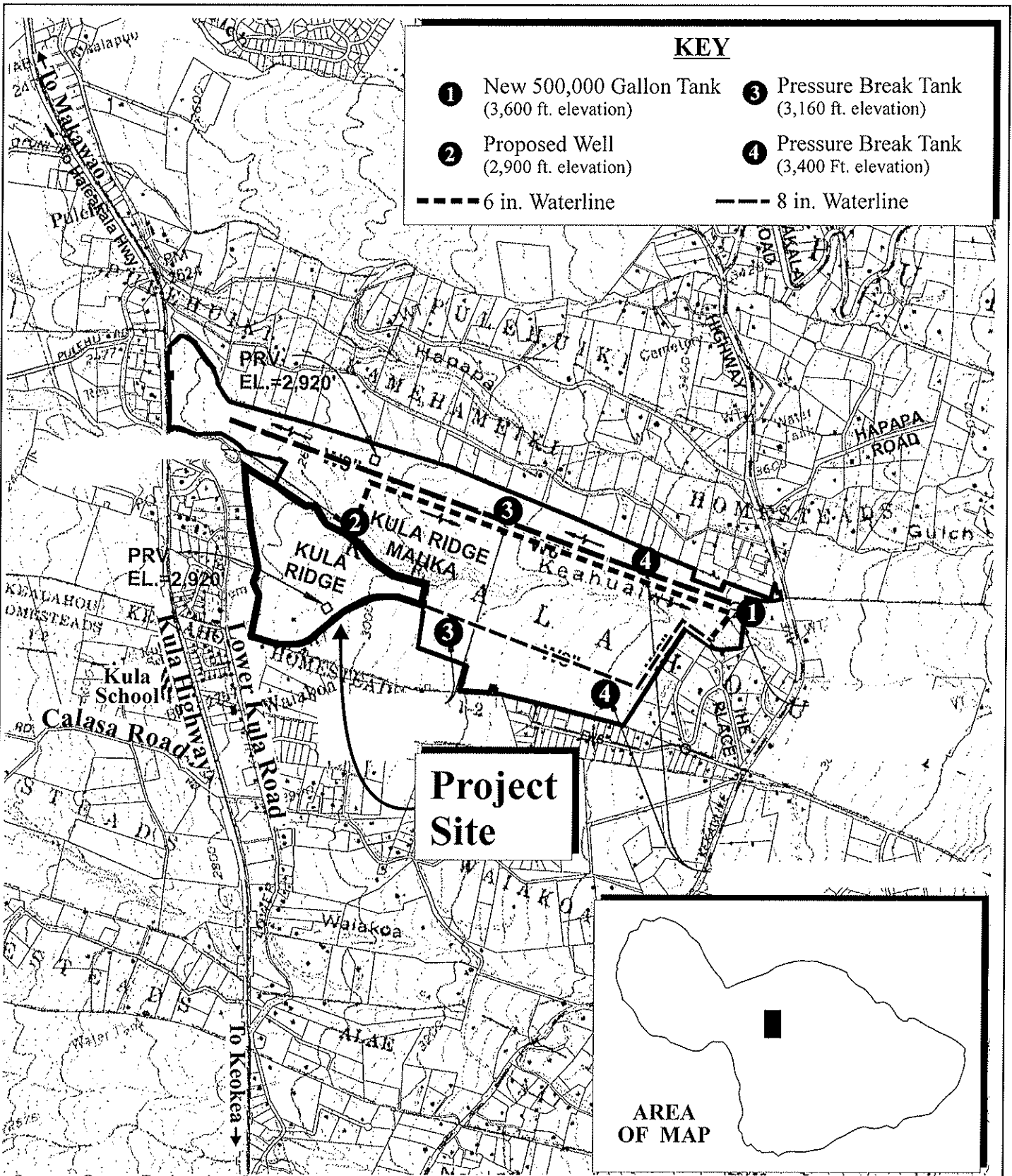
**a. Roadway Improvements**

Access to the proposed subdivision will be provided via a new access road off of Lower Kula Road. Refer to **Figure 3**. Improvements to the westbound approach of Lower Kula Road at the northern intersection with Kula Highway will also be provided.

**b. Offsite Water Improvements**

It is also noted that Kula Ridge LLC, the applicant for the Ridge Project also proposes to install offsite waterline improvements at the adjacent Mauka Subdivision site (TMK (2) 2-3-001:023) to service the proposed residential subdivision. See **Figure 14**.

Kula Ridge LLC is pursuing the development of an offsite well at an elevation of 2,900 feet on the adjacent Mauka Subdivision site. The owner of the Mauka Subdivision property, Kula Ridge Mauka LLC, will enter into a partnership with Kula Ridge LLC for the development of the water source.



Source: Otomo Engineering, Inc.

Figure 14 Proposed Kula Ridge Residential Workforce Housing Subdivision Proposed Water System

NOT TO SCALE



Water will be pumped from the well site to a new 500,000 gallon storage tank located near the mauka boundary of the Mauka Project site at an elevation of approximately 3,600 feet.

The 500,000 gallon storage tank will have two (2) distribution lines, one on the north side of Keahuaiwi Gulch, and one along the south. Water from the tank will be transported to the proposed Ridge Project by a new 8-inch transmission line. The water distribution lines will have pressure break tanks, to control the water service pressures, servicing both the Ridge Project and the Mauka Subdivision.

The waterline crossing of Keahuaiwi Gulch will occur in a single location. An 8-inch waterline will be installed approximately 1,500 feet makai of Kekaulike Highway in Keahuaiwi Gulch. The waterline will extend approximately 700 feet in a southwesterly direction to provide service to the Ridge Project.

#### **5. Estimate of Project Costs**

The estimated cost for the Ridge Project improvements, including water source development (excluding house construction on the affordable lots) is approximately \$9 million.

### **C. PROJECT NEED/REASONS JUSTIFYING THE REQUEST**

The Kula area is surrounded by lands used historically for agricultural production. Agricultural operations have been significantly reduced in recent years, and the project site has since been used for pasture land. The Makawao-Pukalani-Kula Community Plan shows “Rural”, “Agriculture”, “Park”, and “Single-Family” residential use designations surrounding the proposed project site.

With continuing stability in local economic conditions, housing demand has exhibited an upward trend. Sales information for single-family subdivisions in Kula/Ulupalakua/Kanaio indicate that demand for single-family homes are strong, with continuing strength in demand anticipated. Recent median sales price information for the Kula/Ulupalakua/Kanaio area shows that single-family units sold for approximately \$764,000.00 in December of 2007 (Realtor Association of Maui, December 2007).

## **D. AFFORDABLE HOUSING PROGRAM**

In accordance with the affordable housing conditions adopted by the Workforce Housing Ordinance No. 3418, the range in workforce housing for all projects on Maui is 80 percent to 160 percent of median family income. The present criteria requires that Section 201H-38, HRS projects primarily or exclusively include housing units made affordable to households with incomes at or below 140 percent or less of the County's median income.

### **1. Ridge Project Affordable Housing Program**

The Ridge Project will provide workforce housing in keeping with affordability guidelines for Section 201H-38, HRS projects. In particular, the project will offer a minimum of 51 percent of the total number of lots or 59 workforce housing units to families having an annual income of not more than 140 percent of the Maui County median income. Specifically, thirty (30) Ridge Project units will be provided for above moderate income households. Twenty-nine (29) Ridge Project units will be provided for moderate income and below moderate income households.

### **2. Mauka Subdivision Affordable Housing Program**

The Mauka Subdivision is required to provide the following number of workforce housing units within each of the income group categories, as provided for by the RWHP, 30 percent or three (3) workforce housing units for below moderate income households; 30 percent or four (4) workforce housing units for moderate income households; 20 percent or two (2) workforce housing units for above moderate income households; and 20 percent or two (2) workforce housing units for gap income households. A workforce housing distribution for the Mauka Subdivision is summarized in **Table 3**.

**Table 3**

<b>WORKFORCE HOUSING DISTRIBUTION FOR MAUKA SUBDIVISION</b>				
<b>Ownership Income Group</b>	<b>Product Type</b>	<b>Percentage of Units Allocated to Income Group</b>	<b>Number of Affordable Units</b>	<b>*Sales Price Range</b>
Below Moderate Income (80% to 100% of County Median Income)	Two Bedroom	30%	3	\$234,685.00 to \$260,790.00
Moderate Income (101% to 120% of County Median Income)	Two to Three Bedroom	30%	4	\$286,875.00 to \$368,200.00
Above Moderate Income (121% to 140% of County Median Income)	Three Bedroom	20%	2	\$398,900.00 to \$429,500.00
Gap Income (141% to 160% of County Median Income)	Three Bedroom	20%	2	\$460,200.00 to \$490,900.00
		<b>TOTAL</b>	<b>11 Mauka Subdivision Units</b>	

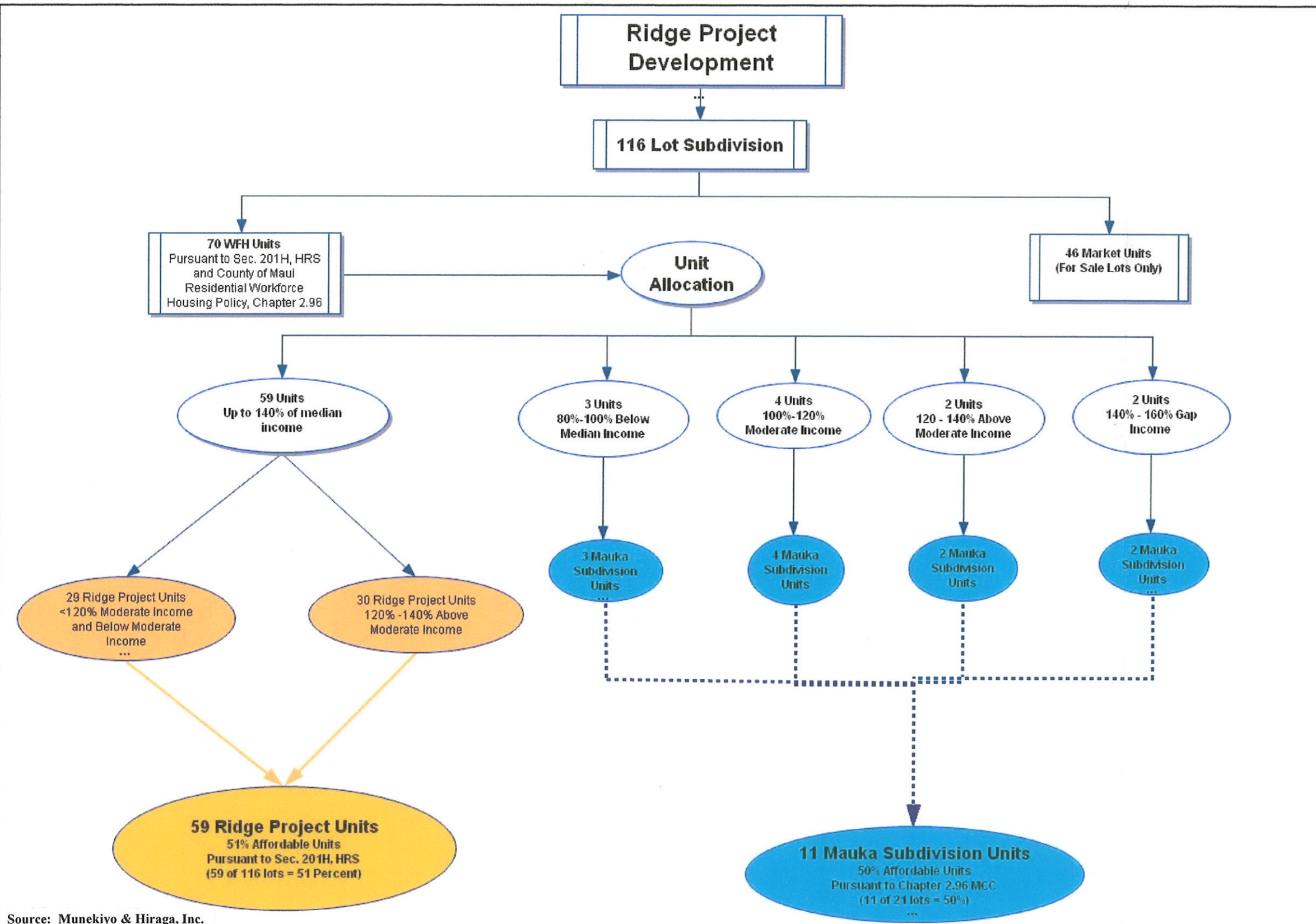
\*Based on 2007 U.S. Department of Housing and Urban Development Income Guidelines at a prevailing interest rate of 6.0 percent.

The proposed sales prices for the house-lot packages have been preliminarily set at \$234,685.00 to \$490,000.00 based on 2007 income guidelines. At interest rates prevailing at the time of the filing of the Section 201H-38, HRS application, and at the preliminary prices noted herein, the house-lot packages would be affordable to families falling between the 80 to 160 percent of median income categories.

Kula Ridge, LLC will enter into an affordable housing agreement with the County of Maui to establish the specific terms and conditions for affordable sales price distribution, applicant selection process, and marketing requirements.

A summary of the proposed affordable housing program is graphically depicted in **Figure 15**.

Preliminary construction specifications for the affordable units are included in this document as **Appendix "A"**. The Ridge Project will be initiated upon receipt of State Land Use Commission approvals, the Section 201H-38, Hawai'i Revised Statutes (HRS) and related construction plan approvals, with completion of the project anticipated within 12 months of the start of construction.



Source: Munekiyo & Hiraga, Inc.

Figure 15

Proposed Kula Ridge Residential  
Workforce Housing Subdivision  
Affordable Housing Program Summary

NOT TO SCALE



## **E. ENTITLEMENTS REQUIRED**

The Ridge Project has been developed to meet the criteria for a Section 201H-38, HRS project by County of Maui's, Department of Housing and Human Concerns. Section 201H-38, HRS promotes the delivery of affordable housing by allowing the exemption of endorsed projects from:

*"...all statutes, ordinances, charter provisions, and rules of any governmental agency relating to planning, zoning, construction standards for subdivisions, development and improvement of land, and the construction of units thereon."*

As such, a Section 201H-38, HRS application will be filed with the Maui County Council to seek exemptions from the Community Plan Amendment and Change in Zoning processes, as well as other County requirements to support the timely implementation of the project, without compromising public health, safety or welfare considerations. Proposed exemptions are presented in **Appendix "B"**.

The current State Land Use designation for the plan area is "Agricultural". Concurrent with the County's 201H-38, HRS processing, a petition for a State Land Use Commission (SLUC) District Boundary Amendment (DBA) from the "Agricultural" to "Rural" and "Urban" Districts will be processed. The SLUC petition will encompass the entire 48-acre project area and follow the provisions of Section 15-15-97 of the Land Use Commission Rules, pertaining to Section 201H-38, HRS processing.

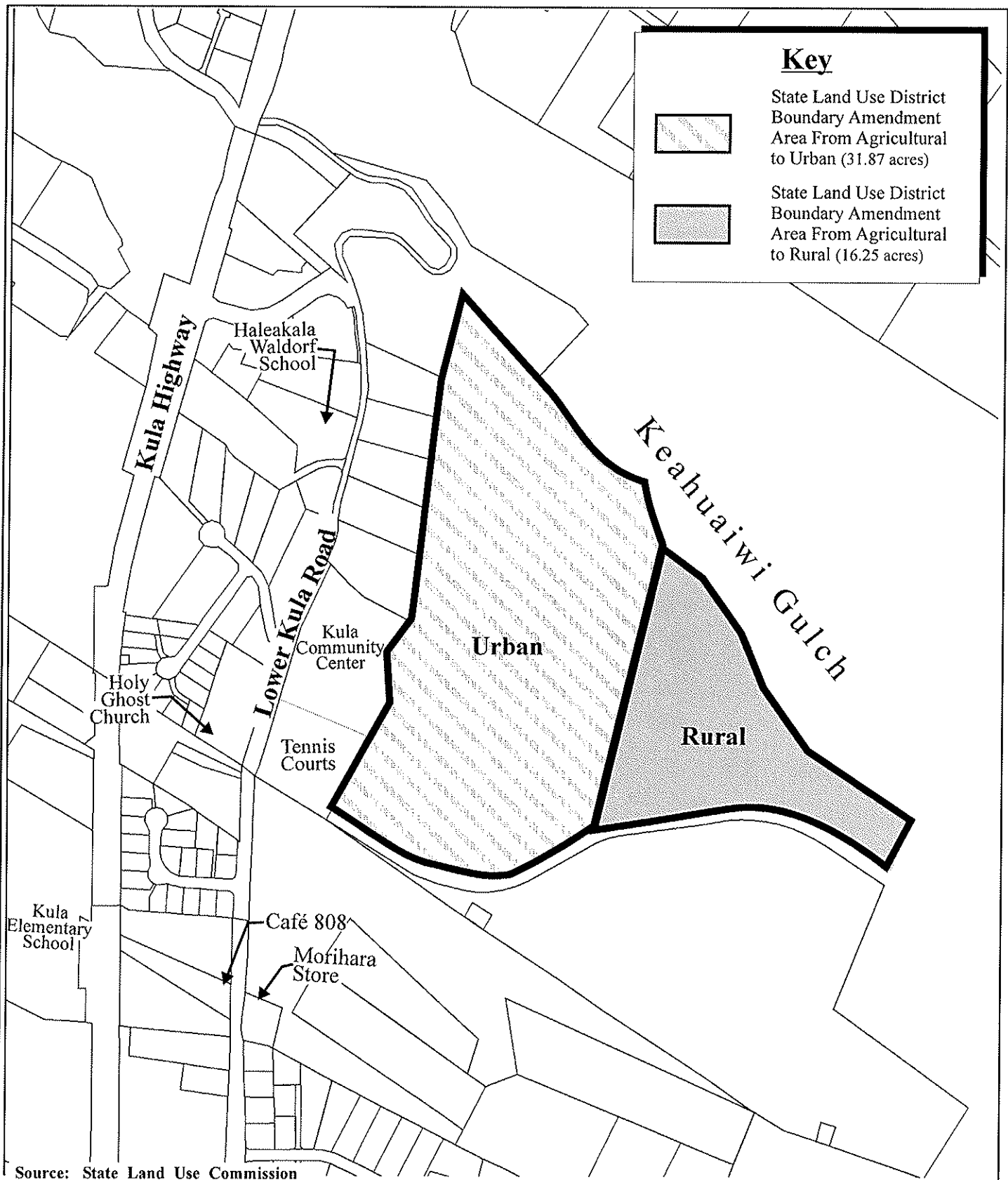
The District Boundary Amendment area from Agricultural to Urban is approximately 31.87 acres. The District Boundary Amendment area from Agricultural to Rural is approximately 16.25 acres. The proposed District Boundary Amendment areas are presented in **Figure 16**.

## **F. CHAPTER 343, HAWAII REVISED STATUTES (HRS REQUIREMENTS)**

Roadway improvements are anticipated at the intersection of the subdivision access road and Lower Kula Road, a County roadway. Improvements at the intersection of Lower Kula Road and the State of Hawaii's Kula Highway may also be required. In addition, subdivision access road improvements will traverse along the south side of the Kula Community Center, a County-leased recreational facility. The scope of these actions are triggers for an environmental assessment pursuant to Chapter 343, HRS. Accordingly, this environmental

**Key**

- State Land Use District Boundary Amendment Area From Agricultural to Urban (31.87 acres)
- State Land Use District Boundary Amendment Area From Agricultural to Rural (16.25 acres)



Source: State Land Use Commission

**Figure 16 Proposed Kula Ridge Residential Workforce Housing Subdivision Boundary Amendment Area**

NOT TO SCALE





assessment is being prepared in accordance with Chapter 200 of Title 11, Department of Health Administrative Rules, Environmental Impact Statement Rules.

This document addresses the plan's technical characteristics, environmental impacts and alternatives, and advances findings and conclusions relative to the significance of the proposed single-family residential subdivision and the proposed offsite water system improvements. Based on discussions held with the County of Maui Planning Department, the County of Maui, Department of Housing and Human Concerns and the State Land Use Commission staff, it has been determined that the approving agency for the environmental assessment is the County of Maui, Department of Housing and Human Concerns.

**II. DESCRIPTION OF THE  
EXISTING  
ENVIRONMENT, IMPACTS  
AND MITIGATION  
MEASURES**

## II. DESCRIPTION OF THE EXISTING ENVIRONMENT, IMPACTS AND MITIGATION MEASURES

This chapter has been prepared to describe the existing conditions and potential impacts and proposed mitigation measures at the Ridge Project site. A description of environmental impact considerations associated with the Mauka Subdivision's 11 workforce housing units and water system improvements on the Mauka Subdivision property is provided in Chapter III of this report.

### A. PHYSICAL SETTING

#### 1. Surrounding Land Uses

##### a. Existing Conditions

The Ridge Project site is located in the Waiakoa, Kula region on the southwestern slope of Haleakala. The Kula area is characterized by a combination of rural and agricultural uses. The produce and flowers grown in Kula are exported to domestic, mainland and international markets.

The project site lies in the vicinity of Keahuaiwi Gulch to the north and Waiakoa Gulch to the south. The property is surrounded by pastures to the south and east, and by the Kula Community Center and Holy Ghost Church on the west. Kula Elementary School is located southwest of the property, across Kula Highway. Haleakala Waldorf school is located west of the project site along Lower Kula Road. A restaurant, Café 808, and a grocery store, Morihara Store, are located southwest of the property along Lower Kula Road. Single- family homes are located to the south and west of the project site. Refer to **Figure 16**.

The Kula Fire Station and Kula Park are located southwest of the project area, along Kula Highway. The Kula Hospital lies south of the property, approximately 7.8 miles from the proposed project area.

b. **Impact and Mitigation**

The project site consists of pasture and abandoned farm land and is located in proximity to other single-family residential areas. Kealahou Subdivision is located in close proximity of the project site along with small farms and urban services. The proposed project will include single-family homes and small farms that are reflective of the region's rural character. The development of residential units at the project site is consistent with existing residential uses in the area. The use of the property for the proposed affordable housing subdivision would be functionally compatible with surrounding uses.

2. **Climate**

a. **Existing Conditions**

Kula's climate is typical of most mountainous areas in Hawai'i, with conditions varying by altitude and wind direction. Low land areas are generally typified by arid to semi-tropical climate, while higher elevations are characterized by more temperate conditions.

The Kula region is relatively dry, with rainfall of 20 to 30 inches per year. Generally, temperatures range from low 50 degrees Fahrenheit during the winter, to mid-80 degrees Fahrenheit during the summer. Maui is cooled by northeast tradewinds most of the year. These winds are constant during the spring and summer months. During the winter months, the island is often affected by Kona weather conditions, ranging from strong southerly winds with heavy rains, to calm, humid, or rainy weather.

b. **Impact and Mitigation**

The proposed project is not anticipated to affect climatic conditions in the area.

3. **Topography and Soil Characteristics**

a. **Existing Conditions**

Located on the southwestern flank of Haleakala, the project site slopes away from Lower Kula Road in a northwesterly direction at an average grade of

approximately 14.8 percent. Elevation at the site ranges from 2,780 to 3,085 feet above mean sea level (amsl).












Underlying the site for the proposed subdivision and surrounding lands is soil belonging to the Pu`u Pa-Kula-Pane association. See **Figure 17**. The Pu`u Pa-Kula-Pane soil association is found on the intermediate and high uplands, and consists of deep, gently sloping to steep, well-drained soils that have a medium or moderately textured subsoil. This association is used for orchards, pastures, truck crops, and wildlife habitat. The soil consists of Kula Cobbly Loam with 12 to 20 percent slopes (KxaD). See **Figure 18**. The surface layer of the soil is dark reddish-brown loam and subsoil is dark-reddish brown loam, silt loam and silty clay loam that has subangular, blocky structure. While the surface soil is slightly acid, the subsoil is slightly acid to neutral. Kula Cobbly Loam is characterized as having moderately rapid permeability, medium runoff and moderate hazard of erosion.

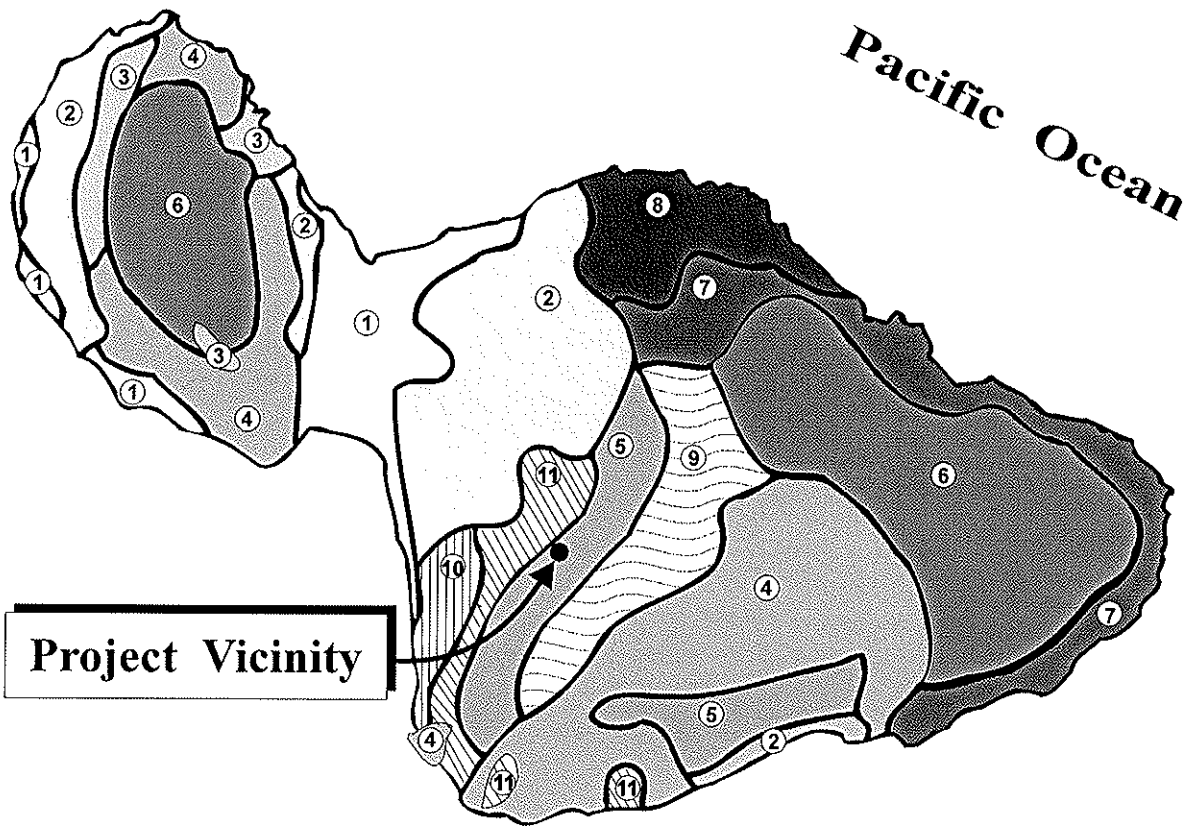
**b. Impact and Mitigation**

To prevent soil erosion during site work, the applicant will implement Best Management Practices, such as construction of drainage basins prior to mass grading for use as temporary sediment catchments; installation of a dust control fence, silt fence, gravel bag berms or other sediment-trapping devices downstream; diversion of storm runoff from graded areas through use of sand bag berms or lined temporary swales; and paving and grassing of exposed areas and permanently landscaping as soon as grading is completed. To minimize soil erosion, the contractor will be required to submit a soil erosion control plan prior to issuance of a grubbing and grading permit. Because the graded area will be larger than 1.0 acre, the applicant will obtain a National Pollutant Discharge Elimination System (NPDES) General Permit Coverage Authorizing Discharges of Storm Water, prior to commencement of construction activity, as required.

Temporary environmental effects due to construction of an off-site water system in the project area will occur. A 2,900-foot groundwater well will be constructed on the Mauka Subdivision site. A storage tank will be provided at the 3,600 ft. elevation. A single trench will be excavated in the Keahuiwi Gulch to facilitate the installation of the waterline. This activity is anticipated to have an insignificant effect on the water quality. This activity

# LEGEND

- |  |   |
|--|---|
|  Pulehu-Ewa-Jaucas association                |  Hana-Makaalae-Kailua association  |
|  Waiakoa-Keahua-Molokai association           |  Pauwela-Haiku association         |
|  Honolua-Olelo association                    |  Laumaia-Kaipoi-Olinda association |
|  Rock land-Rough mountainous land association |  Keawakapu-Makena association      |
|  Puu Pa-Kula-Pane association                 |  Kamaole-Oanapuka association      |
|  Hydrandepts-Tropaquods association           |   |

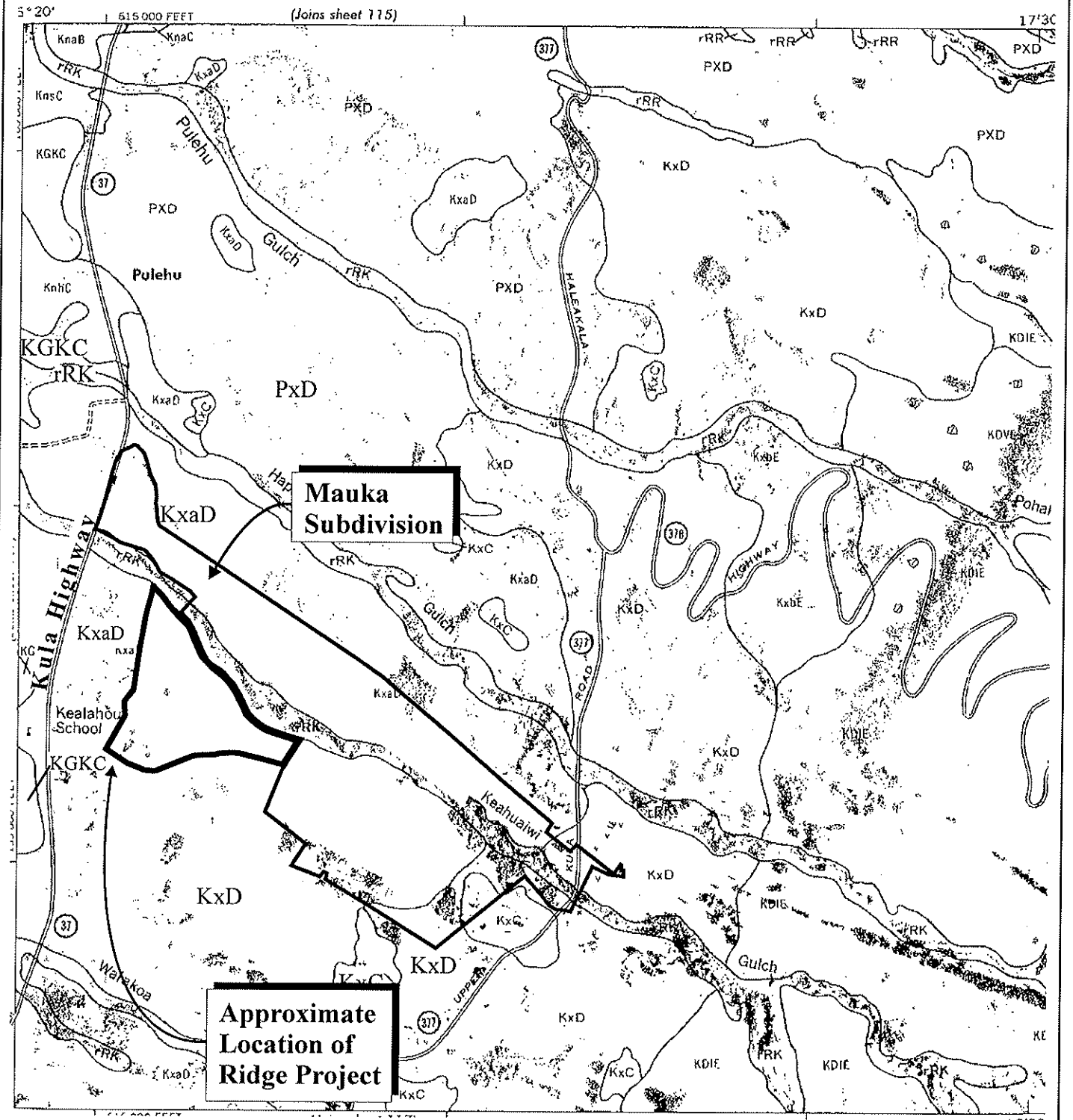


Source: USDA, Soil Conservation Service

**Figure 17** Proposed Kula Ridge Residential Workforce Housing Subdivision  
Soil Association Map

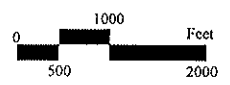
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Source: USDA, Soil Conservation Service

**Figure 18 Proposed Kula Ridge Residential Workforce Housing Subdivision Soil Classifications Map**



Prepared for: Kula Ridge, LLC

MUNEKIYO & HIRAGA, INC.  
Nishikawa/Kula/RI/soilsclass

will disturb the soils and vegetation in the immediate vicinity, but because construction will be limited to a period when the gulch is dry, the gulch will not have continuous flow to impact the environment downstream. Environmental impacts to the gulch are expected to be minimal and will be monitored on a regular basis. After construction, the preconstruction conditions of the area are expected to recover fully.

#### 4. Agricultural Productivity Considerations

##### a. Existing Conditions

The three classification systems commonly used to rate soils in Hawai'i are: (1) Land Capability Grouping, (2) Agricultural Lands of Importance to the State of Hawai'i, and (3) Overall Productivity Rating.

##### (1) Land Capability Grouping (NRCS Rating)

The 1972 Land Capability Grouping by the U. S. Department of Agriculture NRCS rates soils according to eight levels, ranging from the highest classification level "I" to the lowest "VIII".

The project site soils are rated IVe. Class IV soils have very severe limitations that reduce the choice of plants, or require very careful management, or both. The subclassification "e" indicates that the soils are subject to severe erosion if they are cultivated and not protected.

##### (2) Agricultural Lands of Importance in the State of Hawai'i (ALISH)

In 1977, the State Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawai'i (ALISH), based primarily, though not exclusively, on their soil characteristics. The three (3) classes of ALISH lands are "Prime", "Unique", and "Other", with the remaining non-classified lands termed "Unclassified". When utilized with modern farming methods, "Prime" agricultural lands have a soil quality, growing season, and moisture supply needed to produce sustained crop yields economically; while "Unique" agricultural lands poses a combination of soil quality, growing season, and moisture supply to produce sustained high yields of a specific crop. "Other" agricultural lands include those that have not been



rated as “Prime” or “Unique”.

As reflected by the ALISH map for the Kula region, the proposed project is comprised of lands that have been defined as “Other” agricultural lands. See **Figure 19**.

(3) Overall Productivity Rating

The University of Hawai`i, Land Study Bureau (LSB) developed the Overall Productivity Rating, which classifies soils according to five (5) levels, with “A” representing the class of highest productivity and “E” representing the lowest. The letters are followed by numbers which further classify the soil types by conveying such information as texture, drainage, and stoniness.

The subdivision area is located on lands designated as “C41i” “D41” and “E96”. The western part of the subdivision lies on lands designated “E96” which designates irrigated, well-drained land with non-stony to rocky and moderately fine to medium textured soil. The area in the eastern part of the subdivision lies on lands designated as “C41i” and “D41” which designate irrigated, well-drained land with stony and medium textured soil. See **Appendix "C"**.

**b. Impact and Mitigation**

Assessment of the agricultural land use impacts was carried out for the Ridge Project. Refer to **Appendix "C"**.

The project will commit approximately 32 acres of low-quality agricultural land to a non-agricultural use, leaving about 16 acres of the better land available for rural/agriculture uses as part of four 4-acre lots.

The development on this agricultural land, combined with other developments in Hawai`i and the island of Maui, involves a small loss of agricultural land which will not significantly affect (1) the availability of land to farmers in Hawai`i, (2) agricultural land rents, (3) the growth of diversified crops, or (4) potential agricultural employment.

The loss of agricultural land will not limit the Statewide growth of diversified agriculture. While the market for agricultural land is much tighter in Kula than it is in most other areas of the state, the impact to the loss of agricultural



land is minimal since a majority of the land has poor soil.

**5. Flood and Tsunami Hazards**

**a. Existing Conditions**

According to the Federal Emergency Management Agency's Flood Insurance Rate Maps for the area, the proposed subdivision is situated in Zone C, an area of minimal flooding. See **Figure 20**. The property is located upland, away from tsunami inundation areas.

**b. Impact and Mitigation**

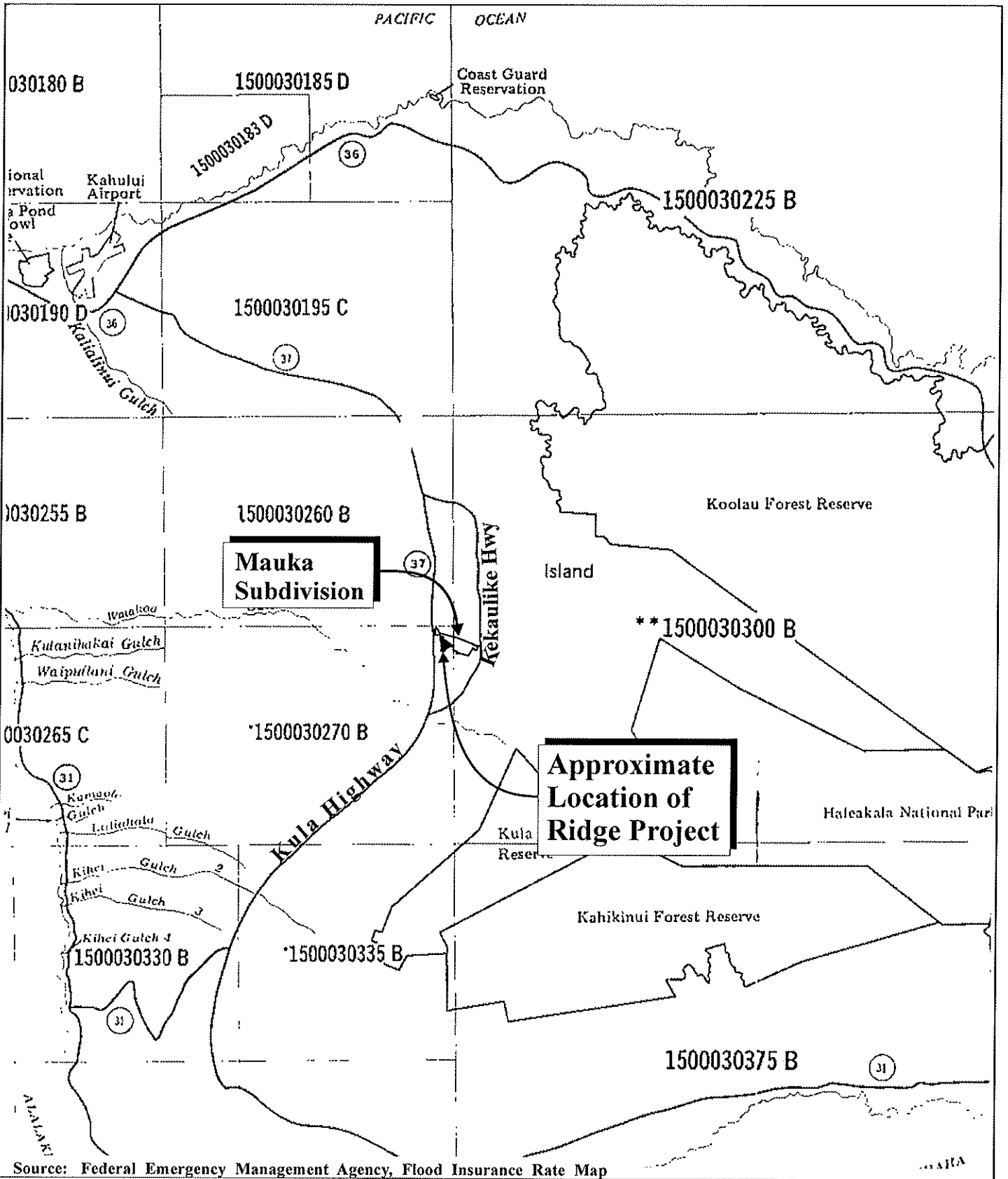
The use of the subject property for a residential workforce housing subdivision is not anticipated to pose a flood or tsunami hazard. As will be discussed in Section "D" of this chapter, post-development drainage mitigation measures will be implemented to ensure that adjacent and downstream properties will not be adversely affected by the proposed action. Because the project site is located upland, there are no threats to the surrounding area from coastal wave action.

**6. Flora and Fauna**

**a. Existing Conditions**

A Biological Resources Survey of the Ridge Project site was conducted by Robert W. Hobdy. See **Appendix "D"**. The inventory survey summarized the findings of flora and fauna in the project site. The property is grassed and has been overrun by scrub vegetation, consisting of pasture grasses and weeds. There are no rare, threatened or endangered species of plants on the property.

Typical of the Upcountry region, animal life in the area include cats, dogs, rats and mongoose. Avifauna include the mynah bird, francolins and the short-eared owl, known as pueo. The Fauna Survey Report indicated that a special effort was made to look for the native Hawaiian hoary bat. Evening surveys of the property were conducted to observe any presence of the



**Figure 20 Proposed Kula Ridge Residential Workforce Housing Subdivision Flood Zone Designation Map**

NOT TO SCALE



species. No evidence of activity by the bat was observed.

In addition, no endangered nene or Hawaiian goose were seen on the property or in the vicinity of the property. The project area provides a habitat not suitable for these birds. They prefer lush green grass found in irrigated lawns and golf courses.

**b. Impact and Mitigation**

There are no rare, Federally threatened or endangered species of plants on the property. Further, there are no known rare or Federally endangered or threatened species of fauna or avifauna in the vicinity of the project site. Accordingly, the proposed development is anticipated to have no significant negative impact on those elements of the natural environment.

**7. Archaeological Resources**

**a. Existing Conditions**

An Archaeological Inventory Survey of the Ridge Project site was carried out by Scientific Consultant Services (SCS). See **Appendix "E"**. The inventory survey included historic background research and settlement pattern analysis prior to fieldwork, a complete pedestrian survey of the project area, subsurface testing, and reporting.

The project site has been heavily altered by habitation since the 1800s, followed by ranching for the past 100 years. A cottage stands on the property, typical of plantation-style homes of the 1930s. Cattle grazing, erosion, and bulldozer grading activities, including construction of a dirt road and presence of horses, have altered much of the project area's original integrity.

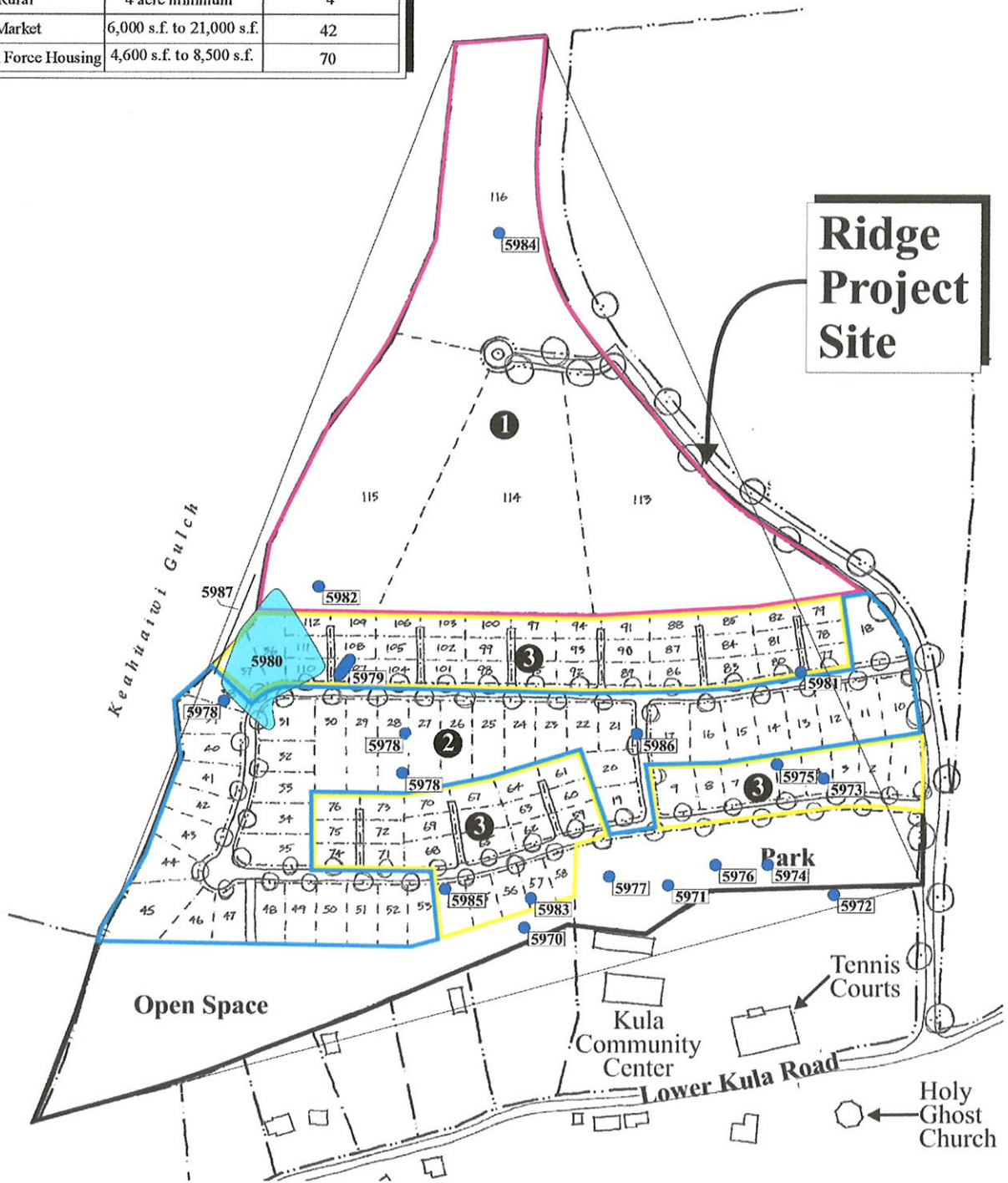
Eighteen (18) historic sites were documented during the survey. See **Figure 21**. Nine (9) sites were considered pre-Contact, based on the architecture and type. Six (6) sites were interpreted as historic and three (3) were undetermined.

Pre-Contact sites include settlement patterns of a modified outcrop and small enclosure that may represent temporary habitation (Site 50-50-11-5980), rock

**KEY**

**LAND USE SUMMARY**

	Lot Type	Lot Size	Number of Units
①	Rural	4 acre minimum	4
②	Market	6,000 s.f. to 21,000 s.f.	42
③	Work Force Housing	4,600 s.f. to 8,500 s.f.	70



Source: Architectural Design & Construction, Inc. and Scientific Consultant Services

**Figure 21 Proposed Kula Ridge Residential Workforce Housing Subdivision Archaeological Site Locations**

NOT TO SCALE



mounds (Site 5983), low walls (Site 5972), a habitation platform (Site 5977), and agricultural terraces (Sites 5973, 5975, 5978, 5979, and 5982). All sites fit the model of upcountry occupation reflected in early historic documents, Land Commission Awards (LCAs) and archaeological studies.

Parts of the project area were interpreted as historic and used for habitation (Site 50-50-11-5984), or for pastureland (Sites 5970, 5971, 5981, 5985, and 5987). The sites used for pastureland consisted of walls and an enclosure, and were interpreted as the results of historical ranching activities. It is also noted that a house is featured on Site 5984.

The sites listed as undetermined (Sites 50-50-11-5974, 5976, and 5986) were difficult to define.

Sub-surface testing carried out in areas likely to have been least affected by historic activities resulted in no identified cultural material. The only find of any significance were a sharpening stone (hoana) and a surface lithic scatter on Site 50-40-11-5980.

**b. Impact and Mitigation**

The following significance evaluations are broad criteria established for the State and National register of Historic Places. These criteria are as follows:

**Criterion A:** Site is associated with events that have made a significant contribution to the broad patterns of our history.

**Criterion B:** Site is associated with the lives of persons significant to our past.

**Criterion C:** Site is an excellent site type: embodies distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual construction.

**Criterion D:** Site has yielded or has the potential to yield information important in prehistory or history.

**Criterion E:** Site has cultural significance; probable religious structures or burials present. (State of Hawai'i criterion only).

The eighteen (18) sites identified in the Archaeological Inventory Survey of the proposed subdivision site were considered significant under Criterion D because of their ability to yield information about history or prehistory. Refer to **Appendix "E"**. Excavation at the most important sites yielded information that was recorded by Scientific Consultant Services. As indicated by the State Historic Preservation Division (SHPD), further archaeological monitoring during construction work is recommended due to the historic properties representing pre-contact agricultural use of the area, and post-contact use for ranching, agriculture, and historic habitation. See **Appendix "F"**. The applicant's archaeology consultant has prepared an archaeological monitoring plan and has submitted the plan to the SHPD for review and approval. Should any archaeological remains or cultural materials be encountered during construction and excavation activities, work in the vicinity of the find will be stopped and the SHPD will be contacted to establish appropriate mitigation measures in accordance with Chapter 6E, Hawai'i Revised Statutes. The Office of Hawaiian Affairs (OHA) shall also be contacted in the event that archaeological remains or cultural material are discovered during ground altering activities.

## 8. **Cultural Impact Assessment**

### a. **Historic Context**

During the pre-contact and early contact periods, Kula was primarily an area for farming. Dryland taro patches grew in elevations up to 3,000 feet. Farmers were reliant on growth of sweet potatoes and when crops failed due to caterpillars, blight, frost or sun, people in Makawao and Kula suffered from famine.

The arrival of whalers in the 1840s stimulated great demand for Irish and sweet potatoes. Potatoes were taken to Lahaina and sold aboard ships. The California gold rush also resulted in great demand from prospectors for potatoes, other vegetables, sugar, molasses and coffee. Farmers were doing so well that many Hawaiians were going into business for themselves, shipping their goods to San Francisco. Maui fields were referred to as "Nu



Caliponi” or “New California.” When prices dropped, Hawaiians lost interest in growing potatoes.

In the 1840s, many Chinese from Honolulu, Kohala and China moved to the region and acquired land by lease or deed from Caucasian ranchers or Hawaiian homesteaders for farming. The Territorial government leased the land to ranchers who then subleased to the Chinese. In addition to Irish potatoes, they planted corn, beans, onions, Chinese cabbage, round cabbage, sweet potatoes, wheat and other grains, and cotton. Farmers often bartered their farm produce for payment on leases, in lieu of monetary transactions. Bartering was a common practice. In the Kula area, there were three (3) stores that often bartered for goods on other islands.

During the mid-19<sup>th</sup> century, the Chinese population grew. Kula consisted of Chinese and English schools, Christian churches, a Chinese society, gambling houses, opium dens, general stores, farms and cattle ranches. Keokea was often referred to as “Chinatown” and many would travel to the area on Sundays and holidays from the outlying areas of Kanaio, Ulupalakua and Waiakoa.

In the 1880s, large sections of crown land in lower Kula were leased for grazing for the booming cattle industry. Around the end of World War I, the Territorial government released a large amount of land to the public for purchase. Homestead lands were available to all American citizens at least 21 years old. As a result of the policy, the Chinese population began to decline. In addition to loss of land to parceling, the Chinese population left the area due to severe drought that devastated crops and livestock, soil depletion due to years of harvesting and tilling and a lack of educational opportunities.

Since the late twentieth century, most of the land in the Waiakoa, Kula area served as farm land (Rosendahl, 1989).

**b. Cultural Perspectives**

To assess the cultural impact associated with the proposed project, two (2) interviews were conducted with individuals familiar with the area and long-

time residents. A summary of their interviews follow.

(1) **Rogers Ishizu**

The interview with Rogers Ishizu was carried out on September 14, 2006 in Kahului, Maui.

Mr. Ishizu was born in Waiakoa, Kula on January 27, 1944. His mother and father are originally from Wailuku, but were asked to relocate to Kula where Mr. Ishizu was born. Mr. Ishizu is a retired teacher and currently lives in Wailuku with his wife Karen.

Mr. Ishizu's parents operated the Maui Dry Goods store in Wailuku and were subsequently asked by the store owner, Mr. John Dolim, to relocate and manage the Maui Dry Goods store in Kula. At that time, the owner of Maui Dry Goods was opening stores in different places on Maui. The Ishizus relocated and operated Maui Dry Goods for nearly 40 years. The first house that they lived in was owned by Maui Dry Goods.

After living there for some time, Mr. Ishizu's father had the opportunity to purchase a lot from a private owner. At the time, there were a few lots to choose from. The lots were 2.5 acres in size. In order to select a lot, people drew straws. Mr. Ishizu's father had a good draw and chose the property with the best view. The Ishizu family continues to own the same home located off of Copp Road near the Calasa Service Station.

In later years, Mr. Ishizu's father was given an offer to buy the store but decided against it, thinking that it would be too much work. The Ishizus eventually retired, prompting the closing of the store. The store currently houses the Café 808 restaurant. In addition to Maui Dry Goods, there was also the Ching Store and the Tavares Store.

Mr. Ishizu attended Kealahou School, now occupied by the Haleakala Waldorf School on Lower Kula Road. He stated that there was one classroom for every grade level. Kealahou School taught children from Kindergarten to the 8<sup>th</sup> grade. Mr. Ishizu remembers his Kindergarten teacher, Mrs. Furukawa, because she was his first teacher. He remembers

her as being very strict, but fair. He also noted that a Japanese School was in the area across from Kealahou School and that a Japanese minister taught language there. According to Mr. Ishizu, the Japanese school was owned and operated by the Honpa Hongwanji. Mr. Ishizu was enrolled as a student at the Japanese school, and laughed when he stated that he lasted there for just one day.

In recalling the history of the area, Mr. Ishizu remembers the first Morihara store located on the western edge of the subject property near the Holy Ghost Church. Mr. Ishizu said that the Moriharas operated the store for some time and eventually relocated further south across from Maui Dry Goods.

Mr. Ishizu recalls many happy memories of living in Kula. He was very active in sports activities, and played with friends in the neighborhood. He and his friends played in the area south of the subject property, on land owned by Louis Fernandez. Mr. Ishizu had a couple of friends who lived in the area and they would ride horses on the land surrounding the subject property. He stated that most of the land in the area was used for ranching. During Mr. Ishizu's childhood, transportation was limited, so residents in the area didn't travel much to other parts of Maui. He and his childhood friends would often travel to Ulupalakua and other parts of the countryside for football challenges and other activities.

Mr. Ishizu's family lived close to the store, near Copp Road and Mauna Place. As young boys, the Ishizu brothers worked for the Vincent family in upper Kula. They worked as yard boys and worked for as little as 60 cents an hour to 1.40 cents an hour.

Mr. Ishizu recalls other families in the area who were farmers. There were the Kobayashi, the Nishimoto, and the Umeno Families. He recalls the Koga family owning a farm next to the subject area.

There was a mix of people from different ethnic backgrounds who lived in the Waiakoa area. Residents were of mainly Japanese, Portuguese, and Hawaiian ancestry. Mr. Ishizu added that many Caucasian people owned land. There were a few Chinese or Filipino people who lived in the area, and many of the Chinese people lived in Keokea.

Mr. Ishizu recalls the subject property only being used for pasture land and open space. He is not aware of any cultural practices or gatherings on the subject property. Should the proposed project proceed, Mr. Ishizu said that he was open to seeing development for family homes and thought that there should be more services for people in the area. Mr. Ishizu's mother continues to live in the same home that his family built over 50 years ago in Kula.

(2) **Dorothy Nakata**

The interview with Dorothy Nakata was carried out on May 24, 2007 in Kahului.

Mrs. Nakata was born in Ulupalakua in 1928 and was given the name Dorothy Toyoko Terada by her parents Mitsuji and Hatsume Nishiyama Terada. Her father was originally from Haleiwa, O`ahu. He relocated to Maui when he was 2 years old and was a bookkeeper for Ulupalakua Ranch. Mrs. Nakata's mother is originally from the Waiakoa area and was a homemaker and dressmaker. Mrs. Nakata has one (1) brother and three (3) sisters. She currently lives in the Waiakoa area with her husband, Ronald and her daughter, Suzanne.

Although Mrs. Nakata grew up in Ulupalakua, she spent all of her childhood summers in Waiakoa helping her grandparents at their farm situated near Copp Road and King Kekaulike Highway. Mrs. Nakata noted that during her childhood, the ethnic mix in Waiakoa mainly included Portuguese and Japanese families, and some Caucasian families. These families operated ranches and farms in the Waiakoa area. There were a few Chinese families in the area and she added that many of them lived in Keokea. Mrs. Nakata stated that a majority of the Hawaiian families in the upcountry area lived in Ulupalakua.

Mrs. Nakata stated that there were two (2) stores that catered to the residents in the area. A third store, Morihara Store was located in close proximity to the project area near the Holy Ghost Catholic Church. The Morihara Store eventually relocated further south near Copp Road during the 1940's. The Morihara Store continues to service the residents of the Waiakoa area today. Mrs. Nakata also noted that residents either went to the Calasa Garage or the Migita Garage for

gasoline or to get their cars fixed.

Back then, very few people went to the stores for their goods. Mrs. Nakata stated that many residents prepared their own foods. Women and children stayed home to make jellies, ketchup, and mayonnaise. They churned their own butter and sewed their own clothes. There was no need for a bakery, because the women would also bake their own baked goods. Mrs. Nakata added that many Portuguese parishioners from the Holy Ghost Parish were actively involved in baking Portuguese bread. She remembered the Gregulio and the Moniz families as having an active role in the church. Mrs. Nakata said that residents who knew parishioners from the church were very lucky if they were given Portuguese bread.

Mrs. Nakata added that situated near the Holy Ghost Church was the Kealahou School where Haleakala Waldorf School stands today. She added that Japanese movies would be shown at the school. Mrs. Nakata developed friendships with many of the other children who lived in the area. Some of her childhood friends included Ann Takahashi Masuda, Flora Umeno and Bernice Takahashi Nagato who lived near the Holy Ghost Church.

Most of Mrs. Nakata's time was spent helping her grandparents on the farm, pulling weeds and harvesting vegetables. They worked from 6:00 in the morning to 7:00 in the evening. She added that back then, children didn't work for money, but worked for love. Farmers with no children depended on relatives with children to help them on the farms. She stated that farmers in those days did not rely on a sophisticated irrigation system to water the crops, so they depended on rain. Mrs. Nakata said that her grandparents grew cabbage, onions, carrots, tomatoes, potatoes, gobo, strawberries, and dried beans on their family farm. She assisted her grandparents with the harvesting of vegetables. Her uncle would travel into town on Mondays to sell their groceries at the market farmer's exchange. She would stay home on these days and do chores such as laundering, housework, etc.

Mrs. Nakata remembers that during her childhood, this part of Kula (Waiakoa) was bustling with agricultural activities. Farmers grew their own food and sold their produce at the markets during the weekdays. Families often picked their

own fruit, and made jams and jellies out of peaches and poha berries.

There were many flower farmers in the area following WWII, including Mrs. Nakata's relatives. Her uncle had a large lot that he divided into sections which he used to grow upcountry flowers such as, proteas, carnations, babies breath and lilies. Her Uncle Shigeo Maeda and Aunt Fudeko Maeda, also grew proteas that they marketed in Honolulu.

During World War II, her uncle and aunt, Susumu and Hatsuyo Nishiyama established Wailuku Florist where they sold fresh cut flowers from their farm in Kula. Her cousin Ray Nishiyama eventually took over the family flower farm and continued growing flowers as well.

Mrs. Nakata said that she was aware of cultural practices by Japanese and Portuguese families in the area. Many Japanese families gathered together during the months of June, July, and August to celebrate the O-Bon Festival. Japanese residents from all parts of Maui would travel to Kula to support their relatives and friends in celebrating the O-Bon festival. Japanese farmers gave O-Bon participants bags of vegetables to show appreciation for coming to Kula to celebrate the occasion. Portuguese families were heavily involved with the Holy Ghost Church and shared their culture with the families of various ethnic backgrounds.

Another cultural activity was the New Year celebration where the Japanese Community Association celebrated with big feasts at the Japanese church.

Mrs. Nakata would like to see more agricultural activity in the Waiakoa region. Throughout the years, she has seen a decline in agricultural activity and felt that many young farmers wanting to continue their family farms need support from the community and county. She also felt that farmers need assistance in obtaining water and providing farmers with opportunities to sell their produce. She felt that local farmers face a tough competition with mainland companies also selling their produce in the stores.

Mrs. Nakata also stated her concern about the reduction of forest land and its effect on the environment. She added that once trees are removed or cut down, they need to be replaced

with other trees. She felt that trees were needed to mitigate drainage issues. Mrs. Nakata also stated that stealing, robberies, and fights have become major concerns in the community during recent years. She added that Kula was once a very close-knit community. Residents were cordial and got along well with one another. She hopes that the community will come together and have a sense of closeness that existed many years ago.

Mrs. Nakata stated that she enjoys the open country that Kula has to offer. She thought that the rural characteristic, the friendliness of the residents and the local "*aloha spirit*" were benefits to the community. She stated that she would like to see these benefits continue in the community for the benefit of our children and future generation. She likes the way people help one another. In closing, she stated, "*We need to keep our local aloha spirit in our community.*"

c. **Impact and Mitigation**

Based on the findings and recommendations of the archaeological report and accounts presented by the interviewees, the proposed action is not anticipated to have an adverse effect on cultural practices.

9. **Air and Noise Quality**

a. **Existing Conditions**

There are no point sources of airborne emission in the immediate vicinity of the project site. The air in the Kula region is of good quality, with existing airborne pollutants attributable to automobile exhaust from the region's roadways. Other sources of airborne pollutants typically include dust and equipment emissions resulting from agricultural activities and smoke generated from sugar cane harvesting operations occurring in the Central Maui plain. These sources are intermittent and the generated particulates are quickly dispersed by the prevailing tradewinds.

Noise generated in the vicinity of the subject property may be attributed to natural (e.g. wind) conditions, traffic along Lower Kula Road, agricultural-related activity involving the intermittent operation of equipment, such as tractors, and trucks, and activity from the Kula Community Center.

**b. Impact and Mitigation**

Airborne particulates, including dust, may be generated during site preparation and construction. To minimize dust generation, dust fences, sprinklers and/or water wagons will be utilized during site preparation and construction. As soon as grading is complete, exposed areas will also be paved, grassed or permanently landscaped.

Ambient noise conditions will be temporarily affected by construction activities. Material-transport vehicles and power tools are anticipated to be the dominant noise-generating source during construction. As with air emissions, construction noise will be minimized through use of applicable BMPs. Construction work will be limited to daylight work hours.

Once operational, the proposed workforce housing project should not have an adverse impact on air or noise quality in the vicinity.

**10. Scenic and Open Space Resources**

**a. Existing Conditions**

Situated on the slopes of Haleakala, Kula provides expansive scenic views of the Central Maui isthmus, the off-shore islands of Lanai and Kaho`olawe, and the West Maui Mountains. From clearings throughout the project site, Maui's central isthmus and the northern and southern shorelines of Maui can be seen makai (northwest and southwest, respectively) of the project area. Mauka of the site Haleakala is visible.

**b. Impact and Mitigation**

The proposed subdivision involves site-related grading and associated improvements. The subdivision configuration maintains density and spatial layout concept which, with the use of existing topographic character of the site will minimize adverse impacts to the visual character of the surrounding area.

Architectural and landscape designs, as well as grade differentials, will help to mitigate views of the sight from Kula Highway and along Kekaulike Highway. The proposed development is anticipated to not have an impact on



scenic view, open space resources or adversely affect the visual character of the surrounding area.

## **B. SOCIO-ECONOMIC ENVIRONMENT**

### **1. Community Character**

#### **a. Existing Conditions**

From a regional standpoint, the project site is part of the Makawao-Pukalani-Kula Community Plan region. The region includes a diverse range of physical and socio-economic environments. The region's rural qualities are characterized by vast open space and natural resources, a clean environment, and abundant outdoor recreational opportunities. With its temperate climate, fertile soil, and sweeping views, Kula has grown steadily over the past few years. The area has attracted more residents and there has been a decrease in small farm activity.

#### **b. Potential Impacts and Benefits**

As noted earlier, the subdivision property is in proximity to other residential areas of similar character with structures, streets, and services of both rural and urban type. The proposed project will include single-family homes and agricultural lots that are reflective of the region's rural character. Included in the proposed project plans are four (4) large lots that will encourage the continuation of farming activities to occur near other farming communities in the area.

### **2. Population**

#### **a. Existing Conditions**

The population of Maui County has exhibited relatively strong growth over the past decade with the 2000 population of 128,241, reflecting a 27.6 percent increase over the 1990 population of 100,504. Growth in the County is expected to continue, with resident population projections for the years 2010 and 2030, estimated to be 151,300 and 199,550, respectively (County of Maui Planning Department, June 2006).

Just as the County's population continues to grow, the resident population of the Kula region has also increased. The 2000 population of the Makawao-Pukalani-Kula region was 21,571. The population is projected to increase to 26,644 by the year 2010 and 30,880 by the year 2030 (County of Maui Planning Department, June 2006).

**b. Potential Impacts and Benefits**

Given the size and scope of the proposed action, impact on population is expected to be minimal. The proposed project is not considered a direct population generator from a long-term perspective. Instead, the project is anticipated to accommodate demands for housing by existing island residents.

While many purchasers are anticipated to be Upcountry residents, some of the prospective homeowners may relocate from other regions of the island, with the potential to incrementally increase population in the Makawao-Pukalani-Kula Community Plan region. Given the size of the project (116 lots), the increase in population is not expected to extend beyond the projected growth parameters of the region defined by migration and birth/death rates.

**3. Economy**

**a. Existing Conditions**

Maui's economy is heavily dependent upon the visitor industry. The Kula region, with its fertile soil and cool climate conditions, has resulted in successful produce and flower generation for export to domestic and international markets. The vast lands of pasture grass has also enabled cattle ranching and alternative ranching activities, such as sheep and llama herding, which contribute to the economy.

**b. Potential Impacts and Benefits**

On a short-term basis, the proposed action will support construction and construction-related employment. In the long term, residential homeowners will require services related to home maintenance and improvement which is expected to further support local business owners. Real property taxes generated by the project will contribute to the County's revenue base to

support any increase in regional public service demands over time.

4. **Housing**

a. **Existing Conditions**

In 2000, Maui County's housing supply totaled 56,377 housing units, representing a 31 percent increase from 1990. The Makawao-Pukalani-Kula area's housing supply in 2000 totaled 4,761 units, representing a 57% increase from 1990.

Countywide, owners lived in 44 percent of the occupied homes. Owner occupancy tended to be slightly higher in the Makawao-Pukalani-Kula region with 59 percent of the units being owner-occupied.

Housing values in Kula-Ulupalakua-Kanaio are noticeably higher than most of the Countywide housing supply. Whereas recent median home valuation for Maui County was \$630,000.00, the price median in the Kula-Ulupalakua-Kanaio area was \$764,000.00 (Realtor Association of Maui, December 2007).

b. **Potential Impacts and Mitigation Measures**

As noted previously, there is a need for residential workforce housing in Maui County. The proposed action will address this need through the provision of housing intended for families earning up to 160 percent of the median annual income for the island of Maui. A residential workforce housing agreement setting forth the terms and conditions of provision of the workforce units will be executed by Kula Ridge, LLC and the County of Maui.

The proposed action is anticipated to have a positive economic effect during the construction phase of development as expenditures for construction and related support services are made. In the long term, the project is anticipated to accommodate demands for workforce housing by existing island residents.

## C. PUBLIC SERVICES

### 1. Police

#### a. Existing Conditions

The County of Maui's Police Department is headquartered in Wailuku. The Maui Police Department (MPD) consists of several patrol, investigative and administrative divisions. The Wailuku or Central station, which serves the Haiku, Paia, Makawao, Pukalani and Kula regions is situated approximately 18.0 miles northwest of the project site. A police substation is located in Pukalani, about 5.3 miles northwest of the project site. A new police community service center will be located in the Kulamalu Town Center, approximately 1.0 mile northwest of the project site.

#### b. Impact and Mitigation Measures

The project will not extend the existing service area limits for emergency limits. As previously noted, real property taxes generated by the project will contribute to the County's revenue base to support police manpower requirements in the region.

### 2. Fire

#### a. Existing Conditions

Fire prevention, suppression and protection services are provided by the County Department of Fire Control. The Kula Station, which serves the region, is located off Kula Highway, approximately one-half mile southwest of the subject property. The Makawao and Paia fire stations lend additional firefighting support to the Kula region and are situated approximately 7.0 miles and 7.5 miles away from the project site, respectively.

#### b. Impact and Mitigation Measures

The proposed action is not anticipated to affect the service capabilities of fire operations. The project will not extend the existing service area limits for emergency services.

3. **Medical Services**

a. **Existing Conditions**

Maui Memorial Medical Center, the only major medical facility on the island, is approximately 19.0 miles to the northeast of the project site. Licensed for 231 beds, this facility provides acute, emergency, general, and obstetric care services. Several medical and dental care facilities are located in Makawao and Pukalani to serve Upcountry residents.

Kula Hospital is situated about 3.0 miles southwest of the project site. The hospital serves as a long-term care facility, that provides Alzheimers and dementia care services. An out-patient clinic for the area's residents operates from 8:00 a.m. to 4:30 p.m. on weekdays.

b. **Impact and Mitigation Measure**

The proposed action is not anticipated to affect the service capabilities of emergency medical operations. The project will not extend the existing service area limits for emergency services.

4. **Solid Waste Disposal**

a. **Existing Conditions**

Residential solid waste collection and disposal is provided once weekly by the County's Department of Environmental Management's Solid Waste Division. Solid waste generated in the Upcountry region is transported to the Central Maui Landfill off Pulehu Road, approximately 8.0 miles northwest of the project sites. Other than the Hana Landfill, the Central Maui Landfill is the only disposal site on the island of Maui which accepts County-hauled residential waste, commercially-hauled commercial waste, and self-hauled waste.

Privately owned facilities, such as the Maui Demolition and Construction Landfill and the Pohakulepo Concrete Recycling Facility, accept solid waste and concrete from demolition and construction activities. These facilities are located at Maalaea, northwest of the subject property, near Honoapiilani Highway's junction with North Kihei Road and Kuihelani Highway. A green

waste recycling facility is present at the Central Maui Landfill.

**b. Impact and Mitigation Measure**

A solid waste management plan will be developed for the disposal or recycle of materials resulting from the site and construction activities, as appropriate. The plan will incorporate strategies for effective construction waste management to reduce, reuse, and recycle solid waste materials. Such strategies involve the use of efficient design to promote waste reduction, salvaging of material to be used by other businesses or local organizations, and separating recyclable and non-recyclable materials for proper recycling and disposal. All materials deemed unfit for reuse/recycling will be dispose at an approved construction waste disposal site.

Once completed, it is anticipated that the project would be served by the County of Maui's solid waste collection operations, and is not expected to affect County services or infrastructure capacities for solid waste. The County of Maui's Solid Waste Division is working on a new landfill expansion increment, estimated to provide the island with sufficient capacity for several years, which takes into account future growth of residential and non-residential uses. In addition, lands adjacent to the existing landfill are currently utilized for rock quarrying and will likely be available for County expansion of the landfill, further increasing available capacity.

**5. Education**

**a. Existing Conditions**

The State Department of Education (DOE) operates three (3) public schools in the Upcountry region. They are: King Kekaulike High School for grades 9 to 12, Kalama Intermediate School for grades 6 to 8, and Kula Elementary School for grades K to 5. The State Department of Education capacity, enrollment and projected enrollment for the schools are as follows in **Table 4**.

**Table 4**

School	Actual Enrollment	Capacity	Projected Enrollment				
			2007 - 2008	2006 - 2007	2008 - 2009	2009 - 2010	2010 - 2011
Kula Elementary	455	588	421	414	408	405	401
Kalama Intermediate	894	1,118	881	877	873	871	868
Kekaulike High School	1,354	1,288	1,262	1,197	1,158	1,143	1,117
Source: State of Hawai'i, Department of Education							

There is an elementary, middle and high school primarily for persons of native Hawaiian ancestry, operated by Kamehameha Schools, located approximately eight (8) miles north of the subject property at Kulamalu . The Kamehameha Schools has an enrollment capacity of 1,100 students.

The region is also served by privately operated facilities, such as St. Joseph School (Grades K to 6), Haleakala Waldorf School (Grades K to 8), and Seabury Hall (Grades 6 to 12).

**b. Impact and Mitigation Measure**

The project involves the development of 116 improved residential lots and construction of single-family residences. The DOE general guidelines for student enrollment projections indicate that the proposed subdivision is anticipated to generate the new student enrollment as follows:

Elementary School . . . . .	33 students
Middle School . . . . .	14 students
High School . . . . .	16 students
<b>Total . . . . .</b>	<b>63 students</b>

Educational assessments are required for the Ridge Project as it meets the criteria of 50 units or more. Coordination between the applicant and the DOE has begun to ensure that the assessment policy provisions are appropriately addressed. Should impact fees be assessed and collected, they are assured to

be earmarked for area schools, such as Kula Elementary, Kalama Intermediate, and King Kekaulike High School. Therefore, it is anticipated that these funds will assist in the upgrade and improvement to schools in the Kula-Upcountry area.

Coordination with the DOE and the State Land Use Commission will continue to ensure that assessment policy provisions are appropriately addressed.

## 6. Recreational Facilities

### a. Existing Conditions

Kula Park is located southwest of the Ridge Project site, across Kula Highway and adjacent to Kula Elementary School. The park consists of the 10.3-acre Kula Ball Field, two (2) soccer fields, playground equipment, two (2) picnic tables, a restroom and two (2) parking areas.

Other neighborhood parks and facilities in close proximity include the Kula Community Center located to the immediate west of the project area. The Kula Community Center is an approximate 2,800 square foot building on seven (7) acres of land. The center has a stage, barbecue grill and restrooms. There is a community police office onsite. Macrame and folk dance classes are offered there. The center hosts weekly bingo games, Alcoholic Anonymous meetings and senior nutrition classes. Behind the community center is the Old Kula Center where Boy Scouts meetings and Dance Society classes are held. The Maui Farm Bureau is also located in this building. Recreational facilities on the property include two (2) tennis courts and a gateball court. The gateball court has a field house and a storage shed.

Harold Rice Park is located approximately 1.3 miles southwest of the project site. The 3.8-acre park contains a paved parking lot with 18 parking stalls, a restroom facility, picnic tables and a barbecue grill. Access to the Rice Park is located off of Lower Kula Road. Located about 4.2 miles southeast of project area is Keokea Park, which encompasses approximately 6.7 acres and includes a picnic pavilion with tables and barbecue grills, a playground area, a softball backstop, a portable backstop, two (2) storage sheds, a restroom facility and two (2) parking areas with a total of twelve (12) spaces.



Situated along the higher elevations of Haleakala, Polipoli State Park, and Haleakala National Park offers camping, hiking, and sight-seeing opportunities.

**b. Impact and Mitigation**

The applicant for the project is working with the Department of Parks and Recreation to ensure compliance with applicable park assessment requirements. In particular, it is the intent of the applicant to utilize the 3-acre park in the subdivision to address parks and playground assessment requirements. The applicant is also working with the Department of Parks and Recreation on roadway access improvements traversing the existing Kula Community Center property.

**D. INFRASTRUCTURE**

**1. Roadways**

**a. Existing Conditions**

Access to the Ridge Project site will be provided via a new access road off Lower Kula Road south of Alanui Place. Lower Kula Road lies southeast of the Kula Highway. Kula Highway is a predominately two-way, two-lane State of Hawai'i roadway, generally oriented in the north-south direction that serves as the primary access road through Upcountry Maui between Pukalani and Ulupalakua.

Also located in the project vicinity are Alanui Place and Copp Road. Alanui Place is a two-way, two-lane roadway that provides access to the residential properties along its alignment. South of the intersection with Alanui Place, Lower Kula Road intersects Copp Road. Copp Road is a two-way, two-lane roadway oriented in an east-west direction providing access to the residential neighborhoods along its alignment.

A Traffic Impact Assessment Report (TIAR) was prepared by Wilson Okamoto Corporation, dated July 2006. See **Appendix "G"**.

A field investigation was conducted on May 31, 2005, June 1, 2005, and

April 25 to 26, 2006 and consisted of manual turning movement count surveys during the morning peak period between 6:00 a.m. and 8:00 a.m., and the afternoon peak period between 3:00 p.m. and 6:00 p.m. at the following intersections:

- Lower Kula Road, Alanui Place, the Kula Community Center driveway;
- Lower Kula Road and Kula Highway (North);
- Lower Kula Road and Copp Road; and
- Lower Kula Road and Kula Highway (South).

In addition, 24-hour mechanical traffic count surveys were collected along Lower Kula Road and Kula Highway to verify the peak traffic periods in the project vicinity.

The highway analysis was consistent with procedures established in the "Highway Capacity Manual", (Transportation Research Board, 2000) and the "Highway Capacity Manual", developed by the Federal Highway Administration. The analysis is based on the concept of Level of Service (LOS), a qualitative and quantitative assessment of traffic operation, with LOS "A" representing ideal traffic operating conditions and LOS "F" representing unacceptable or congested traffic conditions. The existing LOS was recorded as follows:

1. Southbound at the intersection of Lower Kula Road and Kula Community Center driveways on Lower Kula Road, traffic operates at LOS "A" in the morning and afternoon peak hours. Eastbound traffic operates at LOS "A" in the morning and afternoon peak hours.
2. Westbound at the northern intersection of Kula Highway and Lower Kula Road, traffic operates at LOS "C" during the morning and LOS "B" during the afternoon peak hour. Northbound traffic operates at LOS "A" during the morning and afternoon peak periods.
3. Northbound traffic at the intersection of Copp Road and Lower Kula Road, traffic operates at LOS "A" during the morning and afternoon peak hours. Eastbound traffic operates at LOS "A" during both morning and afternoon peak hours.

4. Westbound traffic at the southern intersection of Kula Highway and Lower Kula Road operates at LOS "B" in the morning peak hour and LOS "A" in the afternoon peak hour. Southbound traffic operates at LOS "A" during the morning and afternoon peak periods.

**b. Impact and Mitigation**

Access to the proposed project site will be available off of Lower Kula Road, via an existing 56-foot wide utility and access easement road. The easement road traverses along the southern boundary of the Kula Community Center to the southwest corner of the proposed project site. The driveway pavement section will be 24 feet wide for ingress and egress.

In accordance with County requirements, roadway improvements consisting of concrete curbs, gutters, and sidewalks will be constructed along the frontage of the property to Lower Kula Road.

Access off of Lower Kula Road on the northern boundary of the project has been considered, however, it has been determined to be infeasible, given that the topographic conditions to the north of the Kula Community Center does not provide for a viable second access point.

Traffic was also assessed using an alternate trip distribution scenario which all site-generated trips were assumed to travel from origins to destinations to the north of the project site. See **Appendix "G-1"**. This trip distribution methodology assumes that all site-generated trips are work related and do not have any linked or pass-by destinations.

Under this alternate trip distribution scenario, the critical movements at the intersections of Lower Kula Highway (north) are expected to operate at LOS "C" or better during both peak periods while those at the intersection with Kula Highway (south) are expected to operate at LOS "B" or better during both peak periods. Similarly, all approaches of the intersection with Copp Road are expected to operate at LOS "A". At the intersection of Lower Kula Road with Alanui Place and the Kula Community Center Driveway, the eastbound approach of the intersection is expected to operate at a slightly lower LOS "B" during both peak periods while the other approaches of the intersection are expected to operate at levels-of-service similar to those

included in the TIAR.

An analysis of the changes in traffic volumes at the study intersections concluded that during the weekday morning peak hour, traffic volumes at all intersections are expected to remain the same.

The following recommendations have been advanced by the TIAR:

1. Maintain sufficient sight distance to motorists to safely enter and exit all project roadways.
2. Provide adequate onsite loading and off-loading service areas and prohibit offsite loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at all project roadways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
5. Provide exclusive left-turn and right-turn lanes on the westbound approach of Lower Kula Road at the northern intersection with Kula Highway to minimize the impact of left-turning vehicles on the higher volume of right-turning vehicles on that approach.

The applicant will ensure that all proposed roadway development and improvements are in accordance with the Hawai'i Revised Statutes, Maui County Code, and other applicable rules and regulations. (Figure 1 of the TIAR provides a regional roadway context for the proposed project.) This includes the Hawai'i Standard Specifications for Road and Bridge Construction dated 2005, the Standard Details for Public Works Construction, 1984, as amended, and the Manual on Uniform Traffic Control Devices for Streets and Highways, 2003.

The TIAR recommends mitigation measures and improvements to be implemented for the project. These are outlined above and on page 22 of the TIAR. Agreement on the mitigation measures and improvements to be implemented by the applicant will be determined with the DOT Highways Division. This would occur as part of the applicant's engineering design

process and the preparation of specific onsite and offsite roadway and intersection improvement plans. DOT approval will be required prior to finalizing plans and undertaking these roadway and intersection improvements.

The Department of Public Works and the DOT Highways Division will be given the opportunity to review and approve roadway construction plans to ensure that applicable regulations are satisfied.

The project presents an opportunity to promote non-automobile travel for recreational and household pursuits. Accommodations to support public bus transportation services may be provided in the area to facilitate an alternative travel mode. This effort will be coordinated with the County Department of Transportation.

A network of bicycle paths and walking trails within the neighborhood is anticipated to promote recreational activity and in line with the proposed concepts envisioned in the Upcountry Greenway Master Plan.

In this regard, as the project site is located within the Upcountry Greenway Master Plan Region, opportunities for a walking trail or path may be within an existing right-of-way or may be placed adjacent to the existing roadway on private lands. This type of section has the flexibility to accommodate pedestrians, bicyclists, and horseback riders. The applicant intends to incorporate recommendations from the Upcountry Greenway Master Plan and will work with the County's Department of Public Works to identify opportunities and constraints in implementing a recreational loop trail along the perimeter of the project area.

## 2. Water

### a. Existing Conditions

Water service to the Makawao-Pukalani-Kula Community Plan region is provided by the County Department of Water Supply (DWS). The Kula system consists of an upper and lower system, with the upper system located at the 4,000 foot elevation, and the lower system originating at the 3,000 foot

elevation. The Lower Kula System serves the Omaopio, Olinda, and lower Kula communities, while the Upper Kula System serves the remaining communities. The upper system collects water from Haipuaena, Puohakamoa, and Waiakamoi Streams, while the lower system diverts water from the Haipuaena, Puokakamoa, Waiakamoi, and Honomanu Streams.

The DWS operates a water treatment plant at Olinda with a capacity of 1.7 million gallons per day (MGD). Major storage reservoirs supporting the Upper Kula System include a 10 million gallon (MG) upper Waiakamoi dam/reservoir, a lower Waiakamoi concrete dam, two (2) 15 MG Waiakamoi concrete tanks, and a 3 MG Olinda steel tank. The recently constructed Kahakapao Reservoirs, consisting of two (2) 50 MG reservoirs in the vicinity of the Waiakamoi Reservoirs, also provide additional storage capacity for the upper system. During dry periods, the Kula system is supplemented by water pumped from the Makawao system.

Water storage for the area is currently provided by the Omaopio tank located approximately 1,200 feet to the northeast of the project site. It has a capacity of 2.1 million gallons at an elevation of 3,890 feet. An existing 8-inch waterline along Lower Kula Road in the vicinity of the project site conveys water from the Omaopio tank. There is an existing fire hydrant located near the Kula Community Center.

**b. Impact and Mitigation**

The proposed Ridge Project is estimated to require approximately 83,200 gallons of domestic water per day. See **Appendix "H"**. For this calculation, it is assumed that each 4-acre large lot will develop both a main residence and an accessory dwelling unit. The affordable and smaller market-priced lots will be limited to one (1) dwelling. The subdivision will meet DWS standards for fire flow demand of 1,000 gallons per minute for a two (2) hour duration and 500 gallons per minute for a two (2) hour duration for agriculture. Fire hydrants will be installed with a maximum spacing of 350 feet for residential areas and 500 feet in the agricultural areas.

Kula Ridge, LLC is pursuing the development of an offsite well at an elevation of 2,900 feet on the adjacent Mauka Subdivision parcel identified

as TMK (2) 2-3-001:023. The ground water well is anticipated to yield approximately 1,000,000 gallons of water per day. The owner of the Mauka Subdivision, Kula Ridge Mauka LLC, will enter into a partnership with Kula Ridge LLC for the development of this water source, to service both parcels. Water will be pumped from the well site to a new 500,000 gallon storage tank to be located near the mauka boundary of the Mauka Project at an elevation of approximately 3,600 feet. Refer to **Figure 14**.

The 500,000 gallon storage tank will have two (2) distribution lines to service the Ridge Project and the Mauka Subdivision. Distribution lines will be located along the north side of Keahuaiwi Gulch and along the south side of the gulch. Water from the tank will be transported across Keahuaiwi Gulch to the proposed Ridge Project by a new 8-inch transmission line. See **Figure 22**. The north side distribution line will have pressure break tanks to control the water service pressures, servicing the Mauka Project.

The applicant will undertake coordination with the DWS regarding standard requirements pertaining to this water source, and is planning to develop the well, the storage tanks, and the transmission lines according to County standards. In the event that the well produces a sufficient yield with good water quality, the applicant will discuss with the DWS, opportunities for dedicating this well to the County of Maui. The proposed water system is anticipated to improve storage and source in the service area.

In accordance with the rules of the DWS, calculations for domestic and fire protection use will be submitted to DWS in connection with the processing of the project's subdivision approval.

The applicant will also utilize the private water source for non-potable water needs. Water conservation plans will be pursued further during the design phase of project development.

Plumbing fixtures will be installed in accordance with Maui County Code Section 16.20a.680, which requires the utilization of low-flow fixtures and devices in an effort to conserve water. The applicant will advise owners to maintain fixtures and devices to minimize leakage.



**Photo No. 1: View of Gulch Facing East (Mauka)**



**Photo No. 3: View of Gulch Facing South**



**Photo No. 2: View of Gulch Facing West (Makai)**



**Photo No. 4: View of Gulch Facing North**

Source: Kula Ridge, LLC

**Figure 22**



Prepared for: Kula Ridge, LLC

**Proposed Kula Ridge Residential  
Workforce Housing Subdivision**  
Photographs of the Existing  
Conditions at Keahuaiwi Gulch

NOT TO SCALE





The Commission on Water Resources Management (CWRM) requested that the project be included in the County's Water Use and Development Plan. The applicant will coordinate with the DWS as applicable to address the CWRM request.

**3. Wastewater**

**a. Existing Conditions**

There are no public sewer facilities in this part of Maui. Wastewater in the Kula region is treated, processed and filtered through cesspools or septic tanks. The County of Maui does not serve the area.

**b. Impact and Mitigation**

The average wastewater flow rates for the project area were estimated using County of Maui standards. It is estimated that the wastewater contributions from the subdivision will be approximately 40,600 gallons per day. See **Appendix "H"**.

The applicant has been granted a variance from the State Department of Health to utilize Individual Wastewater Systems (IWS) on lots smaller than 10,000 square feet. The applicant is coordinating with Best Industries USA, Inc., to install and maintain IWS for the 112-lot residential and 4-lot rural subdivision. The approved aerobic Individual Wastewater Systems (IWS) as the means of wastewater treatment disposal for each lot meets the requirements of Hawai'i Administrative Rule (HAR), Title 11-62, Section 33.1. (b) (2). A single IWS will be provided per lot and will consist of an aerobic unit, chlorinators, and horizontal soil absorption system or surface disposal system. Refer to **Appendix "I"**.

Each IWS unit will be required have an operation and maintenance (O&M) program to ensure optimal performance. This O&M program will be written into each deed and will require that an annual report of its quality be sent to the Department of Health. The IWS in the Kula Ridge Subdivision will be maintained by Best Industries USA, Inc. The maintenance program will involve provisions for system operation, scheduled service inspections, and a basic maintenance visit completed at least once a year for each IWS. A

maintenance inspection notice will be provided for every homeowner. This notice will list recommendations and comments for maintaining the IWS.

#### 4. **Drainage**

##### a. **Existing Conditions**

Keahuaiwi Gulch is located on the north side of the subdivision site and extends east to west. Based on the United States Geological Survey Map and the Federal Emergency Management Agency, the estimated flow for a 50-year storm from the project site is 55.66 cubic feet per second (cfs) in a northeast to southwest direction toward adjacent properties. There are no existing drainage improvements located on the project site. A portion of the runoff sheetflows directly into Keahuaiwi Gulch. The runoff eventually discharges into the ocean. Refer to **Appendix "H"**.

##### b. **Impact and Mitigation**

It is estimated that the 50-year storm runoff will create a net increase of 108.93 cfs of sheetflow from the subdivision site resulting in a post development total of 164.59 cfs. There will be an onsite detention basin located on the northwestern corner of the subdivision. This basin will hold the runoff generated by the development of the proposed project. Runoff from throughout the subdivision will be channeled into the retention basin by grated catch basins located within grassed shoulder areas.

Overflows from the detention basin will be allowed to sheetflow into Keahuaiwi Gulch at a rate less than the existing condition. The detention basin will be sized to accommodate the increase in surface runoff volume from a 50-year, 1-hour storm generated from the proposed project. The detention basin will also be designed to retain up to 10 percent more than the minimum required by the Rules for the Design of Storm Drainage Facilities in the County of Maui.

The proposed drainage improvements will be designed to ensure that the natural pattern of the existing onsite surface runoff will not be adversely impacted by the proposed action. Drainage design criteria to minimize

alterations will be in accordance with the drainage standards for the County of Maui.

The applicant will ensure that runoff from driveways will be directed to nearby landscaped areas and detention basins to minimize drainage-related impacts resulting from project implementation. Also, native plants which require less water will be sought for the landscaped areas within the project.

Further, appropriate mitigation measures will be developed in consultation with the applicable governmental agencies during the design process. During Construction, the contractor will implement the following recommended Best Management Practices (BMPs) for erosion and sedimentation control.

- Construction of detention basins to capture sedimentation to minimize the quantity of sediment leaving the site
- Staging of construction
- Protecting of natural vegetation
- Stockpiling topsoil, and covering or stabilizing of the soil stockpiles
- Using wind erosion control
- Intercepting runoff above disturbed slopes
- Constructing of benches, terraces, or ditches at regular intervals to intercept runoff on long or man-made slopes
- Providing linings or other method to prevent erosion of storm channels
- Using seeding and fertilizing or other soil erosion control
- Providing vehicle wheel wash-down facilities
- Using stabilized construction entrances
- Using vegetated filter strips

In general, the project will have silt fences, dust fences, and stabilized construction entrance(s). No more than 15 acres will be graded and left

unstabilized at any given time. The contractor will be required to stabilize all graded areas as soon as practicable. The permanent detention basins will be constructed and stabilized prior to the commencement of any other grading on the property. Temporary cutoff ditches will be constructed to ensure that runoff from the property will be diverted into the detention basins. The cutoff ditches will be grassed and have a minimum slope to regulate the velocity of the runoff and allow silt and debris to settle. The detention basins will serve as the primary BMP for erosion and runoff. Runoff will be allowed to overtop the detention basins with its capacity is exceeded and sheet flows into Keahuaiwi Gulch. Prior to overflowing into the gulch, the runoff will be filtered through a gravel berm wrapped in a fine filter fabric.

The foregoing BMPs will be implemented at appropriate stages of construction to ensure optimal management of stormwater.

5. **Electrical, Telephone, and Cable Television Services**

a. **Existing Conditions**

Electrical and telephone services for the Kula region are provided by Maui Electric Company, Ltd. and Hawaiian Telcom, respectively. Developed properties within the vicinity of the project site are served by overhead electrical and telephone distribution systems along Lower Kula Road. Refer to **Appendix "H"**.

b. **Impact and Mitigation**

Electrical and telephone distribution systems in the subdivision will be installed underground from Lower Kula Road to reduce visual impacts. Early design coordination will be undertaken with utility companies to ensure that services can be provided in accordance with the project development schedule. Electrical services will be provided by Maui Electric Company, Ltd. (MECO). Coordination with Maui Electric Company will be done to ensure that the project will meet electrical requirements. The proposed project is not anticipated to adversely affect electrical or communication systems. Street lights will be installed along subdivision streets with the design to be determined by the project's electrical engineer, in coordination

with MECO and in conformance with applicable State and County standards. All lighting within the subdivision will be fully shielded.

It is noted that Maui Electric Company will require an electrical line extension, access, and electrical easements in order to provide service to the project.

In addition, energy conservation measures will be considered as part of the project design phase of development and further coordination with Maui Electric Company will occur at that time. As a result, the applicant will consider implementation of the following demand side management measures, where applicable, to conserve natural resources and to promote energy efficiency.

- Site buildings to take advantage of natural features and maximize their beneficial effects by providing for solar access, daylighting, and natural cooling.
- Design south, east, and west shading devices to minimize solar heat gain.
- Consolidate utility and infrastructure in common corridors to minimize site degradation and cost, improve efficiency, and reduce impermeable surfaces.

Telephone service will be provided by Hawaiian Telcom and cable television service by Time Warner Oceanic Cable.

### **III. CUMULATIVE AND SECONDARY IMPACTS**

### III. CUMULATIVE AND SECONDARY IMPACTS

Cumulative impacts are defined as the impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

In this instance, there are two Ridge Project elements which relate to the proposed development of the 272-acre Mauka Subdivision project. First, 11 of the workforce housing units proposed in the Ridge Project will be used to meet the RWFH requirements for the 21-lot Mauka Subdivision. Second, water service for the Ridge Project is being provided via offsite water system improvements located on the Mauka Subdivision project. These improvements include a new water source well, a 500,000 gallon storage tank and water distribution lines.

This chapter addresses impact considerations associated with the Mauka Subdivision project given its relationship to the Ridge Project.

#### A. PHYSICAL SETTING

##### 1. Surrounding Land Uses

Offsite water improvements will occur on the Mauka Subdivision project area. The improvements include the construction of a groundwater well at the 2,900 ft elevation, the installation of a water storage tank at the 3,600 ft. elevation and the installation of waterlines to service both the Mauka Subdivision and the Ridge Subdivision project areas. The proposed groundwater well will be located more than 1,000 ft. from the nearest private water septic system. The proposed groundwater well and water storage tank are not anticipated to have an adverse impact on surrounding uses. The development of these facilities is consistent with existing agricultural and rural uses in the area.

Underground water utility line installation will traverse the Keahuaiwi Gulch. No human activities involving recreation or marine activities occur where the waterline is anticipated to cross Keahuaiwi Gulch. The gulch, where the trenching and backfilling will occur, consists of rocks and boulders and is typically dry, except when it rains. Scrub vegetation, grasses and trees border the area. The waterline will

traverse across existing pastureland to service the proposed subdivision. Coordination with the Department of the Army and the State Commission on Water Resource Management will be undertaken to ensure that applicable permits are secured for the work within the gulch.

A portion of the property is County zoned “Interim” and designated “Single-Family” and “Rural” by the Makawao-Pukalani-Kula Community Plan. The Mauka Subdivision also includes the proposed creation of 21 agricultural lots ranging in size from 3 acres to 41 acres. The proposed agricultural subdivision is consistent with the property’s underlying State “Agricultural” district, Makawao-Pukalani-Kula “Agricultural” land use category, and County “Agricultural” zoning designation. The development of the proposed subdivision will be undertaken in accordance with applicable provisions of the County’s subdivision ordinance as well as other applicable State statutes and County ordinances and rules. The development of the proposed subdivision is not anticipated to be in conflict with surrounding land uses.

## **2. Topography and Soil Characteristics**

The lands underlying the site for the proposed Mauka Subdivision project and offsite water improvements contain soil consisting of Kula Cobbly Loam, 12 to 20 percent slopes (KxaD) and Rock Land (rRK). Refer to **Figure 18**. Kula Cobbly Loam is characterized as having moderately rapid permeability, medium runoff and moderate hazard of erosion. Soil type Rock Land is associated with Keahuaiwi Gulch. Rock Land is characterized as having exposed rock covering 25 to 90 percent of the surface, rock outcrops, and very shallow soils (Decision Analysts Hawai’i, Inc., December 2007).

Temporary environmental effects due to the construction of an offsite water system in the project area are anticipated to occur. A 2,900-foot groundwater well will be constructed on the Mauka Subdivision site. A storage tank will be provided at the 3,600 ft. elevation. A single trench will be excavated in the Keahuaiwi Gulch to facilitate the installation of the waterline that will cross the gulch and service the Ridge Project. Additionally, grading activities will be needed to construct roadway improvements for the 21-lot Mauka Subdivision.

In all instances where grading work will be required, whether it be for water system improvements or subdivision improvements, applicable permits and approvals will



be secured. In this connection Best Management Practices will be employed to ensure that impacts of site-related grading are minimized. Grading plans for the subdivision will be designed to minimize cut and fill quantities, and are not expected to result in post-grading topographic conditions which are significantly different than existing conditions.

Collectively, grading work on both the Mauka Subdivision and the Ridge Project is not anticipated to create adverse topographic conditions or involve soil conditions which are limiting to the provision housing development.

### **3. Agricultural Productivity Considerations**

An assessment of the agricultural feasibility and potential impacts on agriculture at Mauka Subdivision was prepared (Decision Analysts Hawai'i, Inc., December 2007).

The three classification systems commonly used to rate soils in Hawaii are: (a) Land Capability Grouping, (b) Agricultural Lands of Importance to the State of Hawaii, and (c) Overall Productivity Rating. The following identifies the ratings for the soils underlying the Mauka Project site:

#### **a. Land Capability Grouping**

Approximately 233 acres of the Mauka Subdivision site soils are rated IVe. Class IV soils have very severe limitations that reduce the choice of plants, or require very careful management, or both. The subclassification "E" indicates that the soils are subject to severe erosion if they are cultivated and not protected.

The remaining 40 acres of the site are rated VIIs. Class VII soils have very severe limitations that make them unsuitable for cultivation and restrict their use largely to pasture. The subclassification "S" indicates that the soils are rocky or stony.

b. **Agricultural Lands of Importance in the State of Hawaii (ALISH)**

About 233 acres of the Mauka Subdivision site have soils that are rated “Other”, while the remaining 40 acres are “Unclassified”. Refer to **Figure 19**. The unclassified soils are associated with Keahuaiwi Gulch.

c. **Overall Productivity Rating**

About 233 acres of the Mauka project site have soils that are rated “D”, while the remaining 40 acres are rated “E”. The E soils are associated with Keahuaiwi Gulch.

Historically, the Mauka Subdivision project site has been and continues to be used for grazing cattle and horses. The site is not and was never part of a sugarcane or pineapple plantation. The proposed subdivision of the property into 21 agricultural lots ranging in size from 3.0 acres to 41 acres will allow for continued agricultural use. For example, based on existing agricultural lots in the surrounding area and in other farm communities, it is anticipated that commercial or casual farming and ranching activities may be carried out at the Mauka Subdivision.

In this regard, the Mauka Subdivision and Ridge Project, when taken together, are not anticipated to adversely affect agricultural productivity parameters in the region.

4. **Flood and Tsunami Hazards**

As reflected in **Figure 20**, both the Mauka Subdivision and the Ridge Project are located in flood Zone “C”, an area of minimal flooding. Cumulative impacts resulting from the development these projects are not anticipated to pose a flood hazard. Post development drainage mitigation measures will be implemented to ensure that adjacent and downstream properties will not be adversely affected by the proposed projects. Because the region is located upland, there are no threats to the surrounding area from coastal wave action. The development of both projects is not anticipated to result in drainage or flooding conditions which are adverse from a cumulative standpoint.

5. **Flora and Fauna**

A Biological Resources Survey of the Mauka Subdivision lands was conducted by Robert W. Hobdy (Hobdy, October 2006). Vegetation on the project site and within Keahuaiwi Gulch includes small weeds and ferns. Eleven (11) native plant species were recorded on the property. All of these native species are widespread and common throughout Hawaii. In addition, there were no known rare or endangered species of fauna or avifauna identified in the vicinity of the proposed offsite water improvements. Accordingly, the proposed development is anticipated to have no significant negative impact on those elements of the natural environment. Collectively, the development of both the Mauka Subdivision and the Ridge Project is not anticipated to create an adverse effect on flora or fauna resources.

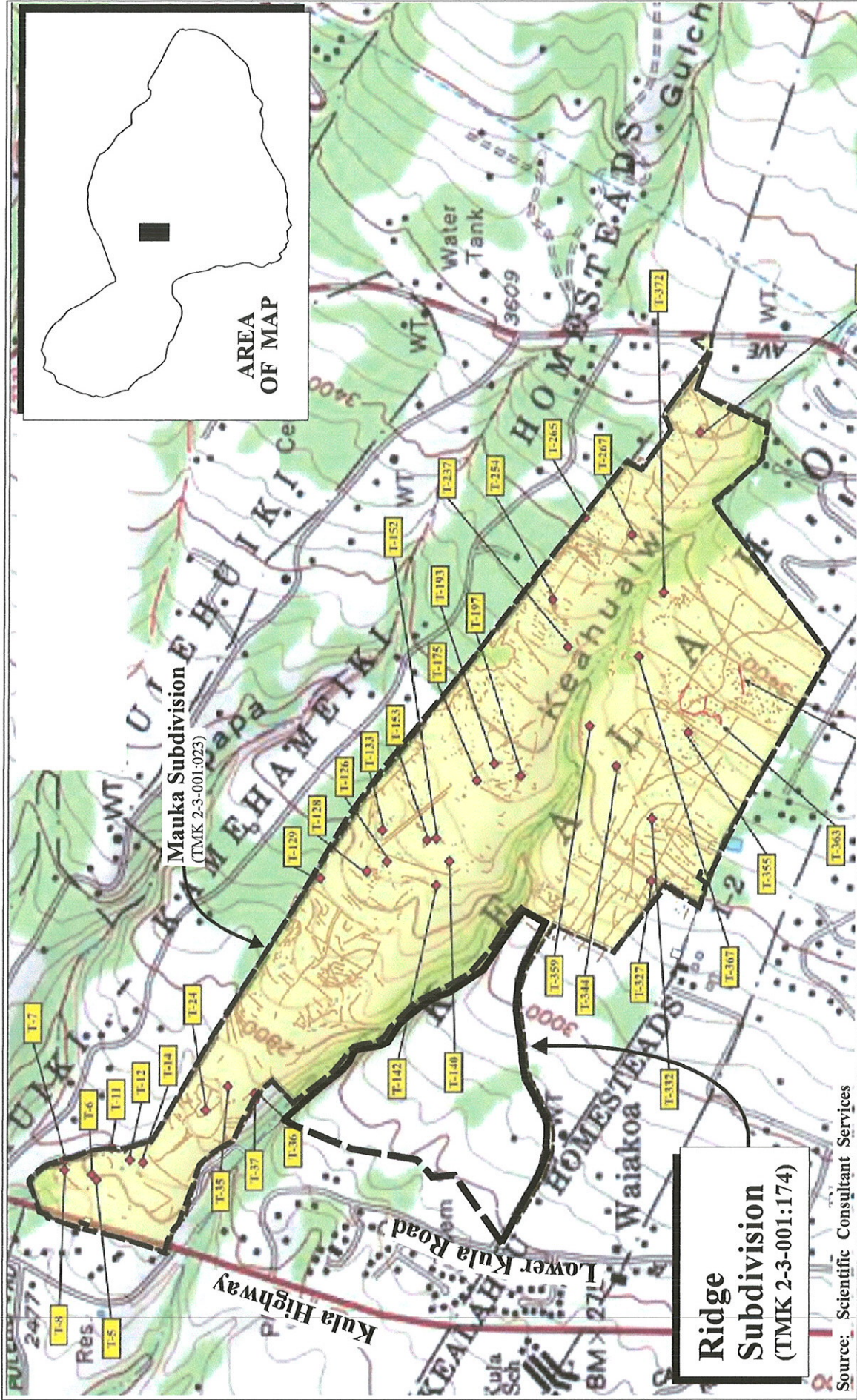
6. **Archaeological Resources**

An Archaeological Inventory Survey was conducted on the Mauka Subdivision project site covering approximately 272 acres (Dega, May 2007). The survey identified 39 sites and agricultural features to be significant for information content under Criterion D. See **Figure 23**. A petroglyph site was identified and is significant under Criterion D and E. The proposed water storage tank and transmission lines will be designed to avoid the identified sites and agricultural features. Data Recovery or Preservation has been recommended for several sites on the Mauka Subdivision project area.

In the event that archaeological resources are encountered during earth altering activities, work will be halted in the area of the find and appropriate protocols will be followed in coordination with the State Historic Preservation Division and the Maui/Lanai Islands Burial Council. Archaeological features will be treated in accordance with current State preservation law and administrative rules for the treatment of inadvertent discoveries, including required coordination with the Maui/Lanai Islands Burial Council.

7. **Cultural Impact Assessment**

Based on the findings and recommendations of the archaeological reports prepared for the Ridge Project and the Mauka Subdivision, and accounts presented by interviewees of the Ridge Project, the proposed developments in the region are not



Source: Scientific Consultant Services

Figure 23



Proposed Kula Ridge Residential  
 Workforce Housing Subdivision  
 Archaeological Site Locations and  
 Agricultural Features at Kula Ridge Mauka

NOT TO SCALE

Prepared for: Kula Ridge, LLC

anticipated to have an adverse effect on cultural practices.

**8. Air and Noise Quality**

The construction phase of the Mauka Subdivision project will generate noise generated from construction equipment, similar to the Ridge Project. The construction duration for the Mauka Subdivision project is estimated to be 12 to 18 months. Construction activities will be limited to daylight hours and Best Management Practices will be implemented to ensure compliance with applicable noise standards set forth by the Department of Health. After construction, noise generated from the Mauka Subdivision will be limited to local traffic and agricultural-related activities. These sources however, are not anticipated to create adverse noise conditions given the surrounding land use context.

Air quality will also be temporarily affected during subdivision construction activities and water system improvements installation. Best Management Practices will be used during construction to minimize fugitive dust emissions associated with construction. Post-construction air quality is not expected to differ from existing conditions. Farming activities may result in the generation of dust on a temporary basis. However, the effects of small-scale farming on air quality is not anticipated to be adverse.

Collectively, the Mauka Subdivision and the Ridge Project are not anticipated to create adverse noise and air quality conditions.

**9. Scenic and Open Space Resources**

The Mauka Subdivision will continue the agricultural land use context on the property's 272 acres. The development of the subdivision will enable construction of farm dwelling and related structures. However, such structures will be required to comply with zoning performance standards relating to height, setbacks and lot coverage, as set forth by Chapter 19.30A of the Maui County Code. Open space, park areas and large residential lots at the mauka portion of the Ridge Project will be provided to create a greenbelt and maintain the rural characteristic of the region. The Ridge Project will result in a change in the man-made landscape with the development of 116 house lots. This change however, is not considered out of context when considering the architectural character of the proposed house designs

and the need for workforce housing.

## **B. SOCIO-ECONOMIC ENVIRONMENT**

### **1. Community Character**

The Mauka Subdivision and the Ridge Project are located in the Waiakoa region of Kula. The region's rural qualities are characterized by agricultural pursuits, outdoor recreational opportunities, and open space and natural resources. The areas within Waiakoa contain agricultural uses and low-density rural residential uses.

Overall, the Kula region has grown steadily over the past few years with the development of the Kulamalu Town Center located approximately 1.0 mile northeast of the project site and the Department of Hawaiian Homelands Waiohului Homestead Community located south of the project site. The project area is also located in close proximity to urban and rural uses, such as the Kula Community Center, Holy Ghost Catholic Church, several small business establishments, and schools which include Kula Elementary School and Haleakala Waldorf School. Residential workforce housing would be provided in close proximity to these neighborhood services.

Both projects are proposed to be built with the intention of maintaining the character of the region while meeting the need for additional housing in the community.

### **2. Population and Housing**

Resident population in the Makawao-Pukalani-Kula region is projected to increase to 26,644 by the year 2010 and 30,880 by the year 2030 (County of Maui Planning Department, June 2006). A significant increase in housing supply will be needed to accommodate the region's anticipated growth. The project will provide residential workforce housing opportunities in both the near and long term, which in turn is anticipated to result in a more balanced housing market. The proposed projects respond to the demand of a growing need for homes in the region.

### **3. Economy**

The natural and agricultural settings in the region provide opportunities to maintain and enhance the region's economic base. The Waiakoa region includes opportunities

that can contribute to the economic well-being of the County of Maui. It is anticipated that commercial or casual farming and ranching activities will be carried out at the Mauka Subdivision, thereby providing opportunities for agricultural diversification.

Development of both the Ridge Project and Mauka Subdivision are expected to involve construction over a period of approximately 12 to 18 months and support construction related employment. In the long term, real property taxes generated by the project will contribute to the County's revenue base to support any increase in regional public service demands over time.

## **C. PUBLIC SERVICES**

### **1. Police, Fire, and Medical Services**

The combined developments in the region will not extend the existing service area limits for police services, fire protection operations, or medical services.

### **2. Education and Recreational Facilities**

The combined development of both projects includes 116 improved residential lots, the construction of single-family residences and 21 agricultural lots. Cumulative impacts of both developments are anticipated to result in a slight increase in student population. This impact is anticipated to be mitigated by educational impact fees as determined by the DOE.

The development of both projects will also result in increased land for park areas and improvements to existing recreational facilities in the vicinity. The Mauka Subdivision project will address the County's parks and playground requirements through the payment of fees. It is noted that Kula Ridge Mauka LLC, the owner of the Mauka Subdivision property also owns the lands underlying the Kula Community Center. An alternative means of addressing the parks and playground requirements for the Mauka Subdivision therefore, includes the dedication of lands underlying the Kula Community Center. Kula Ridge Mauka LLC will coordinate with the Department of Parks and Recreation to address the County's parks and playground requirements.

As previously noted, the Ridge Project will meet the parks and playground assessment requirements through the provision of a three (3)-acre park site adjacent to the Kula Community Center.

Collectively, both projects will meet their respective obligations for parks and playgrounds.

### **3. Solid Waste Disposal**

A solid waste management plan will be developed for the disposal or recycle of materials resulting from construction and site activities. Solid waste generated during the construction of both projects are anticipated to be recycled or disposed in an approved construction landfill site.

The Public Facilities Assessment Update County of Maui prepared by R.M. Towill Corporation (R.M. Towill Corporation 2002) indicates that the Central Maui Landfill will have adequate capacity to accommodate residential and commercial waste through the year 2025. The study took into account future growth of residential and non-residential uses on Maui. In addition, lands adjacent to the existing landfill are currently utilized for rock quarrying and will likely be available for County expansion of the landfill, further increasing available capacity.

## **D. INFRASTRUCTURE**

### **1. Roadways**

A traffic study that was prepared for the Makua Project shows traffic patterns within the Waiakoa region along Kula Highway and Lower Kula Road and the potential impacts of the proposed Ridge Project and the Kula Senior Housing project (Wilson Okamoto, December 2006).

Each potential development was analyzed separately and then integrated into the study area to account for trips generated by all proposed developments in the region. Total traffic volumes entering the traffic study's subject intersections along Kula Highway are expected to increase by approximately 2 to 3 percent during both peak periods with the proposed developments. These increases in the total traffic volumes are in the range of daily volume fluctuations along the highway and represent a



minimal increase in the overall traffic volumes.

The TIAR indicated that cumulative traffic volumes and operating conditions with the proposed projects are generally expected to remain similar to existing conditions in the Waiakoa area.

**2. Water**

Kula Ridge Mauka LLC, in partnership with Kula Ridge LLC is proposing to drill a ground water well at the 2,900 ft. elevation of the Mauka Subdivision site. The groundwater well is anticipated yield approximately 1 million gallons per day (mgd) and serve both the Ridge and Mauka projects. Development of the groundwater well involves the construction of a 500,000 gallon tank at the 3,600 ft. elevation and distribution lines to service both projects.

The project's water system may provide opportunities for water service beyond the project's limits. Should opportunities for joint development of water storage and conveyance systems become available, the project's water system has been formulated with the notion that integration with adjoining properties' water systems can be accomplished.

**3. Wastewater**

The Ridge Project has secured a wastewater variance for the installation of individual wastewater systems for each of the 116 residential lots. Each agricultural lot in the Mauka Subdivision will also have individual wastewater systems. Collectively, the two projects will not place additional burdens on the County for wastewater resources.

**4. Drainage**

The development of both the Ridge Project and the Mauka Subdivision are not expected to have significant adverse effects on downstream properties or coastal marine waters. Post development runoff from both the Ridge Project and the Mauka Subdivision is estimated to be 711.4 cfs, an increase of 211.3 cfs over existing conditions. All additional runoff due to the development of the subdivisions will be retained onsite. Overflows from the detention basins at both the Ridge Project and

the Mauka Subdivision will be allowed to sheetflow into Keahuaiwi Gulch at a rate less than the existing conditions. (Otomo Engineering, Inc., February 2008.)

**5. Electrical, Telephone and Cable Television Services**

Electrical, Telephone, and Cable Television Services for the Mauka Subdivision will be provided by Maui Electric, Hawaiian Telcom, and Oceanic Cable respectively. All utility lines servicing the projects will be installed underground. On a cumulative basis, the projects are not anticipated to adversely affect electrical or communication systems.

**E. OTHER PLANNING CONSIDERATIONS**

It is noted that the County of Maui's ongoing General Plan update process will involve the formulation of a Maui Island Plan which would delineate urban and rural growth boundaries. Other landowners in the vicinity may seek to have portions of their respective land holdings placed on the Maui Island Plan for purposes of defining future development potential in the Kula region. Should lands other than the proposed Ridge Project be identified as potential future areas for urban and/or rural growth, planning for such areas would need to consider land planning integration opportunities. Upon completion of the General Plan update, the respective community plans, including the Makawao-Pukalani-Kula Community Plan, will be updated. The timeframe for the overall completion of the updating of the community plans has not yet been established. However, the overall timeframe for the General Plan covers a planning horizon up to the year 2030.

**F. SECONDARY IMPACTS**

A secondary impact associated with the Ridge Project and the Mauka Subdivision relates to the development of the new water source on the Mauka Subdivision property. As previously noted, the well yield is estimated to be 1.0 mgd while the daily average consumption demands for the Ridge Project and the Mauka Subdivision are 83,200 mgd and 300,000 mgd, respectively. These estimates indicate an excess availability of water of approximately 616,800 mgd which may be used by others seeking to build homes or use their properties for a higher use. Alternatively, the source may be dedicated to the County of Maui, DWS should they determine that source acquisition holds public value and benefit. In both instances, the availability of water will allow for additional growth, which up to this point in time has been constrained due to the lack of water.