



UNIVERSITY OF HAWAII

Maui Community College

Office of the Provost

Molokai Educ.
Center

BY

UNIVERSITY OF HAWAII CENTER ON MAUI

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June 10, 1998

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Finding of No Significant Impact (FONSI) for Moloka'i Education
Center TMK# 5-3-03:1 (por.), Kaunakakai, Moloka'i, Hawaii

Maui Community College has reviewed the comments received during the 30-day public comment period which began on May 8, 1998. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the June 23, 1998 OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the Final EA. Please call me at (808) 984-3209 if you have any questions.

Sincerely yours,

Clyde M. Sakamoto

LS

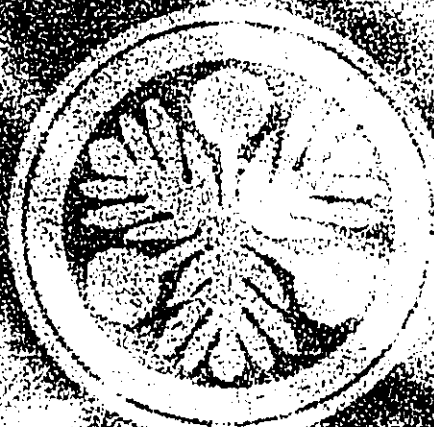
1998-06-23-MO-*FEA-Molokai Education Center*

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DEPT. OF
QUALITY



Moloka'i Education Center

Final Environmental Assessment

*Maui Community College
University of Hawai'i*

and

Moloka'i Ranch, Ltd.

June 1998

Moloka'i Education Center
Final Environmental Assessment

Maui Community College
University of Hawai'i

and

Moloka'i Ranch, Ltd.



Prepared by PBR HAWAII

June 1998

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INTRODUCTORY INFORMATION

PROJECT TEAM

Applicant: Maui Community College
University of Hawai'i
310 Ka'ahumanu Avenue
Kahului, Hawai'i 96732

Land Owner: Moloka'i Ranch, Ltd.
Harbor Court
55 Merchant Street, Suite 2000
Honolulu, Hawai'i 96813

Project Manager: Clifford Projects Inc.
125 Merchant Street, 2nd Floor
Honolulu, Hawai'i 96813

Project Architect: Kauahikaua & Chun / Architects
567 South King Street, Suite 108
Honolulu, Hawai'i 96813

Project Civil Engineer: Warren S. Unemori Engineering, Inc.
2145 Wells Street, Suite 403
Wailuku, Hawai'i 96793

Environmental Assessment
Preparer and Landscape
Architect: PBR HAWAII
Pacific Tower, Suite 650
1001 Bishop Street
Honolulu, Hawai'i 96813

PURPOSE OF THIS DOCUMENT

This Environmental Assessment ("EA") has been prepared for the Moloka'i Education Center project to assess the development of a new campus facility which is intended to provide a more efficient and comprehensive educational service to the people of Moloka'i.

This project is a joint development of Moloka'i Ranch and the University of Hawai'i Maui Community College. Compliance with Chapter 343 is required because the development of the project will utilize funds provided by the State of Hawai'i.

This EA has been prepared in compliance with the provisions of *Hawai'i Revised Statutes* Chapter 343 and Title 11, Department of Health, Chapter 200, EIS Rules.

1.0 *Introduction*

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1.0 INTRODUCTION

Section 1 provides a project summary and background of the proposed development, including location, land ownership, property description and land uses of the surrounding properties.

1.1 PROJECT SUMMARY

- Project Name:** Moloka'i Education Center
- Applicant:** Maui Community College, University of Hawai'i
- Landowner:** Moloka'i Ranch
- Tax Map Key:** 5-3-03:1 (por.) (2nd Division)
(Total land area: 5 acres)
- Project Area:** Phase 1 Project Area: 2 acres
Future Phase Project Area: 3 acres
Total Project Area: 5 acres
- Existing Use:** Agricultural Use: Cultivation of seed corn
- Proposed Use:** Development on Moloka'i of a Maui Community College post-secondary satellite campus and distance learning education center with a design enrollment of 300 to 350 students. Phase 1 components include a Main Building with an Administration Wing, Distance Learning & Technology Wing, Classrooms, Library/Learning Center, access road, and supporting infrastructure. Future Phase components to include additional Classroom Buildings, a possible Theater, and additional parking.
- Land Use Designations:**
- State Land Use: Agricultural District
 - Community Plan: Public/Quasi-Public
 - Zoning: Interim
- Special Management Area:** Phase 1 elements in the SMA include the access road connection to the highway and a sewer line extension and other utility lines planned adjacent to the highway right-of-way. Approximately 3.21 acres designated for Future Phase development is in the SMA.
- Action Requested:** Compliance with Chapter 343, *Hawai'i Revised Statutes* and Hawai'i Administrative Rules, Title 11, DOH, Chapter 200
- Accepting Authority:** Maui Community College, University of Hawai'i

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1.2 PROJECT BACKGROUND

The mission of the Maui Community College ("MCC" or "College") is to provide education to residents who reside on the three-island Maui County — Maui, Moloka'i, and Lāna'i. The Moloka'i Education Center was established by Maui Community College to fulfill its mission on Moloka'i.

Since 1970, MCC has offered college credit courses to Moloka'i residents through the Moloka'i Education Center in borrowed and rented spaces in the community. MCC also coordinates the scheduling and delivery of the University of Hawai'i Center on Maui program and the UH/Hawai'i Interactive Television System (HITS) courses to Moloka'i. Through the Moloka'i Education Center, MCC is also responding to the challenge of working directly with the community to provide the training necessary to help alleviate the high unemployment rates since the departure from Moloka'i of Del Monte and the closure of pineapple operations in 1988. MCC, as the parent institution of the Moloka'i Education Center, seeks to expand and efficiently deliver educational opportunities to Moloka'i residents through the establishment of permanent state-of-the-art facilities.

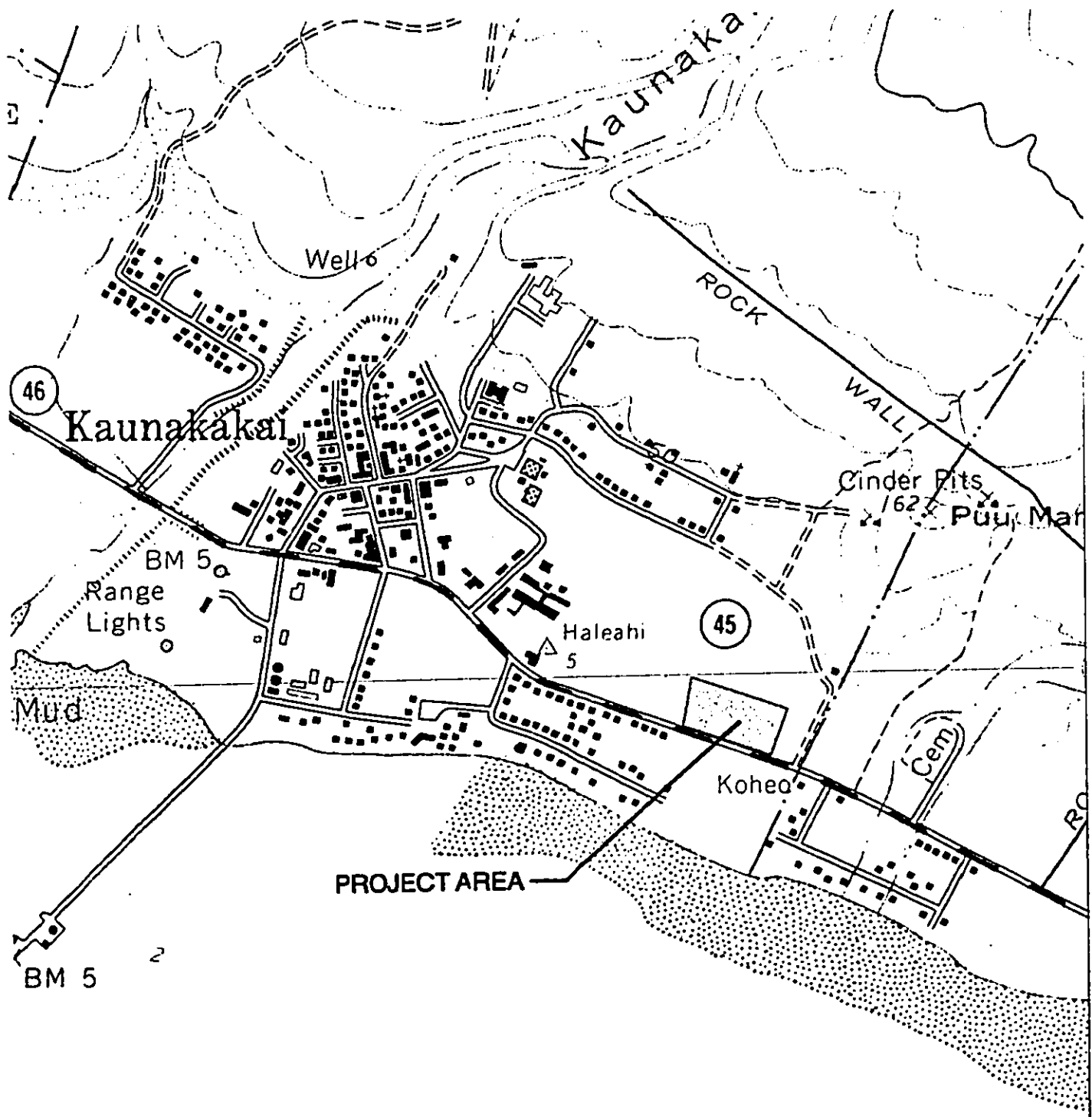
The Moloka'i Education Center has expanded considerably since its inception. The College presently offers approximately 58 classes per year and coordinates the scheduling of six (6) classes per year for the University of Hawai'i Maui Outreach Program (UH-MO). Approximately 250 students are currently enrolled in day and night classes. The current enrollment consists of 35 percent day students and 65 percent night students. The present program hours are 8:00 AM to 10:00 PM Monday-Friday and 8:30 AM to 3:30 PM on Saturday.

The curricula lead to certificates and degrees in 10 areas, instructed by a blend of Maui-based and Moloka'i instructors and lecturers. Five locations are currently utilized to operate the program: 1) agricultural classes are held at the MCC Moloka'i Farm, 2) technical classes are held at Moloka'i High School in Ho'olehua, 3) dance classes are held at the National Guard Armory, 4) lab and daytime classes at the MCC Moloka'i Center, and 5) all other classes at the elementary school in Kaunakakai. Most classes are scheduled at night due to the lack of day facilities. Business, agriculture, and fashion classes are scheduled during the day, and UH Center classes are broadcast over HITS, cable television, and SkyBridge, MCC's interactive cable telecommunications system.

The use of a rented facility in Kaunakakai since 1986 allowed the College to schedule day classes, broadened the selection of classes, and provided safe storage of equipment. The College's first cable course was broadcast to Moloka'i in 1986, followed shortly by the SkyBridge interactive classroom in 1988. An Academic Development Plan for Moloka'i (1992-1998) describes a long-range plan which projects a more stable and comprehensive post-secondary educational program for the residents of Moloka'i through the development of a permanent facility for the Moloka'i Education Center.

1.3 LOCATION

The land area encompassed by this project is located at Kaunakakai on the island of Moloka'i, within the County of Maui (Figure 1). The project is located adjacent to and immediately mauka of Kamehameha V Highway and to the east of the Kaunakakai Regional Park. Kaunakakai is the island's center of government and business and located approximately eight miles southeast of Moloka'i Airport.



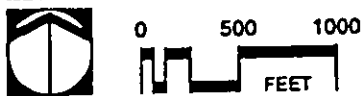
**PROJECT
LOCATION**

Base Map: USGS, Kaunakakai Quad Map (1952)

**FIGURE 1
LOCATION MAP**

Moloka'i Education Center

3



April 1998 **PBR**

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1.4 DEVELOPMENT TEAM

This development project is presented by a unique private and public-sector partnership between Moloka'i Ranch, Ltd., a Hawai'i corporation, and the Maui Community College, a University of Hawai'i institution of higher education.

1.5 LAND OWNERSHIP

The parcel of land (TMK: 5-3-03:1) proposed for the development of the Moloka'i Education Center is owned by Moloka'i Ranch, Ltd. (Figure 2). Subdivision of the Phase 1 two-acre project site out of the large 1,762-acre parcel is in process by Moloka'i Ranch, Ltd. and is expected to be completed by Fall 1998. Moloka'i Ranch, Ltd. will donate the two-acre Phase 1 parcel to the University of Hawai'i and, through a joint agreement with the University, will develop Phase 1 of the property for use as the permanent facility of the Moloka'i Education Center. An option to purchase the remaining three-acre Future Phase parcel at fair market value has been extended to the University by Moloka'i Ranch, Ltd. for a 20-year period.

1.6 DESCRIPTION OF THE PROPERTY

The project site consists of five acres of TMK: 5-3-03:1 (por.). The site is located at Kaunakakai and is adjacent to Kamehameha V Highway. Elevation of the flat project site generally averages six feet MSL at the highway to nine feet MSL at the mauka edge. The areas of the TMK parcel which are not part of the project extend to higher elevations at the upper (northern) boundary.

The subject five-acre property has been utilized for agricultural purposes (e.g. cultivation of pineapple and seed corn) for many years. Vegetation on the project site currently consists of cultivated corn and herbaceous weeds associated with cultivation.

1.7 SURROUNDING LAND USES

The project site in south central Moloka'i is bounded by the Kamehameha V Highway to the south, the Kaunakakai Regional Park to the west, vacant Department of Hawaiian Home Lands to the east, and additional Moloka'i Ranch Parcel 1 lands to the north (Figure 3). Vacant lands and residential houselots are located makai of Kamehameha V Highway across the proposed campus.

Residential subdivisions, Kaunakakai School, commercial and service businesses, and civic uses are located in Kaunakakai town. The project site is located at the eastern edge of Kaunakakai town and is approximately eight miles southeast of the Moloka'i Airport.

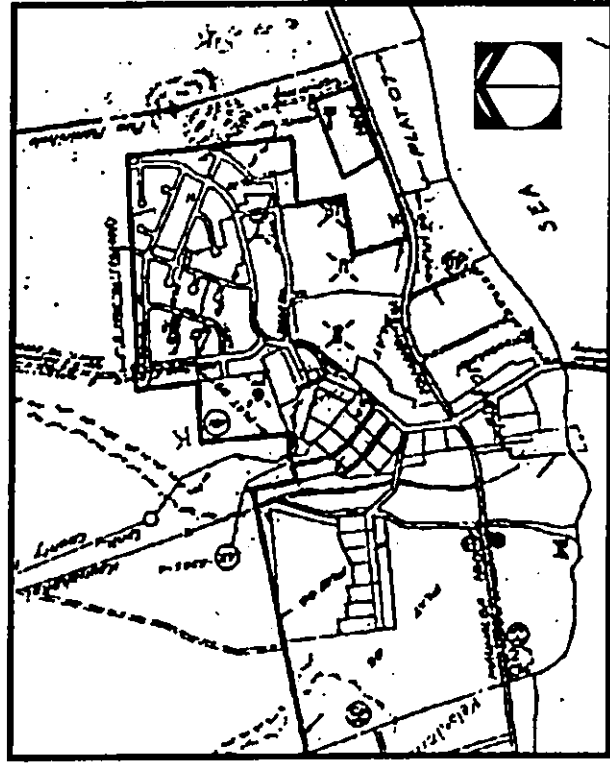
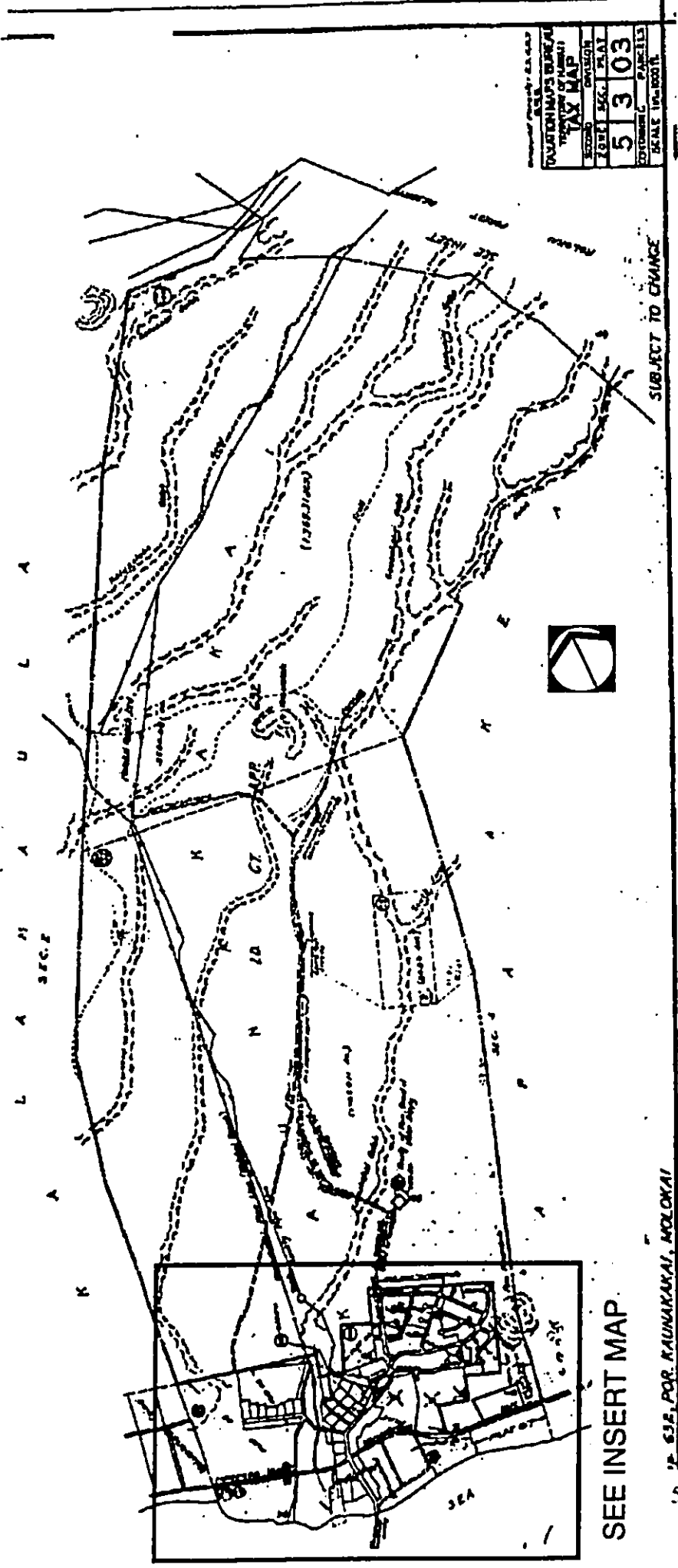


FIGURE 2
TAX MAP KEY / LAND OWNERSHIP MAP
Moloka'i Education Center



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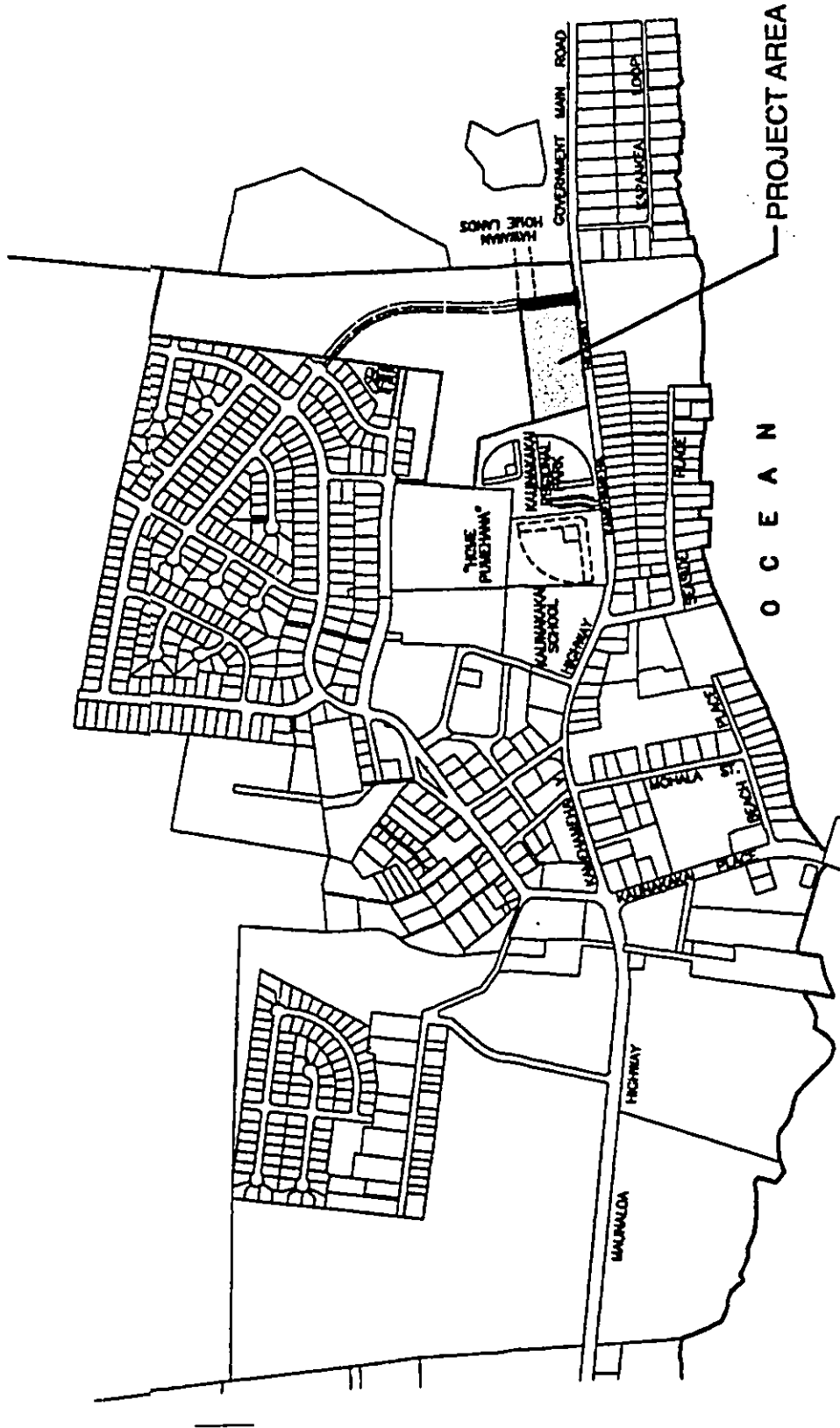
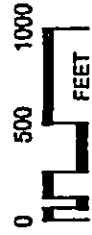


FIGURE 3
SURROUNDING LAND USES

Moloka'i Education Center



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1.8 AGENCIES CONSULTED IN THE PREPARATION OF THE EA

The following agencies and organizations have been consulted during the planning process and for the preparation of the Environmental Assessment:

County of Maui

Department of Parks and Recreation
Department of Planning
Department of Public Works and Waste Management

State of Hawai'i

Department of Accounting and General Services
Department of Agriculture
Department of Business, Economic Development & Tourism
Department of Education
Department of Hawaiian Home Lands
Department of Health, Office of Environmental Quality Control
Department of Land and Natural Resources – Land Division
Department of Land and Natural Resources – Historic Preservation Division
Department of Transportation

University of Hawai'i

Maui Community College
Physical Planning and Construction Office for Community Colleges
Offices of the Senior Vice President for Administration
Office of Long Range Physical Development

Federal Agencies

U.S. Department of Agriculture Natural Resources Conservation Services
U.S. Army Corps of Engineers

Schools

Kamehameha Schools – Moloka'i Island
Kaunakakai School
Kilohana School
Kualapu'u School
Maunaloa School
Moloka'i High and Intermediate School

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Public Officials

Senator Rosalyn Baker
Councilmember Pat Kawano
Representative Mike White

Community Individuals and Organizations

(The community has been involved in this project since the initial site selection process and continues to be involved through the planning phase.)

Alu Like Inc.
DeGray Vanderbuilt
Hawaiian Research, Ltd.
Holden's Foundation Seed, Inc.
Legal Aid
Maui Economic Opportunity
MCC Moloka'i Advisory Committee
Moloka'i Catholic Church
Moloka'i Chamber of Commerce
Moloka'i General Hospital
Moloka'i Homestead Association
Moloka'i Jaycees
Moloka'i Ranch

Moloka'i Businesses

American Savings Bank
Bank of Hawai'i
Friendly Isle Realty
Moloka'i Drugs, Inc.

2.0 *Project Description*

MOLOKA'I EDUCATION CENTER
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2.0 PROJECT DESCRIPTION

The proposed Moloka'i Education Center, construction activities, and a preliminary development timetable and approximate development costs are described in this section.

2.1 PROJECT DEVELOPMENT GOALS

The overall goal of the project is to develop a permanent facility for the Moloka'i Education Center, a post-secondary campus facility of the Maui Community College. As part of the University of Hawai'i system, the Moloka'i Education Center will provide learning opportunities for Moloka'i residents to obtain vocational and academic training in preparation for future employment. The long-range conceptual master plan is shown in Figure 4.

Currently, Moloka'i Education Center operates out of several borrowed and rented locations scattered throughout the island. This arrangement is inefficient and does not provide for technological expansion. Since Maui Community College serves residents on three islands, distance education services through intra- and inter-campus telecommunications technology (e.g. interactive television, conferencing, data transmission) are an integral part of the operational requirements. Distance learning through telecommunications technology together with conventional classroom teaching will allow a sparsely populated community such as Moloka'i the benefits of a larger campus such as MCC on Maui or other University of Hawai'i campuses throughout the state.

Development of the project will provide facilities which would be able to accommodate the curricula offerings which are expected to increase through distance education. The design of the project, therefore, necessitates and incorporates flexibility into the multiple uses of rooms and connects all possible communications wiring and circuit access in each room to meet these demands. The Moloka'i Education Center is expected to adapt to and benefit from the rapidly developing communications technology available to educational institutions.

2.2 PHASING OF THE PROJECT

The project conceptual long-range master plan will be developed in at least two phases; an initial Phase 1 and a Future Phase.

Phase 1: The goals for Phase 1 are to establish a permanent facility to relocate the minimum Moloka'i Education Center facilities and to establish an academic presence on Moloka'i.

Future Phase: The goals of the Future Phase are to enhance existing programs and to expand new needed offerings.

Phase 1 is planned on two acres of the five-acre project site (Figure 5). Phase 1 will be developed through a partnership between Moloka'i Ranch, Ltd. and the University of Hawai'i. Construction is scheduled for Summer 1998 to Summer 1999.

A development schedule of the Future Phase is undetermined at this time. The University of Hawai'i and Maui Community College will plan its construction when the need in the community warrants its development and when funding becomes available.

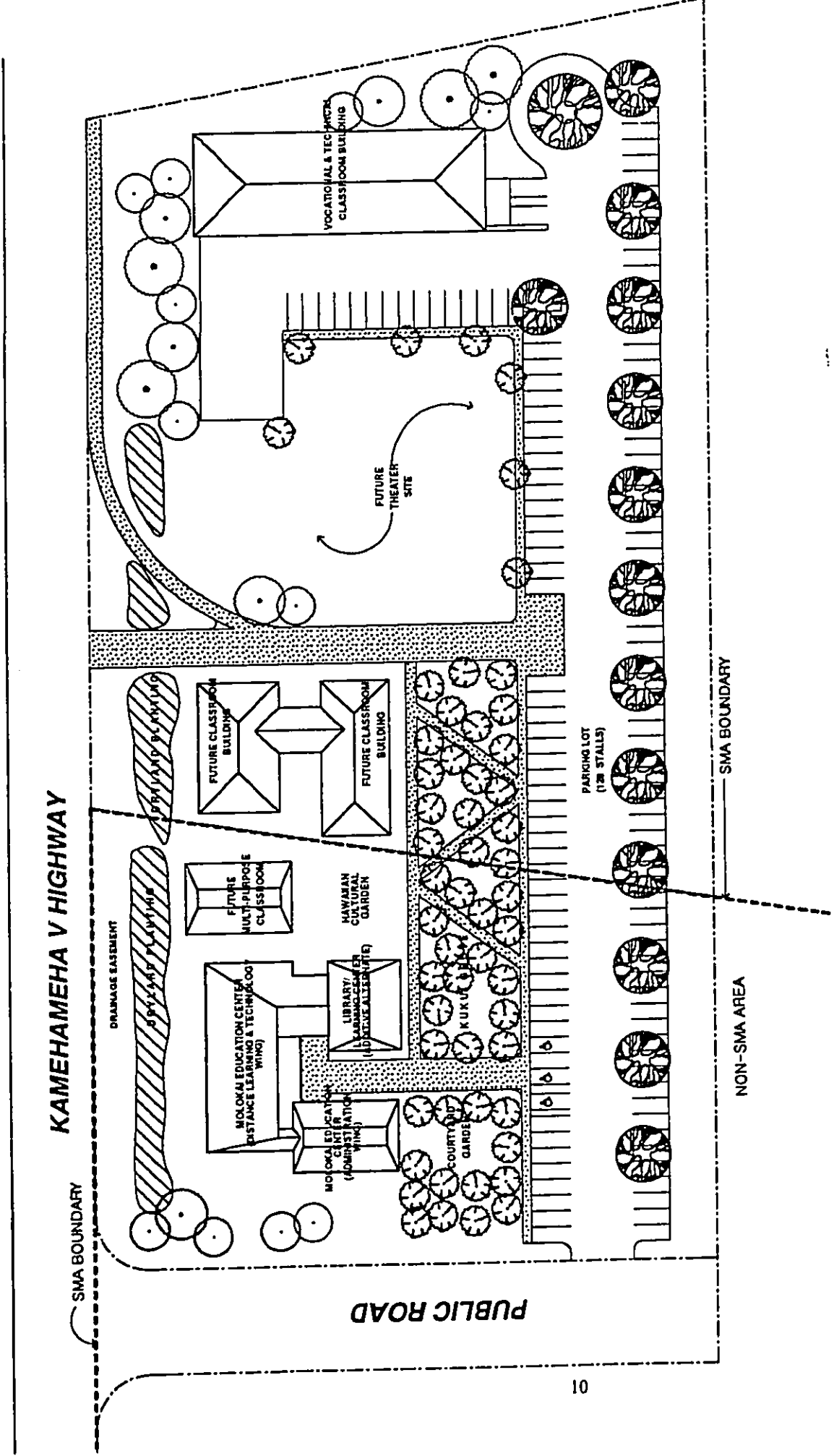


FIGURE 4
LONG-RANGE MASTER PLAN

Moloka'i Education Center



June 1998

Source: Kauahikaua & Chun Architects

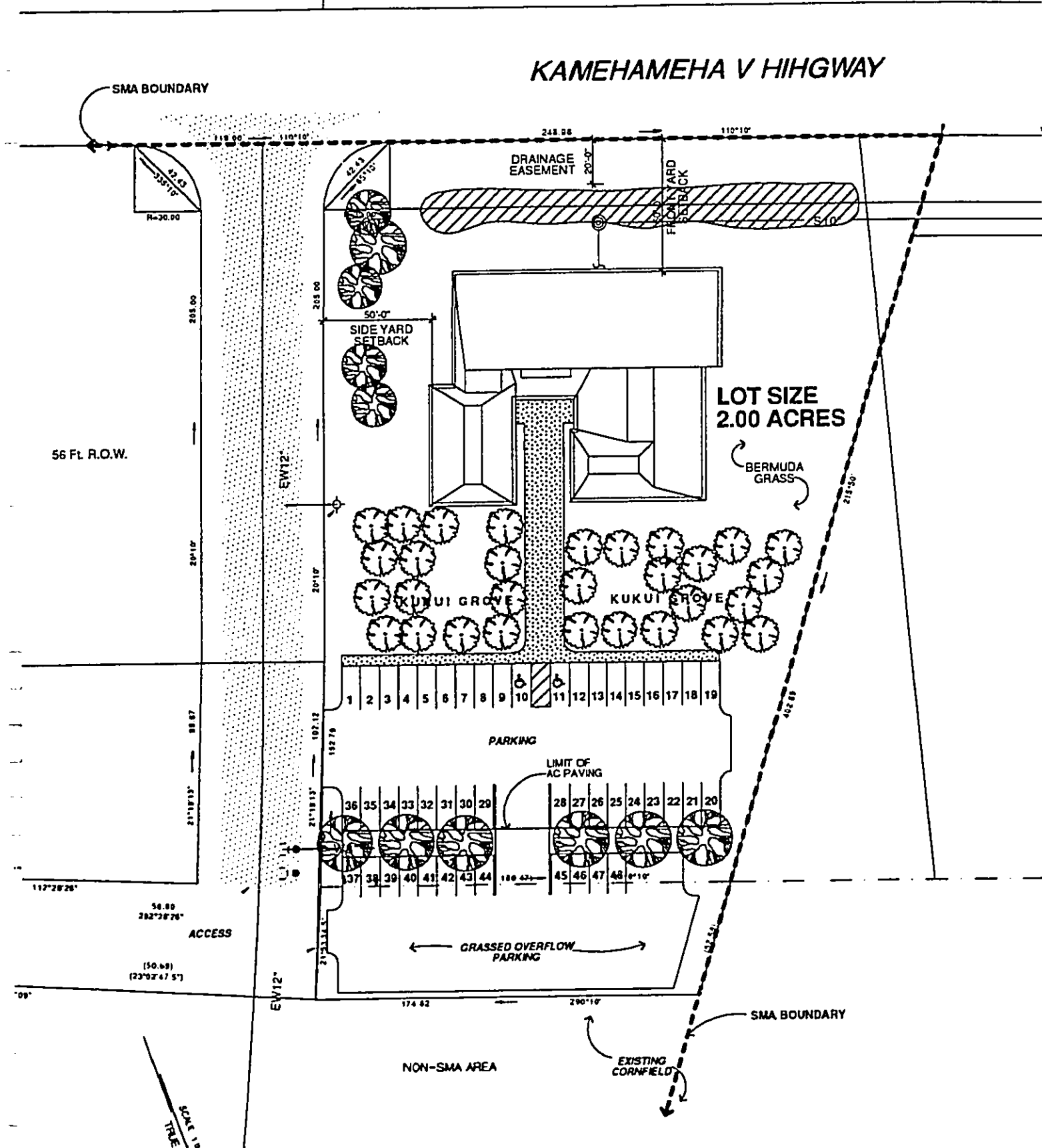


FIGURE 5
SITE PLAN (PHASE I)

Moloka'i Education Center



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This environmental document discloses the impacts of the complete master plan to the extent practicable. When development of the Future Phase is known, the University will determine if conditions have sufficiently changed to warrant any additional studies.

2.3 PROJECT COMPONENTS

The Moloka'i Education Center long-range conceptual master plan is shown as a phased development. The physical components of the plan include buildings, a site for a theater, landscaped grounds, parking, and supporting infrastructure.

2.3.1 Phase 1

The Phase 1 project components include a Main Building with three wings to house the Administrative Offices, Distance Learning and Technology Center, Library/Learning Center, hardscape and landscaped lawns, parking, and a new access roadway.

2.3.1.1 Main Building

The initial building (Main Building) to be constructed in Phase 1 will house the Administrative Wing, the Distance Learning and Technology Center Wing, and, if the budget permits, a Library/Learning Center Wing and General Purpose Classroom. The three wings will have a minimum building area under roof of approximately 10,820 square feet. The floor plan of the Main Building is shown in Figure 6.

PHASE 1 BUILDING SPACE PROGRAM

BUILDINGS	FLOOR AREA (Sq. Ft.)	USES
Main Building		
- Administration Wing	1,900	- Office
- Distance Learning and Technology Center Wing	3,630	- Classroom, Control Rooms
- Library/Learning Center Wing	2,190	- Library, Learning Center, Testing Room
- General Purpose Classroom	1,130	- Classrooms
- Circulation, Toilets, Mechanical	<u>1,970</u>	- Hallways, Lavatory, Equipment Room
	10,820	

2.3.1.2 Parking

Phase 1 parking will include 48 parking stalls which includes two handicap-accessible stalls. Thirty-six of the stalls will be paved and 12 will be grassed. In addition, overflow parking will be accommodated on the grassed areas to provide parking for as many as 68 cars. The portion of the parking lot with the additional 12 grassed parking stalls and the grassed overflow parking area will be temporarily used for Phase 1 until the Future Phase (as shown on the Long-Range Master Plan in Figure 4) is developed. Appropriate lighting will be provided along walkways and parking areas.

Parking for the five-acre long-range master plan at build-out is projected at 128 stalls.

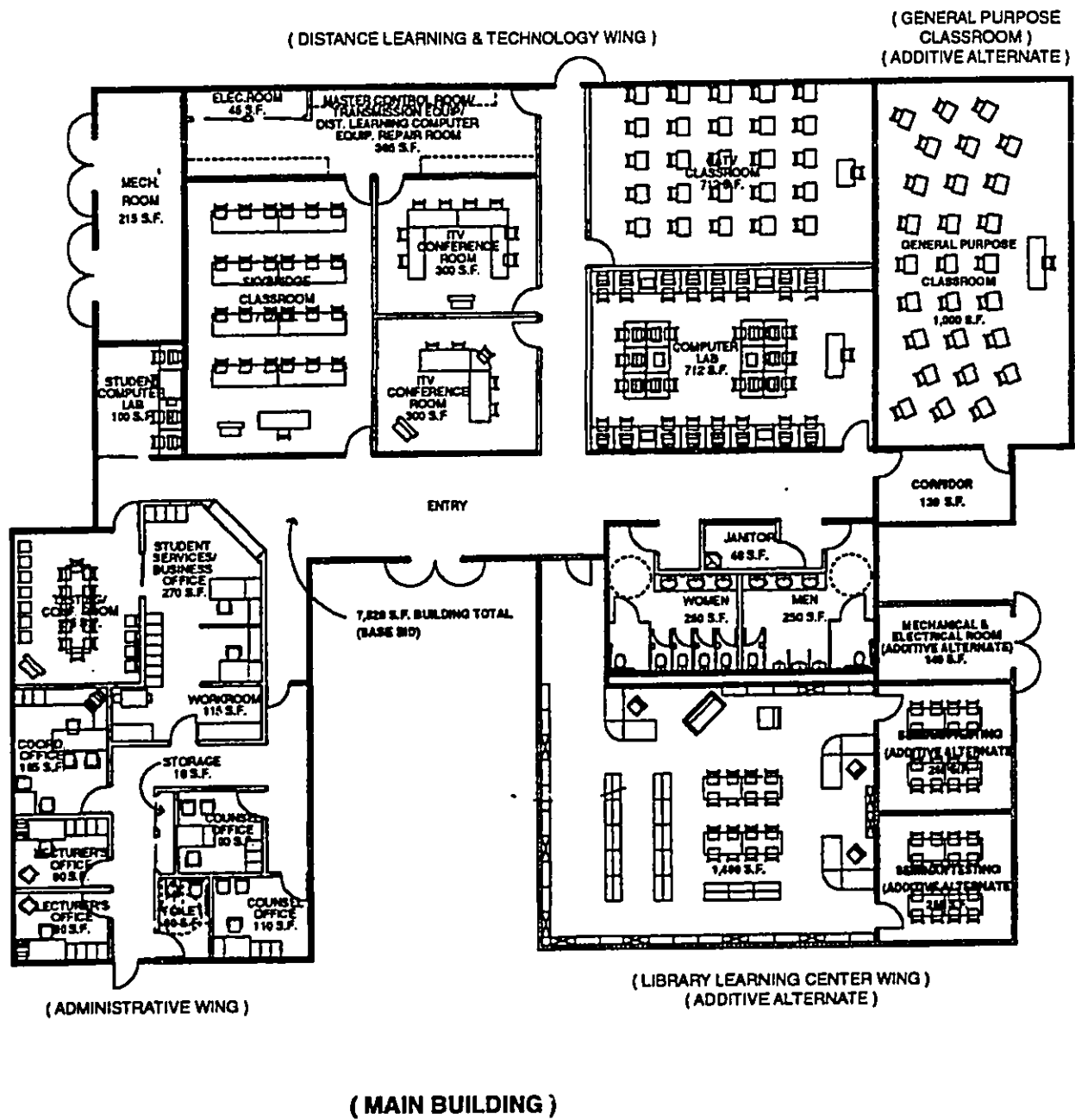


FIGURE 6
PHASE 1 (FLOOR PLAN)

Moloka'i Education Center



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2.3.1.3 Landscaped Grounds

The focal point of the landscaping is a long rectangular kukui grove. The kukui (*Aleurites moluccana*) is the popularly ascribed floral symbol of Moloka'i. Introduced through Polynesian migration, the tree bears an oily nut used in ancient Hawai'i as fuel for stone lamps. This association with light relates to the University of Hawai'i's motto "Mālamalama" nurturing the light of knowledge. The theme also relates to the circular kukui grove of Lanikāula at Keōpukaloa, Moloka'i.

Along the Kamehameha V Highway, a xeriscape of mostly indigenous Hawaiian planting characteristic of low land regions will be used. Trees will include endemic wiliwili (*Erythrina sandwicensis*) and milo (*Thespesia populnea*). A broad grassed swale will be used to satisfy storm water drainage requirements.

The paved parking area will be shaded by canopy trees meeting Maui County standards.

2.3.1.4 Access Road

Access to the project will be from Kamehameha V Highway at a location designated on the Kaunakakai Town Community Plan Map (see Figure 9). A new access road will be developed as part of the subject project and will be paid for by project funds provided by the University of Hawai'i. The approximately 390 feet long roadway will be dedicated to the County upon completion of the project. The roadway right-of-way is planned to be 56 feet wide.

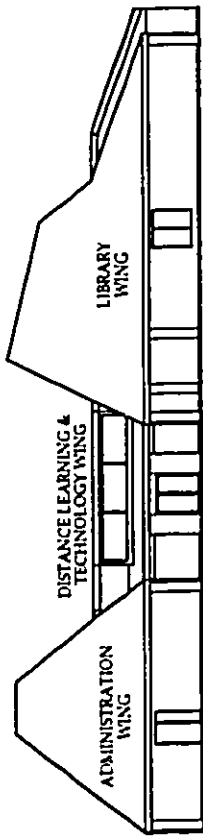
As shown on the Community Plan Map, this roadway would, in the future, connect to an off-site residential subdivision to the north of the subject project site. Construction of the future segment[s] would be the responsibility of others.

2.3.2 Future Phase Expansion

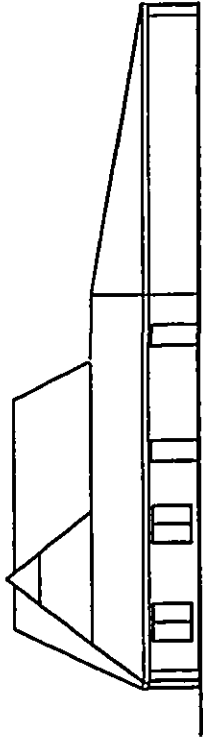
The Moloka'i Education Center long-range master plan provides for the long-term needs of the Moloka'i community. The future expansion of the Education Center will be based upon student and community interests, economic demands, and would be contingent upon available funding. Components that are conceptually planned include additional classroom buildings, a theater, if need for one is warranted, and additional landscaping and parking.

2.4 DESIGN CONCEPT

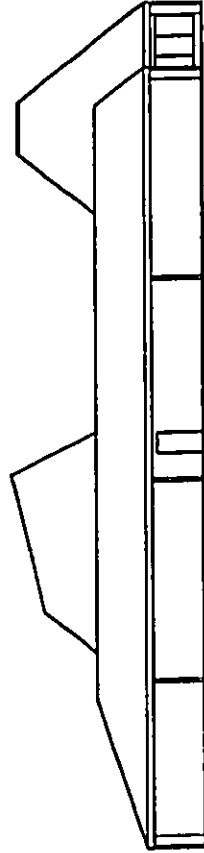
From distant views, the building will have a silhouette which is based on contemporary Hawaiian architecture on Moloka'i. Pitched roofs of varying heights will reduce the overall mass of the development. Much of the exterior building materials will satisfy design standards established for Kaunakakai town. Close-up views and building interiors will be strongly inspired by the modern distance-learning technology housed within (Figure 7).



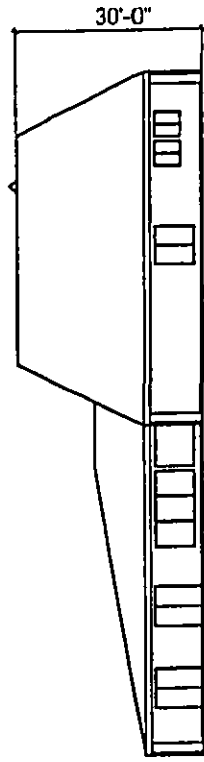
FRONT ELEVATION



RIGHT ELEVATION



BACK ELEVATION



LEFT ELEVATION

**FIGURE 7
PHASE ONE - MAIN BUILDING (ELEVATIONS)**

Moloka'i Education Center



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2.5 CONSTRUCTION ACTIVITIES

The proposed Phase 1 project will entail the alteration of less than two acres of land area. Best management practices ("BMPs") will be implemented during construction to assure minimal impact to the surrounding neighborhood.

2.6 DEVELOPMENT TIMETABLE AND APPROXIMATE COSTS

The five-acre long-range master plan for Moloka'i Education Center is a phased development. Phase 1 on two acres is scheduled to be developed in 1998-1999. A development schedule for the Future Phase on the additional three-acres is undetermined at this time.

Construction of Phase 1 infrastructure of the project is scheduled to commence in Summer 1998, and the construction of the Main Building is scheduled to commence in Fall 1998. The completion of construction is expected by Summer 1999, and classes are scheduled to begin the Fall Session of 1999.

The State of Hawai'i appropriated \$4,162,000 for the development of Phase 1. Of the \$4,162,000 appropriation, \$36,550 has been transferred to the State Works of Art Special Fund. Therefore, the total funds available for the project is \$4,125,450. The \$4,125,450 will be used to finance the on-site and off-site infrastructure development, building construction and equipment, and project fees and expenses. The two-acre Phase 1 parcel, valued at \$196,000 is being donated by Moloka'i Ranch, Ltd.

Determinants for the Future Phase development timetable and approximate costs would include an expressed need to expand the program and the availability of funding. The University of Hawai'i has a long-term option to purchase the additional three-acre portion of land from Moloka'i Ranch Ltd. at fair market value for the planning of the Future Phase expansion.

3.0 *Required Land Use Approvals*

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3.0 REQUIRED LAND USE APPROVALS

The entire site for the Moloka'i Educational Center is currently designated by the State Land Use Commission as "Agricultural" (Figure 8). The Moloka'i Community Plan designation for the property is for "Public/Quasi-Public Use" (Figure 9). The property is not zoned but is designated by the County as "Interim".

3.1 COUNTY OF MAUI

3.1.1 Special Management Area Use Permit

The two-acre parcel site for Phase 1 is located outside the Special Management Area (SMA). However, the SMA boundary includes the roadway right-of-way for Kamehameha V Highway. Infrastructure requirements for Phase 1 include extension of a sewer line and other utility extensions into this area. A small portion of the Phase 1 driveway connection to Kamehameha V Highway is also in the SMA. The project will require SMA (Minor) approval by the County of Maui.

All of the Future Phase project area is in the SMA (Figure 10). Future Phase development will require SMA approval by the County of Maui. The University of Hawai'i will consult with the County prior to development of the Future Phase.

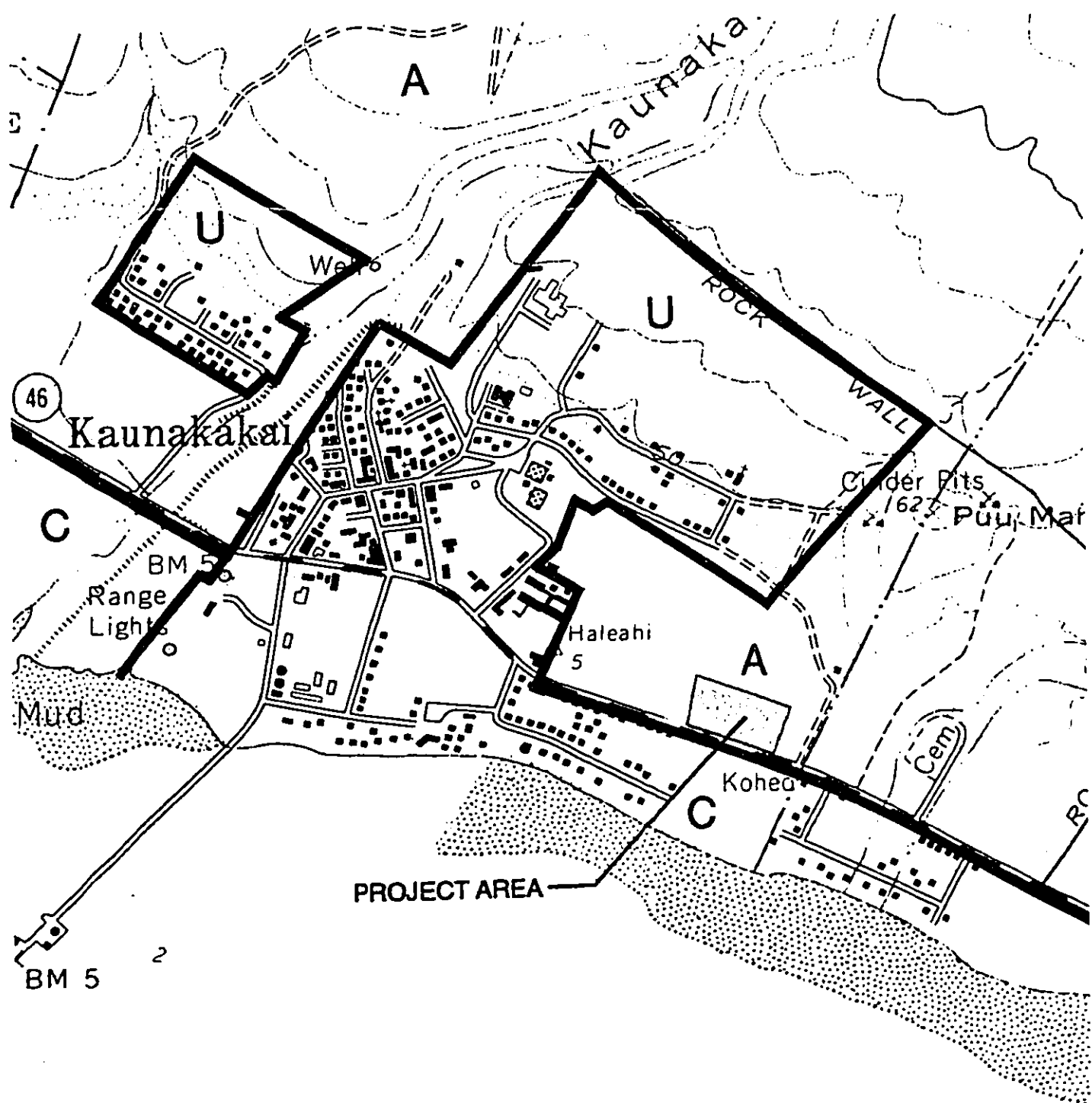
3.1.2 State Land Use Commission Special Use Permit

Alternative land use entitlement processes for the property include: 1) obtaining a State Land Use District Boundary Amendment and County Change in Zoning; or 2) obtaining a State Land Use Commission Special Use Permit (SUP). In this case, the SUP alternative was deemed appropriate, since "publicly-owned buildings" and "universities" are outright permitted uses pursuant to Chapter 19.02, relating to the Interim Zoning Provisions. In addition, the proposed use is in keeping with the Moloka'i Community Plan's land use policy (B.2.g) which identifies public and quasi-public uses as special uses within the State Agricultural district which may be allowed. Project implementation, therefore, would proceed in accordance with appropriate underlying land use entitlements which are already in place.

Section 15-15-95 (b) of the State Land Use Commission makes provisions for certain "unusual and reasonable" uses within agricultural districts other than those for which the district is classified may be permitted. The following guidelines are established in determining an "unusual and reasonable" use:

Guideline: *The use shall not be contrary to the objectives sought to be accomplished by Chapter 205A, HRS, and the rules of the commission.*

Discussion: The general intent of the State Land Use law is "to preserve, protect and encourage the development of land in the state for those uses best suited in the interest of the public health and welfare of the State of Hawai'i". The Moloka'i Education Center project is intended to develop a permanent educational facility, thereby allowing the Maui Community College to more efficiently provide educational programs for the Moloka'i community. The proposed project is consistent with Chapter 205A, HRS.

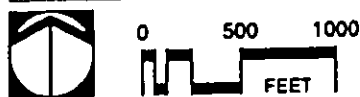


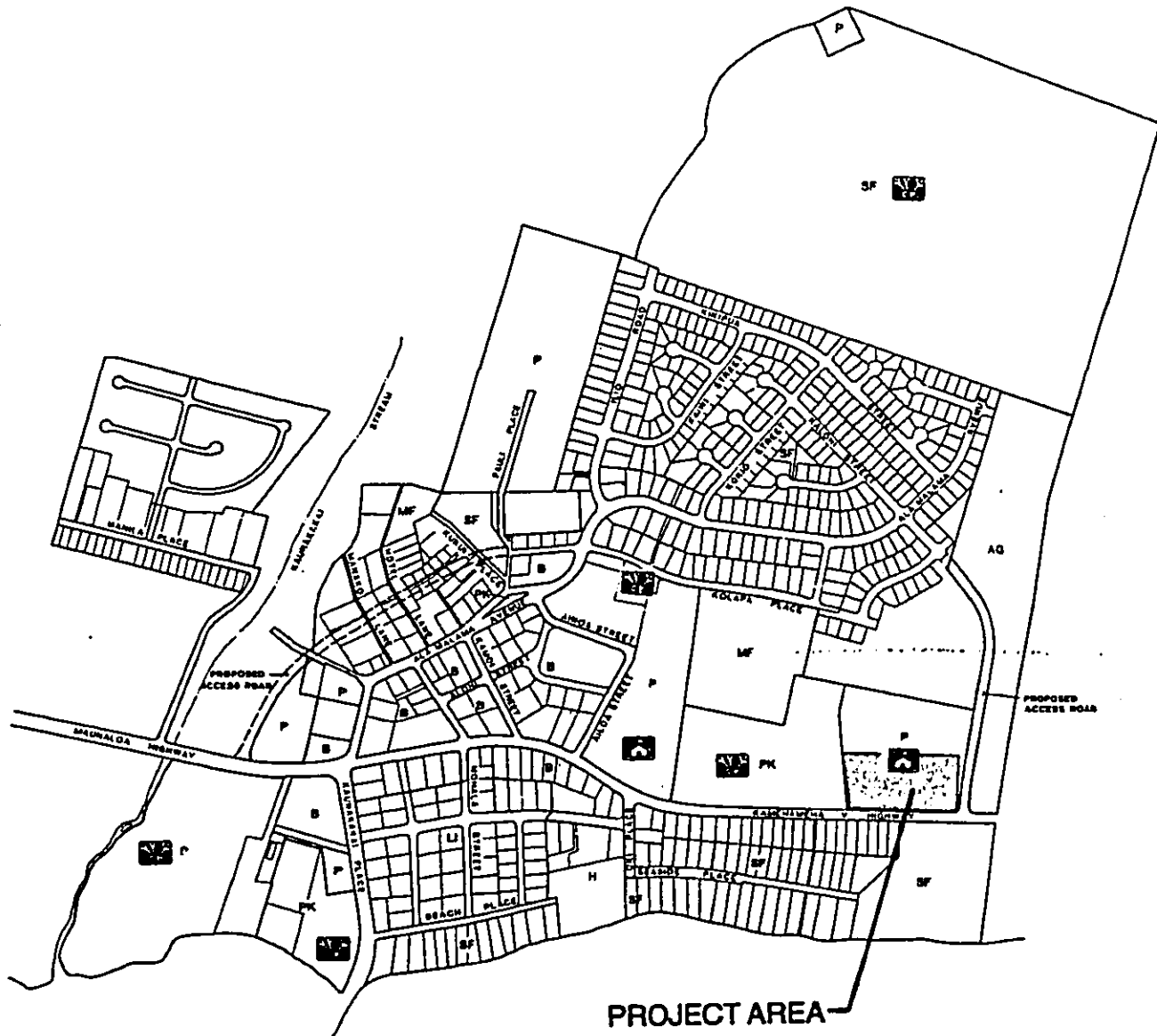
LEGEND

- U** Urban
- A** Agricultural
- R** Rural
- C** Conservation



Source: Land Use Commission

FIGURE 8
STATE LAND USE BOUNDARY MAP
Moloka'i Education Center





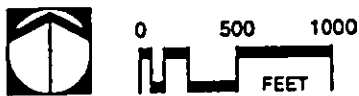
LEGEND

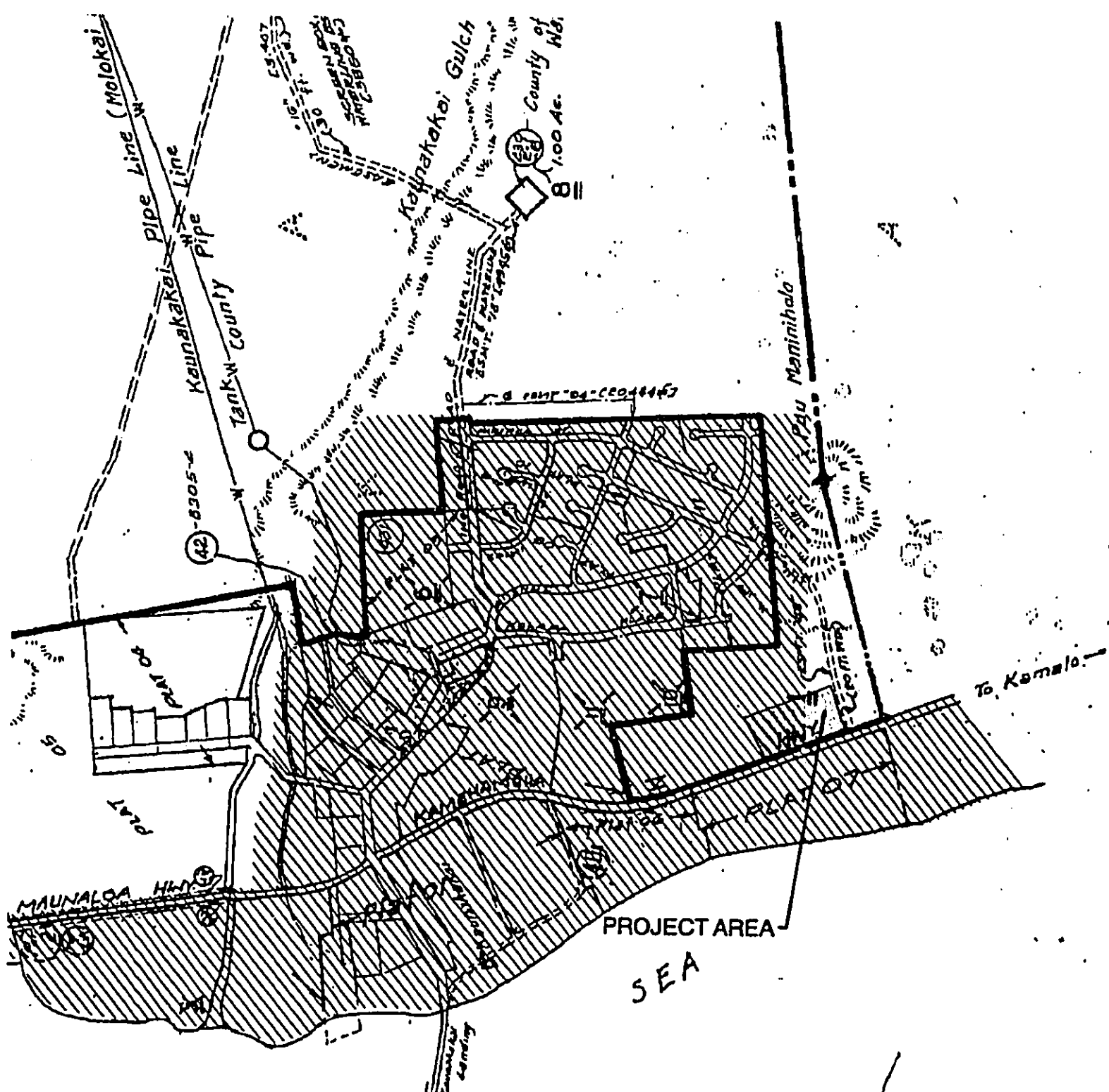
-  Park / Golf Course
-  School / Library

Source: County of Maui, Molokai Community Plan

FIGURE 9
MOLOKA'I COMMUNITY PLAN:
KAUNAKAKAI TOWN

Moloka'i Education Center



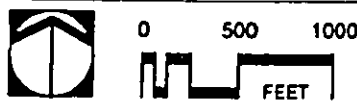


LEGEND

 Special Management Area

FIGURE 10
SMAMAP

Moloka'i Education Center



MOLOKA'I EDUCATION CENTER
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Guideline: *The desired use would not adversely affect surrounding property.*

Discussion: The location of the proposed Education Center is at the edge of Kaunakakai. Adverse impacts to surrounding properties are not anticipated as a result of this project.

Guideline: *The use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, school improvements, and police and fire protection.*

Response: A sewer line extension which will connect to the existing County system and a new access roadway connecting to Kamehameha V Highway will be developed as part of the project and will be paid for by funds provided by the University of Hawai'i. The water demand is not expected to exceed the current usage of the Education Center which presently operates out of five different locations on the island. On-site drainage improvements for the project will be designed and constructed and will be integrated into the existing system which has sufficient excess capacity to handle the runoff generated by the project.

In general, the proposed project is not anticipated to significantly affect infrastructure and public service demand and will result in enhanced post-secondary educational opportunities for the residents of Moloka'i.

Guideline: *Unusual conditions, trends and needs have arisen since the district boundaries and rules were established.*

Discussion: Maui Community College has been offering classes on Moloka'i since the 1970's in fulfillment of its mission and in response to a public demand. The program operates out of rented and borrowed spaces which are inefficient and limits the ability of the College to expand the program. At the same time, the public demand for post-secondary technical and vocational education continues to grow. This is attributable in part to the island's high unemployment rate following the closure of the pineapple industry on the island and a sluggish tourism industry. The development of a permanent campus for the Center is appropriate at this time. As a distance learning center, the technology which is now available to academic institutions would allow students in less populated Moloka'i to benefit from the range of courses which are available to other students on Maui and the rest of the state.

Guideline: *The land upon which the proposed use is sought is unsuited for the uses permitted within the district.*

Discussion: The subject site was one of nine candidate sites evaluated for the development of a permanent facility for the Education Center in an extensive process which involved the community, Maui Community College, the University of Hawai'i, and the Board of Regents. Its selection was based on criteria related to its physical attributes (e.g., flat land and suitable soils) and spatial requirements (e.g., within the Kaunakakai area and receptivity for microwave reception). Its development on agricultural land would initially displace two acres, and in the future, an additional three acres of farmland. However, Moloka'i Ranch, Ltd., the landowner, has other lands that may be used to accommodate displaced agricultural uses.

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3.2 STATE OF HAWAI'I

The use of State or County funds require compliance with Chapter 343, HRS and *Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules*. This Environmental Assessment has been prepared to fulfill these requirements. The accepting agency for the Environmental Assessment is Maui Community College.

3.3 OTHER APPROVALS AND PERMITS

During the implementation stages of the project, the applicant will be working with the State and County review agencies for examination and approval of project plans and specifications.

Permit	Approving Agency
<u>Phase I</u>	
Roadway Entrance Approval	State Department of Transportation
Grading/Building Permit	County Department of Public Works and Waste Management
Subdivision Approval	County Department of Public Works and Waste Management
<u>Future Phase</u>	
SMA Use Permit	Moloka'i Planning Commission
Grading/Building Permit	County Department of Public Works and Waste Management
Subdivision Approval	County Department of Public Works and Waste Management

4 . 0

*Description of the Affected Environment,
Potential Impacts of the Proposed Action,
and Mitigative Measures*

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4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT,
POTENTIAL IMPACTS OF THE PROPOSED ACTION,
AND MITIGATIVE MEASURES

The environment surrounding the proposed project includes the physical or natural environment and the human or social environment. This section describes the existing conditions, the potential impacts to the environment, and mitigative measures.

4.1 PHYSICAL CHARACTERISTICS

Moloka'i, fifth largest of the Hawaiian Islands, is approximately 38 miles long (oriented in east-west direction), 10 miles wide, and 259 square miles in area. The island is formed by two domes interconnected by a central plateau. The larger eastern dome rises to an elevation of 4,970 feet; the western dome rises to 1,346 feet. The project site is situated within the town of Kaunakakai at the base of the eastern dome along the southern coastal band at the base of the central plain.

4.1.1 Topography

The topography of the project site is nearly level with elevations ranging from six to nine feet mean sea level (msl) and soils that are deep and well-drained.

Potential Impacts

The implementation of the project will require vegetation removal, earthwork and grading of an area less than two acres in Phase 1 and three acres in the Future Phase. Development of building sites will require grading to establish level building surfaces with new drainage improvements to direct surface flows into the project's drainage system. To mitigate potential flooding concerns, the site will be raised two to three feet. Imported borrow material, type and quantities to be specified by the soil engineer, will be brought to the project site to create level building areas. The quantities will be specified in the grading plans.

Mitigative Measures

All grading operations will be conducted in full compliance with dust and erosion control and other requirements of the County of Maui Grading Ordinance, and all construction activities must comply with the provisions of Chapter 11-60.1, Hawai'i Administrative Rules, Section 11-60.1-33 on Fugitive Dust. The Phase 1 grading area is anticipated to be about two acres.

4.1.2 Climate

Kaunakakai is characterized by its hot and dry climate with annual rainfall of approximately 10 to 25 inches. Trade winds are generally from the northeast. Strong winds do occur at times in connection with storm systems moving through the area. Daily variations include diurnal effects of winds from the southwest quadrant during the night and morning hours, shifting to the northeast during the day. Temperatures in the project area average 66° to 81.5°F.

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Potential Impacts and Mitigative Measures

Design of the proposed project will be typical for a tropical climate. The proposed project will have no effect on climatic conditions and no mitigative measures are necessary. Project landscaping will help mitigate any localized temperature increases from parking areas, roadways, and buildings.

4.1.3 Soils and Agricultural Impact

Seed production, particularly seed corn, is one of the top five diversified agricultural crops in the State. In 1997, nearly \$13 million in seed corn was sold, continuing an upward trend. According to the Department of Agriculture, Moloka'i has a substantial share of seed corn production and sales. The subject five-acre site is part of a larger area currently under cultivation for seed corn production by Hawaiian Research, Inc.

There have been three soil suitability studies prepared for Hawai'i whose principal focus has been to describe the physical attributes of land and the relative productivity of different land types for agricultural production. These are: 1) U.S. Department of Agriculture Soil Conservation Service (SCS) Soil Survey; 2) Land Study Bureau Detailed Land Classification; and 3) the Agricultural Lands of Importance to the State of Hawai'i (ALISH).

4.1.3.1 Soil Conservation Survey

The U.S.D.A. Soil Survey, *Islands of Kaua'i, O'ahu, Maui, Moloka'i and Lāna'i, State of Hawai'i* classifies the soils at the project site as Mala Silty Clay (MmA) with slopes of 0 to 3 percent, (Figure 11) which are described as follows:

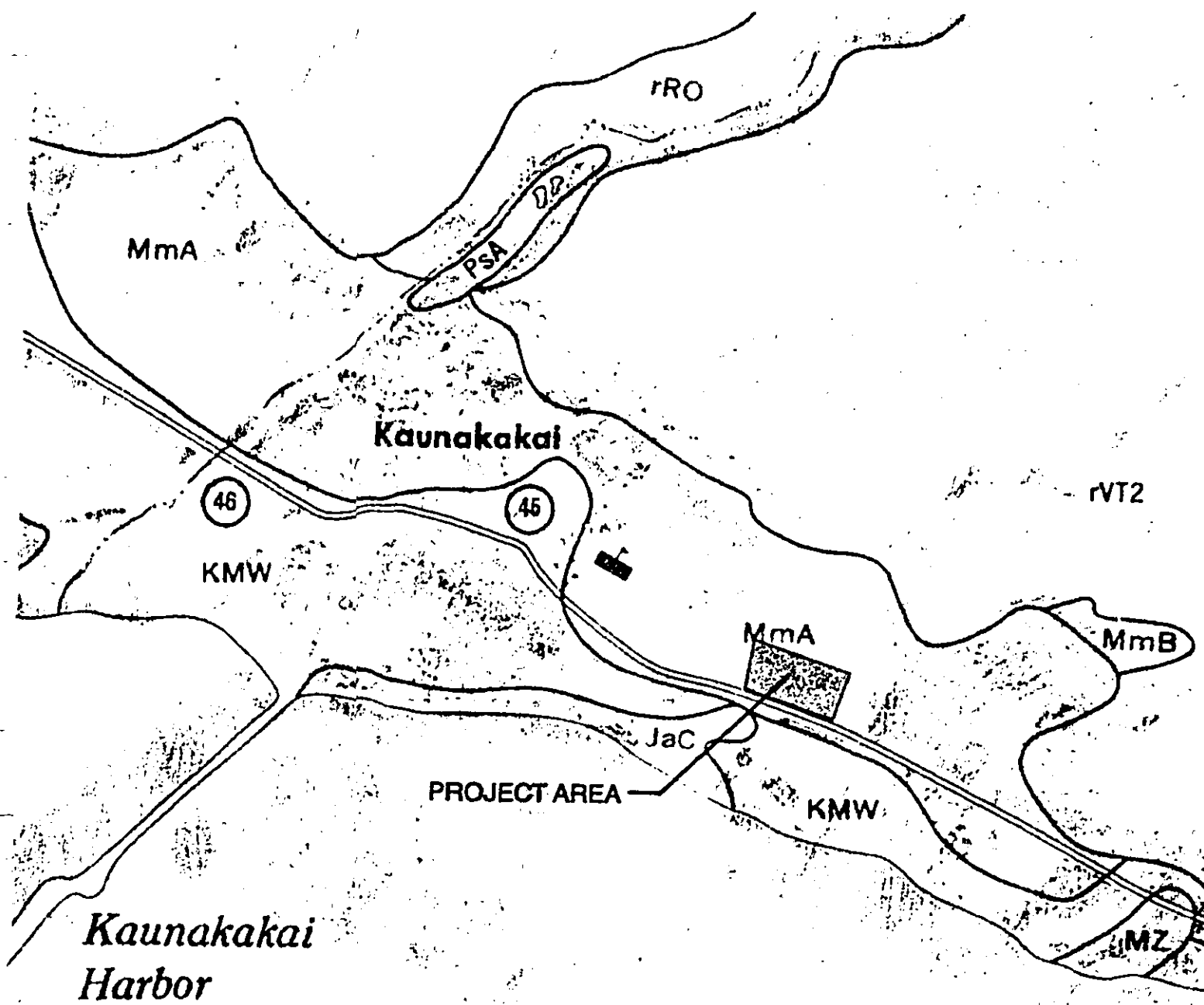
"Mala Silty Clay (MmA) – This soil is on fans along the coastal plains. In a representative profile, the surface layer, about 7 inches thick, is dark reddish-brown silty clay that has a platy structure. It is underlain by stratified layers of dark reddish-brown and very dark gray alluvium that is mostly silty clay. These layers are 47 to more than 59 inches thick. The soil is slightly acid to neutral in the surface layer and in the upper part of the subsoils and moderately alkaline in the lower part of the subsoil. Permeability is moderate. Runoff is slow, and the erosion hazard is no more than slight. The available water capacity is about 1.4 inches per foot of soil."

4.1.3.2 Detailed Land Classification

The University of Hawai'i's Land Study Bureau *Detailed Land Classification – Island of Moloka'i* has classified the project area according to overall productivity as Class A (A36i). Soils with "A" classification have "excellent suitability" for productive agriculture (Figure 12) due primarily to the level terrain, deep soils, and soil type.

4.1.3.3 Agricultural Lands of Importance to the State of Hawai'i

The State Department of Agriculture *Agricultural Lands of Importance to the State of Hawai'i* (ALISH) system of defining agricultural suitability, classifies the property as "Prime" agricultural lands (Figure 13).



LEGEND

- KMW Kealia silt loam
- JaC Jaucas sand, 0 to 12% slopes
- rRO Rock outcrop
- rVT2 Very stony land, eroded
- MmA Mala silty clay, 0 to 3% slope
- MmB Mala silty clay, 3 to 7% slope
- PsA Pulehu clay loam, 0 to 3% slopes

Source: US Department of Agriculture Soil Conservation Service/
The University of Hawai'i Agricultural Experiment Station

FIGURE 11
SCS SOIL SURVEY
Moloka'i Education Center



PIBR
April 1998

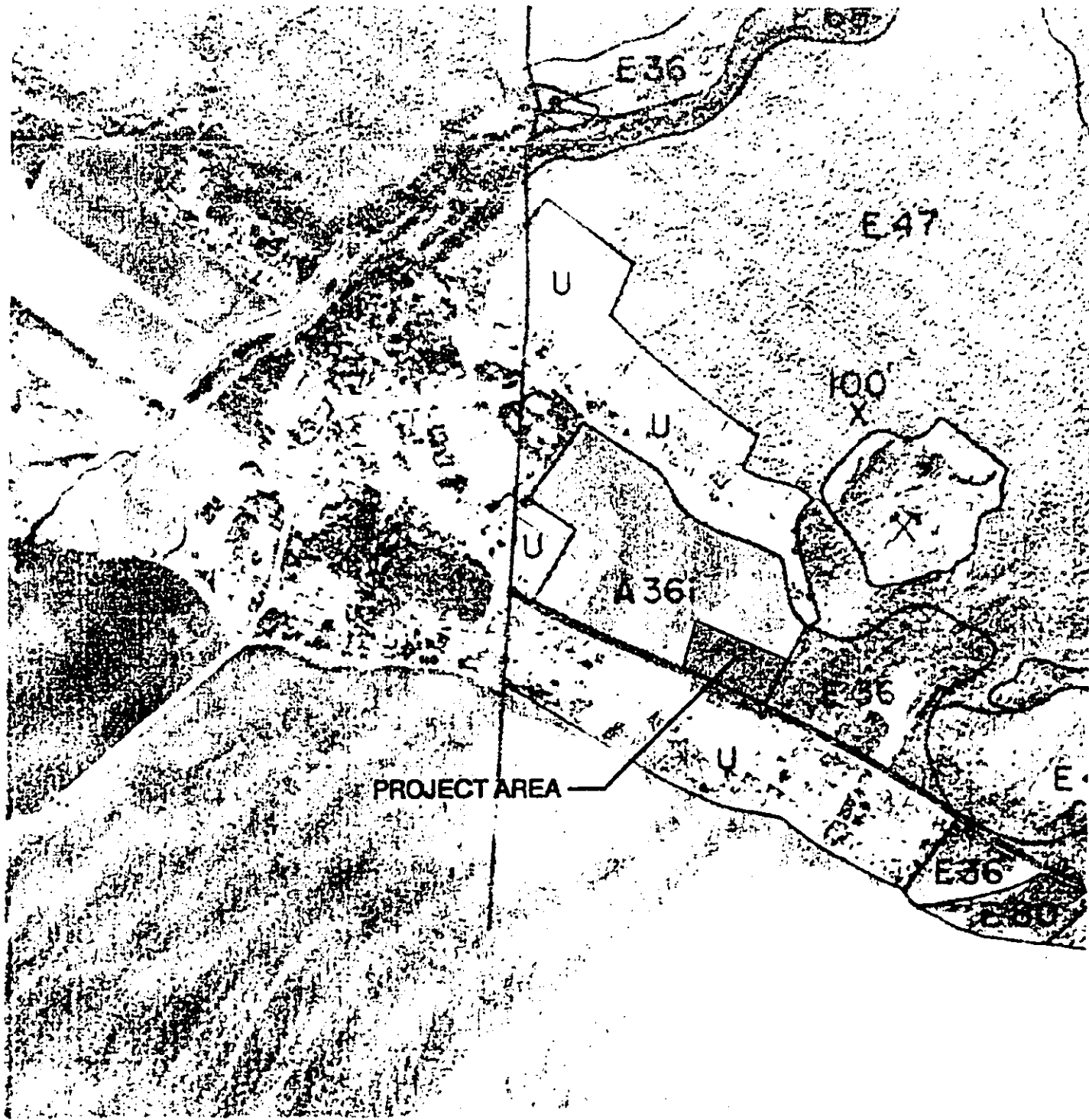
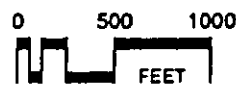
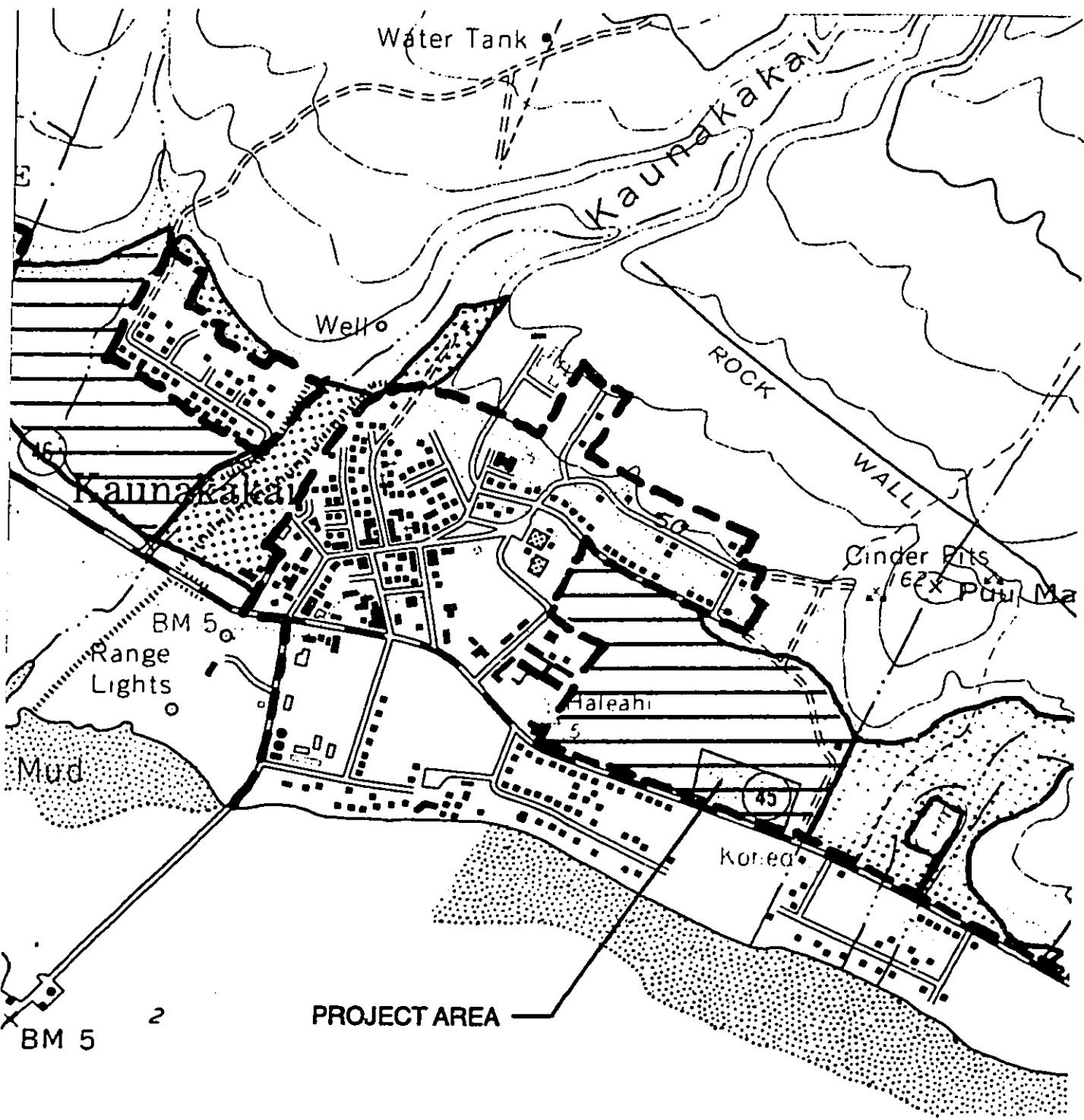





FIGURE 12
DETAILED LAND CLASSIFICATION
Moloka'i Education Center





LEGEND

-  Prime Agricultural Land
-  Other Important Agricultural Land
-  Existing Urban Development

Source: Department of Agriculture-State of Hawai'i, January 1977

FIGURE 13
AGRICULTURAL LANDS OF IMPORTANCE
TO THE STATE OF HAWAII (ALISH)

Moloka'i Education Center



April 1998

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Potential Impacts and Mitigative Measures

The subject property includes soils with characteristics that are well suited for supporting agricultural crops and which have historically been used for agricultural production. The proposed use will effectively remove these lands for future agricultural use; however, the potential use of the approximately five-acre site (Phase 1 and Future Phase) represents a relatively small portion (less than 0.07 percent) of the total "Prime" agricultural lands available on the island and, therefore, does not represent a significant loss of viable agricultural lands. Further, the proposed use of these lands as a site for an educational center will provide new opportunities to provide training in agricultural science, an important component to agricultural production that would otherwise not be available to the residents of Moloka'i. Therefore, the potential loss of a relatively small portion of agricultural lands should be weighed against the potential benefits to the public that would result from the new educational opportunities provided throughout the construction of the Moloka'i Education Center.

Moloka'i Ranch, Ltd. currently leases the subject property to Hawaiian Research, Ltd. for seed corn cultivation. The initial Phase 1 area would be removed from agricultural use. However, the loss of the agricultural use of the land by Hawaiian Research, Ltd. will be offset through other lands which Moloka'i Ranch, Ltd. is making available to the lessee.

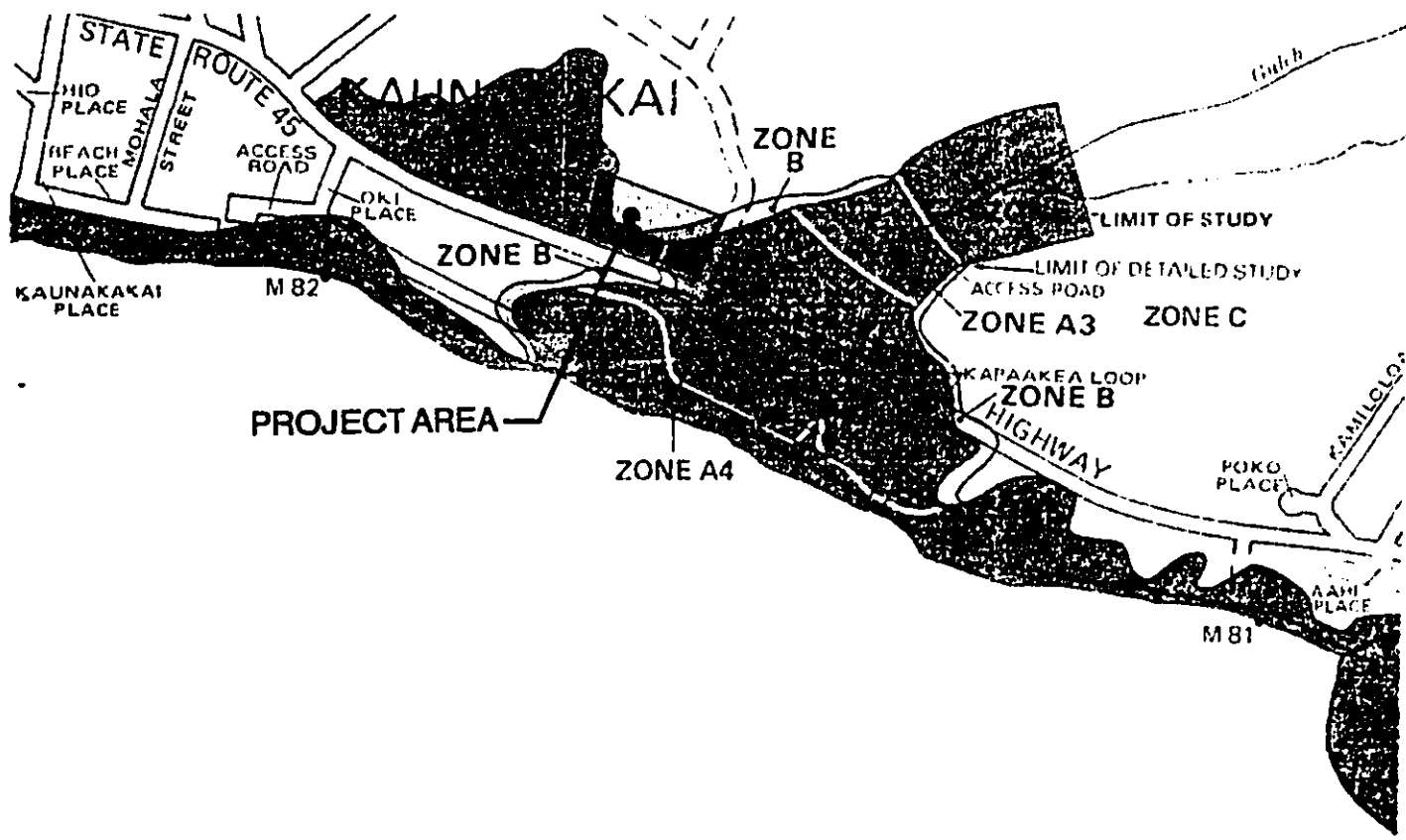
4.1.4 Hydrology and Drainage

A Preliminary Drainage and Soil Erosion Control Report (Appendix A) and a Preliminary Engineering Report (Appendix B) prepared by the project civil engineer, Warren S. Unemori Engineering, Inc. are attached to this environmental assessment report as appendices.

According to the drainage report, runoff from lands mauka of Kaunakakai Houselots, located northwest of the project site, is diverted into Kaunakakai Stream (off-site) by means of a diversion ditch that was installed by the Army Corps of Engineers. Runoff from the westerly half of the Kaunakakai residential area is being directed into an open channel south of Kaunakakai School. This channel continues in an easterly direction on the mauka side of Kamehameha V Highway to a 10 feet x 3 feet box culvert. According to the County's Drainage Master Plan for Kaunakakai, present runoff in this channel for a 100-year storm is 169 cubic feet per second (cfs). This box culvert, located south of the Moloka'i Education Center project site, takes the runoff across the highway towards the wetlands at Kapa'akea and subsequently into the ocean. The estimated capacity of this culvert is 225 cfs. However, the makai outlet channel between the box culvert and the wetlands is clogged and needs to be cleared.

The grass-lined drainage channel along the frontage of and on the mauka side of Kamehameha V Highway will be retained to facilitate the County's Drainage Master Plan for Kaunakakai.

According to the Flood Insurance Rate Map, portions of the site, primarily near Kamehameha V Highway, are situated within multiple flood zones (Figure 14). The lower (makai) portion closer to Kamehameha V Highway is in Zones AH and A. The upper (mauka or more inland) portions are in Zones B and C. The portions of the project site within Zone AH, Zone A, and Zone B will have habitable structures built above the designated flood elevation.

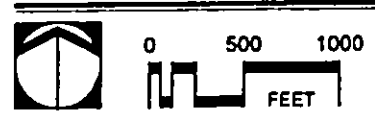


LEGEND

- AH** Areas of 100-year shallow flooding where depths are between one and three feet
- B** Areas between limits of the 100-year flood and 500-year flood
- A** Areas of 100-year flood
- A1-A30** Areas of 100-year flood; base flood elevations and flood hazard factors determined
- C** Areas of minimal flooding. (No shading)

Source: National Flood Insurance Program, FEMA, Sept. 1989

FIGURE 14
FLOOD INSURANCE RATE MAP
Moloka'i Education Center



June 1998

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The pre-development runoff from the project site is estimated to be around 2.4 cfs. The offsite surface volume is calculated to be approximately 4.2 cfs, for a total surface runoff of 6.6 cfs. The existing onsite and offsite runoff sheet flows through the project site in the direction on the existing 10 feet x 3 feet concrete box culvert located on the southerly boundary of the project site crossing Kamehameha V Highway. The inlet capacity has been calculated to be approximately 225 cfs. This 10 feet x 3 feet box culvert discharges to an existing wetlands area where it eventually sheet flows into the ocean.

Potential Impacts

According to the engineering reports, the offsite surface volume is expected to remain at 4.2 cfs. The anticipated post-development onsite and offsite surface runoff generated by the development of the project site is calculated to be approximately 5.0 cfs, for a total onsite and offsite surface runoff volume of 9.2 cfs. Accordingly, there will be a net increase of onsite surface runoff of approximately 2.6 cfs due to the built surfaces (e.g. paved areas and structures). This calculation is based on a 10-year recurrence interval – one hour duration storm.

Mitigative Measures

Curb inlets and grated inlet catch basins will be installed as part of the proposed improvements to intercept the additional onsite and surface runoff. A grassed swale will be installed on the easterly boundary of the project site to intercept the offsite surface runoff generated from the area located east of the project site.

The onsite and offsite surface volume will be intercepted by new catch basins and conveyed by a new underground drainage system which will be constructed as part of the proposed improvements to outlet into the existing 10 feet x 3 feet box culvert or to a new onsite subsurface detention system consisting of 36-inch diameter perforated drain pipes. The surface runoff that discharges into the box culvert will be conveyed to the existing makai area wetlands provided a drainage easement can be secured from the land owner.

Although the development of the project will increase the onsite surface runoff volume discharging into the box culvert, this culvert has been determined to have adequate capacity to carry the increased amount.

The proposed onsite subsurface detention system designed as a contingency plan until the clogged box culvert issue is resolved and a drainage easement is obtained will be designed to accommodate the additional runoff volume generated by the project. The existing pre-development surface runoff volume will be allowed to sheet flow to the box culvert as in the present condition. The additional surface runoff volume generated by the development of the project will be conveyed to an adequate drainage outlet, the project will not adversely affect the adjoining properties.

Soil erosion and sediment control measure would be take during the site development period and will include the following: 1) minimize time of construction; 2) retain existing ground cover until latest date to complete construction; 3) early construction of drainage control features; 4) use temporary area sprinklers in non-active construction areas when ground cover is removed; 5) station water truck on site during construction in active construction zones; 6) use temporary berms and cut-off ditches, where needed, for erosion control; 7) thoroughly water areas after construction

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activity has ceased for the day and on weekends; and 8) sod or plant all cut and fill slopes immediately after grading work has been completed.

Calculations for soil loss during construction indicated that the sedimentation hazard to coastal waters and downstream properties is minimal (Appendix A). The soil loss per unit area and severity rating computed for the project are well within the tolerable limits and additional control measures would not be required.

4.1.5 Natural Hazards

The Hawaiian Islands are associated with volcanic eruption or tectonic movement. Moloka'i is rated in Seismic Zone 2B in the Uniform Building Code and volcanic eruption is unlikely. All structures will be constructed for protection from earthquakes in accordance with the Uniform Building Codes adopted by the County.

The State of Hawai'i has been affected twice since 1982 by devastating hurricanes, 'Iwa in 1982 and 'Iniki in 1992. While it is difficult to predict these natural disasters, it is reasonable to assume that future occurrences are possible given the record of the last sixteen years. The project area is no more or less vulnerable to the destructive winds and torrential rains associated with hurricanes and cyclones than other areas of the island. Kilohana School at 'Ualapu'e is the designated Emergency Evacuation Center for this area of Moloka'i.

Potential Impacts and Mitigation Measures

The project will not exacerbate any hazard conditions. Planning and design for the project will implement the following measures to mitigate any potential damages.

The potential impact of destructive winds and torrential rainfall of tropical hurricane and cyclones on structures within the project will be mitigated by compliance with the Uniform Building Code adopted by the County. All structures will be designed in accordance with the requirements of the County. All structures will be designed in accordance with the requirements of the County for earthquake and wind.

4.1.6 Flora and Fauna

Botanical Resources

The project site represents a relatively small portion of agricultural land in production. Previously, the same area had been in pineapple cultivation for many decades. Vegetation on the site consists of cultivated corn and typical herbaceous exotic weeds and grasses growing along the edges of the areas of cultivation. The existing vegetation is composed exclusively of introduced or alien species. Patches of bufflegass (*Cenchrus ciliaris*) and hairy abutilon shrubs (*Abutilon grandifolium*) can be found, especially near the proposed access road and highway edge. A patch of kiawe trees (*Prosopis pallida*) is found fronting the southwestern edge of the property fronting the highway, and a line of vertical wiliwili (*Erythrina* sp.) provide a wind buffer along the fields.

No listed, proposed, or candidate threatened and endangered plant species (U.S. Fish and Wildlife Service 1992, 1996) occur on the study site, which is to be expected given the current and historical

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agricultural use of these lands. In addition, no conditions were observed that would suggest any wetland conditions on the site.

Wildlife Resources

The property supports the typical array of exotic birds that are expected at this locality and in this type of habitat on Moloka'i. These include Zebra or Barred Dove (*Geopelia striata*) and the larger Spotted or Mountain Dove (*Streptopelia chinensis*), House Finch or Papayabird (*Carpodacus mexicanus*), Common mynah (*Acridotheres tristis*), Japanese White-eye (*Zosterops japonicus*), Northern Cardinal (*Cardinalis cardinalis*), and Red-Crested Cardinal (*Paroaria coronata*). Only the Gray Francolin (*Francolinus pondicerianus*) and Black Francolin (*Francolinus francolinus*) preferred the open space grassland areas. Cattle Egret (*Bulbulcus ibis*) may also be seen in the area. It is likely that mammals such as the Small Indian Mongoose, feral dogs and cats, rats, and mice also inhabit the property.

Potential Impacts and Mitigative Measures

No particularly unique or special habitat features essential to native wildlife were discovered. The proposed use of the site for an educational center complex should not have a significant negative impact on the botanical or wildlife resources. The vegetation at the site is dominated by introduced species, such as exotic grasses and cultivated crops. Introduced or alien species include those plants brought to the islands by humans, intentionally or accidentally, after western contact, that is, Cook's discovery of the islands in 1778. In addition, the parcel has been extensively disturbed in the past. Overall, the environment will be changed from an agricultural to a more urban landscaped environment. Proposed plant materials will include native species such as kukui trees which may attract native birds to the site.

Given the findings above, there are no reasons to impose any restrictions, conditions, or impediments to the planned development. Some of the existing trees found on the property may be replaced as part of the landscape plan to retain views to the campus facilities. The landscaping of the campus will include a new grove of kukui trees (*Aleurites moluccana*) and coastal dryland native plantings including naupaka kahakai (*Scaevola sericea*), milo (*Thespesia populnea*), and wiliwili (*Erythrina sandwicensis*).

4.2 HUMAN ENVIRONMENT

4.2.1 Archaeological and Historic Resources

The project site consists of lands that have been subject to agricultural cultivation. No remnant features of archaeological sites were encountered on site and are not likely to be encountered given the long history of disturbance to these lands.

Potential Impacts and Mitigative Measures

Although a formal archaeological inventory survey of the site has not been undertaken, based on a determination of the State Historic Preservation Division (Appendix C), the proposed development is determined to have "no effect" on significant historical sites, given the current and former agricultural use of these lands. However, should remains of historic or human burial sites be

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encountered in the course of project construction, the applicant will stop work in the immediate area and seek consultation with the State Historic Preservation Division and, in the case of burial sites, the Moloka'i Burial Council.

4.2.2 Roadways and Traffic

The proposed project would have vehicular access from a new access road from Kamehameha V Highway. Existing traffic conditions and potential impacts of the Moloka'i Education Center project have been analyzed by Julian Ng, Inc. and are described in this section.

The project site is located within the town of Kaunakakai on the southern coast of Moloka'i. The project site is inland of and adjacent to Kamehameha V Highway, a two-lane State highway, which, together with Maunaloa Highway (west of Kaunakakai) form the main surface transportation artery for the island of Moloka'i. Kamehameha V Highway has a 22-foot wide travelway with 4-foot wide paved shoulders on both sides at the location of the Moloka'i Education Center. Kamehameha V Highway continues east of the site, narrowing to a single lane (12-foot wide paved travelway) without paved shoulders approximately ten miles east of Kaunakakai.

The *Moloka'i Long-Range Land Transportation Plan* by the Hawai'i State Department of Transportation (1997) recommended that Level of Service (LOS) "B" be used as the appropriate criteria for determining the adequacy of roadways on Moloka'i, based on the rural character and lifestyle of the island. The plan found that traffic congestion on Moloka'i is minimal, with the only unsatisfactory operating condition occurring at the intersection of Kamehameha V Highway, Maunaloa Highway, Ala Malama Avenue, and Kaunakakai Place during the afternoon (PM) peak hour of traffic. The rest of the island's highway system operates at acceptable Levels of Service, except during severe inclement weather, when the main highway is closed in several locations as storm water runoff flows over the highway at existing drainage fords.

The long-range land transportation plan included forecasts of future population and land uses on Moloka'i, to the year 2020. These forecasts were used to develop estimates of future peak hour traffic volumes; future highway deficiencies were identified and recommendations were made for mitigation measures. West of Kaunakakai, improvement of the existing two-lane highway to current highway standards was recommended. At the intersection of Kamehameha V Highway, Maunaloa Highway, Ala Malama Avenue, and Kaunakakai Place, the recommendation was to replace the existing stop-controlled intersection with a modern roundabout.

Potential Impacts and Mitigation Measures

Project related traffic will be generated by employees, students, and visitors to the Moloka'i Education Center. The Center is projected to have five full-time employees and 12 part-time lecturers. Operating hours of the Center, which has a current enrollment of 250 students and will ultimately have up to 350 students at project build-out, are expected to be similar to the existing hours (8:00 AM to 10:00 PM during weekdays and 8:30 AM to 3:30 PM on Saturdays). Figure 15 depicts the number of trips which would be generated as a result of the Phase I development of the project and the project's build-out in the Future Phase.

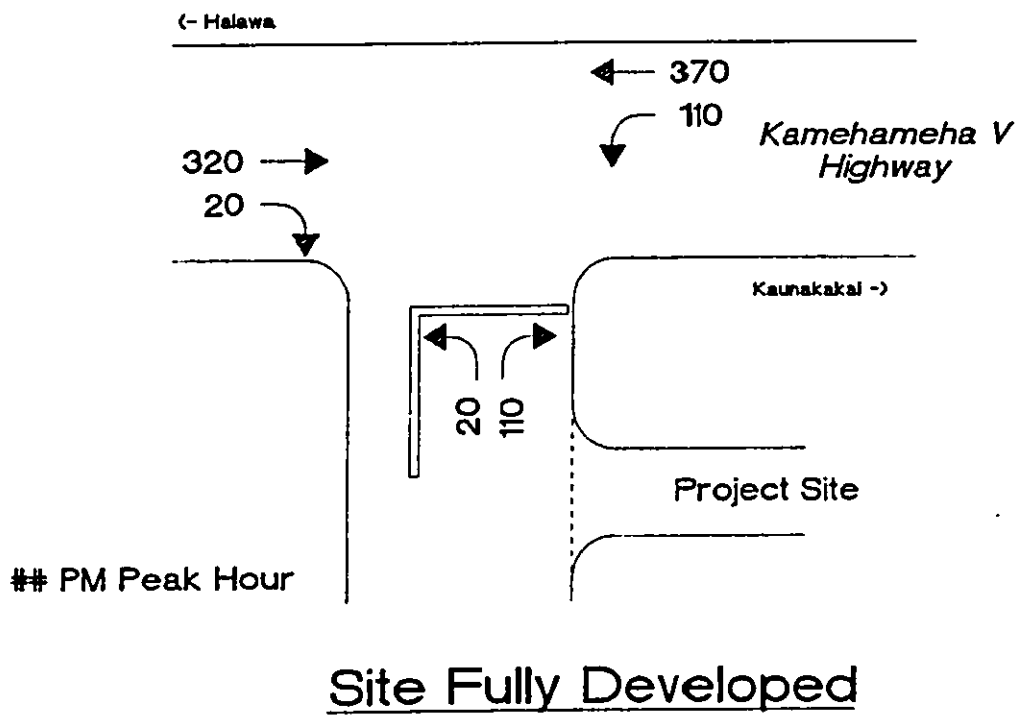
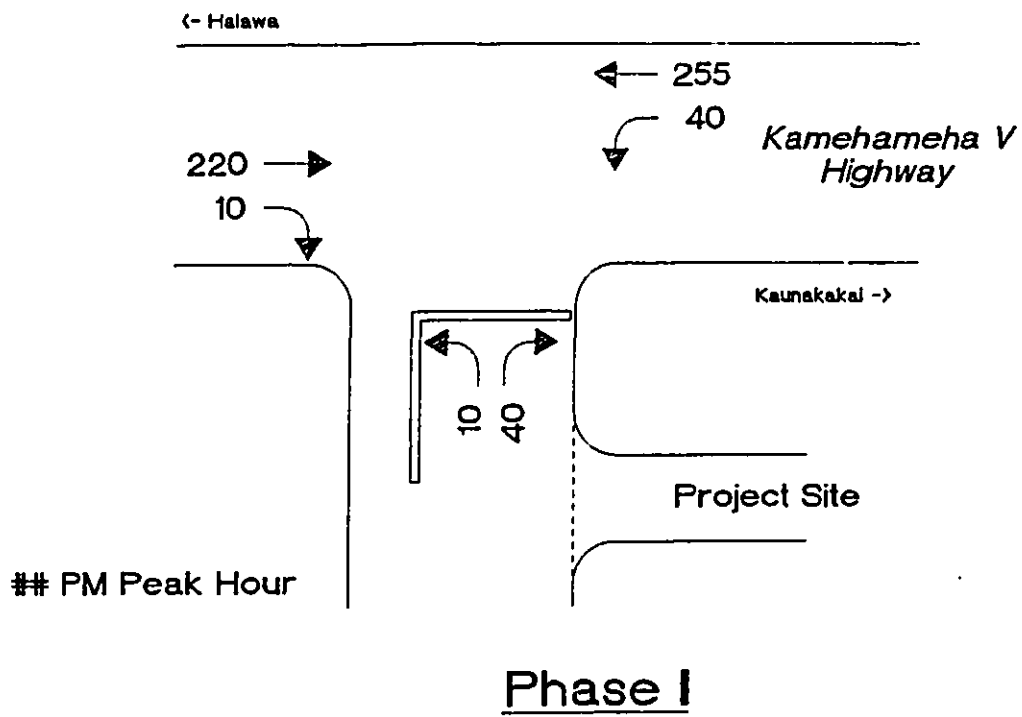


FIGURE 15
TRIP GENERATION
(PHASE 1 AND FUTURE PHASE)

Moloka'i Education Center



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Impacts of Phase 1: With completion of Phase 1 of the project, 27 classes that are currently held at the existing Moloka'i Education Center facilities in Kaunakakai would be relocated to the new site. In addition, two classes that are currently held at Kaunakakai Elementary School will be moved to the new site. Two other classes currently held at Kaunakakai Elementary School will remain there, and other classes currently held in Ho'olehua and at the Armory in Kaunakakai will remain at their current locations.

Since the new campus and the existing sites from which activities will be relocated are all along Kamehameha V Highway east of the intersection of Kamehameha V Highway, Maunaloa Highway, Ala Malama Avenue, and Kaunakakai Place, there would be no effect on traffic volumes at that intersection due to Phase 1 of the proposed project.

Classes are scheduled throughout the day and evening, with as many as 60 students attending classes at the new campus at any one time. Based on existing modes of travel to the existing facilities (automobiles, carpools, walking, and bicycling), the provision of 48 paved and grassed parking spaces in Phase 1 will be adequate.

Impacts of Full Development of the Site: The long-range master plan for Moloka'i Education Center includes additional classrooms and other buildings and an increase in the number of parking stalls to approximately 130, or an increase of about 170% over the number provided for Phase 1. As a worst-case situation, a future class schedule which would result in a complete turnover of all of the parking spaces during the peak hour of traffic on the highway was assumed. Traffic volumes at the intersection of the proposed access roadway with Kamehameha V Highway are shown on Figure 15 (non-project highway volumes were estimated by taking the average of the PM Peak Hour volumes on Kamehameha V Highway at Kamiloloa and at the east leg of the intersection of Kamehameha V Highway, Maunaloa Highway, Ala Malama Avenue, and Kaunakakai Place from the long-range plan).

An estimate of the traffic volume at the intersection upon completion of Phase 1 of the project is also shown on Figure 15. A comparison of the traffic volumes for the two cases indicates that the traffic due to full development of the site will be a small part of the increase in traffic that is already expected as a result of increased population and economic activity on Moloka'i.

Conditions at the Intersection of Kamehameha V Highway and the New Access Road Servicing the Site: Traffic generated by the project would be served from a new access road intersecting with Kamehameha V Highway. A stop sign controlling a single lane of traffic approaching from the new road has been assumed. The unsignalized intersection analysis procedure described in the *Highway Capacity Manual, Third Edition* was applied to the volumes shown in Figure 15. In both cases, Level of Service "A" would describe the left turn from the highway to the access road. For the stop-controlled traffic on the access road that must wait before entering the highway, the analysis showed Level of Service "A" conditions with Phase 1 and Level of Service "B" conditions with the Future Phase at full development.

The analyses done for the worst case situation in which the highway peak hour volumes were used along with an assumption of complete turnover of the site's parking showed acceptable conditions; at other times of the day, when traffic volumes would be less than the assumed worst case, Levels of Service would also be acceptable.

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4.2.3 Noise

The existing background ambient noise levels are generally less than the average noise levels associated with the proposed land uses. Existing noise results from the natural sounds of wind, foliage and birds, as well as intermittent aircraft and traffic. Surrounding uses include the adjacent Kaunakakai Regional Park and vacant or cultivated agricultural lands. The nearest residential neighborhoods are located makai of Kamehameha V Highway and mauka (to the northwest) of the project site approximately 300 feet away from the project site at its closest point.

Potential Impacts and Mitigative Measures

Potential noise impacts will be generated from short-term construction activity and long-term operation of the project. Additional ambient future noise levels will likely be generated from traffic on Kamehameha V Highway.

Construction noise is typical of development projects and do not warrant additional mitigation measures. Noise associated with the operation of the project will be mitigated through landscaping, building siting, and design, in accordance with the County of Maui and Department of Health requirements.

The effect of ambient noise levels on the sensitive telecommunications equipment housed in the Distance Learning and Technology Wing and other buildings will be mitigated by noise attenuation measures in the design of the buildings.

As noted above, a Theater is being considered as a component of future phases of development. Depending on the types and times of usage, this facility could potentially impact the noise quality in the area. However, without more specific information as to the project parameters including when, or if, this facility would be built, it is premature at this time to assess the potential noise impacts of this use.

4.2.4 Air Quality

Both Federal and State standards have been established to control ambient air quality. At present, six parameters are regulated including: 1) particulate matter; 2) sulphur dioxide; 3) nitrogen dioxide; 4) carbon monoxide; 5) ozone; and 6) lead. Hawai'i's standards are more stringent than comparable national limits except for sulphur dioxide. Regional and local climate, together with the type and amount of human activity, generally dictate the air quality at a given location. Present air quality is estimated to be good; this is primarily due to the predominant northeast trade winds.

Potential Impacts and Mitigative Measures

Construction of the proposed project will not significantly impact air quality. Vehicular emissions will increase from construction equipment during the short-term construction period and over the long-term from highway passenger vehicles. However, State and Federal air quality standards will not be exceeded and no significant adverse impacts are anticipated. Over the long term, increased vehicular traffic will not violate State or Federal air quality standards based on the moderate level of existing traffic volumes in the project region.

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Mitigation measures available to minimize air quality impacts include dust control measures, such as frequent watering during construction and rapid establishment of plant materials once grading is completed. Should dirt be tracked onto the highway, wash down will be undertaken to prevent fugitive dust formation.

4.2.5 Visual Resources

The project site is visible from the adjacent Kamehameha V Highway and is currently used for seed corn cultivation. A line of vertical wiliwili trees borders the project site. No structures are currently present on the site (Figure 16).

Potential Impacts and Mitigative Measures

The building setback area from the highway will be a landscape buffer of coastal dryland planting and will include low maintenance indigenous Hawaiian plants that are adapted to the dry coastal climate on this area of the island. Plantings would include *naupaka*, a native, smooth leaf shrub with clusters of white flowers; *pōhinahina*, a native creeping beach shrub; and *'ākia*, a native ground cover with small yellow flowers. The signature tree for the campus is the *kukui*, or candlenut tree, a native species with a medium to large canopy. *Kukui* will be planted as a grove along the mauka length of the project and will define the campus by its silvery green foliage.

The exposure of the built project from the highway will alter the present views. From distant views, the building will have a silhouette which is based on contemporary Hawaiian architecture on Moloka'i. Pitched roofs of varying heights will reduce the overall mass of the development. Much of the exterior building materials such as green metal roofing and siding with white window trim will blend this complex into the historical architectural vernacular of Kaunakakai. Close-up views and building interiors will be strongly inspired by the modern distance-learning technology housed within.

4.2.6 Social and Employment Characteristics

Population. According to the latest census information (1990), the population on the island of Moloka'i was approximately 6,587, which reflects a relatively small population base. In comparison, the census population in 1980 was 6,049, and in 1970 was 5,261 residents. A large percentage of the population is Hawaiian or part-Hawaiian, representing the largest concentration of this ethnic group on any island in the State. The population center is concentrated in Kaunakakai town. Only small pockets of residences are located in the former plantation towns of Kualapu'u and Maunaloa, with the rest scattered across the homestead lands of Ho'olehua and the remote east and west ends of the island.

Employment. The primary industries on Moloka'i include agriculture (e.g. ranching, seed corn, coffee, watermelon, and other diversified crops) and limited tourist-related activities. According to the State Department of Labor and Industrial Relations, the estimated average unemployment rate for November 1996 on Moloka'i was 16.5 percent. This is compared to 6.6 percent unemployment within Maui County and 5.8 percent in the State of Hawai'i during the same time period.

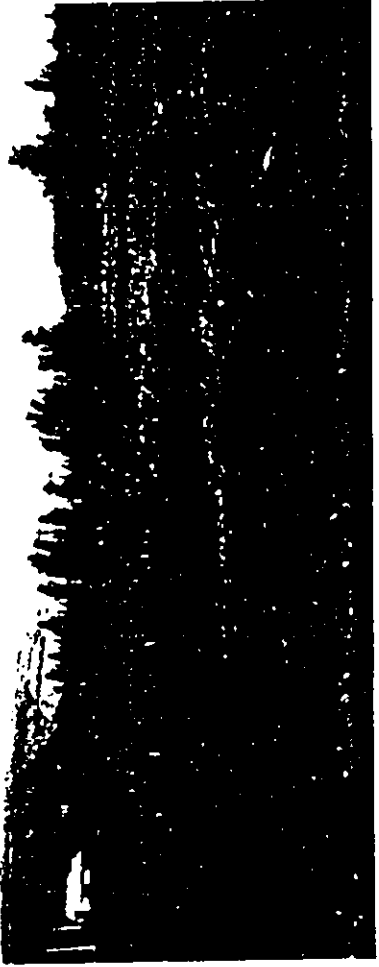


FIGURE 16
SITE PHOTOGRAPHS
Moloka'i Education Center



April 1998

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Potential Impacts and Mitigative Measures

Population. The proposed project contains no residential land uses. As such, the project will not directly impact the existing or future residential population of the area.

Employment. Presently, the project area is leased by Moloka'i Ranch to Hawaiian Research, Ltd. for seed corn cultivation. Although Phase 1 of the project will initially remove two acres from agricultural use, and in the Future Phase development an additional three acres would be removed, this impact is not expected to have a significant impact on existing agricultural operation or a decrease in employment. Moloka'i Ranch, Ltd. has other suitable sites for the operations taking place on the project site.

The proposed project will generate short-term direct and indirect employment during the construction period. After construction, long-term employment at the Education Center is expected to remain the same as under the present condition. Five full-time positions include a Director, Business Office Manager, two counselors, and a student helper. In addition, the Education Center employs 12 part-time lecturers. The long-term cumulative benefit which will result from the establishment of this facility for higher education is a population of residents who are better trained and more competitive to enter the workforce, thus resulting in increased economic gain to Moloka'i households.

4.2.7 Economic Factors/Government Revenues

The proposed project is not expected to affect the population of the region and will meet the increasing demand for educational services and facilities. Indirectly, the economic base of the region will be expanded, employment opportunities will be enhanced, and government revenues will be increased from income taxes paid by construction workers and Moloka'i Education Center employees.

Potential Impacts and Mitigative Measures

Socioeconomic. Significant social impacts are associated with the proposed project. Positive impacts from construction related employment and operation of the proposed educational improvements will result from the proposed project. The long-term operation of Moloka'i Education Center is also anticipated to increase overall efficiency in the delivery of educational services which will contribute towards an overall cumulative benefit which includes improvement in education, employment, and family life for Moloka'i residents.

Public Costs or Revenues. Completion of this project depends on the benevolent donation of the two-acre land parcel by Moloka'i Ranch, Ltd. at no cost to the University of Hawai'i. The land is currently valued at \$196,000. Funds for the planning, design, and construction of the Center will be from the State. Currently \$4.1 million has been allocated for the fiscal year 1998-1999 as part of the University of Hawai'i's capital improvements program budget for construction of the first phase of improvements.

Although there is a public commitment of funds for the construction of the project, the potential public benefits in the form of new job creation and a more highly skilled work force are expected to generate many times this amount in increased taxes on wages and expenditures, as well as a

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decrease in the need for County and State support to those participants who are able to find new employment opportunities as a result of the training provided through the Moloka'i Education Center.

Property Values. The Phase 1 project site consisting of two acres is valued at \$196,000 and is being donated to the University of Hawai'i by Moloka'i Ranch, Ltd. The property values of the surrounding agricultural and residential areas are not anticipated to increase or decrease as a result of the development of the campus.

Housing. Approval of the subject project will not increase or decrease the supply of new affordable housing on Moloka'i.

4.2.8 Character of the Community

In addition to the direct classroom and counseling opportunities, state-of-the-art communication facilities linking the Moloka'i Education Center to classrooms on Maui and O'ahu will greatly enhance the educational offerings available to students. The Moloka'i Education Center will bring a new focus to Kaunakakai by creating a centralized educational and training complex which will be designed in an architectural style with building clusters sensitively integrated with landscaped open spaces and courtyards to create a strong sense of place and identity.

4.2.9 Infrastructure

The Preliminary Engineering Report by Warren S. Unemori Engineering, Inc. is attached as Appendix B. Roads, water, sewer, drainage, electrical and communications improvements necessary for the project will connect to existing infrastructure. No significant off-site infrastructure improvements will be required.

4.2.9.1 Roadways

A description of the traffic related impacts and necessary roadway improvements have been discussed in Section 4.2.2. The analysis of the traffic data for the project indicated that no special roadway highway improvements would be warranted by the development of the project.

Potential Impacts and Mitigative Measures

A new access roadway from Kamehameha V Highway will be constructed as part of the project through the use of funds allocated by the University of Hawai'i. This access road will eventually be extended by others to serve off-site future residential developments to the north of the project. The access road is being designed to County standards and will be dedicated to the County.

4.2.9.2 Water Supply

Water for Kaunakakai is provided by a County well at Kualapu'u which is supplemented by a shallow, low capacity well in Kawela. Storage is provided by a 1.0 million gallon (MG) reinforced concrete reservoir located at the 232-foot elevation north and mauka of Kaunakakai. From this reservoir, a network of distribution lines supplies water to Kaunakakai, Kamiloloa, and areas east,

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as far as Kawela. A 12-inch line runs along the eastern side of the project site within the right-of-way of the proposed access road.

Potential Impacts and Mitigative Measures

The estimated average water demand for the Phase 1 improvements is approximately 6,000 gallons per day (gpd). Fire flow requirements for Phase 1 improvements are expected to range between 1,500 and 2,000 gallons per minute (gpm). Fire hydrants will be installed at appropriate locations on the access road off of the existing 12-inch line. If necessary, a fire line will be extended into the campus to provide adequate coverage for all structures.

4.2.9.3 Wastewater Treatment

The area in and around Kaunakakai is served and connects to the Kaunakakai Wastewater Reclamation Facility (WRF). Wastewater is collected by a gravity system and directed into a pump station located to the east of Kaunakakai Stream, where it is pumped into an oxidation pond for treatment. According to the Maui County Waste Management Division, the waste treatment facility has a capacity to handle 300,000 gallons of wastewater per day. The maximum flow recorded was 250,000 gpd, indicating there is a remaining capacity of 50,000 gpd, which is more than sufficient to meet the requirements of the Moloka'i Education Center at full development.

Potential Impacts and Mitigative Measures

The estimated wastewater flow from the Phase i development is 4,500 gpd. To accommodate the proposed project, a new gravity sewer line will be extended approximately 600 feet from a sewer manhole at Kamehameha V Highway, which will run approximately 37 feet mauka of the Kamehameha V Highway right-of-way. The Kaunakakai Wastewater Reclamation Facility has ample excess capacity to handle the wastewater generated by the project and no negative effects are anticipated as a result of this project.

4.2.9.4 Drainage Facilities

The existing conditions, potential impacts of the project, and mitigative measures related to drainage and hydrology of the project have been described in detail in Section 4.1.4.

4.2.9.5 Utilities

Kaunakakai is served by Moloka'i Electric Company. A new generating plant is located adjacent to the Nā'iwa Industrial Park near the western boundary of Kalama'ula. Electrical, telephone, and cable television services for the project are available from the overhead utility lines along Kamehameha V Highway. Based on the County's Country Town Business Guidelines for Kaunakakai and subdivision standard for residential projects on Moloka'i, overhead power and telephone transmission lines are acceptable in Kaunakakai.

Potential Impacts and Mitigative Measures

Schematic design plans include energy conservation measures such as thermal insulation to reduce heat from the sun and daylighting to reduce dependency on electrical lighting.

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4.2.9.6 Telecommunication System

The State of Hawai'i Department of Accounting and General Services (DAGS) Information and Communication Systems Division is in the process of developing a microwave station to connect Moloka'i to statewide communications systems. The completion of this microwave station will provide fiber-optic telecommunication connectivity to the Moloka'i Education Center for its educational programs.

4.2.10 Public Services and Facilities

Major public facilities on the island include the Ho'olehua Airport, Kaunakakai Harbor, Moloka'i General Hospital, and State and County governmental offices.

4.2.10.1 Fire and Police Protection

The project area is serviced by two fire stations and one substation on Moloka'i. The Kaunakakai Fire Station is located about one-half mile from the project site. The station is staffed by a five-man crew (i.e., four men and one captain), and the service is available 24 hours a day. The Ho'olehua Fire Station is located seven miles from the project site. Similarly, the station is staffed by a five-man crew and open 24 hours daily. The Pūko'o Substation is located 15 to 16 miles away from the project site and has a crew of two men.

Moloka'i is served by a single police station at Kaunakakai. Police Department staff includes a complement of 12 officers; however, only two officers are on duty at any given time to serve the entire island. Police services are available 24 hours daily. At the present, the County of Maui does not plan to increase police department staffing or facilities on Moloka'i.

Potential Impacts and Mitigative Measures

There will be an occasional and unavoidable demand for both fire and police protection services associated with the overall development; however, the net increase is expected to be small. The applicant will advise the fire department of project implementation and phasing to permit adequate planning and advance notice of project completion. Existing levels of fire protection services and facilities are considered adequate to service the proposed project.

As part of the proposed project, the water transmission system and lines with adequate fire flow capacity and fire hydrants will be installed within the property, improving the fire fighting capabilities in the area. Access for emergency vehicles into the project site will be established in the circulation plan for the overall project.

4.2.10.2 Health Care Services

Moloka'i General Hospital and other clinics in Kaunakakai serve the Island's health care needs. The Queen Emma Foundation and Nā Pu'uwai will be co-locating to the Kūlana 'Ōiwi multi-service center located west of Kaunakakai at Kalama'ula to provide integrated health services in coordination with Moloka'i General Hospital. In the future, if the need is warranted, Moloka'i General Hospital would operate a satellite facility at Kūlana 'Ōiwi. The proposed Education Center

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is not anticipated to have a significant impact on the demand for health care services at these facilities.

4.2.10.3 Schools

Moloka'i has four public elementary schools: Kaunakakai, Kilohana, Kualapu'u (at Ho'olehua), and Maunaloa. There is one secondary school: Moloka'i High and Intermediate at Ho'olehua. Private schools include Moloka'i Christian Academy (K-12) and Moloka'i Mission School (1-8).

The subject Moloka'i Education Center, a satellite program of the Maui Community College in the University of Hawai'i System, has been offering vocational and technical credit courses since the 1970's. While the program has been expanding due to a demand by Moloka'i residents, the lack of permanent facilities severely limits the growth of the program.

Potential Impacts and Mitigative Measures

The project itself will not impact public school enrollment in the area; however, the proposed new facilities for the Moloka'i Education Center will provide a valuable adjunct to the existing public and private educational facilities and services on the island by expanding the opportunities for residents to continue their education and training in a format that otherwise would not be available.

4.2.10.4 Recreational Facilities

Moloka'i is served by County parks and facilities including the Kaunakakai Regional Park adjacent to the proposed project, the Mitchell Pauole Center, Cooke Memorial Pool, Kilohana Community Center, and Maunaloa Recreational Gym.

Potential Impacts and Mitigative Measures

The proposed project will not impact public recreational facilities in the area. In its present condition, the property provides no public recreational opportunities. However, the potential Theater, which is being considered as part of a future phase of the campus development, will provide a venue for gatherings such as ceremonies, conferences, performances, etc. The impact could be a positive one; there would be no impact on the existing recreational facilities in the area.

Construction of the sewer line expansion to the project will require work on the existing 10-inch line located within the Kaunakakai Regional Park. There will be no impacts to recreational uses during construction.

4.2.10.5 Solid Waste Disposal

Vegetation removed from the property during the construction of the project will be chipped and disposed at a County approved landfill. Earth materials, such as sand, soil, and stone, will be recycled for use in the construction. Construction material debris will be recycled or disposed at a County approved landfill.

Solid waste generated during the operation of the project will be collected and disposed of by the County Department of Public Works Refuse Division.

5.0 *Alternatives to the Proposed Action*

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5.0 ALTERNATIVES TO THE PROPOSED ACTION

In compliance with the provisions of Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-17(f), *the "known feasible" alternatives to the proposed project are limited to those that would allow the objectives of the project to be met, while minimizing potential adverse environmental impacts.*

5.1 NO ACTION ALTERNATIVE

The no action alternative will not accomplish the desired goal of an educational service center to more efficiently and effectively serve the population of Moloka'i. Without the project, the ability of Maui Community College to serve the educational and training needs of the area would be greatly curtailed, thereby limiting the potential employment options and opportunities available to the island's workforce.

5.2 ALTERNATIVE SITES

In 1992, a Site Evaluation Study for the Moloka'i Education Center (DPD Associates, Inc. 1992) was prepared for the University of Hawai'i Board of Regents to evaluate candidate sites within the central Moloka'i area, between the airport, Kualapu'u and Kaunakakai. Ten candidate sites were selected, evaluated, and ranked.

The site evaluation process involved a series of interviews with affected agencies and officers of the current Moloka'i Education Center and surveys by Maui Community College (Moloka'i) on continuing student needs. The results of the survey indicated that 82 percent of the respondents prefer the permanent facility for the Education Center to be located in Kaunakakai with 49 percent of the respondents residing in Kaunakakai.

The basic criteria for the evaluation process included the following: 1) minimum size of three to five acres, 2) location in central Moloka'i, 3) be publicly owned or owned by a single entity. Sites which were eliminated were those with the following qualities: 1) remotely located from population centers, 2) located within a flood hazard zone, and 3) land fully developed or assigned for development.

The review of the criteria produced a total of ten major sites for consideration (with only one site publicly owned) (Figure 17):

- Site #1: Ho'olehua – a site adjacent to Moloka'i High School
- Site #2: Kualapu'u – a site adjacent to County land
- Site #3: Old Del Monte packing plant site at the intersection of Maunaioa Highway and Kalae Highway
- Site #4: Kaunakakai – General Hospital uphill site
- Site #5: Kaunakakai – General Hospital downhill site

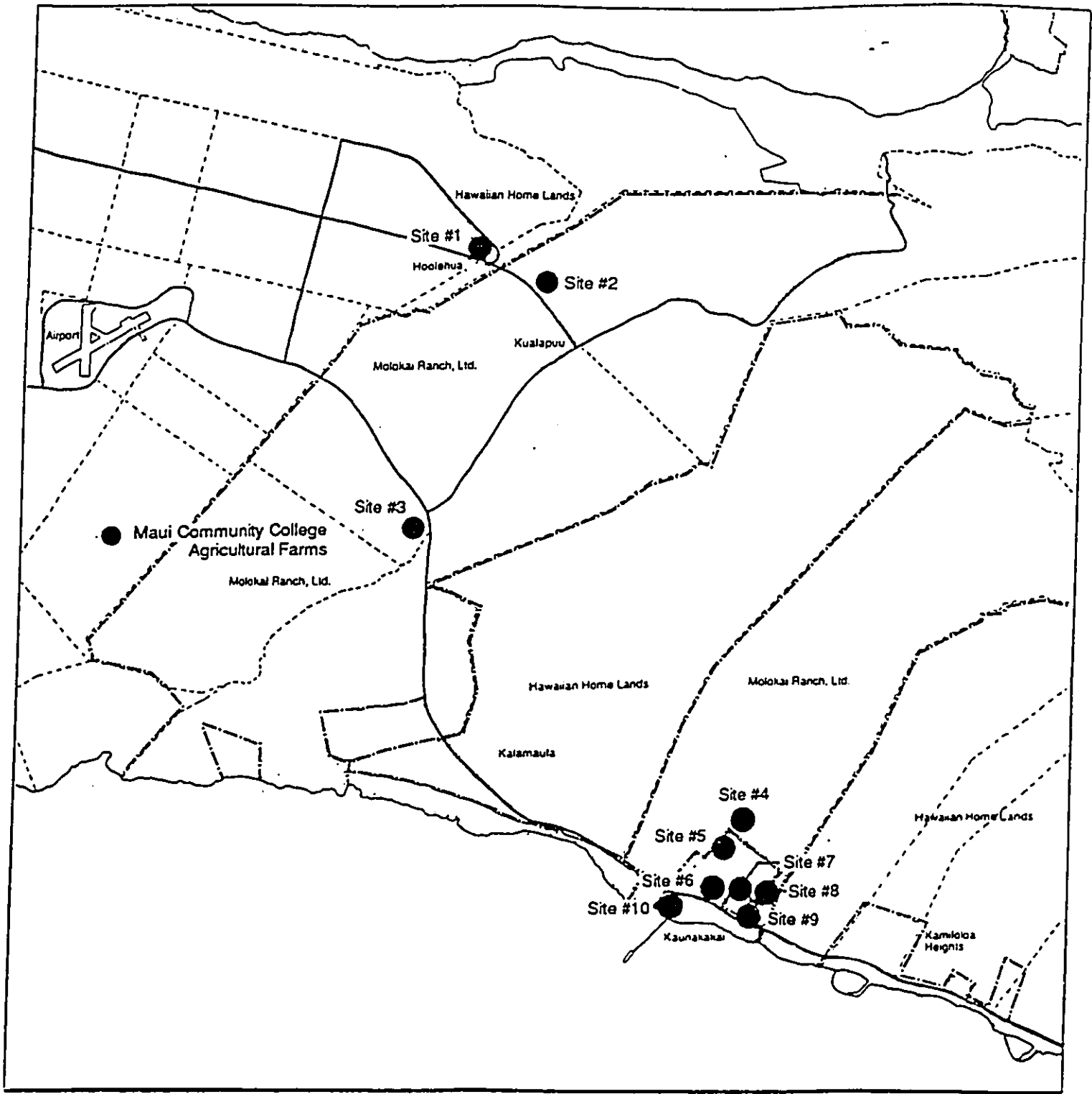


FIGURE 17
CANDIDATE SITES

Moloka'i Education Center



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- Site #6: Kaunakakai – Central baseball stadium site
- Site #7: Kaunakakai – Tennis court site adjacent to Mitchell Pauole Center
- Site #8: Kaunakakai – Site behind baseball field at east end of Kaunakakai town
- Site #9: Kaunakakai – Farmland site at east end of Kaunakakai town
- Site #10: Kaunakakai – Waterfront site on Kaunakakai Place

Each site was rated for its size and shape, expansion potential, physical conditions (e.g., topographic slope and relationship to microwave reception, flood hazard, soils), human factors (e.g., distance to the population center), land ownership, land use and zoning designations, and accessibility to infrastructure (e.g., water, electricity, sewer, and roadways).

Sites #4 and #9 received the highest scores and Sites #1 and #6 received the lowest scores. The final selection process by the Board of Regents involved public testimony at a Regent's meeting in August 1993 at Kaunakakai Elementary School Cafetorium. All testifiers who spoke to recommend a site endorsed the subject Site #9.

The selected Site #9 is the subject site now proposed by Maui Community College for the development of the Moloka'i Education Center and described in this Environmental Assessment.

6 . 0

*Determination, Findings
and Reasons for Supporting Determination*

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6.0 DETERMINATION, FINDINGS AND, REASONS FOR SUPPORTING DETERMINATION

To determine whether the proposed action may have a significant impact on the environment, every phase and expected consequences, both primary and secondary, and the cumulative as well as short- and long-term effects have been evaluated. Based on the studies performed and research evaluated, a finding of no significant impact is anticipated and is summarized in this section.

6.1 SIGNIFICANCE CRITERIA

According to the Department of Health rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences, both primary and secondary, its cumulative impact with other projects, and its short- and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

- **Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.**

The proposed Moloka'i Education Center project is designed with one-story buildings with pitched roofs and will not impact scenic views of the ocean or any ridge lines in the area. The visual character of the area will change from the current agricultural use to a developed academic campus. The design will be compatible with the surrounding homes adjacent to the proposed project. The plant and wildlife which occur on the property are comprised entirely of cultivated (e.g., seed corn) and exotic weed species and vertical wiliwili; wildlife on site are exotic species. No natural resources requiring protection occur on the site.

The property has been altered by agricultural uses in the past. As such, the State Historic Preservation Division has determined that the project should have "no effect" on historic resources. Should any archaeologically significant artifacts, bones, or other indicators of previous on-site activity be uncovered during the construction phases of development, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

- **Curtails the range of beneficial uses of the environment.**

The five-acre site for the development of the Moloka'i Education Center represents a small portion of a larger parcel (1,762 acres). The construction of this permanent academic campus will foreclose other uses, however, the proposed use of the project outweighs other uses. The provision of educational facilities at this location could be determined to be the highest and best use of the property since current Moloka'i residents and future generations will benefit from its development and operation.

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- **Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders.**

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS.

- **Substantially affects the economic or social welfare of the community or state.**

The new educational facilities will positively affect the educational, economic and social welfare of Moloka'i residents and ultimately the people of Hawai'i. Maui Community College, in serving the community with post-secondary education, has had to operate in sub-standard and inefficient borrowed and rented facilities which limit its ability to expand the program. Moloka'i residents in pursuit of college classes and degrees will substantially benefit from the new programs and classes which would become available through the state-of-the-art long distance telecommunication facilities.

- **Substantially affects public health.**

Impacts to public health may be affected by air, noise, and water quality impacts during the construction phase of the project, however, these will be short-term and insignificant or not detectable, especially when weighed against the positive economic, social, and quality of life implications associated with the project.

- **Involves substantial secondary impacts, such as population changes or effects on public facilities.**

The project will not have a direct impact on population; however, it will substantially benefit the surrounding and general community through the provision of educational services. The infrastructure demand (roads, water, sewer) are minimal and can be accommodated by the existing systems.

In addition, construction employment opportunities will generate direct and indirect revenue for individuals and the State of Hawai'i by providing short-term employment opportunities during the construction period. Indirect employment in a wide range of service related industries will also be created from construction during project development.

- **Involves a substantial degradation of environmental quality.**

The proposed development will utilize existing agricultural land and is not expected to degrade environmental quality on-site or in the surrounding neighborhood. Through the decades of agricultural cultivation on this property (formerly pineapple and currently seed corn) the property was previously modified and today lacks any significant natural and cultural resources. With development of the proposed project, diversity in plant communities is expected to improve through a program of landscaping which will utilize native trees and shrubs in greater abundance than what presently exists on the site. Appropriate best management practices (BMPs) will provide safeguards for protection of water quality during the short-term construction period.

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The architectural styles will complement background vistas and become a defining focal point in Kaunakakai.

- **Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions.**

The environmental resources on the project site are limited to introduced plant and animal species. Once completed, the landscape plantings will bring to the site native species of plants which may possibly attract native birds to the property. While the development of the project can be seen as a more intense (urban) use of the land in recent times, the overall project will bring a new balance and introduce cultural and natural resources to the site.

- **Substantially affects a rare, threatened or endangered species or its habitat.**

Biological assessments undertaken at the property indicate that no rare, threatened, or endangered species occur on the property.

- **Detrimentially affects air or water quality or ambient noise levels.**

Any possible impact resulting from surface runoff, will be mitigated by the establishment of on-site detention during the construction phases of development. After development, runoff would be conveyed into on-site catch basins and eventually connected to the existing drain system. Minimal impacts on air quality and noise are anticipated during construction, but will be limited by normal construction practices (i.e., mufflers, water wagon, construction during daylight hours only, etc.). Over the long-term, traffic noise during peak periods (due to the overall increase in area traffic) may increase, however, landscape plantings and building design will mitigate any increase in noise levels. BMPs will be implemented for water quality protection to the extent practicable.

- **Affects or is likely to suffer damage by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater, or coastal waters.**

Development of the property is compatible with the above criteria since there are no environmentally sensitive areas associated with the project and the physical character of the site has been previously disturbed by past activities. As such, the property no longer reflects a "natural environment". Shoreline, valley, or ridges will not be impacted by the development. Therefore, the effects of the project on the existing neighboring properties appear negligible.

- **Substantially affects scenic vistas and view planes identified in county or state plans or studies.**

The low-rise peak roof design of the campus buildings will not impede distant mountain views. The architectural style and the landscape improvements are intended to integrate the Center with Kaunakakai town and provide a defining sense of place.

MOLOKA'I EDUCATION CENTER
Final Environmental Assessment

- **Requires substantial energy consumption.**

Construction of the proposed project will not require substantial energy consumption relative to other similar projects. Once completed, the campus is expected to consume energy (i.e., electricity) similar to other developments; however, this increase represents a small net increase and will not result in any negative effect.

6.2 DETERMINATION

On the basis of the above criteria and the discussion of impacts and mitigative measures contained in this document, it is anticipated that the proposed project will not have a significant effect on the environment.

7.0 *Comments and Responses*

MOLOKA'I EDUCATION CENTER
Final Environmental Assessment

7.0 COMMENTS AND RESPONSES

The public comment period as required by Chapter 343, Hawai'i Revised Statutes, on the Draft EA resulted in the following responses from governmental agencies. The comments and the applicant's responses are included in this section.

7.1 COMMENTS RECEIVED ON THE DRAFT EA

County of Maui Agencies

Department of Parks and Recreation
Department of Planning
Department of Public Works and Waste Management
Department of Water Supply

State of Hawai'i Agencies

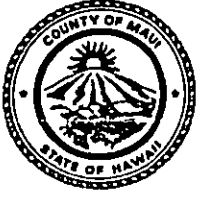
Department of Accounting and General Services
Department of Agriculture
Department of Business, Economic Development & Tourism
Department of Education
Department of Health, Office of Environmental Quality Control
Department of Land and Natural Resources – Land Division
Department of Land and Natural Resources – State Historic Preservation Division
Department of Transportation
University of Hawai'i

Federal Agencies

U.S. Department of Agriculture - Natural Resource Conservation Service
U.S. Army Engineer District (Corps of Engineers)

7.2 DRAFT EA COMMENT LETTERS AND THE APPLICANT'S RESPONSES

The following section includes letters responding to the Draft EA and the Applicant's responses.



DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

LINDA LINGLE
Mayor

HENRY OLIVA
Director

ALLEN SHISHIDO
Deputy Director

(808) 243-7230
FAX (808) 243-7934

PROVOST'S OFFICE

MAY 20 1998

Maui Community College

May 20, 1998

Dr. Clyde Sakamoto, Provost
Maui Community College
310 Ka'ahumanu Avenue
Kahului, Hawaii 96732

RE: Moloka'i Education Center

Dear Dr. Sakamoto:

Thank you for the opportunity to review and comment on the Moloka'i Education Center project. At this time we have no objection to the proposed action as described in the Draft Environmental Assessment prepared by PBR Hawaii, April 1998.

Should you have any questions or need of further comment, please call me or Patrick Matsui, Chief of Parks Planning & Development, at 808-243-7387.

Sincerely,

Henry Oliva
Director

HO:PTM:rh

c: Yukie Ohashi, PBR Hawaii



UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

The Honorable Henry Oliva, Director
County of Maui
Department of Parks and Recreation
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

Dear Mr. Oliva:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 20, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that you have no objection to the proposed action as described in the Draft EA.

Thank you for participating in the environmental review process.

Sincerely yours,

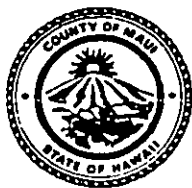
A handwritten signature in cursive script, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto

LINDA LINGLE
Mayor

DAVID W. BLANE
Director

LISA M. NUYEN
Deputy Director

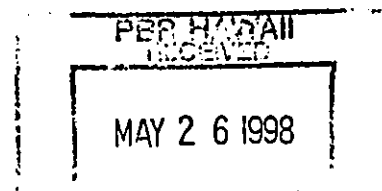


COUNTY OF MAUI
DEPARTMENT OF PLANNING

May 19, 1998

CLAYTON I. YOSHIDA
Planning Division

AARON H. SHINMOTO
Zoning Administration and
Enforcement Division



Ms. Yukie Ohashi
PBR Hawaii
1001 Bishop Street
Pacific Tower, Suite 650
Honolulu, Hawaii 96813

Dear Ms. Ohashi:

RE: Draft Environmental Assessment for the Molokai Education Center, Maui Community College and Molokai Ranch, TMK: 5-3-03:Portion of O1, Kaunakakai, Island of Molokai, County of Maui, Hawaii

Thank you for the opportunity to review the Molokai Education Center, Draft Environmental Assessment (EA). The Applicants intend to develop the five (5) acre site with a Maui Community College post-secondary satellite campus and Distance Learning Education Center with a design enrollment of 300 to 350 students. Phase 1 will be two (2) acres which will include a Main Building with three (3) wings to house the Administrative Offices, Distance Learning and Technology Center, Library/Learning Center, hardscape and landscaped lawns, parking, and a new access roadway. Total floor area for the Main Building is 10,820 square feet. A classroom building of 1,500 square feet is also included for future development in Phase 1.

Phase 2 will include three (3) classroom buildings, one of which is a vocational and technical building, a theater, and additional parking.

Parking for Phase 1 will include fifty-six (56) parking stalls including three (3) handicap-accessible stalls. Twenty-one (21) of the fifty-six (56) parking stalls and a grassed area will be located mauka of the project to accommodate overflow parking. The Final Environmental Assessment Report should clarify that a portion of the parking lot with the additional twenty-one (21) parking stalls and overflow-parking area will be temporarily used only until Phase 2 is developed as shown in Figure 4, *Long-Range Master Plan*. Total parking at build out is projected to be one hundred and twenty-eight (128) parking stalls.

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 96793
PLANNING DIVISION (808) 243-7735; ZONING DIVISION (808) 243-7253; FACSIMILE (808) 243-7634

Ms. Yukie Ohashi
May 19, 1998
Page 2

There is no information on the parking requirements and the traffic impact of the theater. The EA states on Page 33 that it is not known when or if the theater will be built and a meaningful assessment of traffic impacts from this use is not feasible at this time. The EA further states that when the theater is likely to be constructed and the programmatic uses are better defined, traffic conditions in the vicinity will be reevaluated. On this bases, the Maui Planning Department (Department) recommends that the site plan be changed to delete the footprint of the proposed theater; that the area be identified in parenthesis as "(future site of theater)"; and that an EA be completed at the time the theater is likely to be constructed and programmatic uses are better defined. As a side note, another basis for not including the theater is that generally the height of the structure may be higher than the normal thirty (30) feet. The water table in this area is high and underground construction may be too expensive. The visual effect of the height of this building should also be discussed in the EA.

Figure 7 on Page 15 only shows the elevations for the Administrative Wing/Distance Learning and Technology Wing. There are no elevation drawings for the four (4) classroom buildings in Phases 1 and 2 and should be included in the EA. Architectural details, to scale, are not necessary for the EA but should be included in the Special Use and Special Management Area (SMA) Permits.

The Department also notes that the parking lot shows only three (3) trees. Title 19 of the Maui County Code requires one (1) shade tree for every five (5) stalls, as well as other landscaping surrounding the parking area. Details of the type and location of the planting need not be included in the EA but should be addressed in the Special Use and SMA applications. However, conceptually, the landscaping should be shown fairly accurately on the site plan in conformance with the landscaping requirements of the off-street parking ordinance in Title 19.

The future Phase 2 components are located in the SMA and will include additional classroom buildings, a theater, and additional parking. The SMA line should be identified on the site plan and referenced in the text.

The Hydrology and Drainage information on Page 28 should be rechecked. The site appears to be in "multi-flood zone" districts. There is no A-1 zone in this area. In addition, there should be discussion on the relationship of the flood-zoning districts to the project site and building requirements. A clearer copy of the Flood Hazard Insurance Rate Map is enclosed for your information.

Ms. Yukie Ohashi
May 19, 1998
Page 3

Drainage improvements, as noted on Page 30 and 38, will be located along Kamehameha V Highway. Figures 4 and 5 on Pages 10 and 11 should be clarified to indicate that the hatched-marked area identified as "Dryland Planting" is also to be used as catch basins.

Roadways and traffic, as noted on Page 32, should have discussion on the traffic impact of the current enrollment of 250 students, 65% evening and 35% daytime, on the existing traffic. If 65% or 165 of the students attend evening classes, what time is the peak in the evening and does it conflict with work-hour traffic? What effect will it have on the intersection at Kamehameha V/Maunaloa Highway and Ala Malama Avenue/Kaunakakai Place? Will all of the 250 students be attending classes on site during this Phase 1 development and will there be some classes continuing off campus? When will the future Phase 1 multipurpose-classroom building be built? How many more students and how much more traffic will this 1,500 square foot classroom building have and what would be the effect on traffic at the intersection?

Should you have any questions, please contact Ms. Julie Higa, Staff Planner, of this office at 243-7814.

Very truly yours,

Lisa M. Nunez

for DAVID W. BLANE
Director of Planning

DWB:JMH:osy
Enclosures

c: Clayton Yoshida, AICP, Planning Program Administrator
Aaron Shinmoto, PE, Planning Program Administrator
Gwen Ohashi Hiraga, Munekiyo, Arakawa & Hiraga, Inc.
Julie Higa, Staff Planner
Project File
General File
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UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

The Honorable Lisa M. Nuyen, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawaii 96793

Dear Ms. Nuyen:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 19, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments:

1. **Clarification on parking.** We have clarified in the Final EA the allocation of parking in Phase 1. Phase 1 parking will include 48 parking stalls which includes two handicap-accessible stalls. Thirty-six of the stalls will be paved and 12 will be grassed. In addition, overflow parking will be accommodated on the grassed areas to provide parking for as many as 68 cars. The portion of the parking lot with the additional 12 grassed parking stalls and the grassed overflow parking area will be temporarily used for Phase 1 until the Future Phase (as shown on the Long-Range Master Plan in Figure 4) is developed.
2. **Future theater.** Since the theater is highly conceptual at this time, we have taken your recommendation and revised the Long-Range Master Plan to show a "Future Theater Site" and have removed the footprint of the structure. In the future, if the need for a theater is warranted at this campus, a separate environmental document and appropriate studies would be prepared and reviewed with all affected parties at that time.

Ms. Lisa M. Nuyen
Molokai Education Center
June 10, 1998
Page 2

3. **Building elevations.** The Phase 1 components of the project include the Main Building with the various wings (e.g. Administration, Distance Learning and Technology Center, Library/Learning Center, and Classrooms) on the two-acre parcel. Figure 7 showing the building elevation has been revised in the Final EA.

The construction of the stand-alone Classroom Building located adjacent to the Main Building on the two-acre parcel (as shown on the Long-Range Master Plan) is now planned for the Future Phase. Detailed drawings for the Future Phase structures will be prepared for review by all affected agencies at that time.

4. **Parking lot landscaping.** The Phase 1 Site plan and the Long-Range Master Plan have been revised to show additional trees in accordance with Chapter 19.36.
5. **SMA Line.** The SMA line has been labeled on the Long-Range Master Plan (Figure 4) and the Phase 1 Site Plan (Figure 5) and referenced in the text.
6. **Hydrology and Drainage.** Clarification on the flood zones affecting the project site have been made in the Final EA and the appended revised Drainage Report.
7. **Drainage Improvements.** As recommended, Figures 4 and 5 have been revised to identify the dryland planting area as catch basins.
8. **Roadways and Traffic.** The traffic impact of the Education Center at the location of the proposed new access street at Kamehameha V Highway was studied by a traffic consultant and is included in the Final EA, Section 4.2.2.

Operating hours of the Center, which will ultimately have up to 350 students, are expected to be similar to the existing hours (8:00 AM to 10:00 PM during weekdays and 8:30 AM to 3:30 PM on Saturdays). With completion of Phase 1 of the project, 27 classes that are currently held at the existing Molokai Education Center facilities in Kaunakakai would be relocated to our new campus. In addition, two classes that are currently held at Kaunakakai Elementary School will be moved to the new campus. Two other classes currently held at Kaunakakai Elementary School will remain there, and other classes currently held in Hoolehua and at the armory in Kaunakakai will remain at their current locations.

Ms. Lisa M. Nuyen
Molokai Education Center
June 10, 1998
Page 3

Since the new campus and the existing sites from which activities will be relocated are all along Kamehameha V Highway east of Kamehameha V Highway, Maunaloa Highway, Ala Malama Avenue, and Kaunakakai Place, there would be no effect on traffic volumes at the new access intersection due to Phase 1 of the project.

The 1,500-square foot multi-purpose classroom building which was designated as a Phase 1 component in the Draft EA is now designated as a Future Phase component. Therefore, the construction of this classroom building will be subject to an expressed need for program expansion and the availability of funding. However, based on the traffic assessment, which utilized the State Department of Transportation's projections in the *Molokai Long-Range Land Transportation Plan* which included forecasts of future population and land uses on the island to the year 2020, the development of this classroom should be accommodated at the new access street and Kamehameha V Highway without significantly affecting traffic flow.

Thank you for your review of the Draft EA.

Sincerely yours,

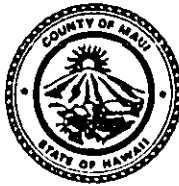


Clyde M. Sakamoto

LINDA LINGLE
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director



Telephone: (808) 243-7845
Fax: (808) 243-7955

COUNTY OF MAUI
**DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT**
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

EASSIE MILLER, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

June 2, 1998

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawaii
310 Kaahumanu Avenue
Kahului, Hawaii 96732

PROVOST'S OFFICE

JUN 05 1998

Maui Community College

Dear Dr. Sakamoto:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
MOLOKAI EDUCATION CENTER
TMK (2) 5-3-003:001**

We reviewed the subject application and have the following comments:

1. The developer should be informed that the Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for the project.
2. Wastewater contribution calculations are required before a building permit is issued.
3. The developer will be required to fund any necessary off-site improvements to the collection system and wastewater pump stations.
4. The project area shall be subdivided from the remaining portion of the parcel. The subdivision shall comply with the provisions of Title 18, Maui County Code, "Subdivisions."
5. A detailed final drainage report and an erosion control Best Management Practices (BMP) plan shall be submitted with the construction plans for review and approval prior to issuance of grading or building 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 for Design of Storm

Dr. Clyde Sakamoto
June 2, 1998
Page 2

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.

6. Off-street parking, loading spaces, and landscaping shall be provided per Maui County Code Chapter 19.36.
7. The existing culvert crossing under Kamehameha V Highway at the proposed project site has not conveyed runoff adequately. This may be due to clogged lines or obstacles on the downstream property.

As a result, flooding has occurred as recently as the winter of 1997 forcing partial closure of the road.

A backup in this culvert also affects the County's drainage line located west of the project site.

If you have any questions, please call David Goode at 243-7845.

Sincerely,



for CHARLES JENCKS
Director of Public Works
and Waste Management

DG:co/mt

cc: Office of Environmental Quality Control

PBR Hawaii

S:\LUCA\CZM\EDUCCTR.

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

The Honorable Charles Jencks, Director
County of Maui
Department of Public Works and Waste Management
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

Dear Mr. Jencks:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated June 2, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments.

- 1, 2, 3. **Wastewater issues.** During the Phase 1 design phase, the Project Civil Engineer will prepare wastewater calculations for your review and approval and will work closely with your staff.

The project budget includes the necessary funds for the off-site improvements to the collection system.

4. **Subdivision of the Phase 1 project area.** An application for subdivision has been submitted. It is anticipated that it will be approved in August 1998. The subdivision will be accordance with the provisions of Title 18, Maui County Code.
5. **Drainage Report and Best Management Practices (BMP) plan.** A detailed final drainage report and erosion control BMP plan will be submitted with the construction plans for review and approval. The drainage report will include

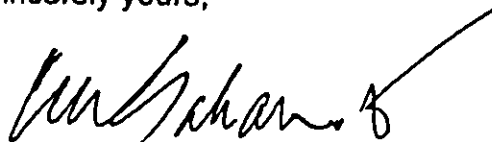
Mr. Charles Jencks
Molokai Education Center
June 10, 1998
Page 2

hydrologic and hydraulic calculations and the schemes for disposal of runoff waters in compliance with the provisions of the "Rules for Design of Storm Drainage Facilities in the county of Maui". The report will verify that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. BMP measures for erosion control and their locations will be specified.

6. **Off-street parking, loading spaces, and landscaping.** The Phase 1 component of the project (as shown on the Phase 1 Site Plan), which is to be developed upon the receipt of all necessary approvals, provides the required parking, loading spaces and landscaping in accordance with Chapter 19.36 of the Maui County Code.
7. **Culvert crossing at Kamehameha V Highway.** We are aware that the existing culvert under Kamehameha V Highway may be clogged on the downstream property and that recent flooding forcing road closure may, in part, be attributable to this existing condition. We will work with your staff and, as necessary, the makai landowner to resolve the problem.

Thank you for participating in the environmental review process.

Sincerely yours,



Clyde M. Sakamoto



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1108
WAILUKU, MAUI, HAWAII 96793-7109
Telephone (808) 243-7816 • Fax (808) 243-7833

June 5, 1998

Ms. Lisa M. Nuyen, Director
County of Maui
Planning Department
250 South High Street
Wailuku, Maui, Hawaii 96793

Re: ID: SUP98-0010
TMK: 5-3-03:Por 01
Project Name: Molokai Education Center

Dear Ms. Nuyen,

Thank you for the opportunity to comment on this application. We provide the following information:

Please be aware that fire flow and domestic & irrigation calculations will be required during the building permit process. The actual fire flow demand for structures is determined by fire flow calculations performed by a certified engineer. The approved fire flow calculation methods for the applicant's use include "Fire Flow" - Hawaii Insurance Bureau, 1991; and "Guide for Determination of Required Fire Flow" - Insurance Service Office, 1974.

Also, a master plan of the property will be required so that we may better evaluate the projects peak demand use. The applicants are encouraged to contact our engineering division (243-7835) with respect to the fire protection, irrigation and domestic use requirements.

In order to protect Molokai's groundwater and surface water resources, DWS recommends that the applicant utilize Best Management Practices (BMP's) designed to minimize infiltration and runoff from all construction and vehicle operations. We have attached sample BMP's for principle operations and a list of references for the applicants use. Additional information is available from the State Department of Health.

Additionally, wherever appropriate, the application should always consider conservation measures in and around the property. Some conservation measures are listed below for your use including:
Eliminate Single-Pass Cooling: Single-pass, water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. These units pass water once-through for cooling, and then

Lisa M. Nuyen, Director
Molokai Education Center
June 5, 1998
Page 2

dispose of the water into the drain. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20.675 requires the use of low flow water fixtures and devices in faucets, showerheads, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available, and can help cut back on water bills.

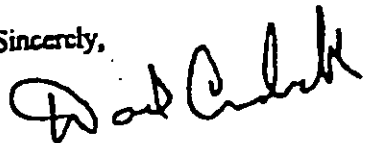
Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 3. Please refer to the "Maui County Planting Plan" for Molokai, and to the attached documents, "XERISCAPE: Water Conservation Through Creative Landscaping" and "Some of Maui's Native and Polynesian Plants." We encourage the applicants to review the attached documents, refer to the Planting Plan, and consider using climate-adapted and salt-tolerant native plants. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

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 evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

Should you have any further comments, please contact our Water Resources & Planning Division at 243-7199.

Sincerely,



David R. Craddick
Director
RS

cc: applicant w/attachments :

- 1) The Costly Drip"
- 2) Some of Maui's Native and Polynesian Plants"
- 3) Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
- 4) XERISCAPE - Water Conservation through Creative Landscaping"
- 5) A Checklist for Water Conservation Ideas for Cooling"
- 6) "Hawaiian Alien Plant Studies - Pest Plants of Native Hawaiian Ecosystems"
- 7) "A Checklist for Water Conservation Ideas for Schools and Public Buildings" Seattle, Washington
- 8) Selected BMP's from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts
- 9) References for Further Reading from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

The Honorable David R. Craddick, Director
County of Maui
Department of Water Supply
PO Box 1109
Wailuku, Hawaii 96793-7109

Dear Mr. Craddick:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated June 5, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments.

1. **Calculations for water requirement.** During the design phase of the project, the Project Civil Engineer will prepare water calculations for fire flow and domestic and irrigation requirements for your review and approval. The methods for calculation will follow: 1) Fire Flow (Hawaii Insurance Bureau 1991), and 2) Guide for Determination of Required Fire Flow (Insurance Service Office 1974).

In addition, a water master plan will be prepared to identify the Education Center's peak demand use. We will coordinate our water needs with your engineering division.

2. **Ground water and surface water protection.** Best management practices (BMPs) as recommended by the State Department of Health will be implemented to minimize infiltration and runoff from all construction and vehicle operations.

Mr. David Craddick
Molokai Education Center
June 10, 1998
Page 2

3. **Conservation measures.**

Cooling system: The installation of a cooling system will be in accordance with the Maui County Code Subsection 14.21.20 and will not utilize a single-pass, water-cooled system.

Low-flow fixtures and devices: Use of low-flow water fixtures and devices in faucets, showerheads, water closets and hose bibs will be specified pursuant to Maui County Code Subsection 16.20.675.

Maintenance of fixtures to prevent leaks: A regular maintenance program of the water system will be implemented in the operations of the Center to prevent leaks.

Use of climate-adapted plants: Lawn grasses and plantings will be specified for the dry coastal climate of southern Molokai including salt-tolerant plantings.

Irrigation system: An automated irrigation controlled system with rain-sensors on controllers is planned.

Thank you for participating in the environmental review process.

Sincerely yours,



Clyde M. Sakamoto



BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810

PROVOST'S OFFICE

MAY 21 1998

Maui Community College

LETTER NO. (P) 1297.8

MAY 21 1998

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawaii
310 Kaahumanu Avenue
Kahului, Hawaii 96732

Dear Dr. Sakamoto:

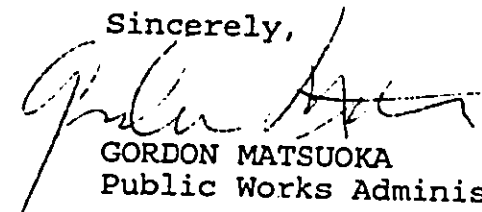
Subject: Draft Environmental Assessment
Molokai Education Center
Tax Map Key (2) 5-3-03:01 (por.)
Molokai

Thank you for the opportunity to review the subject Draft Environmental Assessment (DEA) which we received with PBR Hawaii's undated letter on May 4, 1998.

The DEA does not impact any Department of Accounting and General Services planned projects or existing facilities. Thus, we have no comments to offer.

If there are any questions, please have your staff contact Mr. Ronald Ching of the Planning Branch at 586-0490.

Sincerely,


GORDON MATSUOKA
Public Works Administrator

RC:jy
c: OEQC
Ms. Yukie Ohashi, PBR Hawaii



UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

Mr. Gordon Matsuoka, Public Works Administrator
State of Hawaii
Department of Accounting and General Services
PO Box 119
Honolulu, Hawaii 96810

Dear Mr. Matsuoka:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 21, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that since the project does not impact any Department of Accounting and General Services planned projects or existing facilities, your agency has no comments to offer on the Draft EA.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto", written in a cursive style.

Clyde M. Sakamoto

BENJAMIN J. CAYETANO
Governor



JAMES J. NAKATANI
Chairperson, Board of Agriculture

LETITIA N. UYEHARA
Deputy to the Chairperson

PROVOST'S OFFICE

MAY 28 1998

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512

Mailing Address:
P.O. Box 22159
Honolulu, Hawaii 96823-2159

Fax: (808) 973-9613

Maui Community College

May 22, 1998

To: Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawaii
310 Kaahumanu Avenue
Kahului, Hawaii 96732

From: James J. Nakatani Chairperson
Board of Agriculture

Subject: Draft Environmental Assessment
Molokai Education Center
Maui Community College
TMK: 5-3-03: por. 1 Kaunakakai, Molokai
Area: approximately 5 acres

The Department of Agriculture has reviewed the subject document and offers the following comments.

Background:

The applicant is proposing to develop a post-secondary satellite campus and distance learning education center in two phases. The first phase will begin in fall 1998 and will occupy two acres. The project site is in the State Agricultural District, has a Public/Quasi-Public designation in the Molokai Community Plan, and is zoned "interim." The five-acre area is planted in seed corn by Hawaiian Research, Inc. and is in the midst of 18 acres of seed corn fields in the area.

Comments:

Seed production, particularly seed corn, is one of the top five diversified agricultural crops in the State. In 1997, nearly \$13 million in seed corn was sold, continuing a dramatic upward trend. We believe Molokai has a substantial share of seed corn production and sales (seed corn statistics by island are not published in the State's agricultural statistics book to avoid disclosure of individual operations).



Dr. Clyde Sakamoto
May 21, 1998
Page -2-

Given the importance of the seed corn industry on Molokai, the site selection process done in 1992 for the proposed facility should have included as a criterion, the "avoidance of using lands currently in agricultural production."

We understand that the affected seed corn operation has been doing it's best to be a good neighbor to adjacent residential and public facility uses. Nevertheless, non-agricultural uses adjacent to the seed corn operation should be reminded that Chapter 165, Hawaii Revised Statutes, limits the circumstances under which normal farming activities may be considered a nuisance.

Finally, the issue of accommodating displaced agricultural uses should be further developed and include a discussion of the availability and location of other agricultural lands of equivalent quality for seed corn cultivation owned by Molokai Ranch, Ltd.

Should you have any further questions, please call Earl Yamamoto at 973-9466.

c: Hawaiian Research, Inc. (attn. Mr. Peter Eichhorn, fax: 553-5436)
OEQC
PBR Hawaii (attn. Ms. Yukie Ohashi, fax: 523-1402)

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

The Honorable James J. Nakatani, Chairperson
Board of Agriculture
State of Hawaii
Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814-2512

Dear Mr. Nakatani:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your memorandum dated May 22, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments:

1. We have incorporated the information on seed production statistics, and specifically, the importance of the seed corn industry on Molokai, in the Final EA.
2. The 1992 site selection process evaluated several criteria for our new campus. As you mentioned, the "avoidance of using lands currently in agricultural production" was not included as a criterion of site elimination. A leading criteria for selection included a central location within urban Kaunakakai. While we recognize the importance of prime agricultural lands, especially lands currently being farmed, the public benefits of this location made it the unanimous choice of the community.

The loss of the agricultural use of the land for seed corn cultivation by the present lessee, Hawaiian Research, Inc. will be offset through other lands which Molokai Ranch, Limited, the owner of the property is making available to the lessee.

Mr. James J. Nakatani
Molokai Education Center
June 10, 1998
Page 2

3. Just as Hawaiian Research, Inc. has been an asset and a good neighbor in the Molokai community, we also, intend to establish a meaningful educational presence on the island. We recognize the importance of working closely with Hawaiian Research, Inc. so that we may mutually complement each other as neighbors.

We thank you for participating in the environmental review process.

Sincerely yours,



Clyde M. Sakamoto



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

No. 1 Capitol District Bldg., 250 South Hotel St., 5th Flr., Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

Tel.: (808) 586-2355
Fax: (808) 586-2377

Ref. No. P-7444

May 15, 1998

PROVOST'S OFFICE

MAY 26 1998

Maui Community College

Dr. Clyde Sakamoto
Provost
Maui Community College
University of Hawaii
310 Kaahumanu Avenue
Kahului, Hawaii 96732

Dear Dr. Sakamoto:

Subject: Molokai Education Center - Draft Environmental Assessment (EA)
TMK 5-3-03:1

We have reviewed the draft EA for the proposed Maui Community College post-secondary satellite campus and distance learning center on Molokai. We do not have any comments to offer relative to our plans and programs.

If you have any questions, please contact Christina Meller of our Coastal Zone Management Program at 587-2845.

Sincerely,

Rick Egged
Director
Office of Planning

cc: OEQC
PBR Hawaii

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

Mr. Rick Egged, Director
State of Hawaii
Department of Business, Economic Development & Tourism
Office of Planning
250 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Egged:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 15, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that your agency has no comments to offer relative to your plans and programs.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto

BENJAMIN J. CAYETANO
GOVERNOR

PROVOST'S OFFICE

MAY 28 1998



HERMAN M. AIZAWA, Ph.D.
SUPERINTENDENT

Maui Community College STATE OF HAWAII
DEPARTMENT OF EDUCATION
P O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

May 15, 1998

MEMO TO: Dr. Clyde Sakamoto, Provost
Maui Community College

F R O M: Herman M. Aizawa, Ph.D., Superintendent
for Department of Education

SUBJECT: Molokai Education Center - Draft EA

The Department of Education has no comment on the subject Draft Environmental Assessment.

Thank you for the opportunity to respond.

HMA:SB:hy

cc: A. Suga, OBS
G. Gill, OEQC
R. Murakami, MDO

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

The Honorable Herman M. Aizawa, Ph.D., Superintendent
State of Hawaii
Department of Education
PO Box 2360
Honolulu, Hawaii 96804

Dear Dr. Aizawa:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your memorandum dated May 15, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that the Department of Education has no comments to offer on the Draft EA.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto

BENJAMIN J. CAYETANO
GOVERNOR

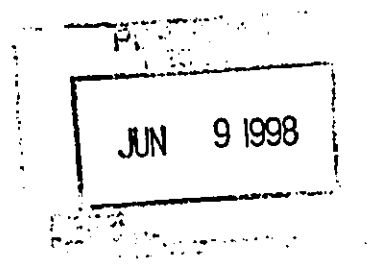


GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

June 8, 1998



Mr. Clyde Sakamoto
Maui Community College
310 Ka'ahumanu Avenue
Kahului, Hawai'i 96732

Dear Mr. Sakamoto:

We submit for your response the following comment on a draft environmental assessment (DEA) for the *Moloka'i Education Center*, Kaunakakai, Moloka'i, TMK: 2nd Division, 5-3-03: (por.) 1.

1. **SOCIAL-ECONOMIC IMPACTS.** Please discuss the direct, indirect and cumulative social and economic impacts (e.g., property values, etc.) of the proposed project on the island, including impacts to both the Kaunakakai community and Moloka'i Ranch.
2. **HISTORIC/VISUAL RESOURCES.** Please discuss any landscaping buffers (including the use of native Hawaiian plants), building materials to be used and any special design elements applied to blend this complex into the "historic architectural vernacular" of Kaunakakai.

Please include discussion of the above in the final environmental assessment (FEA) and notice of determination for this project. Also, include a copy of this letter and your response in the FEA. If there are any questions, please call my environmental health specialist, Leslie Segundo at 586-4185. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script that reads "Gary Gill".

GARY GILL
Director

c: Ms. Yukie Ohashi, PBR Hawai'i



UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
State of Hawaii
Department of Health
235 South Beretania Street
Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your memorandum dated June 8, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments:

1. **Social-Economic Impacts.** The direct, indirect and cumulative social and economic impacts of our new Education Center and the project's impact on the Molokai community and Molokai Ranch are discussed in the Final EA.
2. **Historic/Visual Resources.** The Final EA contains further discussion of the design elements (e.g. architectural and landscaping) of the project and how it integrates with the "historic architectural vernacular" of Kaunakakai.

We thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

May 5, 1998

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

PROVOST'S OFFICE

MAY 07 1998

Maui Community College

LD-NAV
Ref.: DEAMAUIC.RCM

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawaii
235 Kaahumanu Avenue
Kahului, Hawaii 96732

Dear Dr. Sakamoto:

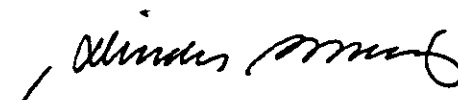
SUBJECT: Review : Draft Environmental Assessment
Applicant: PBR Hawaii on behalf of, Maui Community College
University of Hawaii
Project : Molokai Education Center
Proposal : Develop post secondary satellite campus
Location : Molokai Ranch, Molokai, Maui, Hawaii
TMK : 2nd/ 5-3-03: Portion of parcel 01

Thank you for the opportunity to review and comment on the subject matter.

The Department of Land and Natural Resources has no comments to offer on the proposed project.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division's Support Services Branch at 1-808-587-0438.

Very truly yours,


DEAN Y. UCHIDA
Administrator

c: Maui Land Board Member
At Large Land Board Member
Maui District Land Office
PBR Hawaii

UNIVERSITY OF HAWAII



Maui Community College
Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

Mr. Dean Y. Uchida, Administrator
Land Division
State of Hawaii
Department of Land and Natural Resources
PO Box 621
Honolulu, Hawaii 96809

Dear Mr. Uchida:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 5, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that the Department of Land and Natural Resources has no comments to offer on the proposed project.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".
Clyde M. Sakamoto

BENJAMIN J. CAYITANO
GOVERNOR OF HAWAII



MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION

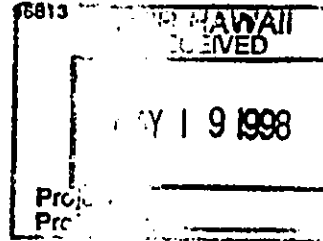
DIVISION
LAND DIVISION
STATE PARKS
WATER AND LAND DEVELOPMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

May 15, 1998

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawai'i
310 Ka'ahumanu Avenue
Kahului, Hawai'i 96732



LOG NO: 21454 ✓
DOC NO: 9805SC02

Dear Dr. Sakamoto:


SUBJECT: Chapter 6E-8 Historic Preservation Review of a Draft Environmental Assessment Prepared for the Moloka'i Education Center Kaunakakai, Moloka'i
TMK: 5-3-003: 001 (portion)

Thank you for the opportunity to comment on the draft Environmental Assessment (EA) prepared for the development of the proposed Moloka'i Education Center in Kaunakakai, Moloka'i. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel.

The draft EA correctly incorporates our earlier comments. The site proposed for the Moloka'i campus has been previously altered through pineapple cultivation. Consequently, it is highly unlikely that significant historic sites are still present. Therefore, we believe that the proposed undertaking will have "no effect" on significant historic sites.

Should you have any questions, please feel free to call Sara Collins at 587-0013.

Aloha,


DON HIBBARD, Administrator
State Historic Preservation Division

SC:jen

cc: Ms. Elizabeth Anderson, Cultural Resources Commission, Maui Planning Department,
250 S. High Street, Wailuku, HI 96793
Ms. Barbara Haliniak, Chair, Moloka'i Plng Comm., P.O. Box 976, Kaunakakai, HI 96748
Ms. Yukie Ohashi, PBR Hawaii, 1001 Bishop Street, Pacific Tower, Suite 650,
Honolulu, HI 96813
Mr. Gary Gill, Director, Office of Environmental Quality Control

UNIVERSITY OF HAWAII



Maui Community College
Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

Mr. Don Hibbard, Administrator
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Hibbard:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 15, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note your assessment that the development of the new campus will have "no effect" on significant historic sites because the site has been previously altered through pineapple cultivation, and consequently, it is unlikely that significant historic sites are still present.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto", with a long, sweeping flourish extending to the right.

Clyde M. Sakamoto

BENJAMIN J. CAYETANO
GOVERNOR



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

MAY 29 1998

PROVOST'S OFFICE

JUN 04 1998

Maui Community College

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
HWY-PS
2.9499

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawaii
310 Kaahumanu Avenue
Kahului, Hawaii 96732

Dear Dr. Sakamoto:

Subject: Molokai Education Center, Draft Environmental Assessment,
Island of Molokai, TMK: (2) 5-3-03: 1 (por.)

Thank you for transmitting the above project document for our review and comments. We have the following comments:

1. The document should include a discussion or short assessment of the generated project trips at the intersection of the school's new access with Kamehameha V Highway. The evaluation should be done for both day and evening school sessions.
2. Additional surface water run-off due to the development should be managed within the project site. Diverting surface water run-off onto Kamehameha V Highway is not permitted.
3. The drainage catch basin that will be installed near the intersection of Kamehameha V Highway with the school access road must be designed for a 100% "catch" of any surface run-off.
4. Plans for work done within our highway rights-of-way must be submitted for our review and approval. Please coordinate the review of construction plans with our Highways Division, Maui District Engineer.

Dr. Clyde Sakamoto
Page 2
MAY 29 1998

HWY-PS 2.9499

5. All required roadway improvements within our highway rights-of-way shall be implemented by the applicant at his costs.

Very truly yours,



KAZU HAYASHIDA
Director of Transportation



UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

The Honorable Kazu Hayashida, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Hayashida:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 29, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments.

1. The traffic impact of the Education Center at the location of the new access street at Kamehameha V Highway was studied by Julian Ng, Inc. and is included in the Final EA. A stop sign controlling a single lane of traffic approaching from the Education Center's new access street has been assumed. The assessment has indicated that Level of Service "A" would describe the left turn from the highway onto the Education Center's new access street. For the stop-controlled traffic on the new access street entering Kamehameha V Highway, the analysis showed Level of Service "A" conditions with Phase 1 and Level of Service "B" conditions with the site fully developed. Both day and night sessions have been accounted for in the assessment.
2. Any additional surface water runoff resulting from the development of the project will be managed on-site and will not be diverted to Kamehameha V Highway.
3. The drainage catch basins along the new access road are being designed for a 100% "catch" of surface run-off.

310 Kaahumanu Avenue, Kahului, Hawaii 96732

E-mail: provost@mccada.maucc.hawaii.edu • Tel 808 984 3213 • Fax 808 244 0862

An Equal Opportunity Employer

Mr. Kazu Hayashida
Molokai Education Center
June 10, 1998
Page 2

4. The review of construction plans for the new access road connection to the highway and all construction within the highway-right-of-way will be coordinated with the State Highways Division, Maui District Engineer.
5. The construction and funding for the improvements within the State highway right-of-way will be provided by the University of Hawaii.

Thank you for participating in the environmental review process.

Sincerely yours,



Clyde M. Sakamoto

UNIVERSITY OF HAWAII

Office of the Senior Vice President and Chancellor for Community Colleges
Physical Facilities Planning and Construction Office

May 22, 1998

dcliff

Mr. Donald J. Clifford
Clifford Projects Inc.
125 Merchant Street, 2nd Floor
Honolulu, Hawai'i 96813

PROVOST'S OFFICE

JUN 03 1998

Maui Community College

Subject: Moloka'i Education Center
Maui Community College

Dear Mr. Clifford:

We have reviewed the submittals for the master plan and recommend its approval. Thank you for your assistance in this matter.

Sincerely,



Maynard Young
Director

MY:lkt

cc: Provost Clyde Sakamoto
Ryan Kurashige

UNIVERSITY OF HAWAII



Maui Community College
Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

Mr. Maynard Young, Director
University of Hawaii
Office of the Senior Vice President and Chancellor for Community Colleges
Physical Facilities Planning and Construction Office
Kapiolani Community College, Manele Building
4303 Diamond Head Road
Honolulu, Hawaii 96816

Dear Mr. Young:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 22, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note that you have reviewed the submittals for the master plan and recommend its approval.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

P.O. Box 50004
Honolulu, HI
96850

Our People...Our Islands...In Harmony

June 2, 1998

Dr. Clyde Sakamoto, Provost
Maui Community College
University of Hawai'i
310 Ka'ahumanu Avenue
Kahului, Hawaii 96732

PROVOST'S OFFICE

JUN 03 1998

Maui Community College

Dear Provost Sakamoto:

Subject: Draft Environmental Assessment (DEA) - Moloka'i Education Center,
Moloka'i, Hawai'i

We have reviewed the above mentioned document and offer the following comments:

A large part of the proposed site for the project is located in flood zone. The DEA stated that the site would be raised two to three feet to mitigate potential flooding concerns. However, control measures for overland flow of floodwaters were not mentioned. Also, there was no mention of the source or quality of fill material to raise the site.

The capacity of the existing highway culvert was discussed and used to justify increased runoff from the site but no detail was provided on proposed new drainage measures.

The site is located in Mala silty clay loam soil which is classified as prime farmland. NRCS policy encourages the use of alternate sites for developments which does not remove the best agricultural land from crop production.

Thank you for the opportunity to review this document.

Sincerely,


KENNETH M. KANESHIRO
State Conservationist

cc:

Mr. Gary Gill, Director, Office of Environmental Quality Control, 235 South Beretania
Street, Suite 702, Honolulu, Hawaii 96813

The Natural Resources Conservation Service works hand-in-hand with
the American people to conserve natural resources on private lands.

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UNIVERSITY OF HAWAII

Maui Community College

UNIVERSITY OF HAWAII CENTER ON MAUI

Office of the Provost

June 10, 1998

Mr. Kenneth M. Kaneshiro, State Conservationist
US Department of Agriculture
Natural Resources Conservation Service
PO Box 50004
Honolulu, Hawaii 96850

Dear Mr. Kaneshiro:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated June 2, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project and offer the following responses to your comments:

1. According to the Preliminary Engineering Report (Revised June 1998), the onsite and offsite surface runoff volume will be intercepted by new catch basins and conveyed by a new underground drainage system which will be constructed as part of the proposed improvements to outlet either into the existing box culvert at Kamehameha V Highway or to a new onsite subsurface detention system consisting of 36-inch diameter perforated drainage pipes. The subsurface runoff that discharges into the box culvert would ultimately be conveyed to an existing makai wetlands area. Discussions with the landowner are underway to establish an easement.
2. To raise the site, imported borrow material will be specified by the soil engineer. Quantities will be specified by the civil engineer in the grading plans which will be submitted to the County Department of Public Works and Waste Management for review and approval.

Mr. Kenneth M. Kaneshiro
Molokai Education Center
June 10, 1998
Page 2

3. *Much of the land area above the Kamehameha V Highway surrounding the urbanized Kaunakakai area consists of Mala silty clay loam soils; and below the highway there is generally a predominance of Kealia silt loam, a hydric soil. The extensive site selection process conducted by the University evaluated many factors for the siting of this campus. A leading criteria included a central location within urban Kaunakakai. While we recognize the importance of prime agricultural lands, the public benefits of this location and the relatively small area made it the unanimous choice of the community.*

The loss of the agricultural use of the land for seed corn cultivation by the present lessee, Hawaiian Research, Inc. will be offset through other lands which Molokai Ranch, Limited, the owner of the property is making available to the lessee.

Thank you for participating in the environmental review process.

Sincerely yours,



Clyde M. Sakamoto



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

May 7, 1998

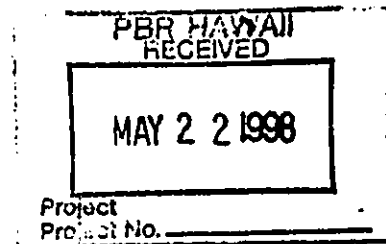
PROVOST'S OFFICE

MAY 12 1998

Maui Community College

Civil Works Branch

Dr. Clyde Sakamoto, Provost
Maui Community College
310 Kaahumanu Avenue
Kahului, Maui 96732



Dear Dr. Suzuki:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for Molokai Education Center (Tax Map Key 5-3-3: por. 1). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit will not be required for the project.

b. The flood hazard information provided on page 28 of the DEA is correct.

Sincerely,

Paul Mizue, P.E.
Chief, Civil Works Branch

Copies Furnished:

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Ms. Yukie Ohashi
PBR Hawaii
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

UNIVERSITY OF HAWAII



Maui Community College

Office of the Provost

UNIVERSITY OF HAWAII CENTER ON MAUI

June 10, 1998

Paul Mizue, P.E., Chief
Civil Works Branch
Department of the Army
US Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

Dear Mr. Mizue:

Subject: Response to Comments on the Molokai Education Center
Draft Environmental Assessment
TMK# 5-3-03:1 (por.), Kaunakakai, Molokai, Hawaii

We have reviewed your letter dated May 7, 1998 regarding the Draft Environmental Assessment for the Molokai Education Center project. We note your comments that a Department of the Army permit will not be required for the project and that the flood hazard information is correctly represented in the EA.

Thank you for participating in the environmental review process.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Clyde M. Sakamoto".

Clyde M. Sakamoto

8.0 *References*

MOLOKA'I EDUCATION CENTER
Final Environmental Assessment

8.0 REFERENCES

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- Unemori, Warren S. *Preliminary Engineering Report, Moloka'i Education Center*. Wailuku, Hawai'i, 1998.
- United States Department of Agriculture Soil Conservation Service. *Islands of Kaua'i, O'ahu, Maui, Moloka'i and Lāna'i, State of Hawai'i*, 1972.
- United States Department of Commerce, Bureau of the Census. *1990 Census of Population and Housing, Population and Housing Characteristics for Census Tracts and Block Numbering Areas--Moloka'i, Hawai'i, MSA*.

*Appendix A. Preliminary Drainage
and Soil Erosion Control Report*

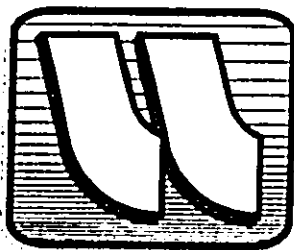
Established 1969

**Preliminary
Drainage and Soil Erosion Control Report**

MOLOKAI EDUCATION CENTER

Molokai, Hawaii
TMK: (2) 5-3-03:Portion of 01

DEVELOPER: Molokai Ranch Limited
ADDRESS: Honolulu, Hawaii



WARREN S. UNEMORI ENGINEERING, INC.
Civil and Structural Engineers - Land Surveyors
Wells Street Professional Center - Suite 403
2145 Wells Street
Wailuku, Maui, Hawaii 96793

April, 1998
Revised: June, 1998

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EXHIBITS:

- 1 Location Map
- 2 Soil Survey Map
- 3 Flood Insurance Rate Map

APPENDICES:

- A Hydrologic Calculations
- B Universal Soil Loss Equation Calculations
- C Hydrologic and Channel Information for 10'x3' Concrete Box Culvert

**Preliminary
Drainage and Soil Erosion Control Report
for
Molokai Education Center
Kaunakakai, Molokai, Hawaii**

I. INTRODUCTION:

This drainage and soil erosion report has been prepared to evaluate both the existing site drainage conditions and proposed drainage plan for the subject development.

An investigation to determine the potential movement of soil due to rainfall and surface runoff during construction of the project in accordance with Chapter 20.08 of the Maui County Codes is also included.

II. PROPOSED PROJECT:

A. Site Location:

The proposed Molokai Education Center will be located in Kaunakakai, on the island of Molokai, and in the State of Hawaii. The project site encompasses a portion of Lot 430-E-1-A-1-A of Land Court Application 632. The proposed site is located approximately 3600 feet east of the intersection of Kamehameha V Highway and Kaunakakai Place. It is situated 700 feet east of the existing "Duke" Maliu Regional Park. (See Exhibit 1).

The project site encompasses an area of approximately 2.5 acres.

B. Project Description:

The proposed plan for the Molokai Education Center project will include, but not be limited to, new one or two story buildings, asphalt paved parking, a new

thirty-six (36) foot wide access road, concrete sidewalks, concrete curb and gutter and landscaping. Utility improvements will consist of underground drainage (for offsite surface runoff and onsite runoff), sewer, water distribution and fire protection systems, as well as overhead electrical and telephone distribution systems. An irrigation system and landscaping is expected to be provided within the Molokai Education Center project site.

III. EXISTING CONDITIONS:

A. Topography and Soil Conditions:

Presently, the majority of the Molokai Education Center project site is undeveloped and is currently being used to cultivate corn. The natural vegetation consists of feather finger grass, kiawe, bristly foxtail, ilima, and Australian saltbrush.

The existing ground of the project site slopes in a northeasterly to southwesterly direction from an elevation of approximately (+) 10± feet M.S.L. to (+) 5± feet M.S.L. with an average slope of approximately 1%.

According to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, (August 1972)", prepared by the United States Department of Agriculture, Soil Conservation Service, the soil type present on the project site is Mala Silty clay (MmA, 0 to 3 percent slopes). (See Exhibit 2). The Mala Silty clay is characterized as having moderate permeability, slow runoff and the erosion hazard is no more than slight.

B. Drainage:

Presently, the onsite surface runoff volume, is calculated to be approximately 2.4 cfs. The offsite surface runoff volume is calculated to be approximately 4.2 cfs, for a total surface runoff of 6.6 cfs (See Appendix A). The existing onsite and offsite surface runoff generated from the project site sheet flows through the project site in the direction of an existing ten foot by three foot (10'x3') concrete box culvert located on the southerly boundary of the project site crossing Kamehameha V Highway at Baseline Station 36+15±. According to the "Drainage Master Plan for Kaunakakai, Molokai, Hawaii" prepared by Wilson Okamoto & Associates, the inlet for the existing 10'x3' box culvert has an inlet capacity calculated to be approximately 225 cfs (see Appendix C). This 10'x3' box culvert discharges into an existing wetlands area and where it eventually sheet flows into the ocean.

C. Flood and Tsunami Zone:

According to Panel Number 150003 0185C of the Flood Insurance Rate Map, revised September 6, 1989, prepared by the U.S. Federal Emergency Management Agency, the southerly portion of the project site is situated in an area designated as Zone AH (El. 5), Zone A, and Zone B, which area areas subject to the 100-year flooding where depths are between one (1) and three (3) feet. The remaining area is situated within Zone C which is designated as areas subject to minimal flooding. (See Exhibit 3).

The flood plain ordinance adopted by the County of Maui, entitled Flood Hazard Districts (Chapter 19.62) Maui County Code), places restrictions on

structures and development in flood plains. Compliance with this law allows the County of Maui to participate in the Federal Insurance Administration's regular flood insurance program.

The portion of the project site within Zone AH, Zone A, and Zone B will all have habitable structures built above the designated flood plain elevation.

IV. DRAINAGE PLAN:

A. General:

According to our calculations, the offsite surface runoff volume is expected to remain at 4.2 cfs. The anticipated post-development onsite surface runoff generated by the development of the project site is calculated to be approximately 5.0 cfs, for a total onsite and offsite surface runoff volume of 9.2 cfs. Accordingly, there will be a net increase of onsite surface runoff of approximately 2.6 cfs. This calculation is based on a 10-year recurrence interval - 1 hour duration storm. (See Appendix A.)

Curb inlets and grated inlet catch basins will be installed as part of the proposed improvements to intercept the additional onsite surface runoff. A grassed swale will be installed on the easterly boundary of the project site to intercept the offsite surface runoff generated from the area located east of the project site (see Exhibit C).

The onsite and offsite surface runoff volume will be intercepted by new catch basins and conveyed by a new underground drainage system which will be constructed as part of the proposed improvements to outlet either into the existing

10'x3' concrete box culvert located on the southerly boundary of the project site or a new onsite subsurface detention system consisting of 36-inch diameter perforated drainage pipes. The surface runoff that discharges into the 10'x3' box culvert will be conveyed to an existing wetlands area provided a drainage easement can be secured from the land owner.

Although the development of the project site will increase the onsite surface runoff volume discharging into the existing 10'x3' box culvert, the concrete box culvert has adequate capacity for the increase of surface runoff generated by the project.

The proposed onsite subsurface detention system for the contingency plan will be designed to accommodate the additional surface runoff volume generated by the proposed development. The existing pre-development surface runoff volume will be allowed to sheet flow to the previously mentioned 10'x3' box culvert as it is presently doing.

B. Hydrology Calculations:

The hydrologic calculations presented in this report are based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui, Title MC-15, Chapter 4", prepared by the County of Maui, and the "Rainfall Frequency Atlas of the Hawaiian Islands", Technical Paper No. 43, U.S. Department of Commerce, Weather Bureau. Calculations are based upon the Rational Formula:

$$Q = CIA$$

Where Q = Rate of Flow (cfs)

C = Rainfall Coefficient

I = Rainfall Intensity (inches/hour)

A = Area (acres)

The hydrologic calculations for this project may be found in Appendix A.

C. Conclusion:

Based on our calculations, the after development onsite and offsite surface runoff volume generated from the proposed development for this phase of the project is expected to be approximately 9.2 cfs. Accordingly there will be a net increase in onsite and offsite surface runoff volume of approximately 2.6 cfs due to the proposed development (see Appendix A)

The onsite and offsite surface runoff generated by the proposed development will be intercepted by new curb inlets and grated inlet type catch basins and conveyed by means of a new underground drainage system, where it will be allowed to either discharge into an existing 10'x3' concrete box culvert located along the southerly boundary of the project site which has the capacity to accommodate the increase in surface runoff volume or into a new onsite subsurface detention system which will be sized to accommodate the additional surface runoff volume generated by the proposed development. The pre-development surface runoff will be allowed to sheet flow into the previously mentioned 10'x3' box culvert as it is presently doing. The surface runoff volume conveyed thru the 10'x3' box culvert will then be discharged into an existing wetlands area located south of Kamehameha V Highway.

Since the additional surface runoff volume generated by the proposed and future development will be conveyed to an adequate existing drainage outlet, it is our professional opinion that the proposed Molokai Education Center - Offsite Improvements project will not adversely affect the adjoining properties.

V. SOIL EROSION CONTROL PLAN:

A. General:

The Hawaii Environmental Simulation Laboratory (HESL) equations will be utilized to determine if the soil loss during the construction period is well within the tolerable limits.

B. Soil Erosion Control Plan:

The following measures will be taken to control erosion during the site development period.

1. Minimize time of construction.
2. Retain existing ground cover until latest date to complete construction.
3. Early construction of drainage control features.
4. Use temporary area sprinklers in non-active construction areas when ground cover is removed.
5. Station water truck on site during construction period to provide for immediate sprinkling, as needed, in active construction zones (weekends and holidays included).

6. Use temporary berms and cut-off ditches, where needed, for control of erosion.
7. Graded areas shall be thoroughly watered after construction activity has ceased for the day and on weekends.
8. All cut and fill slopes shall be sodded or planted immediately after grading work has been completed.

The development project is provided with adequate facilities for drainage control and storm water disposal. This, together with ultimate ground cover, shall preclude any appreciable onsite erosion.

C. Conclusion:

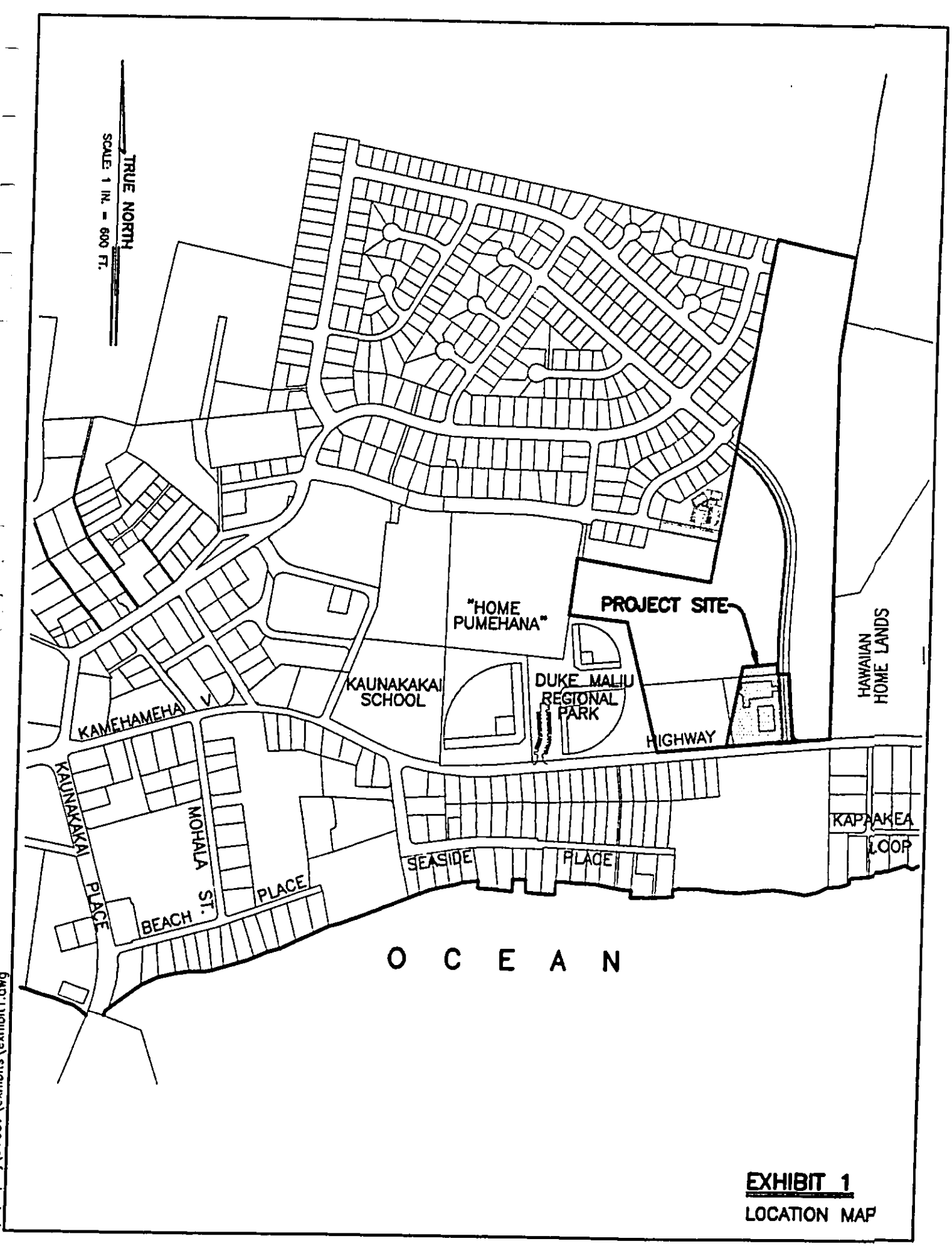
Based on our calculations, the sedimentation hazard to coastal waters and downstream properties is minimal (see Appendix B). The soil loss per unit area and severity rating computed for the proposed development are well within the tolerable limits and additional control measures are not required.

VI. REFERENCES

1. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* August 1972. United States Department of Agriculture, Soil Conservation Service.
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3. *Drainage Master Plan for the Kaunakakai, Molokai, State of Hawaii.* August 1992. Wilson Okamoto & Associates, Inc..
4. *Rainfall Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43.* 1962. U.S. Department of Commerce, Weather Bureau.
5. *Rules for the Design of Storm Drainage Facilities in the County of Maui, Title MC-15, Chapter 4.* November, 1995. Department of Public Works and Waste Management, County of Maui.
6. *Storm Drainage Standards.* Revised Printing May 1988. Department of Public Works, City and County of Honolulu, Division of Engineering.
7. *Modern Sewer Design.* dated 1980, by the American Iron and Steel Institute.

EXHIBITS

- 1. Location Map**
- 2. Soil Survey Map**
- 3. Flood Insurance Rate Map**



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EXHIBIT 1
LOCATION MAP

DOCUMENT CAPTURED AS RECEIVED

MOLOKAI ISLAND, HAWAII - SHEET NUMBER 77

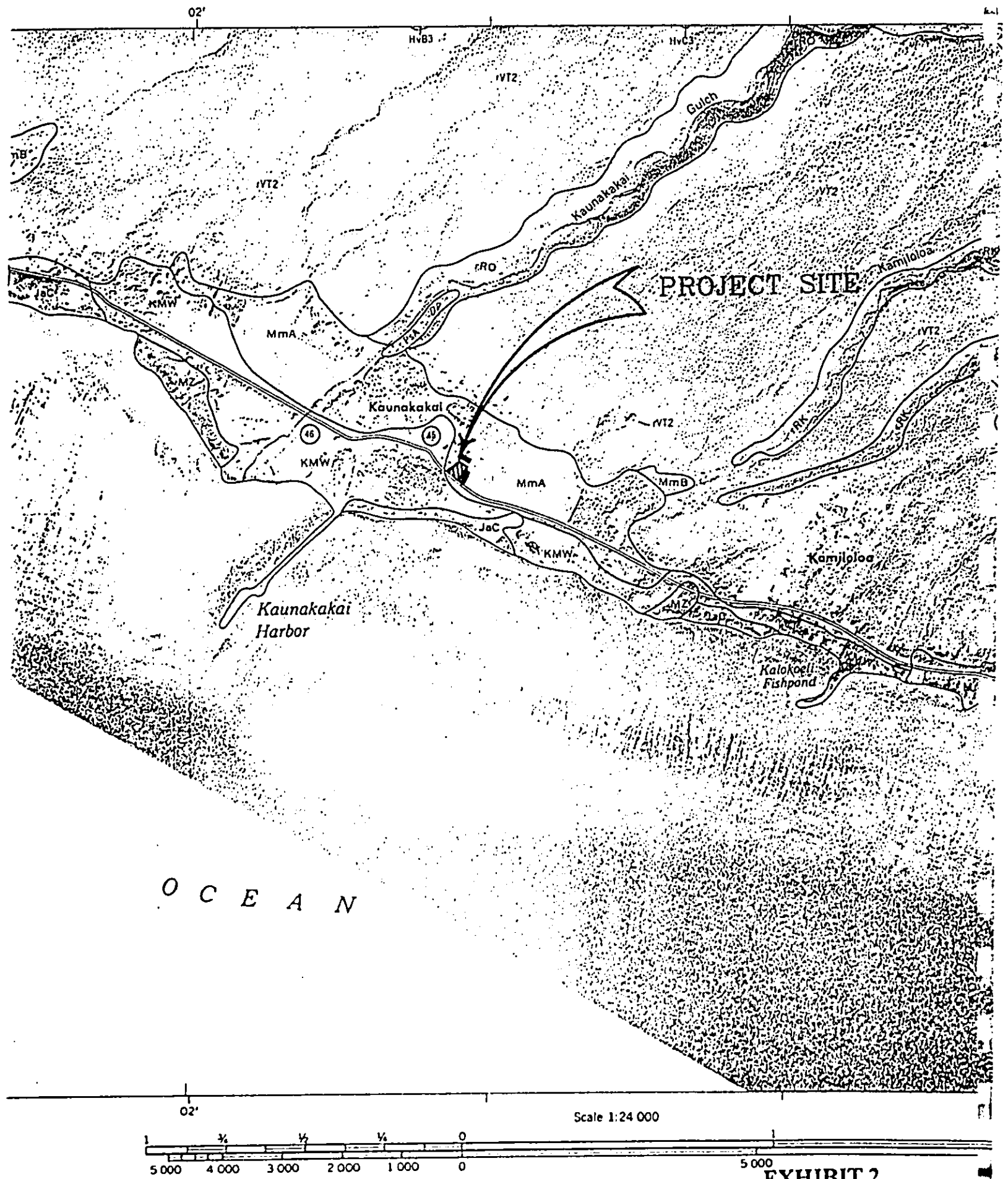
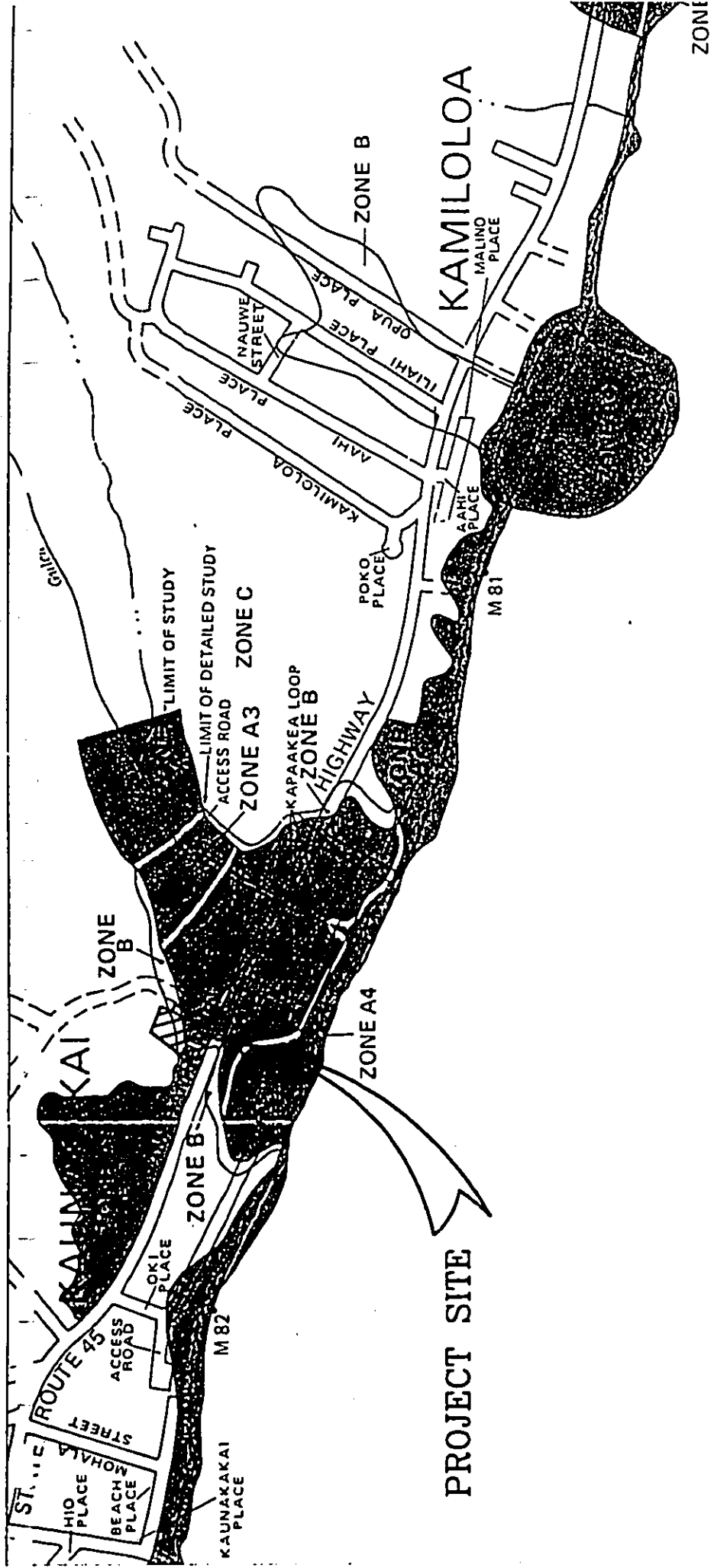


EXHIBIT 2
SOIL SURVEY MAP



Coral Reef

EXHIBIT 3
FLOOD INSURANCE RATE MAP

APPENDIX A
HYDROLOGIC CALCULATIONS

Pre-Development Surface Runoff Volume
And
Post-Development Surface Runoff Volume

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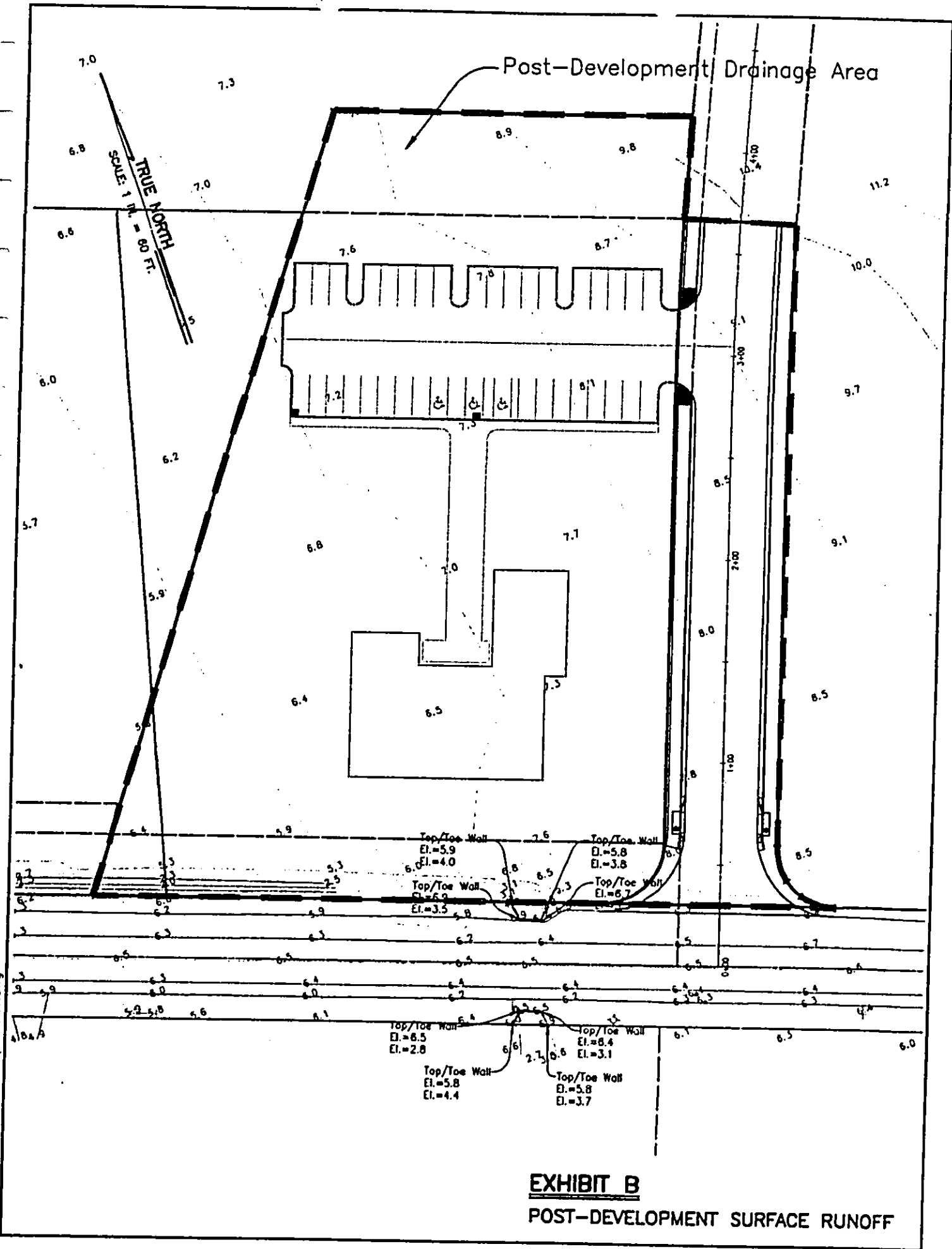


EXHIBIT B
POST-DEVELOPMENT SURFACE RUNOFF

Page 1 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

HYDROLOGIC STUDY
FOR
MOLOKAI EDUCATIONAL CENTER

Kaunakakai, Molokai, Hawaii

Pre-Development Onsite Surface Runoff

RECURRENCE INTERVAL:	10 years	HYDRAULIC LENGTH:	480.0 ft.
ONE-HOUR RAINFALL:	2.00 inches	ELEV'N. DIFFERENTIAL:	8.50 ft.
		HYDRAULIC SLOPE:	0.018 ft./ft.
WEIGHTED RUNOFF			
COEFFICIENT, C:	0.28	TIME OF CONCENTRATION:	18.0 min.
INTENSITY, I:	3.45 inches		
AREA, A:	2.45 acres	SUB BASINS CONSIDERED:	1

$$Q = C \cdot I \cdot A = 2.37 \text{ cfs}$$

COMMENTS:

Page 2 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

MOLOKAI EDUCATIONAL CENTER
[continued]

TABULATION OF RUNOFF COEFFICIENTS & AREAS:

SUB-BASIN 1 OF 1 : Agricultural Land

INFILTRATION:	Medium	0.07	
RELIEF:	Rolling (5-15%)	0.03	>>> COMPOSITE C = 0.280
VEGETAL COVER:	Good (10-50%)	0.03	>>> AREA = 2.450 acres
DEVELOPMENT:	Agricultural	0.15	

Page 1 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

HYDROLOGIC STUDY
FOR
MOLOKAI EDUCATIONAL CENTER

Kaunakakai, Molokai, Hawaii

Post-Development Onsite Surface Runoff

RECURRENCE INTERVAL:	10 years	HYDRAULIC LENGTH:	780.0 ft.
ONE-HOUR RAINFALL:	2.00 inches	ELEV'N. DIFFERENTIAL:	5.85 ft.
		HYDRAULIC SLOPE:	0.007 ft./ft.
WEIGHTED RUNOFF			
COEFFICIENT, C:	0.59	TIME OF CONCENTRATION:	18.0 min.
INTENSITY, I:	3.45 inches		
AREA, A:	2.45 acres	SUB BASINS CONSIDERED:	2

$$Q = C \cdot I \cdot A = 5.03 \text{ cfs}$$

COMMENTS:

Page 2 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

MOLOKAI EDUCATIONAL CENTER
[continued]

TABULATION OF RUNOFF COEFFICIENTS & AREAS:

SUB-BASIN 1 OF 2 : Landscape Area

INFILTRATION:	Medium	0.07	
RELIEF:	Flat (0-5%)	0.00	>>> COMPOSITE C = 0.350
VEGETAL COVER:	High (50-90%)	0.00	>>> AREA = 1.450 acres
DEVELOPMENT:	Grass	0.28	

SUB-BASIN 2 OF 2 : Paved Area

INFILTRATION:	Negligible	0.20	
RELIEF:	Flat (0-5%)	0.00	>>> COMPOSITE C = 0.950
VEGETAL COVER:	None	0.07	>>> AREA = 1.000 acres
DEVELOPMENT:	Paved	0.68	

Offsite Surface Runoff Volume

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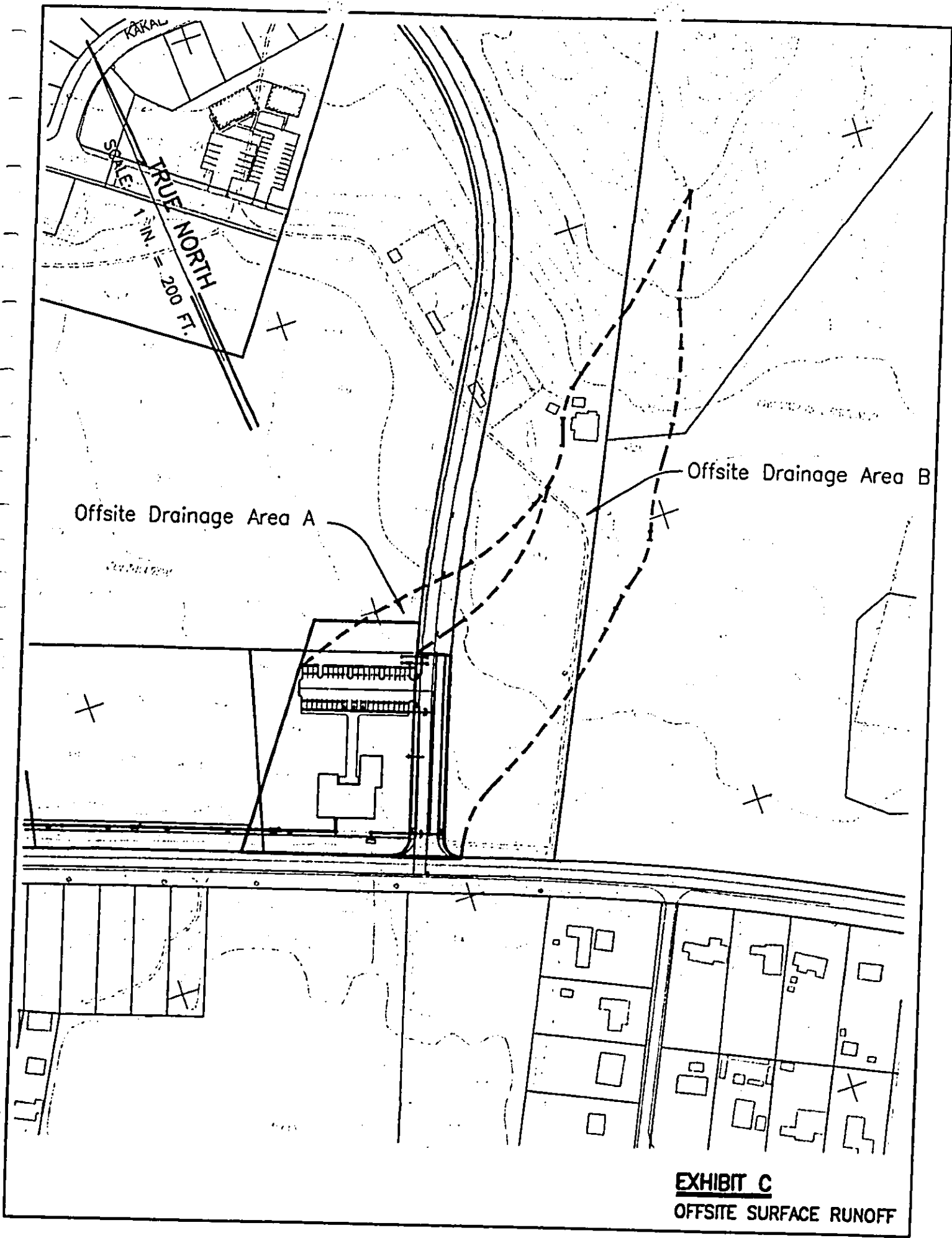


EXHIBIT C
OFFSITE SURFACE RUNOFF

Page 1 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

HYDROLOGIC STUDY
FOR
MOLOKAI EDUCATIONAL CENTER

Kaunakakai, Molokai, Hawaii

Offsite Drainage Area A

RECURRENCE INTERVAL:	10 years	HYDRAULIC LENGTH:	300.0 ft.
ONE-HOUR RAINFALL:	2.00 inches	ELEV'N. DIFFERENTIAL:	8.40 ft.
		HYDRAULIC SLOPE:	0.028 ft./ft.
WEIGHTED RUNOFF			
COEFFICIENT, C:	0.28	TIME OF CONCENTRATION:	14.0 min.
INTENSITY, I:	3.80 inches		
AREA, A:	0.83 acres	SUB BASINS CONSIDERED:	1

$$Q = C \cdot I \cdot A = 0.88 \text{ cfs}$$

COMMENTS:

Page 2 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

MOLOKAI EDUCATIONAL CENTER
[continued]

TABULATION OF RUNOFF COEFFICIENTS & AREAS:

SUB-BASIN 1 OF 1 : Agricultural Land

INFILTRATION:	Medium	0.07	
RELIEF:	Rolling (5-15%)	0.03	>>> COMPOSITE C = 0.280
VEGETAL COVER:	Good (10-50%)	0.03	>>> AREA = 0.830 acres
DEVELOPMENT:	Agricultural	0.15	

Page 1 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

HYDROLOGIC STUDY
FOR
MOLOKAI EDUCATIONAL CENTER

Kaunakakai, Molokai, Hawaii

Offsite Drainage Area B

RECURRENCE INTERVAL:	10 years	HYDRAULIC LENGTH:	1150.0 ft.
ONE-HOUR RAINFALL:	2.00 inches	ELEV'N. DIFFERENTIAL:	67.00 ft.
		HYDRAULIC SLOPE:	0.058 ft./ft.
WEIGHTED RUNOFF		TIME OF CONCENTRATION:	22.0 min.
COEFFICIENT, C:	0.28	SUB BASINS CONSIDERED:	1
INTENSITY, I:	3.20 inches		
AREA, A:	3.65 acres		

$$Q = C \cdot I \cdot A = 3.27 \text{ cfs}$$

COMMENTS:

Page 2 of 2
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: April 24, 1998

MOLOKAI EDUCATIONAL CENTER
[continued]

TABULATION OF RUNOFF COEFFICIENTS & AREAS:

SUB-BASIN 1 OF 1 : Agricultural Land

INFILTRATION:	Medium	0.07	
RELIEF:	Rolling (5-15%)	0.03	>>> COMPOSITE C = 0.280
VEGETAL COVER:	Good (10-50%)	0.03	>>> AREA = 3.650 acres
DEVELOPMENT:	Agricultural	0.15	

Subsurface Drainage System Calculations

Warron S. Unomori Engineering, Inc.
 Wells Street Professional Center
 2145 Wells Street, Suite 403
 Wailuku, Maui, Hawaii 96793

Date: April, 1998

SUBSURFACE DRAINAGE SYSTEM ANALYSIS AND DESIGN

Project: Molokai Education Center - Onsite Improvements
Location: Kaunakakai, Molokai, Hawaii
Job Number: 97037
Objective: To determine the storage requirements for full attenuation of the anticipated increase in onsite surface runoff attributable to the project development. A recurrence interval of fifty (50) years is used.

I. Determine 50-Yr. - 1 Hr. Rainfall:

From "Rainfall Frequency Atlas of the Hawaiian Islands", for Kaunakakai, Molokai,
 R(50 Yr.-1Hr.) = 2.5 inches

II. Determine Pre-Development Runoff:

Pre-Development Component Areas:

Total Area (Ac.): 2.5

Pre-Development Runoff Coefficients:

Infiltration:	High	0.07
Relief:	Rolling (5-15%)	0.03
Vegetal Cover:	Good (10-50%)	0.03
Development Type:	Agricultural	0.15
<hr/>		
Composite Runoff Coefft., C:		0.28

Pre-Development Time of Concentration:

Approx. Elev. Diff. (feet):		8.50
Higher Elev. (ft.):	10.5	
Lower Elev. (ft.):	2.0	
Approx. Runoff Length (ft.):		480
Average Slope:		1.8%
Ground Character:		Bare Soil
Time of Concentration (min.):		18

Pre-Development Intensity:

Intensity (in./hr.): 3.45

Pre-Development Runoff:

Q (pre-dev.) = C x I x A (cfs): 2.37
Allowable Release Rate(cfs): 2.37 (100% of pre-development)

III. Determine Post-Development Runoff:

Total Area (Ac.): 2.5

Post-Development Runoff Coefficients:

Infiltration:	Medium	0.07
Relief:	Flat (0-5%)	0.08
Vegetal Cover:	Good	0.04
Development Type:	Residential	0.40
<hr/>		
Component Runoff Coefft., C:		0.59

Post-Development Time of Concentration:

Approx. Elev. Diff'l. (feet): 5.85
Higher Elev. (ft.): 11.0
Lower Elev. (ft.): 5.2

Approx. Runoff Length (ft.): 780
Average Slope: 0.8%

Ground Character: 60% Paved

Time of Concentration (min.): 18

Post-Development Intensity:

Intensity (in./hr.): 3.5

Post-Development Runoff:

Q (post-dev.) = C x I x A (cfs): 4.99

IV. Establish Initial Trench Cross Section Parameters:

Cover Over Pipe (ft.):	1.00
Pipe Diameter (ft.):	3.00
Cradle Depth Below Pipe (ft.):	1.00
Cradle Thickness on Sides of Pipe (ft.):	1.00
Total Trench Depth (ft.):	5.0
Total Trench Width (ft.):	5.0
Gross Trench Cross Sectional Area (sf/lf):	25.0
Pipe Cross Sectional Area (sf/lf):	7.1
Trench Aggreg. Cross Sectional Area (sf/lf):	17.9
Assumed Initial Length of Pipe/Trench (ft.):	320.00

V. Determine Adequacy of Storage Volume Provided:

Determine Required Storage Volume:

Analytical procedures are based on methods prescribed in "Modern Sewer Design" (dated 1980, by the American Iron and Steel Institute).

Intensity values are obtained from the the Intensity-Duration Curves found page 122 of the "Drainage Master Plan for the County of Maui" (dated 1971, by R.M. Towill Corp.).

Time (min.)	I (in/hr)	Post-Dev. C x A (ac)	Accum. Runoff Vol. (cf)	Allow. Release (cf)	Storage Required. (cf)	Comments
(1)	(2)	(3)	(4)	(5)	(6)	
5	6.40	1.45	2,775	710	2,065	
10	5.20	1.45	4,510	1,420	3,090	
15	4.60	1.45	5,984	2,130	3,854	
20	4.15	1.45	7,199	2,840	4,359	Peak Storage
30	3.50	1.45	9,107	4,260	4,847	
40	3.15	1.45	10,928	5,680	5,248	
60	2.50	1.45	13,010	8,520	4,489	
80	2.20	1.45	15,264	11,360	3,904	
100	1.95	1.45	16,912	14,200	2,712	
120	1.75	1.45	18,213	17,040	1,173	
180	1.50	1.45	23,417	25,560	-2,143	

(COL 4) = (COL 1) x (COL 2) x (COL 3) x (60 sec./min.)

(COL 5) = Q(allowable) x (COL 1) x (60 sec./min.)

(COL 6) = (COL 4) - (COL 5)

Maximum Storage Required (cf): 4,358.6

Determine Provided Storage Volume:

Pipe Storage Capacity (cf): 2,261.9

Net Aggregate Cradle Storage Capacity (cf): 8,000.0

Gross Aggregate Cradle Volume (40% of voids) (cf): 2,295.2

Void Ratio (50% of voids)(cf): 1,147.6

Total Storage Capacity Provided (cf): 3,409.6

{Storage Provided = 3,410 cf} > {Storage Required = 3,410 cf}; therefore initial assumptions based on 320 l.f. of 36-inch diameter pipe are acceptable.

APPENDIX B

UNIVERSAL SOIL LOSS EQUATION CALCULATIONS

H.E.S.L. Report Page 1 of 3
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: May 11, 1998

H.E.S.L.
FOR
MOLOKAI EDUCATION CENTER

Offsite Improvements
Kaunakakai, Molokai, Hawaii

1. HESL EQUATION: $E = R * K * LS * C * P$

WHERE: E = Soil Loss (tons/acre/year)
R = Average Annual Rainfall Factor for Erosion
K = Soil Erodibility Factor
L = Horizontal Slope Length (feet)
S = Average Slope (%)
LS = Slope Factor (function of L and S)
C = Cover and Management Factor
P = Erosion Control Practice Factor

R = 160.0 tons/acre/year
(Soil Erosion & Sediment Control Guide for Hawaii;
Appendix A: Average Annual Values of Rainfall Factor)

K = 0.28 Soil Series: Mala
(Soil Survey of Islands of Kauai, Oahu, Maui, Molokai,
and Lanai, State of Hawaii; Soil Type Plates & Table 4;
Soil Properties Related to Erosion & Sedimentation)

L = 480.0 feet
k = 5.0 feet
(Soil Erosion & Sediment Control Guide for Hawaii;
Table 16)

S = (k/L)
= 1.0 %

LS = 0.212

H.E.S.L. Report Page 2 of 3
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: May 11, 1998

MOLOKAI EDUCATION CENTER
[Continued]

C = 1.00
(Soil Erosion & Sediment Control Guide for Hawaii
Tables 17-22, Pages 59-61; C=1.00 for Bare Soil)

P = 1.00
(Soil Erosion & Sediment Control Guide for Hawaii;
the Universal Soil Loss Equation in Hawaii)

E = R*K*LS*C*P
= 9.5 tons/acre/year

2. SEVERITY RATING NUMBER EQUATION: $H = [(2 * F * T) + (3 * D)] * A * E$

WHERE: H = Severity rating number
T = Duration of land-disturbing activity (years)
A = Area subject to disturbance (acres)
E = Rate of soil loss under disturbed conditions
(tons/acre/year)
F = Downslope-downstream rating factor
(rating points/ton)
D = Coastal water rating factor
(rating points/ton)

T = 1.00 years

A = 2.50 acres

E = R*K*LS*C*P
= 9.5 tons/acre/year

F = 4 (Downslope-downstream detriment: Major)

D = 4 (Coastal water rating factor: Class AA)

H = $[(2 * F * T) + (3 * D)] * A * E$
= 473.9

Standard severity rating (allowable): 50,000 r 473.9 =>OK

H.E.S.L. Report Page 3 of 3
W.S. UNEMORI ENGINEERING, INC.
2145 Wells Street Suite 403
Wailuku, Maui, Hawaii 96793

BY: EAN
DATE: May 11, 1998

MOLOKAI EDUCATION CENTER
[Continued]

3. MAXIMUM ALLOWABLE SOIL LOSS: $E_{max} = H_{max}/(2FT+3D)A$

$$E_{max} = H_{max}/(2FT+3D)A, \quad H_{max} = 50,000$$
$$= 1,000.0 \text{ tons/acre/year} \quad r \quad 9.5 \text{ tons/acre/year} \Rightarrow \text{OK}$$

Coastal Hazard: Class AA waters are approximately 750 feet from the site.

CONCLUSION: Sedimentation hazard to coastal waters and downstream properties is minimal. Erosion rate computed for this project site is well within the tolerable limits and additional control measures are not required.

4. REFERENCES:

1. Soil Conservation Service (USDA); 'Guidelines For Use of the Universal Soil Loss Equation in Hawaii,' Technical Notes, March 1975. (Revised Draft)
2. County of Maui; (Ord No. 816), 'Chapter 24, Soil Erosion and Sedimentation Control,' June 13, 1975.
3. Soil Conservation Service (USDA); 'Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai; State of Hawaii, August 1972.
4. Hawaii Environmental Simulation Laboratory; 'Guidelines for Data Preparation, Part 1: Universal Soil Loss Equation; Undated (Draft).

APPENDIX C

HYDROLOGIC AND CHANNEL INFORMATION
FOR
10'x3' CONCRETE BOX CULVERT

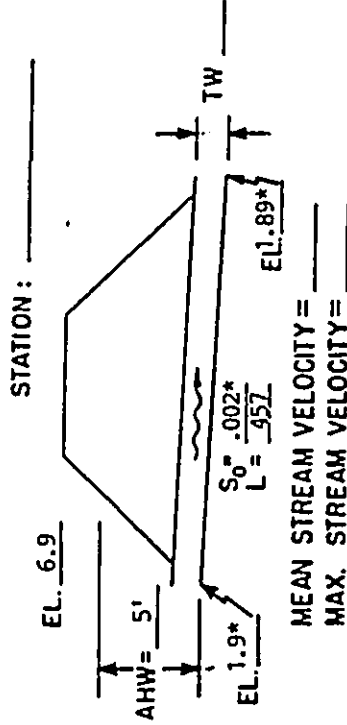
PROJECT: 2931-01 DESIGNER: CIG
 Culvert CE12 DATE: 4/91
 Cornfield 10' x 3' Box

HYDROLOGIC AND CHANNEL INFORMATION

$Q_1 =$ _____ $TW_1 =$ 3
 $Q_2 =$ _____ $TW_2 =$.3

(Q_1 = DESIGN DISCHARGE, SAY Q_{25}
 Q_2 = CHECK DISCHARGE, SAY Q_{50} OR Q_{100})

SKETCH



CULVERT DESCRIPTION (ENTRANCE TYPE)	D. SIZE	Q	HEADWATER COMPUTATION										COMMENTS			
			INLET CONT.		OUTLET CONTROL				HW = H + h ₀ - LS ₀					CONTROLLING	VELOCITY	COST
			HW/O	HW	K _e	H	d _c	d _c +D/2	TW	h ₀	LS ₀	HW				
10' x 3' Box	3	225	1.7	5	.5	1.4	2.5	3	3	.1	4.3	5			Inlet control	

SUMMARY & RECOMMENDATIONS: 10' x 3' Box
 Max allowable = 225 CFS

*Assumed values

*Appendix B. Preliminary Civil
Engineering Study*

Established 1969

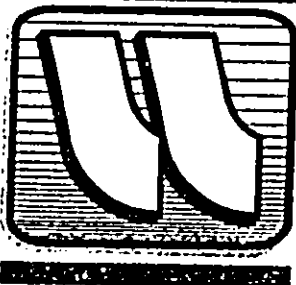
PRELIMINARY ENGINEERING REPORT

MOLOKAI EDUCATION CENTER

Kaunakakai, Molokai, Hawaii
TMK: 5-3-03: Portion of 01

PREPARED FOR: Kauahikaua & Chun Architects
567 S. King Street Suite 108
Honolulu, Hawaii 96813

DATE: April 1998
Revised: June 1998



WARREN S. UNEMORI ENGINEERING, INC.
Civil and Structural Engineers - Land Surveyors
Wells Street Professional Center - Suite 403
2145 Wells Street
Wailuku, Maui, Hawaii 96793

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**PRELIMINARY ENGINEERING REPORT
FOR
PHASE I - MOLOKAI EDUCATION CENTER PROJECT**

1.0 INTRODUCTION

The Molokai Education Center (MEC) project site is located at the easterly edge of Kaunakakai Town on Molokai. Phase I of the project, containing a land area of two acres, is situated on the northerly side of Kamehameha V Highway on what is presently being used to grow seed corn. The site is fairly flat, ranging in elevation from 6 feet near Kamehameha V Highway to 9 feet at its mauka edge.

This report provides a brief description of existing infrastructure in the project vicinity. It also provides a synopsis of probable infrastructural improvements that will be required to support the project.

2.0 EXISTING INFRASTRUCTURE

2.1 Water System

Water for Kaunakakai is provided by a County well at Kualapuu. This source is supplemented by a shallow, low capacity well in Kawela. Storage is provided by a 1.0 MG reinforced concrete reservoir located at elevation 232 feet north and mauka of Kaunakakai. From this reservoir a network of 12, 8, 6, and 4 inch lines convey water to Kaunakakai, Kamilaloo, and areas east as far as Kawela. The 12 inch

line to Kamilaloa and Kawela runs along the easterly side of the MEC project site within the right-of-way of the proposed access road for it.

2.2 Sewer System

Kaunakakai Town is sewerred. Wastewater is collected by a gravity system and directed into a pump station located on the easterly side of Kaunakakai Stream. It is then pumped into an oxidation pond for treatment. According to the County's Waste Management Division of Department of Public Works and Waste Management, this plant has a capacity to handle 300,000 gallons of wastewater per day. The maximum flow recorded was 250,000 gpd. Therefore they estimate the remaining available capacity to be in excess of 50,000 gpd.

The closest gravity system is located on Kamehameha V Highway, approximately 600 feet west of the MEC project site.

2.3 Drainage

Runoff from lands mauka of Kaunakakai Houselots is diverted into Kaunakakai Stream by means of a diversion ditch that was installed by the Army Corps of Engineers. Runoff from the westerly half of Kaunakakai residential area is being directed into an open channel south of Kaunakakai School. This channel continues in an easterly direction on the mauka side of Kamehameha V Highway to a 10' x 3' box culvert. According to the County's Drainage Master Plan for

Kaunakakai present runoff in this channel for a 100 year storm is 169 cfs. This box culvert, located south of the MEC project site, takes the runoff across Kamehameha V Highway towards the wetlands at Kapaakea. The estimated capacity of this culvert is 225 cfs. However the outlet channel between the box culvert and the wetlands is clogged and needs to be cleared.

The grass-lined drainage channel along the frontage of and on the mauka side of Kamehameha V Highway will be retained to facilitate future implementation of the County's Drainage Master Plan for Kaunakakai.

The MEC site is situated in a multiple flood plain zone. The lower or makai portion closer to Kamehameha V Highway is in Zones AH and A. The upper more inland portion is in Zones B and C.

2.4 Electricity and Telephone

Overhead power and telephone lines are located on Kamehameha V Highway. Based on the County's Country Town Business Guidelines for Kaunakakai and subdivision standards for residential projects on Molokai, overhead power and telephone transmission and distribution systems would be acceptable in Kaunakakai.

2.5 Access Road

Kamehameha V Highway is a State highway. It links Kaunakakai to other villages in east Molokai. Together with Maunaloa Highway, located west of Kaunakakai, these two highways form the main surface transportation artery for the island of Molokai. The southerly boundary of MEC project site fronts on Kamehameha V Highway.

3.0 PROBABLE INFRASTRUCTURAL REQUIREMENTS

3.1 Water System

The Department of Water Supply's consumption guideline suggest an average daily water demand of 1700 gallons per acre per day for schools. For the two (2) acre MEC campus this would translate to an average daily demand of 3400 gpd or 11 gallons per student per day. Although MEC will not have a gym, cafeteria or showers on campus, a more realistic water demand would be around 20 gpcd or a total water demand of approximately 6000 gpd. Based on anticipated fixture units, preliminary indications are that a one (1) inch meter will be required for Phase I.

Fire flow requirements for Phase I of MEC is expected to range between 1500 and 2000 gpm. Fire hydrants will be installed at appropriate locations on the access road off of the existing 12 inch

line. If necessary a fire line will be extended into the campus to provide adequate coverage of all structures.

Applicant's prorata share of source development, water storage, and transmission line extension costs will be paid for in conjunction with the comprehensive meter fee.

3.2 Sewer System

According to the provisions of Chapter 62, Hawaii Administrative Rules Title 11 of the State Department of Health regarding wastewater systems, wastewater allocation for schools without gyms, cafeteria or showers is 15 gallons per student per day. Based on a maximum projected enrollment of 300 students, this would amount to 4500 gpd of wastewater per day for Phase I.

A new gravity sewer line will be extended in the easterly direction approximately 600 feet to the MEC project site from the last sewer manhole on Kamehameha V Highway. This new sewer line will be located approximately 20 feet outside and mauka of the highway right-of-way.

As stated earlier, Kaunakakai Wastewater Reclamation Facility has ample excess capacity to handle wastewater generated by the MEC project.

3.3 Drainage

Pre-development runoff from the MEC campus and access road sites is estimated to be around 2.4 cfs. After development the runoff from these areas is projected to increase to 5.0 cfs.

The 10' x 3' box culvert on Kamehameha V Highway west of the access road to the campus has a capacity of 225 cfs. The projected 100 year runoff from the contributory drainage area for the same intensity storm is only 169 cfs. The existing 10' x 3' box culvert obviously has adequate excess capacity to handle additional runoff generated by the project.

Since the land on the outlet side of the existing box culvert is privately owned, the applicant is trying to secure a right-of-entry and drainage easement to clear the drainage channel to the wetlands. If a mutually acceptable plan can be worked out with the owner the approval of numerous boards, commission, and agencies will also be required. Although this plan would be most effective in mitigating the current flooding condition on Kamehameha V Highway it may not be consummated in time to meet the project schedule. Therefore the applicant has also developed a contingency plan to retain all additional runoff generated by the project on site in accordance with the provisions of the Rules for the Design of Storm Drainage Facilities in the County of Maui.

Post development runoff generated will be collected by catch basins on campus and directed into a storm drain system on the access road. Catch basins will also be installed on the access road near its intersection with Kamehameha V Highway to intercept runoff before it reaches the highway. Runoff collected by this system will be conveyed either toward the inlet end of the existing 10' x 3' box culvert or directed into an onsite retention facility under the contingency plan.

Portion of the MEC project site located within the flood plain will be filled to keep it above the flood inundation limits.

3.4 Electricity and Telephone

As stated earlier under the County's Country Town Business Design Guidelines for Kaunakakai, power and telephone lines along the access road will be allowed to be kept overhead and not required to be installed underground.

3.5 Access Road

The access road for MEC will be constructed to County urban minor collector standards. A 56-foot wide right-of-way with a 36-foot paved travelway and 2-foot wide curb and gutter on each side will be provided. A six-foot wide sidewalk will also be provided on the west side adjoining the MEC campus site. According to projected traffic data, no pavement widening or major improvements are expected

to be required on Kamehameha V Highway other than for sewer and access road tie-ins.

4.0 CONCLUSION

Based on the foregoing it is reasonable to conclude that any project related impact on the infrastructure can be readily mitigated with the installation of appropriate improvements as proposed above.

*Appendix C. State Historic Preservation
Division Letter*

BENJAMIN J. CAYetano
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
Gilbert Coloma-Agaran

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

July 22, 1997

Ms. Yukie Ohashi, Project Manager
PBR Hawaii
1001 Bishop Street
Pacific Tower, Suite 650
Honolulu, Hawaii 96813

LOG NO: 19853 ✓
DOC NO: 9707SC18

Dear Ms. Ohashi:

**SUBJECT: Chapter 6E-8 Historic Preservation Review of the Proposed Construction of Molokai
Community College
Kaunakakai, Moloka'i TMK: 5-3-003: 001**

Thank you for the opportunity to comment on the proposed development of a campus for the Molokai Community College on lands in Kaunakakai, Moloka'i. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel.

Although the land has not undergone an archaeological inventory survey, we have no record of historic sites on this parcel. Judging from aerial photographs taken in the 1970s, the proposed development site was formerly under pineapple cultivation. Consequently, it is unlikely that significant historic sites are still present. Therefore, we believe that the proposed undertaking will have "no effect" on significant historic sites.

Should you have any questions, please feel free to call Sara Collins at 587-0013.

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

SC:jen

cc: Ms. Elizabeth Anderson, Cultural Resources Commission, Maui Planning Department,
250 S. High Street, Wailuku, HI 96793

JUL 25 1998