12

F

t a

E

. .

"

] :

11

1 3

11

11

1 6

1 1

j 1

] 1

1:1

1.6

न ः नेऋ

RECEIVED

Final Environmental Assessment

PROPOSED KAUNAKAKAI FIRE STATION

Prepared for:

December 2006

County of Maui, Department of Fire and Public Safety

MUNEKIYO & HIRAGA, INC.

Final Environmental Assessment PROPOSED KAUNAKAKAI FIRE STATION

Prepared for:

County of Maui, Department of Fire and Public Safety December 2006



CONTENTS

Pret	face				- 1		
Exe	cutive	Summa	ıry		ii		
l.	PRC	PROJECT OVERVIEW					
	Α.)JECT NERSH	·	1		
	В.	PRO	POSE	D ACTION	1		
	C.	PRO	JECT	NEED	10		
	D.	PRO	JECT	FUNDING AND SCHEDULING	11		
II.	DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES						
·	Α.	PHYSICAL SETTING 1					
		1.	Surro	ounding Land Uses	12		
			a.	Existing Conditions	12		
			b.	Potential Impacts and Mitigation Measures	12		
		2. Climate, Topography and Soils					
			a.	Existing Conditions	13		
			b.	Potential Impacts and Mitigation Measures	17		
		3. Flood and Tsunami Conditions					
			a.	Existing Conditions	20		
		•	b.	Potential Impacts and Mitigation Measures	20		

	4.	Flora and Fauna		20
		a	Existing Conditions	20
		b.	Potential Impacts and Mitigation Measures	22
	5.	Histo	orical and Archaeological Resources	22
		a.	Existing Conditions	22
		b.	Potential Impacts and Mitigation Measures	23
	6.	. Cultural Assessment		23
		a	Existing Conditions	23
		b.	Potential Impacts and Mitigation Measures	35
	7.	Air a	and Noise Quality	36
		a.	Existing Conditions	36
		b	Potential Impacts and Mitigation Measures	36
	8	Scei	nic and Open Space Resources	38
		a.	Existing Conditions	38
		b.	Potential Impacts and Mitigation Measures	38
В.	SOC	OIO-EC	ONOMIC ENVIRONMENT	40
	1.	Exis	ting Conditions	40
		a.	Population and Economy	40
		b.	Potential Impacts and Mitigation Measures	41
C.	PUE	BLIC S	ERVICES	41
	1.	Police and Fire Protection		
		a.	Existing Conditions	41

		b.	Potential Impacts and Mitigation Measures	42
	2.	Medica	al Facilities	42
		a.	Existing Conditions	42
		b.	Potential Impacts and Mitigation Measures	42
	3.	Solid Waste		
		a	Existing Conditions	42
		b.	Potential Impacts and Mitigation Measures	43
	4.	Recrea	ational Resources	43
		a.	Existing Conditions	43
		b.	Potential Impacts and Mitigation Measures	43
	5.	Educational Facilities		
		a.	Existing Conditions	43
		b.	Potential Impacts and Mitigation Measures	44
D.	INF	NFRASTRUCTURE		
	1.	Roadv	vays	45
		a.	Existing Conditions	45
		b.	Potential Impacts and Mitigation Measures	46
	2.	Water	System	46
		a.	Existing Conditions	46
		b.	Potential Impacts and Mitigation Measures	47
	3.	Waste	water System	48
		<u> </u>	Existing Conditions	48

			b.	Potential Impacts and Mitigation Measures	48	
		4.	Drain	age	49	
			a.	Existing Conditions	49	
			b.	Potential Impacts and Mitigation Measures	49	
		5.	Utiliti	es	49	
	_		a.	Existing Conditions	49	
			b.	Potential Impacts and Mitigation Measures	50	
III.	RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS					
	Α.	STA	TE LA	ND USE DISTRICTS	52	
	B. LAND USE COMMISSION RULES, CHAPTER 15-15, HAWAII ADMINISTRATIVE RULES					
	C.	CHAPTER 226, HRS, HAWAII STATE PLAN				
	Objectives and Policies of the Hawaii State Plan					
		2.	Prior	rity Guidelines of the Hawaii State Plan	59	
	F.	ZON	NING		64	
	G.		ASTAL LICIES	ZONE MANAGEMENT OBJECTIVES AND	64	
		1.	Rec	reational Resources	65	
		2.	Hist	oric Resources	66	
		3.	Sce	nic and Open Space Resources	67	
	-	4.	Coa	stal Ecosystems	68	
		5.	Eco	nomic Uses	68	
		6.	Coa	estal Hazards	69	

		7. Managing Deve	lopment	70		
	_	8. Public Participa	tion	71		
		9. Beach Protection	on	71		
		10. Marine Resource	ces	72		
IV.		MARY OF UNAVOIDAB RESOURCES	LE IMPACT ON THE ENVIRONMENT	73		
V.	ALT	RNATIVES TO THE P	ROPOSED ACTION	74		
	A.	NO ACTION ALTERN	ATIVE	74		
	В.	DEFERRED ACTION	ALTERNATIVE	74		
	C.	ALTERNATIVE DESIG		74		
VI.	FIND	NGS AND CONCLUSI	ONS	75		
VII.	LIST	OF PERMITS AND AP	PROVALS	79		
VIII.	AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS 80					
IX.	LETTER RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS 150					
REFE	ERENC	ES		i		
LIST	OF A	PENDICES				
	A B-1 B-2 C D E	Preliminary Project Planchaeological Assess Letter from State Histor 2006 Site Section and View Preliminary Engineerin Preliminary Drainage	sment Report oric Preservation Division, Dated Augus Renderings og Report	st 11,		

.

÷ .

LIST OF FIGURES

1	Regional Location Map 2
2	Site Location Map 3
3	Site Plan
4	Exterior Elevations (1)
5	Exterior Elevations (2)
6	Landscape Planting Plan 9
7	Soil Association Map
8	Soil Classification Map
9	Agricultural Lands of Importance to the State of Hawaii 18
10	Grading Plan
11	Flood Insurance Rate Map
12	Site Photos
13	State Land Use Classifications
14	Community Plan Land Use Designations 63
com\firekkai\finalea.mt	, 1 2 2 2 2 2 3 3 1 2 1 2 1 2 2 2 3 3 1 2 1 2

5

Preface

The County of Maui, Department of Fire and Public Safety proposes the construction of a new fire station at Kaunakakai, Molokai, on lands identified as Tax Map Key (2) 5-3-03:15 (por.). This new facility will replace the existing fire station, which is unable to meet the needs of the Kaunakakai community. As the action requires a Community Plan Amendment, as well as County funds, an Environmental Assessment (EA) is required pursuant to Chapter 343, Hawaii Revised Statutes and Chapter 200 of Title 11, Hawaii Administrative Rules, Environmental Impact Statement Rules. The following EA documents the project's technical characteristics and environmental impacts, and advances findings and conclusions relative to the project.

Executive Summary

Project Name:

Proposed Kaunakakai Fire Station

Type of Document:

Draft Environmental Assessment

Legal Authority:

Chapter 343, Hawaii Revised Statutes

Agency Determination:

Anticipated Finding of No Significant Impact

Applicable Environmental

Assessment Review "trigger":

Use of County Funds and Amendment to

4 1

County General Plan

Location:

Island of Molokai Kaunakakai, Molokai TMK (2)5-3-03:15 (por.)

Proposing Agency:

County of Maui

Department of Fire and Public Safety

200 Dairy Road

Kahului, Hawaii 96732 Contact: Greg Jenkins Phone No.: (808) 336-0996

Approving Agency:

Molokai Planning Commission

250 South High Street Wailuku, Hawaii 96793 Contact: Nancy McPherson Phone No.: (808) 270-1768

Consultant:

Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793 Contact: Michael T. Munekiyo Phone No.: (808) 244-2015

Project Summary:

The County of Maui, Department of Fire and Public Safety (DFPS), proposes to construct a new fire station at Kaunakakai, Molokai. The subject property is an approximately 5-acre parcel along Alanui Ka 'Imi 'Ike, near its intersection with Kakalahale Street. This new

fire station will replace the existing fire station, which is unable to meet the growing requirements of the Kaunakakai community. The existing fire station is also subject to flooding during heavy rainfall, which detracts from the functional efficiency objectives of the station. The new fire station will incorporate state-of-the-art functional and technological elements to ensure that services delivered meet the life safety mandate of the DFPS. The new facility includes an approximately 18,779 square feet main building, parking areas, fueling tanks, and a helipad for emergency flights. Two (2) access driveways are proposed from Alanui Ka 'lmi 'lke. The proposed project will require land use changes for implementation which will be initiated by the County of Maui.

Chapter I

Project Overview

I. PROJECT OVERVIEW

A. PROJECT LOCATION, EXISTING USE AND OWNERSHIP

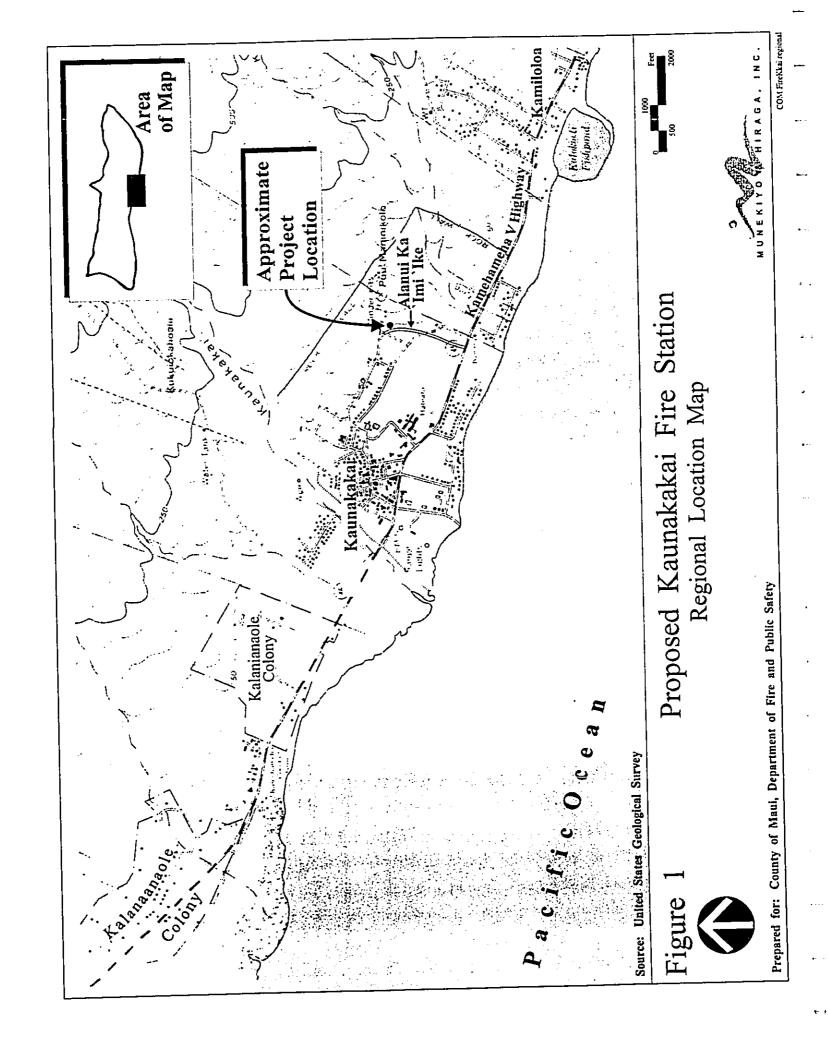
The County of Maui, Department of Fire and Public Safety (DFPS) proposes the construction of a new fire station in Kaunakakai, Molokai to better achieve its mission: to provide emergency protection and related services. The new station will occupy an approximately five-acre parcel, located a Alanui Ka 'Imi 'Ike, near its intersection with Kakalahale Street, on lands identified as a portion of Tax Map Key (2) 5-3-03:15. See Figure 1 and Figure 2.

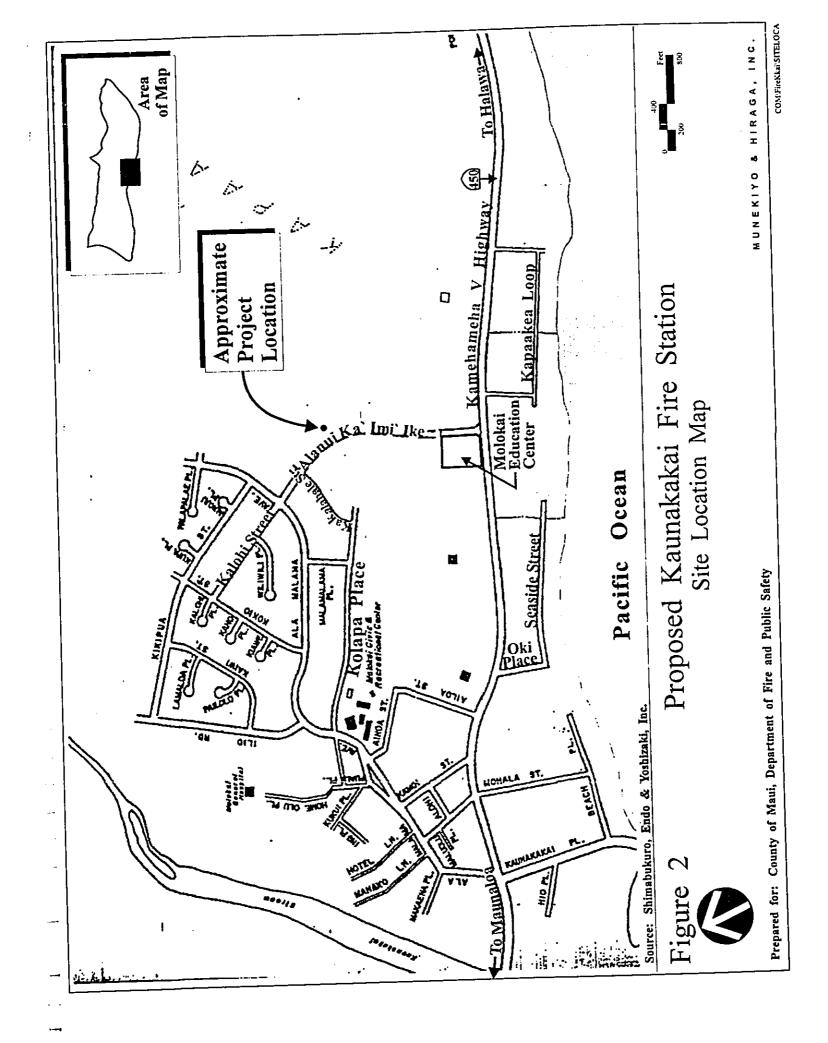
Northwest of the subject property are single-family residential uses, while land to the immediate southeast is characterized by agricultural uses. The Molokai Educational Center is located further south, at the intersection of Alanui Ka 'Imi 'Ike and Kamehameha V Highway. The Duke Maliu Regional Park is located further west of the project area. Downtown Kaunakakai, the location of the existing fire station, is located approximately one-half mile west of the project site.

The subject property is owned by Molokai Ranch, Ltd. The site will be subdivided and conveyed to the County of Maui.

B. PROPOSED ACTION

The proposed project calls for the construction of a new state-of-the-art fire station located at the eastern edge of Kaunakakai. Approximately 5.0 acres of land will be subdivided and conveyed to the County of Maui for the new station. The new facility will consist of warm earth toned colors and textures, include an approximate 18,779 square foot main building, 40 parking stalls, a diesel pump station, and a helipad for emergency evacuations. Two (2) access driveways will be provided from Alanui Ka 'Imi 'Ike, one (1) at the northern extent and the other at the southern extent. See Figure 3 for the proposed site plan and Figure 4 and Figure 5 for building elevations. Detailed plans for the proposed fire station are





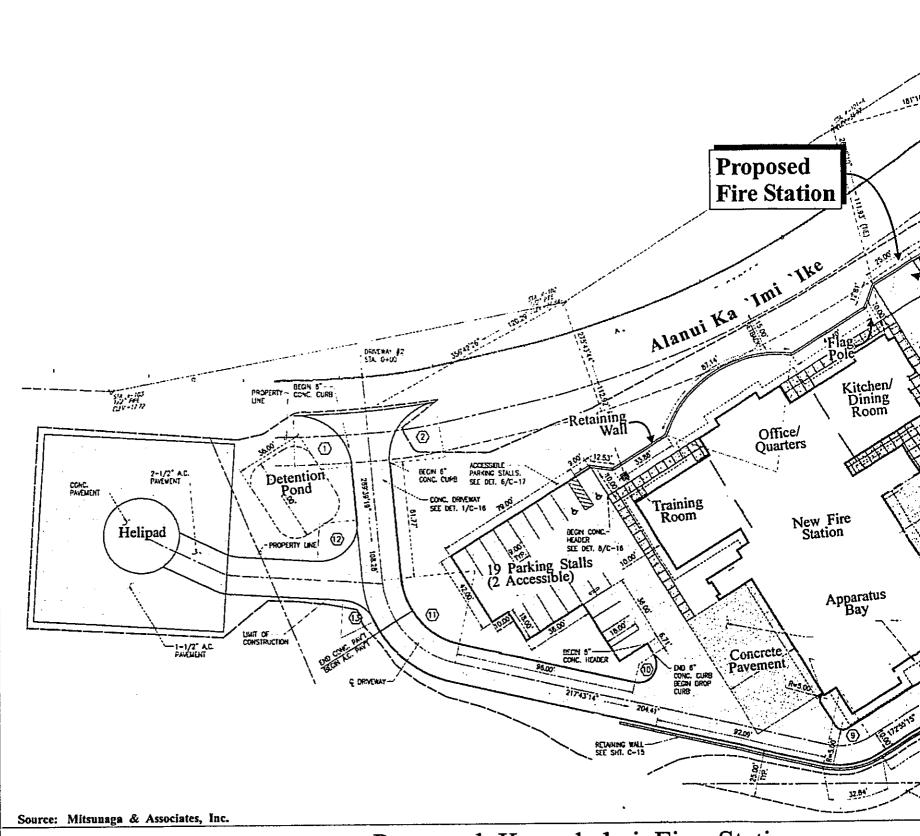
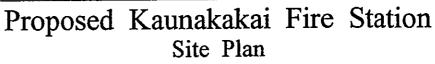
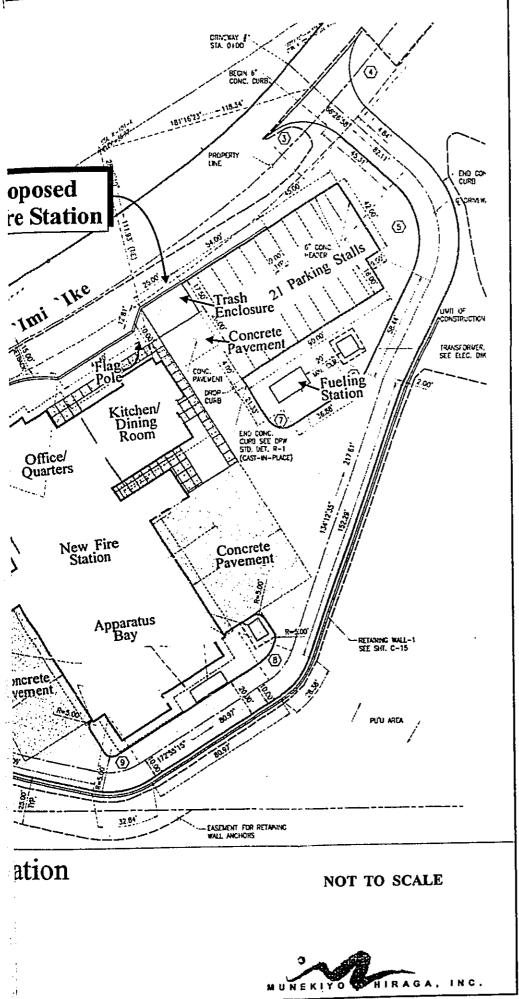


Figure 3

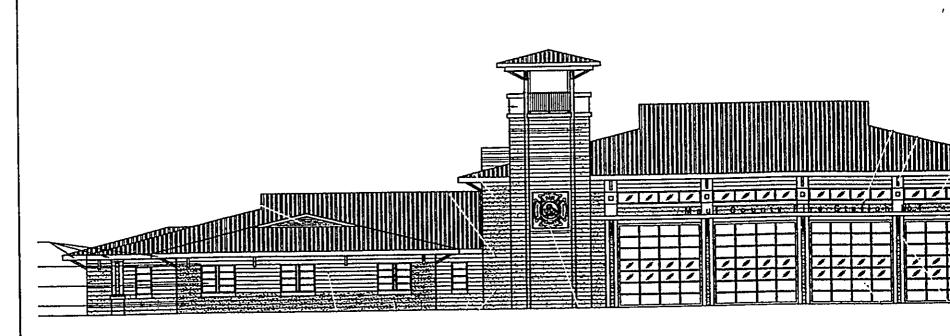




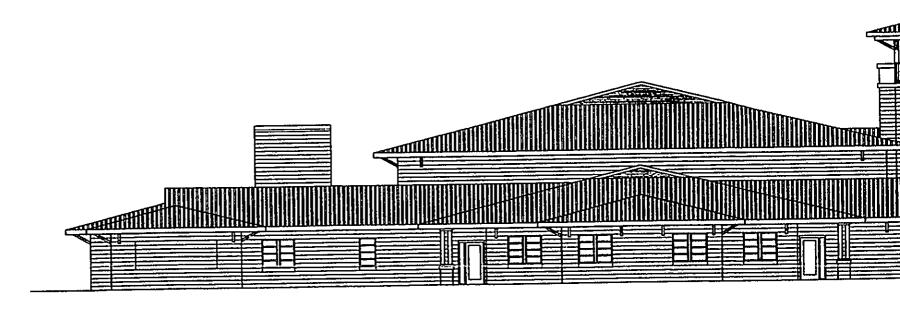
Prepared for: County of Maui, Department of Fire and Public Safety



CORNELINATION Cirables



South Elevation



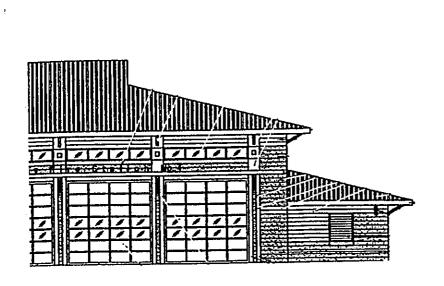
West Elevation

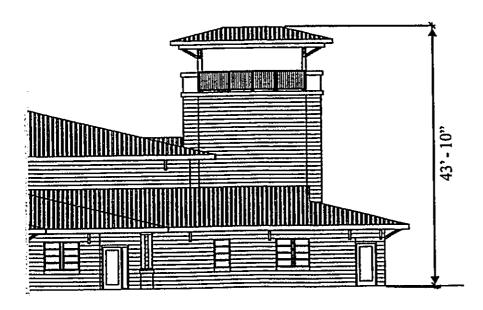
Source: Mitsunaga & Associates, Inc.

Figure 4

Proposed Kaunakakai Fire Station Exterior Elevations (1)

Prepared for: County of Mani, Department of Fire and Public Safety

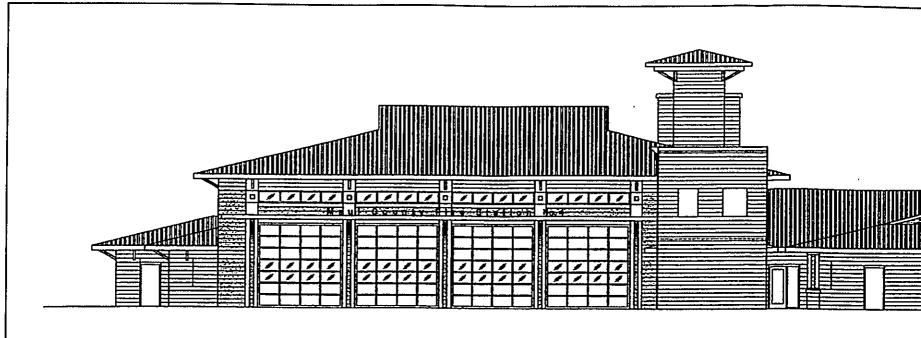




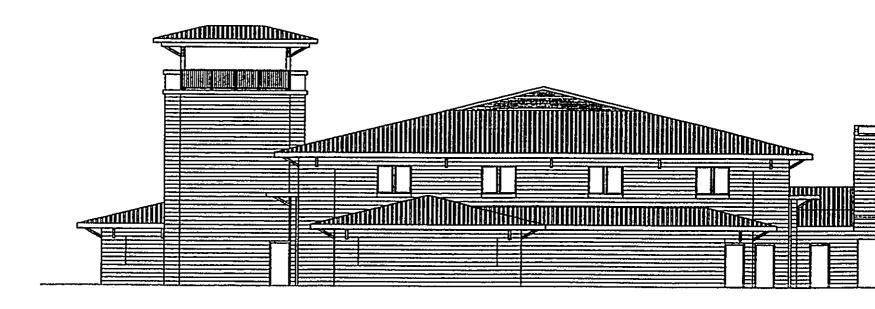
tion

NOT TO SCALE





North Elevation



East Elevation

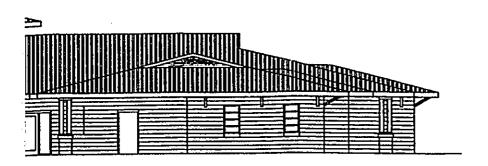
Source: Mitsunaga & Associates, Inc.

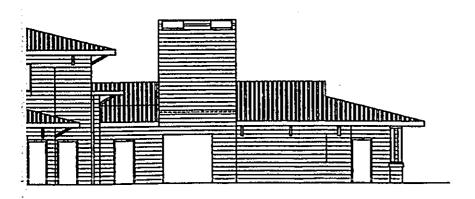
Figure 5

1.4

Proposed Kaunakakai Fire Station Exterior Elevations (2)

Prepared for: County of Maui, Department of Fire and Public Safety





ion

NOT TO SCALE



presented in Appendix "A".

The station is modular in design so that the structure can accommodate a larger fire-fighting force, should such expansion be required. Bays within the station can also be used to house educational resources. Currently, DFPS educational programs must utilize classroom space in other locations as authorized by cooperating authorities, such as the nearby Molokai Educational Center.

The new station will be designed to comply with Americans With Disabilities Accessibility Guidelines (ADAG) and provide adequate parking for staff and visitors.

There will be a six-vehicle bay, which will allow for the rapid deployment of emergency vehicles. Currently, should there be any servicing of vehicles, the fire station has limited deployment capacity. The new tower will allow the firefighters to run their hose-training exercises up four (4) stories, as required, in addition to allowing rappelling exercises, which are currently performed off bridges over the highways.

The new station will have a decontamination/utility room for the cleansing and sanitization of medical equipment and personal protective equipment (including but not limited to blood splatter as required by OSHA).

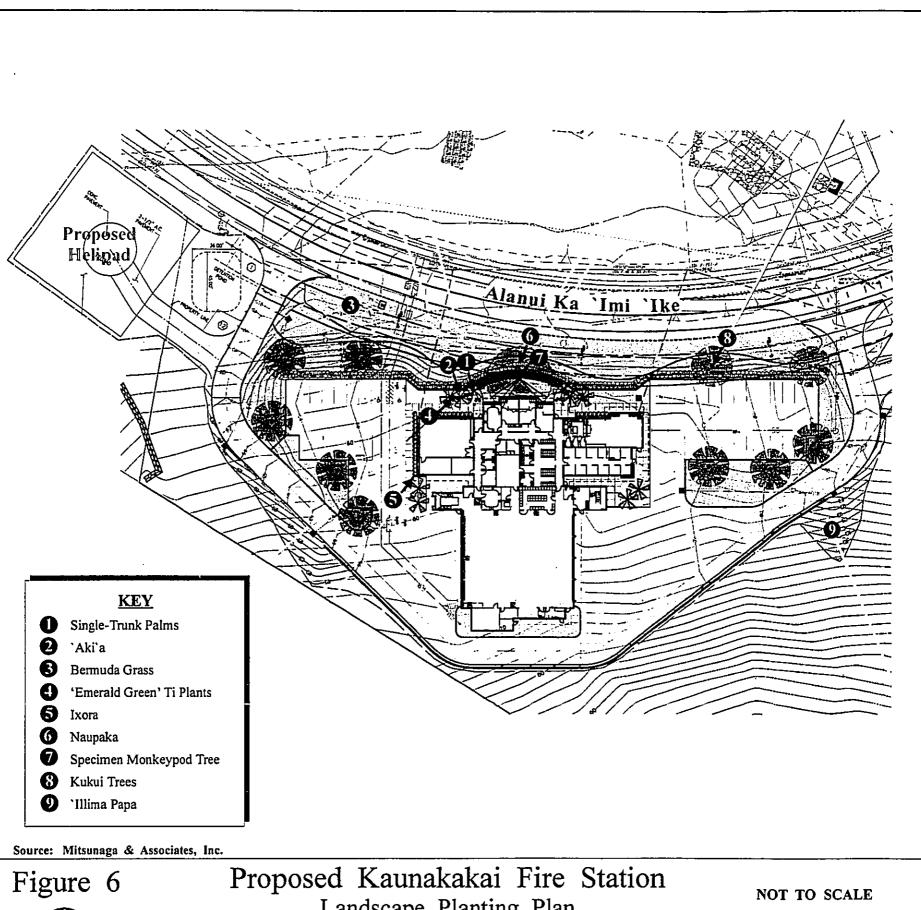
Two 500 to 750 gallon diesel tanks and one (1) gasoline tank will be installed above ground onsite to fuel engines and other emergency equipment and the emergency generator. Once permitted, tank operation, maintenance and installation will be in accordance with Maui County Fire Code requirements. Because the tanks will be above ground, any leak will be visible. Island Petroleum will be responsible for tank refill. There

should be no adverse impact to existing conditions as a result of the tank installation.

There will be a new helipad mauka of the new station. The helipad will be used for civil defense emergency operations, fire training, rescue and firefighting operations. Emergency helicopter use will not impact State conservation lands, shoreline areas, or historic sites listed in the National Register or Hawaii Register.

With regard to landscaping, the planting design will help to visually integrate the fire station with the surrounding community. Molokai's native loulu lelo (pritchardia hillebrandii) will frame the building's entrance. To blend the planting with existing foliage, sloped areas will be covered with native ilima papa (sida fallax) and pa'u-o-hi'iaka (jacquemontia ovalifolia). See Figure 6. Ten (10) kukui trees will shade the paved parking lot, five (5) will be located to the north and five (5) to the south of the station. Hedges will serve to screen cars from the parking lot and provide a foundation planting for the building. There will be a specimen monkeypod tree located behind the station's office/quarter area to shade the building. Naupaka will line the retaining wall and parking lot to the rear of the fire station. Emerald green ti leaves will also line the retaining wall to the rear of the station. Ixora will surround the training room.

In order to implement the project, land use entitlements will be required. The County of Maui will be initiating changes to the State Land Use and County Zoning designations so as to permit the new fire station. The subject property is currently designated "Agricultural" by the State Land Use Commission. Accordingly, a reclassification to the "Urban" designation is required. Similarly, a change in County zoning from the "Interim" district to the "Public/Quasi-Public" zoning district is required.



Landscape Planting Plan



Prepared for: County of Maui, Department of Fire and Public Safety

MUNEKIYO & HIRAGA, INC.

COM/FireKkai/PlantingPlan

The Molokai Community Plan designates the subject property for "Public/Quasi-Public" and "Open Space" use. To enable the implementation of the new fire station, the portion of the site designated for "Open Space" use will need to be amended to enable "Public/Quasi-Public" land use. Further discussion regarding the Community Plan amendment is provided in Chapter III, Section C of this report.

Given that the proposed project will be funded by the County and the fact that an amendment to the Molokai Community Plan and hence the General Plan (to be initiated by the County of Maui) is required, this Environmental Assessment has been prepared in accordance with the provisions of Chapter 343, Hawaii Revised Statutes.

The training tower exceeds the height restrictions imposed by Chapter 19.31 of the Maui County Code, relating to "Public/Quasi-Public" uses. The maximum allowable height in the "Public/Quasi-Public" zoning district is 35 feet, while the tower height is estimated at 43 feet 10 inches. Refer to Figure 4. A height variance will be sought for the tower, which is subject to review and action by the Board of Variances and Appeals.

C. PROJECT NEED

The existing fire station in Kaunakakai was constructed in 1978. Since then, a number of issues with this facility has arisen, which seriously undermine the ability of the Kaunakakai Fire Station to fulfill its goals. Most notable amongst the problems is the fact that the existing fire station is located in an area subject to flooding during heavy rainfall. The dormitory areas, restrooms, and vehicle bay may flood, which poses a safety concern and impedes the functioning of the fire station. The vehicle bay is also inadequate; if any emergency vehicles are being

serviced, the remaining vehicles have limited access way for deployment in an emergency situation. Emergency vehicles are also forced to use a school access road which poses a safety concern for school children. Finally, the existing station does not comply with ADAG and has inadequate parking for staff and visitors.

The Kaunakakai Fire Station currently has 18 personnel and houses two (2) fire engines/ladder trucks, one (1) water tanker tender, one (1) utility rescue truck, one (1) jetski and a rescue boat. The new fire station will have the potential to accommodate additional personnel and equipment, including an additional engine or ladder truck, a hazmat trailer and two (2) emergency medical service units.

D. PROJECT FUNDING AND SCHEDULING

The estimated cost of the proposed project is \$10.5 million. Assuming all necessary approvals and entitlements are obtained, construction is expected to begin in the third quarter of 2007, with completion estimated in the third or fourth quarter of 2008.

Chapter II

Description of the Existing Environment, Potential Impacts and Mitigation Measures

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

A. PHYSICAL SETTING

1. Surrounding Land Uses

a. Existing Conditions

The proposed fire station site is located on the eastern edge of Kaunakakai Town. North of the project site is the Ranch Camp residential subdivision. East of the subject property, land is in agricultural use. Further south of the site is Molokai Education Center. South of the center is Kamehameha V Highway and across the highway is a wetland area. Across Kamehameha V Highway, east of its intersection with Alanui Ka 'Imi 'Ike; is a single-family residential area accessible via Kapaakea Loop. The Kapaakea Cemetery is located southeast of the proposed project area. To the west of Kamehameha V Highway's intersection with Alanui Ka 'Imi 'Ike is a single-family residential area accessible by Oki Place and Seaside Street. Lands to the west of the subject property are also utilized for agricultural use. Further west are the Duke Mailu Regional Park and Kaunakakai Elementary School.

b. Potential Impacts and Mitigation Measures

The subject project is not anticipated to adversely impact surrounding land uses in the vicinity of the proposed roadway extension. The new fire station will occupy lands in the vicinity of the former slaughterhouse and holding pen, which have been unused for some time. The fire station will be in close proximity to Kaunakakai Town, its primary service point, but located sufficiently outside of the town core to facilitate ready access to surrounding service areas.

The Kapaakea Cemetery and wetland area are downhill of the project site. However, the project engineer has designed a detention basin with excess capacity to accommodate a 50-year, one-hour storm. All increased runoff associated with development will be retained onsite. Thus, there should be no impact to adjacent or downstream properties, including the Kapaakea Cemetery and Kapaakea Homestead residents.

2. Climate, Topography and Soils

a. <u>Existing Conditions</u>

Hawaii's tropical location results in uniform weather conditions throughout the year. Climatic conditions on Molokai are characterized by mild and consistent year round temperatures, moderate humidity and steady northeasterly tradewinds. Variations in Molokai's weather are attributable to regional topographic and climatic conditions.

Kaunakakai is situated in the south central portion of the island, near sea level. Average annual rainfall is approximately 15 inches near the coast. At the upper reaches of the watershed, there is greater rainfall, which averages approximately 75 inches per year. The months of October through March are typically the wetter periods of the year, with April through September being typically the drier months. Mean temperatures range from 69 degrees Fahrenheit in January to 76 degrees Fahrenheit in August.

Wind conditions are predominantly characterized by northeasterly tradewinds. However, as these winds round

2.1

the eastern tip of the island and veer west at the southern coast, they blow in an eastern direction.

Topography in the region ranges from a flat coastal plain, to moderately steep slopes, and gulches in the mountains behind Kaunakakai Town. The project site, which is characterized by moderate hills of approximately up to 25 percent slope, sits at 50 feet above mean sea level (amsl). The ground cover is well established and small trees are spread throughout the site. Surface soil consists of dense, stiff sandy silt, and sand and gravel, ranging in depth from 1.5 to 17 feet below grade. The soil is characterized as a medium hard basalt in a slightly weathered and highly vesicular condition.

Underlying the proposed project roadway are soils belonging to the Jaucas-Mala-Pulehu Association and the Very Stony land-Rock Land Association. See Figure 7. The Jaucas-Mala-Pulehu Association is characterized by deep, nearly level and gently sloping, excessively drained soils that has a coarse-textured to fine-textured underlying material, common to alluvial fan areas and drainage ways. The Very Stony Land-Rock Land Association is characterized as gently sloping to very steep, rocky, and stony terrain. The soils are common to upland areas, gulches and valleys.

The subject property contains underlying soils from the Very Stony Land, eroded soil classification (rVT2). See Figure 8. This soil type is severely eroded, and 50 to 70 percent of the surface is typically covered with stones and boulders. In

Rough moutainous land-Amalu-Olokui association Very stony land-Rock land association Rough broken land-Oli association 0 LEGEND Approximate Project Location Kahanui-Kalae-Kanepuu association Jaucas-Mala-Pulehu association Molokai-Lahaina association 0

Proposed Kaunakakai Fire Station Soil Association Map

Source: USDA, Soil Conservation Service

NOT TO SCALE

Prepared for: County of Maui, Department of Fire and Public Safety

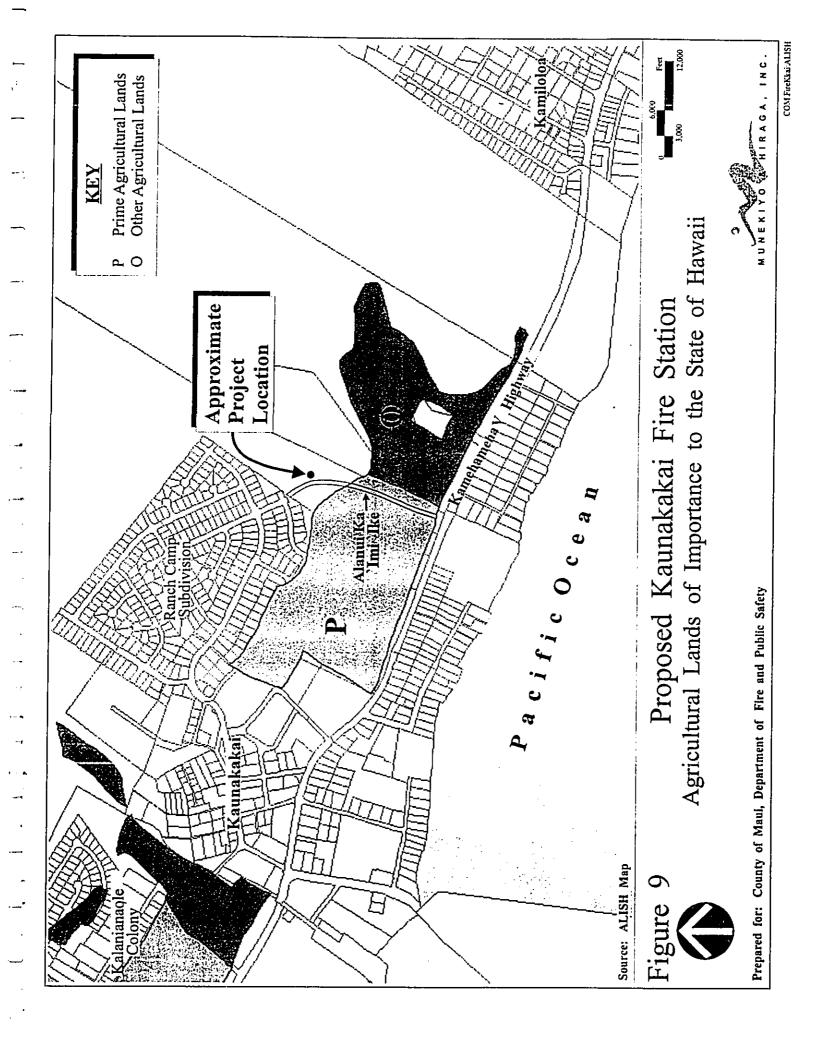
Prepared for: County of Maui, Department of Fire and Public Safety

general, the soil is less then 24 inches deep to the bedrock, and slopes are generally 7 to 30 percent.

The State Department of Agriculture has established three (3) categories of Agricultural Lands of Importance to the State of Hawaii (ALISH). The ALISH system classifies lands into "Prime", "Unique", and "Other Important Agricultural Land". The remaining lands are "Unclassified". Utilizing modern farming methods, "Prime" agricultural lands have the soil quality, growing season, and moisture supply needed to produce sustained crop yields economically, while "Unique" agricultural lands possess a combination of soil quality, location, growing season, and moisture supply currently used to produce sustained high yields of a specific crop. "Other Important Agricultural Land" includes those which have not been rated as "Prime" or "Unique". The subject property is located on lands "Unclassified" by the ALISH rating system. See Figure 9.

b. Potential Impacts and Mitigation Measures

Construction of the new fire station will require grading and grubbing of the project site. See Figure 10. Given the variation in site topographic conditions, cut-and-fill quantities vary. The proposed grading plan will require an estimated excavation of approximately 13,000 cubic yards and fill of approximately 7,000 cubic yards.



DOCUMENT CAPTURED AS RECEIVED

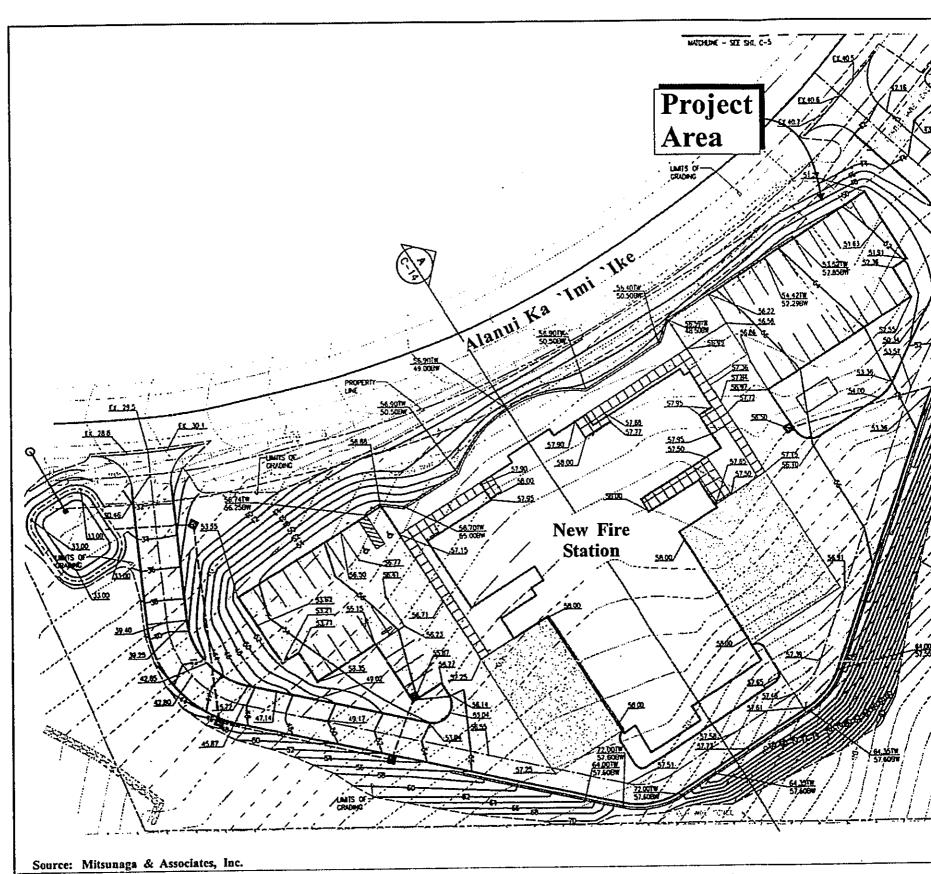


Figure 10

Proposed Kaunakakai Fire Station Grading Plan

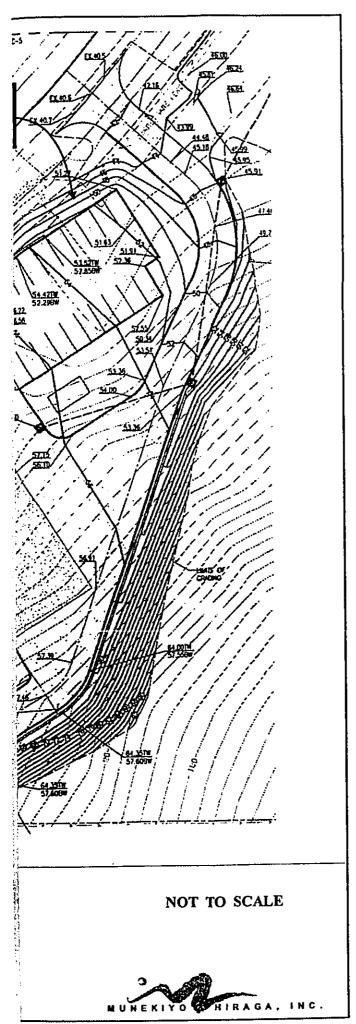


MUNEKIY

NO

Prepared for: County of Maui, Department of Fire and Public Safety

DOCUMENT CAPTURED AS RECEIVED



COM/FireKkai/GradingPlan

3. Flood and Tsunami Conditions

a. <u>Existing Conditions</u>

The project site is located in Flood Zone C, an area of minimal flooding. See Figure 11. According to the Civil Defense Disaster Preparedness Information, the subject property is located outside the tsunami evacuation boundary, as defined by Kamehameha V Highway, fronting the Molokai Education Center.

b. Potential Impacts and Mitigation Measures

As further discussed in Section D.4 of this chapter, onsite drainage mitigation measures will be implemented to address the increase in storm water associated with the development of the fire station. These improvements, coupled with the proposed grading plan will ensure that downstream or adjacent properties are not affected during large storm events.

4. Flora and Fauna

a. Existing Conditions

Vegetation in the vacant lands of the project area include koa haole, kiawe, as well as introduced and native species (e.g., uhuloa and ilima) of grasses and shrubs. Nearby land across Alanui Ka 'Imi 'Ike Street consists of seed corn cultivated for research. There are no rare, threatened, or endangered plant species or habitats that have been identified within the project area.

Avifauna and mammals common to the project site and surrounding areas include introduced birds and feral animals

نمت سدن

(deer, goat, mongoose, wild pig).

b. Potential Impacts and Mitigation Measures

There are no known or identified habitats of rare or endangered species of flora, fauna or avifauna located at the project site. Proposed landscaping will reflect the character of the area. Consistent with the area of Kaunakakai, landscaping will include the addition of native loulu lelo, ilima papa and pa'u-o-hi'iaka. In addition, landscaping will include bermuda grass, kukui trees, specimen monkeypod trees, naupaka, emerald green ti leaves and ixora. The proposed fire station is not anticipated to have an adverse impact upon the biological environment.

It should be noted that a concern was raised with regard to possible importation of invasive species with construction equipment brought in from off-island. The applicant will inform the contractor selected of the concern and should there be a need to ship heavy equipment to Molokai, the equipment should be cleaned and decontaminated prior to shipment.

5. <u>Historical and Archaeological Resources</u>

a. Existing Conditions

An archaeological assessment of the project site was conducted by Scientific Consultant Services (SCS). See Appendix "B-1". The assessment involved historic background research, a pedestrian survey and laboratory work. No archaeological sites were identified within the

project area. According to research obtained from archives, the project area consisted of pasture maintained by Molokai Ranch. During the field visit, archaeologists found evidence of prior grading and piles of boulders were pushed up against kiawe trees as a result of bulldozer activities, possibly associated with ranching activities previously conducted onsite.

b. <u>Potential Impacts and Mitigation Measures</u>

Research indicates that the land was previously maintained as pasture for cattle-grazing activities. No archaeological features were identified during the pedestrian survey. Based on these findings, there are no anticipated archaeological impacts associated with the proposed project. In a letter dated August 11, 2006, the State of Hawaii, Department of Land and Natural Resources, State Historic Preservation Division concurred with the archaeologist's recommendations. See Appendix "B-2". Should any archaeological remains or cultural materials be encountered during construction activities, all work in the vicinity of the find will cease and the State Historic Preservation Division will be contacted for establishment of appropriate mitigation measures in accordance with Chapter 6E, Hawaii Revised Statutes.

6. <u>Cultural Assessment</u>

a. Existing Conditions

(i) <u>Historical Overview</u>

During the pre-contact era, the Molokai population base was primarily concentrated at the island's

P1

windward coasts. The area was rich in ocean resources and the deep valleys with perennial streams supported a lifestyle based on subsistence agriculture, primarily associated with intensive taro production.

The 18th century saw great upheaval on Molokai as the island became subject to the ambitions of the rulers of neighboring islands. Political authority over Molokai passed back and forth between the chiefs of Maui and Oahu throughout the century, only ceasing with the unification of all the islands under Kamehameha I.

With the onset of western contact, a western influence began to permeate through the island's social environment. The result was a reduced reliance on subsistence lifestyles and an increased dependence on a plantation and ranching-based economy. As a result, the island of Molokai experienced a westward population movement from the windward coast to the leeward side of the island.

Several important changes for Molokai occurred in the 19th century. Herd animals were introduced at this time: cattle in 1833, followed by deer and sheep 30 years later. Cattle had profound socio-economic and, thus, cultural impacts through ranching activities. Sheep, on the other hand, had a notably adverse impact on the landscape because of their grazing

(Wiesler and Kirch). The Molokai Ranch was founded at the end of the century, purchasing lands formerly owned by Kamehameha V.

The 19th century also saw the creation of the Hansen's Disease colony on Molokai by the government. The first habitants arrived at Kalawao on January 6, 1866 to live on approximately 800 acres purchased by the kingdom (De Loach). The association of Molokai and leprosy remains to this day.

During the westward movement, the island's political and commercial center developed in accordance with the population movement. The first western town was established at Puko'o, which included a County seat, a court house, a wharf, and several small stores. In 1925, 'Ualapue became the island's new major commercial center, where a new hospital was constructed. Finally in 1935, Kaunakakai was established as the political center and economic nucleus of the island.

In the 1920's, large pineapple plantations were established in the Maunaloa and Kualapu'u areas, further strengthening the westward movement. However, in the 1970's and 1980's, both plantations ceased operations and the island's economy became primarily dependent on diversified agriculture and ranching activities a with an emerging visitor industry

(Molokai Community Plan, 2000).

The project site is located in the Kaunakakai area. The old name for this area, *Kaunakahakai*, means "resting (on) the beach". It was a location for canoes to come because of its abundant supply of fish. Molokai was a favored vacation spot for King Kamehameha V and located to the west of the existing Kaunakakai Wharf are the remains of Kamehameha V's vacation home, Malama. The beach fronting this site was reserved for the exclusive use of the *ali'i* in sunbathing (De Loach; Summers).

Further to the west lie the traditional salt pans, where sea water running during high tide was trapped and left to evaporate for up to three (3) weeks to produce salt. This salt was reputedly less strong than that made from deep sea water. Two (2) heiaus are also reported in the area, as well as a fishpond in the Kapa'akea area, which is now filled in. Molokai was well-known for the number of its fishponds; 58 of them once ringed the southern coast of the island.

(ii) Geopolitical Organization

Prior to Western contact in Hawaii, land was divided into *moku*, or districts. Each of these was further subdivided into units called *ahupua'a*. Ideally, each *ahupua'a* was self-sufficient, running from *mauka*, the mountain, to *makai*, the ocean (MacKenzie). These divisions served as both cultural and settlement

systems as traditional Hawaiian life was tied intimately to the land. Hunting, gathering, cultivation, and habitation took place within three (3) zones which characterized the *ahupua'a*: the *Mauka* Zone, the Agricultural Zone, and the Coastal Zone. The *Mauka* Zone provided access to a variety of trees, plants, and herbs for various needs, customs and practices. Planting of yams, sweet potato, sugar cane, taro, and other foods took place in the Agricultural Zone, where gradual slopes of land allowed terraces to be constructed for more efficient irrigation. The Coastal Zone and low-lying areas was where most of the *kauhale*, group of houses, were found, as well as temples, fishing shrines, and fishponds (Minerbi).

Molokai was traditionally divided into two (2) moku: Ko'olau district and Kona district, although there is some evidence of a third district having been used at some point (Wiesler and Kirch; Summers). The Ko'olau district was centered on the windward coast of the island, with the Kona district essentially comprising the remainder of Molokai. These moku were subdivided into ahupua'a which ranged in size from 79 to 46,500 acres (Summers). Molokai is noted for having had some unusual ahupua'a which stretched from shore to shore, rather than the more usual mauka to makai; this is due to the shape of the central portion of the island (De Loach).

In 1859, the traditional moku divisions were

eliminated and the entire island made into one district, called the Molokai district. Fifty years later, the island was redivided, this time into the Kalawao district, which is comprised of those areas known as Kalaupapa, Kalawao, and Waikolu and is administratively distinct from Maui County, and the remainder of the island, which is still designated as the Molokai district.

Western contact brought changes to the Hawaiian land system with the introduction of private ownership of land, a concept foreign to the Native Hawaiians. A Board of Land Commissioners was established in 1845 to uphold or reject all private land claims of both foreigners and Hawaiians. The Commission adopted rules pertaining to the proof of claims, right of tenants, and commutation to the government in attempts to achieve the goal of totally partitioning undivided lands. All lands not claimed by February 1848 were to be forfeited to the government (MacKenzie).

Following the enactment of these rules, the *Mahele* division of 1848 divided all lands of Hawaii between the king and chiefs. Two (2) years later the *Kuleana* act completed the *Mahele* process by authorizing the Land Commission to award fee simple titles to native tenants for their land. These *kuleana* parcels, also known as Land Commission Awards (LCA), were generally among the richest and most fertile in the islands and came from the king, government, or

chief's land. All claims and awards were numbered and recorded in the *Mahele* Book (MacKenzie). In addition, government lands were sold as "Royal Patent Grants" or "Grants" in order to meet the increasing costs of government. These grants differed from LCAs, as it was not necessary for the recipients to obtain an award for their land from the Land Commission (Chinen).

(iii) Stories and Traditions of Molokai

As is frequently the case with the islands, Molokai is the subject of multiple creation stories. Some say that all of the islands were born of the god Wakea and his wives; Molokai being the off-spring of that god and his third wife, Hina, after his previous wives had given birth to Hawaii, Maui, Kahoolawe, and Lanai. A separate tradition gives the formation of all the islands as having resulted from pieces of coral tossed back into the sea by the fisherman Kapuhe'euanui (Fornander).

The traditional history of Molokai is only extant in fragmentary form. It begins with Kamauaua, reputedly the first ali'i-nui of the island, who is thought to have lived sometime in the 13th century. There are subsequently many stories which suggest that the island was repeatedly subject to domination by the rulers of Hawaii and Maui, with lordship over Molokai passing back and forth between the kings of the other two (2) islands, as well as intervening periods of

8-4

autonomy (Summers).

The famous kahuna, Lanikaula, is thought to have lived in the 16th century. He is reputed to have lived in seclusion, but to have been frequently visited by peoples from all the islands in search of his advice. It is said that he had an 'aumakua in the form of a small bird, who spoke to the wise man. Stories tell that Lanikula predicted the defeat of a powerful Mauian king who attempted to invade Hawaii from Molokai.

At some point towards the late 18th century, Molokai acquired a reputation as being an aina ho'omana, a land of sorcery and the island was sometimes called Moloka'i pule o'o, "Molokai of the potent prayers" (De Loach, Summers). This reputation is connected with the kalaipahoa, the poison-tree gods, whose introduction to Molokai are the subject of several legends. The poison-trees and their associated gods were thought to be so deadly that the mere touch of their wood or sap lead to instant death and the kalaipahoa could be used to invoke fatal illness in people; conversely, the kahuna associated with the kalaipahoa was granted great wealth from his akua (Summers).

(iv) Traditional and Customary Rights

The traditional and customary rights of Native Hawaiians can be broken down into access rights,

gathering rights, burial rights, and religious rights.

Access

Native Hawaiians generally share the same access rights as the general public. However, they have the unique access rights to *kuleana* parcels and between *ahupua'a*. Access to *kuleana* parcels may involve access via ancient trails or expanded access not limited to any route. Additionally, the *Kuleana* Act granted unobstructed access within the *ahupua'a* to obtain items necessary to make the *kuleana* parcel productive. Access rights between *ahupua'a* involve access a ancient or well established trails (MacKenzie).

Gathering

In terms of gathering rights, the Hawaii Supreme Court has upheld gathering rights within an ahupua'a for firewood, house-timber, aho cord, thatch, and ki-leaf under three (3) conditions. The tenant must physically reside within the ahupua'a, the right to gather can only be exercised upon undeveloped lands within the ahupua'a, and the right must be exercised only for the purpose of practicing Native Hawaiian customs and traditions (MacKenzie).

<u>Burial</u>

According to traditional Hawaiian burial beliefs, following death, the 'uhane, or spirit, must remain near na iwi, or bones. Burial sites are chosen by Hawaiians for symbolic purposes in places for safekeeping. Often, bones were hidden in caves, cliffs, sand dunes, or deposited in the ocean. Today, federal and state laws protect both unmarked and marked burial sites. Island Burial Councils assist the State Historic Preservation Division with inventory and identification of unmarked

Hawaiian burial sites and determine the preservation or relocation of native Hawaiian burial sites (MacKenzie).

Religious

Hawaiian religion and beliefs were intimately tied to the land. While some practices and traditions were lost over the years, basic Hawaiian religious concepts remain. terms "aloha 'aina," love the land and "malama 'aina," care for and protect the land, convey the unity of humans, nature, and the gods in Hawaiian philosophy (Minerbi). Furthermore, Hawaiians honored and worshiped aumakua, deities, and akua, gods. There were numerous akua of farming, fishing, tapa making, dancing, sports, and any other activity of Hawaiian life. The concept of mana or sacred attachment to places, people, or things also remains as a significant aspect of Hawaiian religion (MacKenzie).

(v) Local Resident Interview

In order to obtain a wider array of cultural perspectives, interviews were conducted with individuals knowledgeable of and familiar with the project area and its history. Summaries of their interviews are presented below.

(1) Harriet Keuonaona ("Aunty Nona") Fukuoka

Ms. Fukuoka was born on Maui, in Puunene. Her paternal grandfather was Ikua Purdy, a champion roper from the Big Island, who eventually went to work at the Ulupalakua Ranch on Maui. Ms. Fukuoka's parents were William Purdy and Ella Kapaku. William worked for HC&S, the sugar company, as a blacksmith, shoeing the horses which were used in the cane fields at the time. He also

worked for the wealthy, area landowners. Ella worked for Maui Land & Pineapple Company. Ms. Fukuoka noted that her parents moved around a great deal, living in Kula, Puunene, Haiku, Hamakuapoko, and Spreckelsville, and that she consequently attended many different schools in her youth.

Ms. Fukuoka has several siblings, five (5) of which still reside on Maui. A sister moved to Molokai and operated the island's only mortuary. Ms. Fukuoka moved to Molokai 27 years ago to join her sister. At first, she lived in the Kalae area, later moving to Kaunakakai, and finally relocating to the Ranch Camp Subdivision immediately adjacent to the project site in approximately 1977, where she has resided ever since.

Ms. Fukuoka has been an active community participant over the years. She sat on the Public Safety Commission Board for five (5) years and has been an adult crossing guard at Kaunakakai School for approximately 20 years. The interviewee has strong connections to the island, including two (2) children who are residents and numerous nieces and nephews.

The interviewee spoke about the population changes on Molokai since she arrived. She noted the increased number of people from the mainland who have moved there. There are not enough restaurants, grocery stores, or parking places with the population influx to the island. Ms. Fukuoka wondered if Molokai might even need a traffic signal soon, which it has never had. She also spoke of the crowded nature of the public parks these days and the traffic congestion created by sporting events and public meetings.

She noted that the location of the current fire station creates numerous hazards as the fire vehicles must use the access road adjacent to Kaunakakai School and the public park. This presents not only pedestrian hazards for the school children, but access difficulties, as the road can become quite congested. When asked about the project site, Ms. Fukuoka stated that it was in the vicinity of the old Molokai Ranch slaughterhouse and holding pen for the cattle. That area surrounding the slaughterhouse was used for cattle operations and pasture. The slaughterhouse has been out of operation for some time and as far as she knew, the land has been unused since then, although the cinder cone at the back of the property is sometimes used as an unofficial firing range. She knew of no traditional or cultural uses for the subject property.

(2) Walter Wilber Pua Mendes

Mr. Mendes was born in Kane'ohe, Oahu, in 1944. His father was a sailor stationed at Pearl Harbor, who remained after his naval discharge. He grew up with four (4) siblings on Oahu. Mr. Mendes worked as a firefighter in Honolulu from 1969 to 1972. He then moved to Washington State for a time and worked as a structural crash fireman for the Boeing Corporation. In 1974 he returned to Hawaii with his wife and daughter and decided to backpack through the various islands. The family lived on Maui for a short while, but traveled through Kauai, Lanai, and the Big Island.

Mr. Mendes came to Molokai that year to be part of the march to open the fishing trails. This was a large-scale community action which marched some ten (10) miles over the course of that July 4th. Mr. Mendes stated that it felt as if the entire population of the island turned out for the march. Finding the people friendly and the island lifestyle agreeable, the family moved to Molokai soon after. For several years, they lived in a simple house and did not own a car, they hiked or hitchhiked to travel. His daughter was home-schooled during much

of that time. She later attended the Kamehameha School for high school.

In 1979, Mr. Mendes worked with Weisler and Kirch of the Bishop Museum on archaeological surveys of Molokai. He explained that he worked on archaeological investigations on lands in the vicinity of the proposed fire station site. Mr. Mendes noted that the Kaunakakai area in general is rich in archaeological deposits, including habitation, fishing, and burial sites. Many of the sites were located east of the subject property, on lands owned by the Department of Hawaiian Home Lands.

In 1989, Mr. Mendes began to work as a firefighter with the Molokai Fire Department, at the age of 44, he was the Department's oldest recruit. He continues to work as a firefighter on Molokai and notes that new fire station is a good idea. He also pointed out that the new site might experience some drainage issues which would have to be mitigated. Mr. Mendes recalled that the site is in close proximity to the old Molokai Ranch slaughterhouse and feed pen, unused since the mid-1990's.

From 1996 to 2000, Mr. Mendes studied "la'au lapa'au", the traditional Hawaiian healing arts, with the noted practitioner, Mr. Au'uae. He believes that there are approximately 15 to 20 other, former students on Molokai. Mr. Mendes noted that the project site contains plants which could be used in healing practices, including uhuloa and ilima. He is not, however, aware of the site being used in this regard, nor is he aware of any traditional or cultural practices associated with the site.

b. <u>Potential Impacts and Mitigation Measures</u>

From a recent historical perspective, land underlying the proposed fire station site was primarily maintained for

21

ranching activities. More recently, the site has been underutilized and is vacant. No indications of cultural practices, such as gathering, access, or religious traditions, are known to be associated with the project area.

With regard to the proposed fire station, no adverse impact to cultural resources, practices, and traditions is anticipated.

7. Air and Noise Quality

a. Existing Conditions

Due to the low level of residential and commercial development in the Kaunakakai area, the lack of major point sources of air pollution, and the prevailing tradewind conditions, the Kaunakakai region has good air quality. The primary source of emissions may be attributed to motor vehicles traversing roadways in the area. However, these mobile sources have no adverse influence on air quality.

There are no significant noise generators in the vicinity of the project area. Noise generated in this locale may be attributed to traffic in the Kaunakakai area.

b. Potential Impacts and Mitigation Measures

Airborne particulates, including dust, may be generated during site preparation and construction activities. However, dust control measures, such as regular watering and sprinkling, will be implemented as needed to minimize wind-blown emissions.

In the long term, vehicle-generated emissions will not

adversely impact local and regional ambient air quality conditions.

As with air quality, ambient noise conditions will be temporarily impacted by construction activities. Heavy construction equipment, such as bulldozers, front end loaders, and dump trucks and trailers will be the dominant source of noise during site construction. Construction generated noise will be mitigated through Best Management Practices (BMPs), and construction activities will be limited to daylight work hours only. The contractor will coordinate with the State Department of Health to ensure that noise permits are obtained, as appropriate.

Noise will be generated by vehicles and sirens and helicopter operations, however, such impact will be temporary. The helipad will be accessed during civil defense emergency operations, fire training, rescue and firefighting operations. The helipad site will be located on the south side of the fire station complex, away from residential areas. The helicopter will not be stored onsite. At most, helipad use will average approximately three (3) inbound and three (3) out-bound trips per month.

With respect to noise generated from fire sirens and air horns, it should be noted that the Kaunakakai Fire Station currently responds to 20 calls per month on average. The number of calls is not anticipated to increase as a result of the new fire station. Use of the sirens and air horns will be limited to roadway clearing activity as stipulated by law. On

9.1

21

21

average, sirens or air horns are utilized for roadway clearing approximately 30 seconds to one (1) minute, two (2) times per day. The use of sirens and air horns will be limited to those instances where maintenance of public safety is essential.

8. Scenic and Open Space Resources

a. Existing Conditions

The project site is located near the eastern boundary of Kaunakakai Town. North of the project site is Ranch Camp. Further north, vacant dry grasslands slope gradually higher up to the Puu Olelo area. West of the project site is Kaunakakai Town, Kaunakakai Stream, Manila Camp and Kalanianaole Colony. South of the project area is the Kamehameha V Highway. Further south are vacant lands, residential dwellings abutting Oki Place and Seaside Place, and the Pacific Ocean. Agricultural lands, vacant lands and the Kamiloloa residential subdivision lie east of the site. The subject property does not lie within a scenic view corridor.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to have a substantial, adverse impact to existing view corridors. Most of the subject property is overgrown and views of the site from adjacent areas is limited. See Figure 12. Because of this, the property is not considered part of a scenic view corridor to the shoreline. A view rendering of the proposed fire station has been prepared and is incorporated in Appendix "C". There are no anticipated adverse impacts to



East View of Subject Property



Southeast View of Subject Property (to left of road)

Source: Munekiyo & Hiraga, Inc.

Figure 12 Proposed Kaunakakai Fire Station Site Photos

NOT TO SCALE

Prepared for: County of Maui, Department of Fire and Public Safety

MUNEKIYO & HIRAGA, INC

the visual resources of the surrounding environment as a result of the proposed project's construction.

B. <u>SOCIO-ECONOMIC ENVIRONMENT</u>

1. Existing Conditions

a. Population and Economy

The resident population of the island of Molokai (excluding Kalawao), as determined by the 1990 Census, was 6,587. In the year 2000, the resident population was 7,404, representing an increase of approximately 10 percent. Kaunakakai remains the population center of Molokai with 2,726 residents, followed by Kualapuu with 1,936 residents (Maui County Data Book, 2005).

On Molokai, there is still a large number of unemployed, compared to Lanai and Maui. In 2005, the unemployment rate was 2.5 percent for the island of Maui, 1.5 percent for Lanai. On Molokai it was 8.3 percent. In comparison, the unemployment rate for the State of Hawaii was 2.8 percent (Hawaii Workforce Informer).

In 2005, the total number of people employed in non-farming wage and salary jobs on Molokai was 1,900 and the total number in the private sector was 1,350. There were 550 people employed in government, 250 in retail, 350 in educational and health services, and 300 in leisure and hospitality (Hawaii Workforce Informer).

The visitor industry continues to provide a valuable contribution to the Molokai economy. In 2004, a total of

72,099 visitors traveled to Molokai by air. Of those visitors, 57,987 were domestic, while 14,112 visitors were from foreign countries. However, the Molokai tourism market still has room for growth. In the year 2003, approximately 299 rental accommodations were available, with an average occupancy rate of 60.38 percent, and an average room rate of \$107.28 per night. These figures are substantially lower than those of Maui, which had an average occupancy rate of 78.69 percent, and an average room rate of \$226.78 in the same period (Maui County Data Book, 2005).

b. Potential Impacts and Mitigation Measures

Short-term economic benefit associated with construction expenditures is anticipated. The proposed project is not a population generator. Thus, there are no anticipated long-term impacts on population parameters. The proposed fire station will fulfill the Kaunakakai community's need for fire protection and public safety.

C. PUBLIC SERVICES

1. Police and Fire Protection

a. Existing Conditions

Police services on Molokai are provided by the Maui County Police Department. The Molokai station is located in the Mitchell Pauole Center in Kaunakakai.

Fire prevention, protection and suppression services are provided by the Maui County Fire Department. The Fire Department maintains stations in Kaunakakai and Hoolehua, with a substation in Pukoo. The proposed action calls for a

new station at Kaunakakai to replace the existing station at the Mitchell Pauole Center.

b. Potential Impacts and Mitigation Measures

The new fire station is anticipated to substantially improve fire protection services on Molokai. The new station will allow for more efficient deployment of emergency vehicles, better training facilities for the firefighters, who will no longer have to train off-island or in dangerous situations, and better facilities for the DFPS educational efforts.

2. <u>Medical Facilities</u>

a. Existing Conditions

Molokai General Hospital, which is operated by the Queen's Health Systems, is the only major medical facility on the island. Licensed for 30 beds, the hospital located in Kaunakakai provides acute, and obstetrics care services. The hospital also houses the Women's Health Center, which offers mid-wife and maternity services to local residents.

Other medical facilities include the Molokai Family Health Center in Kaunakakai.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to have adverse impacts on existing medical facilities or services on Molokai.

3. Solid Waste

a. <u>Existing Conditions</u>

Except for remote areas, single family solid waste collection

service is provided by the County of Maui once weekly.

Solid waste is collected by County refuse collection crews and disposed at the County landfill at Palaau. Commercial waste from private collection companies is also disposed of at the landfill.

b. Potential Impacts and Mitigation Measures

The proposed fire station is not anticipated to adversely impact existing solid waste services on Molokai.

4. Recreational Resources

a. Existing Conditions

The island of Molokai offers a wide range of recreational opportunities. Possible outdoor activities include bicycling, boating, camping, diving, fishing, golfing, hiking, horseback riding, hunting, surfing, swimming, tennis, and windsurfing.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to adversely impact the existing recreational facilities located in Kaunakakai.

5. Educational Facilities

a. <u>Existing Conditions</u>

There are five (5) public schools on Molokai. Four (4) are public elementary schools, Kaunakakai, Kilohana, Kualapuu, and Maunaloa, providing elementary school education for children from Kindergarten through Grade 6. There is one (1) secondary school, Molokai High and Intermediate School, located in Hoolehua. School capacity, enrollment

and projected enrollment are as follows in Table 1.

Table 1

ENROLLMENT ESTIMATES FOR MOLOKAI SCHOOLS			
School	Capacity for 2005-2006 School Year	Enrollment 2005-2006 School Year	Projected Enrollment 2011-2012
Kaunakakai Elementary School (Grades K-6)	464	175	218
Kilohana Elementary School (Grades K-6)	209	91	87
Maunaloa Elementary School (Grades K-6)	121	51	51
Kualapuu Elementary School (Charter School-Grades K-6)	436	342	420
Molokai Intermediate School (Grades 7-8)	343	144	173
Molokai High School (Grades 9-12)	756	337	268
Source: State of Hawa	ii, Department of	Education	

Private schools include Molokai Christian Academy (Grades K-12) and Molokai Mission School (Grades 1-8).

Molokai Education Center, a satellite facility of Maui Community College, offers post-secondary, vocational and technical credit courses, and is located at the intersection of Alanui Ka 'Imi 'Ike and Kamehameha V Highway.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to adversely impact existing education facilities or services on Molokai. Movement of the fire station from its existing location

adjacent to Kaunakakai Elementary School, will result in better school safety.

D. <u>INFRASTRUCTURE</u>

1. Roadways

a. <u>Existing Conditions</u>

The State of Hawaii's Maunaloa Highway links Kaunakakai with the western portion of the island. Maunaloa Highway becomes Kamehameha V Highway at Kaunakakai and extends toward the shoreline, providing access to eastern portions of Molokai. Alanui Ka 'Imi 'Ike fronts the subject property. It is a two-lane, two-way County road which connects Kamehameha V Highway to Kalohi Street in the Ranch Camp Subdivision. There are speed bumps along the roadway, which serve to prevent vehicles from high speed activity.

County roads run through residential, commercial, light industrial and public facility areas throughout the remainder of Kaunakakai. Due to the rural character of the town, traffic is generally light and there is no chronic traffic congestion.

Currently, the department responds with an engine to emergency calls, on average one (1) time per day. Engines and utility trucks travel away from the existing station approximately one (1) to four (4) times per day for daily training and business operations. No training activities are conducted at the existing facility. Thus, there is no visitor traffic. There is a fire signal located at the front and side of the existing station at the intersection of Ainoa and Ala

Malama Streets, that has not been in operation for approximately 10 to 15 years, due to the low traffic conditions.

b. Potential Impacts and Mitigation Measures

There should be no adverse traffic impact associated with the proposed project. The speed bumps along Alanui Ka 'Imi 'Ike Street will limit the speed of large trucks and resident vehicles. It should be noted that the Maui Police Department recommended installation of a fire signal at the Kamehameha V Highway and Alanui Ka 'Imi 'Ike intersection. The Department of Fire and Public Safety has considered a fire signal. However, at this time, given the non-use of the existing fire signal and the low traffic volume in the vicinity of the new station, the Department of Fire and Public Safety believes that sirens and flashing lights are appropriate means to alerting the public to fire equipment emergency response conditions.

The fire station will be staffed by approximately 18 people, with six (6) people each shift per day. Given the low number of vehicle trips to and from the station and the capacity of Alanui Ka 'lmi 'lke, the proposed project is not anticipated to result in any substantive, adverse impacts to traffic.

2. Water System

a. <u>Existing Conditions</u>

The County of Maui operates four (4) water systems on the island of Molokai. The water distribution system for

Kaunakakai consists of a 1.0 million gallon reinforced concrete reservoir at an elevation of 232 feet. It is located approximately 2,500 feet northeast of the site. A network of 12-, 8- and 6-inch waterlines transport water from the reservoir to residential and commercial areas of Kaunakakai.

b. Potential Impacts and Mitigation Measures

The proposed project will connect to the Department of Water Supply's existing 12-inch waterline, which runs beneath Alanui Ka 'Imi 'Ike Street. See Appendix "D". The new station will be served by a 2.5-inch domestic and 8-inch fire protection line. A 2-inch water meter will be installed on the domestic waterline. Water demand from the new fire station is estimated at 2,380 gallons per day (gpd). Water conservation measures to be incorporated into the proposed project include the use of low flow plumbing fixtures and use of landscape planting material which minimizes irrigation water consumption.

Appropriate Best Management Practices (BMPs) will be employed during construction in order to protect the integrity of groundwater and surface water resources in the vicinity of the project.

Water requirements will be coordinated with the Department of Water Supply to ensure that adequate supply is available at the time of development. In addition, calculations for domestic, irrigation and fire protection use will be submitted to the Department of Water Supply for building permit

processing.

3. Wastewater System

a. <u>Existing Conditions</u>

The Kaunakakai Wastewater Treatment Plant, built in 1987, provides service to the Kaunakakai area. Residents within one (1) mile of the plant are linked to the wastewater system. The Kaunakakai facility has a capacity of 300,000 gallons per day (gpd) and a cumulative allocated capacity of 287,000 gpd.

Most regions of Molokai are not served by a wastewater treatment system. Residents situated beyond the Kaunakakai service area utilize either cesspools or septic systems. The County of Maui provides cesspool pumping services to readily accessible areas.

b. <u>Potential Impacts and Mitigation Measures</u>

The proposed station will have a sewer lateral that will connect to an existing manhole at the intersection of Kalohi and Kakalahale Streets. The proposed project will generate approximately 1,500 gallons of wastewater per day. The Molokai sewer system will be able to accommodate the additional flow. Bio-hazardous substances on clothing and/or fire protective gear will be treated with peroxide and/or normal laundry processes in the decontamination room in accordance with standards established by OSHA, the Environmental Protection Agency and the State of Hawaii Department of Health. There should be no adverse impact to wastewater conditions and/or infrastructure.

4. Drainage

a. Existing Conditions

Because the property is undeveloped, currently there is no onsite drainage system. Runoff sheet flows off the northern corner of the property. There is a drainline beneath Alanui Ka'imi'ike Street that has inlets adjacent to the property. The existing runoff is 6.51 cubic feet per second (cfs). See Appendix "E".

b. Potential Impacts and Mitigation Measures

The development of the project site will result in an alteration of storm water runoff, from 6.51 cfs to 18.15 cfs, an increase of 11.64 cfs. To accommodate the increase in storm flows, two (2) onsite detention ponds will be constructed. The combined capacities of the ponds will be approximately 10 percent larger than the volume necessary to meet the increase of 11.64 cfs. With the proposed drainage improvements, adverse impact to downstream properties, including the Kapaakea Homestead area, is not anticipated.

5. Utilities

a. Existing Conditions

Electrical service will be provided by Maui Electric Company's (MECO) Molokai Division. There is a primary overhead system, located along Alanui Ka'imi'ike Street, fronting the site. The system consists of secondary power conductors only.

Telephone and cable service will be provided via an

extended overhead distribution system located along Alanui Ka'imi'ike Street by Hawaiian Telcom and Oceanic Time Warner Cable, respectively.

b. Potential Impacts and Mitigation Measures

Coordination is being undertaken with the respective utility companies to ensure that electrical, telephone and cable TV services are provided to the site. Refer to Appendix "C". Service utility lines will be extended to the project site via the existing overhead distribution system. From a joint utility pole which fronts the subject property, underground duct systems will be installed for extension of service up to the fire station building. The new fire station will be set back away from neighboring properties so as to mitigate the impacts of light "spillage" onto adjacent lands.

Energy conservation design measures that will be incorporated into the proposed project include the following:

- 1. Roof insulation of building;
- 2. Tinted windows to shade and cool the building;
- 3. Installation of large canopy trees around the building for shade and cooling of the building;
- 4. Installation of a heat recovery hot water system that will utilize waste heat from air conditioning condensing units;
- 5. Use of variable frequency drive to minimize energy usage by fan motors for air conditioning system;
- 6. Use of low flow plumbing fixtures;
- 7. Installation of high pressure sodium (HPS) luminaires around entrances/exit;
- 8. Installation of HPS pole mounted lights at all driveways and vehicle parking areas;
- Installation of lights to the exterior of the site and building that will be automatically triggered by time

- switch controls and limited to night time use only;
- Installation of energy efficient fluorescent lighting to 10. the building interior;
- Installation of multi-level and/or zoned switching of 11.
- interior lighting in large rooms; and Installation of wall mounted occupancy sensor light 12. switches within private offices.

The proposed project is not anticipated to adversely affect electrical, telephone or cable systems.

Chapter III

Relationship to Governmental Plans, Policies and Controls

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission (LUC), establishes the four (4) major land use districts in which lands in the State are placed. These districts are "Urban", "Rural", "Agricultural", and "Conservation".

The proposed roadway improvement is located within the State "Agricultural" district. See Figure 13. The proposed action involves a County-initiated District Boundary Amendment to the "Urban" District to permit the proposed action.

B. <u>LAND USE COMMISSION RULES, CHAPTER 15-15, HAWAII</u> <u>ADMINISTRATIVE RULES</u>

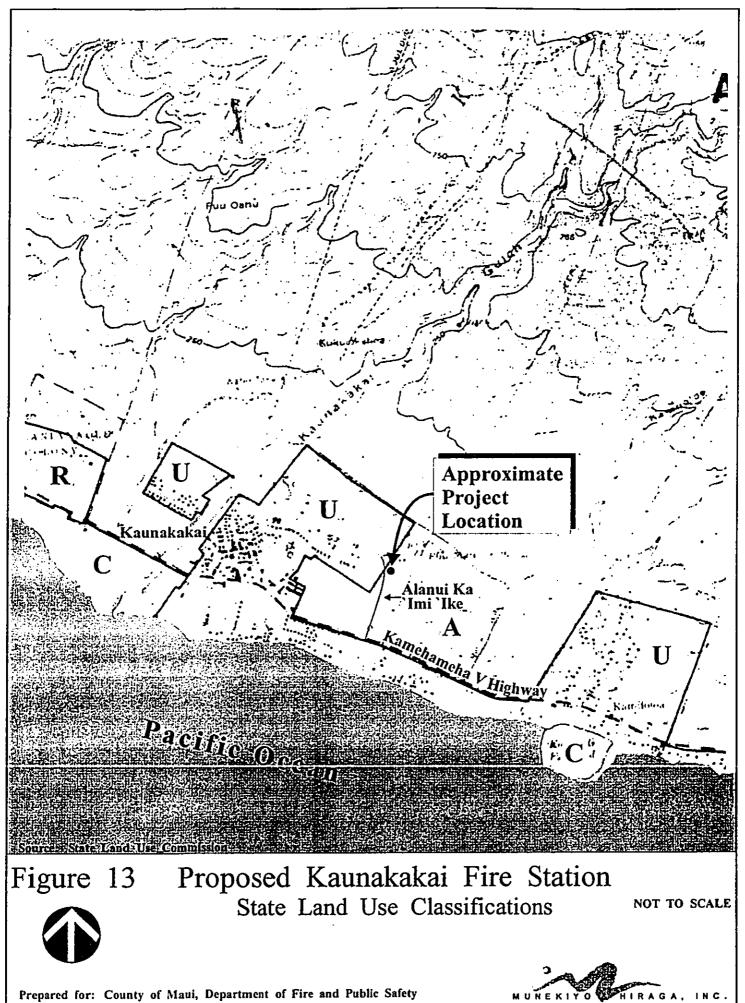
The proposed reclassification of the subject property is in conformance with the following standards of the Urban District set forth in Chapter 15-15-18, Hawaii Administrative Rules:

Chapter 15-15-18

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

Comment: The proposed fire station will be located south of the Ranch Camp residential subdivision. It is also in close proximity to Kaunakakai Town, which consists of single-family residential, commercial, public/quasi-public and recreational uses.

- (2) It shall take into consideration the following specific factors:
 - A. Proximity to centers of trading and employment except where the development would generate new centers of trading and employment.



COM/FireKkai\SLUC

Comment: The proposed project site is located approximately 0.5 mile from Kaunakakai Town, which is the island's center of trade and employment.

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

Comment: Basic infrastructure, such as transportation systems, sewer, water, drainage and public utility hook-ups are available in close proximity to the project site. Drainage improvements will comply with County of Maui standards. Schools and parks are located in close proximity to the project site. The proposed action will enhance fire protection service for the Kaunakakai Community.

C. Sufficient reserve areas for foreseeable urban growth.

<u>Comment:</u> The area of proposed reclassification involves the development of a fire station. Development of the property should help provide better fire service without significantly affecting reserve areas for urban growth. Additional areas for future urban growth are delineated in the Molokai Community Plan.

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

<u>Comment:</u> The site has been engineered to provide a functional fire station without compromising natural geographic and

environmental parameters. The project site is located in Zone C, an area of minimal flooding. The project site is not subject to tsunami inundation, nor is it characterized by unstable soil conditions.

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

<u>Comment:</u> The subject property is located adjacent to the existing Kaunakakai urban area.

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

<u>Comment:</u> The subject property is an appropriate location for an Urban District classification as reflected by the underlying public/quasi-public designation established in the Molokai Community Plan.

- (6) It may include lands which do not conform to the standards in paragraphs (1) to (5):
 - A. When surrounded by or adjacent to existing urban development; and
 - B. Only when those lands represent a minor portion of this district

Comment: The subject property conforms with standards in paragraphs (1) to (5). Moreover, it lies in close proximity to Kaunakakai Town, an existing urban area. The proposed project site represents a small portion of the Agricultural District on the

island of Molokai.

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

Comment: The proposed reclassification will not result in scattered spot urban development. The project site lies in close proximity to Kaunakakai Town. The proposed development will not necessitate additional public investment in infrastructure facilities or public services. The County of Maui has appropriated funds for the project in its fiscal year 2007 to 2008 budget. The applicant will comply with applicable conditions regarding provision of infrastructure facilities.

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

Comment: Portions of the subject property have a cross-slope of more than 20 percent. However, the portion of the property used for building siting and related functions, has a slope suitable for project development.

C. CHAPTER 226, HRS, HAWAII STATE PLAN

Chapter 226, HRS, also known as the Hawaii State Plan, is a long-range comprehensive plan which serves as a guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The proposed action

is consistent with the following goals of the Hawaii State Plan.

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

1. Objectives and Policies of the Hawaii State Plan

The proposed reclassification is consistent with the following objectives and policies of the Hawaii State Plan:

Chapter 226-5, HRS, Objectives and Policies for Population

226-5(a), HRS:

It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.

226-5(b)(7), HRS:

Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.

Chapter 226-11, HRS, Objectives and Policies for the Physical Environment - Land-Based, Shoreline, and Marine Resources.

226-11(b)(9), HRS:

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

Chapter 226-13, HRS, Objectives and Policies for the Physical Environment - Land, Air, and Water Quality.

226-13(b)(7), HRS:

Encourage urban developments in close proximity to existing services and

facilities.

Chapter 226-26, HRS, Objectives and Policies for Socio-Cultural Advancement - Public Safety.

226-26(a)(1), HRS:

Assurance of public safety and adequate protection of life and property

for all people.

226-26(a)(2), HRS:

Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.

226-26(b)(1), HRS:

Ensure that public safety programs are effective and responsive to community

needs.

times.

226-26(d)(1), HRS:

To further achieve public safety objectives related to emergency management, it shall be the policy of this State to ensure that responsible organizations are in a proper state of readiness to respond to major warrelated, natural, or technological disasters and civil disturbances at all

2. Priority Guidelines of the Hawaii State Plan

The proposed action coincides with the following priority guidelines of the Hawaii State Plan.

<u>Chapter 226-104, HRS, Population Growth and Land Resources Priority Guidelines.</u>

226-104(a)(1), HRS:

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

226-104(b)(1), HRS:

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

226-104(b)(12), HRS:

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

D. GENERAL PLAN OF THE COUNTY OF MAUI

The Maui County General Plan (1990 Update) sets forth broad objectives and policies to help guide the -range development of the County. As stated in the Maui County Charter:

u . }

: 1

The general plan shall indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain the opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns, and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.

The proposed action is in keeping with the following General Plan objectives and policies:

Land Use

Objective:

To preserve for present and future generations existing geographic, cultural and traditional community lifestyles by limiting and managing growth through environmentally sensitive and effective use of land in accordance with the individual character of the various communities and regions of the County.

Policy:

Identify and preserve significant historic and cultural sites.

Environment

Objective:

To use the County's land-based physical and ocean-related coastal resources in a manner consistent with sound environmental planning practice.

Policy:

Evaluate all land based development relative to its impact on the County's land and ocean ecological resources.

Public Safety

Objective:

To create an atmosphere which will convey a sense of security for all residents and visitors and aid in the protection of life and property.

Policies:

- Maintain a proper state of preparedness for man-made or natural disasters.
- Maintain efficiency of police and firefighters at the highest attainable level through in-service educational and training programs.
- Publicize public safety and fire protection programs.
- Reduce fire losses by improving and maintaining fire fighting apparatus.
- Locate fire, police and life saving stations in convenient areas.

E. MOLOKAI COMMUNITY PLAN

Within Maui County, there are nine (9) community plan regions. From a General Plan implementation standpoint, each region is governed by a Community Plan which sets forth desired land use patterns, as well as goals, objectives, policies, and implementing actions for a number of functional areas, including infrastructure-related parameters.

The subject property is located within the Molokai region and occupies

j |

- į

lands designated as "Public/Quasi-Public" and "Open Space" in the Community Plan. See Figure 14. The "Open Space" designation encompasses a portion of the site at its northern extent, with the balance of the property designated for "Public/Quasi-Public" use. The proposed action involves a Community Plan Amendment to render the entire subject area as "Public/Quasi-Public" so that the action is a compatible use. The County of Maui will initiate the Community Plan Amendment.

The proposed project is consistent with the following goals, policies, and objectives, of the Community Plan:

Land Use

Goal:

Enhance the unique qualities of the island of Moloka'i to provide future generations the opportunity to experience rural and traditional lifestyles.

Objectives and Policies:

Require all zoning, discretionary land uses, and development approvals to be consistent with the Community Plan and be subject to public review.

Environment

Goal:

Preserve, protect and manage Moloka'i's exceptional natural land and water resources to ensure that future generations may continue to enjoy and protect the island environment.

Objectives and Policies:

Require fire prevention and suppression strategies as a means of protecting and preserving Moloka'i's land and coastal water resources.

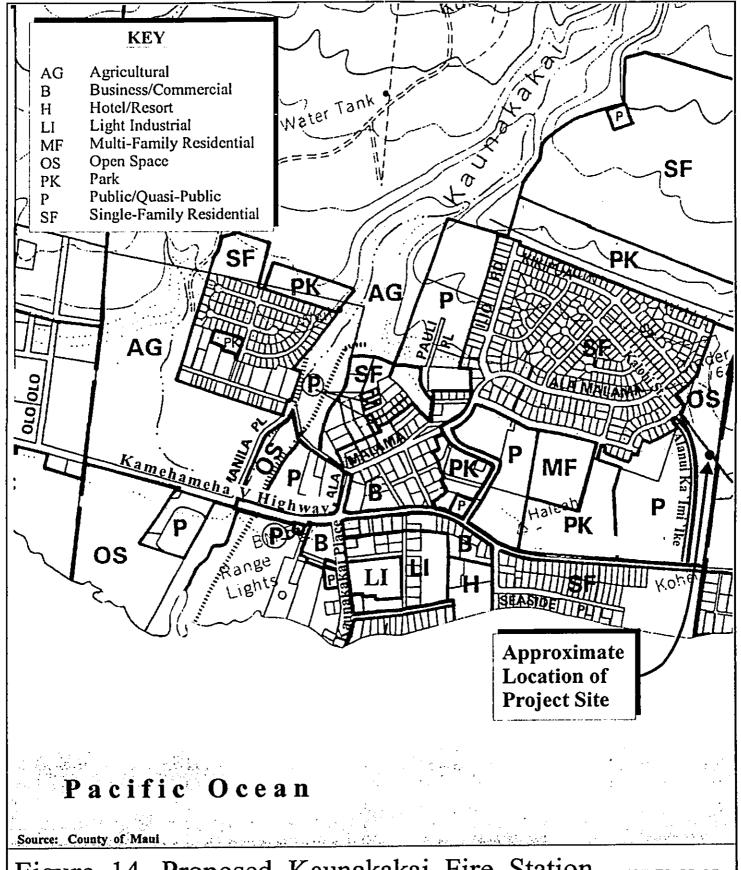


Figure 14 Proposed Kaunakakai Fire Station NOT TO SCALE Community Plan Land Use Designations

Prepared for: County of Maui, Department of Fire and Public Safety



Cultural Resources

Goal:

. .

t ∉ } ⊢

4

-9

. 3

1 2

15

1 1

13

1

Preservation, enhancement and appropriate use of cultural resources, cultural practices and historic sites that provide a sense of history and define a sense of place for the island of Moloka'i.

Objectives and Policies:

Encourage the recordation of local history.

Social Infrastructure

Goal:

An efficient and responsive system of people-oriented public services which enable residents to live a safe, healthy and enjoyable lifestyle.

Objectives and Policies:

Improve emergency rescue and transport services for the community.

F. ZONING

The zoning designation for the subject property is "Interim". The County of Maui will initiate a Change in Zoning to the "P-1, Public/Quasi-Public" designation so that the action is a compatible use. It is noted that the allowable height within the P-1 zoning district is 35 feet, whereas, the height of the proposed fire station tower is 43-feet 10-inches. Refer to Figure 4. Accordingly, a variance application for the tower will be separately prepared and processed through the County's Board of Variances and Appeals.

G. COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES

The Hawaii Coastal Zone Management Program (HCZMP), as formalized in Chapter 205A, HRS, establishes objectives and policies for the

preservation, protection, and restoration of natural resources of Hawaii's coastal zone. The subject property lies outside of the County of Maui's Special Management Area (SMA).

Although a SMA permit is not required for the project, this section addresses the project's relationship to applicable coastal zone management considerations, set forth in Chapter 205A, Hawaii Revised Statutes.

1. Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

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

- (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas:
- (ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
- (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and a shorelines with recreational value;
- (iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
- (v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural

.

- 1

resources;

- (vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
- (vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and
- (viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of Section 46-6.

<u>Response:</u> The proposed project is not anticipated to result in adverse impacts to existing coastal or inland recreational resources. The project is not anticipated to limit or compromise any existing shoreline recreational activity.

2. <u>Historic Resources</u>

Objective:

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

Policies:

- (A) Identify and analyze significant archeological resources;
- (B) Maximize information retention through preservation of remains and artifacts or salvage operations; and
- (C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Response: The proposed project is not anticipated to have an adverse effect on historic or cultural resources. An archaeological assessment was conducted for the proposed project. Refer to

Appendix "B-1". No historic sites were identified during the pedestrian survey and the land was already disturbed during previous cattle-ranching activity conducted onsite and grading activity. The State Historic Preservation Division concurred with the archaeologist's recommendation that no further archaeological work is necessary. Refer to Appendix "B-2".

Should any cultural or historical materials be uncovered during construction-related activities, work shall be halted in the area of the find and the State Historic Preservation Division shall be notified for determination of appropriate mitigation measures.

3. Scenic and Open Space Resources

Objective:

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

Policies:

- (A) Identify valued scenic resources in the coastal zone management area;
- (B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
- (C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
- (D) Encourage those developments that are not coastal dependent to locate in inland areas.

Response: The subject property was formerly a part of the abandoned ranch slaughterhouse and cattle pen and is not deemed a scenic resource. The site is overgrown, with little visual penetration from adjacent areas and is not part of a scenic view corridor to the shoreline. Refer to Figure 10. No substantive

adverse impacts to scenic or open space resources are anticipated to result from the proposed action.

4. Coastal Ecosystems

Objective:

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

Policies:

- (A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
- (B) Improve the technical basis for natural resource management;
- (C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
- (D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
- (E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

Response: The proposed project is not anticipated to result in substantive, adverse impacts to coastal ecosystems. Best Management Practices (BMPs) and appropriate drainage design will mitigate potential impacts to the coastal environment.

5. Economic Uses

Objective:

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

Policies:

- (A) Concentrate coastal dependent development in appropriate areas:
- (B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
- (C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - (i) Use of presently designated locations is not feasible;
 - (ii) Adverse environmental effects are minimized; and
 - (iii) The development is important to the State's economy.

Response: The proposed project is not a coastal dependent development. The project will provide short-term economic benefits during the construction-phase.

6. Coastal Hazards

Objective:

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

Policies:

- (A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
- (B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
- (D) Prevent coastal flooding from inland projects.

2 (

15 1

Response: The subject property is not located in a tsunami zone. It is located in Flood Zone C, an area of minimal flooding action and without developmental restrictions. No substantive, adverse impacts resulting from drainage are anticipated to adjoining or downstream properties.

7. <u>Managing Development</u>

Objective:

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

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

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

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

Response: A public presentation was made to the community at the Molokai Planning Commission, in Kaunakakai, on March 9, 2005. In addition, a number of stakeholders and agencies were consulted as part of the Environmental Assessment process. Further public presentation will be made as part of the Environmental Assessment, SMA Permit-and County-initiated land use processes.

8. <u>Public Participation</u>

Objective:

Stimulate public awareness, education, and participation in coastal management.

Policies:

- (A) Promote public involvement in coastal zone management processes;
- (B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
- (C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Response: Public awareness and participation are being facilitated through the Chapter 343, HRS process, as well as the County's permitting and review process as discussed above.

It is noted that the land use entitlement processes to be initiated by the County of Maui will also provide public participation opportunities.

9. <u>Beach Protection</u>

Objective:

Protect beaches for public use and recreation.

Policies:

- (A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
- (B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in

improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The proposed project is located well beyond the vicinity of the shoreline area and is not anticipated to affect natural beach processes.

10. Marine Resources

Objective:

Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

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

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

Response: The project is not located in the vicinity of the shoreline. The use of appropriate BMPs and drainage designs will mitigate any potential impacts to marine resources.

Chapter IV

Summary of Unavoidable Impact on the Environment and Resources

IV. SUMMARY OF UNAVOIDABLE IMPACT ON THE ENVIRONMENT AND RESOURCES

Project construction will result in a certain amount of unavoidable construction-related impacts. These impacts include noise-generated impacts and air quality impacts associated with the operation of construction equipment. Air quality will also be impacted by dust generated from site work. The construction-related impacts will be temporary and mitigated through implementation of appropriate BMPs.

The development of the proposed project will involve the commitment of vacant and undeveloped lands. In addition, the proposed action would involve a commitment of fuel, labor, funding, and material resources. However, the commitment of resources necessary to implement the proposed project will be justified, given the eventual benefits to be realized through the completion of the new fire station.

In the long term, the construction of the new fire station is not anticipated to create any significant, long-term adverse environmental effects.

Chapter V

Alternatives to the Proposed Action

V. ALTERNATIVES TO THE PROPOSED ACTION

A. NO ACTION ALTERNATIVE

The "no action" alternative would see the current fire station remain in use. This is deemed an undesirable alterative for several reasons. The existing station is inappropriately located such that it is forced to use the Molokai School access road during emergency trips, with potential safety hazards. In addition, the current site is subject to flooding which compromises the station's ability to perform its required duties. The current fire station has no training or educational facilities, requiring the firefighters to go off-site and off-island for these required duties. Finally, the existing station is inadequate to house the number of firefighters currently assigned to the station, a situation that will only be exacerbated if the DFPS deems it necessary to expand the Kaunakakai force.

B. <u>DEFERRED ACTION ALTERNATIVE</u>

A "deferred action" alternative would have similar consequences to the "no action" alternative in terms of compromising the DFPS ability to perform its duties in Kaunakakai safely and efficiently. This alternative could result in potentially higher development costs due to increases in labor and material costs.

C. <u>ALTERNATIVE DESIGNS</u>

Alternative site plans were also considered during the design phase of the project. These included various orientations of the fire station which would have different sections of the structure, such as the apparatus bay, directly accessed by the access roads. Alternative locations of the structure were also analyzed, such as placing the building further north, at the lowest point of the site. Considerations of proximity to the nearby residential neighborhood, site grading requirements, and placement of parking areas made the selected alternative most desirable.

Chapter VI

Findings and Conclusions

VI. FINDINGS AND CONCLUSIONS

The significance criteria of Section 12, of the Administrative Rules of Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed project will have a significant adverse impact to the environment. The following analysis is provided.

1. No Irrevocable Commitment to Loss or Destruction of any Natural or Cultural Resources Would Occur as a Result of the Project

No significant natural or cultural resources have been identified on the subject property. Refer to Appendix "B-1". The State Historic Preservation Division (SHPD) concurred that development of the area will have no impact on historic sites. Refer to Appendix "B-2". Should there be unanticipated finds of culturally significant material during project construction, the SHPD will be notified and appropriate mitigative measures implemented in accordance with SHPD program requirements.

2. <u>The Proposed Action Would Not Curtail the Range of Beneficial Uses of the Environment</u>

The project site is not anticipated to result in adverse environmental impacts. There will be no consequent curtailment of uses of the environment resulting from the proposed action.

3. <u>The Proposed Action Does Not Conflict with the State's Long-Term Environmental Policies or Goals or Guidelines as Expressed in Chapter 344, Hawaii Revised Statutes</u>

The State's Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes (HRS). The proposed action is in consonance with the policies and guidelines of Chapter 344, HRS. The loss of approximately 5 acres of agricultural lands is not deemed significant when compared to the public safety needs addressed by the new fire station.

4. The Economic or Social Welfare of the Community or State Would Not Be Substantially Affected

The proposed action would provide a direct, short-term economic benefit to the community during the construction phase. There are no adverse long-term economic or social welfare impacts associated with the proposed action.

5. The Proposed Action Does Not Affect Public Health

The new fire station would have a direct, positive impact to public health, as the DFPS will be able to fulfill its goals more capably both in emergency protection and educational outreach. No adverse impacts to public health are anticipated to result from the proposed action.

6. <u>No Substantial Secondary Impacts, Such as Population Changes or</u> Effects on Public Facilities are Anticipated

The proposed action is not deemed a population generator. There are also no anticipated adverse effects upon public services, such as police, medical, educational, or waste collection services. Beneficial impacts to fire protection services are anticipated to result from the new fire station.

7. No Substantial Degradation of Environmental Quality is Anticipated

During project implementation, appropriate measures will be utilized to mitigate potential adverse environmental impacts. The proposed action will have no substantial impact to environmental quality.

8. The Proposed Action Does Not Involve a Commitment to Larger Actions, Nor Would Cumulative Impacts Result in Considerable Effects on the Environment

The proposed action is not part of or linked to any larger action. The proposed project is not anticipated to create any considerable effect upon

the environment.

9. <u>No Rare, Threatened or Endangered Species or Their Habitats Would Be Adversely Affected By the Proposed Action</u>

There are no identified rare, endangered, or threatened species or habitats within the project vicinity. Thus, there should be no impact from the proposed action. As appropriate, construction equipment brought from off-island will be cleaned to ensure that there is no importation of invasive species.

10. <u>Air Quality, Water Quality or Ambient Noise Levels Would Not Be</u> <u>Detrimentally Affected by the Proposed Project</u>

During the construction of the new fire station, there may be short-term impacts to air and noise quality. Appropriate BMP's will be implemented to minimize these short-term impacts, which will not extend into the long term. No impacts to water quality are anticipated.

11. The Proposed Project Would Not Affect Environmentally Sensitive Areas, Such as Flood Plains, Tsunami Zones, Erosion-prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters

The subject property is not located in or adjacent to any environmentally sensitive areas. Potential impacts to wetland areas downstream of the property will be mitigated through appropriate BMPs during construction-related activities, as well as drainage improvements.

12. <u>The Proposed Action Would Not Substantially Affect Scenic Views and Viewplanes Identified in County Plans or Studies</u>

The proposed action is not anticipated to result in substantive, adverse impacts to identified scenic vistas or viewplanes. The property is overgrown, with kiawe. It is noted that the tower of the proposed facility will be approximately 43-feet, 10-inches in height. This height exceeds

the permitted height standard of 35 feet set forth by the Public/Quasi-Public zoning district. An application for a height variance will be filed for the tower. The proposed fire station is set in a rising topographic backdrop, fitting into a hillside. There are no residences or public view areas on the adjoining mauka slopes which would have viewplanes impacted.

13. <u>The Proposed Action Would Not Require Substantial Energy</u> <u>Consumption</u>

The proposed action will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this is not anticipated to result in any substantial consumption of energy. The new fire station is also not anticipated to require any substantial energy consumption in the long term.

In conclusion, based on the foregoing findings, the proposed action is not anticipated to result in significant adverse impacts.

Chapter VII

List of Permits and Approvals

VII. LIST OF PERMITS AND APPROVALS

The following permits and approvals will be required prior to the implementation of the project.

County of Maui

- 1. County Change in Zoning
- 2. Community Plan Amendment
- 3. Construction Permits (Grubbing, Grading and Work to Perform on County Highway)
- 4. Height Variance

State of Hawaii

1. State Land Use Commission District Boundary Amendment

Chapter VIII

Agencies Consulted During the Preparation of the Draft Environmental Assessment; Letters Received and Responses to Substantive Comments

VIII. AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during the preparation of the Draft Environmental Assessment. Comment letters received, as well as responses to substantive comments are contained in this chapter. In addition, a public information meeting on the proposed action was held in Kaunakakai on March 9, 2005.

- Ranae Ganske-Cerizo, Soil Conservationist
 Natural Resources Conservation Service
 U.S. Department of Agriculture 210 Imi Kala Street, Suite 209 Wailuku, Hawaii 96793-2100
- George Young, P.E.
 Chief Regulatory Branch
 U.S. Department of the Army
 U.S. Army Engineer District,
 Honolulu
 Building 230
 Fort Shafter, Hawaii 96858-5440

1 .

: 1

- Paul Henson, Ph.D.
 Field Supervisor
 U. S. Fish and Wildlife Service
 300 Ala Moana Blvd.
 Rm. 3-122, Box 50088
 Honolulu, Hawaii 96813
- Ted Liu, Director
 State of Hawaii
 Department of Business,
 Economic Development &
 Tourism
 P. O. Box 2359
 Honolulu, Hawaii 96804

- 5. Mary Lou Kobayashi, Planning Program Administrator State of Hawaii

 Office of Planning
 P. O. Box 2359
 Honolulu, Hawaii 96804
- 6. Patricia Hamamoto
 State of Hawaii
 Department of Education
 P. O. Box 2360
 Honolulu, Hawaii 96804
- 7. Ken Nomura
 Complex Area Superintendent
 Department of Education
 54 High Street, 4th Floor
 Wailuku, Hawaii 96793
- 8. Denis Lau, Chief
 Clean Water Branch
 State of Hawaii
 Department of Health
 919 Ala Moana Blvd., Room 300
 Honolulu, Hawaii 96814
- D. Herbert Matsubayashi
 District Environmental Health
 Program Chief
 State of Hawaii
 Department of Health
 54 High Street
 Wailuku, Hawaii 96793

10.	Peter Young, Chairperson State of Hawaii Department of Land and Natural	17.	Glenn Correa, Director County of Maui Department of Parks and	
	Resources		Recreation	
	P. O. Box 621		700 Hali'a Nakoa Street, Unit 2	
	Honolulu, Hawaii 96809		Wailuku, Hawaii 96793	
11.	Melanie Chinen, Administrator	18.	Thomas Phillips, Chief	
	State of Hawaii		County of Maui	
	Department of Land and Natural		Police Department	4
	Resources		55 Mahalani Street	
	State Historic Preservation		Wailuku, Hawaii 96793	
	Division			
	601 Kamokila Blvd., Room 555	19.	Milton Arakawa, Director	.,
	Kapolei, Hawaii 96707		County of Maui	
			Department of Public Works	
12.	Rodney Hiraga, Director		and Environmental Management	
	State of Hawaii		200 South High Street	
	Department of Transportation		Wailuku, Hawaii 96793	
	869 Punchbowl Street			***
	Honolulu, Hawaii 96813	20.	Kyle Ginoza, Director	
	cc: Fred Cajigal		County of Maui	
			Department of Transportation	ú
13.	Clyde Namu'o, Administrator		200 South High Street	
	Office of Hawaiian Affairs		Wailuku, Hawaii 96793	
	711 Kapiolani Boulevard, Suite 500	04	O T D: (
	Honolulu, Hawaii 96813	21.	George Tengan, Director	1
	Cod Kaupalala Chief		County of Maui	
14.	Carl Kaupalolo, Chief County of Maui		Department of Water Supply	
	Department of Fire and Public		200 South High Street Wailuku, Hawaii 96793	F
	Safety		Walluku, Hawali 30755	
	200 Dairy Road	22.	Neal Shinyama, Manager -	
	Kahului, Hawaii 96732		Engineering	
			Maui Electric Company, Ltd.	
15.	Alice Lee, Director		P. O. Box 398	
	County of Maui		Kahului, Hawaii 96732	•
	Department of Housing and			
	Human Concerns	23.	Donna Haytko-Paoa, Coordinator	
	200 S. High Street		Maui Community College	6
	Wailuku, Hawaii 96793		Molokai Education Center	
			375 Kamehameha V Highway	٠
16.	Michael W. Foley, Director		P. O. Box 440	
	County of Maui		Kaunakakai, Hawaii 96748	
	Department of Planning			
	250 South High Street			
	Wailuku, Hawaii 96793			

•

e. -- 1



[]

f:

{ ;

L

U. S. ARMY ENGINEER DISTRICT, HONOLULU FT. SHAFTER, HAWAII 96858-5440

March 3, 2005

Regulatory Branch

REPLY TO ATTENTION OF

Mr. Michael T. Munekiyo, A.I.C.P Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

This responds to your request dated February 25, 2005, for comments to be included in a draft Environmental Assessment for the proposed Kaunakakai Fire Station (TMK 5-3-03: 015), Molokai Island. Based on the information provided, I have determined that this location is in an upland area, and outside the limit of our jurisdiction. Therefore a Department of Army (DA) permit will not be required. However, should construction activities necessitate the side-casting or placement of fill material into potential wetlands, consultation should take place with this office to determine if a Department of Army (DA) permit may then be required.

File Number POH-2005-137 has been assigned to this project. Please feel free to contact Mr. Farley Watanabe of my staff at 438-7701, if you have additional questions.

Sincerely,

George P. Young, P.E. Chief, Regulatory Branch



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

₹.;

1.4

April 6, 2006

George Young, Chief

Department of the Army

Regulatory Branch

U. S. Army Engineer District, Honolulu

Building 230

Ft. Shafter, Hawaii 96858

SUBJECT: Early Consultation Comments on the Proposed Fire Station at Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Young:

Thank you for your letter of March 3, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. We acknowledge your confirmation that the project, as currently proposed, will not require a Department of the Army permit. We further acknowledge that further consultation with your office may be required if any side-casting or placement of fill material into potential wetlands is proposed as part of the project.

Thank you again for providing your input to the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

OutCK

Tara K. Nakashima, Planner

TKN:yp

cc: Greg Jenkins, Department of Fire and Public Safety

F:\DATA\COMFireKkaltermy.res.wpd

planning

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com



1

[:

t.

13

4:

1 !

T,

[]



STATE OF HAWAI'I

DEPARTMENT OF EDUCATION

P.O. BOX 2360 HONOLULU, HAWATI 96804

OFFICE OF THE SUPERINTENDENT

March 10, 2005

Mr. Michael Munekiyo Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

Subject: Early Consultation Request

Proposed Kaunakakai Fire Station

TMK: 5-3-03: 15 (por)

The Department of Education has no comment on the early consultation request for a new fire station in Kaunakakai.

We appreciate the opportunity to respond. If you should have any questions, please call Rae Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

Patricia Hamamoto Superintendent

PH:hy

c: Rae Loui, OBS

Ron Okamura, CAS, Hana/Lahainaluna/Lanai/Molokai Complex Area

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

CHIYOME L. FUKINO, M.D. DIRECTOR OF HEALTH

LINDA LINGLE / GOVERNOR OF HAWAII



STATE OF HAWAII DEPARTMENT OF HEALTH P.O. BOX 3378 HONOLULU, HAWAII 96801-3378

In reply, picase refer to:

03030PKP.05

Ē.

€ 1

March 7, 2005

Mr. Michael Munekiyo Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

Subject: Early Consultation Request for Proposed Kaunakakai Fire Station Kaunakakai, Molokai, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), has reviewed the subject document and offers the following comments:

- 1. The Army Corps of Engineers should be contacted at (808) 438-9258 to identify whether a Federal license or permit (including a Department of Army permit) is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Control Act (commonly known as the "Clean Water Act"), a Section 401 Water Quality Certification is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..."
- 2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following activities:
 - a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).
 - b. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the commencement of the construction activities.
 - c. Discharges of treated effluent from leaking underground storage tank remedial activities.
 - d. Discharges of once through cooling water less than one (1) million gallons per day.
 - e. Discharges of hydrotesting water.

Mr. Michael Munekiyo March 7, 2005 Page 2

1:

1

1_

1

- f. Discharges of construction dewatering effluent.
- g. Discharges of treated effluent from petroleum bulk stations and terminals.
- h. Discharges of treated effluent from well drilling activities.
- i. Discharges of treated effluent from recycled water distribution systems.
- j. Discharges of storm water from a small municipal separate storm sewer system.
- k. Discharges of circulation water from decorative ponds or tanks.

The CWB requires that a Notice of Intent (NOI) to be covered by an NPDES general permit for any of the above activities be submitted at least 30 days before the commencement of the respective activities. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/index.html

- 3. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters and/or coverage of the discharge(s) under the NPDES general permit(s) is not permissible (i.e. NPDES general permits do not cover discharges into Class 1 or Class AA State waters). An application for the NPDES permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/index.html
- 4. Hawaii Administrative Rules, Section 11-55-38, also requires the applicant to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD.

If you have any questions, please contact Ms. Kris Poentis of the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

DENIS R. LAU, P.E., CHIEF

Clean Water Branch

KP:cu



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRAND

KARLYNN KAWAHARA

6.1,

April 6, 2006

Dennis Lau, Chief State of Hawaii Department of Health Clean Water Branch P. O. Box 3378 Honolulu, Hawaii 96801

SUBJECT: Early Consultation Comments on the Proposed Fire Station at Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Lau:

Thank you for your letter of March 7, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- 1. The Department of the Army has been contacted as part of the early consultation process. Coordination with that office shall continue and they will receive a copy of the Draft Environmental Assessment when that is published.
- 2. We acknowledge your comments regarding general and individual National Pollutant Discharge Elimination System (NPDES) permit requirements and functions. Appropriate NPDES permitting will be obtained for the proposed project.
- 3. The applicant will coordinate with the Department of Land and Natural Resources, State Historic Preservation Division and the Department of Health regarding NPDES notification.

environmen lannina

305 High Street, Suite 104 Wailuku, Hawaii 96793 · ph. (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com V & P 17: YY & A

Dennis Lau, Chief April 6, 2006 Page 2

Τ.,

17

Thank you again for providing your input to the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp
cc: Greg Jenkins, Department of Fire and Public Safety
FIDATAICOM/Firekkundoncorb.res.wpd

CHYOME L. FUKINO, M.
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.
DISTRICT HEALTH OFFICE P.

3-1

7

| |----| |----|

LINDA LINGLE GOVERNOR OF HAWAI



STATE OF HAWAII DEPARTMENT OF HEALTH MAUI DISTRICT HEALTH OFFICE 54 HIGH STREET WAILUKU, MAUI, HAWAII 96793-2102

SCORD, MADI, HAMAII 98/93-2

March 8, 2005

Mr. Michael Munekiyo Project Manager Munekiyo & Hiraga, Inc. 305 South High Street, Suite 104 Wailuku, Hawai'i 96793

Dear Mr. Munekiyo:

Subject:

Proposed Kaunakakai Fire Station

TMK: (2) 5-3-03: 15 (por.), Kaunakakai, Hawaii

Thank you for the opportunity to participate in the early consultation process for the environmental assessment. The following comments are offered:

- 1. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
- 2. HAR, Chapter 11-46, sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.
- National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.

Should you have any questions, please call me at 984-8230.

Sincerely,

Herbert S. Matsubayashi

District Environmental Health Program Chief



J

Ţ.

L

7

<u>r</u>

[_

Ţ

f:

MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

April 6, 2006

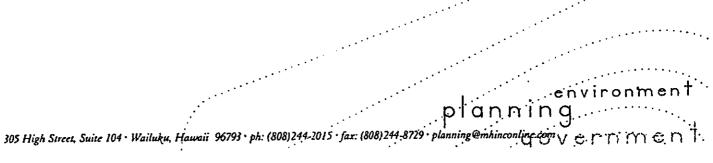
Herbert Matsubayashi, District Environmental Health Program Chief State of Hawaii Department of Health Maui District Health Office 54 High Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Matsubayashi:

Thank you for your letter of March 8, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- 1. We acknowledge that a noise permit may be required for the proposed action. The applicant shall comply with all applicable requirements of Chapter 11-46, Hawaii Administrative Rules.
- 2. Consideration will be given to the placement of construction equipment so as to attenuate the noise of their operation to the fullest extent practicable.
- 3. We acknowledge your comments regarding National Pollutant Discharge Elimination System (NPDES) permits. Appropriate permitting will be sought for the proposed project.



Herbert Matsubayashi, District Environmental Health Program Chief April 6, 2006 Page 2

Thank you again for providing your input to the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

Oak Ok

TKN:yp

CC: Greg Jenkins, Department of Fire and Public Safety

FAX (808) 594-1865



STATE OF HAWAI'I OFFICE OF HAWAIIAN AFFAIRS

711 KAPI'OLANI BOULEVARD, SUITE 500 HONOLULU, HAWAI'I 96813

HRD05/1754

March 22, 2005

11

1)

EÌ

Michael Munekiyo Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawai'i 96793

Re: Early Consultation Request, Proposed Kaunakakai Fire Station, Kaunakakai, Island of Molokai TMK: 5-3-003:015 (por.)

Dear Mr. Munekiyo:

The Office of Hawaiian Affairs (OHA) is in receipt of your request for early consultation regarding a proposed fire station in Kaunakakai on the Island of Molokai.

The proposed fire station and associated improvements do not appear to adversely impact any known native Hawaiian rights, resources or practices in the area. An archaeological assessment of the affected parcel should occur with associated research to determine the likelihood of adversely impacting any buried cultural deposits including unmarked human burial sites.

Please contact our Molokai representative of OHA, Irene Kaahanui, at 560-3963 for additional contacts and information regarding the subject area. OHA would request to be kept abreast and informed of any further actions concerning this particular initiative.

If you have any questions or concerns, please contact Kai Markell, Policy Advocate, at 594-1945 or kaim@oha.org. Once again, thank you for your patience during our review and assessment of this important matter.

'O wau iho no,

Clyde W. Nāmu'o Administrator



MICHAEL T. MUNEKIYO " GWEN OHASHI HIRAGA MITSURU "MICH" HIRAND

KARLYNN KAWAHARA

April 6, 2006

Clyde Namu'o, Administrator State of Hawaii Office of Hawaiian Affairs 711 Kapiolani Boulevard, Suite 500 Honolulu, Hawaii 96813

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Namu'o:

Thank you for your letter of March 22, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- An archaeological assessment will be performed for the subject property. The 1. assessment will be included in the Draft Environmental Assessment.
- As appropriate, we will coordinate with the Molokai representative of your office. 2.
- In order to keep your office informed of the project, a copy of the Draft Environmental Assessment will be provided to your office for review and comment. 3.

Thank you again for providing your input to the proposed action.

Very truly yours, Onk. Ok.

Tara K. Nakashima, Planner

TKN:yp

Greg Jenkins, Department of Fire and Public Safety

Erik Fredricksen, Xamanek Researches

F-IDATA/COM/FireMosiloha.res.wpd

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com

LINDA LINGLE GOVERNOR

1

; :

1.

1.

17

1

 $\mathbf{L}_{\mathbf{B}}$

 Γ_{-1}^{-1}



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION 869 PUNCHBOWL STREET HONOLULU, HAWAII 96813-5097

March 21, 2005

APR 0 7 2005 RODNEY K. HARAGA DIRECTOR

Deputy Directors BRUCE Y. MATSUI BARRY FUKUNAGA BRENNON T. MORIOKA BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1659

Mr. Michael T. Munekiyo, A.I.C.P. Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

Subject: Kaunakakai Fire Station

Early Consultation for Draft Environmental Assessment (DEA)

TMK: 5-3-03: 15 (por.)

Thank you for your transmittal requesting our comments on the subject project.

The applicant should coordinate the project drainage report and construction plans with our Highways Division Maui District Office to ensure that no additional storm water runoff will occur in the State Highway right-of-way.

We appreciate the opportunity to provide comments.

Very truly yours,

RODNEY K. HARAGA Director of Transportation



MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

 $|\tilde{a}_{i}|,|f_{i}^{\prime}$

April 6, 2006

Rodney Haraga, Director State of Hawaii Department of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Haraga:

Thank you for your letter of March 21, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. The Department of Fire and Public Safety will coordinate with the Maui District Office regarding the drainage report and construction plans and ensure that no additional stormwater runoff will occur in the State highway right-of-way.

Thank you again for your comments. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp

cc: Greg Jenkins, Department of Fire and Public Safety FADATANCOM/FIRE AND ADDRESS OF THE PROPERTY OF THE PROP

planning

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconling.com

3

1

1

1

 \mathbf{J}

T.

DEPARTMENT OF

HOUSING AND HUMAN CONCERNS **COUNTY OF MAUI**

ALICE L. LEE Director

ALAN M. ARAKAWA

HERMAN T. ANDAYA Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

March 4, 2005

Mr. Michael Munekiyo Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

SUBJECT: EARLY CONSULTATION REQUEST FOR PROPOSED KAUNAKAKAI FIRE STATION

In response to your February 25, 2005 request, we have reviewed the project overview for the proposed Kaunakakai Fire Station and would like to convey our support of the proposed project.

Thank you for the opportunity to comment.

ALICE L. LEE Director

ETO:hs

Housing Administrator



MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

72.1

9.

4 1

April 6, 2006

Alice Lee, Director County of Maui **Department of Housing** and Human Concerns 200 South High Street Wailuku, Hawaii 96793

> SUBJECT: Early Consultation Comments on the Proposed Fire Station at Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Ms. Lee:

Thank you for your letter of March 4, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. We acknowledge and appreciate your support for the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp

Greg Jenkins, Department of Fire and Public Safety

com/firekka/dhhc.res

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline

ALAN M. ARAKAWA Mayor MICHAEL W. FOLEY Director WAYNE A. BOTEILHO

Deputy Director

1

1:



COUNTY OF MAUI DEPARTMENT OF PLANNING

March 18, 2005

Mr. Michael Munekiyo, AICP Munekyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

RE: Preconsultation Comments in Preparation of a Draft Environmental Assessment for the Proposed Kaunakakai Fire Station Located at TMK: 5-3-003: 015 (portion), Kaunakakai, Island of Molokai, Hawaii (EA 2005/0003) (DBA 2005/0002) (CIZ 2005/0001) (CPA 2005/0002)

At its regular meeting on March 9, 2005, the Molokai Planning Commission (Commission) reviewed the above-referenced request and provides the following comments:

- 1. Discuss whether the Department of Fire and Public Safety (DFPS) anticipate hiring female firefighters and how will the facility accommodate their needs?
- 2. Discuss sewer treatment options. Does the wastewater reclamation facility have sufficient capacity to handle the proposed facility?
- Discuss potential impacts and proposed mitigative measures to manage any toxic, hazardous, bio-hazardous substances that may enter the wastewater or stormwater systems of the facility. Discuss impacts to surface waters, coastal waters, and the underlying aquifer.
- Discuss whether the accreditation program proposed for the new facility also be applied to other existing fire stations located on Molokai.
- 5. Discuss how the proposed facility will interface with potentially major catastrophic events at the Molokai Airport.

- Provide a view analysis of the proposed facility. The analysis should 6. include views impacted from the highway, adjacent properties, and stakeholders.
- The following stakeholders should be advised of the proposed project: 7.

[kid]

E. |

31

3.1

Ų.

. |

: 1

: 1

11

- Maui Community College, Molokai Education Center; a.
- Kuleana land holders; b.
- Department of Hawaiian Homelands (DHHL); C.
- Bishop Museum; d.
- Hawaiian Research (corn fields); e.
- Kapaakea Homesteaders; f.
- Kapuna in the district regarding sites, trails and access; and g.
- Preschool Maui Economic Opportunity (MEO) h.

Include a summary of any discussions and concerns.

- Discuss whether Molokai residents receive preferential selection for 8. employment at the Department.
- Provide a topographic map showing the relation of the Pu'u to the 9. proposed facility.
- Discuss how the facility will meet the needs of Molokai firefighters, 10. and if they will still need to travel to Maui for training.
- Discuss how and where tower training is currently conducted on 11. Molokai.
- Drainage 12.
 - Identify stormwater flows for the area on plans/maps and the a. final discharge point.
 - Provide hydrology maps. b.
 - Provide plans of the County's overall stormwater drainage C. system.
 - Discuss how the proposed drainage and mitigation plan meets d. the U.S. Environmental Protection Agency's (EPA) guidelines for stormwater drainage.

1...

1

 Γ

F. 3

f:

1...

 Γ

1:

- 13. Discuss potential impacts to the Kapaakea Cemetery.
- 14. Discuss the wetland fronting the highway and potential impacts from the proposed project.
- 15. Provide a Cultural Impact Assessment.
- 16. Discuss how the proposed project will address future growth and needs. Discuss how the site plan has accommodated for future expansion within the five (5) acre area. The Commission recommends developing a Memorandum of Understanding or Agreement (MOU/A) with Molokai Ranch to obtain additional lands for future development, if needed.
- 17. Provide a landscape planting plan.
- 18. Provide a discussion and include plans that indicate grading activities required along the street.
- 19. Clarify whether heavy equipment that must be shipped into Molokai will be required for the proposed project. If the equipment is required, discuss mitigative measures to ensure the equipment is cleaned and decontaminated to prevent the spread of invasive species.
- 20. Provide the specifications for the proposed fuel tanks and storage area. Provide a discussion of the safety protocol and mitigative measures for potential explosions and leaks.
- 21. Provide the specifications on the decontamination station of the proposed building.
- 22. The U.S. Army Corps of Engineers (USACE) proposes a project in the area to the east of the current exit road of the college. As such, the Commission recommends consulting with USACE.

The Commission indicated a general support of the proposed project as a public facility and further recognized their role and responsibility to ensure the project is implemented appropriately.

Public testimony received during the meeting expressed a general support of the proposed project. One (1) letter of testimony was received during the meeting (see attached). In addition, the following comments were provided:

Mr. Michael Munekiyo, AICP March 18, 2005 Page 4

- Discuss noise impacts to neighboring residents both during and post 1. construction.
- Discuss proposed energy conservation measures. 2.
- 3. Discuss drainage impacts to the Kapaakea Homesteaders.
- Recommend using native plants adapted to the area in the landscape 4. planting plan.

41

\$ 1

Thank you for your cooperation. If additional clarification is required, please contact Ms. Kivette A. Caigoy, Environmental Planner, of this office at 270-7735.

MICHAEL W. FOLEY Planning Director

MWF:KAC:do

Wayne A. Boteilho, Deputy Planning Director Clayton I. Yoshida, AICP, Planning Program Administrator Councilmember Danny Mateo Kivette A. Caigoy, Environmental Planner Robyn L. Loudermilk, Staff Planner Greg Jenkins, Fire Department Neal Bal, Fire Department **EA Project File** General File

K:\WP_DOCS\PLANNING\EA\2005\0003_KaunakakaiFireStn\MoPCCommentsPrecon.wpd



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

April 7, 2006

Michael Foley, Director County of Maui Department of Planning 250 South High Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Foley:

1

] `

f '

1

13

Thank you for your letter of March 18, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. Our responses have been numbered to correspond with the comments in your letter.

- 1. The Department of Fire and Public Safety (DFPS) encourages female firefighter applicants to join the force. Female firefighters will have equal opportunity to be stationed in the new fire station as male firefighters. The DFPS notes that two (2) female recruits are in the new recruit class.
- 2. The Draft Environmental Assessment (EA) will address wastewater issues, including a discussion of the appropriate wastewater reclamation facility's capacity, anticipated wastewater generated by the proposed project, and an analyses of potential wastewater impacts posed by the project.
- The Draft EA will address potential impacts posed by toxic or hazardous materials resulting from the proposed project. It is noted that the State Department of Health will be consulted as part of the EA process.
- 4. The accreditation discussed at the March 9, 2005 Molokai Planning Commission meeting is not station-specific, but would, rather apply to the DFPS as a whole. It is the DFPS's hope that the proposed Kaunakakai Fire Station may be an important first step in achieving accreditation for the Department.
- 5. The Hoolehua Fire Station addresses the district of the island that includes the airport and is the primary responder in case of emergencies. However, the DFPS's

planning

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808) 244-2015 · fax: (808) 244-8729 · planning@mhinconline.com v ernment.

response plans include the utilization of all three (3) Molokai fire stations, which perform integrated training in regards to responding to airport emergencies.

- 6. The Draft EA will discuss potential impacts to scenic views and visual resources and mitigation measures. It is noted that the project area is heavily overgrown with limited visual penetration from surrounding properties.
- 7. A copy of the Draft EA will be sent to the listed parties. It is noted that early consultation comments were solicited from the Molokai Education Center and a representative from the Kapaakea Homesteaders.
- 8. Assignment to the new fire station will be provided on an equal opportunity basis, as with all Maui County fire stations. However, it is the DFPS's desire for Molokai residents to be posted to the new fire station.
- 9. A topographic map showing the new fire station and the nearby Pu'u will be included in the Draft EA.
- 10. The Draft EA will discuss the functions of and the need for the new fire station.
- 11. The DFPS is unable to perform tower training on Molokai at present. In the past, the DFPS has performed training exercise off of the Manawainui Gulch Bridge, as well as other outcroppings, but this practice has been discontinued for safety reasons. In order for the Molokai firefighters to receive equal training to those of Maui, they must travel to Maui for tower training. The proposed tower of the new fire station would end that need.
- 12. The Draft EA will include a Preliminary Drainage Report which will discuss and represent stormwater flows. The Draft EA will also discuss potential impacts from and mitigation measures for stormwater runoff. In addition, a National Pollutant Discharge Elimination System permit will be secured through the State Department of Health. Appropriate BMPs will be identified and implemented to mitigate stormwater drainage impacts.
- 13. Potential impacts to surrounding areas will be addressed in the Draft EA.
- 14. The wetlands area fronting the Kamehameha V Highway will be discussed in the Draft EA, as well as any potential impacts to it from the proposed project.
- 15. A Cultural Impact Assessment will be included in the Draft EA.

13

1

£ 3

11

1.

- 16. The Draft EA will discuss how the proposed fire station's design will be modular and allow for the potential expansion of the facilities staff and equipment. The DFPS has determined that the size of the proposed fire station site is adequate for any foreseeable expansion of the island's population or area service limits.
- 17. A landscape plan will be included in the Draft EA.
- 18. Grading plans will be prepared during the building permitting process of the proposed project. The Draft EA will include discussion of potential impacts to the project area topography.
- 19. Construction specifics, such as the equipment required for project implementation, will be determined when the project plans are finalized, prior to the building permitting process.
- 20. More information on the proposed fuel tanks will be included in the Draft EA.
- 21. The decontamination station will be discussed in the Draft EA.
- 22. A copy of the Draft EA will be sent to the U.S. Army Corps of Engineers.
- 23. Impacts to and mitigation measures for noise quality will be discussed in the Draft EA.
- 24. Any proposed energy conservation measures will be discussed in the Draft EA.
- 25. As noted in No. 12 above, potential drainage impacts will be discussed in the Draft EA.
- 26. The DFPS acknowledges the recommendation regarding the use of native plants adapted to the area in the landscaping plan.

Thank you again for your comments. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp

CC: Greg Jenkins, Department of Fire and Public Safety

ALAN M. ARAKAWA Mayor



MAR 11 2005 — GLENN T. CORREA Director

4....

7

JOHN L. BUCK III Deputy Director

(808) 270-7230 Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

March 9, 2005

Mr. Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

SUBJECT: PROPOSED KAUNAKAKAI FIRE STATION

We have reviewed the proposed project and have no comments to offer at this time.

Thank you for the opportunity to review and comment. Please feel free to contact me or Mr. Patrick Matsui, Chief of Planning and Development at 270-7387, should you have any questions.

Sincerely,

GLENN T. CORREA

Director

c: Patrick Matsui, Chief of Planning and Development



<u>T</u>,

1.

5

!

(

Γ.

L

ALAN M. ARAKAWA MAYOR

OUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET WAILUKU, HAWAII 96793 (808) 244-6400 FAX (808) 244-6411 APR 2 9 2005

THOMAS M. PHILLIPS CHIEF OF POLICE

KEKUHAUPIO R. AKANA DEPUTY CHIEF OF POLICE

April 21, 2005

Mr. Michael T. Munekiyo, A.I.C.P. Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, HI 96793

Dear Mr. Munekiyo:

SUBJECT: Early Consultation Request for Proposed Kaunakakai Fire Station

Thank you for your letter of February 25, 2005, requesting comments on the above subject.

We have reviewed the information submitted for this project and have enclosed our comments and recommendations. We apologize for the delay and thank you for giving us the opportunity to comment on this project.

Very truly yours,

Assistant Chief Sydney Kikuchi for: Thomas M. Phillips
Chief of Police

c: Michael Foley, Planning Department

Enclosure

COPY

TO: THOMAS PHILLIPS, CHIEF OF POLICE, MAUI POLICE DEPARTMENT

VIA : CHANNELS -04/19/05

FROM: GREGG OKAMOTO, SERGEANT, DISTRICT V PATROL

SUBJECT: EARLY CONSULTATION REQUEST FOR PROPOSED KAUNAKAKAI FIRE STATION

Sir, the following are my comments in response to a request by Michael MUNEKIYO of MUNEKIYO & HIRAGA, INC. regarding early consultation on the proposed action.

Early consultation is requested in order to initiate an Environmental Assessment for the proposed action pursuant to Chapter 343, Hawaii Revised Statutes.

Overview of proposed action:

The County of Maui Department of Fire and Public Safety proposes the construction of a new fire station at Kaunakakai, Molokai, on an approximately three to five acre parcel located along Alanui Ka 'Imi 'Iki near the intersection with Kakalahale Street. The lands to the northwest of the property are in single-family residential use, while lands to the south are in agricultural use. The existing fire station is located approximately one-half mile to the east in downtown Kaunakakai.

The existing fire station no longer meets current fire protection standards required to service the Kaunakakai community. In addition, the existing fire station is subject to flooding which is disruptive to operations.

The project site is currently designated "Agricultural" by the state, and "Public/Quasi-public" and "Open Space" by the Molokai Community Plan. County zoning is "Interim". The state must amend boundary to establish the "Urban" district designation and the community plan must be amended to fully designate the site for "Public/Quasi-Public" use and the zoning must be changed to establish "Public/Quasi-Public" designation.

My assessment, based on the project overview provided by MUNEKIYO, raises the following concerns for both vehicle and pedestrian traffic:

- 1. The proposed site is near the intersection of Alanui Ka 'Imi 'Ike and Kakalahale Street, a residential area (Ranch Camp). Currently there are no crosswalks at the intersection. The new fire station will increase both vehicle and pedestrian traffic in the area.
- 2. There are no sidewalks along Alanui Ka 'Imi 'Ike which, again, will need to be addressed in response to the increase in vehicle and pedestrian traffic.

PAGE 2

1

\$

(

ſ.

f .

£.

<u>['</u>

17

- 3. The proposed access driveway at the property's northern extent appears to be in close proximity to the intersection of Kakalahele Street. This may be an issue of vehicle traffic congestion as Alanui Ka 'Imi 'Ike has become a main thoroughfare in and out of the Ranch Camp area.
- 4. The posting of signs along Alanui Ka 'Imi 'Ike in regards to speed limit, pedestrians crossing, restricted/no parking, etc.

Some positive aspects of the proposed action:

- 1. The existing lanes on Alanui Ka 'Imi 'Ike are approximately 12' wide and will accommodate emergency vehicles.
- 2. The asphalt shoulders along Alanui Ka 'Imi 'Ike are approximately 6' wide which would allow a wide berth for sidewalks.
- 3. There are existing speed humps on Alanui Ka 'Imi 'Ike near the intersection with Kakalahale Street and Kamehameha V Highway.
- 4. The proposed site would allow for a less obtrusive response by emergency vehicles as the current station is located in the heart of Kaunakakai town.
- 5. The new station location will provide a more direct route and quicker access to Kamehameha V Highway which connects both ends of the island.
- 6. The new heli-pad will eliminate the need for police to temporarily shut down Ainoa Street in order to clear a landing zone for emergency helicopters.
- 7. The elevated site will eliminate flooding during heavy rains.

This communication is being respectfully submitted for your perusal.

LT. CYM KILL

GREGG OKAMOTO E10856 04/12/05 @0115 HOURS

THE DENOUNCE POR CHINESE CONTINUES C



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

2.1

April 7, 2006

Thomas Phillips, Chief County of Maui Police Department 55 Mahalani Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Chief Phillips:

Thank you for your letter of April 21, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note that the proposed project is still in the conceptual stages and consideration of such elements as crosswalks and street signage is ongoing. The new fire station is anticipated to result in minimal increases in vehicle and pedestrian traffic in the project area. The new fire station will be staffed by approximately 18 people. The existing facility receives minimal visitors; the new facility is expected to accommodate educational, community outreach programs, but these are not anticipated to result in more than approximately 55 visitors at any one time.

Given the above, the Department of Fire and Public Safety (DFPS) does not anticipate adverse impacts to pedestrian and traffic operations in the project area in general. As noted in the Police Department comments, the location of the proposed station represents an improved condition with respect to emergency vehicle access and response parameters.

environment

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com

Thomas Phillips, Chief April 7, 2006 Page 2

13

[]

Thank you again for your comments. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

On F. CA

TKN:yp

CC: Greg Jenkins, Department of Fire and Public Safety

46.4

1 -1

5 1

ALAN M. ARAKAWA Mayor

MILTON M. ARAKAWA, A.I.C.P. Director

MICHAEL M. MIYAMOTO Deputy Director

Telephone: (808) 270-7845 Fax: (808) 270-7955



COUNTY OF MAUI DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL MANAGEMENT

200 SOUTH HIGH STREET, ROOM 322 WAILUKU, MAUI, HAWAII 96793

May 11, 2005

RALPH NAGAMINE, L.S., P.E. Development Services Administration

TRACY TAKAMINE, P.E. Wastewater Reclamation Division

CARY YAMASHITA, P.E. Engineering Division

BRIAN HASHIRO, P.E. Highways Division

Solid Waste Division

Mr. Michael Munekiyo MUNEKIYO & HIRAGA, INC. 305 High Street, Suite 104 Wailuku, Maui, Hawaii 96793

Dear Mr. Munekiyo:

SUBJECT: EARLY CONSULTATION

PROPOSED KAUNAKAKAI FIRE STATION

TMK: (2)5-3-003:015 (POR.)

We reviewed the subject application and have the following comments:

- 1. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with building codes. We will review the project for building code requirements during the building permit application process.
- 2. The architect and owner are advised that the project is subject to possible tsunami and flood inundation. As such, said project must conform to Ordinance No. 1145, pertaining to flood hazard districts.
- A 30 foot radius shall be provided at the intersection of the proposed driveway and the adjoining subdivision roads and State roads.
- 4. A verification shall be provided by a Registered Civil Engineer that the grading and runoff water generated by the project will not have an adverse effect on the adjacent and downstream properties.

Mr. Michael Munekiyo May 11, 2005 Page 2

f

- 5. A detailed and final drainage report and a Best Management Practices (BMP) Plan shall be submitted with the grading plans for review and approval prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion and sedimentation to the maximum extent practicable.
- 6. All existing features such as structures, driveways, drainage ways, edge of the pavement, etc. shall be shown on the project plat plan.
- 7. A site plan and a sight distance report to determine required sight distance and available sight distance at existing and proposed street intersections shall be provided for our review and approval.
- 8. A detailed final Traffic Impact Assessment Report for the entire development shall be submitted for our review and approval. The report shall also address regional traffic impacts and include assessments from the local community police officer.
- 9. The subject project shall comply with Title 18 (Subdivision Ordinance) of the Maui County Code.
- 10. All grading/grubbing work for the subject project shall comply with Chapter 20.08 (Soil Erosion and Sedimentation Control) of the Maui County Code. Best Management Practices shall be implemented to the maximum extent practicable to prevent pollutants including dust and sediment from discharging off the project site.
- 11. Although wastewater system capacity is currently available as of March 11, 2005, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
- 12. Wastewater contribution calculations are required before building permit is issued.

Mr. Michael Munekiyo May 11, 2005 Page 3

- Developer is not required to pay assessment fees for this area at 13. the current time.
- Developer is required to fund any necessary off-site improvements 14. to collection system and wastewater pump stations.
- Plans should show the installation of a single service lateral and an 15. advance riser for each lot.
- Non-contact cooling water, condensate, etc. should not drain to the 16. wastewater system.
- Address construction waste disposal and recycling. 17.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,

MILTON M. ARAKAWA, A.I.C.P. Director

MMA:MMM:da S:\LUCA\CZM\Pro_Kaunakakai_Fire_Stn_53003015_da.wpd



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

April 27, 2006

Milton Arakawa, Director County of Maui **Department of Public Works** and Environmental Management 200 South High Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Arakawa:

Thank you for your letter of May 11, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- We acknowledge that your Department will review the project plans during the 1. building permit process for compliance with the building codes.
- As applicable, flood inundation limits will be shown on the project site plans and the 2. project will comply with Ordinance No. 1145 pertaining to flood hazard districts.
- A 30 foot radius will be provided at the driveway intersections with Alanui Ka 'Imi 3.
- A registered civil engineer will provide verification that runoff from the proposed 4. project will not have adverse effect on downstream and adjacent properties.
- A final drainage report and a Best Management Practices (BMPs) plan will be 5. submitted with the grading plans prior to the issuance of the building permit. These reports will provide all the required information and comply with the "Rules and" Design of Storm Drainage Facilities in the County of Maui."
- All existing structures shall be shown on the project plat map. 6.
- A site plan and sight distance report will be provided to your Department for review 7. and approval during the building permit application phase of work.

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808) 244-2015 · fax: (808) 244-8729 · planning@mhinconlinex.pm V & To YYY &

f :

['

- 8. The new fire station is anticipated to result in minimal increases in vehicle traffic in the project area. The new fire station will be staffed by approximately 18 people at any one time. The existing facility receives minimal visitors; the new facility is expected to accommodate educational, community outreach programs, but these are not anticipated to result in more than approximately 60 visitors at any one time. For these reasons, there are no anticipated, substantial impacts to traffic operations in the project area in general. Because of the minimal traffic impacts anticipated, a traffic study is not being prepared for the proposed project. (It is noted that traffic impacts from emergency vehicle response at the proposed new fire station location represents a significant improvement over conditions at the existing fire station site.)
- 9. The project will comply with applicable sections of Title 18 (Subdivision Ordinance) of the Maui County Code. It is noted that the proposed action involves a County-initiated Change in Zoning from "Interim" to "P-1, Public/Quasi-Public".
- 10. All grading and grubbing work for the proposed fire station will comply with Chapter 20.08 of the Maui County Code. BMPs will also be implemented to the maximum extent practicable to mitigate air and water quality impacts due to construction activities.
- 11. We acknowledge that wastewater capacity cannot be ensured until the issuance of the construction permits.
- 12. Wastewater contribution calculations will be provided prior to the issuance of the building permit.
- 13. We acknowledge that the developer is not required to pay any wastewater assessment fees at this time.
- 14. We acknowledge that the applicant may be required to fund necessary offsite improvements to wastewater systems.
- 15. The plans will show the installation of a single-service lateral and advance riser for the lot.
- 16. Non-contact cooling water and condensate will not drain into the wastewater system.
- 17. Construction waste management plans will be coordinated with your Department.

Milton Arakawa, Director April 27, 2006 Page 3

Thank you again for providing your input to the proposed action.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp cc:

 \mathbf{f}^{-1}

7 ?

7

Greg Jenkins, Department of Fire and Public Safety Steve Wong, Mitsunaga & Associates, Inc.

ALAN M. ARAKAWA MAYOR



KYLE K. GINOZA
Director
DON A. MEDEIROS
Deputy Director
Telephone (808) 270-7511
Facsimile (808) 270-7505

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI 200 South High Street Wailuku, Hawaii, USA 96793-2155

March 16, 2005 Mr. Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street Suite 104 Wailuku, HI 96793 SUBJECT: Early Consultation Request for Proposed Kaunakakai Fire Station Dear Mr. Munekiyo, In response to your letter regarding the above subject matter, we have reviewed the project overview and location maps and have no comments to add at this time. Should you have any questions, or require additional information, please feel free to contact our office at 270-7511. Sincerely, Kyle K. Ginoza, Director /dcy

ALAN M. ARAKAWA Mayor

1:

f :

17

1.

f.:

1

1

ſ.,

13

1

1

f ?

\$:



GEORGE Y. TENGAN Director

JEFFREY T. PEARSON, P.E. Deputy Director

DEPARTMENT OF WATER SUPPLY

COUNTY OF MAUI

200 SOUTH HIGH STREET WAILUKU, MAUI, HAWAII 96793-2155 www.mauiwater.org

March 7, 2005

Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Re: Early Consultation Request for Proposed Kaunakakai Fire Station

Dear Mr. Munekiyo:

Thank you for the opportunity to comment on this proposal in preparation of a Draft Environmental Assessment.

Source Availability and Consumption

The project site is served by the Kaunakakai-Kawela System. Water for the system comes from the Kualapu'u and Kawela Aquifers with sustainable and developable yields of 5 MGD and 3 MGD, respectively.

In 1992, Molokai was designated a Water Management Area for groundwater by the State's Commission on Water Resource Management (COWRM) to regulate existing and future uses of Molokai's limited groundwater resources.

System Infrstructure

The project site is served by a 12-inch waterline fronting the site and a fire hydrant about 240 feet northwest of the site. The applicant will required to submit domestic and irrigation calculations to determine meter size. The applicant will also be required to submit fire flow calculations to determine adequate fire protection. Actual fire demand for the proposed structure is determined by using fire flow calculations prepared, signed and stamped by a certified engineer or architect. The approved fire flow calculation methods for use include Guidance for Determination of Fire Flow-Insurance Service Office, 1974 and Fire Flow-Hawaii Insurance Bureau, 1991. Installation of a reduced pressure back-flow preventer approved by the Department should likewise be required.

Pollution Prevention

The project site overlies the Kamiloloa Aquifer which has a sustainable and developable yield of 3 MGD. The Department strives to protect the integrity of surface and groundwater resources by encouraging the applicant to adopt best management practices (BMPs) for construction and fueling stations to minimize infiltration and runoff. Please refer to the Source Water Protection Practices Bulletin - Managing Storm Water Runoff to Prevent Contamination of Drinking Water and the BMP for fueling stations.

Conservation

We recommend that the applicant consider the following water conservation measures:

Eliminate Simple-Pass Cooling:

Single-pass water cooled systems should be eliminated per Maui County Code Subsection 14.21.20 Although prohibited by code, single-pass cooling systems are still manufactured into some models of air conditioners, freezers and commercial refrigerators.

"By Water All Things Find Life"

Printed on recycled paper (

Utilize Low-Flow Fixtures and Devices:

Maui County Code Subsection 16.20A.680 requires the use of low-flow fixtures and devices in faucets, shower-heads, urinals, water closets and hose bibs. Other water conserving devices are also available.

Maintain Fixtures to Prevent Leaks:

A simple program of repair and maintenance can prevent loss of hundreds or even thousands of gallons of water per day. Please refer to "The Costly Drip".

Utilize Climate-Adapted Plants:

The project is located in the "Maui County Planting Plan" - Plant Zone 3. Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species. Please refer to the attached brochure: "Saving Water in the Yard - What and How to Plant in Your Area".

Prevent Over-Watering By Automated Systems:

Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evaporation rates at the site. As an alternative, provide more automated, soil-moisture sensors on controllers.

1.2

Should you have any questions, please contact our Water Resources and Planning Division at 270-7199.

Sincerely,

George Tengan

Director ayi

c: Engineering Division

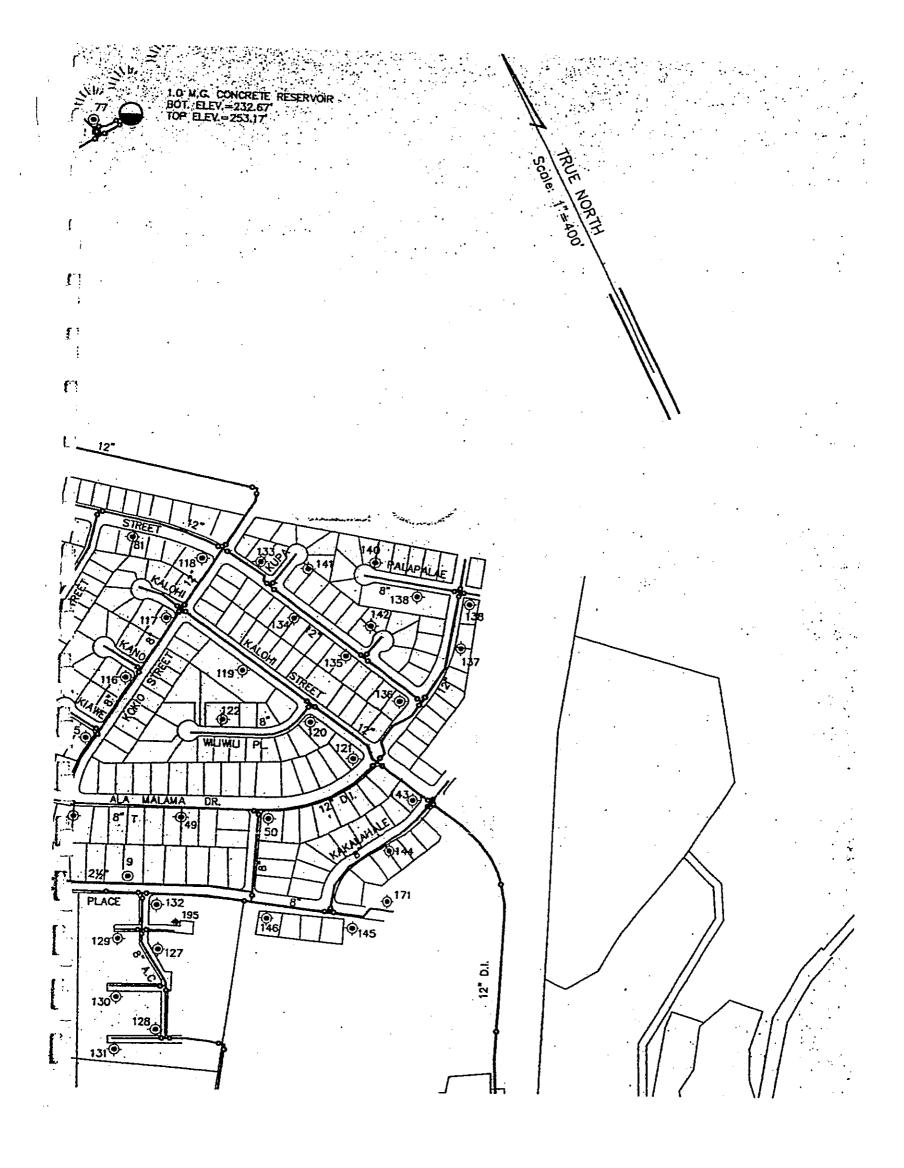
attachments:

Source Water Protection Practices Bulletin - Managing Storm Runoff to Prevent Contamination of Drinking Water

BMP on Fueling Stations

The Costly Drip

Maui County Planting Plan - Saving Water in the Yard - What and How to Plant in Your Area
Ordinance No. 2108 - A bill for an Ordinance Amending Chapter 16.20 of the County of Maui Code, Pertaining to the Plumbing Code



United States

Source Water Protection Practices Bulletin

(4606)

Office of Water

Managing Storm Water Runoff to Prevent Contamination of Drinking Water

Storm water runoff is rain or snow melt that flows off the land, from streets, roof tops, and lawns. The runoff carries sediment and contaminants with it to a surface water body or infiltrates through the soil to ground water. This fact sheet focuses on the management of runoff in urban environments; other fact sheets address management measures for other specific sources, such as pesticides, animal feeding operations, and vehicle washing.

SOURCES OF STORM WATER RUNOFF

Urban and suburban areas are predominated by impervious cover including pavements on roads, sidewalks, and parking lots; rooftops of buildings and other structures; and impaired pervious surfaces (compacted soils) such as dirt parking lots, walking paths, baseball fields and suburban lawns.

During storms, rainwater flows across these impervious surfaces, mobilizing contaminants, and transporting them to water bodies. All of the activities that take place in urban and suburban

areas contribute to the pollutant load of storm water runoff. Oil, gasoline, and automotive fluids drip from vehicles onto roads and parking lots. Storm water runoff from shopping malls and retail centers also contains hydrocarbons from automobiles. Landscaping by homeowners, around businesses, and on public grounds contributes sediments, pesticides, fertilizers, and nutrients to runoff. Construction of roads and buildings is another large contributor of sediment loads to waterways. In addition, any uncovered materials such as improperly stored hazardous substances (e.g., household



Parking lot runoff

÷ \$

cleaners, pool chemicals, or lawn care products), pet and wildlife wastes, and litter can be carried in runoff to streams or ground water. Illicit discharges to storm drains (e.g., used motor oil), can also contaminate water supplies.

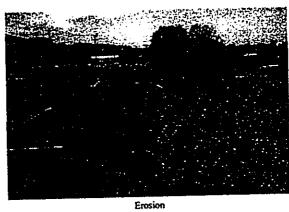
Storm water is also directly injected to the subsurface through Class V storm water drainage wells. These wells are used throughout the country to divert storm water runoff from roads, roofs, and paved surfaces. Direct injection is of particular concern in commercial and light industrial settings (e.g., in and around material loading areas, vehicle service areas, or parking

WHY IS IT IMPORTANT TO MANAGE STORM WATER RUNOFF NEAR THE SOURCES OF YOUR DRINKING WATER?

Impervious areas prohibit the natural infiltration of rainfall through the soil, which could filter some contaminants before they reach ground water. Also, impervious surfaces allow the surface runoff to move rapidly. Development reduces the amount of land available for vegetation, which can mitigate the effects of rapid runoff and filter contaminants. When the percentage of impervious cover reaches 10 to 20 percent of a watershed area, degraded water quality becomes apparent.

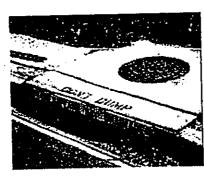
There are three primary concerns associated with uncontrolled runoff: (1) increased peak discharge and velocity during storm events resulting in flooding and erosion; (2) localized reduction in recharge; and (3) pollutant transport.

When runoff is confined to narrow spaces, such as streets, the velocity at which water flows increases greatly with depth. This contributes to erosion in areas without vegetation cover, increased flooding in low lying areas, and sedimentation in surface water bodies. Sediment deposited in streams can increase turbidity, provide transport media for pathogenic bacteria and viruses, and decrease reservoir capacity. Sediments also smother aquatic species, leading to habitat loss and decreased biodiversity of



aquatic species. The fast-running runoff is not afforded an opportunity to infiltrate into the subsurface, and ground waters are not recharged by rain events.

EPA considers nonpoint source pollution, including storm water runoff, to be one of the most important sources of contamination of the nation's waters. According to a nationwide study, 77 of 127 priority pollutants tested were detected in urban runoff. Some of the principal contaminants found in storm water runoff include heavy metals, toxic chemicals, organic compounds, pesticides and herbicides, pathogens, nutrients, sediments, and salts and other deicing compounds. Some of these substances are carcinogenic; others lead to reproductive, developmental, or other health problems that are associated with long-term exposure. Pathogens can cause illness, even from short-term exposure, that can be fatal to some people.



Urban runoff is commonly collected in storm sewers and discharged to waterways untreated, so that any contaminants carried by the storm water are discharged to surface water bodies that are used as the sources of drinking water. In addition, about 20 percent of the population in the U.S. is served by combined sewer systems (for both sanitary waste and storm water) that, during heavy storm events, allow contaminants from sanitary sewage to discharge directly to waterways untreated.

AVAILABLE PREVENTION MEASURES TO ADDRESS STORM WATER RUNOFF

A variety of management practices, including pollution prevention and treatment devices, are available to abate storm water pollution. The most effective storm water pollution prevention plans combine these measures and reflect local soil, precipitation, and land use conditions. Some of the more widely-used management measures are described below.

Please keep in mind that individual prevention measures may or may not be adequate to prevent contamination of source waters. Most likely, individual measures should be combined in an overall prevention approach that considers the nature of the potential source of contamination, the purpose, cost, operational, and maintenance requirements of the measures, the vulnerability of the source waters, the public's acceptance of the measures, and the community's desired degree of risk reduction.

Pollution source control and prevention measures include public education to homeowners and business owners on good housekeeping, proper use and storage of household toxic materials, and responsible lawn care and landscaping; storm drain stenciling; hazardous materials collection; and eliminating illicit discharges. The incorporation of best management practices (BMPs) in building and site-development codes, if feasible, should be encouraged. On roadways, proper maintenance of rights-of-way, control of chemical and nutrient applications, street cleaning or sweeping, storm drain cleaning, use of alternative or reduced de-icing products, and equipment washing can reduce the pollutant content of runoff.

Without appropriate erosion and sedimentation control (ESC) measures, construction activities can contribute large amounts of sediment to storm water runoff. Erosion can be controlled by planting temporary fast-growing vegetation, such as grasses and wild flowers. Covering top soil with geotextiles or impervious covers will also protect it from rainfall. Good housekeeping measures for construction sites include construction entrance pads and vehicle washing to keep sediment and soil on-site. Construction should be staged to reduce soil exposure, or timed to coincide with periods of low rainfall and low erosion potential, such as in the fall, rather than during spring rains. Other measures include sediment traps and basins; sediment fences; wind erosion controls; and sediment, chemical, and nutrient control.

If available, ordinances and regulations on construction activities can require plan reviews to ensure that erosion during construction is minimized or require ESC measures during construction. Inspections of ESC measures and repair of controls where needed will maintain the working order of these controls and maximize their benefit.

Local governments can use a variety of *land use controls* to protect source water from potential contamination. For example, subdivision controls help to ensure that expected development will not compromise drinking water quality or ground water recharge. Requiring proper storm water management in new developments and redevelopments will ensure that runoff does not become excessive as areas of paved surfaces increase. *Low impact development* incorporates maintaining pre-development hydrology, considering infiltration technology, and re-routing water to recharge the aquifer.

Minimizing directly connected impervious areas

(DCIAs) is important to reducing the flow and volume of runoff. Planners should direct runoff from roofs, sidewalks, and other surfaces over grassed areas to promote infiltration and filtration of pollutants prior to surface water deposition. Porous design of parking lots also provides places for storm water to infiltrate to soils. Concrete grid pavement is typically placed on a sand or gravel base with void areas filled with pervious materials such as sand, gravel, or grass. Storm water percolates through the voids into the subsoil. Planting landscaped areas lower than the street level encourages drainage.



Concrete grid pavemen

Structural designs are used to control runoff or temporarily store storm water on site. A number of structural devices have been developed to encourage filtration, infiltration, or settling of suspended particles. Some of the more commonly-used practices are described below.

Grassed swales are shallow, vegetated ditches that reduce the speed and volume of runoff. Soils remove contaminants by infiltration and filtration. Vegetation, or turf, prevents soil erosion, filters out sediment, and provides some nutrient uptake. Maintenance of grassed swales involves regular mowing, re-seeding, and weed control, along with inspections to check for erosion and ensure the integrity of the vegetative cover. To function properly, the inflow to the swale must be sheet flow from a filter strip or an impervious surface (i.e., not from the end of a pipe). Swales have demonstrated solids removals exceeding 80 percent. Apart from grassed swales, grassed waterways (wide, shallow channels lined with sod) are often used as outlets for runoff from terraces.

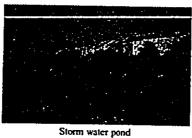
Buffer strips are combinations of trees, shrubs, and grasses planted parallel to a stream. Buffer strips should consist of three zones—about four or five rows of trees closest to the stream, one or two rows of shrubs, and a 20 to 24 foot wide grass zone on the outer edge. They decrease the velocity of runoff, thus moderating flooding and preventing stream bank crosion. The vegetation and soils also strain and filter sediments and chemicals. Buffer strips should be maintained by controlling weeds and mowing grasses once or twice annually. In the long term, each zone should be harvested and replanted. About 10 to 20 percent removal of solids has been demonstrated in buffer zones. These buffer strips, however, do not necessarily increase infiltration.

Filter strips are areas of close-growing vegetation on gently sloped land surfaces bordering a surface water body. They work by holding soils in place, allowing some infiltration, and filtering solid particles out of the runoff from small storms. Plants with dense root systems are preferred; the ideal species and mixes of vegetation are specific to the region. The width and length of the filter strip depends on the size and grade of the slope it drains. Maintenance activities include inspections, mowing, and removal of



Filter strip

sediment build-up. Filter strips can remove nitrogen and phosphorus, but are less effective in filtering pesticides. They are most effective when water flow is even and shallow and if grass can regrow between rains.



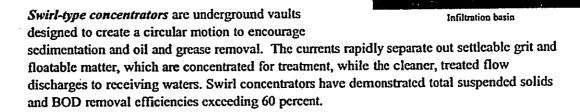
Storm water ponds (wet ponds) consist of a permanent pond, where solids settle during and between storms, and a zone of emergent wetland vegetation where dissolved contaminants are removed through biochemical processes. Wet ponds are usually developed as water features in a community, increasing the value of adjacent property. Other than landscape maintenance, only annual inspection of the outlets and shoreline is required. Vegetation should be harvested every 3 to 5 years, and sediment removed every 7 to 10 years.

Wet ponds can achieve 40 to 60 percent phosphorus removal and 30 to 40 percent total nitrogen removal.

Constructed wetlands are similar to wet ponds, with more emergent aquatic vegetation and a smaller open water area. Storm water wetlands are different from natural wetlands in that they are designed to treat storm water runoff, and typically have less biodiversity than natural wetlands. A wetland should have a settling pond, or forebay, if significant upstream soil crosion

is anticipated. Coarse particles remain trapped in the forebay, and maintenance is performed on this smaller pool. Wetlands remove the same pollutants as wet ponds through settling of solids and biochemical processes, with about the same efficiency. Maintenance requirements for wetlands are similar to those of wet ponds.

Infiltration practices (basins and trenches) are long, narrow stone-filled excavated trenches, 3 to 12 feet deep. Runoff is stored in the basin or in voids between the stones in a trench and slowly infiltrates into the soil matrix below, where filtering removes pollutants. Infiltration devices alone do not remove contaminants, and should be combined with a pretreatment practice such as a swale or sediment basin to prevent premature clogging. Maintenance consists of inspections annually and after major rain storms and debris removal, especially in inlets and overflow channels. Infiltration devices and associated practices can achieve up to 70 to 98 percent contaminant removal.



BMPs for Class V storm water drainage wells address siting, design, and operation of these wells. Siting BMPs for storm water drainage wells include minimum setbacks from surface waters, drinking water wells, or the water table. Storm water drainage wells may also be prohibited from areas of critical concern, such as source water protection areas, or from areas where the engineering properties of the soil are not ideal for their performance. Available design BMPs for storm water drainage wells include sediment removal devices (such as oil/grit separators or filter strips), oil and grease separators, and pretreatment devices such as infiltration trenches or wetlands (described above). Maintenance of these BMPs is crucial to their proper operation. Management measures related to operation include spill response, monitoring, and maintenance procedures. Source separation, or keeping runoff from industrial areas away from storm water drainage wells, involves using containment devices such as berms or curbs (see the fact sheets on vehicle washing and small quantity chemical use for more information on these devices).

EPA's National Pollutant Discharge Elimination System (NPDES) Permitting Program regulates storm water runoff from municipal separate storm sewer systems (MS4s) and industrial activity (including construction). The current rules establish permit requirements for more than 5,000 MS4s nationwide. NPDES storm water permits issued to MS4s require these MS4s to develop the necessary legal authority to reduce the discharge of pollutants in storm water to the maximum extent practicable and to develop and implement a storm water management program that includes:

- Structural and source control measures to reduce pollutants from runoff from commercial and residential areas, including maintenance, monitoring, and planning activities:
- Detection and removal of illicit discharges and improper disposal into the storm sewer;
- Monitoring and control of storm water discharges from certain industrial activities; and
- Construction site storm water control.

In addition, the storm water rule for certain small MS4s requires post-construction storm water management controls. These local controls are in addition to existing federal regulations that require NPDES permits of all construction activities disturbing greater than one acre.

Recently, EPA developed a menu of BMPs that provides more than 100 fact sheets on measures that small MS4s could use to control urban storm water runoff. The menu is available from EPA's Web site at www.epa.gov/npdes.

FOR ADDITIONAL INFORMATION

['

1

1

These sources contain information on storm water management measures. All of the documents listed are available for free on the Internet. State departments of transportation or agriculture, whose contact information can be found on the Internet or in the phone book, are also good sources of information.

To pass local ordinances or regulations to affect storm water controls, contact city or county public works departments, zoning offices, permitting offices, or transportation departments, who typically have the authority to pass local ordinances. Contact local government authorities in your area to see if there are ordinances in place to manage storm water. Numerous examples of local source water protection-related ordinances for various potential contaminant sources can be found at http://www.epa.gov/r5water/ordcom/, http://www.epa.gov/owow/nps/ordinance/, and http://www.epa.gov/owow/nps/ordinance/links.htm.

The following resources provide information on selection and design of specific management measures:

The Center for Watershed Protection's Stormwater Manager's Resource Center (www.stormwatercenter.net) provides technical assistance storm water management issues.

Northern Arizona University offers a course on wet weather flow management, materials are available at http://jan.ucc.nau.edu/~dmh3/egr499/.

Texas Nonpoint SourceBOOK (www.txnpsbook.org) contains four manuals on storm water Best Management Practices, including "Urban Nonpoint Source Management," and an interactive BMP selector.

U.S. EPA, Office of Ground Water and Drinking Water. (September 1999). The Class V Underground Injection Control Study. Volume 3: Storm Water Drainage Wells. EPA/816-R-99-014c. Retrieved May 2, 2001, from the World Wide Web: http://www.epa.gov/safewater/uic/classv/stw-fact.pdf

U.S. EPA, Office of Science and Technology. (August 1999). Preliminary Data Summary of Urban Stormwater Best Management Practices. EPA-821-R-99-012. Retrieved February 7, 2001, from the World Wide Web: http://www.epa.gov/OST.

U.S. EPA, Office of Wastewater Management. (September 1992). Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and BMPs. Retrieved February 6, 2001, from the World Wide Web: http://www.epa.gov/owm/sw/indguide/index.htm

U.S. EPA, Office of Wetlands, Oceans, and Watersheds. (January 1993). Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters. EPA-840-B-93-001c. Retrieved February 15, 2001, from the World Wide Web: http://www.epa.gov/OWOW

Washington State Department of Transportation. (February 1995). Highway Runoff Manual. M 31-16. Retrieved February 15, 2001, from the World Wide Web: http://www.wsdot.wa.gov/fasc/engineeringpublications/manuals/highway.pdf

Wyoming Department of Environmental Quality. (February 1999). Urban Best Management Practices for Nonpoint Source Pollution. Draft. Retrieved February 21, 2001, from the World Wide Web: http://deq.state.wy.us/wqd/urbbmpdoc.htm

University extension services are excellent sources for information on water quality issues, including storm water management. The Oregon Department of Agriculture offers comprehensive list of links to many of these on its Web site (http://www.oda.state.or.us/Natural_Resources/wq_ces.htm).

Following are examples of extension services that offer fact sheets on a variety of storm water management measures, including best management practices:

Iowa State University Extension (http://www.extension.iastate.edu/Pages/pubs/).

North Carolina Cooperative Extension Service (http://www.ces.ncsu.edu/resources/).

Oklahoma State University. Division of Agricultural Sciences and Natural Resources (http://agweb.okstate.edu/pearl/wqs).

7.

Purdue University Cooperative Extension Service (http://www.agcom.purdue.edu/AgCom/Pubs/menu.htm).

[]

£.i

1

1.1

£".

In addition to general service gas stations, fueling may also occur at 24-hour convenience stores, construction firms, warehouses, car washes, and businesses with fleet vehicles. Fuels contain organic compounds and metals that adversely affect aquatic life.

- The fuel island shall be covered to prevent the direct entry of precipitation. See graphic field.
- 2. Longitudinal drains shall be located at the perimeter along the "downhill" side of the island. This drain shall be connected to the sanitary sewer. The drain shall have a valve to allow shutoff in the event of a large fuel spill.
- 3. The island shall be paved using Portland cement concrete, not asphalt.
- 4. Suitable cleanup materials shall be kept on site to allow prompt cleanup.

No waste liquids or chemicals of any kind are to be discharged to the storm sewers. Antifreeze and radiator flush can be discharged to the Sanitary sewers. All other liquids shall be recycled or properly disposed to permitted landfills.

Washing or steam cleaning of vehicles or vehicle parts outside shall occur in a designated area incorporating the requirements of BMP for steamcleaning.

Businesses generating Dangerous Wastes shall properly segregate and dispose the wastes as required by state regulations.

If stored above ground, waste container drums shall be kept inside the service bay; or if kept outside, be covered by a "lean-to" structure that keeps rainfall from reaching the drums (see BMP for above ground storage).

Dumpsters that store items awaiting transfer to a landfill such as used oil filters shall also be located in a lean-to (see BMP for above ground storage).

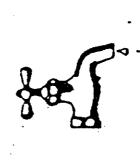
- Signs shall be painted on storm drain inlets to indicate that they are not to receive liquid or solid wastes.
- No waste liquids or chemicals of any kind are to be discharged to the storm sewers. Antifreeze and radiator flush can be discharged to the sanitary sewers. All other liquids shall be recycled or properly disposed to permitted landfills.

STORMWATER-TREATMENT BMPs:

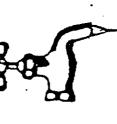
Stormwater from parking and maintenance areas where dripping oil or hydraulic fluids is likely to be occurring shall be treated by an API or CPI-separator (see BMP for oil/water separation).

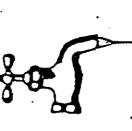
Stormwater runoff from rooftops shall discharge to the storm sewer below the treatment system as long as the County's drainage requirements are met.

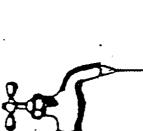
Credit: Water Quality, Best Management Practices Manual for Commercial and Industrial Businesses





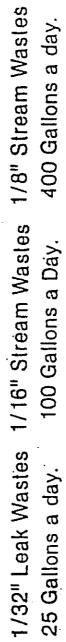












Spigot Wastes 15 Gallons a day.

Slowly Dripping

Zone-specific Native and Polynesi

Zone 3	,
sian plants for Maui County	

E `

TYPE:	F Fern G Grass	ass Gr Ground	Cover	Sh Shrub	P Palm	Ø	S Sedge	ĭr Tree	V Vine
Type	Scientific Name	ne	Con	Common Name		Height	Spread	Elevation	Water req.
L.	Psilotum nudum		moa, moa kula		-			sea to 3,000°	Dry to Wet
ပ	Colubrina asiatica		anapanapa		69		10.	sea to 1,000'	Dry to Wet
ဗ	Eragrostis monticola		kalamalo		-		2.	ses to 3,000'	Dry to Medium
9	Eragrostis variabilis		emo-loa		<u></u>		2	sea to 3,000'	Dry to Medium
O	Fimbristylis cymosa ssp. spathacea	athacea	mau'u'aki'aki fimbristylis	ristylis	0.5		-	sea to 1,000'	Dry to Medium
હ	Boerhavia repens		alena		0.5		4.	sea to 1,000'	Dry to Medium
Ğ	Chamaesyce celastroides var, laehiensis	var. laehiensis	акоко		2		3	sea to 1,000°	Dry to Medium
Ğ	Cressa truxillensis		cressa		0.5		-	sea to 1,000'	Dry to Medium
Ğ	Heliotropium anomalum var. argenteum	r. argenteum	hinahina ku kahaka	(a)	-		2	sea to 1,000'	Dry to Medium
5	Ipomoea tuboides		Hawaiian moon flower, 'uala	ower, 'uala	-		10,	sea to 3,000'	Dry to Medium
Ğ	Jacquemontia ovalifolia ssp. sandwicensis	o. sandwicensis	pa'u o hi'laka		0.5		9	sea to 1,000'	Dry to Medium
હ	Lipochaeta integrifolia		nehe		-		5	sea to 1,00'	Dry to Medium
Ğ	Peperomia leptostachya		'ala'ala-wai-nui				-	sea to 3,000'	Dry to Medium
Ğ	Plumbago zeylanica		9,811						
Ğ	Sesuvium portulacastrum		'akulikuli, sea-purslane	slane	0.5		2'	sea to 1,000'	Dry to Wet
હ	Sida fallax		'lima		0.5	īc	3	sea to 1,000'	Dry to Medium
હ	Tephrosia purpurea var. purpurea	ırpurəa	'auhuhu		2		2.	sea to 1,000'	Dry to Medium
Gr - Sh	Hibiscus calyphyllus		ma'o hau hele, Rock's hibiscus	ock's hibiscus	6		2	sea to 3,000'	Dry to Medium
Gr-Sh	Lipochaeta rockii		nehe		2		2	sea to 3,000'	Dry to Medium
Gr-Sh	Lipochaeta succulenta		пеће		7		ĵ.	sea to 1,000'	Dry to Wet
Gr - Sh	Lycium sandwicense		onelo-kai ae'ae		2		2	sea to 1,000'	Dry to Medium
a.	Cocos nucifera		coconut, niu		100		30.	sea to 1,000°	Dry to Wet
2	Pritchardia hillebrandii		lo'ulu, fan palm		25		15'	sea to 1,000'.	Dry to Wet
S	Mariscus Javanicus		marsh cypress, 'ahu'awa	ihū'awa	0.5		0.5'	sea to 1,000'	Dry to Medium

Zone 3

Zone-specific Native and Polynesian plants for Maui County

3' 2' sea to 3,000' 1' 3' sea to 1,000' 1' 3' sea to 1,000' 2' 2' 1,000' to higher 5' 8' sea to 3,000' 3' 3' sea to 3,000' 6' 8' sea to 3,000' 6' 6' sea to 1,000' 10' 10' sea to 1,000' 8' 8' sea to 1,000' 10' 10' sea to 1,000' 8' 8' sea to 3,000' 6' 40' sea to 3,000' 6' 40' sea to 3,000' 12' 8' sea to 3,000' 12' 15' sea to 3,000' 12' 15' sea to 3,000' 12' 25' sea to 1,000' 20' 25' sea to 1,000'				Heldh	Spread	Elevation	Water req.
Bidans maridaeli sep, meirzieli se	90		Common Name	Barrie	36	sea to 3,000'	Dry to Medlum
Biddens maudensie	Î		Bla		, k	sea to 1,000	Dry to Medium
Biddens merziesali stsp. menziesal stsp. menziesal kookoʻolau 1 3 3 sea to higher to hianara midrantiha ssp. midrantiha sp. midr			coʻokoʻolau		2		
Bidden incirculture St.p. micratifia Robokoolau T. S. Sea to higher L.		an menziesii	(o.oko.olau	-	2		
Chemic manual			κο'οκο'olau	4	3		Dev to Medium
Ukl Ukl 2 2 1 Jubu to ingition Consisting control control of desirability of parallel sendivicents Ukl Headyolis sepp. 2 1 Jubu to ingition Headyolis sepp. Headyolis sepp. 2 2 1 Jubu to ingition Lipochealda lavarum nahe 4 6 sea to 3,000 Osteomielos antitylidalfolia naupaka, haupaka-kahakal 8 8 sea to 1,000 Scaevola sericea naupaka, haupaka-kahakal 6 6 sea to 1,000 Scandrum helsonili puklawa 3 3 4 sea to 1,000 Solanum helsonili puklawa pohinahina 3 4 sea to 1,000 Vikez rotundilolis puklawa pohinahina 3 4 sea to 1,000 Vikez rotundilolis pohinahina 3 4 sea to 1,000 Vikez rotundilolis pohinahina 5 5 sea to 3,000 Vikez rotundilolis pohinahina 4 6 1,000 Vikez rotundilolis puklawa 8			аћевћев, ажеожео	9		sea to nigitel	Dry to Medium
Dianella Santowicelless Dianella Santowicelless Dianella Santowicelless Dianella Santowicelless Dianella Santowicenies Dianela Santo			UKI	2	2.	1,000 to riginal	Ory to Woodium
Hedyolis spp.			1	5	.8	sea to 1,000	Ury to Integral
Hedyolis spp. nahe				3	2	1,000' to 3,000'	Dry to Wet
Lipochaela lavarum nehe 4 6 see to 3,000 Osteomeles antryyllidifolia naupaka, naupaka-kahakai 6 8 sea to 1,000 Scaevola seficea kolomana 3 7 5 sea to 1,000 Senna gaudichaudii akta, beach solanum 3 4 sea to 1,000 Solanum nelsonii puklawe 3 4 sea to 1,000 Solanum nelsonii pohinahina 3 4 sea to 1,000 Vilax rotundifolia walak, bolokai osmanthus 8 6 sea to 1,000 Vilax rotundifolia walak, paper mulberry 10 10 sea to 1,000 Vilax rotundifolia walak, paper mulberry 8 6 sea to 1,000 Vilax rotundifolia walak, paper mulberry 8 8 sea to 1,000 Vilax rotundifolia adiali 6 8 sea to 1,000 Vilax rotundifolia adiali 8 sea to 1,000 Aleuriles modicchium sandwicense adiali adiali 8 sea to 1,000			au, piio	3	3.	sea to 3,000'	Dry to Medium
Scaevola sericae Use, eluche Scaevola sericae Use, eluche Scaevola sericae Sc			nene	Į.	Ţ.	sea to 3,000	Dry to Medium
Scaevola sericea maupake, naupake, ranaka, sento a 3,000° ranapake, ranaka, sento a 3,000° sea to 3,000° sea to 3,000° sea to 3,000° ranapake, kanaka, sento a 3,000° sea to 1,00° ranapake, kanaka, sento a 3,000° ranapake, sento a 3,000°		Osteomeles anthyllidifolia	'ulei, eluene	, <u>a</u>	- CX	sea to 1,000'	Dry to Medium
Senna gaudichaudil Kolomana 3 3 5 sea to 1,00° Solanum nelsonii akla, beach solanum 6° 6° 1,000 to higher Styphelia tamelamelae pohinahina 3° 4° sea to 1,00° Vilex rotundifolia wikstroemia tude-ursi kaualansis kaualansis akla, Molokal osmanthus 8° 6° 6° 1,000 to higher - Tr Broussonetia papyrifera malo, false sandalwood 8° 8° sea to 1,000° - Tr Myoporum sandwicanse kulu¹i 8° 8° sea to 1,000° - Tr Myoporum sandwicanse kulu¹i 6° 4° sea to 1,000° - Tr Myoporum sandwicanse aali¹i 5° 8° sea to 1,000° - Tr Myoporum sandwicanse kulu¹i 6° 4° sea to 1,000° - Tr Myoporum sandwicanse kall¹i 5° sea to 1,000° - Calophyllum inophyllum nophyllum nophyllum modoratum kou 12° 8° sea to 1,000° Cantinum odoratum kou 12° 8°		Scaevola sericea	пвирака, паирака-капакаі	2 10	, "	868 to 3,000'	Dry to Medium
Solianum nelsonii akia, beach solanum 3 3 3 3 3 4 300 to higher Styphelia tamelamelea puklawe puklawe 3 4 sea to 1,000* Yikex rotundifolia Walkstroemia tuka-ursi kaualensis kaualensis akla, Molokal osmianthus 8 6 sea to 1,000* -Tr Broussonetta papyrifera natio, falsa sandakod 8 6 sea to 1,000* -Tr Myoporum sandwicanse ratio, falsa sandakod 8 8 sea to 1,000* -Tr Myoporum sandwicanse ratio, falsa sandakod 8 8 sea to 3,000* -Tr Notorichium sandwicanse candienut, kukul 6 7 40 sea to 3,000* -Tr Aleurites moluccana candienut, kukul 60 40 sea to 3,000* Calibium noporatum kamani, alexandrian laurel 60 40 sea to 3,000* Cordia subcordatia kou 12 15 sea to 1,000* Cordia subcordatia willwill willwill 20 20 sea to		Sanna gaudichaudii	kolomana	0	2 6	see to 1 00'	Dry to Medium
Supplied familiar publication		Scientim pelsonii	akia, beach solanum	9	,	a non to blober	=+=
Other included in a control of c		A short amplament	puklawe	9	0	1,000 t	
Wikstroemia uva-ursi kaualensis			pohinahina	į,	4	288 tO 1,000	
Wikstroemia uva-ursi kauaterisis kadaterisis kadateris kadate	. —	Vitex rotunding	Takia Molokal osmanthus				
r Broussonetis papyrifera wature, paper maio, false sandalwood 10° 10° sea to higher r Myoporum sandwicense kultu! 8° sea to 3,000° r Nototrichium sandwicense kultu! 8° sea to 3,000° Dodonaea viscosa candienut, kukul 50° 50° sea to 3,000° Aleurites moluccana kamani, alexandrian laurel 60° 40° sea to 3,000° Cariphyllum Inophyllum nophyllum Alahe's, 'ohe'e, walahe'e 30° 25° sea to 1,000° Cordia subcordata kou kou 12° 8° sea to 1,000° Diospyros sandwicensis willwill willwill 20° 20° sea to 1,000° Erythrina sandwicensis willwill ohi'a lehua 25° 25° sea to 1,000° Metrosideros polymorpha var. macrophylla ohi'a lehua 25° 25° sea to 1,000°		Wikstroemia uva-ursi itauaiensis kauaiensis	mulherry	ão	9	sea to 1,000'	Dry to Medium
r Myoporum sandwicense naio, false sandawood 8 8 sea to 3,000° r Nofotrichium sandwicense kullu¹ 8 8 sea to 3,000° Dodonaea viscosa candlenut, kukul 50° 50° sea to 3,000° Aleurites moluccana kameni, alexandrian laurel 60° 40° sea to 3,000° Calophyllum inophyllum Alahe'e, 'ohe'e, walahe'e 30° 25° sea to 1,000° Cordia subcordata kou 12° 15° sea to 1,000° Cordia subcordata lama 20° 20° sea to 1,000° Diospyros sandwicensis willwill 20° sea to 1,000° Erythrina sandwicensis willwill 20° 25° sea to 1,000° Metrosideros polymorpha var. macrophylla ohl'a felua 25° 25° sea to 1,000°	-11-	Broussonetia papyrifera	Wauxe, pepel marons	0	10,	sea to higher	Dry to Medium
r Nototrichium sandwicenise kulu! kulu! kulu! kulu! kaa to higher kaa to 3,000° kaa to 1,000° kaa to 1,	1	Myoporum sandwicense	naio, taise sandaiwood	į a	ix.	sea to 3,000'	Dry to Medium
Dodonaea viscosa a'ali'i o	1	Nototrichium sandwicense	kulu'i	,	. 6	sea to higher	Dry to Medium
Aleurites moluccana candienut, kukui Kukui 50 30 30 300 300 300 300 300 300 300 300 300 300 300 400 sea to 3,000 300 400 sea to 3,000 400 sea to 3,000 400 sea to 1,000 400 sea to 3,000 400 400 sea to 1,000 400 400 sea to 3,000 400 400 400 400 86a to 1,000 400 400 400 86a to 1,000 400 400 86a to 1,000 400 400 86a to 1,000 400		Todonaea Viscosa	'a'ali'i	0		100 to 4 000	Medium to We
fum kamani, alexandrian laurei 50 40 sea to 3,000° Alahe'e, 'ohe'e, walahe'e 12' 8' sea to 3,000° Kou 12' 15' sea to 1,000° neils willwill 20' sea to 1,000° orpha var. macrophyila ohi'a lahua 25' sea to 1,000°		Alaurites moluccana	candienut, kukul	20	2 6	sea to 3,000	Medium to We
Alahe'e, 'ohe'e, walahe'e 12' 8' sea to 3,000 Kou 30' 25' sea to 1,000' Iama 12' 15' sea to 1,000' Willwill 20' 20' sea to 1,000' na var. macrophylla ohl'a lehua 25' 25' sea to 1,000'		Catashyllim Inophyllim	kamani, alexandrian laurei	.09	2	988 to 5,000	movin Madium
snels 30' 25' sea to 1,000' snels 12' 15' sea to 3,000' ntils 20' 20' sea to 1,000' orpha var. macrophylla ohl'a lehus 25' 25' sea to 1,000'			Alahe'e, 'ohe'e, walahe'e	12,	ထ	sea to 3,000	Cly to Mor
sansis 12' 15' sea to 3,000' sneils willwill 20' 20' sea to 1,000' norpha var. macrophylla ohl'a lehua 25' 25' sea to 1,000'		Canthium odolarum	1001	30	25	sea to 1,000.	Dry to wet
willwill 20' sea to 1,000' sea to 1,000' 25' 25' sea to 1,000' 25' 25' sea to 1,000'		Cordia subcordata	o Land	12,	15.	sea to 3,000°	Dry to Medium
wiliwiii ohi'a lehua		Diospyros sandwicensis	Malliva	20,	20	sea to 1,000'	Dry
onia lenua		Erythrina sandwicensis	WillWill	25.	25	sea to 1,000'	Dry to Wet
		Metrosideros polymorpha var. macrophylla	ohi'a lehua ·	,			

Zone 3

F 7

L;

[] [

Zone-specific Native and Polynesian plants for Maui County

]			-	•	-				
Water req.	Dry to Wet	Dry	Dry to Medium	Dry to Wet		Dry to Medium	Dry	Dry to Medium	Dry to Wet
Elevation	sea to 1,000'	sea to 3,00°	1,000' to 3,000' Dry to Medium	sea to 1,000°		sea to 3,000'	1,000' to 3,000' Dry	sea to 3,000'	sea to 3,000'
Spread	15'	15	15	25'		15	20,	80	30,
Height	20,	15	15	35	20,	. 50.	20.	8	30,
Common Name	lindian mulberry, noni	Квалі	olopua	hala, puhala (HALELIST)	halapepe	hao	ohe makai	coastal sandalwood, 'ili-ahi	milo
Scientific Name	Morinda citrifolla	Nesoluma polynesicum	Nestegis sandwicensis	Pandanus tectorius	Pleomele auwahlensis	Rauvollia sandwicensis	Reynoldsia sandwicensis	Santalum ellipticum	Thespesia populnea
TVDA		1.	1,	1	-	1	1	1	=

DO NOT PLANT THESE PLANTS !!!

<u> </u>		
Common name	Scientific name	Plant family
ì	Acacla meannsil	Mimosaceae
Diack Walle	Public arguine	Розасезе
DIBCKOELLY	Encolonia alchidia	Myracasa
pine dru	Eucalypius diopnius	Descriptions
bocconia	Bocconia frutescens	rapaveraceae
broad-leaved cordia	Cordia giabra	Doraginaceae
broomsedge, yellow bluestem	Andropogon virginicus	Ровсеве
Duffelorass	Cenchrus ciliaris	Ровсеве
butterily bush, smoke bush	Buddleja madagascariensis	Buddlejaceae
cals claw, Mysore thorn, walt-a-bit	Caesalpinia decapetala	Caesalpiniaceae
common ironwood	Casuarina equisetifolia	Casuarinaceae
common velvet grass. Yorkshire tog	Holcus lanatus	Роасеае
	Citharexylum spinosum	Verbenaceae
fire free, fava tree	Myrica faya	Мугісвсеве
plorybower	Clerodendrum laponicum	Verbenaceae
hairy cal's ear, dosmore	Hypochoeris radicata	Asteraceae
harle kos	Leucaena leucocephala	Fabaceae
livy nound scarlet-fruited gourd	Coccinia grandis	Cucurbitaceae
luningr parry	Citharexylum caudatum	Verbenaceae
kahili tower	Grevillea banksii	Profescese
Kli poniosc	Acacla farnesiana	Mimosaceae
Toowood, bloodwood tree	Haematoxylon campechlanum	Caesalpiniaceae
lognal	Eriobotrya japonica	Rosaceae
meadow ricegrass	l Ehrharta stipoides	Роасеае
melaleuca	Melaleuca quinquenervia	Мупасеве
miconia, velvet leat	Miconia calvescens	Melastomataceae
narrow-leaved carpetgrass	Axonopus fissifolius	Ровсеве
oleaster	l Elaeagnus umbellata	Elaeagnaceae
oriental mangrove	Bruguiera gymnorrhiza	Rhizophoraceae
padang cassia	Cinnamomum burmanli	Lauraceae
palmorass	Setaria palmifolia	Роасезе
pearl flower	Heterocentron subtriplinervium	Melasiomataceae
quinine tree	Cinchona pubesens	Rubjaceae
satin leaf, calmitillo	Chrysophyllum oliviforme	Sapotaceae
Silkwood, Queensland maple	Flindersia brayleyana	Rutaceae
silky oak, silver oak	Grevillea robusta	Proteaceae
strawberry quava	Psidium cattleianum	Myrtaceae
swamp oak, saltmarsh, longleaf fronwood	Casuarina glauca	Casuarinaceae
:=	Anthoxanthum odoratum	Роасеае
tree of heaven	Ailanthus altissima	Simaroubaceae
trumpet tree, guarumo	Cecropia obtusifolia	Cecropiaceae
	Hedychlum coronarium	Zingiberaceae
white moho	Heliocarpus popayanensis	lillaceae
yellow ginger	Hedychium flavescens	Zingiberaceae

DO NOT PLANT THESE PLANTS III

Common name	Scientific name	Plant family
	Jasminum fluminense	Ојевсеве
	Arthrostema ciliatum	Melasiomataceae
	Dissoils rotundifolia	Melasiomataceae
	Erigeron karvinsklanus	Asteraceae
	Eucalyptus robusta	Мупасеве
	Hedychlum gardnerlanum	Zingiberaceae
	Juncus pignitus	Julicacada
	Medicilla cumingii	Melastomataceae
	Medinila magnifica	Melastomataceae
	Medinilla venosa	Melastomataceae
	Melastoma candidum	Melastomataceae
	Melinis minutiflora	Ровсеве
	Olea europaea	
	Oxyspora paniculata	Melastomataceae
	Panicum maximum	Роасеве
	Paspalum urvillei	Poaceae
	Passiflora edulis	Passifloraceae
	Phormium tenax	Agavaceae
	Pinus taeda	Pinaceae
	Prosopis pallida	Fabaceae
	Pterolepis glomerata	Melastomataceae
	Rhodomyrtus tomentosa	Мупасеве
	Schefflera actinophylla	Araliaceae
	Syzygium (ambos	Мупасеве
Australian blackwood	Acacia melanoxylon	Mimosaceae
Australian tree fern	Cyathea cooperi	Cyatheaceae
Australian tree fern	Sphaeropteris cooperi	Cyatheaceae
Beggar's tick, Spanish needle	Bidens pilosa	Asteraceae
California grass	Brachiaria mutica	Ровсеве
Chinese banyon, Maylayan banyon	Ficus mirocarpa	Могасеве
Chinese violet	Asystasia gangetica	Acanthaceae
Christmasberry, Brazilian pepper	Schinus terebinthitolius	Anacardiaceae
Pormosan Koa	Acadia comusa Seperto mitanioldes	Williosaceae
Tababasa honavalickia	Lonicera iaponica	Caprifoliaceae
Kosler's curse	Clidemia hirta	Melastomataceae
Lantana	Lantana camara	Verbenaceae
Maurillus hemp	Furcraea foetida	Agavaceae
Mexican ash, tropical ash	Fraxinus uhdei	Оевсеве
Mexican tulip poppy	Hunnemannia fumariifolla	Papaveraceae
Mules foot, Madagascar tree fern	Angiopteris evecta	Maratiaceae
New Zealand laurel, karakaranut	Corynocarpus laevigatus	Corynocarpaceae
New Zealand tea	Leptospermum scoparium	Мупасеве
ŀ	Cortaderia jubata	Ровсеве
Panama rubber tree, Mexican rubber tree	Castilloa elastica	Могасеве
Shoebutton ardisia	Ardista elliptica	Myrsinaceae
banana poka	កងន់វិញល្អង ពេលប្រទេសពាង	rassilioraceae

ORDINANCE NO. 2108

BILL NO. 6 (1992)

Draft 1

A BILL FOR AN ORDINANCE AMENDING CHAPTER 16.20 OF THE MAUI COUNTY CODE, PERTAINING TO THE PLUMBING CODE

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. Title 16 of the Maui County Code is amended by adding a new section to Chapter 10 of the Uniform Plumbing Code to be designated and to read as follows:

"16.20.675 Section 1050 added. Chapter 10 of the Uniform Plumbing Code is amended by adding a new section, pertaining to low-flow water fixtures and devices, to be designated and to read as follows:

Sec. 1050 Low-flow water fixtures and devices. (a) This section establishes maximum rates of water flow or discharge for plumbing fixtures and devices in order to promote water conservation.

(b) For the plumbing fixtures and devices covered in this section, manufacturers or their local distributors shall provide proof of compliance with the performance requirements established by the American National Standards Institute (ANSI) and such other proof as may be required by the director of public works. There shall be no charge for this registration process.

(c) Effective December 31, 1992, only plumbing fixtures and devices specified in this section shall be offered for sale or installed in the County of Maui, unless otherwise indicated in this section. All plumbing fixtures and devices which were installed before December 31, 1992, shall be allowed to be used, repaired or replaced after December 31, 1992.

(1) Faucets (kitchen): All kitchen and bar sink faucets shall be designed, manufactured, installed or equipped with a flow control device or aerator which will prevent a water flow rate in excess of two and two-tenths gallons per minute at sixty pounds per square inch of water pressure.

(2) Faucets (lavatory): All:lavatory faucets shall be designed, manufactured, installed or equipped with a flow control device or aerator which will prevent a water flow rate in excess of two and two tenths gallons per minute at sixty pounds per square inch of water

(f) Any person violating this section shall be fined \$250 for each violation and shall correct all instances of non-compliance for which a citation is issued. Violation of this section shall constitute a violation as defined in section 701-107 Hawaii Revised Statutes and shall be enforceable by employees of the department of public works. The foregoing fine may also be imposed in a civil, administrative proceeding pursuant to Rules and Regulations adopted by the department of public works in accordance with chapter 91 Hawaii Revised Statutes."

SECTION 2. New material is underscored. In printing this bill, the County Clerk need not include the underscoring.

SECTION 3. This ordinance shall take effect upon its approval.

APPROVED AS TO FORM AND LEGALITY:

1

1

11

Į,

HOWARD M. FOXUSHIMA
Deputy Corporation Counsel
County of Maui
c:\wp51\ords\flows4\pk



MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRAND

KARLYNN KAWAHARA

2 i

3 F

\$ i

April 6, 2006

George Tengan, Director County of Maui Department of Water Supply 200 South High Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Tengan:

Thank you for your letter of March 7, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- 1. We acknowledge your comments regarding source capacity, existing infrastructure, and Molokai's status as a Water Management Area for groundwater.
- 2. The applicant will submit water use calculations to determine meter size and adequate fire protection. It is noted that the proposed action involves the construction of a fire station.
- 3. We acknowledge your recommendations regarding Best Management Practices to mitigate potential infiltration and runoff generated by the project.
- 4. We acknowledge receipt of the suggested water conservation measures. Such measures will be incorporated as are feasible and practicable.

planning

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com V & I 1777 & I

George Tengan, Director April 6, 2006 Page 2

Thank you again for providing your input to the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp

 $\prod_{i=1}^{n}$

[]

cc: Greg Jenkins, Department of Fire and Public Safety

131.

121

20



March 4, 2005

Mr. Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 S. High Street, Suite 104 Wailuku, HI 96793

Dear Mr. Munekiyo:

Subject: Early Consultation Request for Proposed Kaunakakai Fire Station

Thank you for allowing us to comment on the subject project.

In reviewing the information transmitted and our records, we have no objection to the subject project. Additional primary lines will be required to feed this project. Also, additional easements may be required. We encourage the applicant's electrical consultant to meet with us as soon as practical to verify if there any electrical requirements for the project so that service can be provided on a timely basis.

If you have any questions or concerns, please call Dan Takahata at 871-2385.

Sincerely,

Neal Shinyama Manager, Engineering

NS/dt:lkh



1

1

r :

! '

MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRAND

KARLYNN KAWAHARA

April 6, 2006

Neal Shinyama, Manager Engineering Maui Electric Company, Ltd. P. O. Box 398 Kahului, Hawaii 96733

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Shinyama:

Thank you for your letter of March 4, 2005, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we note the following:

- 1. The applicant is advised that additional primary electrical lines will be required for the proposed fire station.
- 2. The applicant will coordinate with your office to determine if additional easements are necessary.
- 3. The project electrical consultant will coordinate with your office as soon as practical to determine any other electrical requirements for the project.

Thank you again for providing your input to the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Bak. Oki

Tara K. Nakashima, Planner

TKN:yp

cc: Greg Jenkins, Department of Fire and Public Safety

olanning.

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com V C 17 177 6 17 1.

. .

MAUI COMMUNITY COLLEGE

Molokai Education Center
Office of the Coordinator

April 18, 2005

Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed Kaunakakai Fire Station

Dear Mr. Munekiyo:

Aloha from Molokai. In the short time since receiving your letter dated March 24, 2005, I have called Matthew Slepin with a few questions; called Councilmember Danny Mateo for his input; and shared the information with the MCC Molokai Education Center staff. The following early comments represent both mine and the staff's collective thinking on the proposed Kaunakakai Fire Station.

1. The Process

Most disturbing to me personally is that the community planning process, which is cumbersome, yet required by law of everyone in Maui County, was not followed by the County of Maui, Department of Fire and Public Safety themselves. This project was not discussed or even mentioned in the Molokai Community Plan of 2001- a planning document which had been in the works since 1993-1994. Surely, a proposal to replace the existing fire station built in 1978 (in an area known to all for its flooding and in need of upgrade to meet current fire safety standards) should have been included in this decade of planning.

In addition, this proposed project should have been mentioned during the infamous meetings before the Molokai Planning Commission on the "alignment of the access road". It's unnerving that the final road alignment for which the County fought so hard miraculously affords the County a five acre parcel for this proposed project. The timing of this proposal and its funding urgency bring back bad memories of similar explanations which were used by the County in order to get the road where they wanted it. The County of Maui should hold themselves accountable to the same planning rules and procedures that they enact on others.

That Molokai Ranch made the County of Maui an "offer it couldn't refuse" on the five-acres for this proposed project further suggests that planning decisions can be and are made at the whim of Molokai Ranch outside of the Molokai Community Plan process. Allowing such action, even on a worthy project, establishes a pattern and practice which frustrates many of us in the community, the College included.

The Required Zoning Changes

This proposal requires "spot zoning" for approval which is not a best practice principle in planning. Since the entire cornfield site has the same designation as does this proposal, and since the proposal requires a Community Plan amendment, the greater good would be served by addressing the zoning changes for the area in aggregate, especially due to the process problems already highlighted in Item #1. The Molokai Education Center was the catalyst to the opening of this entire land area as well as the road, and yet it exists on a Special Use Permit. The College and the community will benefit if the recommended zoning changes are addressed in total as we move forward with our intensions of securing the land designated for future College expansion.

No Project Segmentation

A condition of the Molokai Education Center support for the proposal must include assurance in writing that this is not phase one of a multi-phase project. Poor planning invites project segmentation. After the Fire Department, will the Police Department request relocation due to their flooding issues? Will the County offices follow if Molokai Ranch gives them a good price on a piece land? As the Hawaii Administrative Rules 11-200-7 and 11-200-12 explain, all cumulative impacts, including the potential environmental effects, shall be considered in a single EA/EIS rather than addressed one segment at a time.

4. Drainage

*

F 1

Of utmost concern to the staff are the unresolved drainage issues in the area, especially regarding how the proposed project which will affect the Molokai Education Center at the lower elevation below. As it is now, the winter rains become come a raging stream down the old Slaughter House road. With the size and scope of this project upland, what measures will be in place so as not to exacerbate the problem at the flood plain below? Will vegetation which retains water and xeriscaping be required? The proposal should include clear answers to all drainage concerns, with complete, extensive details that are consistent with the current Kaunakakai Drainage Plan for the area.

5. Noise

A fire station with heliport is not a quiet proposition. The College, while well constructed, will not be immune to the sirens as they move down the road for the foreseeable future. When the College acquired the cornfield land, there was no mention of a fire station using the access road as their main thoroughfare. In fact, had the area above been available to the College, perhaps we would have chosen to be on the hill and the fire station could have had our location along the main highway which makes more sense.

The comfield and the access road were to define the eastern boundary of Kaunakakai proper. Joint use with the County for a possible new pool and gymnasium were discussed, both of which did not involve noise or the disruption of the quiet, thoughtful setting for which any College needs to promote student learning. The sirens will disrupt that learning environment which is a direct result of the lack of proper planning on the part of the County Fire Department.

6. Health and Safety of Students

Of equal concern to the drainage issue, is the issue of the health and safety of the students at the Molokai Education Center. The current fire station must route its emergency vehicles via two equally dangerous paths: one, through the town and the other, past an elementary school. This new proposal would route the emergency vehicles directly past another school, the Molokai Education Center. Though the dangers are slightly different between youngsters and adult students, they must still be considered as the College students walk along the road to school, use the same road to access and leave the campus grounds, etc. Proper planning could have resulted in a location which eliminated routing emergency vehicles past any school, instead of repeating the same mistake twice.

7. Lack of Input from Ranch Camp Neighbors and Community at Large While the Molokai Education Center has been contacted for early consultation, the residents at the eastern side of the Ranch Camp community seem unaware of the proposed development. Many may have similar concerns with the proposal as does the College staff. Documented efforts to reach the Ranch Camp neighborhood for their input as well as the greater community at large must be included in the EA process.

8 1

The Molokai Education Center supports this proposal upon satisfactory responses to the critical issues as stated. As a measure of good faith, we also recommend a meeting between the County of Maui, Molokai Ranch and the Molokai Education Center staff to discuss long-term planning. We look forward to hearing from you and thank you for the opportunity to give input on this project. Aloha pumehana,

Some Haytko-Paoa, Professor/Coordinator

On behalf of the Staff and Students MCC Molokai Education Center 375 Kamehameha V Highway

PO Box 440

Kaunakakai, HI. 96748

Cc Lori Buchanan, Chair Molokai Planning Commission 1.

L

f '



CARL M. KAUPALOLO CHIEF NEAL A. BAL DEPUTY CHIEF

COUNTY OF MAU! DEPARTMENT OF FIRE AND PUBLIC SAFETY

200 DAIRY ROAD KAHULUI, MAUI, HAWAII 96732 (808) 270-7561 FAX (808) 270-7919

March 30, 2006

Donna Haytko-Paoa, Profession/Coordinator Maui Community College **Molokai Education Center** 375 Kamehameha V Highway P. O. Box 440 Kaunakakai, Hawaii 96748

Subject:

Response to Early Consultation Comments on the Proposed Kaunakakai

Fire Station

Dear Ms. Haytko-Paoa:

Thank you for your letter of April 18, 2005, offering your comments on the proposed Kauanakakai Fire Station. Although some delay in project planning and design was encountered, the Department of Fire and Public Safety is now ready to proceed again. With this in mind, we would like to provide the following information to respond to your comments. The responses correspond to the numbered comments in your letter.

1. The Process

The Department acknowledges the significant role of the Molokai Community Plan in guiding new public service improvements for the island of Molokai. While the need for a new fire station in Kaunakakai has been recognized for a number of years, specific programmatic requirements for the station were only recently analyzed in detail and identified after the department concluded discussions with a national fire protection systems consultant. Although the timing for the new station did not correlate with the Community Planning process, the department has engaged in communication with the community to ensure that the planning process is open and continuous.

Donna Haytko-Paoa, Profession/Coordinator March 30, 2006 Page 2

Additionally, the Department of Fire and Public Safety agrees that governmental accountability is needed in the planning process for the new fire station. As noted above, the timing for the planning and development of the new station did not coincide with the Community Plan update process and the subsequent implementation of Alanui Ka 'Imi 'Ike. The department, however, is committed to moving forward with project implementation in a forthright and open manner.

۲ J'

- 1

The site for the new fire station which was provided by Molokai Ranch was determined to be ideal in terms of emergency access and operational utility. The department is required to go through the land use entitlements process to secure appropriate community plan and zoning designations. In this regard, there are no obligations to Molokai Ranch as a result of the provision of land, and no intent to circumvent regulatory systems. As noted above, the department is intent on implementing the project in a manner which maintains governmental accountability and integrity.

II. The Required Zoning Changes

As suggested, a comprehensive approach to land planning and zoning represents the ideal approach when embarking on land use actions. However, due to the multiple landownership and governmental jurisdictions which have an interest in the project vicinity, a coordinated planning and entitlements program is difficult to achieve in a timeframe compatible with the new fire stations implementation schedule. However, the Department is willing to engage in discussions with other agencies and owners to consider a cooperative planning approach for the larger sub-region (encompassing the Molokai Education Center and surrounding lands) so that future land use actions are implemented from a more comprehensive standpoint.

III. No Project Segmentation

The proposed new Kaunakakai Fire Station represents the entire project and is not part of a larger multi-phased project.

IV. <u>Drainage</u>

The proposed drainage system for the new fire station will be designed to ensure that no adverse effects to downstream or adjacent properties occur. A preliminary drainage report prepared by a licensed civil engineer will be incorporated in the Donna Haytko-Paoa, Profession/Coordinator March 30, 2006 Page 3

Draft Environmental Assessment (EA). The EA and/or the preliminary drainage report will address Best Management Practices (BMPs) which may be implemented to address stormwater runoff concerns.

V. Noise

1

1:

1

1:

Ţ

The helipad will be used for civil defense emergency operations, fire training, rescue, and firefighting operations. We anticipate helipad use to average 3 in-bound and 3 out-bound trips per month. With respect to fire fighting equipment sirens, the Kaunakakai Fire Station currently averages 20 calls per month. This pattern of calls is not anticipated to increase substantially with the new fire station. As you have suggested, to ensure a mutually respectful understanding of operational concerns, we would be happy to meet with you and your staff to discuss our current and proposed operations. Such coordination will also allow us to be sensitive to the operational characteristics of the Molokai Education Center.

VI. <u>Health and Safety of Students</u>

We agree that safety of students at the Molokai Education Center is of utmost priority. Our firefighters are keenly aware of the need to balance timely emergency response with the safety of residents along our emergency routes. It is with this in mind, that the department's coordination with the Molokai Education Center, as discussed above, would be of mutual benefit.

VII. Lack of Input from Ranch Camp Neighbors and Community at Large

The department has reached out to the neighboring communities to ensure a broadest possible understanding of the scope of the project. A meeting with the Molokai Planning Commission was held on March 9, 2005, to receive community input. Additional meetings with the Planning Commission will be scheduled as the department progresses with the EA and land use entitlements processes. Like you, we believe it important the that entire community understand the need and impact considerations associated with the new fire station.

Donna Haytko-Paoa, Profession/Coordinator March 30, 2006 Page 4

Thank you again for the valuable comments provided. We look forward to working with you as project planning continues.

Very truly yours,

CARL M. KAUPALOLO, Chief Department of Fire & Public Safety **4** .1

2 1

CK

cc: Michael T. Munekiyo, Munekiyo & Hiraga, Inc.

University of Hawai'i

L

1 ...

L.

MAUI COMMUNITY COLLEGE

Office of the Chancellor

March 17, 2006

Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed Kaunakakai Fire Station

Dear Mr. Munekiyo:

Thank you for the opportunity of providing input on the proposed Kaunakakai Fire Station Project on Moloka'i.

We have reviewed the information you provided regarding the project and wish to inform you that on behalf on Maui Community College I wholeheartedly support the development of this project to enhance firefighter services for the Molokai community.

Please contact me if you require any additional information.

Sincerely,

Clyde M. Sakamoto

Chancellor



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

39.4

August 10, 2006

Clyde Sakamoto, Chancellor Maui Community College Office of the Chancellor 310 West Kaahumanu Avenue Kahului, Hawaii 96732-1617

SUBJECT: Early Consultation Comments on the Proposed Fire Station at Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Sakamoto:

Thank you for your letter of March 17, 2006, responding to our request for early consultation comments for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. We acknowledge and appreciate your support for the proposed action. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Tara K. Nakashima, Planner

TKN:yp

cc: Greg Jenkins, Department of Fire and Public Safety

planning.

305 High Street, Suite 104 Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com C n

Chapter IX

Letter Received During the Draft Environmental Assessment Public Comment Period and Responses to Substantive Comments

IX. LETTER RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

A Draft Environmental Assessment for the subject project was filed and published in the Office of Environmental Quality Control's The Environmental Notice on October 8, 2006. During the 30-day public comment period, agencies were provided the opportunity to comment on the proposed action. This section incorporates the comments received during the 30-day comment period. Responses to the substantive comments are also incorporated herein.



DEPARTMENT OF THE ARMY U.S. ARMY ENGINEER DISTRICT, HONOLULU BUILDING 223 FORT SHAFTER, HAWAII 95858-5440

REPLY TO ATTENTION OF: CEPOH-EC-T

107 OCT 13 P2:04

October 12, 2006

DEPT OF PLANNING COUNTY OF MAUI RECEIVED

4

28.4

李章

Civil Works Technical Branch

Mr. Michael W. Foley, Staff Planner County of Maui Department of Planning 250 South High Street Walluku, Maui, Hawaii 96793

Dear Mr. Foley:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Kaunakakai Fire Station Project, Molokai (TMK 5-3-3: por. 15). The flood hazard information provided on Page 20 and Figure 11 of the DEA is correct.

The documents have been forwarded to our Regulatory Branch to determine Department of the Army permit requirements. They will respond to your office under separate cover. Should you require additional information, please call Ms. Jessie Doblnchick of my staff at 438-8876.

Sincerely,

James Pennaz, P.E.

Chief, Civil Works Technical Branch



DEPARTMENT OF THE ARMY

U. S. ARMY ENGINEER DISTRICT, HONOLULU FT. SHAFTER, HAWAII 96858-5440

October 4, 2006

Regulatory Branch

File Number POH-2005-137-4

Mr. Michael Foley Director Department of Planning County of Maui 250 South High Street Wailuku, Hawaii 96793

Dear Mr. Foley:

This responds to your request dated October 2, 2006, for comments to the draft Environmental Assessment for the Kaunakakai Fire Station Project (TMK (2) 5-3-03: por. 15), Kaunakakai, Molokai Island. The information provided affirms that this location is in an upland area of 5 acres, and outside the limit of our jurisdiction. Our previous determination dated March 3, 2005, stating that a Department of Army (DA) permit will not be required is therefore confirmed. Finally, should the construction activities necessitate the side-casting or placement of fill material into any adjacent wetlands, the agency, Department of Fire and Public Safety, acknowledges that consultation will take place with this office to determine if a Department of Army (DA) permit may then be required.

File Number POH-2005-137-4 is still assigned to this project. Please feel free to contact Mr. Farley Watanabe of my staff at 808-438-7701, or by email at Farley.K.Watanabe@poh01.usace.army.mil, if you have additional questions.

Sincerely,

GEORGE P. YOUNG, P.E. Chief, Regulatory Branch

Copy Furnished:

Director, Clean Water Branch, State of Hawaii

Mr. Michael T. Munekiyo, A.I.C.P, Munekiyo & Hiraga, Inc., 305 High Street, Suite 104, Wailuku, Hawaii 96793



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 17, 2006

George P. Young, P.E., Chief Regulatory Branch U. S. Department of the Army Corps of Engineers Building 230 Fort Shafter, Hawaii 96858-5440

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire Station, TMK 5-3-3:015 (por.), Kaunakakai, Molokai, (EA 2005/0003)(DBA 2005/0002)(CPA 2005/0002)(CIZ 2005/0001)

Dear Mr. Young:

Thank you for your letter dated October 4, 2006, commenting on the Draft Environmental Assessment for the proposed Kaunakakai Fire Station. The Department of Fire and Public Safety understands the applicable triggers for a Department of Army permit and will coordinate with your department, as needed.

Thank you again for your feedback. Should you have any additional questions or comments, please call me at 244-2015.

Very truly yours,

Michael T. Munekiyo, A.I.C.P. Project Manager

MTM:lh

cc: Greg Jenkins, Department of Fire and Public Safety Steve Wong, Mitsunaga & Associates, Inc.

n a

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconfine.comy & ray ry &

LINDA LINGLE GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTHBERETANIA STREET SUITE 702 HONOLULU, HAWAII 96813 TELEPHONE (808) 586-4185 FACSIMILE (808) 586-4186 E-mail, oeqc@health, state hi us

November 3, 2006

Mr. Michael Foley County of Maui Department of Planning 250 South High Street Wailuku, Hawaii 96793

Dear Mr. Foley:

Subject:

Draft EA for the Kaunakakai Fire Station, Molokai

Thank you for the opportunity to review the subject document. We have the following comment.

1. OEQC recommends that the County Department of Fire and Public Safety seek the U.S. Green Building Council's Leadership in Energy and Environmental Design certification for new construction for this project. Please go to http://www.usgbc.org/ for more information.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson

eneview Solmen

Director

c:

County Department of Fire and Public Safety Munekiyo and Hiraga



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 16, 2006

Genevieve Salmonson, Director State of Hawai'i Office of Environmental Quality Control 235 South Beretania Street, Suite 702 Honolulu, Hawai'i 96813

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire

Station, TMK 5-3-3:015 (por.), Kaunakakai, Moloka'i,

(EA 2005/0003)(DBA 2005/0002)(CPA 2005/0002)(CIZ 2005/0001)

Dear Ms. Salmonson:

Thank you for your letter dated November 3, 2006, commenting on the Draft Environmental Assessment for the proposed Kaunakakai Fire Station. On behalf of the applicant, we would like to note that the project architect considered possible incorporation of Leadership in Energy and Environmental Design (LEED) criteria into the architectural design of the proposed fire station. However, based on project budget constraints and programmatic requirements for the fire station, LEED certification was not deemed feasible.

We would like to note that energy conservation design measures that will be incorporated into the proposed project will include the following:

1. Tinted windows to shade and cool the building:

- 2. Installation of large canopy trees around the building for shade and cooling of the building;
- 3. Use of low flow plumbing fixtures;
- 4. Installation of High Pressure Sodium (HPS) luminaires around entrances/exits;
- 5. Installation of HPS pole mounted lights at all driveways and vehicle parking areas;
- 6. Installation of lights to the exterior of the site and building that will be automatically; triggered by time switch controls and limited to night time use only;
- 7. Installation of energy efficient fluorescent lighting to the building interior;
- 8. Installation of multi-level and/or zoned switching of interior lighting in large rooms; and
- 9. Installation of wall mounted occupancy sensor light switches within private offices.

planning environment

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhineonline

Genevieve Salmonson, Director November 16, 2006 Page 2

Again, thank you for your feedback. Should you have further comments or questions, please call me at 244-2015.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.

Project Manager

MTM:Ih

ţz 4.3

1 8

: **?**

11

1 3 13

15 19

3

ŧ\$

CC: Greg Jenkins, Department of Fire and Public Safety Steve Wong, Mitsunaga & Associates, Inc.



STATE OF HAWAII

'D6 DCT 24 AU 303

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM LAND USE COMMISSION

P.O. Box 2369
Honokitu, Hawaii 96804-2359
Telephone: 808-587-3822
Fix: 808-587-3827

OEPT OF PLANNING COUNTY OF MAUI RECEIVED

October 19, 2006

Mr. Michael W. Foley, Director County of Maui Department of Planning 250 South High Street Wailuku, Maui, Hawaii

Dear Mr. Foley:

Subject:

Kaunakakai Fire Station

Draft Environmental Assessment

Proposing Agency: County of Maui Department of Fire and Public Safety

TMK No.: [2] 5-3-003: 015 (por.)

We have reviewed the Draft Environmental Assessment forwarded by your correspondence dated October 2, 2006, for the Proposing Agency to develop a new fire station at Kaunakakai, Molokai. Based upon review of the Draft Environmental Assessment, we have the following comments:

- 1. We confirm that the subject property is located within the State Land Use Agricultural District.
- 2. Pursuant to §205-3.1(c), Hawai'i Revised Statues, and given the location, scope, and nature of the proposed activity, we have no further comments to offer at this time.

Thank you for the opportunity to comment on the subject application. Please feel free to contact Max Rogers of my office at 587-3822, if you have any questions or need clarification.

Sincerely,

ANTHONY JUBY CHING

Executive Officer



STATE OF HAWAI'I DEPARTMENT OF EDUCATION P.O. DOX 27401 HONOLULU, HAWAI'I REBUM

706 NOV 15 P2:05

COUNTY OF MAUI RECEIVED

OFFICE OF BUSINESS SERVICES

November 9, 2006

Mr. Michael W. Foley, Planning Director Department of Planning County of Maui 250 South High Street Wailuku, Hawai'i 96793

Attn: Ms. Nancy M. McPherson:

Dear Mr. Foley:

SUBJECT:

Draft Environmental Assessment for the Kaunakakai Fire Station, Molokai, TMK: 5-3-003: por. 015, (EA 2005/0003), (CPA 2005/0002), (DBA 2005/0002),

and (CIZ 2005/0001)

The Department of Education (DOE) has no comment on the proposed plans to build a new fire station in Kaunakakai, Molokai. The DOE appreciates the opportunity to review the plans. Should you have any questions, please call Heidi Mecker of the Facilities Development Branch at (808) 733-4862.

Sincerely yours,

Duane Y. Kashiwai Public Works Manager

DYK:jmb

c: Ron Okamura, CAS, Hana/Lahainaluna/Lanai/Molokai Complex Areas

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

LINDA LINGLE GUYERROR STATE OF HAWAR



STATE OF HAWAII

DEPARTMENT OF HAWAIIAN HOME LANDS

EO, HOX 1879

HONOLULU, HAWAH 96805

October 9, 2006

TRAIRMAN

BENTENDERMIN

BENTEN

KAUTANA II. PARK BERZINSH ASSISTANT

DEPT OF PLANNING COUNTY OF MAUI

Mr. Michael W. Folcy, Director Department of Planning County of Maui 250 South High Street Wailuku, Hawaii 96793

Attention: Nancy M. McPherson

Dear Mr. Foley:

Subject: ID No. EA 2005/0003, CPA 20052002, DBA 2005/0002, CIZ 2005/0001

TMK No. 5-3-003: 015 por. Kaunakakai Fire Station

County of Maui, Department of Fire and Public Safety

Thank you for the opportunity to review the draft Environmental Assessment report on the proposed Kaunakakai Fire Station on the island of Molokai. The Department of Hawaiian Home Lands has no comments to offer.

If you have any questions, please call me at (808) 586-3801 or call our Planning Office at 586-3836.

Aloha and mahalo,

Micah A. Kane, Chairman Hawaiian Homes Commission LINDA LINGLE COYTENOR OF HAWAII



DCT 19 MO :01

CHIYOME L. FUKINO, M. D. DRECTOR OF MEASTH

LORRIN W. PANG, M. D., M. P. H. DISTRICT HEALTH OFFICER

DEPARTMENT OF HEALTH DEPT OF PLANNING MAUI DISTRICT HEALTH OFFICE OUNTY OF MAUI STRICT HEALTH OFFICE OUNTY OF MAUI WAILLIKU, MAUI, HAWAII 00793-2102 RECEIVED

October 18, 2006

Mr. Michael W. Foley Director Department of Planning County of Maui 250 South High Street Walluku, Hawai'i 98793

Attention: Nancy M. McPherson

Dear Mr. Foley:

Subject:

Kaunakakal Fire Station

TMK: (2) 5-3-003: 015 (por.)

EA 2005/0003, CPA 2005/0002, DBA 2005/0002,

CIZ 2005/0001

Thank you for the opportunity to comment on the proposed Kaunakakai Fire Station. The following comments are offered:

- The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
- 2. HAR, Chapter 11-46 sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.
- National Pollutant Discharge Elimination System (NPDES) permit coverage may be required for this project. The Clean Water Branch should be contacted at 808 586-4309.

Mr. Michael W. Foley October 18, 2006 Page 2

It is strongly recommended that the Standard Comments found at the Department's website: www.state.hl.us/health/environmental/env-planning/landuse/landuse.html be reviewed, and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

Herbert S. Matsubayashi District Environmental Health Program Chief



MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 16, 2006

Herbert S. Matsubayashi, Chief Maui District Health Office State of Hawaii Department of Health 54 High Street Wailuku, Hawaii 96793-2102

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire Station, TMK 5-3-3:015 (por.), Kaunakakai, Molokai, (EA

2005/0003)(DBA 2005/0002)(CPA 2005/0002)(CIZ 2005/0001)

Dear Mr. Matsubayashi:

Thank you for your letter dated October 18, 2006, commenting on the Draft Environmental Assessment for the proposed Kaunakakai Fire Station. On behalf of the applicant, we would like to note the following:

- 1. Pursuant to Chapter 11-46, "Community Noise Control," a noise permit will be secured, as applicable.
- 2. The applicant will comply with Hawaii Administrative Rules (HAR), Chapter 11-46, which sets maximum allowable sound levels from stationary equipment. Noise generating equipment will be placed in locations that will minimize noise effect on the surrounding area.
- 3. The applicant will obtain a permit to comply with the requirements of HAR Sections 11-55-04 and 11-55-34.05, related to the National Pollutant Discharge Elimination System, as applicable.
- The applicant will adhere to the standard department comments, applicable to the project.

environment anning

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconfine.com

Herbert S. Matsubayashi, Chief November 16, 2006 Page 2

Thank you again for your feedback. Should you have any additional questions or comments, please call me at 244-2015.

Very truly yours,

Michael T. Munekiyo, A.I.C.P. Project Manager

MTM:lh

CC: Greg Jenkins, Department of Fire and Public Safety Steve Wong, Mitsunaga & Associates, Inc.



STATE OF HAWAI'I OFFICE OF HAWAIIAN AFFAIRS 711 KAPI'OLANI BOULEVARD, SUITE 500 HONOLULU, HAWAI! 96819

"06 NOV 14 PIZ:21

OEPT OF PLANNING COUNTY OF MAUI RECEIVED

HRD06/1754B

November 6, 2006

Michael Folcy
Maui County, Department of Planning
250 South High Street
Wailuku, HI 96793

RE: Draft Environmental Assessment for the Proposed Kaunakakai Fire Station, Kaunakakai, Moloka'i, TMK 5-3-003: 015.

Dear Mr. Foley,

The Office of Hawalian Affairs (OHA) is in receipt of your October 3, 2006 submission and offers the following comments:

Our staff has no comment specific to the above-listed Draft Environmental Assessment. The applicant may contact Irene Ka'ahanui of OHA's Moloka'i office for future consultation if needed. Thank you for your continued correspondence.

OHA asks that, in accordance with Section 6E-46.6, Hawaii Revised Statutes and Chapter 13-300, Hawaii Administrative Rules, if the project moves forward, and if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

Aloha,

Administrator

C: Irene Ka'ahanui

OHA Community Affairs Coordinator (Moloka'i)

P.O. Box 1717

Kaunakakai, HJ 96748



MICHACL T. MUNEKIYO GWEN ÖHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 17, 2006

Clyde W. Namu`o, Administrator State of Hawai`i Office of Hawaiian Affairs 711 Kapiolani Boulevard, Suite 500 Honolulu, Hawai`i 96813

SUBJECT: Proposed Kaunakakai Fire Station

Dear Mr. Namu'o:

We have received a copy of your November 6, 2006 comment letter on the subject matter and provide the following response on behalf of the County Department of Fire and Public Safety.

The project will be undertaken in accordance with Section 6E-46.6, Hawai'i Revised Statutes and associated administrative rules. Thus, should any significant cultural deposit or human skeletal remains be encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division will be contacted.

Thank you for providing your valuable input.

Very truly yaurs,

Michael T. Munekiyo, A.I.C.P. Project Manager

MTM:lfm

cc: Nancy McPherson, Department of Planning
Greg Jenkins, Department of Fire and Public Safety

Steve Wong, Mitsunaga & Associates, Inc.

F:\DATA\COM\FireKkai\OHA.deares.wpd

.environment

305 High Street, Suite 104. Wailuku, Hawaii 96793. ph. (808)244-2015. fax: (808)244-8729. planning@mhinconline.com

LINDA LINGLE



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION 869 PUNCHBOWL STREET HONOLULU, HAWAII 96813-5097

November 17, 2006

RODNEY K. HARAGA DIRECTOR

Depuiy Directors
FRANCIS PAUL, KEENO
BARRY FUKUNAGA
BRENNON T, MORJOKA
BRIAN H, SEKIGUCHI

IN REPLY REFER TO:

STP 8.2328

Mr. Michael W. Foley Director Department of Planning County of Maui 250 South High Street Wailuku, Hawaii 96793

Dear Mr. Foley:

JEPT OF PLANNING COUNTY OF MAUI RECEIVED

Subject: Kaunakakai New Fire Station

Draft Environmental Assessment (DEA) (EA 2005/0003) for

Community Plan Approval (CPA 2005/0002),

District Boundary Amendment (DBA 2005/0002) and

Change in Zone (CIZ 2005/0001)

TMK: 5-3-003: 015 (por.)

We have the following comments for the subject project:

- 1. Our Airports Division monitors all civil airfields and helicopter sites within the State. We request that notification of the completion and activation of the helipad be provided to our Airports Division, ATTN: General Aviation Officer, for administrative and informational purposes.
- 2. We acknowledge the statement in the Draft EA that the County Department of Fire and Public Safety will provide our Highways Maui District Office the final drainage report and construction plans for the entire fire station facility for review. This is to ensure that there will not be any additional storm water runoff entering into the State highway right-of-way.
- 3. If in the future a need arises for signals or other emergency traffic controls at the Alanui Kai'imi Ike Street/Kamehameha V Highway, this should be coordinated in advance with our Highways Maui District Office.

Mr. Michael W. Foley

STP 8.2328

Page 2 November 17, 2006

We appreciate the opportunity to provide our comments.

Very truly yours,

RODNEY K HARAGA Director of Transportation

5

.

4 1

ě,

\$...

...

#·I

1



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHAHA

November 30, 2006

Rodney K. Haraga, Director State of Hawai'i Department of Transportation 869 Punchbowl Street Honolulu, Hawai'i 96813-5097

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire Station

Dear Mr. Haraga:

We have received a copy of your November 17, 2006 letter to the Maui Planning Department regarding your comments on the Draft Environmental Assessment for the proposed Kaunakakai Fire Station. We provide the following information to respond to the comments submitted.

- 1. The Department of Fire and Public Safety (DFPS) will coordinate with the Department of Transportation's (DOT's) Airports Division to ensure that appropriate notifications are filed in connection with the completion and activation of the proposed helipad.
- 2. Coordination with the DOT's Highways Division will be undertaken during the project design phase to ensure that the Kamehameha V Highway is not adversely affected by stormwater runoff generated by the proposed fire station.
- 3. Should there be a need for emergency traffic signals or other traffic controls at the intersection of Alanui Ka 'Imi 'Ike and Kamehameha V Highway, the design and installation of said controls will be coordinated with the DOT's Highways Division (Maui District Office).

environment nning

305 High Sweet, Suite 1040 Wadaku, Hawaii 967930 ph: (808)244-20150 fax: (808)244-87290 planning@mhinconline.comy & Third

Rodney K. Haraga, Director November 30, 2006 Page 2

We appreciate your valuable input. If there are any questions or if additional information is needed, please do not hesitate to call.

Very truly yours,

Michael T. Munekiyo, A. I. C. P. Project Manager

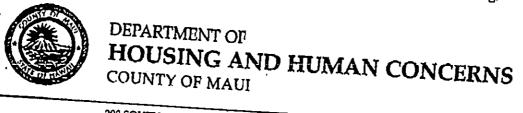
5 i

5.1

*

MTM:yp

cc: Nancy McPherson, Department of Planning
Steve Wong, Mitsunaga & Associates, Inc.
Greg Jenkins, Department of Fire and Public Safety



ALAN M. ARAKAWA AUCE I. LRE Director HERMAN'T ANDAYA Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

October 4, 2006

TO:

NANCY M. McPHERSON, Staff Planner

Department of Planning

FROM:

ALICE L. LEE, Direce

ALICE L. LEE, Director Department of Housing and Human Concerns

SUBJECT:

I.D.: EA 2005/0003, CPA 2005/0002,

DBA 2005/0002 & CIZ 2005/0001

TMR: 5-3-003:015 (por.)

PROJECT NAME: KAUNAKAKAI FIRE STATION APPLICANT: COUNTY OF MAUI, DEPARTMENT OF

FIRE AND PUBLIC SAFETY

We have reviewed the Draft Environmental Assessment (DEA) for the proposed Kaunakakai Fire Station and do not have any comment to offer.

Thank you for the opportunity to comment. We are returning the DEA for your use.

ETO:hs

Enclosure

Housing Administrator

ALAN M. ARAKAWA Mayor

MICHAEL W. FOLEY
Director

Don Couch
Deputy Director



SEP 0 8 2008

COUNTY OF MAUI DEPARTMENT OF PLANNING

September 7, 2006

Mr. Michael Munekiyo, AICP Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Mr. Munekiyo:

E: Comments Regarding August 2006 Draft Environmental Assessment (Prior to Publication) for the Proposed Kaunakakai Fire Station Located at TMK: 5-3-003: 015 (portion), Kaunakakai, Island of Molokai, Hawaii (EA 2005/0003) (DBA 2005/0002) (CIZ 2005/0001) (CPA 2005/0002)

The Planning Department has reviewed the above-referenced document and provides the following comments:

- 1. Pg ii, Executive Summary: Change accepting authority contact to Jeff Hunt;
- 2. Pg 11: State the maximum run-off or type of storm/flood event that the detention basin will be able to handle;
- 3. Whole document: It appears that there a was global delete performed of the word "long", as many of the following comments note. We suggest performing a global search for "term" to determine if "long" needs to be inserted in front of that word;
- 4. Pg 24, bottom of page: Ko'olau has extra 'a'. "Ko'oalau" is an incorrect spelling;
- 5. Pg 27, paragraph 2: The word should be spelled "aumakua", not "amakua". Paragraph 3: Check spelling of "ho'oumauna" we can't find it in the Hawaiian dictionary. Is the term possibly "aina ho'omana" instead?;
- 6. Pg 28, Access: 3rd & 5th sentences don't read well. Should "along" instead of "a";
- 7. Pg 29, Burial: Using "the" and "na" together may be incorrect it's either "near na iwi," or "near the iwi";

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 98793
PLANNING DIVISION (808) 270-7735; ZONING DIVISION (808) 270-7634

Mr. Michael Munekiyo, AICP September 7, 2006 Page 2

- 8. Pg 30, paragraph 2: "At first, she lived in the Kalai area..." should be spelled Kalae;
- 9. Pg 31, (2): Kane'ohe should have an okina;
- 10. Pg 32: la'au lapa'au is often spelled as two words stylistic;
- 11. Pg 33, Potential Impacts: In the 2nd paragraph, "impact" should be plural;
- 12. Pg 34, 2nd paragraph: Add a common after "In the long term";
- 13. Pg 34; 3rd paragraph: The Department believes that construction should be limited to 8am to 6 pm. Neighbors should not be disturbed too early or too late;
- 14. Pg 62, (B): Re-write to "views to and a[long] the shoreline";
- 15. Pg 64, (C): Add "long" before "term";
- 16. Pg 67, Objective: Add "resources" after "coastal"
- 17. Pg 69, C, 5th line: Change spelling to "analyzed";
- 18. Pg 70, item 3: Add "Long" before "Term";
- 19. Pg 71, item 4: Add "long" before "term";
- 20. Pg 72, item 9: This determination of no impact can only be assured if a strategy is outlined for decontamination of all construction equipment brought from off-island. Item 10: Add "long-" before "term". Item 12: Discuss whether the tower will rise above the surrounding kiawe forest and it's possible impacts;

Moloka'i Planning Commission Comment Letter of September 18th:

- 21. Item 3: A more detailed response to this concern should be included;
- 22. Item 6: A view analysis should be included, not just a discussion of the view impacts;
- 23. Item 13: Impacts to the cemetery should be specifically discussed, rather than relying on the discussion of surrounding uses;
- 24. Item 17: A landscape planting plan should be included. Native plants adapted to the area should be used in the plan;

Mr. Michael Munekiyo, AICP September 7, 2006 Page 3

- 25. Item 19: The response is only that it has not yet been determined whether such equipment will be needed. Perhaps a better response would be to accept the seriousness of the concern, and discuss a commitment to a contingency plan or strategy to prevent importation of invasive species on tires, undercarriage, scoops etc. of heavy equipment should it be needed. An invasive species transmission prevention strategy needs to be mandated, e.g. "applicant shall decontaminate heavy equipment before bringing it to Molokai" could be a condition of approval, but would help if the concern was addressed in the EA also;
- 26. Item 20: Specifications, safety protocol and mitigative measure need to be included:

16 I

27. Item 21: Specifications of the decontamination station need to be included;

Public Comments:

- 28. Proposed energy conservation measures should be included;
- 29. Drainage impacts to the Kapaakea Homesteaders should be specifically mentioned;

Appendix B-1 Archaeological Assessment Report

- 30. General: The correct symbol for 'okina needs to be a "left apostrophe", not a "grave accent";
- 31. Pg 1, Introduction, 2nd line: Add "to" before "conduct":
- 32. Pg 5, Background: bottom of page check font used for kahako a may be different, or bolded:
- 33. Pg 6, top of page: Add "was" before "comprised";
- 34. Pg 7, paragraph 1: "In 1795, Kamehameha set out once more to conquer of Molokai" delete "of":
- 35. Pg 8, paragraph 4: "Near Kunakakai Village..." Kaunakakai is misspelled;
- 36. Pg 9, paragraph 4: "...occurring within the ahupua'a of Kalama'uala..." Kalama'ula is misspelled;

Appendix C Prelim Engineering Report

- 37. General Report needs page numbers;
- 38. Pages 8 & 9: are reversed; and

Mr. Michael Munekiyo, AICP September 7, 2006 Page 4

39. Pg 5: 20,000 gpd seems high for landscaping. Are there any strategies to reduce water consumption? (It's way higher than allocation for building and occupants).

Thank you for your cooperation. If additional clarification is required, please contact Mr. Jeff Hunt, AICP, Staff Planner, of this office at jeff.hunt@co.maui.hi.us or 270-6271.

Sincerely,

MICHAEL W. FOLEY Planning Director

MWF:JH:bg

c: Don G. Couch, Deputy Planning Director

Clayton I. Yoshida, AICP, Planning Program Administrator

Councilmember Danny Mateo

Kivette A. Caigoy, Environmental Planner

Nancy McPherson, Moloka'i Planner

Greg Jenkins, Fire Department

Neal Bal, Fire Department

EA Project File

General File

K:\WP_DOCS\PLANNING\EA\2005\0003_KaunakakaiFireStn\Dept_Comment_DEA_Prior to Pub.wpd



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANG

KARLYNN KAWAHARA

2.1

November 17, 2006

Michael Foley, Director Department of Planning Attention: Nancy McPherson 250 South High Street Wailuku, Hawaii 96793

SUBJECT: Early Consultation Comments on the Proposed Fire Station at

Kaunakakai, Molokai, TMK (2) 5-3-03:15 (por.)

Dear Mr. Foley:

Thank you for your letter of September 7, 2006, commenting on the draft version of the Draft Environmental Assessment (EA) for the proposed fire station at TMK (2) 5-3-03:15 (por.), Kaunakakai, Molokai. In response to your comments, we would like to note the following:

Planning Department Comments

Comment Nos. 1 Through 20

The suggested changes were reviewed and the Draft EA was revised to reflect the alterations, as appropriate.

Molokai Planning Commission Comments

Comment No. 21

Potential impacts and proposed mitigative measures to manage toxic, hazardous, bio-hazardous substances that may enter the wastewater or stormwater systems were addressed in Chapter II.D.3.b. of the Draft EA.

Comment No. 22

View renderings will be included in the Final EA.

planning.....

305 High Sweet, Suite 104. Wailuku, Hawaii 96793. ph: (808)244-2015. fux: (808)244-8729. planning@mhinconline.comver nime

Michael W. Foley, Director November 17, 2006 Page 2

Comment No. 23

Potential impact to the nearby Kapaakea Cemetery was addressed in Chapter II.A.1.b. of the Draft EA.

Comment No. 24

A landscape planting plan was included as Figure 6 in the Draft EA. Native plants, such as loulu lelo, ilima papa and pau-o-hiaka were incorporated into the plan, as discussed in Chapter II.A.4.b.

Comment No. 25

The applicant understands your concern with respect to possible importation of invasive species on tires, undercarriage, scoops, etc. of heavy equipment. As previously stated, the applicant plans to work with a contractor who, once selected, will determine the equipment required for project implementation. The contractor will be advised of the need to prevent the importation of invasive species by ensuring that equipment is cleaned prior to being transported to Molokai.

Comment No. 26

A discussion of the safety protocol for the fuel tanks is provided in Chapter I.B. of the Draft EA. The tanks will be installed, operated and maintained in accordance with applicable regulatory requirements.

Comment No. 27

A description of the decontamination station was provided in Chapter I.B. and a discussion of potential impacts and mitigation measures was included in Chapter II.D.3.b. of the Draft EA.

Public Comments

Comment No. 28

As stated in the Draft EA, the applicant will incorporate energy conservation measures in the project, where appropriate. Energy conservation measures will be discussed in the Final EA.

Michael W. Foley, Director November 17, 2006 Page 3

Comment No. 29

Potential drainage impact to Kapaakea Homesteaders was addressed in Chapter II.A.1.b. and Chapter II.D.4.b. of the Draft EA.

Appendix "B-1", Archaeological Assessment Report

Comment Nos. 30 through 36

The project archaeologist was consulted regarding the suggested changes. Because the Archaeological Assessment Report for the proposed project was approved by the State Historic Preservation Division on August 11, 2006, the project archaeologist does not feel a revision to the report is warranted at this time.

Appendix "C", Preliminary Engineering Report

Comment No. 37

The applicant will coordinate with the project engineer to ensure the Preliminary Engineering Report included in the Final EA contains numbered pages.

Comment No. 38

Pages 8 and 9 were collated in correct order prior to printing of the Draft EA.

Comment No. 39

A discussion of strategies to reduce water consumption will be included in the Final EA.

Very truly yours,

Michael T. Munekiyo, A.I.C.P. Project Manager

MTM:Ih

CC: Greg Jenkins, Department of Fire and Public Safety F:\text{DATA\COMFireKkai\PlanningDept.deares.wpd}

ALAN M. ARAKAWA Mayor MICHAEL W. FOLEY Director DON COUCH Deputy Director



October 30, 2006

Ms. Tara Nakashima Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Dear Ms. Nakashima:

RE: Comments in Preparation of a Draft Environmental Assessment For The Proposed Kaunakakai Fire Station Located At TMK: 5-3-003:015 (portion), Kaunakakai, Island Of Molokai, Hawaii (EA 2005/0003) (DBA 2005/0002) (CIZ 2005/0001) (CPA 2005/0002)

At its regular meeting on October 11, 2006, the Molokai Planning Commission (Commission) reviewed the above-referenced request and provides the following comments:

- Discuss potential impacts and proposed mitigative measures to manage noise and traffic affecting the Molokai Education Center. Discuss mitigation measures, such as a flashing warning light, for the intersection of Kamehameha V Highway and Alanui Ka Imi'ike during response events. Discuss anticipated average number of both emergency and non-emergency calls per day, and likely response routes.
- 2. Discuss visibility impairment for traffic along Alanui Ka Imi'ike due to Wiliwili trees and possible mitigations. Discuss impact of speed bumps along Alanui Ka Imi'ike on speed of fire apparatus while responding.
- 3. Discuss water conservation measures with regards to fixtures and landscaping.
- 4. Discuss energy conservation measures with regards to fire station design.

Ms. Tara Nakashima October 30, 2006 Page 2

- 5. Discuss public participation process in more detail as regards addressing concerns of residents in adjacent neighborhoods.
- 6. Provide the specifications for the proposed fuel tanks and storage area. Provide a discussion of the safety protocol and mitigative measures for potential explosions and leaks.
- 7. Discuss subdivision time line, purchase agreement and contingency plans for financing of project.

The Commission indicated a general support of the proposed project as a public facility and further recognized their role and responsibility to ensure the project is implemented appropriately.

Public testimony received during the meeting expressed a general support of the proposed project.

Thank you for your cooperation. If additional clarification is required, please contact Ms. Nancy McPherson, Staff Planner - Molokai, of the Molokai office at (808) 553-3221.

Sincerely,

MICHAEL W. FOLEY Planning Director

MWF:NMM:bv

c: Donald G. Couch, Deputy Planning Director
Clayton I. Yoshida, AICP, Planning Program Administrator
Council Member Danny Mateo
Nancy McPherson, Staff Planner
Greg Jenkins, Fire Department
Neal Bal, Fire Department
EA Project File
General File
K:\WP_DOCS\PLANNING\EA\2005\0003_KaunakakaiFireStn\MoPCCommentsDEA.wpd



MICHAEL T. MUNCKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 17, 2006

Michael Foley, Director Department of Planning Attention: Nancy McPherson 250 South High Street Wailuku, Hawaii 96793

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire

Station, TMK (2) 5-3-03:15 (por.), Kaunakakai, Moloka'i (EA 2005/0003) (DBA 2005/0002) (CPA 2005/0002) (CIZ 2005/0001)

Dear Mr. Foley:

Thank you for your October 30, 2006 letter regarding comments received from the Moloka'i Planning Commission on October 11, 2006. On behalf of the applicant, we would like to note the following:

- With regard to the potential impacts and proposed noise and traffic mitigation 1. measures, the applicant would like to note that the noise and traffic associated with the new fire station is not anticipated to have an adverse impact on the Moloka'i Education Center. The Kaunakakai Fire Station currently responds to 20 calls per month on average. The number of calls is not anticipated to increase as a result of the new fire station. The Department of Fire and Public Safety would like to note that use of the sirens and air horns will be limited to roadway clearing activity as stipulated by law. On average, sirens or air horns are utilized for roadway clearing approximately 30 seconds to one minute. Although this noise type will be audible at the Moloka'i Educaton Center, it will be of a temporary and limited duration. The Maui Police Department suggested that a flashing light be installed at the Alanui Ka Imi Ike Drive and Kamehameha V Highway. While the Department of Fire and Public Safety considered the use of a flashing light, the level of use and low traffic volume in the vicinity does not warrant this specific measure at this time. The Department believes that the standard protocols for sirens and air horns are adequate and appropriate to ensure public safety and welfare.
- 2. The applicant understands the concern with regard to visibility impairment for traffic along Alanui Ka Imi Ike, due to the presence of wiliwili trees. They are unable to address the situation, however, given that the trees are on property not owned by the County of Maui. The Department acknowledges that the speed bumps along

planning to this company

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com V & Mill Com V &

Alanui Ka Imi Ike and would like to note that while they limit speeds along this roadway segment, they will not pose a significant impediment to response time.

- 3. The applicant would like to note that they have been coordinating with the Nature Conservancy to identify plant material which minimizes irrigation water consumption. Water conservation measures to be incorporated into the proposed project include the use of low flow plumbing fixtures.
- 4. Energy conservation design measures that will be incorporated into the proposed project include the following:
 - a. Roof insulation of building
 - b. Tinted windows to shade and cool the building
 - c. Installation of large canopy trees around the building for shade and cooling of the building
 - d. Installation of a heat recovery hot water system that will utilize waste heat from air conditioning condensing units
 - e. Use of variable frequency drive to minimize energy usage by AHU fan motors for air conditioning system
 - f. Use of low flow plumbing fixtures
 - g. Installation of high pressure sodium (HPS) luminaires around entrances/exits
 - h. Installation of HPS pole mounted lights at all driveways and vehicle parking
 - Installation of lights to the exterior of the site and building that will be automatically triggered by time switch controls and limited to night time use only
 - j. Installation of energy efficient fluorescent lighting to the building interior
 - k. Installation of multi-level and/or zoned switching of interior lighting in large rooms
 - I. Installation of wall mounted occupancy sensor light switches within private offices
- 5. The applicant received public comments during two (2) Moloka'i Planning Commission meetings, including the Commission's September 27, 2006 meeting to discuss the Chapter 343, HRS Draft Environmental Assessment. The Draft Environmental Assessment was available for public review at various locations, including the Moloka'i Library. Additional opportunity for public input will be available at the Planning Commission's forthcoming meeting to discuss the Final EA. Following the EA process, the land use entitlements process will be initiated by the County of Maui, providing further opportunity for public review.

Michael W. Foley, Director November 17, 2006 Page 3

- 6. General design parameters for the proposed fuel tanks and discussion of the safety protocol and measures to be taken to address potential explosions and leaks was discussed in the Draft Environmental Assessment under the section detailing the proposed action. Specifications for the fuel tank, including leak mitigation provisions, are attached. See Exhibit "A".
- 7. A subdivision application is expected to be filed during the first quarter of 2007. The landowners' permission to subdivide has been obtained. Financing for the project has been secured in the fiscal year 2006-2007 County of Maui budget. The applicant intends on seeking grant funding to supplement County funding, as needed.

Again, thank you for your feedback. Should you have further comments or questions, please call me at 244-2015.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.

Project Manager

MTM:Ifm Enclosure

cc: Greg Jenkins, Department of Fire and Public Safety (w/ enclosure)

Steve Wong, Mitsunaga & Associates, Inc. (w/ enclosure)

F:\DATA\COMFiret0xai\PlanningDept.doares2.wpd

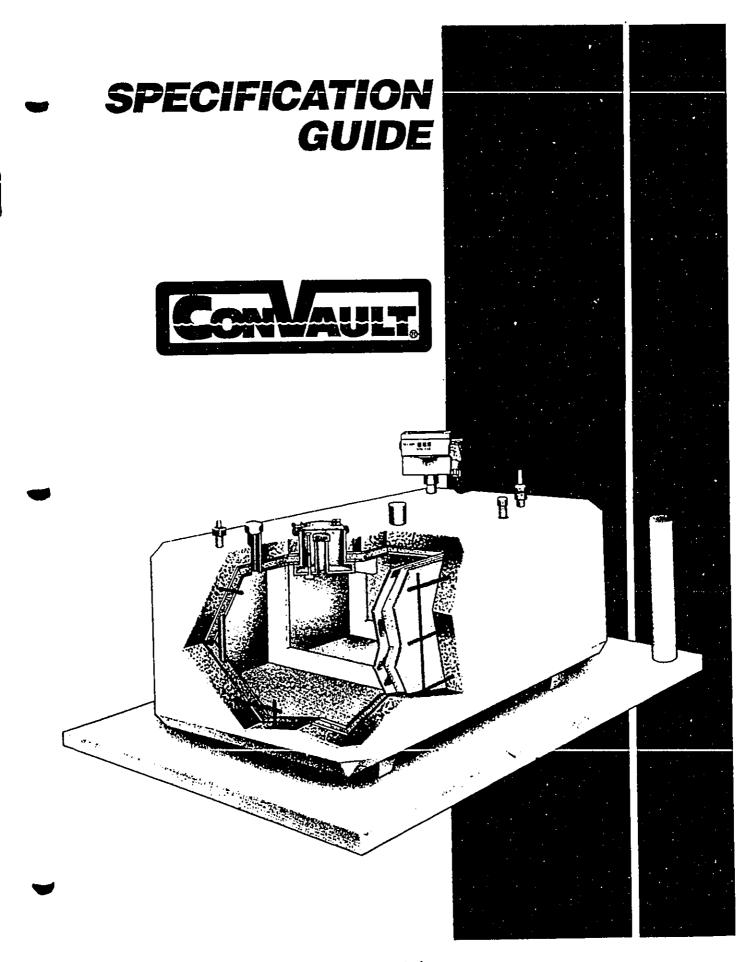


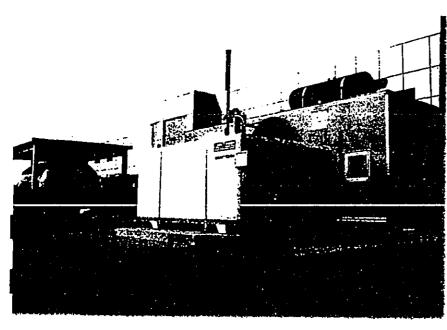
EXHIBIT 44"

THE ABOVEGROUND SOLUTION TO THE UNDERGROUND PROBLEM

Interest in the preservation of our environment has prompted all levels of government to issue strict guidelines for the installation, operation and removal of underground storage tanks (USTs). In the USA, December 22, 1998 remains the deadline by the US EPA for repair, substantial retrofit or removal of USTs. As a result, owner/operators may be faced with expensive upgrades, testing, monitoring equipment and pollution liability insurance to comply with these requirements. In the event of a leak, the actual costs for soil and groundwater clean-up can be catastrophic. ConVault's innovative Protected aboveground storage tanks are the proven solution for these problems.



Primary steel tanks (including spill containment basins) are fabricated in accordance with UL Standard 142 (Seventh Edition). The assembly has passed numerous performance tests including 2-hour liquid-pool/furnace fire tests, vehicle impact and projectile-resistance investigations. The ConVault AST is listed in accordance with ULC 142.16, ULC 142.23 and UL Standard 2085 Insulated/Secondary Containment for Aboveground Storage Tanks/Protected Type.





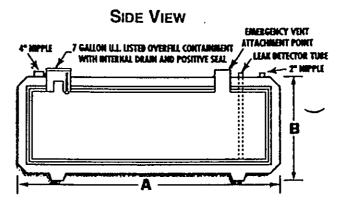
DESIGNED FOR VALUE

The ConVault AST system will provide ongoing value for fuel storage. More stringent regulations are consistently on the horizon; however, with a ConVault AST the need for updating is greatly reduced while operating costs are substantially lower than virtually any other AST available. The end result: The Owner/Operator of a ConVault AST is always provided with PEACE OF MIND.

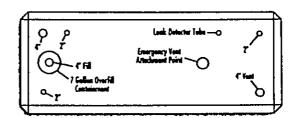
Realizing the diverse needs of our industry, ConVault has responded by expanding our product line to include tank sizes ranging from 125 to 12,000 gallons (including multicompartment options).

ConVault ASTs are shop-fabricated under strict quality controls in accordance with UL Standard 2085 and/or ULC CAN/ORD 142.16 and 142.23 for Protected Tanks. The unit is shipped as a finished assembly, normally limiting the need for major on-site work to providing a concrete and electrical service.

ConVault Size	Weight (lbs)	A (Longth)	B (Height)	Wistn
195 G. 16	6,200	4 6 6	2.1	4.53
1178000	/ 8,500	7.9	2.2	3.9.5
500 0 · ···	12,000	1" C	3 -:	4.6
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	 49 600 	1. S. C. L.	4.4	5 B
0.000.0	0		F å	
Stiff Garett	36,000	11.5	735	ě Ç
A USC Given LP	44 000	17171	.0.525	£ (.
4 000 Galvin HP	40 009 .	.5 5.	8 9	8 C
5 200 Geen LP	53 000	131175	70.	11 117
G COD Gales HP 1	୍ଟେପ ପର	17 7.1	3368	8 C
9 000 Garen HP -	78/000	23 11	- 8 /9 25	8 C
10 000 0 des HP	C3 000	28: 7"	3 -5 PE	£ 0.
12 COO 63 86 HP	all this.	34 1	a ७२5	80.
Dual Tank Sizes				
C at 125 Galts	E 000	7 E ') 2 3	3 B
Dual 250 Gates:	12 000	: 11 C' '	13 4; "	4 E
Build 500 Gallen -	18 000	11.01	'4 A'	5 E
Dear 1 000 Green	30 000	11137	5' 5"	8 C,
Dunt 1 500 Gallon LP	27.006	11 3	7 3 5	E 0
Dunt 2 000 Gut no EP	45 000	17 7	5 5 25	80
Date 2,000 G illon HP	41.000	1212	8.9"	8 C
Dunt 2 600 Gallan LP	54 000	.13 1 75	7.0	11 11"
Data 3 000 Griffor HP	61 00C ·	17:71	219 25	6. O
Duat 4 000 Gatton HP	73 000	23111	8 9 25 1	B 0 '
Duar 5 000 Gulon HP	84.006	29: 7"	B 9 25"	6. 0
Dual 6 000 Gallen HP	94 000	3411"	8" 9 25"	8.0.



TOP VIEW



CROSS SECTION



AVAILABLE IN

STANDARD,

AGGREGATE,

AND



STO FINISHES.

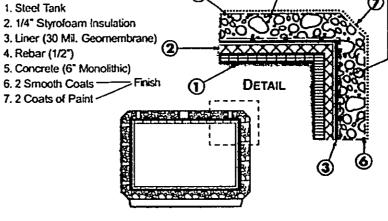


2. 1/4" Styrofoam Insulation

5. Concrete (6" Monolithic)

6. 2 Smooth Coats

7. 2 Coats of Paint



U.S. PATENT #4,826,644; #4,931,235; #4,934,122; #4,963,082; #4,986,436; #5,064,155; #5,157,888; #5,174,079; #5,234,191; #5,126,095

(OTHER U.S. & FOREIGN PATENTS PENDING)





DISTRIBUTED BY:



CORPORATE OFFICES 4109 ZEENING ROAD DEMAIR, CALIFORNIA 95315 1-800-222-7099

OR (209) 632-7571 VISIT OUR WEB SITE AT WWW.CONVAULT.COM

ALAN M. ARAKAWA Mayor



GLENN T. CORREA Director

JOHN I., BUCK IT Deputy Director

(808) 270-7230 Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoz Street, Unit 2 , Wailuku, Hawali 96793

October 9, 2006

Nancy M. McPherson, Staff Planner

Dear Mrs. McPherson

Planning Department 250 South High Street Wailuku, Hawali 96793

SUBJECT: Kaunakakal Fire Station

Draft Environmental Assessment

TMK: 5-3-003:015 (por)

We have reviewed the DEA for the above subject project and find that we have no comments at this time.

Thank you for the opportunity to review and comment. Should there be any questions, please contact Mr. Patrick Matsul, Chief of Parks Planning and Development,

Sincerely,

Director

GTC:PTM:do

Patrick Matsui, Chief of Planning and Development



OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET WAILUKU, HAWAII 96793 (808) 244-6400 FAX (808) 244-6411



THOMAS M. PHILLIPS CHIEF OF POLICE

GARY A. YABUTA
DEPUTY CHIEF OF POLICE

į,

4 4

, i

1

November 21, 2006

MEMORANDUM

TO

MICHAEL W. FOLEY, PLANNING DIRECTOR

FROM

THOMAS M. PHILLIPS, CHIEF OF POLICE

SUBJECT

I.D.

EA 2005/0003, CPA 2005/0002, DBA

2005/0002, CIZ 2005/0001

TMK

5-3-003:015 (por.)

Project

Name

Kaunakakai Fire Station

Applicant : County of Maui Dept. of Fire and Public Safety

___ No recommendation or comment to offer.

x Refer to enclosed comments and/or recommendations.

Thank you for giving us the opportunity to comment on this project.

Acting Assistant Chief Milton Matsuoka

For: THOMAS M. PHILLIPS
Chief of Police

Enclosure

:

1 A. 5 1-14

TO

THOMAS PHILLIPS, CHIEF OF POLICE, MAUI COUNTY

POLICE DEPARTMENT

VIA

CHANNELS

FROM

TIMOTHY K. GAPERO, LIEUTENANT, DISTRICT V.

MOLOKAI

SUBJECT

ENVIRIONMENTAL ASSESSMENT FOR THE PROPOSED

KAUNAKAKAI FIRE STATION

The following communication is relative to the Draft Environmental Assessment submitted by the County of Maui Department of Planning for the proposed Kaunakakai Fire Station. Kaunakakai, Molokai.

PROPOSED SITE LOCATION:

The proposed construction site is a five-acre parcel located on the eastern side of the roadway known as Alanui Ka 'Imi 'Ike near the intersection of Kakalahale Street. The roadway is a two-lane, two-way, county road that provides access to the Ranch Camp Subdivision situated northwest of the proposed Fire Station. Ala Malama Street, located in Kaunakakai Town, also provides access to the Ranch Camp Subdivision. Traffic is expected to be minimal.

The Molokai Educational Center is located south of the proposed project at the west corner of Alanui Ka 'Imi 'Ike intersection of Kamehameha V Highway. A sidewalk is in place fronting the Molokai Educational Center on Alanui Ka 'Imi 'Ike from Kamehameha Highway to its northern boundary

The length of the roadway has ample street lighting. There are bicycle paths on both sides of the roadway, but no sidewalks to accommodate pedestrian traffic.

REFERENCE TO THE MOLOKAI COMMUNITY PLAN:

Review of the Draft Environmental Assessment, Chapter III, indicates that the proposed project is consistent with the goals, policies, and objectives, of the Molokai Community Plan. Furthermore, that the project property is located within the Molokai region and occupies lands designated as "Public/Quasi-Public" and "Open Space" in the Community Plan.

COMMENTS / SUGGESTIONS:

In reviewing the Department of Planning Draft Environmental Assessment relative to the proposed construction of the Molokai Fire Department, the police department has the following comments / suggestions:

Being that the project is located in an area designated as "Public/Quasi-Public", pedestrian traffic is anticipated once the project is completed and will possibly have an impact on the community, therefore, the following recommendations are submitted;

- 1) Traffic speed of 20 to 25 miles per hour is suggested with appropriate signage indicating so.
- 2) Suggest a flashing light be installed at the intersection of Alanui Ka 'Imi 'Ike and Kamehameha Highway to alert motorists of approaching emergency fire vehicles.
- 3) Suggest sidewalks be installed on both sides of the roadway to Kalohi Street to accommodate pedestrian traffic as well as to accommodate the disabled or physically challenged individuals.
- 4) The installation of two crosswalks is also suggested.
 - One crosswalk should be placed above the northern entrance and the other below the southern entrance.
 - Each crosswalk should be installed near or at an existing street light.
 - Suggest signage alerting vehicular traffic of pedestrian traffic and crosswalks be installed as well.

Attached to this communiqué is a copy of the Early Consultation Request submitted by Sergeant G. Okamoto dated April 21, 2005.

Mitigation to implement these recommendations within the five year plan is the task of the various County and State Agencies involved in the overall planning of the project.

This communiqué is respectfully submitted for your review and comments.

LIEUTENANT TIMOTHY K. GAPERO

DISTRICT V - MOLOKAI

11/06/06

Page 2 of 2



OUR REFERENCE

YOUR REFERENCE

CUPY

POLICE DEPARTMENT

COUNTY OF MAU!

55 MAHALANI STREET WAILUKU, HAWAII 96793 (808) 244-6400 FAX (808) 244-6411

April 21, 2005



THOMAS M. PHILLIPS CHIEF OF POLICE

KEKUHAUPIO R. AKANA DEPUTY CHIEF OF POLICE

05 APR 27 A9:39

DEPT OF PLANNING COUNTY OF MAUI

Mr. Michael T. Munekiyo, A.I.C.P. Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, HI 96793

Dear Mr. Munekiyo:

SUBJECT: Early Consultation Request for Proposed Kaunakakai Fire Station

Thank you for your letter of February 25, 2005, requesting comments on the above subject.

We have reviewed the information submitted for this project and have enclosed our comments and recommendations. We apologize for the delay and thank you for giving us the opportunity to comment on this project.

Very truly yours,

Assistant Chief Sydney Kikuchi for: Thomas M. Phillips Chief of Police

c: Michael Foley, Planning Department

Enclosure



FROM-MOLOKAI PUBLIC WORKS

: THOMAS PHILLIPS, CHIEF OF POLICE, MAUI POLICE DEPARTMENT TO

: CHANNELS -04/19/05

FROM: GREGG OKAMOTO, SERGEANT, DISTRICT V PATROL

SUBJECT: EARLY CONSULTATION REQUEST FOR PROPOSED KAUNAKAKAI FIRE STATION

Sir, the following are my comments in response to a request by Michael MUNEKIYO of MUNEKIYO & HIRAGA, INC. regarding early consultation on the proposed action.

Early consultation is requested in order to initiate an Environmental Assessment for the proposed action pursuant to Chapter 343, Hawaii Revised Statutes.

Overview of proposed action:

The County of Maui Department of Fire and Public Safety proposes the construction of a new fire station at Kaunakakai, Molokai, on an approximately three to five acre parcel located along Alanui Ka 'Imi 'Iki near the intersection with Kakalahale Street. The lands to the northwest of the property are in single-family residential use, while lands to the south are in agricultural use. The existing fire station is located approximately one-half mile to the east in downtown Kaunakakai.

The existing fire station no longer meets current fire protection standards required to service the Kaunakakai community. In addition, the existing fire station is subject to flooding which is disruptive to operations.

The project site is currently designated "Agricultural" by the state, and "Public/Quasipublic" and "Open Space" by the Molokai Community Plan. County zoning is "Interim". The state must amend boundary to establish the "Urban" district designation and the community plan must be amended to fully designate the site for "Public/Quasi-Public" use and the zoning must be changed to establish "Public/Quasi-Public" designation.

My assessment, based on the project overview provided by MUNEKIYO, raises the following concerns for both vehicle and pedestrian traffic:

- 1. The proposed site is near the intersection of Alanui Ka 'Imi 'Ike and Kakalahale Street, a residential area (Ranch Camp). Currently there are no crosswalks at the intersection. The new fire station will increase both vehicle and pedestrian traffic in the area.
- 2. There are no sidewalks along Alanui Ka 'Imi 'Ike which, again, will need to be addressed in response to the increase in vehicle and pedestrian traffic.



MICHAEL T. MUNCKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHAHA

November 30, 2006

Thomas Phillips, Chief County of Maui Police Department 56 Mahalani Street Wailuku, Hawai'i 96793

SUBJECT: Proposed Kaunakakai Fire Station

Dear Chief Phillips:

We have received a copy of your memorandum of November 21, 2006 to the Planning Department which provides comments on the Draft Environmental Assessment for the proposed Kaunakakai Fire Station. The following information is provided to address the comments submitted.

- 1. Establishment of appropriate speed limits and posting of associated signage will be coordinated with the Department of Public Works and Environmental Management.
- 2. A fire signal at the intersection of Alanui Ka `Imi `Ike and Kamehameha V Highway was considered. At this time, however, due to the relatively low traffic volumes in the vicinity, the Department of Fire and Public Safety believes that use of the siren/air horn and vehicle-mounted flashing lights will provide appropriate warnings for approaching emergency vehicles at the intersection. Over time, traffic conditions will be monitored and additional warning mitigation measures implemented, as warranted.
- 3. Coordination with the Department of Public Works and Environmental Management will be undertaken to define design parameters for the subject property's roadway frontage. It is noted that the Department of Fire and Public Safety recognizes the need for safe and efficient pedestrian passage along Alanui Ka`lmi`lke. However, the scope and funding of the fire station project does not include the provision of sidewalk improvements along both sides of the roadway. In this regard, the Department of Fire and Public Safety concurs with your assessment that implementation of improvements requires a coordinated effort of State and County agencies in formulating a five (5) year capital program.

environment planning planning@mhnconline.com

305 High Street, Suite 104 Wailuku, Ilawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline@my ernice

Thomas Phillips, Chief November 30, 2006 Page 2

Design coordination with the Department of Public Works and Environmental 4. Management will include consideration of crosswalks and associated signage.

Please note that the early consultation comments from Sergeant G. Okamoto was incorporated in the Draft Environmental Assessment.

Thank you again for your review of the Draft Environmental Assessment and your provision of comments. If there are any questions or if additional information is needed, please do not hesitate to contact me at 244-2015.

Very truly yours,

Michael T. Munekiyo, A. I. C. P.

4.4

Project Manager

MTM:yp

Nancy McPherson, Department of Planning Steve Wong, Mitsunaga & Associates, Inc.

Greg Jenkins, Department of Fire and Public Safety F:\DATA\COMFireKkai\mpd deares.wpd

NOV-09-2006 10:02

FROM-MOLOKAI PUBLIC WORKS

+808 553 5050

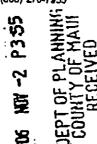
T-647 P.002/004 F-87

ALAN M. ARAKAWA Mayor

MILTON M. ARAKAWA, A.I.C.P. Director

MICHAEL M. MIYAMOTO Deputy Director

Tolephone: (808) 270-7845 Fax: (808) 270-7955



COUNTY OF MAUI DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL MANAGEMENT

200 SOUTH HIGH STREET, ROOM 322 WAILUKU, MAUI, HAWAII 96793

November 1, 2006

RALPH NAGAMINE, L.S., P.E. Development Services Administration

DAVID TAYLOR, P.E. Wastewater Reclamation Olyleion

CARY YAMASHITA, P.E. Engineering Division

BRIAN HASHIRO, P.E. Highways Division

TRACY TAKAMINE, P.E. Solid Waste Division

MEMO TO: MICHAEL W. FOLEY, PLANNING DIRECTOR

FROM:

MILTON M. ARAKAWA, A.I.C.P., DIRECTOR OF PUBLIC WORKS

AND ENVIRONMENTAL MANAGEMENT

SUBJECT: APPLICATION FOR DRAFT ENVIRONMENTAL ASSESSMENT

FOR KAUNAKAKAI FIRE STATION

TMK: (2) 5-3-003:015

DEA

We reviewed the subject application and have the following comments:

- Include a plan for construction waste disposal/recycling and grubbed material disposal/reuse.
- 2. Although wastewater system capacity is currently available as of October 6, 2006, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
- Wastewater contribution calculations are required before building permit is issued.
- 4. Developer is not required to pay assessment fees for this area at the current time.
- 5. Developer is required to fund any necessary off-site improvements to collection system and wastewater pump stations.
- 6. Plans should show the installation of a single service lateral and an advance riser for each lot.

Memo to Michael W. Foley, Planning Director November 1, 2006 Page 2

- 7. Non-contact cooling water, condensate, etc. should not drain to the wastewater system.
- 8. Indicate on the plans the ownership of each easement (in favor of which party). Note: County will not accept sewer easements that traverse private property.
- 9. Provide road improvements along the property frontage to include, but not be limited to curb, gutter and sidewalk.
- 10. Root barriers shall be provided along the property frontage to minimize future problems of root intrusion from property vegetation.
- 11. The architect and owner are advised that the project is subject to possible tsunami and flood inundation. As such, said project must conform to Ordinance No. 1145, pertaining to flood hazard districts.
- 12. A 30 foot radius shall be provided at the intersection of the proposed driveway and the adjoining subdivision roads and State roads.
- 13. A verification shall be provided by a Registered Civil Engineer that the grading and runoff water generated by the project will not have an adverse effect on the adjacent and downstream properties.
- 14. A detailed and final drainage report and a Best Management Practices (BMP) Plan shall be submitted with the grading plans for review and approval prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion and sedimentation to the maximum extent practicable.
- All existing features such as structures, driveways, drainage ways, edge of the payement, etc. shall be shown on the project plat plan.

Memo to Michael W. Foley, Planning Director November 1, 2006 Page 3

- 16. A site plan and a sight distance report to determine required sight distance and available sight distance at existing and proposed street intersections shall be provided for our review and approval.
- 17. A detailed final Traffic Impact Assessment Report for the entire development shall be submitted for our review and approval. The report shall also address regional traffic impacts and include assessments from the local community police officer.
- 18. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with building codes. We will review the project for building code requirements during the building permit application process.

If you have any questions regarding this memorandum, please call Michael Miyamoto at 270-7845.

MMA:MMM:da S:\LUCA\CZM\kaunakakal_fire_stn_dea_53003015_da.wpd



MICHAEL T. MUNEKIYO GWEN OHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 17, 2006

Milton Arakawa, Director
Attention: Michael Miyamoto
County of Maui
Department of Public Works
and Environmental Management
200 South High Street, Room 322
Wailuku, Hawaii 96793

SUBJECT: Draft Environmental Assessment for Proposed Kaunakakai Fire

Station, TMK (2) 5-3-03:015 (por.), Kaunakakai, Moloka'i, (EA 2005/0003)(DBA 2005/0002)(CPA 2005/0002)(CIZ 2005/0001)

Dear Mr. Arakawa:

Thank you for your letter dated November 1, 2006, commenting on the Draft Environmental Assessment for the Proposed Kaunakakai Fire Station. On behalf of the applicant, we would like to note the following:

- 1. The applicant will submit a Best Management Practices plan that will address handling of construction waste disposal/recycling and grubbed material disposal/reuse during the building permit review process.
- 2. The applicant understands that wastewater system capacity cannot be ensured until the issuance of the building permit.
- 3. The applicant understands that prior to building permit issuance, wastewater contribution calculations will be required, as applicable.
- 4. The applicant understands that at this time, they will not be required to pay assessment fees.
- 5. As applicable, the applicant will comply with requirements for offsite wastewater collection system improvements and wastewater pump stations and will pay their fair share contribution.
- 6. The project engineer will prepare a utility plan showing the single service water lateral and advance riser for the lot for submission prior to building permit approval.

environment planning 9- planning@mhinconline.com/y e.m. n. ry e.m.

305 High Street, Suite 104. Wailuku, Hawaii 16793. ph. (808)244-2015. fax: (808)244-8729. planning@mhinconline.comy e. r 17 177 e 17

. .

- 7. The applicant and architect understand that non-contact cooling water and condensation should not drain to the wastewater system.
- 8. Prior to building permit approval, the project engineer will submit plans indicating the ownership of each easement.
- 9. Design criteria for road improvements along the property frontage will be coordinated with the Department.
- 10. Root barriers will be provided along the property frontage, as applicable, to minimize future problems of root intrusion from property vegetation.
- 11. The project engineer will prepare a final drainage report in connection with the preparation of construction documents. The project will conform to Ordinance No. 1145, pertaining to flood hazard districts, as applicable.
- 12. The applicant will provide a minimum road radius of 30 feet at the intersection of the proposed driveway and adjoining subdivision and State roads.
- 13. Prior to building permit approval, the project engineer will prepare a final drainage report with verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent or downstream properties.
- 14. Prior to issuance of grading permits, the project engineer shall submit a detailed and final drainage report and Best Management Practices (BMP) plan with grading plans for review. The drainage report will include hydrologic and hydraulic calculations and schemes for disposal of runoff waters, comply with the "Rules and Design of Storm Drainage Facilities in the County of Maui" and provide verification that the grading and runoff generated by the proposed project will not have an adverse effect on adjacent and downstream properties. The BMP plan will show the location and details of structural and non-structural measure sto control erosion and sedimentation to the extent practicable.
- 15. The project plat plan to be prepared as part of the final construction documents will show existing features such as structures, driveways, drainageways, edge of pavement, etc., as applicable.
- 16. A site plan and sight distance report shall be submitted to determine required sight distance and available sight distance at existing and proposal street intersections will be provided, as applicable.

Milton Arakawa, Director November 17, 2006 Page 3

- 17. Based on the scope and operational parameters of the proposed fire station, adverse traffic impacts are not anticipated. In this regard, the Department of Fire and Public Safety believes that a traffic report is not warranted. Nonetheless, the Department of Fire and Public Safety will coordinate with the Department of Public Works and Environmental Management to support monitoring of traffic conditions on surrounding roadways, as needed.
- 18. Construction plans submitted for the building application review process will show sufficient detail so as to determine whether it is compliant with building and housing codes.

Thank you again for your feedback. Should there be any other questions or concerns in regards to this proposal, please do not hesitate to call me at 244-2015.

Very truly, yours

Michael T. Munekiyo, A.I.C.P.

Project Manager

MTM:lh

CC:

Greg Jenkins, Department of Fire and Public Safety

Steve Wong, Mitsunaga & Associates, Inc.

F:\DATA\COM\FireKka\ldpwem.deares.wpd

ALAN M. ARAKAWA Mayor



GEORGE Y. TENGAN Director

ERIC H. YAMASHIGE, P.E., L.S. Deputy Director

DEPARTMENT OF WATER SUPPLY

COUNTY OF MAU!

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

October 13, 2006

Mr. Michael W. Foley, Planning Director Department of Planning 250 South High Street Wailuku, Hawaii 96793

RE: Subject ID: EA 2005/0003, CPA 2005/0002, DBA 2005/0002, CIZ 2005/0001

TMK: 5-3-003:015 (por)

Project Name: Kaunakakai Fire Station

Applicant: County of Maui, Department of Fire and Public Safety

Dear Mr. Foley:

Thank you for the opportunity of comment on this Draft Environmental Assessment.

The Draft Environmental Assessment for the proposed Kaunakakai Fire Station has been reviewed. The Department does not have additional comments at this time.

Please refer to our attached letter of March 7, 2005.

Sincerely,

ayi

George Y. To

Enclosure:

March 7, 2005 letter

Ms. Nancy M. McPherson, Staff Planner

Ms. Tara Nakashima, Planner, Munekiyo & Hiraga, Inc.

Engineering Division

WRPD File

WRPD Reading File

"By Water All Things Find Life"

The Department of Water Supply is an Equal Opportunity provider and employer. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410. Or call (202) 720-5964 (voice and TDD)

Printed on recycled paper



ALAN M. ARAKAWA Mayor



GEORGE Y. TENGAN Director

JEFFREY T. PEARSON, P.E. Deputy Director

DEPARTMENT OF WATER SUPPLY

COUNTY OF MAU!

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

March 7, 2005

Michael Munekiyo, Project Manager Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793

Re: Early Consultation Request for Proposed Kaunakakai Fire Station

Dear Mr. Munekiyo:

Thank you for the opportunity to comment on this proposal in preparation of a Draft Environmental Assessment.

Source Availability and Consumption

The project site is served by the Kaunakakai-Kawela System. Water for the system comes from the Kualapu'u and Kawela Aquifers with sustainable and developable yields of 5 MGD and 3 MGD, respectively.

In 1992, Molokai was designated a Water Management Area for groundwater by the State's Commission on Water Resource Management (COWRM) to regulate existing and future uses of Molokai's limited groundwater resources.

System Infrstructure

The project site is served by a 12-inch waterline fronting the site and a fire hydrant about 240 feet northwest of the site. The applicant will required to submit domestic and irrigation calculations to determine meter size. The applicant will also be required to submit fire flow calculations to determine adequate fire protection. Actual fire demand for the proposed structure is determined by using fire flow calculations prepared, signed and stamped by a certified engineer or architect. The approved fire flow calculation methods for use include Guidance for Determination of Fire Flow-Insurance Service Office, 1974 and Fire Flow-Hawaii Insurance Bureau, 1991. Installation of a reduced pressure back-flow preventer approved by the Department should likewise be required.

Pollution Prevention

The project site overlies the Kamiloloa Aquifer which has a sustainable and developable yield of 3 MGD. The Department strives to protect the integrity of surface and groundwater resources by encouraging the applicant to adopt best management practices (BMPs) for construction and fueling stations to minimize infiltration and rumoff. Please refer to the Source Water Protection Practices Bulletin - Managing Storm Water Runoff to Prevent Contamination of Drinking Water and the BMP for fueling stations.

Conservation ·

We recommend that the applicant consider the following water conservation measures:

Eliminate Simple-Pass Cooling:

Single-pass water cooled systems should be eliminated per Maui County Code Subsection 14.21.20 Although prohibited by code, single-pass cooling systems are still manufactured into some models of air conditioners, freezers and commercial refrigerators.

Unices 3/9/05

"By Water All Things Find Life"

Utilize Low-Flow Fixtures and Devices:

Maui County Code Subsection 16.20A.680 requires the use of low-flow fixtures and devices in faucets, shower-heads, urinals, water closets and hose bibs. Other water conserving devices are also available.

Maintain Fixtures to Prevent Leaks:

A simple program of repair and maintenance can prevent loss of hundreds or even thousands of gallons of water per day. Please refer to "The Costly Drip".

Utilize Climate-Adapted Plants:

The project is located in the "Maui County Planting Plan" - Plant Zone 3. Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species. Please refer to the attached brochure: "Saving Water in the Yard - What and How to Plant in Your Area".

Prevent Over-Watering By Automated Systems:

Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evaporation rates at the site. As an alternative, provide more automated, soil-moisture sensors on controllers.

Should you have any questions, please contact our Water Resources and Planning Division at 270-7199.

Sincerely,

George Tongan

Director ayi

c: Engineering Division

attachments:

Source Water Protection Practices Bulletin - Managing Storm Runoff to Prevent Contamination of Drinking Water

BMP on Fueling Stations

The Costly Drip

Maui County Planting Plan - Saving Water in the Yard - What and How to Plant in Your Area
Ordinance No. 2108 - A bill for an Ordinance Amending Chapter 16.20 of the County of Maui Code, Pertaining
to the Plumbing Code



06 NOV -8 PIZ 33

DEPT OF PLANNING COUNTY OF MAUI RECEIVED

ا غ

111

November 2, 2006

Ms Nancy M. McPherson, Staff Planner County of Maui – Department of Planning 250 South High Street Walluku, HI 96793

Dear Ms. McPherson,

Subject:

Proposed Kaunakakai Fire Station Draft Environmental Assessment (EA)

Alanui Ka 'Imi 'Ike Street Kaunakakai, Molokai, Hawaii ' TMK: (2) 5-3-003:015

Thank you for allowing us to comment on the Draft Environmental Assessment for the subject project.

In reviewing our records and information received, Maui Electric Company (MECO) has no additional comments or objections to the proposed project at this time.

However, we suggest that the developer and/or their consultant make contact with Joanne Ide of our Demand Side Management (DSM) group at 871-2397 to review potential energy conservation and efficiency opportunities for their project.

If you have any questions or concerns, please call Ray Okazaki at 871-2340.

Sincerely,

Neal Shinyama

Manager, Engineering

Heal Thy

NS/ro:lh

Cc: Joanne Ide - MECO DSM



MICHAEL T. MUNEKIYO GWEN DHASHI HIRAGA MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

November 17, 2006

Neal Shinyama, Manager, Engineering Maui Electric Company, Ltd. 210 West Kamehameha Avenue Kahului, Hawai'i 96733-8898

SUBJECT: Proposed Kaunakakai Fire Station

Dear Mr. Shinyama:

We have received a copy of your November 2, 2006 comment letter on the subject matter and provide the following response on behalf of the County Department of Fire and Public Safety.

The Department's architect has received a copy of your letter and will coordinate with the Demand Side Management Group to discuss energy conservation and efficiency opportunities.

Thank you for providing your valuable input.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.

Project Manager

MTM:Ifm

cc: Nancy McPherson, Department of Planning

Greg Jenkins, Department of Fire and Public Safety

Steve Wong, Mitsunaga & Associates, Inc.

F:\DATA\COM\FireKkai\MECO.dearea.wpd

lanning

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808) 244-2015 · fax: (808) 244-8729 · planning@mhinconline.comverne

References

References

Chinen, Jon, <u>The Great Mahele: Hawaii's Land Division of 1848</u>, Honolulu: University of Hawaii P, 1958.

Community Resources, Inc., <u>Maui Community Plan Update Program Socio-Economic Forecast Report</u>, January 1994.

County of Maui, The General Plan of the County of Maui, 1990 Update.

County of Maui, Molokai Community Plan, 2000.

County of Maui, Molokai Community Plan, 2001.

County of Maui, Office of Economic Development, Maui County Data Book 2004, 2004.

De Loach, Lucile, Land and People on Molokai: An Overview, Master's Thesis, 1975.

First Hawaiian Bank, Research Department, Economic Indicators, July/August 1993.

First Hawaiian Bank, Research Department, <u>Supplement to Economic Indicators - Maui County Profiles</u>, July/August 1993.

Fornander, Abraham, <u>Hawaiian Antiquities and Folk-Lore</u>, P.B. Bishop Museum Memoirs, vol. 4, Honolulu: Bishop Museum, 1916-17.

Hawaiian Electric Industries, Inc., Annual Report, 1992.

Mackenzie, Melody Kapiliaoloha, ed., <u>Native Hawaiian Rights Handbook</u>, Honolulu: Native Hawaiian Legal Corporation, 1991.

Minerbi, Luciano et. al., <u>Native Hawaiian and Local Cultural Assessment Project</u>, Honolulu: University of Hawaii at Manoa, 1993.

Munekiyo, Arakawa & Hiraga, Inc., Molokai Day Care/Senior Center, Applications for District Boundary Amendment, Community Plan Amendment, Change in Zoning, County Special Use Permit, Off-Site Parking and Special Management Area Use Permit, September 2000.

Munekiyo & Hiraga, Inc., <u>Makena Alanui Improvements</u>, <u>Draft Environmental Assessment</u>, June 2001.

State of Hawaii, Department of Business, Economic Development, & Tourism, Hawaii

Workforce Informer, April 2004.

Summers, Catherine C., Molokai: A Site Survey, Pacific Archaeological Records No.14, Honolulu: Bishop Museum, 1971.

United States Department of Agriculture, Soil Conservation Service, Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai & Lanai, August 1972.

Weisler, Marshall and P.V. Kirch, <u>The Archaeological Resources of Kawela, Moloka'i:</u> their nature, significance, and management, Honolulu: Bishop Museum, 1982.

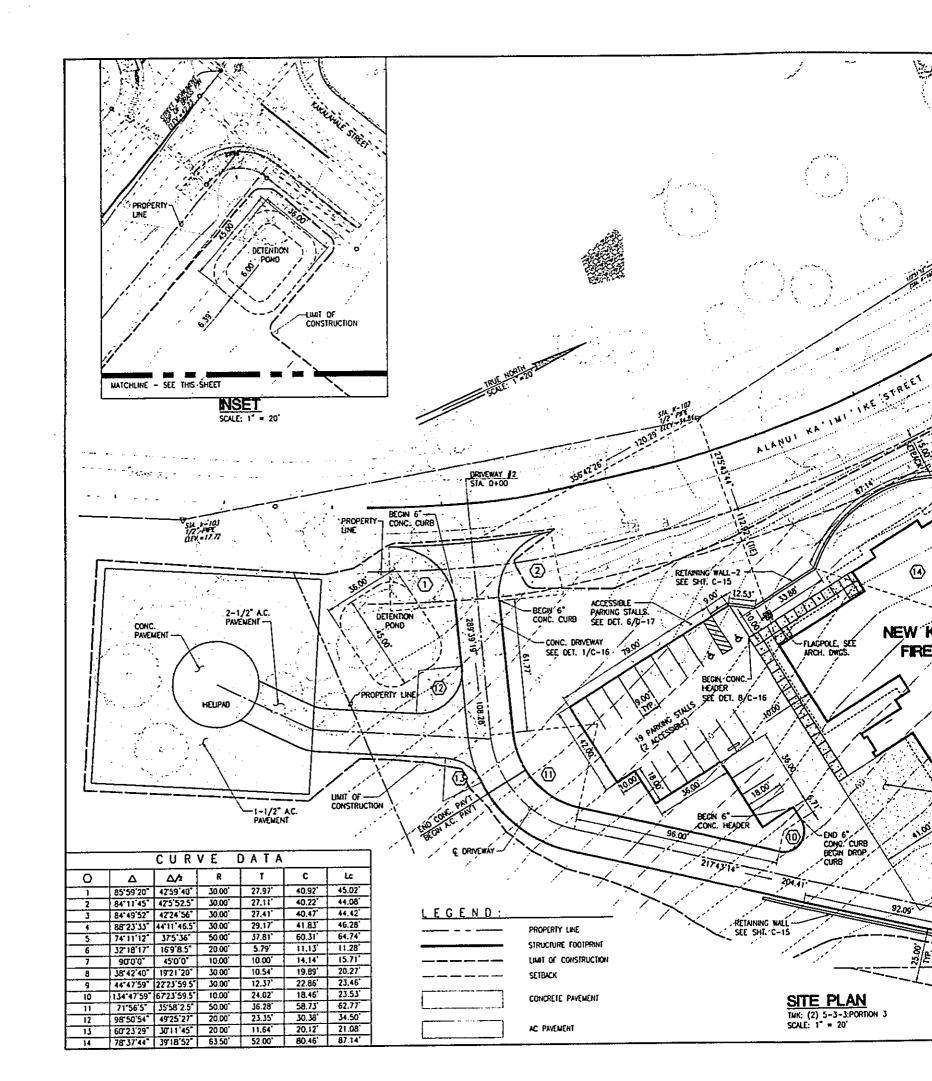
University of Hawaii Press, Atlas of Hawaii - 2nd Edition, 1983.

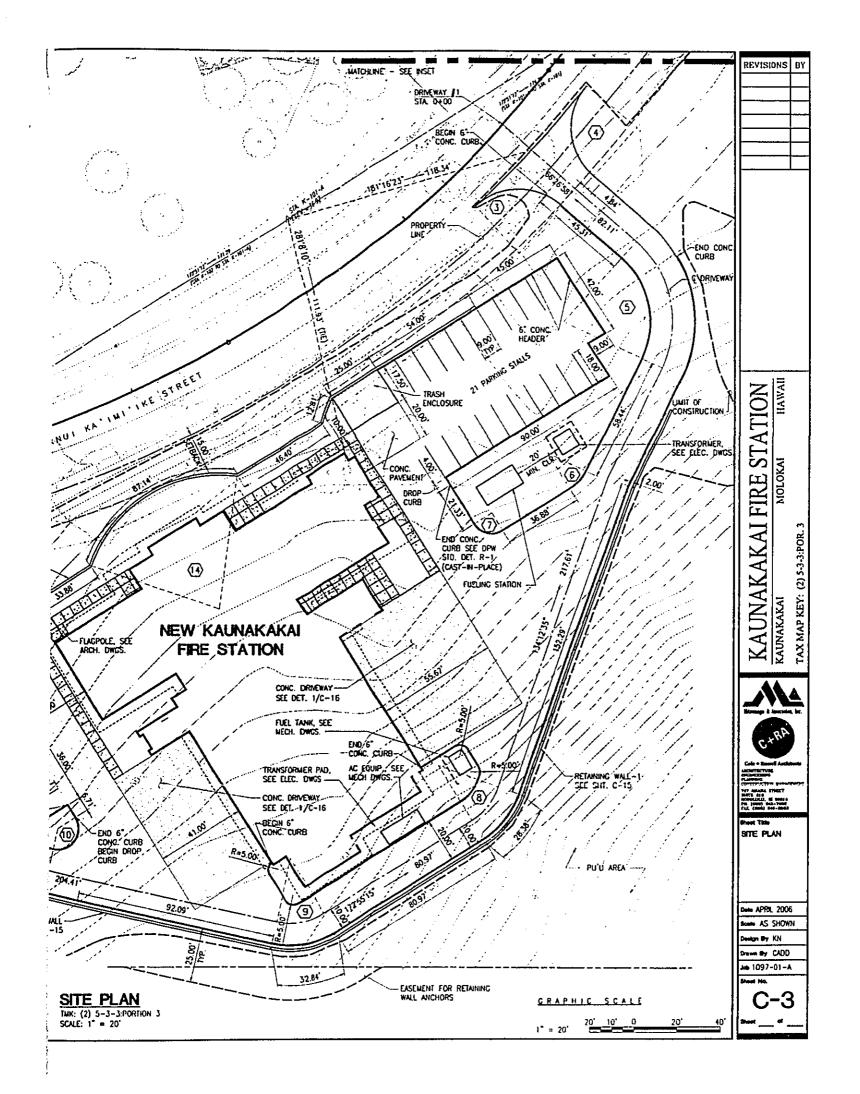
Wilson Okamoto & Associates, Inc., <u>Final Environmental Assessment for the Proposed Kaunakakai Town Drainage Improvements</u>, January 1995.

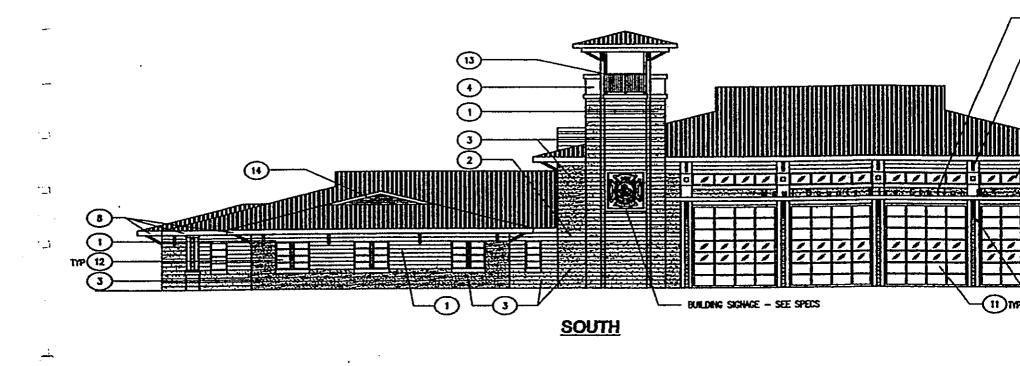
Appendices

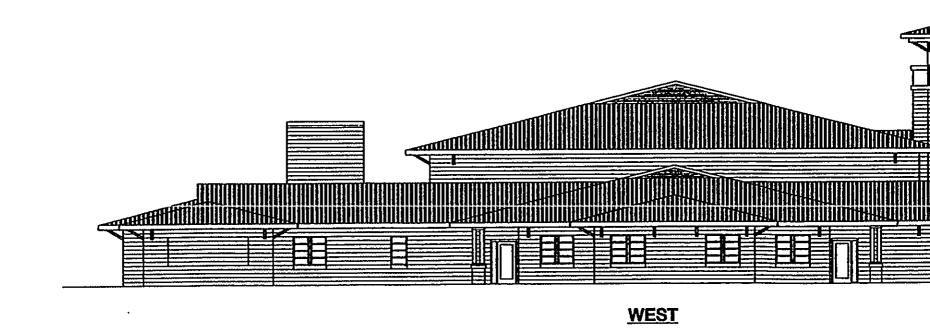
Appendix A

Preliminary Project Plans



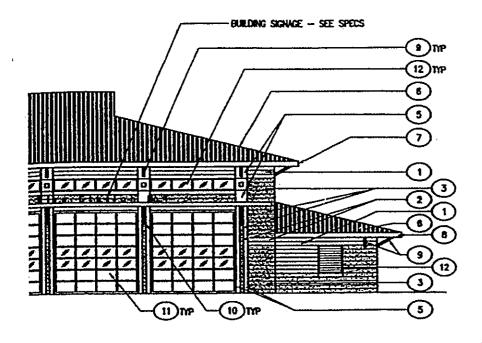


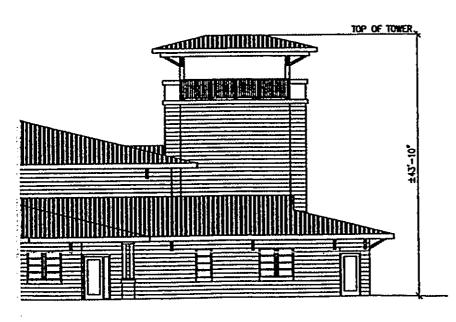




A EXTERIOR ELEVATIONS

SCALE 1/8" = 1'-0"





EXTERIOR ELEVATION

GENERAL NOTES:

1. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ALL ROOF PENETRATIONS.

2. ROOF SLOPE IS 3° PER FOOT, UNLESS OTHERWISE MOICATED.

3. SEE CIVIL DRAWINGS FOR FINISH GRADES.

EXTERIOR ELEVATION KEY LEGEND:

(1) STANDARD CONCRETE MASONRY UNIT

2 STANDARD CONCRETE MASONRY UNIT ACCENT BAND

(3) SPLIT-FACE CONCRETE MASONRY UNIT

4) eps on concrete imponry unit

(5) CONCRETE

(5) METAL ROOFING

(7) PREFINISHED METAL FASCA

(8) WOOD FASCIA

(9) DECORATIVE METAL BRACE TYPE 1

10) DECORATIVE METAL BRACE TYPE 2

(11) DOOR AS SCHEDULED

(12) WINDOW AS SCHEDULED

(13) METAL PIPE GUARDRAIL

(14) DECORATIVE METAL LOUVER

(15) METAL CUTTERS AND DOWNSPOUTS

KAUNAKAKAI FIRE STATION

TAX MAP KEY: 2-5-3-03: 15



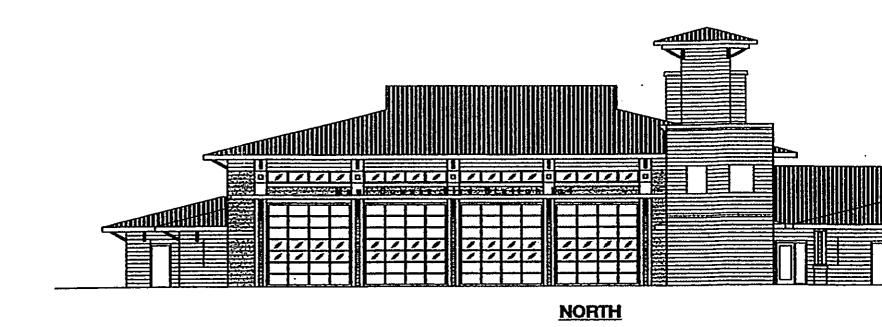
Short This EXTERIOR ELEVATIONS

Date FEBRUARY 2005 AS SHOWN

ndays flow SON

→ 1097--01-A

1/8" = 1'-0" GRAPHIC SCALE

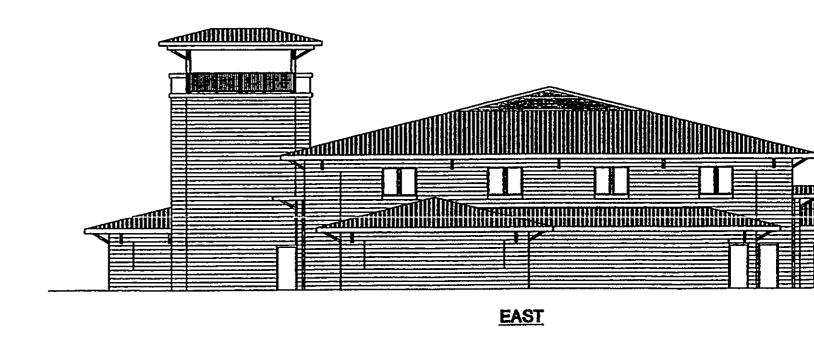


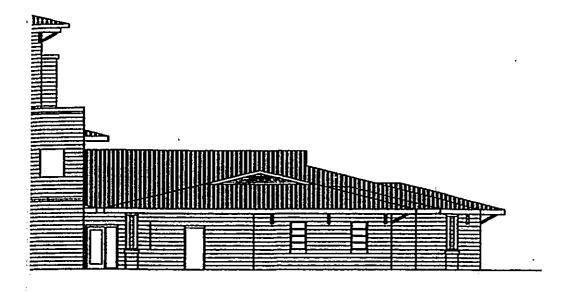
13

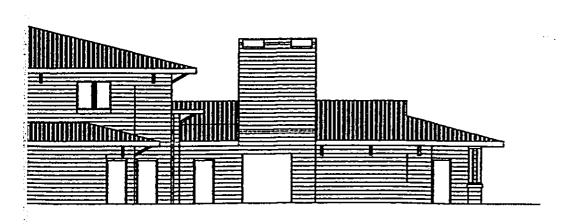
ㅗ

17

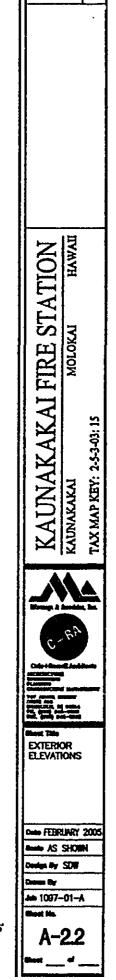
1.3







0 5' 10' 1: 1/8" = 1'-0" GRAPHIC SCALE



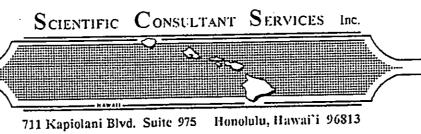
Appendix B-1

Archaeological Assessment Report

AN ARCHAEOLOGICAL ASSESSMENT REPORT FOR AN APPROXIMATELY 5-ACRE PARCEL IN KAUNAKAKAI AHUPUA`A, MOLOKA`I ISLAND, HAWAI'I [TMK: 5-03-003: POR. 15]

Prepared by: Leann McGerty, B.A. and Robert L. Spear, Ph.D. July 2006

Prepared for: Munekiyo and Hiraga, Inc. 2145 Wells Street, Suite 403 Wailuku, HI 96793



Copyright © Scientific Consultant Services, Inc. 2006. All rights reserved

TABLE OF CONTENTS

TABLE OF CONTENTSii
LIST OF FIGURESii
INTRODUCTION
ENVIRONMENTAL SETTING 1
BACKGROUND5
TRADITIONAL SETTING
METHODOLOGY10
FIELD METHODS
REFERENCES CITED
APPENDIX A: HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW A
<u>LIST OF FIGURES</u>
Figure 1: USGS Kaunakakai Quad Showing Project Area

INTRODUCTION

Scientific Consultant Services (SCS), Inc. has been contracted by Munekiyo and Hiraga, Inc. conduct an archaeological investigation on a parcel of land in Kealakekua Ahupua'a, Moloka'i Island [TMK: 5-03-003: por. 15] (Figure 1and 2). The survey covered approximately five acres of land located on the boundary between Kaunakakai and Kapa'akea Ahupua'a. Leann McGerty conducted the fieldwork with the assistance of Elizabeth (Pualani) Pua'ai on June 19, 2006 under the supervision of Robert L. Spear, Ph.D, Principal Investigator. According to information provided by Munekiyo and Hiraga, the proposed development for the parcel consists of the new Kaunakakai Fire Station.

Findings of the archaeological fieldwork, presented in detail below, were negative. No significant prehistoric or historic sites were located within the project area. Therefore, in accordance with SHPD guidelines, the survey will be summarized in an abbreviated report form called an Archaeological Assessment (SHPD 2003). As no archaeological sites were identified, or are likely to be present, there will be no impact resulting from construction on this parcel.

ENVIRONMENTAL SETTING

The project area comprises approximately five acres of land that had originally been a part of Moloka'i Ranch, Ltd. and will be subdivided and conveyed to the County of Maui. To the west and east, the project area is bounded by Alanui Ka'Imi 'Ike Street and the fenced western boundary of a section of Hawaiian Homes Land. To the north is a cinder Quarry and to the south, open land covered by tall, thick grass. The project area slopes steeply from the top of Pu'u Maninikolu to the west (Alanui Ka 'Imi 'Ike Road; Figure 3). Lands to the northwest of the project area are in single-family residential use, while lands to the immediate southeast are in agricultural use. The Moloka'i Educational Center is located further south, at the intersection of Alanui Ka 'Imi 'Ike and Kamehameha V Highway. The Duke Maliu Regional Park, is located further to the west on Kamehameha V Highway. The present fire station is located approximately on-half mile to the west of the project area in Kaunakakai city.

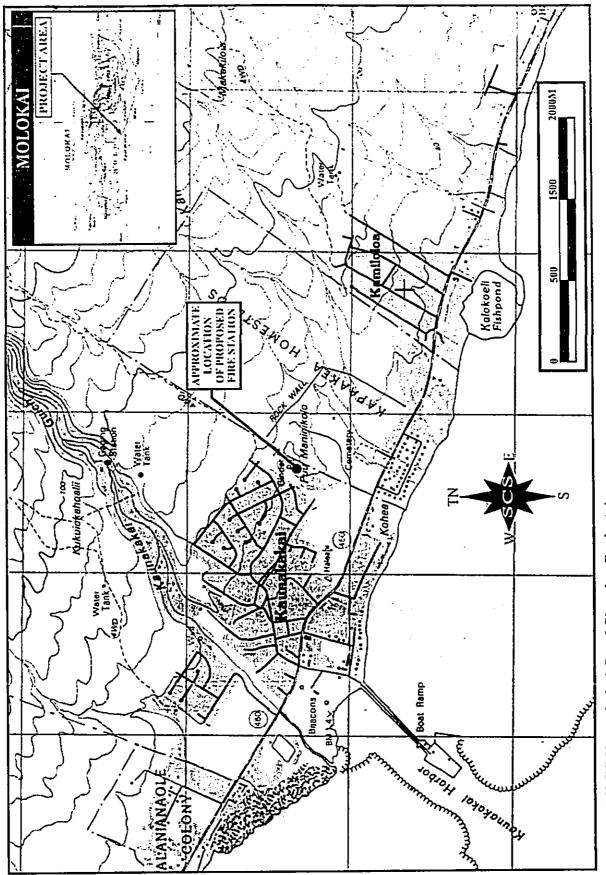


Figure 1: USGS Kaunakakai Quad Showing Project Area

N

17.

1

ř

1

केर

L:

f....

į.

.

Area of Map

.

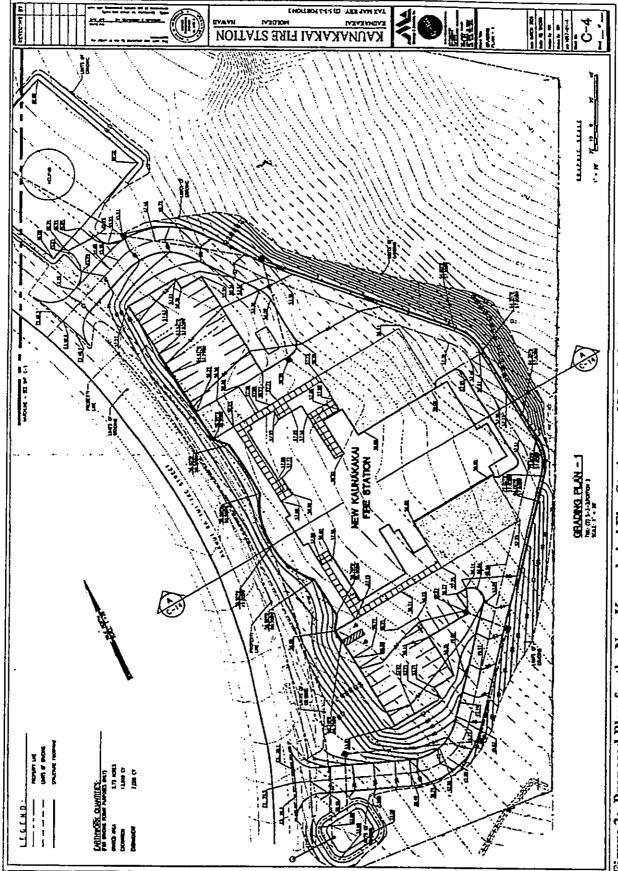


Figure 3: Proposed Plan for the New Kaunakakai Fire Station as of March 2006.

Soils in the project area consist of eroded very stony land (Foote et al. 1972:Map Sheet 77) consisting of large areas of severely eroded soils. About 50 to 75 percent of the surface is covered with stones and boulders. There are common shallow gullies and a few deep gullies. These areas are used for pasture and wildlife habitat. Annual rainfall amounts to 10 to 25 inches. Dominant vegetation is kiawe (Prosopis pallida), 'ilima (Sida fallax), pili grass (Heteropogon contortus) and fingergrass (Chloris spp.).

BACKGROUND

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various ahupua 'a. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland kalo (Colocasia esculenta) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as $k\bar{o}$ (sugar cane, Saccharum officinaruma) and mai'a (banana, Musa sp.), were also grown and, where appropriate, such crops as 'uala (sweet potato, Ipomoea batatas) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch 1985; Kirch and Sahlins Vol. 1,1992:5, 119). Although evidence of settlement in Hālawa Valley occurs early, it was between A.D. 1100-1300 that many new settlements were established in the previously unoccupied leeward regions. This is often referred to as the Expansion Period (Kirch 1985).

TRADITIONAL SETTING

1

11.

ij,

11.

1

IT;

187

1

17

I

1

![]

i .

F:

.4

1.7

The concepts of the Hawaiian land system are helpful in understanding traditional land use in and around the project area. In general, several terms, such as moku, ahupua'a, 'ili or 'ili'ā ina were used to delineate various land sections. A district (moku) contained smaller land divisions (ahupua'a) which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the ahupua'a were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each ahupua'a to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The 'ili 'āna or 'ili were smaller land divisions next to importance to the ahupua'a and were administered by the chief who controlled the ahupua'a in which it was located (ibid:33; Lucas 1995:40). The mo'o'āina were narrow strips of land within an 'ili. The land holding of a tenant or hoa 'āina residing in a ahupua'a was called a kuleana (Lucas 1995:61).

The *ahupua`a* of Kaunakakai, encompassing the present project area, comprised a total 1,598 acres of land.

The island of Moloka'i consists of two districts known as the Ko'olau and Kona Districts. Ko'olau district lands encompass the northern ahupua'a and consist of the wet, windward valleys that supported immense gardens of lo'i kalo (taro pondfields). The Kona District, located on the drier leeward coast, encompasses a fringing reef and an elaborate fishpond complex. A few small gulches east of Kawela contained lo'i kalo (Tomonari-Tuggle 1990:6, Summers 1971:2). Generally, however, the leeward side of the island was considered ideal for the dryland cultivation of sweet potato ('uala or Ipomoea batatas) and taro (kalo or Colocasia esculenta). In the Kona District of Moloka'i, sweet potato was planted along the southern, leeward shore. On kula lands, sweet potato was still being planted into the 1930s. Dryland taro was also grown on slopes rising behind Kaunakakai Village while sweet potato plantations extended east of the village (Handy and Handy 1972:517-520). Kaunakakai was known for its marine resources, especially crustaceans, and these were gathered from the coral reef (Ibid.). Within this ecological framework, the project area is located near traditionally used dryland agricultural fields and also lay proximate to marine resources. Both resources are considered important aspects of the traditional subsistence economy.

HISTORIC PERIOD

Much knowledge of traditional land use patterns in the Hawaiian Islands is based upon written records, these scribed during the time of initial and early contact between native Hawaiians and the first European and American visitors to the islands. Early records (such as journals kept by travelers and missionaries), Hawaiian traditions that survived long enough to be written down, and archaeological investigations have assisted archaeologists in understanding the past.

Although Moloka'i was observed by foreigners during Captain James Cook's return expedition to the islands in 1779, westerners did not make landfall on the island until 1786, this being the arrival of Captain George Dixon (1789:92-93). Kamakau (1961:132-133; see also Fornander 1980 Vol. II:154) relates that at this time, Moloka'i was under the rule of Kahahana, a relative of Kahekili, the ruler of Maui Island and rival of Hawai'i Island chiefs. However, in 1786, when Dixon and his crew arrived on Moloka'i, Kahahana was dead. The island had become a possession of Kahekili.

Kamehameha I, from Hawai'i Island, had conspired to conquer Maui, O'ahu, and Kaua'i, thus bringing all the major Hawaiian Islands under his sole proprietorship. After assuming

control of Maui in 1790, Kamehameha proceeded to focus on uniting Moloka'i with the other islands under his rule. His plan was to procure the support of the Moloka'i chiefs against Kahekili, the powerful chief of Maui, who was then living on O'ahu. Kamehameha temporarily succeeded with this plan until he lost control of Maui. Kamehameha then returned to Hawai'i Island, having not secured authority over Moloka'i. Politically, Moloka'i was still under the control of Maui chiefs. In 1795, Kamehameha set out once more to conquer of Moloka'i. Summers (1971: 20) relates that a fleet of canoes accompanying Kamehameha to Moloka'i were of such a great number that they extended along the coast from Kawela to Kalama'ula, which included the coast of Kaunakakai. Kamehameha held council at Kaunakakai while his chiefs camped nearby at Kalama'ula. No battles were recorded as having been fought at this time suggesting that Moloka'i became a part of Kamehameha's kingdom through negotiation (Kamakau 1961).

11...

11.

11

1.

1

**

' "

. .

T,

1

In 1792, Vancouver recorded his impressions of Moloka'i while sailing along its southern coast towards O'ahu. Vancouver described the eastern part of the island: "It seemed to be well inhabited, in a high state of cultivation, and presented not only a rich but a romantic prospect" (Vancouver 1984). Archibald Menzies, a naturalist also on Vancouver's expedition, had a different impression. He was told by the natives of Moloka'i that "Kamehameha's descent upon it had desolated the country, and that it had not yet recovered its former state of population ... desolating the country by destroying the fields and plantations of the inhabitants." (Menzies 1920:115, 118).

Attesting to a large population living mostly along the southern coast of Moloka'i was the settlement of the missionaries which occurred in 1832 at Kalua'aha. A missionary census estimated the population here to be 8,000 people (Schmitt 1973: 20). This information suggests that concentrated settlements occurred near the project area.

In the 1840s, traditional land tenure shifted drastically with the introduction of private land ownership based on Western law. While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kame'eleihiwa 1992:169–70, 176; Kelly 1983:45, 1998:4; Daws 1962:111; Kuykendall 1938 Vol. I:145). The Great *Māhele* of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were thus made available and private ownership was instituted, the *maka* 'āinana (commoners), if they had been made aware of

the procedures, were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, ' $okip\bar{u}$ (on O'ahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame'eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961:16).

4

ii l

42.

ů.

31

E. 1

Ad

No individual kuleana were awarded in the ahupua'a of Kaunakakai during the Māhele, but subsequent land records include land-use information important during the historic post-Contact period. Records from the Department of Interior from 1852 and 1854 state that Abner Paki owned Kaunakakai Ahupua'a (Borthwick and Hammatt 1993:17). By 1855, the ahupua'a of Kaunakakai had been purchased for \$200 by Kamehameha V (Lot Kapuaiwa) for his own use as a cattle and sheep ranch. Eventually, Kamehameha V released deer that roamed freely on Moloka'i, necessitating the building of walls to protect garden crops. Walls were built around the village of Kaunakakai for security against the wandering ungulates (Ibid.:18).

Moloka'i Ranch was an important entity in the history of land ownership and land use for the island of Moloka'i in the 1800s. Kaunakakai Ahupua'a, including the ranch lands of Lot Kamehameha, were eventually purchased in 1897 by a group of men who had formed the Moloka'i Ranch. This land ownership included the Kaluako'i Ahupua'a located on the dry west end of the island (Summers 1971:22; Borthwick and Hammatt 1994:18).

Moloka'i Ranch formed the American Sugar Company in the late 1800s. Near Kunakakai Village, a pier was built by the ranch that extended one-half mile over the shoals to a natural harbor which had formed in the reef. A large camp was constructed, locomotives arrived, and a coal dump was established for fueling the engines for transporting the expected sugar cane from Ho'olehua. Failure to procure the immense amount of fresh water needed for a successful cane crop soon ended the project (Summers 1971:24). With the collapse of the sugar cane industry, sheep and cattle ranching became the economic alternative for Moloka'i. By the 1920s, pineapple cultivation became another economic option in the drier sections of the island, and many of the lands previously used for sweet potato were converted to pineapple plantations (Handy and Handy 1972).

PREVIOUS ARCHAEOLOGY

[]

11.

In the early 1900s, John Stokes spent 10 weeks on Moloka'i, surveying heiau (religious structures) and other notable sites. He identified salt pans located on the coast (Site 129) and the location of a previously existing heiau named Kamalae (or Kamala'e, Site 130) in the back of Kaunakakai Village. Stokes recorded that this heiau had been "completely destroyed," but he still provided map coordinates for its location (1909). Although many heiau are known to exist on Moloka'i, none can be associated with the project area or its immediate vicinity.

Much of the archaeological work in Kaunakakai has been concentrated in the coastal region (Athens 1983; Kennedy 1988; Komori 1983; Landrum 1984; Shun 1982; Tomonari 1983). This bias may be at least partially the result of urban development in coastal areas and the required state and federal mandated archaeological mitigation. Identified sites include a diversity of functional types attributed to both traditional and historic contexts. Within traditional sites, these studies resulted in variable radiocarbon date ranges for site occupancy, most dates overlapping between A.D. 1230 to1665.

In 1989, archaeological investigation of the Kaunakakai Field System was conducted (Weisler 1989). This system was located at a higher elevation (and northwest) of the present project area. The 115-acre survey resulted in the identification of a dry land agricultural system occupied from the A.D. 1200s to 1400s on the slopes mauka of Kaunakakai Village.

Several archaeological Inventory Surveys occurring within the *ahupua* a of Kalama uala and Kapa akea (situated to the east and west of Kaunakakai respectively) resulted in the identification of extensive agricultural complexes, temporary habitation features, traditional permanent habitation, historic period structures, and an early historic cemetery (Athens 1985; Davis 1977; Dye 1977; Hommon and Ahlo 1983; Tomonari-Tuggle 1990).

An archaeological Inventory Survey and Data Recovery was conducted in a portion of Kaunakakai Drainage System (Borthwick and Hammatt 1994; Heidel et al. 1998). This work revealed the presence of two sites, including an enclosure with associated pavements (Site 50-60-03-895) and a wall composed of stacked boulders (Site 50-60-03-896). Twelve trenches were excavated at the two sites, yielding both traditional and historic period food remains and artifacts. Radiocarbon dating of several charcoal samples yielded date ranges for site occupation between A.D. 1400 to 1690 and A.D. 1650 to 1890, representing two periods of occupation

An undocumented field inspection was conducted by Xanamek of at least a portion of the Hawaiian Homes land to the east of the project area. At least four potential sites were identified close to the boundary line, but none were located within the present project area. No official report has been generated from this informal study.

METHODOLOGY

انتنا

۱۵

31

8.1

FIELD METHODS

Leann McGerty, Senior Archaeologist for SCS and Elizabeth Pualani Pua'ai, Field Archaeologist, conducted fieldwork on June 19, 2006. Portions of the project area were photographed with a digital camera. A pedestrian survey was conducted on the slope from north to south, along the eastern boundary along the ridge, and within the northern section of the project area. Visibility was poor due to heavy vegetation consisting of tall grasses thickly covering the ground. The survey consisted mostly of looking for evidence of construction in the many piles of large rocks and boulders found in clusters throughout the project area. As stated in the Hawai'i Historic Preservation Division Review (Appendix A) there was evidence of grading and the piles of boulders, often pushed up against the *kiawe* trees, that were the result of previous bulldozer activities (ranching?).

LABORATORY METHODS

Laboratory work, conducted at SCS facilities in Honolulu, consisted of archiving digital images. All documentation pertaining to this project is currently being curated at SCS facilities in Honolulu.

FINDINGS

Pedestrian survey failed to result in the identification of any archaeological features. Archival research indicated that the project area was part of pasturelands belonging to the Moloka'i Ranch. Graded sections and bulldozer-push have impacted large areas impacting the integrity of the parcel. SHPD stated in their letter of November 25, 2005 that previous grading had altered the land. Based on this, it is highly unlikely there are archaeological remains on Parcel 15, and therefore the proposed construction will present no impact.

REFERENCES CITED

fi^{*}

 Π^{α}

Athens, J. St	lenhen
1983	•
1985	Prehistoric Investigations at an Island Site on the Leeward Coast of Central Molokai. Prepared for Department. of Hawaiian Home Lands, State of Hawaii. J. Stephen Athens, Archaeological Consultant. Report on file at Hawaii State Historic Preservation Office, Kapolei.
Borthwick, I	Douglas, and Hallett Hammatt
1994	
Chinen, Jon.	J.
1961	Original Land Titles in Hawaii. Copyright 1961 Jon Jitsuzo Chinen. Honolulu.
Davis, Bertel 1977	Cultural Reconnaissance Report-Kapa'akea Homestead Flood Control Project, Kapa'akea, Moloka'i Island, Hawaii. Prepared by Archaeological Research Center Hawaii, Inc. Project 14-108. Report on file at Hawaii State Historic Preservation Office, Kapolei.
Daws, Gavin	
1968	Shoal of Time. University of Hawaii Press, Honolulu.
Dixon, Georg	že
1789	"A Voyage round the WorldPerformed in 1785, 1786, 1787 and 1788 in the "King George" and "Queen Charlotte." George Goulding, London.
Dye, Thomas	s S.
1977	Cultural Resources Survey, Kapa akea Flood Control Project, Moloka i, Hawaii. Department of Anthropology, Bishop Museum. Report on file at Hawaii State Historic Preservation Office, Kapolei.
Foote D. E.	Hill, S. Nakamura, and F. Stephens

1980	An Account of the Polynesian Race. Charles E. Tuttle Company, Rutland
1920	Hawaiian Antiquities and Folk-lore, Vol. VI, part III. Bishop Museum Press, Honolulu.
	hill E.S. and Elizabeth Green Handy Native Planters on Old Hawaii. Bishop Museum Bulletin 233. Bishop Museum Press, Honolulu.
	ly, Douglas Borthwick, Anthony Bush, Hallett Hammatt Archaeological Data Recovery Report for Proposed Drainage System "A" At Kaunakakai, Molokai (TMK 5-3-02:por. 72: 5-3-63:por. 01; 5-3-09:por. 17). Prepared for The County of Maui Department of Public Works. Report on file Hawaii State Historic Preservation Office, Kapolei.
•	and H.M. Ahlo, Jr. An Archaeological Survey of Selected Lands Proposed for Military Training Net Kaunakakai, Island of Molokai, Hawaii. Prepared for Pacific Division, Naval Facilities Engineering Command, Peal Harbor, Hawaii. Science Management, Inc. Report on file at Hawaii State Historic Preservation Office, Kapolei.
Kamakau, Sar 1961	nuel Ruling Chiefs of Hawaii. Kamehameha Schools Press, Honolulu.
Kame`eleihiw 1992	a, Lilikalā <i>Native land and Foreign Desires: Pehea Lā E Pono Ai?</i> Bishop Museum Press Honolulu.
	Nā Māla o Kona: Gardens of Kona. Report 83-2, Department of Anthropology shop Museum. Bishop Museum Press, Honolulu.
Kennedy, Jose 1988	ph Archaeological Surface and Subsurface Testing Results for TMK 5-3-1:77, Kaunakakai, Island of Moloka'i, Hawaii. Archaeological Consultants of Hawai Report on file at Hawaii State Historic Preservation Office, Kapolei.
Kirch, Patrick 1985	Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory. University of Hawaii Press, Honolulu.
	Vinton and Marshall Sahlins Anahulu. Vol. I and II. University of Chicago Press, Chicago.

5.1

Komori, Eric

1983 Results of an Archaeological Reconnaissance Survey and a Search of Historical Documents, TMK 5-3-01:2, Lots 521 and 522, Kaunakakai, Moloka'i. Prepared for Alu Like, Inc. Department of Anthropology, Bishop Museum. Report on file at Hawaii State Historic Preservation Office, Kapolei.

Kuykendall, R.S.

į,

1,3

· •

I:

7

. i

1

L

Ţ.

•

. ;

1.2

TT

7

1938 The Hawaiian Kingdom, 1778-1854. University of Hawaii Press, Honolulu.

Landrum III, James

An Archaeological Reconnaissance of the U.S. Coast Guard Harbor Range Lights Facility, TMK 2-5-3-01:3, Kaunakakai, Moloka'i. Prepared for United States Coast Guard Fourteenth Coast Guard District. Department of Anthropology, Bishop Museum. Hawaii State Historic Preservation Office, Kapolei.

Lucas, Paul F. Nahoa

1995 A Dictionary of Hawaiian Legal Land-Terms. University of Hawai'i Press. Honolulu.

Lyons, C.J.

1875 "Land Matters in Hawaii". The Islander, Vol. 1. Honolulu.

Menzies, Archibald

1920 Hawaii Nei: 128 years ago. Edited by W.F. Wilson. New Freedom Publishers, Honolulu.

Schmitt, Robert

1973 The Missionary Censuses of Hawaii. *Pacific Anthropological Records No. 20.*Department of Anthropology, Bishop Museum. Bishop Museum Press, Honolulu.

Shun, Kanalei

Archaeological Reconnaissance Survey and Test Excavations of the Wastewater Treatment Facility Area, Kaunakakai, Moloka'i. Prepared for CH2M Hill, Maui. Department of Anthropology, Bishop Museum. Report on file at Hawaii State Historic Preservation Office, Kapolei.

Stokes, John F.G.

1909 Heiau of Moloka`i. Unpublished manuscript in Bishop Museum Library, Honolulu.

Summers, Catherine C.

1971 Molokai: a Site Survey. *Pacific Anthropological Records No. 14.* department of Anthropology, Bishop Museum. Bishop Museum Press, Honolulu.

Tomonari, M	
1983	Archaeological Reconnaissance Survey of a Road Corridor in the Ahupua'a of Kalama'ula, Island of Moloka'i. Prepared for the Dept. of Hawaiian Home
	Lands, State of Hawaii. Report on file at Hawaii State Historic Preservation
	Office, Kapolei.
Tomonari-Tu	ggle, M.J.
1990	Archaeological Inventory Survey of a Portion of Kalama'ula, Island of Moloka'i.
	Prepared for Department of Hawaiian Home Lands, State of Hawai'i. IARII, Inc. Report on file at Hawaii State Historic Preservation Office, Kapolei.
Vancouver, C	Beorge
1984	A Voyage of Discovery to the North Pacific Ocean and Round the World, 1791-1795. Edited by W. Kaye Lamb. The Hakluyt Society, London.
Weisler, Mars	shall
1989	Archaeological investigations of the Kaunakakai Field System, South-Central Moloka'i. Prepared for Moloka'i Ranch Limited. Report on file at Hawaii State Historic Preservation Office, Kapolei.

APPENDIX A: HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW

ĬΓ

[**f****

[8]

1

77.1

r

 T_i

#3

1

LIMBA LIMBLE





STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES POST OFFICE BOX 621 HONOLULU, HAWAII \$6809

71

HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW

Log #: 2005.2517 Doc #: 0511NM44

Applicant/Agency:

Michael Munekiyo, Project manager

For: County of Maul, Department of Fire and Public Safety

Fax: 808-244-8729

Address:

2145 Wells Street, Suite 403

Walkuku, HI 98793

BUBJECT: Chapter 6E-42 Historic Preservation Review - Early Consultation for Propose

Kaunakakai Fire Station

Ahupua'a: Kaunakaksi
District, Island: Kawela, Molokai
TMK: (2) 5-3-03: 15 por.

1. We believe there are no historic properties present, because:
_a) intensive cultivation has altered the land
_b) residential development/urbanization has altered the land

c) previous grubbing/grading has altered the land
d) an acceptable archaeological assessment or inventory survey found no historic properties

Thus, we believe that "no historic properties will be	affected" by this undertailing
Thus, we believe that "no historic properties will be Staff: Nancy McMahon 1/2 1/1/14	Date: 11/21/05
Title: Archaeologist for Kaus'l	

Α

Appendix B-2

Letter from State Historic Preservation Division, Dated August 11, 2006 LINDA LINGLE GOVERNOR OF HAWAII





AUG 1 4 2006

PETER T. YOUNG
CHARPERSON
BOARD OF AND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE STAN GENERAL

ROBERT K, MASUDA DEPUTY DIRECTOR (LAND

DEAN NAKANO ACTIVA OCCUTY DIRECTOR - WATER

MAJATIC BLSOURCES
BIGHTHS AND OCLAN RECREATION
BUREAU OF CONVICTANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCE SOFT ORCEMENT
DISCORDED TO THE PROPERTY OF THE PASS OF THE

STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION 601 KAMOKILA BOULEVARD, ROOM 555 KAPOLEI, HAWAII 96707

August 11, 2006

Dr. Robert Spear Scientific Consultant Service 711 Kapiolani Boulevard, Suite 975 Honolulu, Hawai'i 96813

LOG NO: 2006.2575 DOC NO: 0608NM24 Archaeology

Dear Dr. Spear:

SUBJECT:

Chapter 6E-42- Historic Preservation Review -

An Archaeological Assessment Report For An Approximately 5 Acre Parcel in

Kaunakakai, Molokai (SCS, McGerty and Spear, 2006)

TMK: (2) 5-3-003: 015 por.

We are in receipt of the aforementioned archaeological assessment report which we received on July 11, 2006 for our review. The survey included 100% surface survey and inspection of the graded boulder piles. No historic properties were found. We concur with your findings. This assessment report is approved.

You recommend no further work due to extensive grading on the property. We concur with this recommendation.

If you have any questions please call Nancy McMahon at 808-742-7033.

Aloha,

Melanie A. Chinen, Administrator State Historic Preservation Division

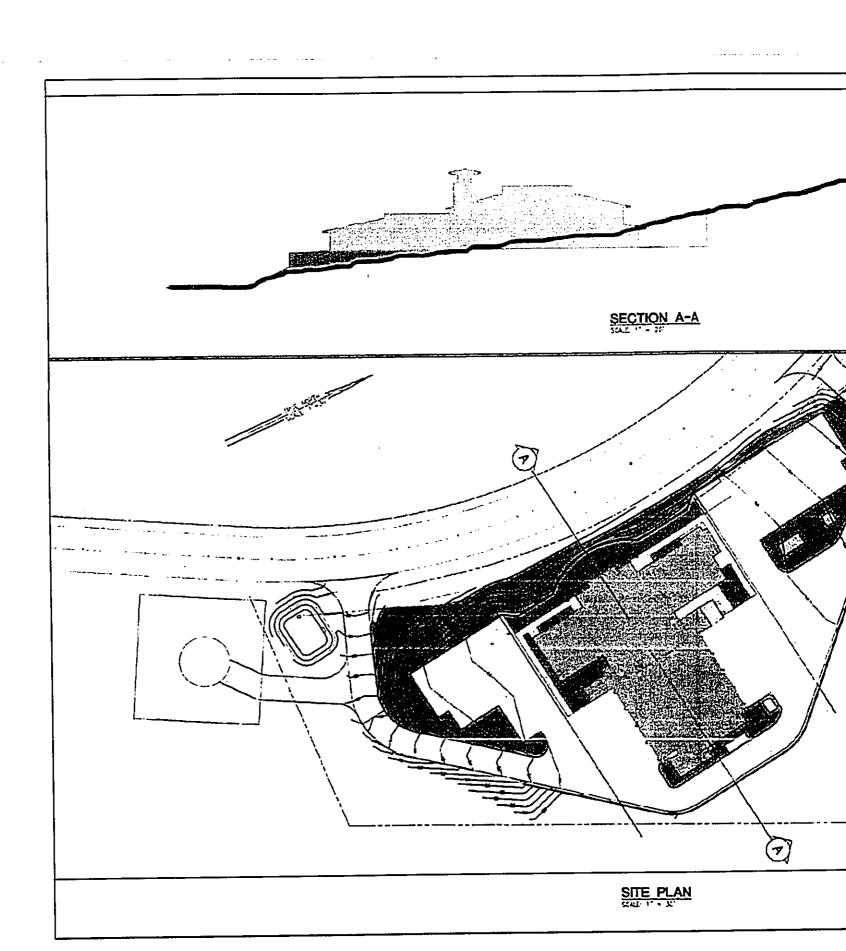
Hoy Mynha for

Cc: Michael Foley, County of Maui Planning Department

V Munekiyo and Hiraga Inc, 2145 Wells, Street, Suite 403, Wailuku HI 96793

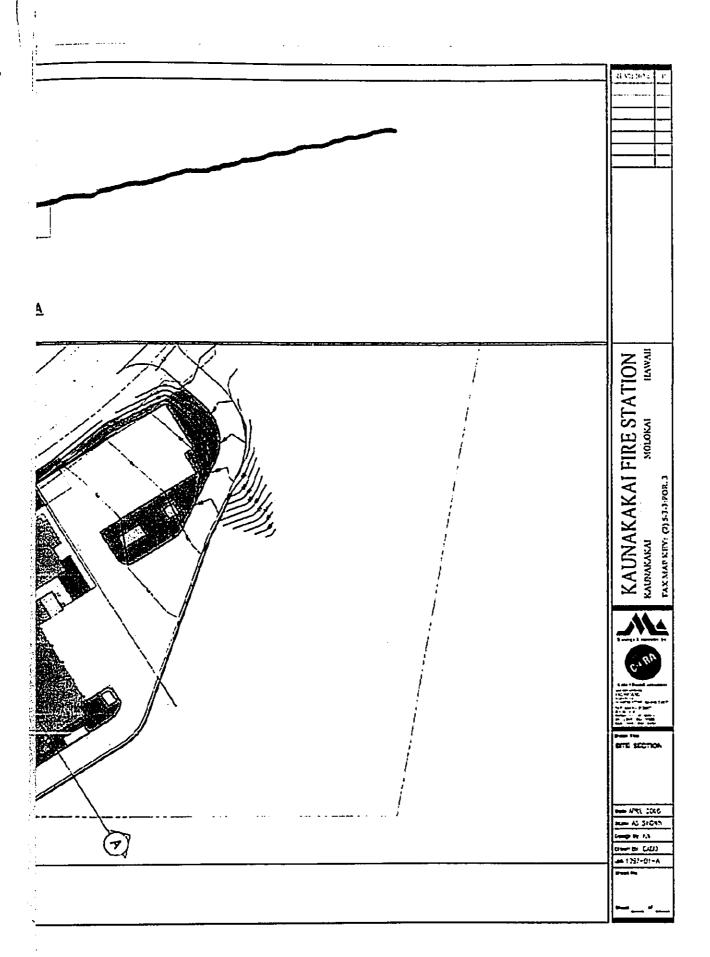
Appendix C

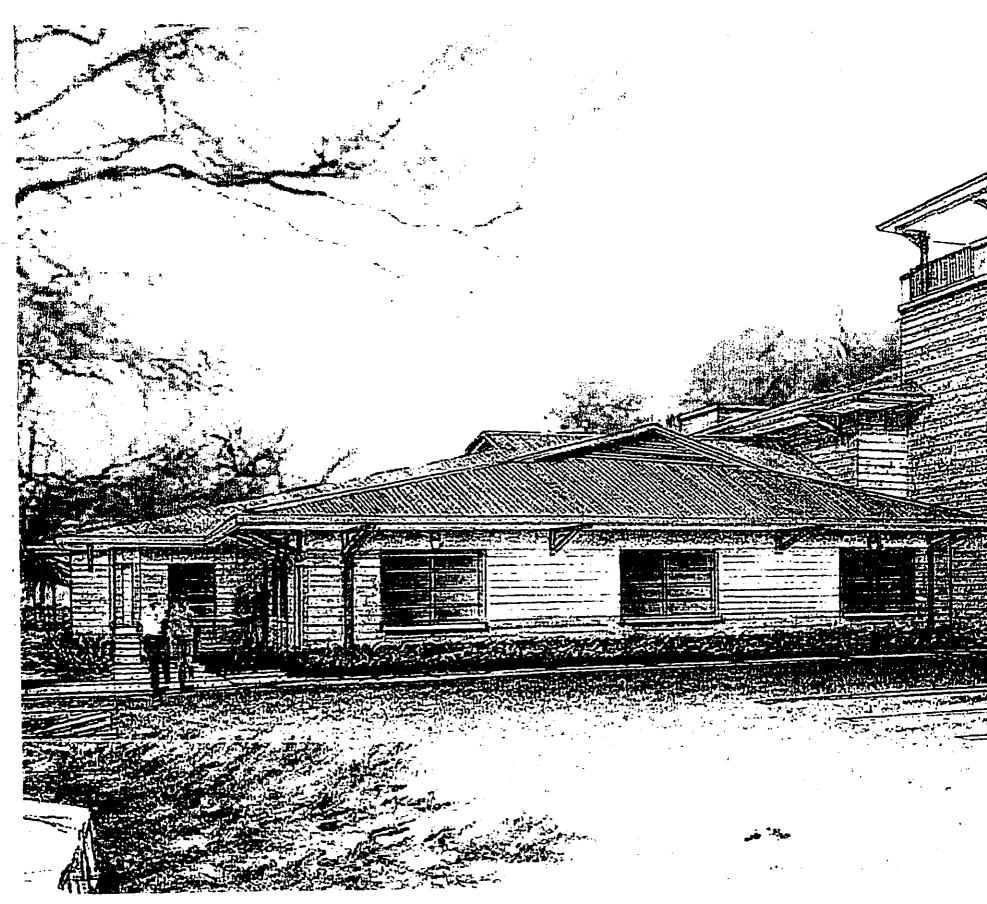
Site Section and View Rendering



1 -3

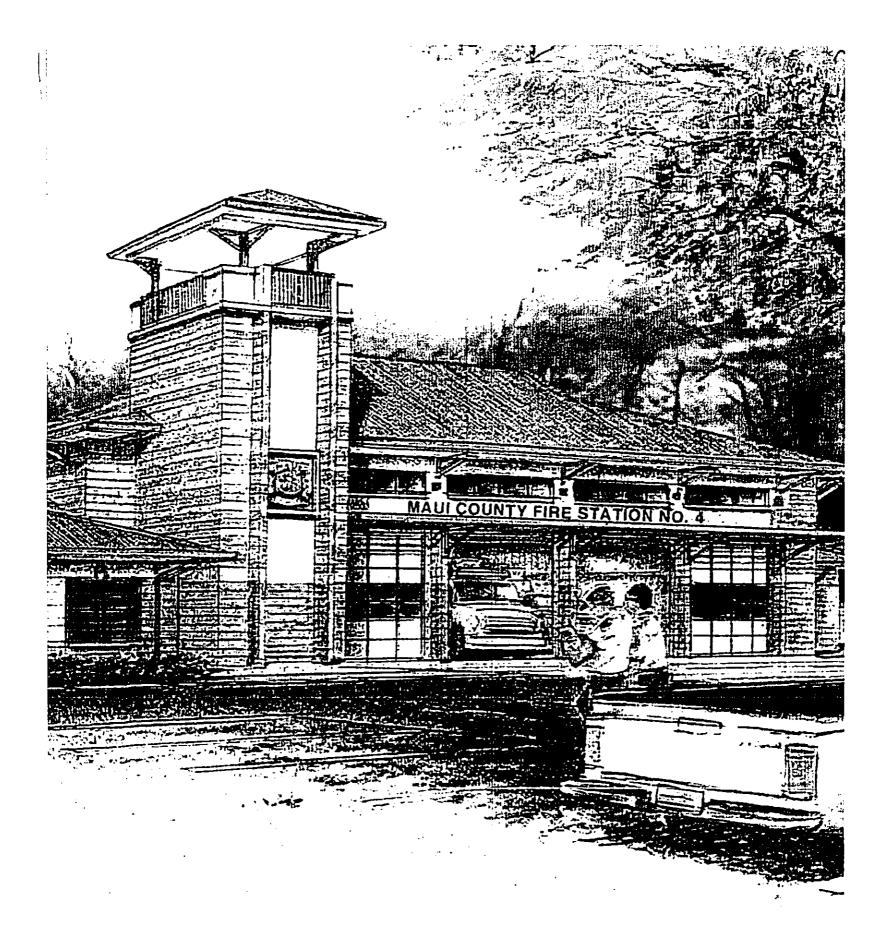
1.4







KAUNAKAKAI FIRE ST Molokai, Hawaii



FIRE STATION, Hawaii



Appendix D

Preliminary Engineering Report

PRELIMINARY

CIVIL ENGINEERING REPORT

FOR

KAUNAKAKAI FIRE STATION

KAUNAKAKAI, MOLOKAI, HAWAII

TAX MAP KEY: (2) 5-3-03:15

PREPARED FOR:

COUNTY OF MAUI

PREPARED BY:



MITSUNAGA & ASSOCIATES 747 AMANA STREET, SUITE 216 HONOLULU, HI 96814

November 2006

TABLE OF CONTENTS

I.	INTRODUCTION	1.
II.	PROJECT OVERVIEW	I
III.	PROJECT LOCATION AND ACCESS	2
IV.	EXISTING TOPOGRAPHY AND SOILS	3
V.	WASTEWATER SYSTEM	3
VI.	WATER SYSTEM	4
VII.	GRADING AND DRAINAGE SYSTEM	6
VIII.	EROSION CONTROL BEST MANAGEMENT PRACTICES	8
IX.	ELECTRICAL, CABLE AND TELEPHONE UTILITIES	10
X.	CONSTRUCTION PLAN APPROVALS	12
XI.	EXHIBITS	12

I. <u>INTRODUCTION:</u>

The purpose of this report is to evaluate the existing conditions and probable impacts of the proposed Kaunakakai Fire Station with respect to water, sewer and drainage utility systems. Recommendations for grading and crosion control Best Management Practices will be proposed.

II. PROJECT OVERVIEW:

County of Maui, Department of Fire and Public Safety has requested the design a new fire station on the island of Molokai, Hawaii. This fire station will be called the Kaunakakai Fire Station. The fire station will incorporate state-of-the-art functional and technological elements to ensure that the services envisioned for the fire station can be delivered in a responsive manner in keeping with the life safety mandate of the Department of Fire and Public Safety.

The design of the fire station houses an administrative office, apparatus and equipment bays, fire training facilities, hazardous material containment area, apparatus and helicopter fuel storage, officer sleeping quarters, crew quarters, food preparation, dining/training and exercise facilities, and a helicopter landing zone. The station will incorporate required fire alarm and communication systems and allow for future expansion. There will be adequate staff and visitor parking that takes into consideration crew change requirements. Accessible parking stalls will be provided. Electrical design will include emergency power for the entire station.

Kaunakakai Fire Station Preliminary Civil Engineering Report

III. PROJECT LOCATION AND ACCESS:

Kaunakakai, Molokai, Tax Map Key: 2-5-3-03: 15

Proposed boundaries are as follows:

Western: East side of new Kalohi/Ka Imi Iki Road extension

Eastern: DHHL parcel boundary

Northern/Mauka: Slope of cinder pit/Puu

Southern/Makai: Old slaughter house

The main entry to the site occurs at the Southern portion of the site near the old slaughter house. The access road continues up the site past the main building and turns directly into the apparatus bays. There is access around the East side of the apparatus bays and then continues down and re-enters the Ka Imi Iki road at the Northern end of the site, which is the lowest portion of the lot. Parking areas are located at both the North and South ends of the building.

The main building is designed as a one-story structure to blend in with the surrounding residential character of the neighborhood. It is prominently situated on the top of the hill which allows clear views to the entire surrounding community. The higher apparatus bay and hose tower is situated further to the rear of the site to minimize any visual impacts.

Kaunakakai Fire Station Preliminary Civil Engineering Report

EXISTING TOPOGRAPHY AND SOILS: IV.

The site is undeveloped land characterized by moderate hills up to 25% slope.

The ground cover is well established and small trees are spread throughout the

site. The surface soils consist of sandy silt, sand and gravel. The onsite soils are

in a dense, stiff condition down to depths ranging from approximately 1.5 to 17

feet below existing grade. The surface soil is generally underlain by medium hard

basalt, which is in a slightly weathered and highly vesicular condition. Soil in the

vicinity of the project is classified as Mala silty clay (MmA) by the Soil

Conservation Service. This type of soil is described as:

"In a representative profile the surface layer, about 7 inches thick, is dark

reddish-brown silty clay that has platy structure. It is underlain by

stratified layers of dark reddish-brown and very dark gray alluvium that is

mostly silt clay."

WASTEWATER SYSTEM ٧.

Per discussion with Maui's Department of Public Works and Waste Management.

Molokai's sewer system has adequate capacity for the proposed fire station. Our

sewer lateral will connect to the existing sewer manhole at the intersection of

Kalohi and Kakalahale Streets.

ESTIMATED WASTEWATER DEMANDS:

Assumptions: 15 persons (max. number per watch)

100 gallons per capita/ day (gpcd)

Average Flow = 100 gpcd x 15 people = 1,500 gallons per day (gpd)

Kaunakakai Fire Station Preliminary Civil Engineering Report

Average Flow: 1,500 gpd

Maximum Flow: Flow Factor = 5 (Babbit Chart)

 $5 \times 1,500 \text{ gpd} = 7,500 \text{ gpd}$

Dry Weather I/I: 5 gpcd (Sewer above ground water table)

15 people x 5 gpcd = 75 gpd

Design Average Flow = 1,500 gpd + 55 gpd = 1,575 gpd

Design Maximum Flow = 7,500 gpd + 75 gpd = 7,575 gpd

Wet Weather I/I: 1,250 gallons per acre/ day (gad)

(Sewer above groundwater table)

Proposed Development Area = 2.7 acres

2.7 acre x 1,250 gad = 3,375 gpd

Design Peak Flow = 7,575 gpd + 3,375 gpd = 10,950 gpd

FLOW REQUIREMENTS:

(Reference: Mechanical Engineer's Fax dated February 18, 2005)

Total Fixture Units: 61.3 fixture units.

Flow Volume: 55 gallons per minute (gpm)

VI. WATER SYSTEM

WATER SUPPLY REQUIREMENTS:

Reference: Water System Standards. 2002

Water service will be provided from a 12" waterline in Alanui Ka'imi'ike Street.

A 2 1/2" domestic line and an 8" fire protection waterline will provide service to

Kaunakakai Fire Station Preliminary Civil Engineering Report

Page 4

4.4

the fire station. A 2" water meter will be installed on the domestic water service line.

ESTIMATED WATER DEMAND:

Commercial Use: 140 gallons/1,000 SF (Table 100-18 - Commercial/ Residential

Mix)

Building/ Facility Area = 17,000 SF

 $(140 \text{ gal/}1,000 \text{ SF}) \times 17,000 \text{ SF} = 2,380 \text{ gallons per day (gpd)}$

Average Daily Demand: 2,380 gpd

Maximum Day Demand: $1.5 \times 2,380 \text{ gpd} = 3,570 \text{ gpd}$ (Table 100-20)

Peak Hour Demand: $3.0 \times 2{,}138 \text{ gpd} = 7{,}140 \text{ gpd}$ (Table 100-20)

Fire flow requirements (Table 100-19). 2000 gpm, 2 hour duration.

BUILDING FLOW REQUIREMENTS:

(Reference: Mechanical Engineer's Fax dated February 18, 2005)

Fixture Units: 61.3 f.u.

Flow Volume: 55 gallons per minute (gpm) - UPC Chart

LANDSCAPE WATER DEMAND:

(Per Landscape Architect - Email dated 2/18/05)

Total Estimated Landscape Area: 2.7 acres

Estimated Average Daily Water Usage: 20,000 gpd

Estimated Maximum Demand: 60 gpm

Kaunakakai Fire Station Preliminary Civil Engineering Report

Estimated Fixture Units: 80 f.u.

TOTAL FLOW REQUIREMENTS

Total Fixture Units: 141.3 f.u

Flow volume: 60 gpm

Note: Landscape irrigation to be conducted during non-peak hours

VII. GRADING AND DRAINAGE SYSTEM

References:

1. Flood Insurance Rate Map (FIRM), County of Maui.

2. Rules for the Design of Storm Drainage Facilities in the County of Maui.

Department of Public Works and Waste Management, County of Maui,

November 1995.

According to FIRM map 150003 0085C dated September 6, 1989, the proposed fire station lies in Zone C (Areas of minimal flooding). Grading and drainage of the site will be in conformance with "Rules for the Design of Storm Drainage Facilities in the County of Maui".

The site is undeveloped land characterized by moderate hills up to 25% slope.

The ground cover is well established and small trees are spread throughout the site. The surface soils consist of sandy silt, sand and gravel. The onsite soils are in a dense, stiff condition down to depths ranging from approximately 1.5 to 17

Kaunakakai Fire Station Preliminary Civil Engineering Report Page 6

10

feet below existing grade. The surface soil is generally underlain by medium hard basalt, which is in a slightly weathered and highly vesicular condition.

Runoff generated from the site sheet flows off the northern corner of the property. There are no on-site drainage structures, however Alanui Ka'Imi'lke Street's drain line has inlets adjacent to the property. The table below summarizes the existing runoff flows and their discharge point from the site. The flows were estimated using the Rational method and a 50 year recurrence interval.

Existing Drainage Area	Area (acres)	Runoff (cfs)
Existing Condition	4.71 acres	6.51 cfs

Proposed Drainage Plan

The intent of the drainage plan is to minimize the drainage impact of the proposed project, and provide adequate storm water disposal for on-site generated runoff.

The table below summarizes the proposed runoff flows and their discharge point from the site.

Proposed Drainage Area	Area (acres)	Runoff (cfs)
Proposed Condition	4.71 acres	18.15 cfs

With the proposed construction of the Fire Station, a peak flow of 18.15 cubic feet per second will be generated vs. an existing peak flow of 6.51 cubic feet per second. The increase in peak flow will be 11.64 cubic feet per second.

Proposed mitigation measures

Storm water runoff will be directed away from the buildings and into a detention pond before entering the County's drainage system. A 207 cubic yards of detention pond is required to attenuate the increase in flow. Our project will construct two detention ponds totaling approximately 230 cubic yards to accommodate more runoff than is generated by our project.

VIII. EROSION CONTROL BEST MANAGEMENT PRACTICES

Temporary soil erosion and dust control requirements during construction will be detailed on the construction documents. A list of best management practices is below:

- The contractor shall minimize the amount of land to be exposed at any time.
- Exposed areas that are not at final grade and are expected to be exposed
 for more than 30 days shall be mulched in order to prevent erosion and silt
 runoff.
- Temporary erosion controls shall not be removed before permanent erosion controls are in place and established.

Kaunakakai Fire Station Preliminary Civil Engineering Report

- 4. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established.
- 5. 2:1 slopes shall be treated with geofabric or treated with soil conditioner to aid in the establishment of turf/planting.
- Prior to clearing land for grading, temporary erosion control measures,
 such as silt fences shall be installed.
- Opening and clearing of land for grading shall be performed incrementally to minimize erosion potential.
- 8. Areas not within the limits of grading shall remain vegetated during grading operations.
- Silt which has accumulated on silt fence shall be removed and disposed of on a bi-weekly basis.
- 10. When cleared or grubbed areas are not to be graded or disturbed for 30 days or more, seed, plant or hydroseed temporary vegetation.
- 11. The contractor's equipment storage areas shall be protected through the use of earth berms and/or absorption materials to prevent pollutants from discharging into state waters. The contractor shall inspect and maintain storage areas.

The contractor will be required to submit a satisfactory soil erosion control plan to minimize soil erosion prior to issuance of a grubbing and grading permit. Best Management Practices shall be in compliance with Section 20.08.035 of the Maui County Code (Ord. No. 2684) and "Construction Best Management Practices

(BMPs) for the County of Maui" of the Department of Public Works & Waste Management, May 2001.

The disturbed area is expected to be greater than one acre; therefore an NPDES permit will be obtained from the State Department of Health, Clean Water Branch prior to any land disturbance.

IX. ELECTRICAL, CABLE AND TELEPHONE UTILITIES

Primary Exterior Electrical System

- 1. Primary power will be derived from a new Maui Electric Company (MECo) primary overhead system along Alanui Ka'imi'ike. The existing overhead utility distribution system along Alanui Ka'imi'ike, fronting the project site, consists of secondary power conductors only. Therefore, it will be necessary for MECo to extend their primary overhead distribution system in order to serve the facility. All work related to the primary overhead system will be performed by MECo.
- A primary underground ductline will be provided between a new joint utility pole fronting the property and MECo pad-mounted transformer.
- Project will provide concrete equipment pad for the MECo pad-mounted transformer. Procurement and installation of primary cabling and the equipment is the responsibility of MECo.

Kaunakakai Fire Station Preliminary Civil Engineering Report

Page 10

24

4. All work related to the primary electrical system is being coordinated with the Molokai Division of MECo.

Exterior Telephone System

- 1. Hawaiian Teicom (HT) will also need to extend their overhead distribution system to serve the project site. Telephone service will be derived from this extended HT overhead distribution system along Alanui Ka'imi'ike at a new joint utility pole fronting the project site.
- 2. The telephone service ductline will be routed to a backboard within the building.
- 3. Telephone service entrance cables to be provided by HT.

Exterior Cable Television (CATV) System

- 1. Cable television (CATV) service will also need to extend their overhead distribution system to serve the project site. CATV service will be derived from this extended overhead distribution system along Alanui Ka'imi'ike at a new joint utility pole fronting the project site.
- The CATV service ductline will be routed to a signal cabinet within the building.

Kaunakakai Fire Station Preliminary Civil Engineering Report

CATV service entrance cables to be provided by Oceanic Time Warner
 Cable.

X. CONSTRUCTION PLAN APPROVALS

Approval of construction plans for site improvements will be obtained from the

- 1. Department of Public Works and Environmental Management
- 2. Department of Water Supply
- 3. Fire Prevention Bureau
- 4. State Department of Health, Clean Water Branch

Kaunakakai Fire Station Preliminary Civil Engineering Report

EXHIBITS

Kaunakakai Fire Station Preliminary Civil Engineering Report

F":



MCE INTERNATIONAL, INC.
Mechanical Consulting Engineers
(Formerly W.A. Hirai & Associates, Inc.)

ormerly W.A. Hirai & Associates, Inc.)

130

Ho

1360 S. Berctania Street, Suite 400 Honolulu, Hawaii 96814 Phone (808) 941-0955 Fax (808) 550-8167 E-mail mcehnl@lava.net

FACSIMILE MEMORANDUM

No. of Pages including this page = 1

MCE Job No. 031.05.01

Date:

February 18, 2005

To:

Mitsunaga & Associates

Fax: 946-2563

Attention:

Kyle Nishioka

From:

Garren Yoshioka

Project:

Kaunakakai Fire Station

Subject:

Demo Fixture Units

The following is the flow calculations requested:

DOMESTIC FIXTURES

Fixture	Number	Fixture Unit / Each	Total
Water closet,	6 each	3.4 FU/ea.	20.4
Urinal,	3 each	1.7 FU/ea.	5.1
Lavatories,	6 each	0.6 FU/ea.	3.6
Showers,	4 each	1.6 FU/ea.	6.4
Sink	3 each	1.6 FU/ea.	4.8
Washer	1 each	2 FU/ea.	2
Laundry Tray	1 each	2 FU/ea.	2
Mop Sink	2 each	2 FU/ea.	4
Hose Bibbs.	15 each	1 FU/ea.	15

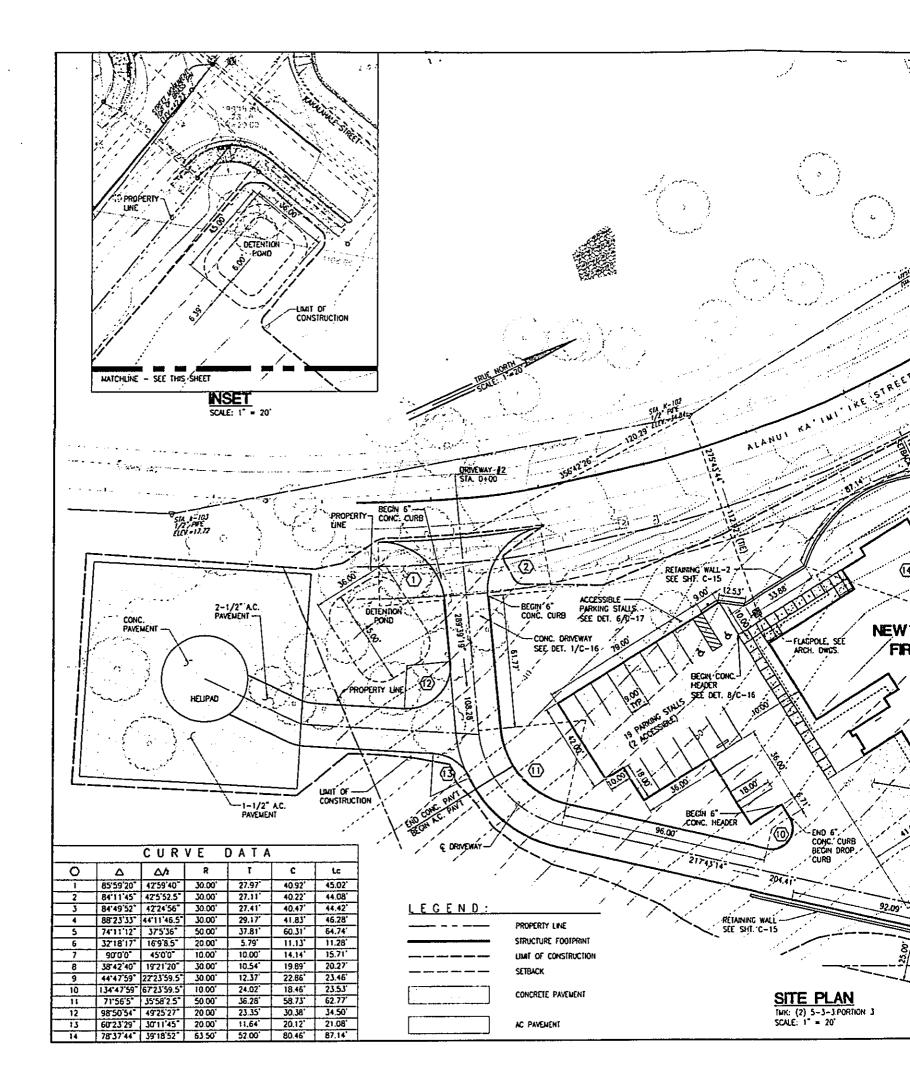
Total

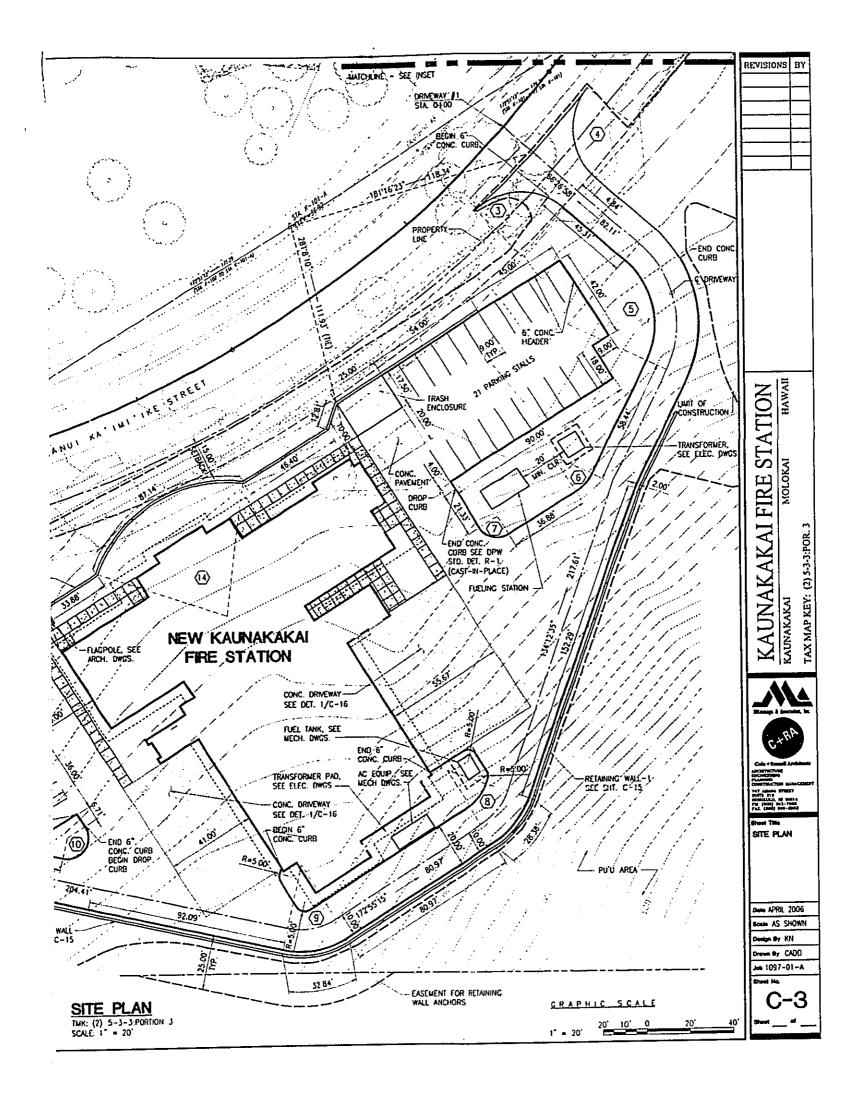
61.3 Fixture Units 55 GPM

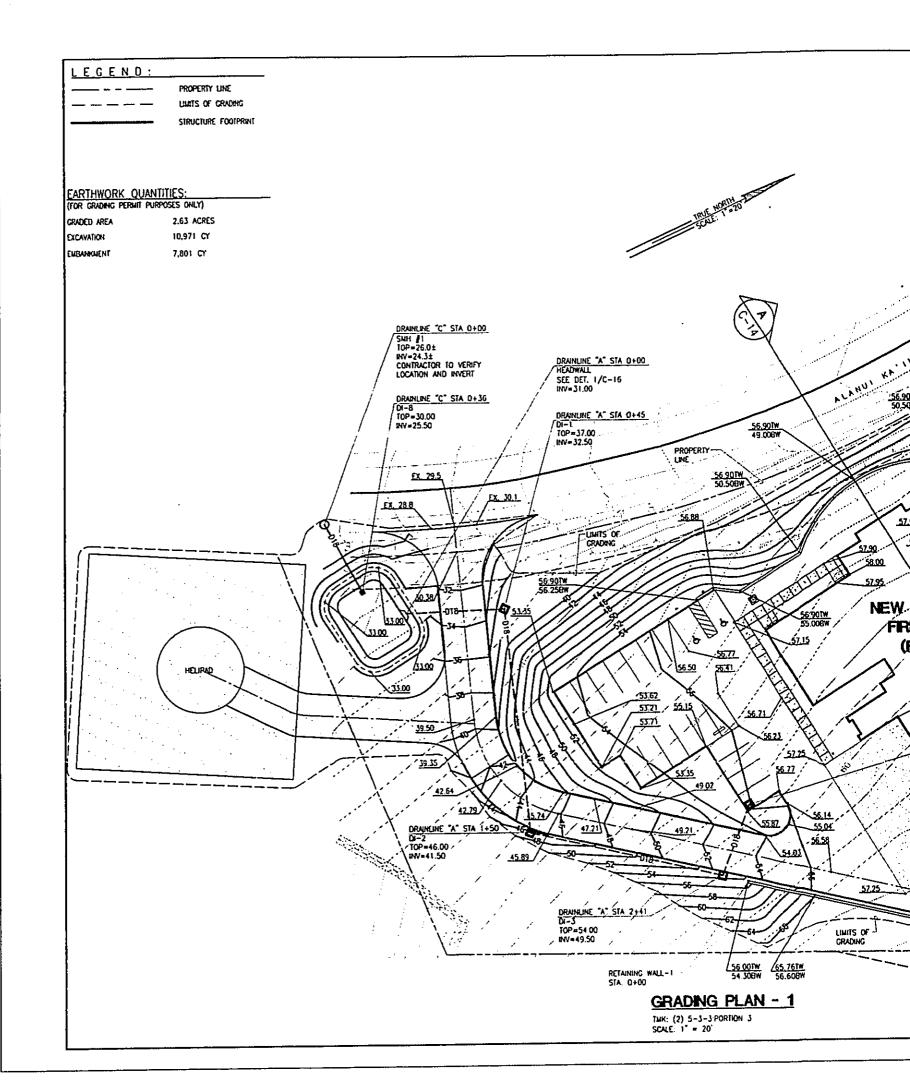
If there are any question please give us a call.

If this facsimile is incomplete, please call our office at (808) 941-0955

RE Kaunakakai FS.txt From: Jonelle Oshiro [jwoshiro@hawaii.rr.com] Sent: Friday, February 18, 2005 4:24 PM To: Kyle Nishioka Subject: RE: Kaunakakai FS Kyle...based on 2.7 acres of landscaped area, please use the following water 20,000 gpd 60 gpm 55 fixture units Call me if you have any questions. Jonelle ----Original Message----From: Kyle Nishioka [mailto:mitsunaga-civil@hawaii.rr.com] Sent: Friday, February 18, 2005 11:08 AM To: 'Jonelle Oshiro' Subject: Kaunakakai FS Jonelle, please email me a rough water demand for the irrigation system. I need it for the design criteria. Kyle Civil Department Mitsunaga & Associates, Inc. Architecture. Engineering. Planning. Project Management. Construction Management 747 Amana Street, Suite 216 Honolulu, HI 96814
Phone: (808) 945-7882
Fax: (808) 946-2563
Email: mitsunaga-civil@hawaii.rr.com

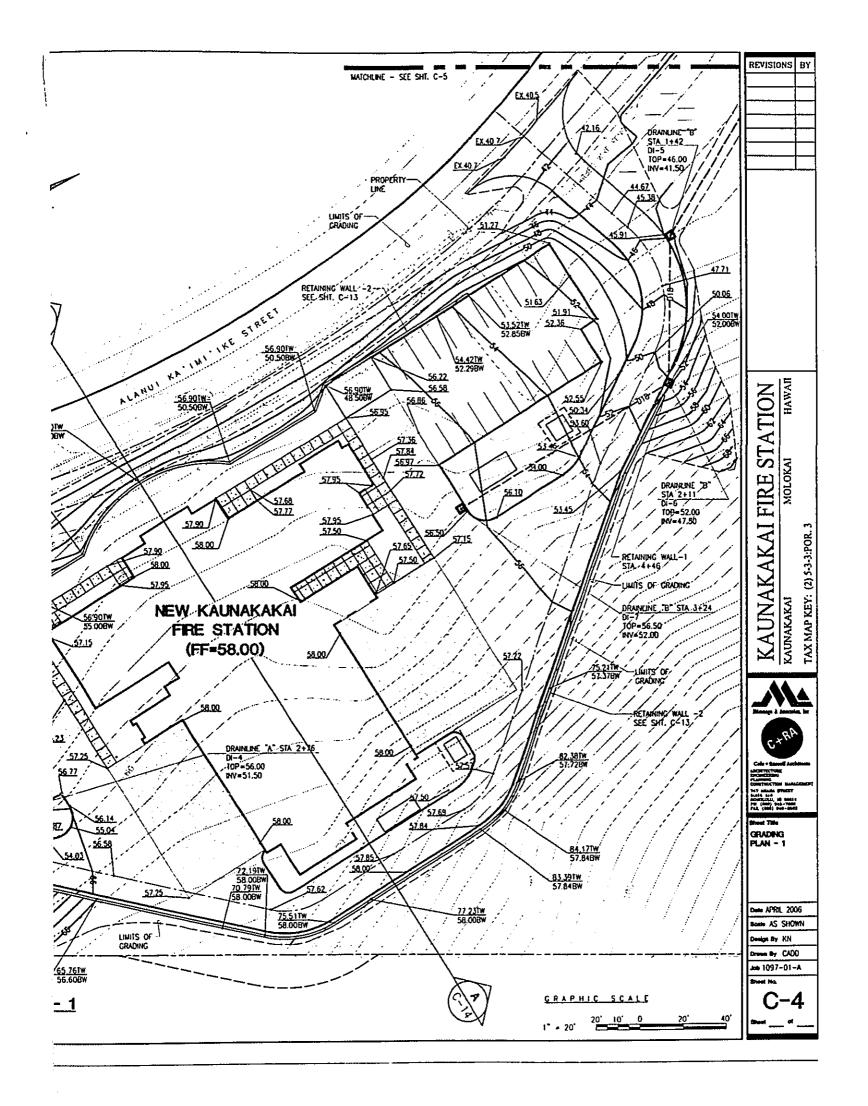


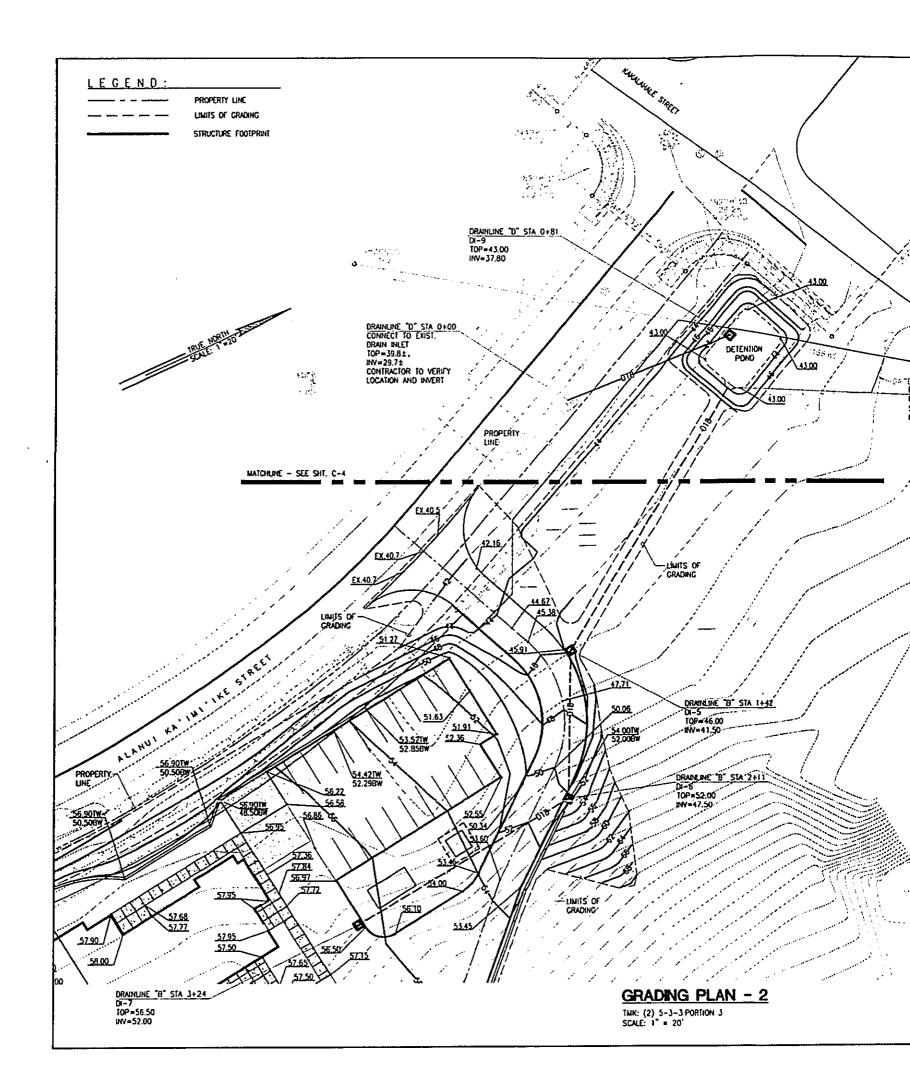


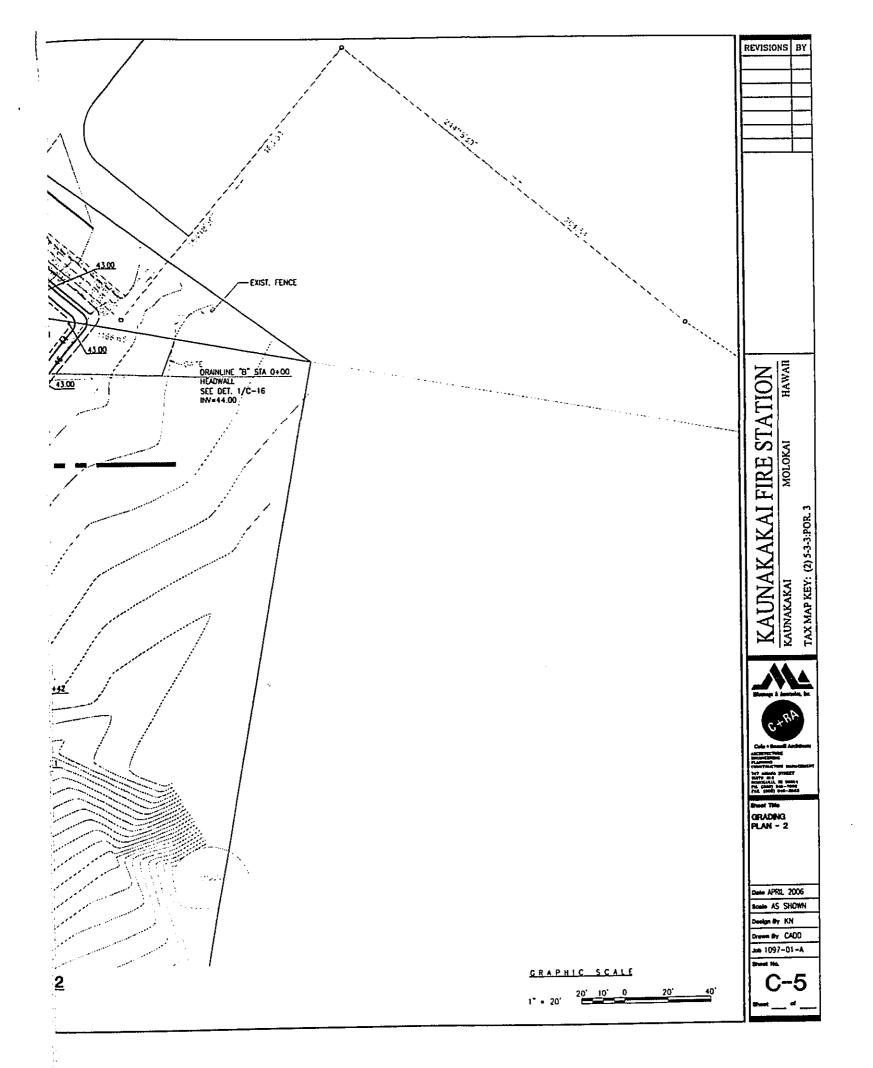


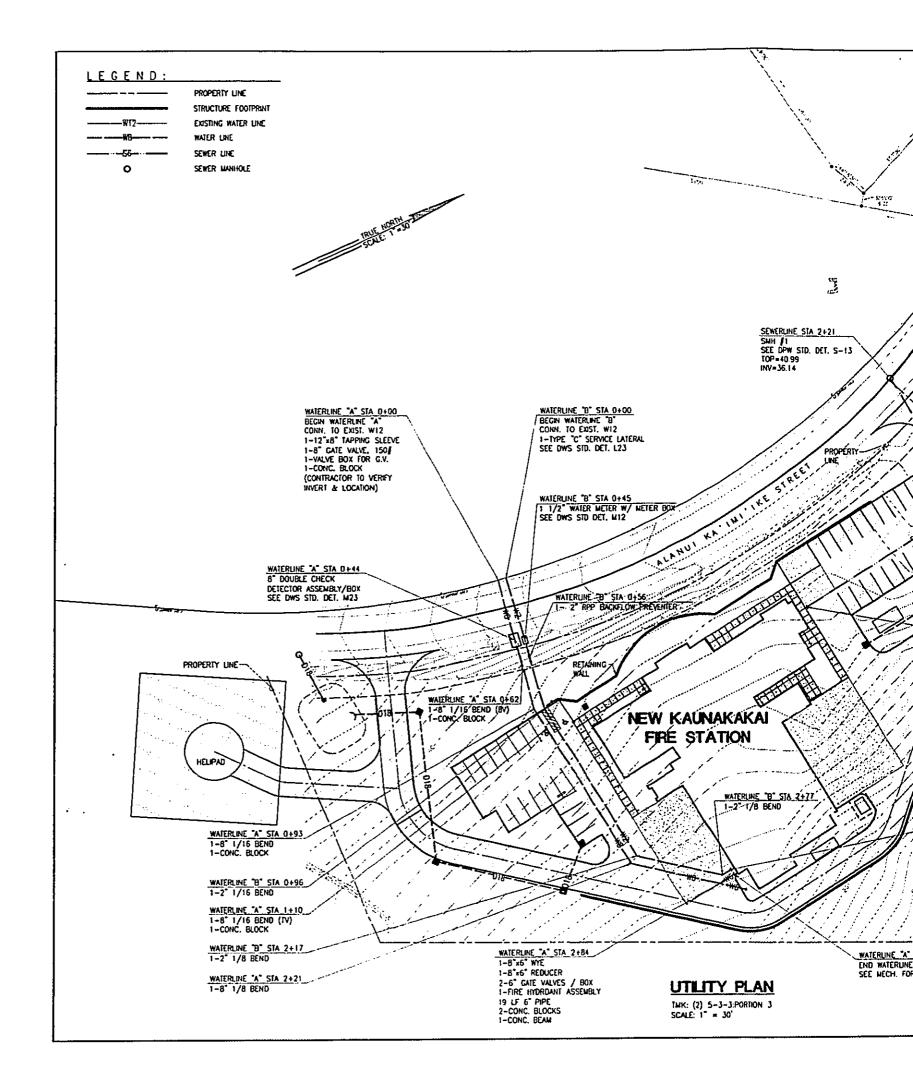
i ē

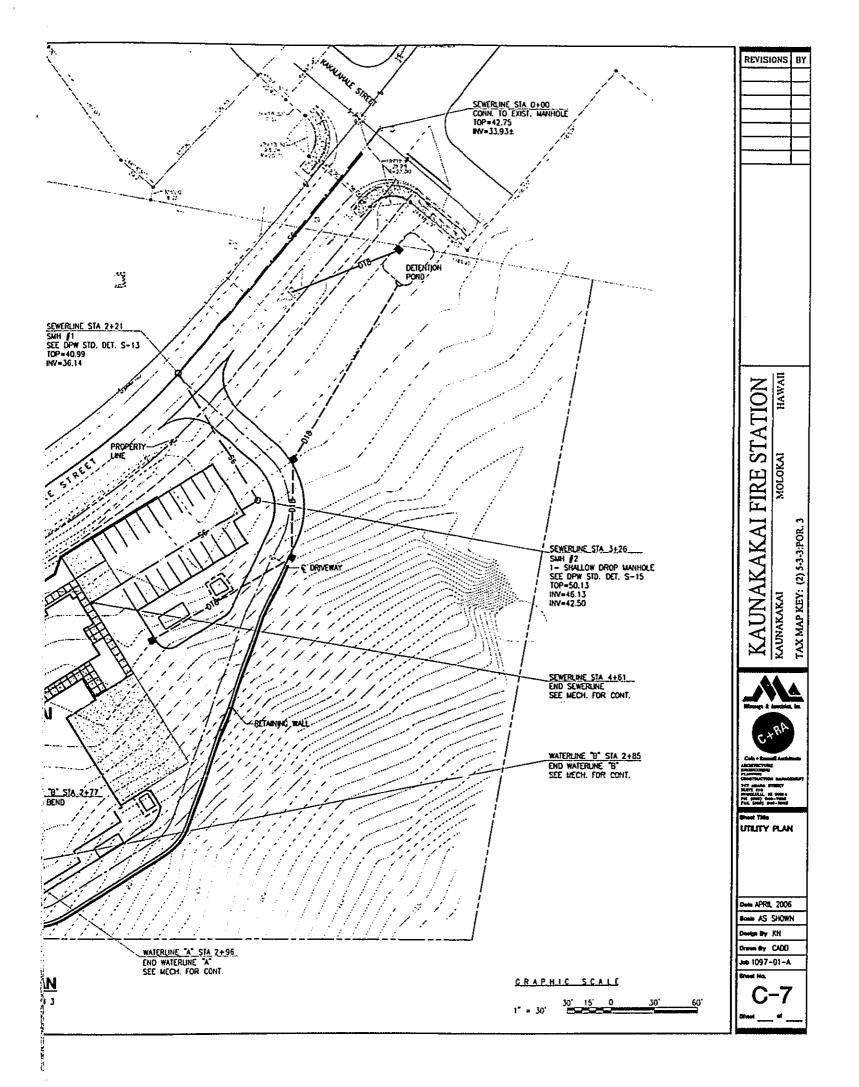
1 -- 4











Appendix E

Preliminary Drainage Report

PRELIMINARY DRAINAGE REPORT

KAUNAKAKAI FIRE STATION (PORTION OF TMK: (2) 5-3-3)



Prepared by:

MITSUNAGA & ASSOCIATES, INC. NOVEMBER 2006

Background Information:

The proposed location of the Kaunakakai is at the south east corner of Kakalahale and Alanui Ka'imi'ike Streets. The property covers approximately 4.7 acres and the grading of the project site will be in conformance with the County of Maui grading ordinance.

Design Criteria

The following design criteria are based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui" Department of Public Works and Waste Management, County of Maui, November 1995.

A. Recurrence Interval

For drainage areas of 100 acres or less, the recurrence interval (Tm) = 10 years based on a 1-hour storm, unless otherwise specified.

1 (

Detention basins - Recurrence interval (Tm) = 50 years based on a 1-hour storm for drainage areas less than 100 acres.

В. **Determination of Runoff Quantities**

For drainage areas 100 acres or less, the Rational Method is used.

Q CIA where,

Q C flow rate in cubic feet per second (cfs)

runoff coefficient

I rainfall intensity in inches per hour (in / hr) for a duration equal to the time of concentration

Α drainage area in acres (ac)

- Runoff Coefficient, C, shall be 0.90 for paved areas and 0.55 for 1. landscaped or bare ground. The runoff coefficient shall be weighted based on the amount of area of each surface. C for the existing condition shall be determined by Table 2 of the Rules for the Design of Storm Drainage Facilities in the County of Maui.
- Rainfall Intensity, I, determined by using Plate I to determine the 2. 1-hour rainfall intensity (inches) for the design storm recurrence interval needed to obtain the value from Plate 4 attached.
- Time of Concentration, Tc, determined from Plate 3 attached. 3.

Existing Conditions

According to the attached Flood Insurance Rate Map 150003 00085 dated September 6, 1989, the entire property lies in Zone C (Areas of minimal flooding).

The site is undeveloped land characterized by moderate hills up to 25% slope. The ground cover is well established and small trees are spread throughout the site. The surface soils consist of sandy silt, sand and gravel. The onsite soils are in a dense, stiff condition down to depths ranging from approximately 1.5 to 17 feet below existing grade. The surface soil is generally underlain by medium hard basalt, which is in a slightly weathered and highly vesicular condition.

Runoff generated from the site sheet flows off the northern corner of the property. There are no on-site drainage structures, however Alanui Ka'Imi'lke Street's drain line has inlets adjacent to the property. The table below summarizes the existing runoff flows and their discharge point from the site. The flows were estimated using the Rational method and a 50 year recurrence interval.

Estate Post			
Existing Drainage Area	Area (acres)	Runoff (cfs)	
Existing Condition	4.71 acres	6.51 cfs	
	·	0.51 013	

Proposed Drainage Plan

The intent of the drainage plan is to minimize the drainage impact of the proposed project, and provide adequate storm water disposal for on-site generated runoff. The table below summarizes the proposed runoff flows and their discharge point from each site.

Proposed Drainage Area	Area (acres)	Runoff (cfs)
Proposed Condition	4.71 acres	18.15 cfs

With the proposed construction of the Fire Station, a peak flow of 18.15 cubic feet per second will be generated vs. an existing peak flow of 6.51 cubic feet per second. The increase in peak flow will be 11.64 cubic feet per second.

Proposed mitigation measures

A 207 cubic yards of detention pond is required to attenuate the increase in flow. Our project will construct two ponds totaling approximately 230 cubic yards to accommodate more runoff than is generated by our project. The fire station project is anticipated to begin construction in 2007.

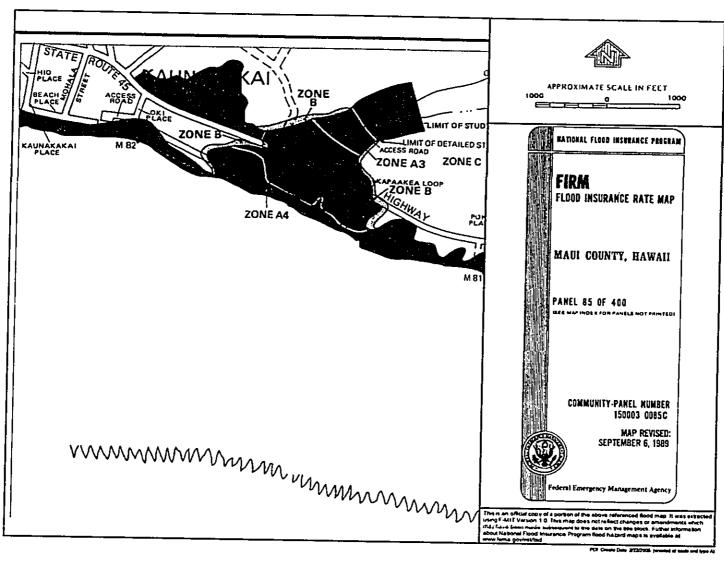
Conclusion:

The peak storm water runoff from the proposed fire station project is greater than the existing runoff by 11.64 cfs. The detention pond planned for construction with the fire station will be sized approximately 10% larger than the volume necessary to accommodate the increase in stormwater runoff from the fire station.

References:

- 1. Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency.
- 2. Rules for the Design of Storm Drainage Facilities in the County of Maui.
 Department of Public Works and Waste Management, County of Maui,
 November 1995.

APPENDIX



¥ ;

Pala Salar

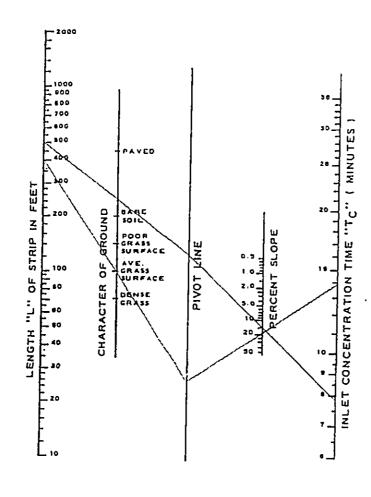
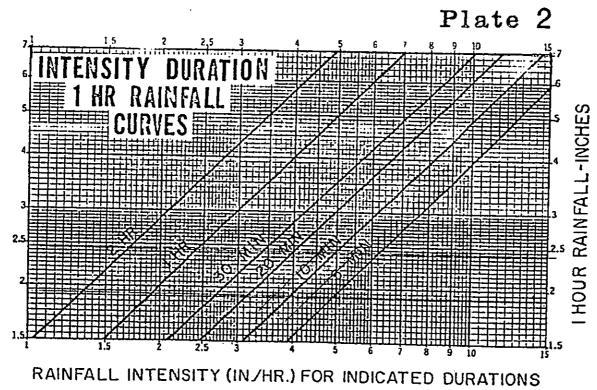


Plate 1

Overland Flow Chart



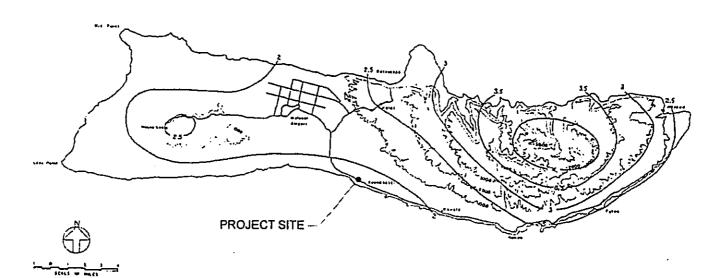


PLATE 5

ISLAND OF MOLOKAL

CRAINAGE MASTER PLAN
10 YEAR-1 HOUR-RAINFALL

The second and the second seco

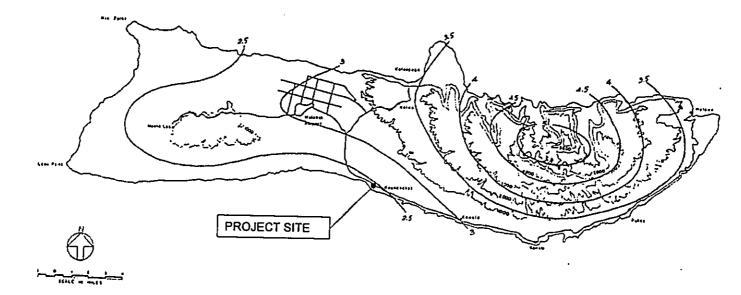


PLATE 8

ISLAND OF MOLOKAL

DRAINAGE MASTER PLAN
DRAINAGE MASTER PLAN
50 YEAR-I HOUR-RAINFALL
R.M. TOWILL CORPORATION
COLL THOMSET - SURVEYORS

Proposed Runoff Volume **Detention Volume Required**

Kaunakakai Fire Station
FLOW CALCULATION FOR EACH DRAINAGE AREA 7/25/2006 Existing Condition (50 yr. storm event) 1-HOUR RAINFALL (INCH/HR) AREA (AC) (UNIMPROVED) 4.71 AREA (AC) (PAVED) AREA INTENSITY (INCH/HR) AREA LENGTH C2 WEIGHTED C SLOPE 20.5% FLOW(CFS) 6.51 6.51 0.30 0.00 400 TOTAL 4.71 Proposed Condition AREA (AC) (LANDSCAPED) AREA (AC) (IMPERVIOUS) AREA WEIGHTED C 0.70 AREA I (INCH/HR) LENGTH 2.4 500 C2 16.4% FLOW(CFS) 1 TOTAL Hydrograph ---- Exist. Runoff -Proposed Runoff 20 Discharge (cfs) 15 10 5 0 2 6 8 10 12 14 16 18 Time (min.) Proposed Flow (cfs) Exist. Flow (cfs) Time (min.) 0 18.15 0 3123 ft^3 8713 ft^3 8 6.51 16 Exist. Runoff Volume

5590 ft^3 207.0 cu yd

