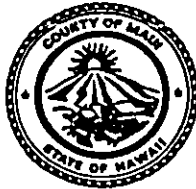


LINDA CROCKETT LINGLE
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

AARON SHINMOTO, P.E.
Chief Staff Engineer



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

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

DAVID WISSMAR, P.E.
Solid Waste Division

BRIAN HASHIRO, P.E.
Highways Division

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

July 25, 1995

Mr. Gary Gill
Director
Office of Environmental Quality Control
220 S. King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Gill,

SUBJECT: Final Environmental Assessment (EA) Submittal
Drainage Improvement on East Lipoa Street
Job No. 94-04

The Maui County Department of Public Works and Waste Management has reviewed the comments received during the 30-day public comment period which began on May 23, 1995. The agency has determined that this project will not have a significant environmental effect and has issued a negative declaration. Please publish this notice in the August 8, 1995 OEQC Bulletin.

Enclosed are four copies of the final EA and a completed OEQC Bulletin Publication Form. Should you have any questions, please contact Joe Krueger at 243-7745.

Very Truly Yours,

CHARLES JENCKS
Director of Public Works and Waste Management

Enclosures

CJ/JK:wk(ED95-1033)
lipoafnl.ea

96

1995-08-08-MA-~~FEA~~ FEA-Kihei East ~~Lihoa~~ ^{Lihoa} 8 1995 Lihoa Street

Drainage Improvements **FILE COPY**

FINAL ENVIRONMENTAL ASSESSMENT
FOR THE DRAINAGE IMPROVEMENT
ON EAST LIPOA STREET, KIHEI, MAUI

Prepared by:

GMP Associates, Inc.
Honolulu, Hawaii



ASSOCIATES, INC.
ENGINEERS/ARCHITECTS

July 1995

**FINAL ENVIRONMENTAL ASSESSMENT
FOR THE DRAINAGE IMPROVEMENT
ON EAST LIPOA STREET, KIHEI**

This environmental document is prepared pursuant to Chapter 200 of Title 11, Administrative Rules, Department of Health Administrative Rules, "Environmental Impact Statement Rules"

PROPOSING AGENCY:

Department of Public Works and Waste Management
County of Maui

ACCEPTING AUTHORITY

Department of Public Works and Waste Management
County of Maui

Responsible Official: _____

Date: _____

PREPARED BY:

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, HI 96813
(808)521-4711

July 1995

TABLE OF CONTENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TABLE OF CONTENTS

SECTION	TITLE	PAGE
PREFACE		vi
 SUMMARY OF THE FINAL ENVIRONMENTAL ASSESSMENT FOR THE DRAINAGE IMPROVEMENT ON EAST LIPOA STREET, KIHEI		
		vii
1	INTRODUCTION	1- 1
1.1	STUDY PURPOSE	1- 1
1.2	EXISTING DRAINAGE PATTERNS	1- 1
1.3	PROPOSED ACTION	1- 1
2	DESCRIPTION OF THE EXISTING ENVIRONMENT	2- 1
2.1	PHYSICAL SETTING	2- 1
2.1.1	CLIMATE	2- 1
2.1.2	GEOLOGY	2- 1
2.1.3	TOPOGRAPHY AND SOILS	2- 1
2.1.4	FLOOD AND TSUNAMI HAZARD	2- 4
2.1.5	FLORA AND FAUNA	2- 4
2.1.6	HISTORICAL/ARCHAEOLOGICAL FEATURES	2- 4
2.1.7	WETLANDS	2- 6
2.1.8	AIR QUALITY	2- 9
2.1.9	NOISE CHARACTERISTICS	2- 9
2.1.10	WATER QUALITY	2- 9
2.2	COMMUNITY SETTING	2- 9
2.2.1	LAND USE AND OWNERSHIP	2- 9
2.2.2	POPULATION	2-10
2.2.3	ECONOMY	2-10
2.2.4	POLICES AND FIRE PROTECTION	2-11
2.2.5	MEDICAL FACILITIES	2-11
2.2.6	RECREATIONAL FACILITIES	2-11
2.2.7	SCHOOLS	2-11
2.2.8	REFUSE COLLECTION AND DISPOSAL	2-12

TABLE OF CONTENTS, Continued

SECTION	TITLE	PAGE
2.2.9	PUBLIC TRANSPORTATION	2-12
2.3	INFRASTRUCTURE	2-12
2.3.1	ROADWAY AND TRAFFIC	2-12
2.3.2	WATER SYSTEM	2-13
2.3.3	WASTEWATER SYSTEM	2-13
2.3.4	ELECTRICITY/TELEPHONE	2-13
2.4	RELATIONSHIP TO LAND USE PLANS, POLICES, AND CONTROLS	2-13
2.4.1	STATE LAND USE DISTRICTS	2-13
2.4.2	MAUI COUNTY GENERAL PLAN	2-15
2.4.3	KIHEI COMMUNITY PLAN	2-15
2.4.4	COUNTY ZONING	2-15
2.4.5	COUNTY OF MAUI SPECIAL MANAGEMENT AREA (SMA)	2-15
3	ENVIRONMENTAL CONSEQUENCES DURING CONSTRUCTION	3- 1
3.1	IMPACTS ON THE PHYSICAL ENVIRONMENT	3- 1
3.1.1	EROSION AND DEWATERING CONTROL	3- 1
3.1.2	WATER QUALITY	3- 1
3.1.3	FLORA AND FAUNA	3- 1
3.1.4	HISTORICAL/ARCHEOLOGICAL FEATURES	3- 2
3.1.5	WETLANDS	3- 2
3.1.6	NOISE	3- 3
3.1.7	AIR POLLUTION	3- 3
3.1.8	PUBLIC HEALTH AND SAFETY	3- 3
3.2	IMPACTS ON COMMUNITY SETTING	3- 3
3.2.1	LOCAL ECONOMY	3- 4
3.2.2	OTHER COMMUNITY SERVICES	3- 4
3.3	IMPACTS ON INFRASTRUCTURES	3- 3

TABLE OF CONTENTS, Continued

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
4	ENVIRONMENTAL CONSEQUENCES AFTER PROJECT COMPLETION	4- 1
4.1	IMPACTS ON THE PHYSICAL ENVIRONMENT	4- 1
4.1.1	DRAINAGE IMPROVEMENT	4- 1
4.1.2	FLORA AND FAUNA	4- 1
4.1.3	VISUAL RESOURCES AND OTHER PHYSICAL ENVIRONMENT	4- 1
4.2	IMPACTS ON COMMUNITY SETTING	4- 1
4.3	IMPACTS ON INFRASTRUCTURES	4- 2
5	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES AND UNRESOLVED ISSUES	5- 1
6	LIST OF NECESSARY PERMITS AND APPROVALS	6- 1
7	ALTERNATIVES TO THE PROPOSED ACTION	7- 1
7.1	NO ACTION	7- 1
7.2	DELAYED ACTION	7- 1
8	FINDINGS AND CONCLUSION	8- 1
9	AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT	9- 1
10	RESPONSES AND COMMENTS TO DRAFT ENVIRONMENTAL ASSESSMENT	10- 1
	REFERENCES	R- 1
	APPENDIX	A- 1

LIST OF FIGURES

<u>FIGURE</u>	<u>TITLE</u>	<u>PAGE</u>
1-1	DRAINAGE ALIGNMENT ON LEAST LIPOA STREET	1- 2
2-1	GENERAL PROJECT LOCATION - ISLAND OF MAUI	2- 2
2-2	MEAN ANNUAL RAINFALL - ISLAND OF MAUI	2- 3
2-3	FLOOD INUNDATION MAP	2- 5
2-4	WETLAND MAP - FROM U.S. FISH AND WILDLIFE SERVICE	2- 7
2-5	WETLAND MAP - FROM U.S. ACOE	2- 8
2-6	STATE LAND USE MAP	2-14
2-7	KIHEI COMMUNITY PLAN	2-16
2-8	MAUI COUNTY ZONING MAP	2-17

PREFACE

PREFACE

This Final Environmental Assessment is prepared pursuant to the requirements of Chapter 343, *Hawaii Revised Statutes*, Act 241, Session Laws of Hawaii 1992, and Chapter 200 of Title 11, Department of Health Administrative Rules, "Environmental Impact Statement Rules"

This assessment documents the technical characteristics and environmental impacts of the proposed drainage project on East Lipoa Street, Kihei, and advances the findings and conclusions relative to the significance of the project.

**SUMMARY OF THE FINAL ENVIRONMENTAL
ASSESSMENT FOR THE DRAINAGE
IMPROVEMENT ON EAST LIPOA STREET, KIHEI**

**SUMMARY OF THE FINAL ENVIRONMENTAL ASSESSMENT FOR THE
DRAINAGE IMPROVEMENT ON EAST LIPOA STREET, KIHEI**

A. RESPONSIBLE OFFICE

Mr. Charles Jencks
Director of Public Works and Waste Management
County of Maui
200 South High Street
Wailuku, Maui 96793
Contact: Mr. Joe Krueger (808) 243-7745

B. ACCEPTING AUTHORITY

Mr. Charles Jencks
Director of Public Works and Waste Management
County of Maui
200 South High Street
Wailuku, Maui 96793
Contact: Mr. Joe Krueger (808) 243-7745

C. NAME OF ACTION

Environmental Assessment for the Drainage Improvement on East Lipoa Street, Kihei

D. DESCRIPTION OF PROPOSED ACTION

The Department of Public Works and Waste Management is proposing to install a drainage system within East Lipoa Street that will discharge into the State Regulation Reservoir located on the west (makai) side of South Kihei Road by Saint Theresa's Church.

E. AGENCIES CONSULTED DURING PREPARING THE ASSESSMENT

1. FEDERAL AGENCIES

Pacific Ocean Division
U.S. Army Corps of Engineers

Fish and Wildlife Service
Department of the Interior

Soil Conservation Service
Department of Agriculture

2. STATE AGENCIES

Department of Land and Natural Resources

Historic Preservation Office
Department of Land and Natural Resources

Commission on Water Resources Management
Department of Land and Natural Resources

Clean Water Branch
Department of Health

Office of Environmental Quality Control

State Land Use Commission
Department of Business, Economic Development, and Tourism

3. MAUI COUNTY AGENCIES

Department of Public Works and Waste Management

Planning Department

F. PROJECT SETTING

The project site is located in the west portion of East Lipoa Street, Kihei, Island of Maui. Currently there is no drainage system in the project site. The runoff generated in the project site and in the vicinity is collected by two storm drain inlets at the intersection of South Kihei Road. The water then flows south through a 2 x 3-foot box culvert along the west side of South Kihei Road to a State Regulation Reservoir. Floods occur during the wet seasons in this area since there is a lack of and limited capacity of drainage system.

G. RELATIONSHIP TO PLANS, POLICES AND CONTROLS

Plans, policies, and controls considered in the evaluation of the project site are as follows:

STATE LAND USE DISTRICTS
MAUI COUNTY GENERAL PLAN
KIHEI COMMUNITY PLAN
COUNTY ZONING
COUNTY OF MAUI SPECIAL MANAGEMENT AREA (SMA)

H. PROBABLE IMPACTS

Impacts associated with the proposed project can be classified as having short-term and long-term effects. Short impacts are those related to construction activities, namely traffic, noise, air quality, water quality, erosion and public health and safety. Long-term impacts are those associated with the operation of the facility. These may include impacts on flora, fauna, social, public health and safety, infrastructure, and traffic.

Short-term Impacts

The impacts generated from the construction activities are not expected to be significant. During construction, soil erosion control measures will be implemented. Potential soil loss is anticipated to be minimal and within a acceptable minimum range. Discharges from dewatering will be routed to the nearby county drainage system, such as the storm drain near the intersection of the South Kihei Road and Lipoa Street, in compliance with all applicable federal, state, and county regulations. There will be no impacts on water

quality, historical/archaeological features, and there are no known rare and threatened species of flora and fauna in the project site.

Noise control measures, such as muffling devices, should be utilized to minimize noise impacts.

Dust control measures such as sprinkling and watering will be implemented to minimize emissions.

Traffic monitoring and coordination shall be conducted to minimize inconvenience due to lane closures.

Long-term Impacts

In the long-term, the project is not anticipated to cause adverse impacts. Based on the history of runoff transport through existing culverts into the State Regulation Reservoir, the proposed project is not expected to adversely affect the existing water quality or biota in the reservoir.

I. ALTERNATIVES CONSIDERED

No Action

The "no action" alternative would mean that no drainage improvements would be made and East Lipoa Street would continue to flood during heavy rain seasons. This alternative will be unacceptable to the community since the absence of drainage facilities on East Lipoa Street causes flooding which affects traffic during heavy rains.

Delayed Action

The "delayed action" alternative means that the drainage improvements take place some time in the future. This alternative will result in similar flooding and traffic impacts to the community until the drainage improvement are made.

J. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES AND UNRESOLVED ISSUES

The construction of the improvements involves irreversible and irretrievable uses of energy, labor, materials and capital funded by the county. Operation of the facility will resolve the runoff hazard in the west portion of East Lipoa Street but also require irreversible and irretrievable resources of labor, materials and the county funds.

There are no unresolved issues at this time.

K. LIST OF NECESSARY APPROVALS

<u>Permit/Approval</u>	<u>Approving Agencies</u>	<u>Approximate Processing Time</u>
Special Management Area (SMA) Use Permit	Maui Dept. of Planning, Planning Commission	4 - 6 months
National Pollutant Delimitation Elimination System Construction/ Dewatering Permit	State Dept. of Health, Clean Water Branch	6 months
Grading Permit	Maui Dept. of Public Works and Waste Management	2 - 4 weeks

SECTION 1
INTRODUCTION

SECTION 1

INTRODUCTION

1.1 STUDY PURPOSE

The purpose of this study is to assess the environmental impacts for installing a drainage system within East Lipoa Street proposed by the Department of Public Works and Waste Management, County of Maui. The new drainage system will connect to the existing regulation reservoir located on the west side of South Kihei Road by Saint Theresa's Church.

1.2 EXISTING DRAINAGE PATTERNS

Natural drainage within the Kihei area generally occurs from upland mauka areas to the sea across urbanized areas on the coastline through several gulches with secondary branches. Almost all of the gulches are dry during most of the year and carry water in wet periods. The existing drainage facilities are limited to a few unlined channel, drain lines, pipes or box culverts scattered throughout Kihei. These drainage systems are inadequate for the volume of surface runoff and results in flooding of the low-lying coastal plain areas during heavy rains.

There is no existing closed drainage system along the East Lipoa Street. Runoff is collected by two storm drain inlets at the intersection of South Kihei Road. The water then flows southerly through a 2 x 3-foot box culvert along the west side of South Kihei Road to a State Regulation Reservoir. Flooding occurs during wet season in this area due to lack of capacity of the drainage system.

1.3 PROPOSED ACTION

The action proposed by the Maui Department of Public Works and Waste Management is to install 450 linear foot of 18-in diameter Reinforced Concrete Pipe (RCP) along the East Lipoa Street. The drainline will direct runoff from the west portion of East Lipoa Street to an existing 2 x 3-foot box culvert on the west side of South Kihei Road which then discharges into the State Regulation Reservoir. The proposed drainline alignment is shown in Figure 1-1. This drainage pipe should be adequate to discharge the runoff generated in the west portion of East Lipoa Street. There are total three catch basins along the drainage system: one is on the north side of the street and the other two are on the south side of the street.

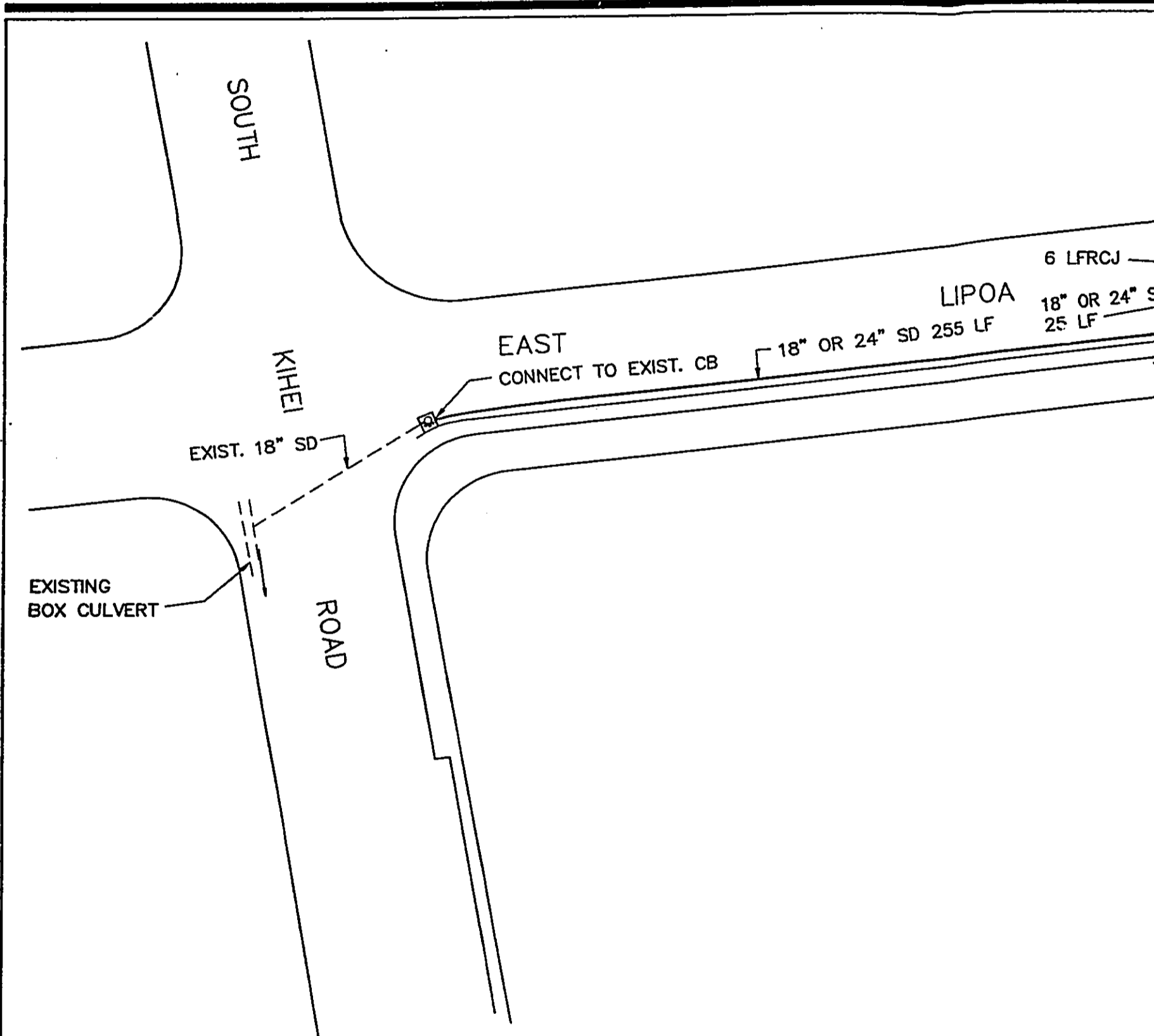
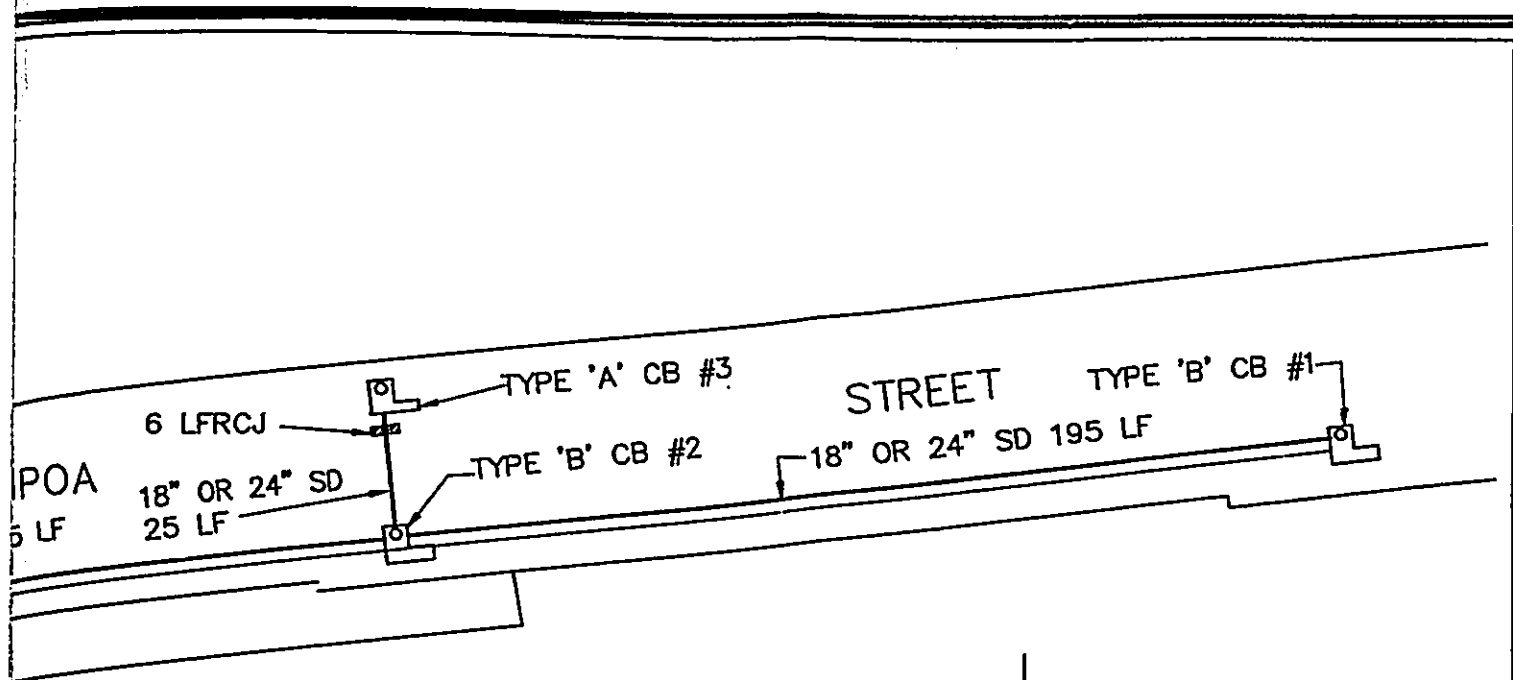


FIGURE 1-1 DRAINAGE ALIGNMENT ON EAST L

S22405AB



GRAPHIC SCALE



MENT ON EAST LIPOA STREET

SECTION 2

**DESCRIPTION OF THE
EXISTING ENVIRONMENT**

SECTION 2

DESCRIPTION OF THE EXISTING ENVIRONMENT

2.1 PHYSICAL SETTING

2.1.1 CLIMATE

Kihei is located on the south side of the island of Maui (see location map Figure 2-1). Kihei's climate is sunny, semi-arid, warm, and relatively uniform year-round. The region's tropical latitude relative to storm tracks and the Pacific anticyclone, and the surrounding ocean combine to produce this stable climate.

The average daily temperatures in Kihei range from a minimum average of 62°F in February to a maximum average of 90°F in July. Relative humidity on the leeward lowlands near Kihei averages 60 - 70%. Annual rainfall along the Kihei dry coastline is less than 15 inches or 380 mm, with most of it occurring during the few winter storms between November and March (figure 2-2). Rainfall during a 24-hour period may reach as high as 7 inches, about half of the annual amount. Winds are generally from the northeast except during the winter months when storms are usually accompanied by southerly winds.

2.1.2 GEOLOGY

The geological strata of the Kihei area are described as the coastal flank of the western slope of the massive and extinct shield volcano, Haleakala. The underlying structure of the land is rock formed by the cooling of lava flows. The most recent Hana Volcanic Series (Recorded in 1790), ranges from a few inches to a few feet in thickness at variable depths below the soil mantle which has built up over the years by alluvial action. Surface strata are characterized by loose sedimentary rock and the alluvial soil covering of gravel, silt, clay and loam.

2.1.3 TOPOGRAPHY AND SOILS

The proposed drainline improvements extend from approximately 4 feet above Mean Sea Level (MSL) to 8 feet above MSL. Slopes in the vicinity of the project site range from nearly level to 4 percent.

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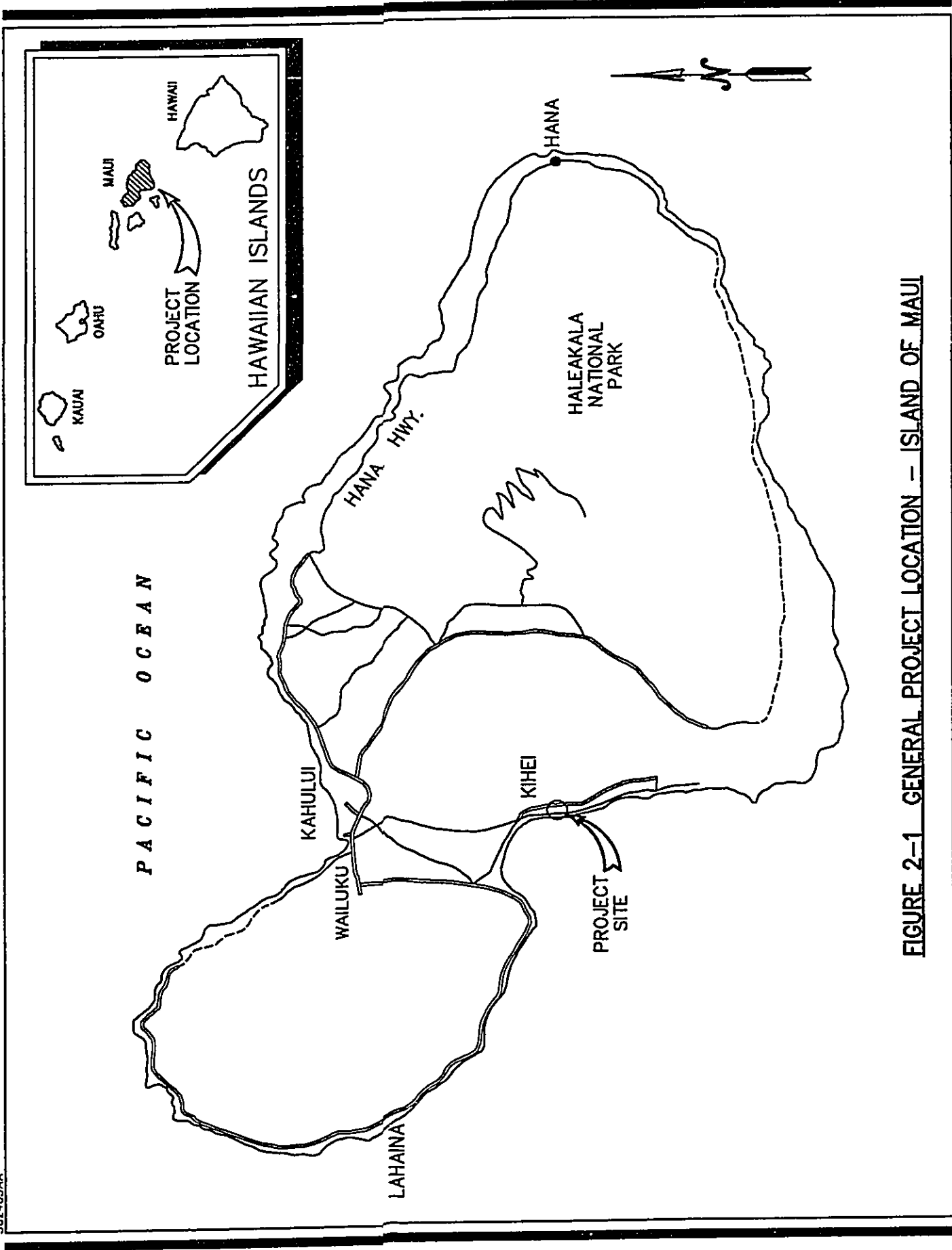
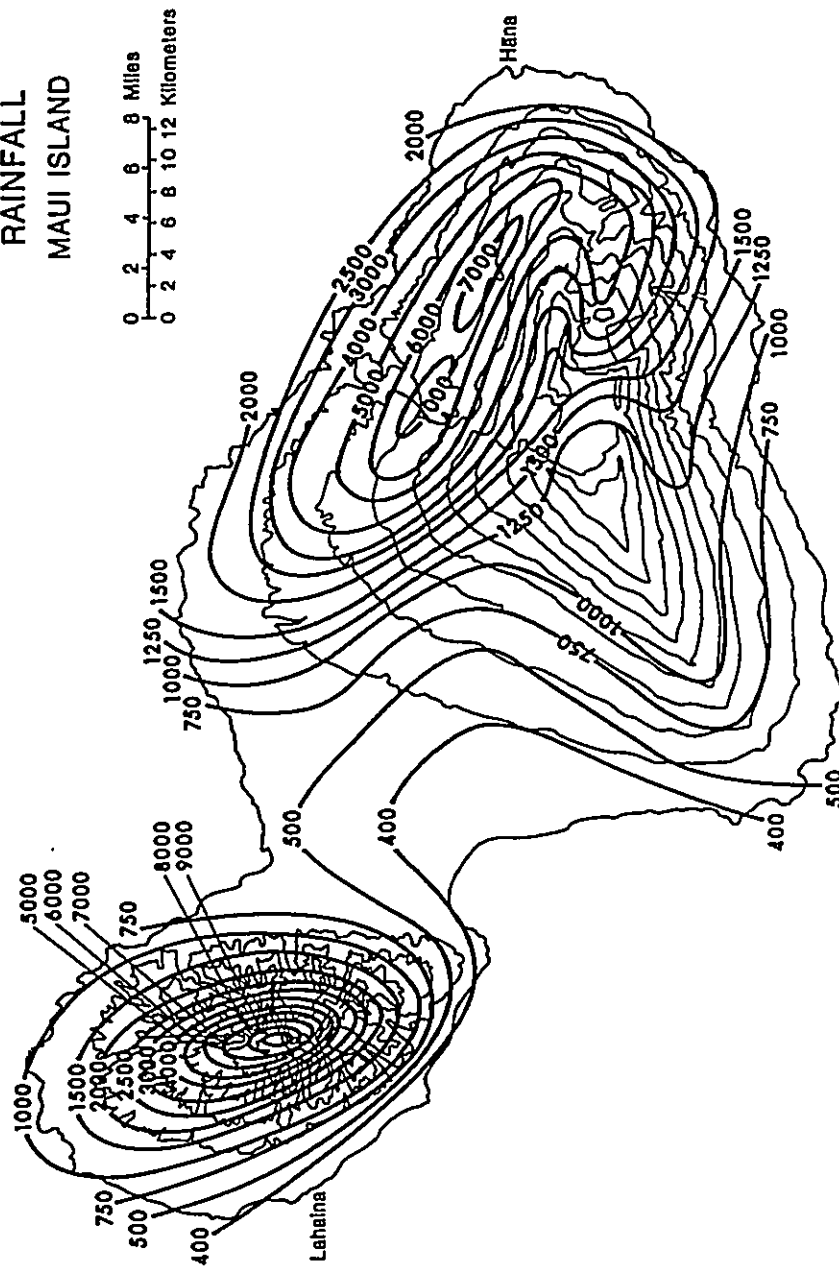


FIGURE 2-1 GENERAL PROJECT LOCATION - ISLAND OF MAUI

MEAN ANNUAL
RAINFALL
MAUI ISLAND



NOTE: Isohyets in millimeters.
NOTE: Elevation in 1000-ft intervals.

FIGURE 2-2 MEAN ANNUAL RAINFALL - ISLAND OF MAUI

Source: Rainfall Atlas of Hawaii. June 1986

The dominant soils underlying the proposed project site and surrounding areas are the Pulehu-Ewa-Jaucas association. They are generally deep, sandy, clayey, well drained and formed by erosion of the upper slopes and the deposition of the eroded material on the lower slopes. Subsoils are moderately fine textured to coarse textured.

2.1.4 FLOOD AND TSUNAMI HAZARD

Much of the area in North Kihei lies within flood inundation areas as defined by the Federal Flood Insurance Rate Map (FIRM) for that area due to the low-lying terrain (Figure 2-3). The project site is designated as Zone AH (EL6), which means the 100-year coastal flood inundation depth is between 1 to 3 feet and base flood elevation is 6 feet.

2.1.5 FLORA AND FAUNA

Indigenous birds near the project area include the permanent resident Hawaiian short-eared owl or pueo, and the migratory pacific golden plover, which is a common winter shorebird. Birds of foreign origin include the barred dove, spotted dove, cardinal, mockingbird and white eye (Ref. 7). Two species of bird, the Hawaiian Coot and Hawaiian Stilt, both on the endangered list of State and Federal wildlife agencies, inhabit Kealia Pond approximately 1 mile northwest of Kihei.

The Haleakala slope is characterized by sparse vegetation. Natural vegetation consists of Kiawe, Haole Koa and lowland shrubs (Ref. 7). A dense cover of buffelgrass (Pili grass, finger grass) characterizes the lower slope and pickleweed (Akulikuli) is preponderant in low-lying and marshy areas along the coastline (Ref. 7). In the residential community there are various types of common plants which include fruit trees, vegetable gardens, coconut and other types of trees, bushes, shrubbery and other ornamental plants.

2.1.6 HISTORICAL/ARCHAEOLOGICAL FEATURES

An historical/archaeological literature survey was conducted for the project site. A letter from the state Historic Preservation Office is included in Appendix. A listing of references consulted for the historical/archaeological literature survey is included and marked with "*" in the References section of this report.

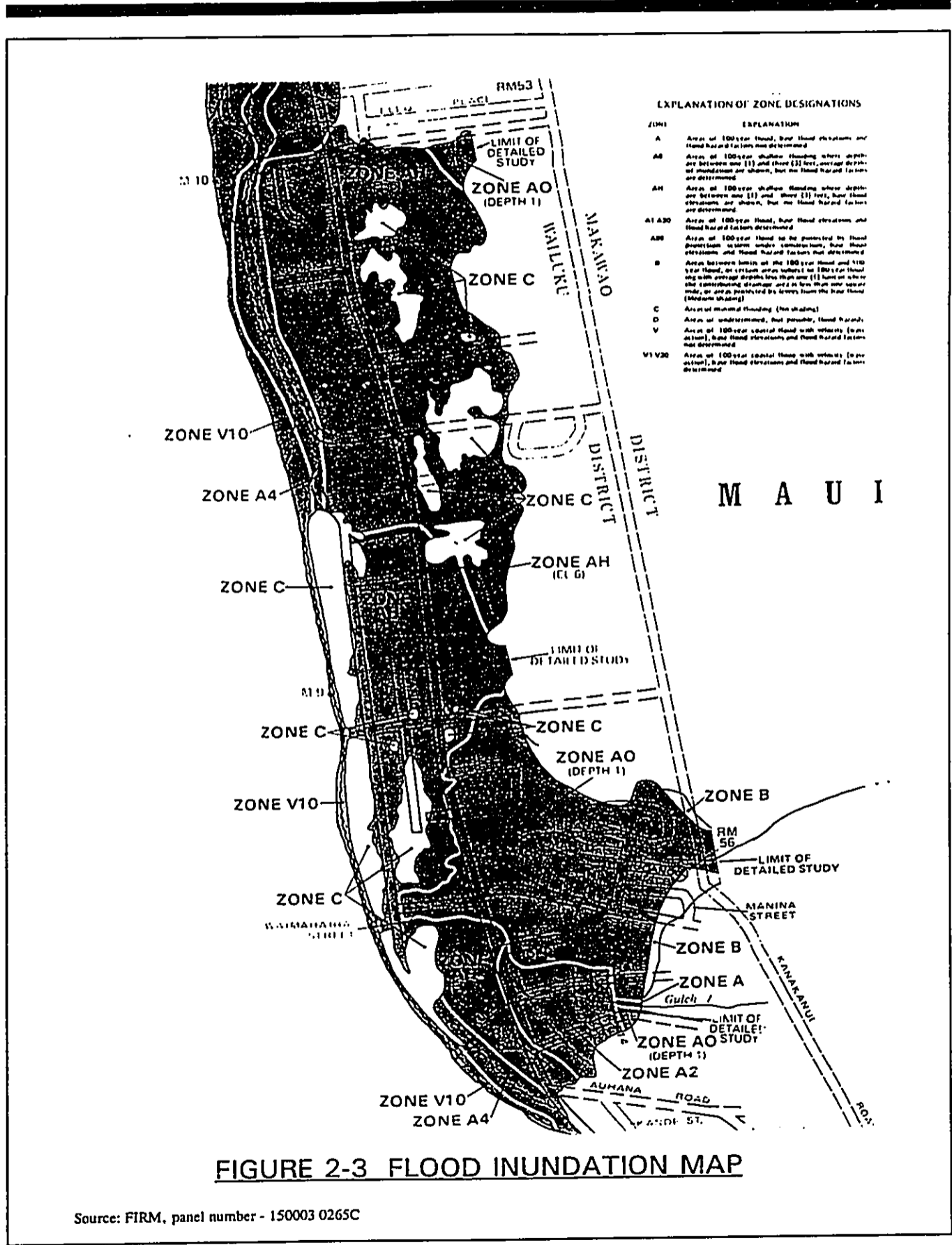


FIGURE 2-3 FLOOD INUNDATION MAP

Source: FIRM, panel number - 150003 0265C

There are no known historical/archaeological sites in the project site. However, there are some historical/archaeological findings nearby.

To the east of the Lipoa Street, Seven sites, including rock mounds, walls, enclosures, platforms, and surface midden deposits, were identified in the vicinity of Kihei Elementary School in 1977 walk-through survey. In the north of the school, five historic sites were identified during 1989 survey for Pi'ilani Residential Community - Phase I project. In the south of the school, Sixteen sites with 30 component features, including platforms, enclosures, walls, C-shapes, and surface midden, were identified during archaeological survey for Pi'ilani residential community - Phase II project.

Along the north of the Lipoa Street, A buried cultural deposit was identified adjacent to an exposed bedrock formation during the archaeological survey for proposed Route Corridor C.

Smith Trust property is located immediately south of the project site. No significant historic sites were identified within this 6.7-acre property.

There are no records of archaeological work conducted in the west of the Kihei Road along either side of Lipoa Street.

2.1.7 WETLANDS

U.S. Fish and Wildlife Services's National Wetlands Inventory Map identifies wetlands in the Kihei area (Figure 2-4). The most prominent wetland is the Kealia Pond in the north end of Kihei. There are two small wetlands scattered to the south and north of the project site.

The Army Corps of Engineers (ACOE) conducted a reconnaissance survey of wetlands in Kihei in June 1990. Based on the survey findings, a generalized wetlands location map was prepared and issued (Figure 2-5). There are several wetlands identified surrounding the project site. The nearest ones are approximately 1,000 feet away to the south and 400 feet away to the north of East Lipoa Street. The receiving water of the stormflows before the improvements and the drainage after the improvements is the State Regulation Reservoir which is within the ACOE wetland jurisdiction.

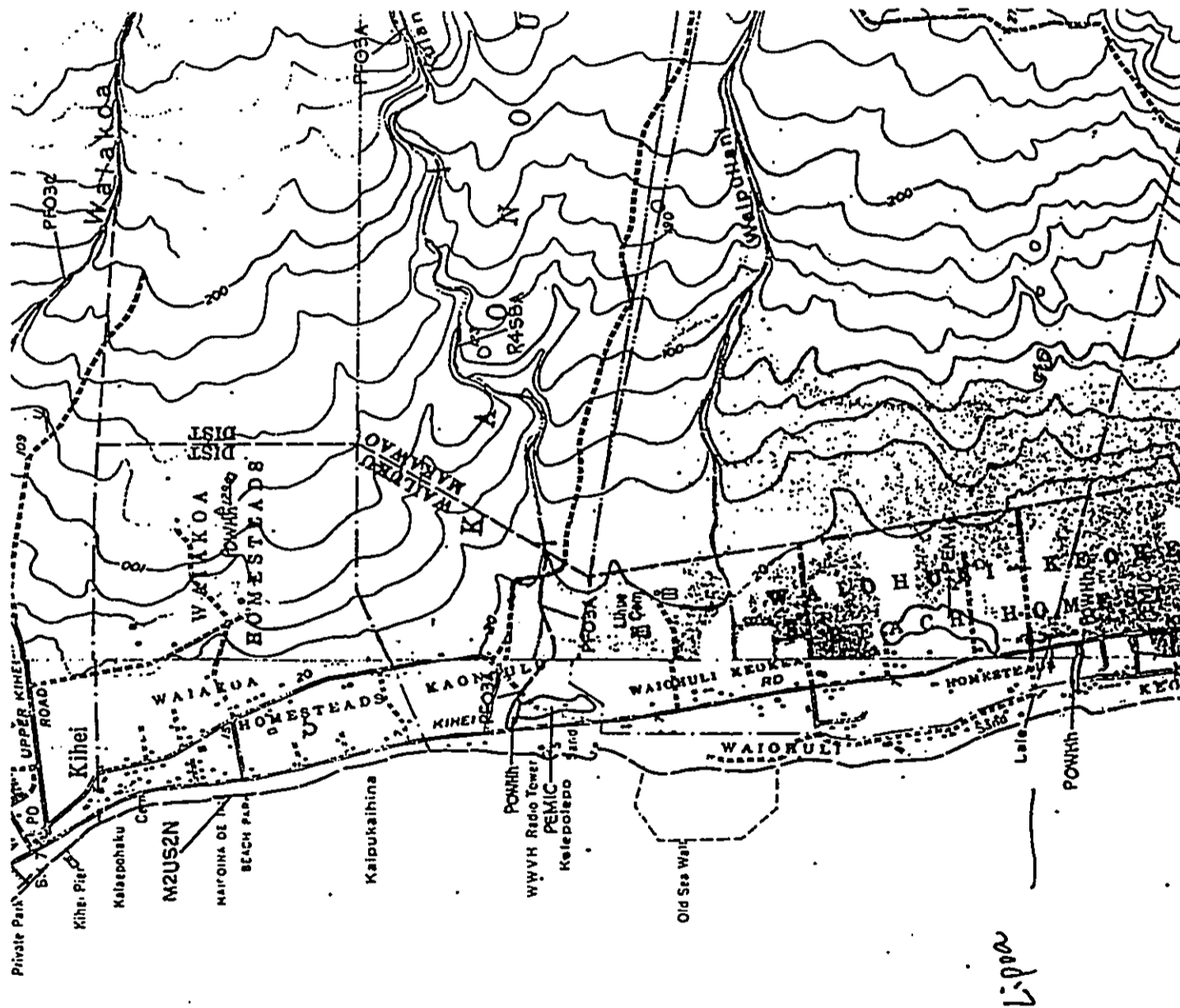
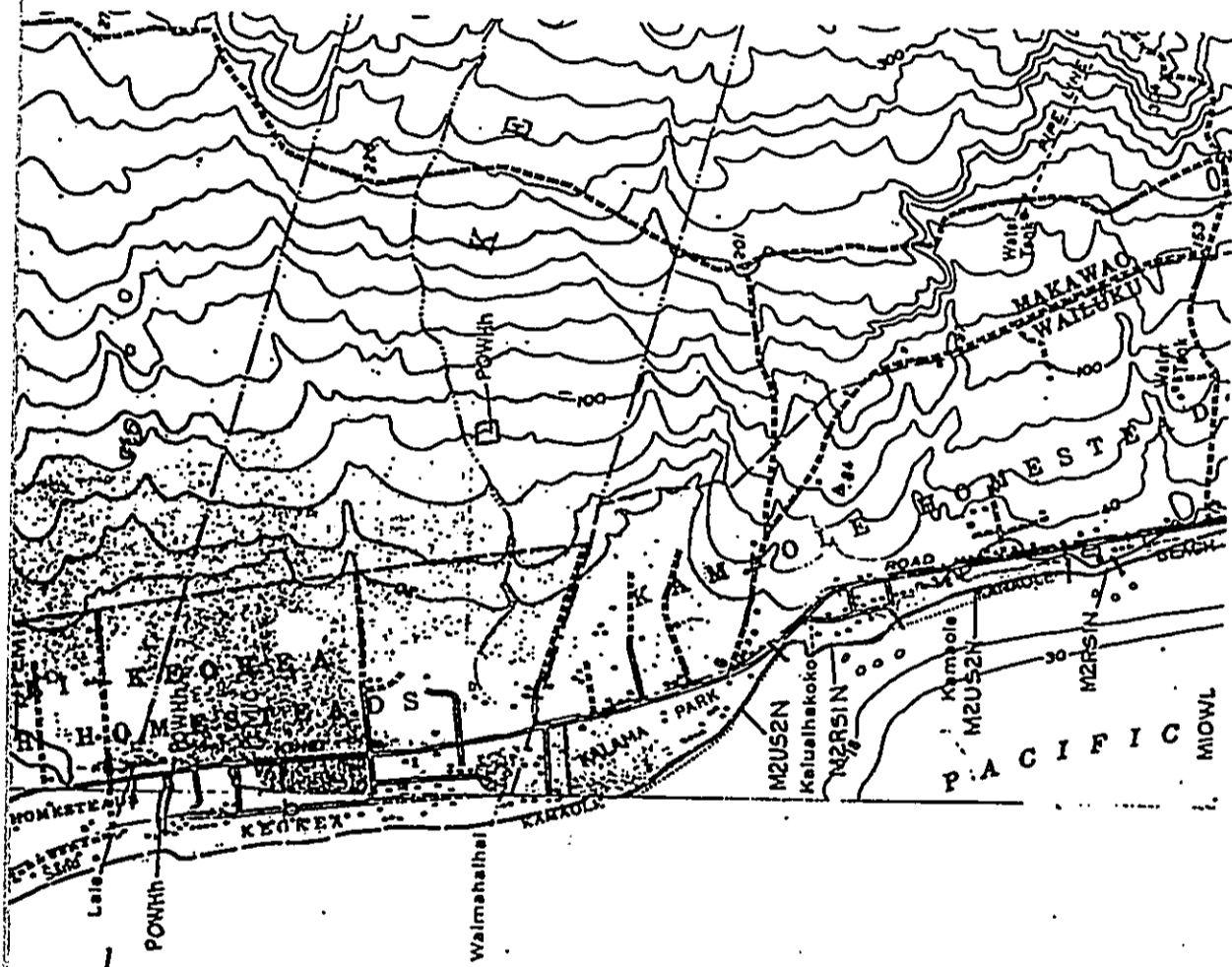


FIGURE 2-4 WETLAND MAP - FROM U.S. FISH AND WILDLIFE SERVICE

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U.S. FISH AND WILDLIFE SERVICE

DOCUMENT CAPTURED AS RECEIVED

Wetland Locations Kihei, Maui

February 1991

U S Army Corps of Engineers

R. M. Towill Photograph, 8/87

Legend:  Wetland Locations

NOT TO SCALE

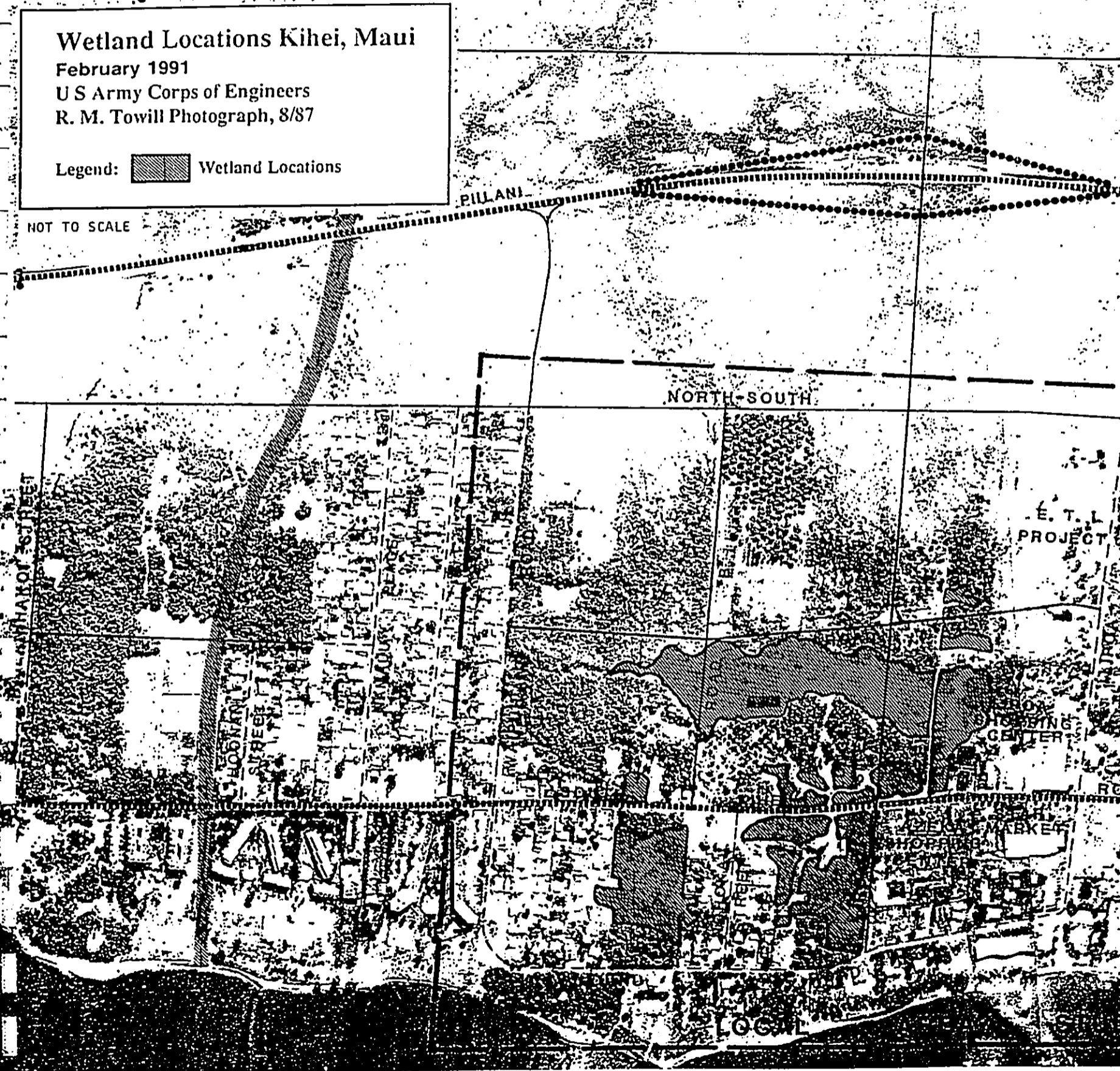
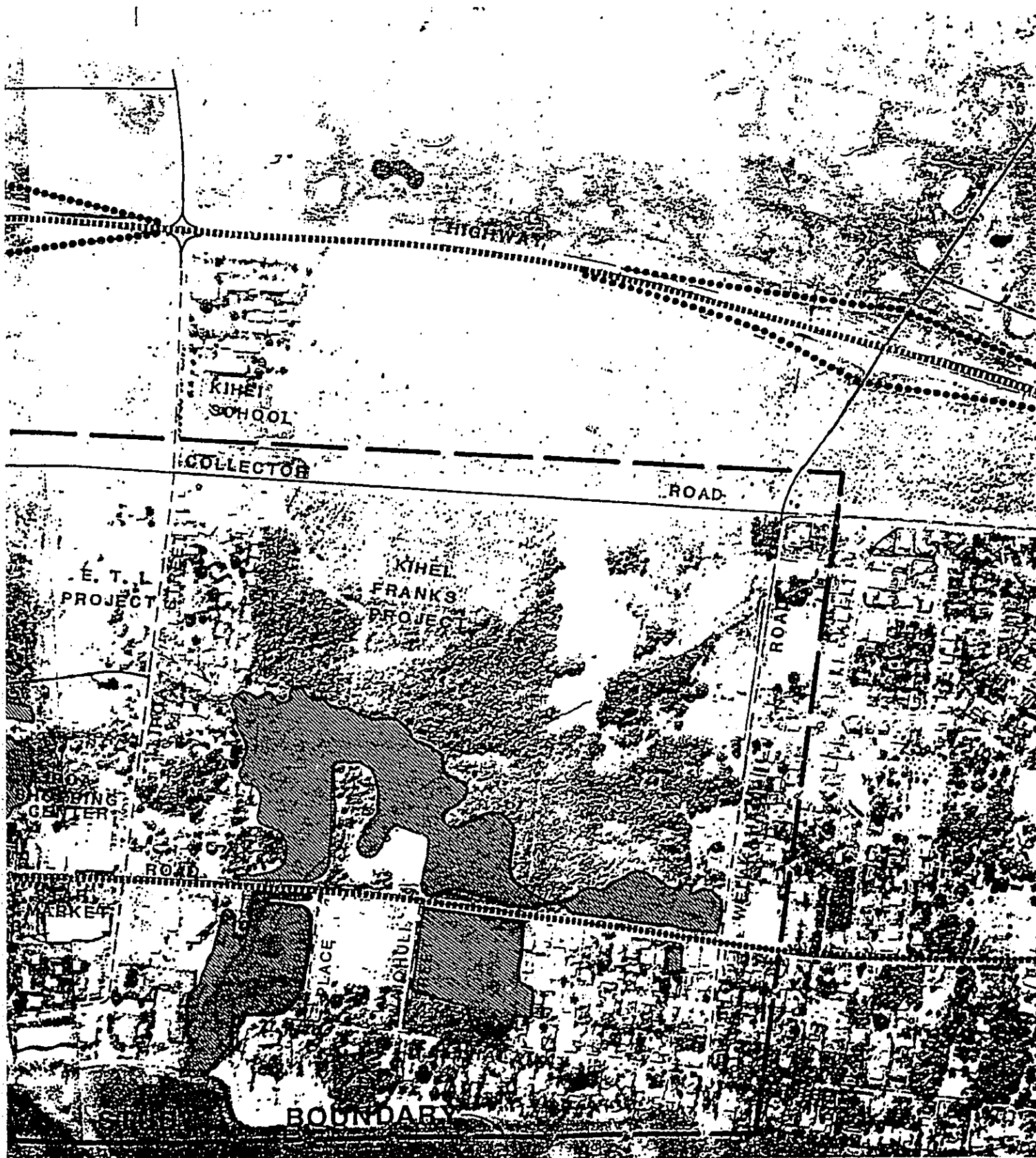


FIGURE 2-5 WETLAND MAP - FROM U.S. ACOE

DOCUMENT CAPTURED AS RECEIVED



2.1.8 AIR QUALITY

Kihei is not exposed to adverse air quality conditions. There are no point sources of airborne emissions in the immediate vicinity. The motor vehicles on East Lipoa Street and South Kihei Road are the primary sources of indirect emissions in the region. The air quality at the project site is generally considered good and well within the state and federal Clean Air Act standards, i.e., particulate matter below 150 micro-grams/m³ and sulphur oxides below 1,300 micro-grams/m³.

2.1.9 NOISE CHARACTERISTICS

There are no significant fixed noise generators in the vicinity of the project site. Background noise in the area can be attributed to traffic travelling on East Lipoa Street and South Kihei Road. The speed limit is 20 miles per hour (mph) for East Lipoa Street and 20 to 30 mph for South Kihei Road. Ambient noise in the project area, therefore, exhibits levels in the range of 25-35 decibels (DBA) and is considered normal and acceptable for surrounding area.

2.1.10 WATER QUALITY

Kihei area is designated as Class 2 inland water area under the water quality standards of the Hawaii Administrative Rules, Chapter 54 of Title 11, Department of Health. The use of water is for recreational purposes, propagation of fish and aquatic life, and agricultural and industrial water supplies, shipping navigation and propagation of fish, shellfish, and wildlife. No new industrial discharges, including dewatering from construction, shall be permitted within the estuary unless covered by a National Pollutant Discharge Elimination System (NPDES) general permit.

2.2 COMMUNITY SETTING

2.2.1 LAND USE AND OWNERSHIP

The project area is characterized by residential (single-family, multifamily, and apartment), business/commercial, hotel, public/quasi-public, and future project district uses.

Most of the property around the project site is privately owned. Significant land uses and ownerships near the project areas are listed below:

Use	Owner
Star Market Shopping Center	Star Markets Ltd.
Sun Hotel	Maui Sun Development Corp.
Kihei Elementary School	State of Hawaii
Kihei Professional Plaza	Term Venture
St. Theresa Church	County of Maui
Single-Family Dwellings	Smith Trust
Silversword Golf Course	Silversword Limited Partnership
Maui Research and Technology Park	Silversword Limited Partnership

East Lipoa Street and its respective right-of-way is owned by the County of Maui.

2.2.2 POPULATION

The population on the island of Maui has increased rapidly. The de facto population, which includes visitors present on an average day for that year, but excludes residents temporarily absent, was 126,992 in 1990 (Ref. 23 and 24). It increased 87.8% from 1970 to 1980 and 65.3% from 1980 to 1990. The residential population, which is defined for whom the residents or those living in the county of Maui for that year was 91,631 in 1990. It increased 62.4% from 1970 to 1980 and 45.4% from 1980 to 1990. The visitor population also increased. In 1990 approximately 30% of the population on the island was comprised of visitors. In the Kihei area the residential population is 11,107, a 96.8% increase from 5,644 in 1980.

2.2.3 ECONOMY

The economy of Kihei, as well as the island of Maui, is heavily dependent upon service industries, i.e., retailing, tourism, utilities, etc. This area also serves as a "bedroom" community for the Kahului/Wailuku centers of employment. During 1993, the unemployment rate experienced on the Island of Maui is 4.9%, which is higher than the state average of 4.2%.

In 1992 the per capita income for Maui County was \$20,633. This was lower than the per capita income in Honolulu (\$22,200) but higher than the other counties.

2.2.4 POLICE AND FIRE PROTECTION

The Kihei area is served by three regular police patrols on all shifts with other on-call resources. The patrols operate out of police headquarters in Wailuku. The construction of a police sub-station in Kihei is under discussion.

Fire protection for the Kihei area is provided by the Maui County Fire Station located on Kihei Road near Kalama Park, about 2 miles south of the project site. It houses a 1,500 gpm pumper with a 1,000 gallon reserve tank. There are over 600 fire hydrants throughout the Kihei area.

2.2.5 MEDICAL FACILITIES

Health care on Maui is provided by general hospitals in Wailuku, Hana, and Kula. In 1987, 153 beds were available for general, acute and emergency care services.

2.2.6 RECREATIONAL FACILITIES

Kihei is served by numerous recreation facilities offering diverse opportunities for the region's residents. Major facilities include Kihei Elementary School Park; Kihei District Park, and Kalama Beach Parks I, II, and III. The Silversword Golf Course, located on the mauka side of Pi'ilani Highway, is also available for public use.

2.2.7 SCHOOLS

There are two public schools in the Kihei area: Kihei Elementary School and Lokelani Intermediate School. Both are located on the east end of East Lipoa Street. The design enrollment for the schools are 900 and 66, respectively. Enrollment in 1988 was 1,013 for Kihei Elementary and 268 for Lokelani Intermediate. The enrollments in spring 1995 for the schools are 1,230 and 607, respectively. The State DOE, Maui District, provides bus services to all students living outside a radius of 1 mile from the schools.

2.2.8 REFUSE COLLECTION AND DISPOSAL

Solid waste collection is provided by County of Maui on a weekly basis. Refuse from this area is disposed of at the central Maui landfill.

2.2.9 PUBLIC TRANSPORTATION

There are no public transportation systems available now in Kihei area or on the island of Maui.

2.3 INFRASTRUCTURE

2.3.1 ROADWAY AND TRAFFIC

Access to the project site is provided by South Kihei Road and Pi'ilani Highway. South Kihei Road is generally a two-lane road through Kihei following the coastline. It is widened to include left-turn lanes at various locations. Posted speed limit is between 20 mph to 30 mph. Pi'ilani Highway is a high-quality two-lane highway. Its alignment is generally parallel to and mauka of South Kihei Road. Pi'ilani Highway has paved shoulders with left and right turn deceleration lanes at key intersections. The posted speed limit is between 45 mph and 55 mph. Several roads connect with South Kihei Road and Pi'ilani Highway. Among them, East Lipoa is the most heavily used because of its location near commercial activities and due to lack of other routes in the vicinity. In the master traffic plan, Pi'ilani Highway is designated as a four-lane divided highway. South Kihei Road is planned to be improved to a four-lane secondary arterial. A new North-South Collector Road between South Kihei Road and Pi'ilani Highway and minor East-West collector roads are designated to improve the access to Pi'ilani Highway from South Kihei Road.

Currently traffic flows on the arterial in this network are moderate to heavy. Pi'ilani Highway carries 13,000 vehicles per day (vpd) to 17,000 vpd. South Kihei Road carries 13,000 vpd to 16,000 vpd. Traffic volume on East Lipoa Street is close to 7,000 vpd. The afternoon peak hour traffic flows at the intersection of the South Kihei Road and East Lipoa street are 1,390 vehicles per hour (vph) north of the intersection on South Kihei Road and 1,422 vph south of the intersection on South Kihei Road, and 455 vph on East Lipoa Street, respectively.

2.3.2 WATER SYSTEM

The Kihei area is served by the Central Maui Water System. Water is transmitted from wells and tunnels in the West Maui Mountains to Makena, through transmission lines running through the isthmus, along South Kihei Road, Pi'ilani Highway, and Wailea Alanui Drive. East Lipoa Street is served by a 12" water line running along the north side of East Lipoa Street.

2.3.3 WASTEWATER SYSTEM

Wastewater from the Kihei area is treated at the Kihei Wastewater Treatment Plant (WWTP), run by the County Department of Public Works and Waste Management. It is located above Pi'ilani Highway, south of the Silversword Golf Course. Sewage is transported to the Kihei WWTP by a combination of gravity sewer lines, pump stations and force mains. Currently the plant is treating 4 million gallons per day (mgd), which is below the design capacity of 6 mgd.

There is a 8" gravity sewer line underlying the south side of East Lipoa Street which collects sewage from nearby subdivisions.

2.3.4 ELECTRICITY/TELEPHONE

Electric power in the Kihei area is provided by Maui Electric Co., a subsidiary of Hawaiian Electric Co., Inc. Telephone service for Kihei, as well as the County of Maui, is provided by Hawaiian Telephone Co.

2.4 RELATIONSHIP TO LAND USE PLANS, POLICES, AND CONTROLS

The following land use plans, policies, and controls apply to the project area:

2.4.1 STATE LAND USE DISTRICTS

Under the State Land Use Law, Chapter 205, *Hawaii Revised Statutes*, all lands are classified as "Urban", "Rural", "Agricultural", or "Conservation". The project site, like most of the Kihei area, is designated as an "Urban" Districts (Figure 2-6). The proposed drainage improvements are allowed within "Urban" Districts.

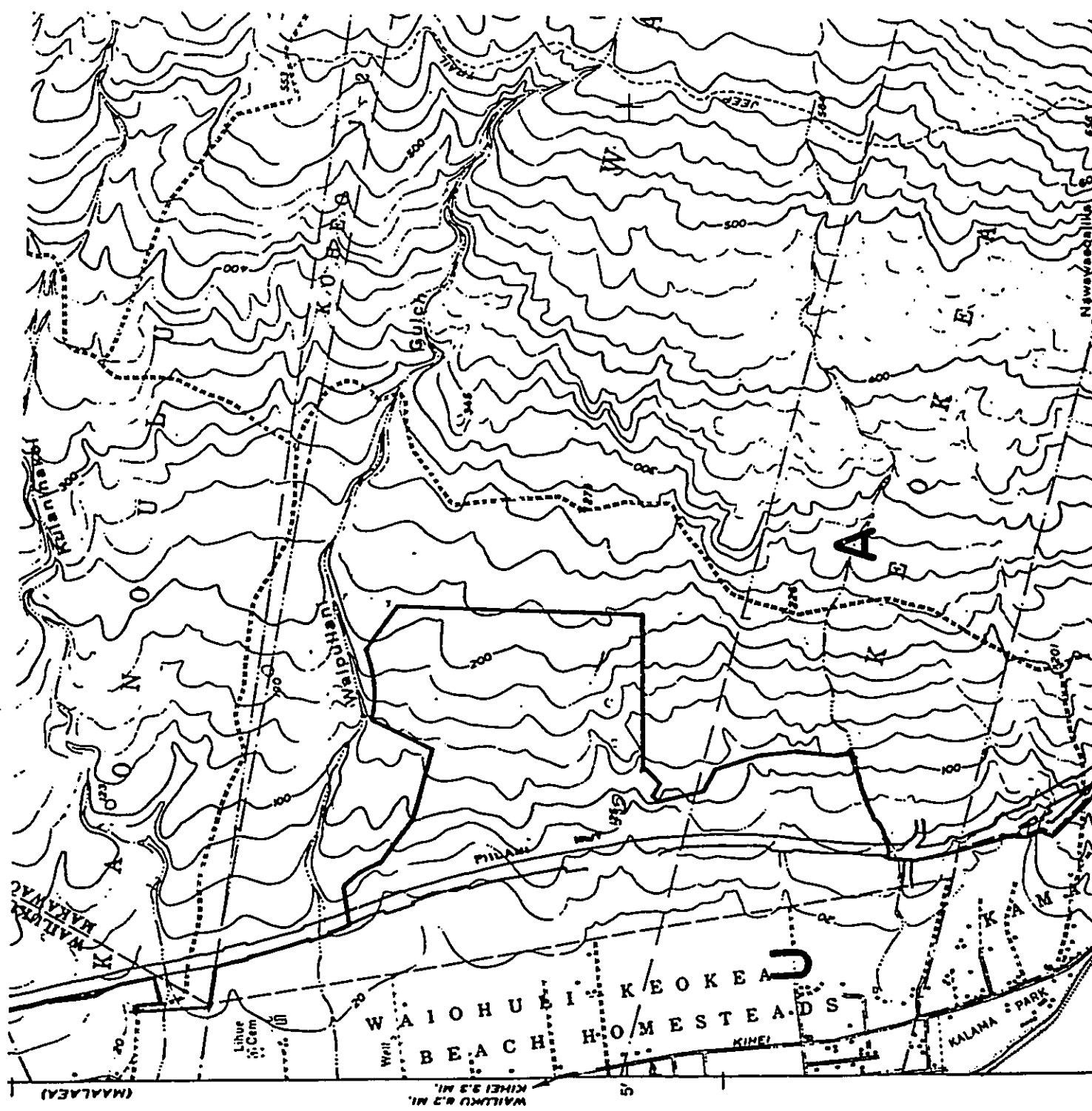
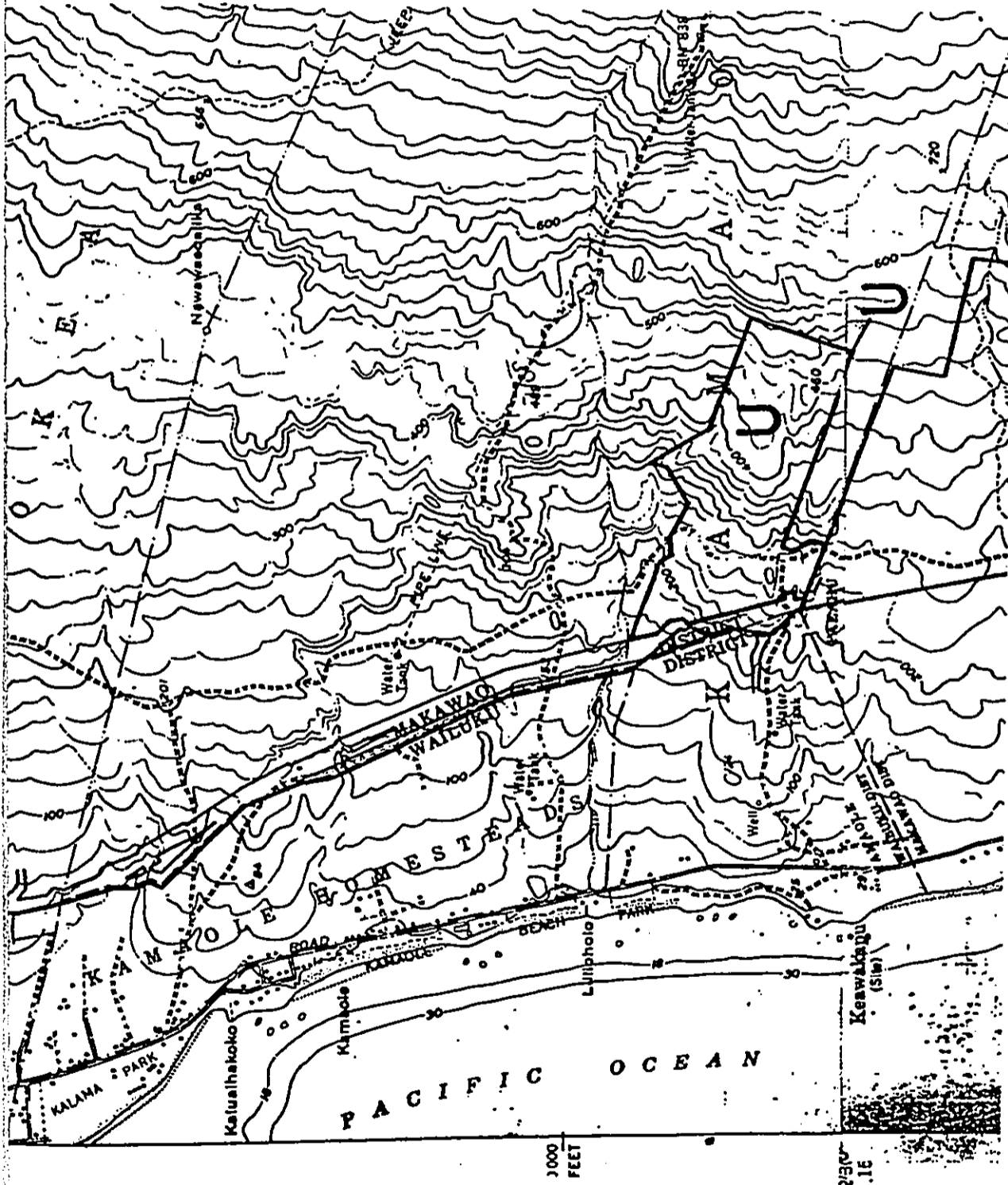


FIGURE 2-6 STATE LAND USE M



LAND USE MAP

2.4.2 MAUI COUNTY GENERAL PLAN

The Maui County General Plan sets forth broad objectives and policies to help guide the long-range development of the County. The proposed project is consistent with this plan which seeks to "make more efficient use of our ground, surface and recycled water sources", and "improve catchment systems and transmission systems to reduce runoff."

2.4.3 KIHEI COMMUNITY PLAN

Nine community plan regions have been established in Maui County. Each region's growth and development is guided by a Community Plan, which contains objectives and policies drafted in accordance with the County General Plan. The purpose of the Community Plan is to outline a relatively detailed agenda for carrying out these objectives.

The proposed project falls within the jurisdictions of the Kihei-Makena Community Plan (Figure 2-7), which was adopted on June 24, 1980 as Ordinance No. 1052. Currently a new Kihei-Makena Community Plan is proposed and no modifications are made in the vicinity of the project site. The proposed drainage is underlying the county road - East Lipoa Street. It is surrounded by the area designated as "Business", "Public/Quasi-Public", and "Single-Family". Therefore, the proposed drainage improvements are consistent with the community plan designations.

2.4.4 COUNTY ZONING

Since the project site is underlying the county road - East Lipoa Street, there is no zoning designations available. The drainage improvements are permitted under the county road. The established zoning districts in the vicinity of the project site include B-2 for community business, R-3 for residential, and A-1 for low density apartment (Figure 2-8).

2.4.5 COUNTY OF MAUI SPECIAL MANAGEMENT AREA (SMA)

The proposed project is located within the County of Maui's Special Management Area (SMA) and subject to Chapter 205-A of the *Hawaii Revised Statutes* and Chapter 202 of SMA Rules for the Maui Planning Commission of the County of Maui. The following objectives shall be met for the development of lands within the SMA.

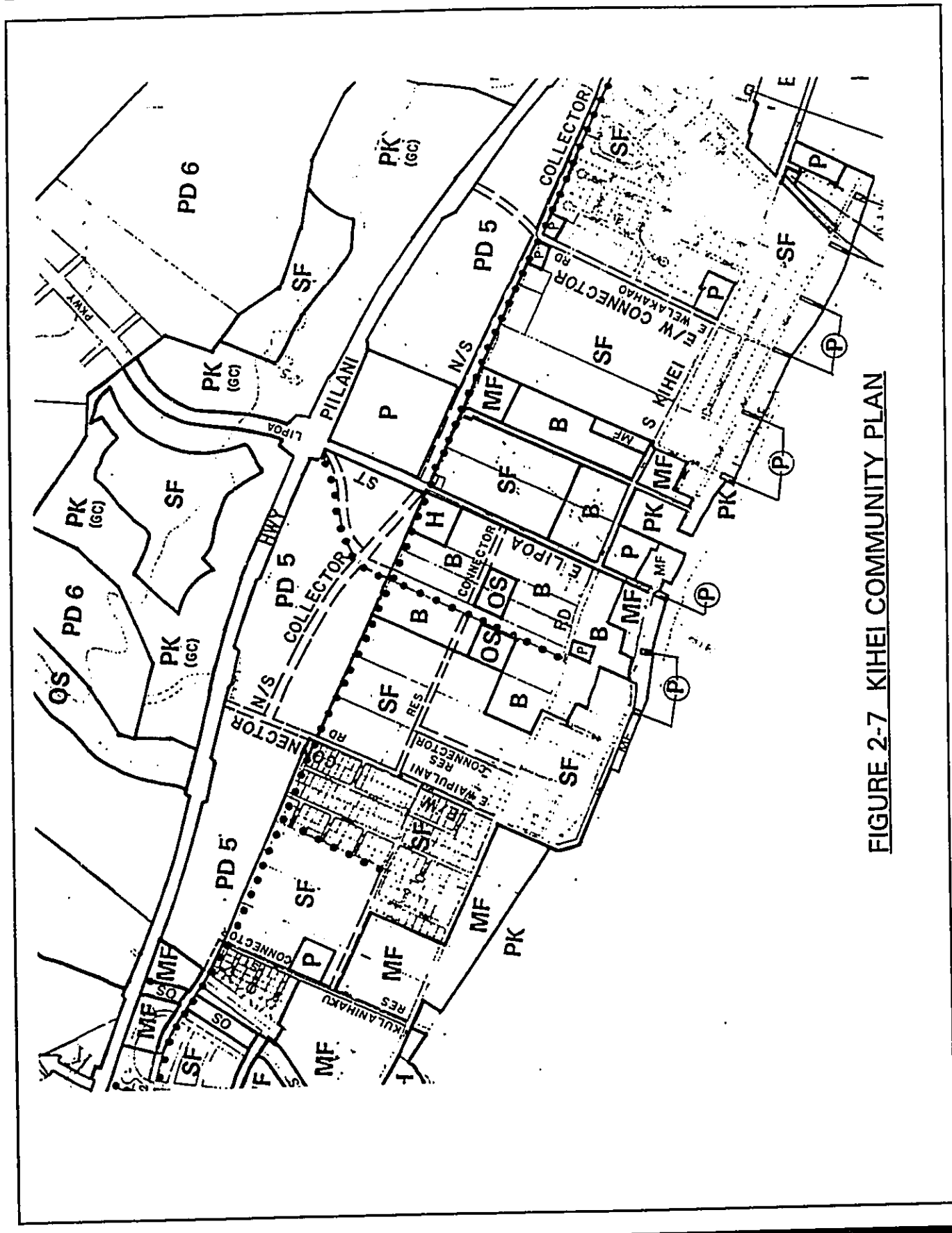


FIGURE 2-7 KIHAI COMMUNITY PLAN

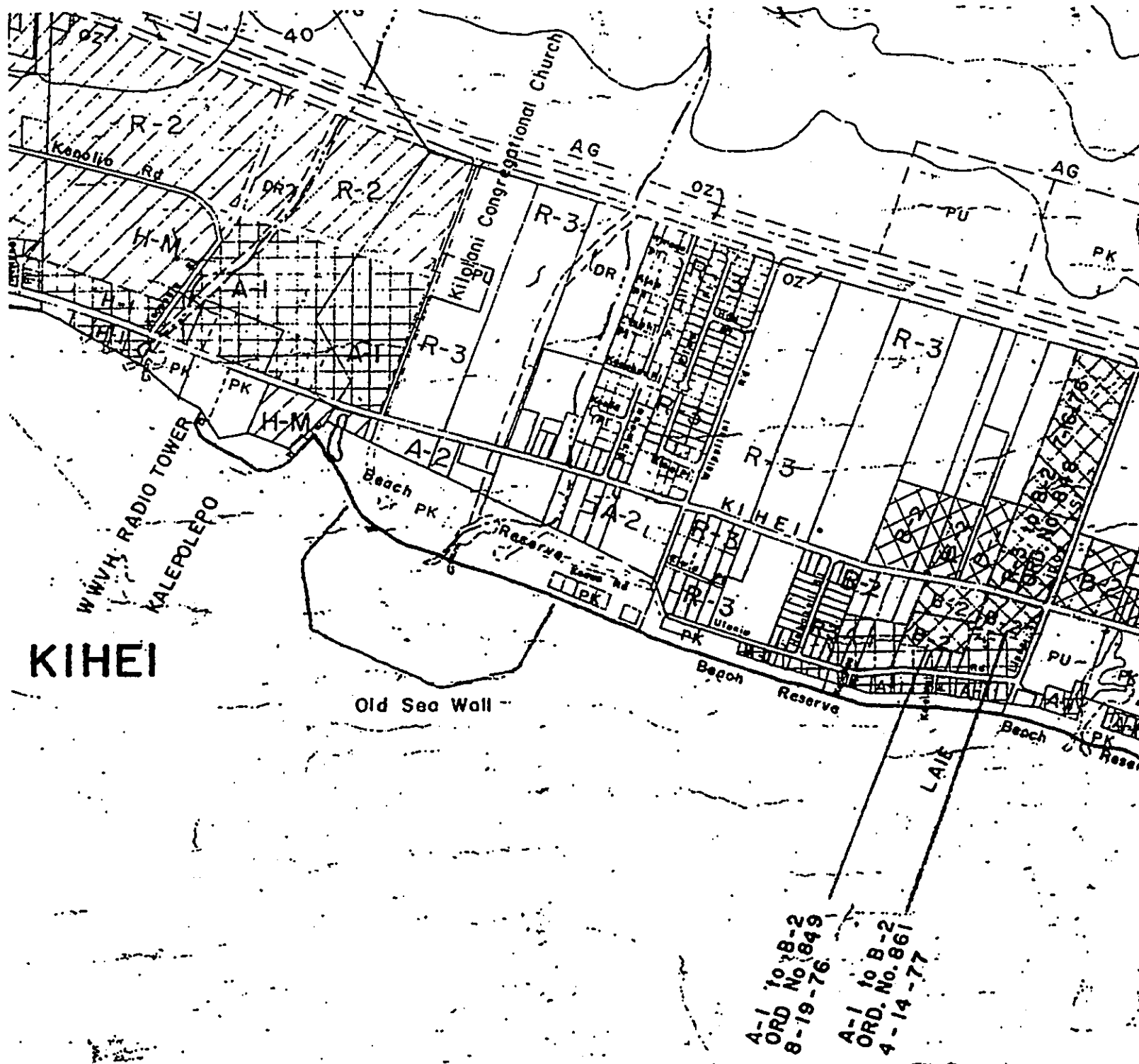
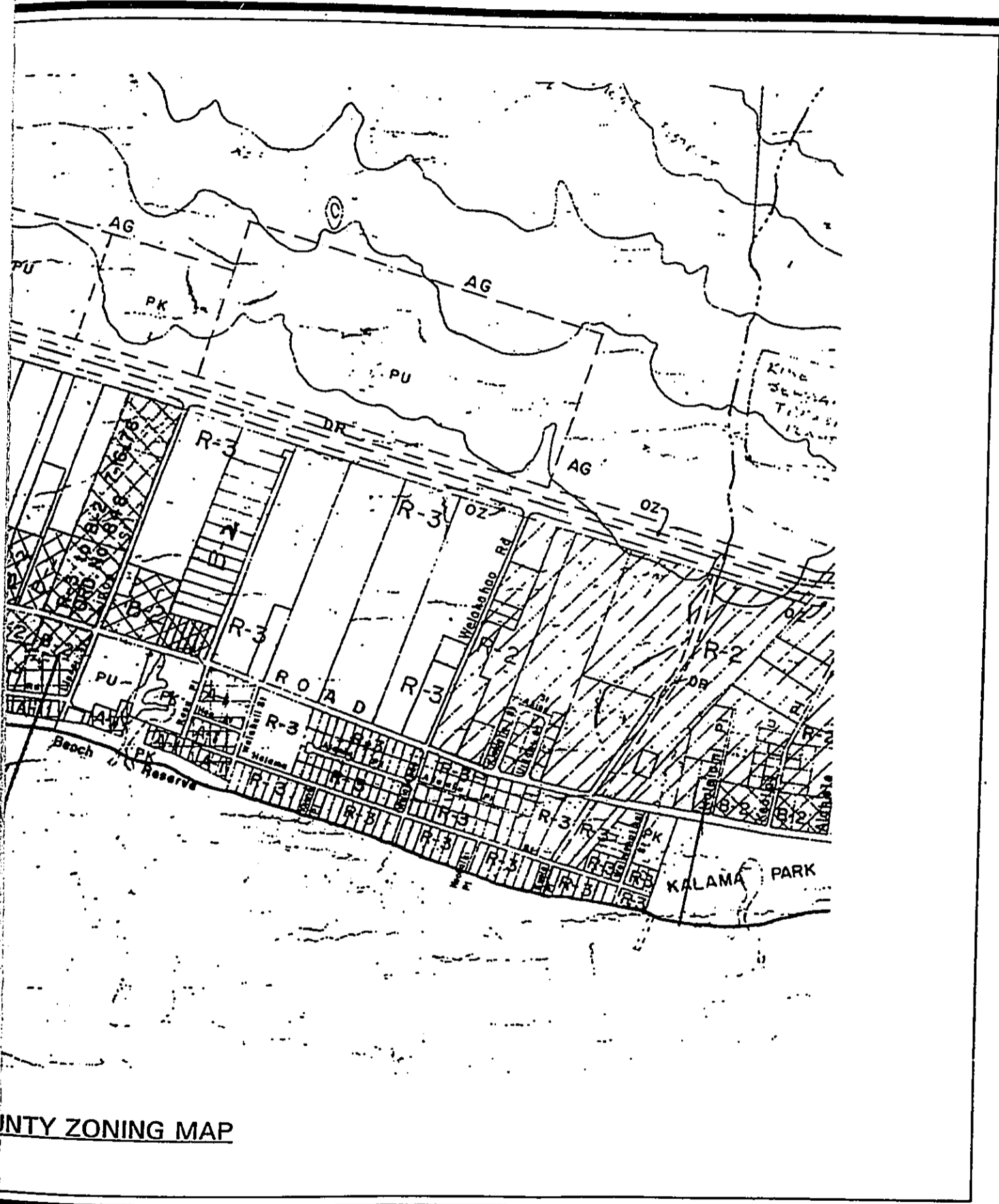


FIGURE 2-8 MAUI COUNTY ZONING



- 1) Provide coastal recreational opportunities accessible to the public.
- 2) Protect, preserve, and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
- 3) Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.
- 4) Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.
- 5) Provide public or private facilities and improvements important to the state's economy in suitable locations.
- 6) Reduce hazard to life and property from tsunamis, storm waves, stream flooding, erosion, and subsidence.
- 7) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

SECTION 3

**ENVIRONMENTAL CONSEQUENCES
DURING CONSTRUCTION**

SECTION 3

ENVIRONMENTAL CONSEQUENCES DURING CONSTRUCTION

3.1 IMPACTS ON THE PHYSICAL ENVIRONMENT

3.1.1 EROSION AND DEWATERING CONTROL

Erosion due to grading and site preparation is anticipated to be minimal and well within acceptable limits due to the nature of the soils and flat slopes involved. Therefore, the construction activity should not have an adverse effect on adjacent downstream properties and resources.

Because the elevation of the project site is near sea level, the installation of the pipes will involve dewatering during its period of construction. According to Chapter 11-55, Water Pollution Control, HAR, construction/dewatering National Pollutant Discharge Elimination System (NPDES) procedures shall be complied with. A NPDES General Permit (GP) associated with construction activity dewatering shall be obtained from State Department of Health, Clean Water Branch. All discharges will be filtered or treated to comply with all applicable federal, state, and county regulations. The discharge can then be pumped into a county-acceptable drainage system, such as the storm drains at the intersection of South Kihei Road and East Lipoa Street, by the use of pipes or other acceptable means.

3.1.2 WATER QUALITY

The proposed drainage improvements should not adversely affect water quality in the area. There are no streams adjacent to or down stream of the project site. Because of the flat grades in the project site, the runoff water generated by the project activity are expected to have minimum probability of transferring silt and debris to the State Regulation Reservoir.

3.1.3 FLORA AND FAUNA

There are no known significant habitats of rare, endangered or threatened species or flora and fauna in or around the project site. East Lipoa Street is in a well developed area and no mitigation measures are indicated.

3.1.4 HISTORICAL/ARCHEOLOGICAL FEATURES

According to the literature search, no significant historic artifacts, middens or sites were identified at the project site in past archaeological/historical surveys. Therefore, no adverse impacts are anticipated. If historic remains such as artifacts, burials, concentrations of shells or charcoal are encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The State Historic Division shall be immediately contacted.

3.1.5 WETLANDS

The proposed project site is surrounded by several wetlands (Figure 2-5). As described in Section 1.2, the existing two catch basins, located at the northeast and southeast corners of the South Kihei Road and East Lipoa Street intersection, collect surface runoff from the west portion of East Lipoa Street. Collected stormflows are conveyed to the State Regulation Reservoir via a 2' x 3' culvert along the west side of South Kihei Road. The proposed improvements include construction of three additional catch basins upstream on East Lipoa Street and 450 linear feet of 18-in diameter RCP connecting to the existing culvert along South Kihei Road. The catch basins will intercept a portion of the surface runoff and reduce the amount reaching the existing catch basins. Thus, while the proposed project is expected to slightly alter the existing drainage pattern on East Lipoa Street and South Kihei Road, the end result will be less flooding in the intersection and no increase in surface runoff to the State Regulation Reservoir. There are no impacts on surrounding wetlands during construction, as well as the nearshore marine environment and water quality.

The Reservoir has been full of water for the past several years. In the extreme event, Maui County dredges a channel to discharge the water from the Reservoir into Ocean.

According to the draft drainage master plan for Kihei, Maui County is proposing to enhance the wetlands to the east of the Reservoir as a storm runoff holding facility to minimize the needs for the Reservoir. There is no improvement plan for the Reservoir at this stage.

3.1.6 NOISE

Ambient noise levels will be unavoidably impacted by construction activity. Construction equipment, such as hoptoes, rollers, dump trucks and trailers will be the dominant noise producers during the construction period. Impact tools such as hand-held vibro plates or hammers will also be a major source of noise. Pump operations, when dewatering, may also involve some noise impacts. Contractors should implement mitigative measures through the use of proper muffling devices to minimize noise impacts from the project activities.

3.1.7 AIR POLLUTION

Ambient air quality is expected to be affected due to the dust generated by short-term construction-related activities. Site work such as clearing, grubbing and grading will generate air-borne particulates. The contractor should be responsible for utilizing dust control measures, such as regular watering and sprinkling to minimize wind-blown particulates. Ambient air quality may also be adversely affected by emissions from construction equipment and other motor vehicles. The contractor will be required to minimize emissions through proper vehicle maintenance. Once the project is completed, no adverse impact on local and regional ambient air quality conditions is anticipated.

3.1.8 PUBLIC HEALTH AND SAFETY

The contractor shall take appropriate measures to ensure public health and safety through the whole life of the construction. The construction site will be secured with safety signs and devices as required by state and county regulations during non-work hours.

3.2 IMPACTS ON COMMUNITY SETTING

3.2.1 LOCAL ECONOMY

The construction of the storm drainage system will provide short-term additional opportunities for local construction workers. It will also benefit the local material suppliers, retail and service sectors.

3.2.2 OTHER COMMUNITY SERVICES

The additional requirements for community services generated from the construction are expected to be minimal since only about 10 to 12 workers are needed. Therefore, there are no project-associated impacts on the community service needs such as: police and fire protection, medical facilities, recreational facilities, schools, refuse collection and disposal.

3.3 IMPACTS ON INFRASTRUCTURES

The proposed drainage improvements on East Lipoa Street will have some construction-related impacts in the vicinity. Traffic along the route may increase and sometimes become congested. At least one lane will be open during all working hours. Construction-related traffic should be required to access the site by alternative less-travelled routes. Work shift and materials transportation should be scheduled during non-peak traffic periods. Traffic monitoring and coordination should be conducted to minimize inconvenience. The construction should occur during low visitor counts period.

The drainage improvements should not affect water and wastewater systems, or electricity and telephone services.

SECTION 4

ENVIRONMENTAL CONSEQUENCES
AFTER PROJECT COMPLETION

SECTION 4

ENVIRONMENTAL CONSEQUENCES AFTER PROJECT COMPLETION

4.1 IMPACTS ON THE PHYSICAL ENVIRONMENT

4.1.1 DRAINAGE IMPROVEMENT

When completed, the proposed improvements will increase the drainage capability for East Lipoa Street and vicinity. The proposed 18-in drainage pipe is adequate to accommodate all of the on-site surface runoff as well as off-site runoff presently entering the project site.

4.1.2 FLORA AND FAUNA

The construction will be conducted on the existing road. There are no known significant habitats of rare, endangered or threatened species of flora and fauna in or around the project site. For that reason, no long-term impacts are expected.

4.1.3 VISUAL RESOURCES AND OTHER PHYSICAL ENVIRONMENT

No visual resources will be affected. The drain outlet will connect to the existing culvert through the existing storm drain located on the southeastern corner of East Lipoa Street and S. Kihei Road intersection. All portions of the project will be located underground.

There are not expected to be any historical/archaeological impacts or displacements during and after the construction of the project.

Noise and air pollution impacts associated with the projects will be eliminated after the completion of the project.

4.2 IMPACTS ON COMMUNITY SETTING

No long-term adverse impacts on the community setting are foreseen. Many beneficial impacts are expected, such as the improvement of traffic conditions during the wet seasons due to increased drainage capacity for East Lipoa Street and vicinity.

4.3 IMPACTS ON INFRASTRUCTURES

There are no long-term adverse impacts on infrastructures foreseen.

SECTION 5

**IRREVERSIBLE AND IRRETRIEVABLE
COMMENTS OF RESOURCES AND
UNSOLVED ISSUES**

SECTION 5
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF
RESOURCES AND UNRESOLVED ISSUES

The proposed project involves irreversible and irretrievable uses of energy, labor, materials, and capital funded by the county. Operation of the facility will resolve the runoff hazard in the west portion of East Lipoa Street but also require irreversible and irretrievable resources of labor, materials and the county funds.

There is no unresolved issues for the proposed project at this time.

SECTION 6

**LIST OF NECESSARY
PERMITS AND APPROVALS**

SECTION 6

LIST OF NECESSARY PERMITS AND APPROVALS

<u>Permit/Approval</u>	<u>Approving Agencies</u>	<u>Approximate Processing Time</u>
Special Management Area (SMA) Use Permit	Maui Dept. of Planning, Planning Commission	4 - 6 months
National Pollutant Discharge Elimination System Construction/Dewatering Permit	State Dept. of Health, Clean Water Branch	6 months
Grading Permit	Maui Dept. of Public Works and Waste Management	2 - 4 weeks

SECTION 7

ALTERNATIVES TO THE
PROPOSED ACTION

SECTION 7

ALTERNATIVES TO THE PROPOSED ACTION

The alternatives for the proposed project are "no action" and "delayed action". They are described below.

7.1 NO ACTION

The "no action" alternative would mean that no drainage improvements would be made and East Lipoa Street would be subject to flooding during heavy rainy seasons. This alternative is unacceptable to the community. Flooding, traffic, and safety issues will remain unresolved. Therefore, it is not recommended.

7.2 DELAYED ACTION

The "delayed action" alternative means that the drainage improvements take place some time in the future. This alternative will result in similar flooding and traffic impacts to the community. Furthermore, the delay of the project would also result in higher construction costs due to inflation.

SECTION 8

**FINDINGS AND CONCLUSION
PROPOSED ACTION**

SECTION 8

FINDINGS AND CONCLUSION

The proposed project involves the construction of a new drainage system on East Lipoa Street. The improvements will address the flood issues on East Lipoa Street.

In the short-term, the impacts generated from the construction activities are not expected to be significant. During construction, soil erosion control measures will be implemented. Potential soil loss is anticipated to be minimal and within tolerated minimums. Discharges from dewatering will be routed to the closest county drainage system, such as the storm drain near the intersection of South Kihei Road and, in compliance all applicable federal, state, and county regulations. There are no impacts on water quality, and no known historical/archaeological features or rare/threatened species of flora and fauna appear in the project site. Noise control measures, such as muffling devices, are advisable to minimize noise impacts. Mitigative measures for dust control will be implemented through the use of sprinkling and watering to minimize emissions. Traffic monitoring and coordination shall be conducted to minimize traffic inconvenience.

In the long-term, the project is not anticipated to cause adverse impacts. Based on the history of runoff transport through existing culvert into the State Regulation Reservoir, the proposed project is not expected to adversely affect the existing water quality or biota in the reservoir.

SECTION 9

**AGENCIES CONSULTED DURING
THE PREPARATION OF THE
DRAFT ENVIRONMENTAL ASSESSMENT**

SECTION 9

AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT

9.1 FEDERAL AGENCIES

Pacific Ocean Division
U.S. Army Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858

Fish and Wildlife Service
Department of the Interior
P.O. Box 50156
300 Ala Moana Blvd.
Honolulu, HI 96850

Soil Conservation Service
Department of Agriculture
P.O. Box 50004
300 Ala Moana Blvd.
Honolulu, HI 96850

9.2 STATE AGENCIES

Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, Hawaii 96813

Historic Preservation Office
Department of Land and Natural Resources
33 South King Street, 6th floor
Honolulu, Hawaii 96813

Commission on Water Resources Management
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, Hawaii 96813

Clean Water Branch
Department of Health
500 Ala Moana Blvd.
Five Waterfront Plaza, Suite 250
Honolulu, Hawaii 96813

Office of Environmental Quality Control
220 South King Street, 4th floor
Honolulu, Hawaii 96813

State Land Use Commission
Department of Business, Economic Development, and Tourism
335 Merchant Street, Rm 104
Honolulu, Hawaii 96813

University of Hawaii
Environmental Center
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

9.3 MAUI COUNTY AGENCIES

Department of Public Works and Waste Management
County of Maui
200 South High Street
Wailuku, Maui 96793

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

SECTION 10

RESPONSES AND COMMENTS
TO DRAFT ENVIRONMENTAL ASSESSMENT

SECTION 10

RESPONSES AND COMMENTS TO DRAFT ENVIRONMENTAL ASSESSMENT

<u>AGENCIES</u>	<u>COMMENTS DATE</u>	<u>RESPONSES DATE</u>
FEDERAL AGENCIES		
Pacific Ocean Division U.S. Army Corps of Engineers	5-26-95	6-29-95
Fish and Wildlife Service Department of the Interior	5-26-95	6-29-95
Soil Conservation Service Department of Agriculture	6-5-95	6-29-95
STATE AGENCIES		
Department of Land and Natural Resources	6-28-95	6-29-95
Historic Preservation Office Department of Land and Natural Resources	5-15-95	6-29-95
Commission on Water Resources Management Department of Land and Natural Resources		
Clean Water Branch Department of Health	5-4-95	6-29-95
Office of Environmental Quality Control	6-14-95	7-12-95

<u>AGENCIES</u>	<u>COMMENTS DATE</u>	<u>RESPONSES DATE</u>
State Land Use Commission Department of Business, Economic Development, and Tourism	5-8-95	6-29-95
University of Hawaii Environmental Center		
MAUI COUNTY AGENCIES		
Department of Public Works and Waste Management	6-20-95	not necessary
Planning Department County of Maui	5-18-95	6-29-95

EDUARDO J. CAYTANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH

HONOLULU, HAWAII 96813-3378

P.O. BOX 3378

May 4, 1995

95 MAY 11 AM 7 36

LAWRENCE MARK
DIRECTOR OF HEALTH

In Reply, Please Refer to
ENCLOSURE

P05113KA

Marc M. Siah, Ph.D., P.E.
Vice President
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, HI 96813

Dear Dr. Siah:

Subject: Draft Environmental Assessment for the
Drainage Improvements on East Lipoa
Kihei, Maui, Hawaii

The Department of Health acknowledges the receipt of the draft
environmental assessment for the subject project and has the
following comments:

1. The applicant should contact the Army Corps of Engineers (COE) to identify whether a Federal permit (including a Department of Army (DA) permit) is required for this project. A Section 401 Water Quality Certification (WQC) is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..." pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act (CWA)").
2. If the project involves the following activities with discharges into State waters, an NPDES permit is required for each activity:
 - a. Discharge of storm water runoff associated with construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five (5) acres of total land area;
 - b. Construction dewatering effluent;
 - c. Non-contact cooling water;
 - d. Hydrotesting water; and
 - e. Treated contaminated groundwater from underground storage tank remedial activity.



ASSOCIATES, INC.

June 29, 1995

Engineers/Architects

Mr. Denis R. Lau, P.E., Chief
Clean Water Branch
Department of Health
500 Ala Moana Blvd.
Five Waterfront Plaza, Suite 250
Honolulu, Hawaii 96813

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Lau:

Thank you for your time in reviewing Draft EA study for the above referenced project.

We offer the following responses to your comments dated May 4, 1995:

1. We have contacted Army Corps of Engineers (ACOE) and confirmed that a Department of the Army (DA) permit is not required. However, if it appears that wetlands or other waters of the U.S. is affected, we will coordinate with the ACOE.
Since there is no discharge into the navigable waters from the construction activity, pursuant to Section 401(a) (1) of the Federal Water Pollution Act, a Section 401 Water Quality Certification (WQC) is not required.
2. We understand that a NPDES permit is required for the project because of the discharge of dewatering effluent into the State Regulation Reservoir.

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siah
Marc M. Siah, Ph.D., P.E.
Vice President

Marc M. Siah, Ph.D., P.E.
May 4, 1995
Page 2

Should you have any questions regarding this matter, please
contact Ms. Kris Aruga, Engineering Section of the Clean Water
Branch, at 586-4309.

Sincerely,



DENIS R. LAU, P.E., CHIEF
Clean Water Branch

KA:sl

REKUNIA L. CAVITANO
CONTACT



ESTHER UEDA,
EXECUTIVE OFFICER

1995 MAY 9 9 41 AM '95

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
Room 104, Old Federal Building
335 Merchant Street
Honolulu, Hawaii 96813
Telephone: 587-3822

ASSOCIATES, INC.

Engineers/Architects

June 29, 1995

Mr. Esther Ueda
Executive Officer
Land Use Commission
Department of Business, Economic Development & Tourism
Room 104, Old Federal Building
335 Merchant Street
Honolulu, Hawaii 96813

Marc M. Siah, Ph.D., P.E.
Vice President
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Dr. Siah:

Dear Mr. Ueda:

Subject: Draft Environmental Assessment (EA) for the
Drainage Improvement on East Lipoa Street, Kihel,
Hawaii

We have reviewed the subject draft EA and confirm that the
project site as shown on figure 1-1 appears to be located within
the State Land Use Urban District.

We have no other comments to offer at this time.

Should you have any questions, please feel free to call me
or Kathy Yonamine of our office at 587-3822.

Sincerely,

ESTHER UEDA
Executive Officer

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siah, Ph.D., P.E.
Vice President

EU:KY:th

DIJLAUME L. CAYSTANO
GOVERNOR OF HAWAII



55 (11) 15 hll 6 28
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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

OUR CITY
CLIENT COLLABORATION

AGRICULTURE DEVELOPMENT
PROGRAM

ADULTIC RESOURCES

CONSERVATION AND

DEPARTMENTAL AFFAIRS

RESOURCES MANAGEMENT

CONTRACTS

PLANNING AND DESIGN

LAND MANAGEMENT

STATE PLANNING

WATER AND LAND DEVELOPMENT

May 15, 1995

Marc M. Siah, Ph.D.
GMP Associates, Inc.
841 Bishop Street
Honolulu, Hawaii 96813

Dear Dr. Siah:

SUBJECT: Historic Preservation Review of a Draft Environmental Assessment for the Drainage Improvement on East Lipoa Street, Kihei, Maui, Maui District, Maui TPK 1-3-9-02

LOG NO: 14530
DOC NO: 9505C08



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

June 29, 1995

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Hibbard:

Thank you for your time in reviewing Draft EA study for the above referenced project. We offer the following responses to your comments dated May 15, 1995:

We acknowledge that since the drainage improvements are to occur on existing East Lipoa Street which is already developed, it is unlikely that significant historic sites to be present. Should historic remains such as artifacts, burials, concentrations of shells or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The State Historic Division shall be immediately contacted.

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siah, Ph.D., P.E.
Vice President

Judging from the project description (p.1-1) and map (p.1-2) included with the draft EA, the drainage improvements will be made within the existing margins of East Lipoa Street, using existing culverts at the intersection of East Lipoa Street and South Kihei Road. Since the drainage improvements are to occur on East Lipoa Street, an existing roadway, it is unlikely that any significant historic sites are still present. Therefore, we believe that the proposed undertakings will have "no effect" on significant historic sites.

We would, however, make the following precautionary recommendation: Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The

Dr. Marc M. Siah
Page 2

contractor shall immediately contact the State Historic Preservation Division (587-0013), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

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

Aloha,



Sara Collins, Administrator
State Historic Preservation Division

SC:jen

LINDA CROCKETT LINGLE
Mayor



COUNTY OF MAUI
PLANNING DEPARTMENT
200 S. HIGH STREET
HONOLULU, HAWAII 96813

BRIAN W. HESKAE
Director
CHERYL CHALKS
Deputy Director



Engineers/Architects

June 29, 1995

Mr. Brian Mistake, Director
Planning Department
County of Maui
250 S. High Street
Maui, Hawaii 96793

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipooa Street

Dear Mr. Mistake:

Thank you for your time in reviewing Draft EA study for the above referenced project.

We offer the following responses to your comments dated May 18, 1995:

1. We understand that a SMA permit is required and a period of four to six month is needed for processing. The application will be submitted to Maui County Planning Department once it is completed.
2. We appreciate your suggestions that the construction should occur during low visitor counts period. The appropriate section will be revised in the Final EA, accordingly.

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Brian W. Heskae
Marc M. Siah, Ph.D., P.E.
Vice President

Marc M. Siah, Ph.D., P.E.
Vice President
GMP Associates, Inc.
841 Bishop Street
Suite 1501
Honolulu, Hawaii 96813

May 18, 1995

Dear Dr. Siah:

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipooa Street

We have reviewed the Draft Environmental Assessment for the subject project and offer the following comments:

1. The proposed project will require an SMA permit. A timely application will aid in preventing possible delays.
2. Section 3.2, Impacts On Community Setting, should consider that the physical construction occur during a period of normally low visitor counts.

Should you need additional information on this subject, please contact Don Schneider of this office at 808-243-7735.

Yours truly,

Brian W. Heskae
BRIAN HESKAE
Director of Planning

BM:ds
cc: Colleen Suyama
Don Schneider
Project File
(2-20-95)



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

REFLECTED
ATTENTION OF

May 26, 1995

35 JUN 31 11 09 00

Planning Division

Mr. Marc M. Siah, Ph.D.
GMP Associates
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

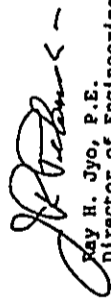
Dear Dr. Siah:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Drainage Improvement Project on East Lipoa Street, Kihel, Maui. The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. Based on the information provided, a DA permit will not be required for the project. However, if it appears that wetlands or other waters of the U.S. will be affected, coordination with our Regulatory Branch will be necessary. Please contact Ms. Karen Tomoyasu for further information at 438-9258.

b. The flood hazard information provided on page 2-4 of the environmental assessment is correct.

Sincerely,


Ray H. Jyo, P.E.
Director of Engineering



June 29, 1995

Mr. Ray H. Jyo, P.E.
Director of Engineering
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, Hawaii 96858-5440

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Jyo:

Thank you for your time in reviewing Draft EA study for the above referenced project.


We offer the following responses to your comments dated May 26, 1995:

1. We appreciate your confirmation that a Department of the Army (DA) permit is not required. However, if it appears that wetlands or other waters of the U.S. is affected, we will coordinate with the ACOE.
2. Your confirmation regarding flood hazard information at the project site is appreciated.

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.


Marc M. Siah, Ph.D., P.E.
Vice President

Engineers/Architects



United States Department of the Interior



FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS ECOREGION
35 FIFTH ST.
Ecological Services

(808) 541-2749

300 Ala Moana Blvd., Room 6307
P.O. Box 50167
Honolulu, Hawaii 96850

FAX (808) 541-2756

In Reply Refer To: MWR

Marc M. Siah
Vice President
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

MAY 26 1995

Re: Draft Environmental Assessment (EA) for the drainage improvement on East Lipoa Street, Kihai, Maui

Dear Mr. Siah:

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced document submitted by GMP Associates for the Department of Public Works and Waste Management, County of Maui. The proposed action involves the installation of 450 lineal feet of 18 or 24-inch reinforced concrete pipe along the west side of East Lipoa Street to South Kihai Road. The new pipe will then direct runoff into an existing box culvert that discharges into the reservoir between St. Theresa's Church and Maui Gardens on the makai side of South Kihai Road. The Service offers the following comments for your consideration.

As proposed, this project will not result in the loss of wetlands or impact any endangered or threatened plant or animal species within the project area. However, the Service is concerned that this project and other proposed road and drainage improvements between East Lipoa Street and Weikahoa Road and makau of South Kihai Road may impact the reservoir between St. Theresa's Church and Maui Gardens. Both this and another project recently reviewed by the Service, propose to discharge runoff into the reservoir. The Service is concerned that an increase in stormwater runoff into the reservoir may exceed its current capacity and adversely impact water quality in the nearshore marine environment. Federally listed endangered and threatened sea turtles, *Eretmochelys imbricata* and *Chelonia mydas*, respectively, and endangered Humpback whales, *Megaptera novaeangliae*, are known to exist in the waters immediately offshore of the project site.

The Service understands that a master plan for stormwater drainage is being developed for this area, but it is unclear whether improvements to the reservoir will occur as part of the master plan, as part of the East Lipoa Street drainage improvements, or as part of another project in the area. We recommend that the final EA address these concerns by identifying the current capacity and



ASSOCIATES, INC.

Engineers/Architects

June 29, 1995

Mr. Brooks Harper
Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
300 Ala Moana Blvd., Room 6307
P.O. Box 50167
Honolulu, Hawaii 96850

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Harper:

Thank you for your time in reviewing Draft EA study for the above referenced project.

We offer the following responses to your comments dated May 26, 1995:

The State Regulation Reservoir serves as an outlet for Lipoa Area since 1960s. The major source of water in the Reservoir is from the culvert along S. Kihai Road, which collects storm runoff generated between S. Kihai Road and Pillani Hwy, including runoff from East Lipoa Street. Proposed drainage improvements on Lipoa Street do not contribute additional runoff to the Reservoir. Therefore, there is no additional adverse impact on the capacity of the Reservoir, as well as the nearshore marine environment and water quality.

We acknowledge that the Reservoir has been full of water for the past several years. In the extreme events, Maui County dredges a channel to discharge the water from the Reservoir into ocean.

According to the draft drainage master plan for Kihai Area, Maui County is proposing to enhance the wetlands to the west of the Reservoir as a storm runoff holding facility to minimize the needs for the Reservoir. There is no improvement plan for the Reservoir at this stage.

Your concern will be addressed in the proper section of the Final EA. Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,
GMP ASSOCIATES, INC.

Marc M. Siah, Ph.D., P.E.
Vice President

condition of the reservoir, and whether improvements to the reservoir will be part of the project. Since the timing of reservoir improvements relative to the timing of increasing runoff to the reservoir is critical, we recommend that this point be clarified as well in the final EA.

The Service appreciates the opportunity to provide these comments. If you have any questions, please contact Fish and Wildlife Biologist Michael Ritter at (808) 541-3441.

Sincerely,


Brooks Harper
Field Supervisor
Ecological Services



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

P. O. Box 50004
Honolulu, HI
96850-0001

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95 JUN 7 11 43

June 5, 1995

Marc M. Siab, Ph.D., P.E.
Vice President
GMP Associates, Inc.
841 Bishop St., Suite 1501
Honolulu, HI 96813

Dear Mr. Siab:

Subject: Draft EA for the Drainage Improvement
on East Lipoa Street

Our District Conservationist on Maui has noted that "the State Regulation Reservoir is basically an earthen channel outlet which has been full of water for the past several years. Since this channel always served as an outlet for the Lipoa area and remained dry prior to development, where are the sources of this water presently? Adding drainage to an outlet which remains consistently full may jeopardize landowners along the channel."

We feel that this concern needs to be addressed in the EA for this project.

Thank you for allowing us the opportunity to comment.

Sincerely,

J. and P. J. ...
for
KENNETH M. KANESHIRO
State Conservationist

The Natural Resources Conservation Service
is an Equal Opportunity Service. We are
committed to providing the American people with
effective natural resources management programs.

AN EQUAL OPPORTUNITY EMPLOYER



ASSOCIATES, INC.

June 29, 1995

Mr. Kenneth M. Kaneshiro
State Conservationist
United States Department of Agriculture
P.O. Box 50004
Honolulu, Hawaii 96850-0001

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Kaneshiro:

Thank you for your time in reviewing Draft EA study for the above referenced project.

We offer the following responses to your comments dated June 5, 1995:

We acknowledge that the State Regulation Reservoir serves as an outlet for Lipoa Area. The major source of water is from the culvert along S. Kibei Road, which collects storm runoff generated between S. Kibei Road and Pilliam Hwy, including runoff from East Lipoa Street. Proposed drainage improvements on Lipoa Street do not contribute additional runoff to the Reservoir. Currently Maui County is considering to enhance the wetlands on the west of the Reservoir as a holding facility to minimize the needs for the Reservoir.

Your concern will be addressed in the proper section of the Final EA. Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siab

Marc M. Siab, Ph.D., P.E.
Vice President

Engineers/Architects

DEPT OF PUBLIC WORKS
 DIRECTOR
 DEPT. ENG.
 STAFF OFFICE
 CIVIL ENGINEERING
 DIVISION



STATE OF HAWAII
 OFFICE OF ENVIRONMENTAL QUALITY CONTROL
 220 SOUTH KING STREET
 HONOLULU, HAWAII 96813
 JUN 14 1995
 JUN 19 P243
 COUNTY OF MAUI
 PUBLIC



July 12, 1995
 Mr. Gary Gill
 Director
 State of Hawaii
 Office of Environmental Quality Control
 220 S. King Street, Fourth Floor
 Honolulu, HI 96813

Mr. Charles Jencks
 Director of Public Works & Waste Management
 County of Maui
 200 South High Street
 Wailuku, Hawaii 96793

Dear Mr. Jencks:
 Subject: Draft Environmental Assessment for East Lipoa Street
 Drainage Improvement, Kihei, Maui

Thank you for the opportunity to review and comment on the subject project. We have the following comment.
 There are several wetlands surrounding the project site. These wetlands may be part of a whole watershed or ecosystem. Although this drainage project is relatively small, the alteration of the water flow patterns may disrupt the watershed or ecosystem. Please determine and disclose whether this drainage project would impact the surrounding wetlands.

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

Sincerely,
 Gary Gill
 Director

GG/JT:kk

RE: Draft Environmental Assessment (EA)
 for the Drainage Improvement on East Lipoa Street

Dear Mr. Gill:

Thank you for your time in reviewing Draft EA study for the above referenced project. We offer the following responses to your comments dated June 14, 1995:

We acknowledge that the existing wetland bodies identified in Figure 2-5 of our Draft EA currently surround the proposed project site. The nearest ones are approximately 1,000 feet away to the south and 400 feet away to the north of East Lipoa Street.

As described in Section 1.2 of the Draft EA, the existing drainage system consists of two catch basins located at the northeast and southeast corners of the South Kihei Road/East Lipoa Street intersection. These two catch basins collect surface runoff from the west portion of East Lipoa Street. Collected stormflows are conveyed to the State Regulation Reservoir via a 2' x 3' culvert along the west side of S. Kihei Road.

The flooding which occurs in the intersection is the result of the inadequate capacity of the two existing catch basins. The proposed improvements include construction of three additional catch basins upstream on East Lipoa Street and 450 linear feet of 18-inch diameter RCP connecting to the existing culvert along South Kihei Road. The catch basins will intercept a portion of the surface runoff and reduce the amount reaching the existing catch basins.

Thus, while the proposed project is expected to slightly alter the existing drainage pattern on East Lipoa Street and South Kihei Road, the end result will be less flooding in the intersection and no increase in surface runoff to the State Regulation Reservoir. There are no impacts on surrounding wetlands during or after construction.



Engineers/Architects

Mr. Gary Gill
Page 2
July 12, 1995

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siab
Marc M. Siab, Ph.D., P.E.
Vice President

cc: Joe Krueger, Mani DPWWM

LINDA CROCKETT LINDLE
Mayor
CHARLES JENCKS
Director



95 JUN 22 11P 5
COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
LAND AND WASTE MANAGEMENT

LAND USE AND CODES ADMINISTRATION
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAUMANE, L.S., P.E.
Land Use and Codes Administration
EASSE MILLER, P.E.
Wastewater Reclamation Division
LLOYD P. C. W. LEE, P.E.
Engineering Division
DAVID WISSLUAR, P.E.
Solid Waste Division
BRIAN HANSHIRO, P.E.
Highways Division

June 20, 1995

Mr. Marc M. Siah, Ph.D., P.E.
GMP ASSOCIATES, INC.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Assessment (EA)
DRAINAGE IMPROVEMENT ON EAST LIPOA STREET

Dear Mr. Siah:

We reviewed the subject draft environmental assessment and have no comments.

If you have any questions regarding this letter, please call me at 243-7845.

Very truly yours,

Charles Jencks
CHARLES JENCKS
Director of Public Works & Waste Management

BY: Engineering Division
XC: Solid Waste Division
Wastewater Reclamation Division

6:10am/6/20/95/10:00am/10:00am

Not Necessary

BENJAMIN J. CAYETANO
Governor of Hawaii



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. Box 621
Honolulu, Hawaii 96809

REPROCESSES

FILE NO.: 95-529

Mr. Marc M. Siah, Vice President
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Mr. Siah:

SUBJECT: Draft Environmental Assessment (DEA); Drainage
Improvements on East Lipoa Street, Kihei, Maui,
THIKSI YAKOUB

We have reviewed DEA information for the subject project that was
transmitted by your letter dated May 2, 1995 and have the
following comments:

Historic Preservation Division

Our Historic Preservation Division comments that their review is
based on historic reports, maps and aerial photographs maintained
at the State Historic Preservation Division (HPD); no field
inspection was made of the subject area.

Judging from the project description and map included with the
DEA, the drainage improvements will be made within the existing
margins of East Lipoa Street, using existing culverts at the
intersection of East Lipoa Street and South Kihei Road. Since
the drainage improvements are to occur on East Lipoa Street, an
existing roadway, it is unlikely that any significant historic
sites are still present. Therefore, HPD believes that the
proposed undertakings will have "no effect" on significant
historic sites.

However, HPD makes the following precautionary recommendation:

Should historic remains such as artifacts, burials,
concentrations of shell or charcoal be encountered during
construction activities, work shall cease immediate vicinity of
the find, and the find shall be protected from further damage.
The contractor shall immediately contact the State Historic
Preservation Division at 587-0013, which will assess the
significance of the find and recommend an appropriate mitigation
measure, if necessary.

271

Chairperson
MICHAEL D. WILSON
Board of Land and Natural Resources

Deputy Director
GILBERT COLOMA-AGUIRAN
Agriculture Development
Arts and Recreation
Building and Census Services
Bureau of Ocean Resources
Department of Conservation
Conservation and Environmental Affairs
Forestry and Wildlife
Historic Preservation
Land Management
State Parks
Water and Land Development



ASSOCIATES, INC.

Engineers/Architects

June 29, 1995

Mr. Michael D. Wilson
Chairperson
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

RE: Draft Environmental Assessment (EA)
for the Drainage Improvement on East Lipoa Street

Dear Mr. Wilson:

Thank you for your time in reviewing Draft EA study for the above referenced project.

We offer the following responses to your comments dated June 28, 1995:

Historic Preservation Division

We acknowledge that since the drainage improvements are to occur on existing East
Lipoa Street which is already developed, it is unlikely that significant historic sites to
be present. Should historic remains such as artifacts, burials, concentrations of shells
or charcoal be encountered during construction activities, work shall cease
immediately in the immediate vicinity of the find, and the find shall be protected from
further damage. The State Historic Division shall be immediately contacted.

Should you have any additional questions or concerns, please do not hesitate to call.

Sincerely,

GMP ASSOCIATES, INC.

Marc M. Siah

Marc M. Siah, Ph.D., P.E.
Vice President

Mr. M. Siah

-2-

File No.: 95-529

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to contact Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Aloha,

Michael D. Wilson
MICHAEL D. WILSON

ST:tes

REFERENCES

REFERENCES

- 1 Austin, Smith & Associates, *An Inventory of the Flora and Fauna of the Kihei Area, Maui*. 1974.
- 2 Austin, Tsutsumi & Associates, Inc., *Kihei Traffic Master Plan*. October 1989.
- 3* Bishop Musiem, *Archaeological Survey for Site Selection Study/EIS - New Kihei Elementary School, Kihei, Maui*. May 1991.
- 4 Carpenter, Richard A., and James E., Maragos, Environmental and Policy Institute, East-West Center, University of Hawaii, *How to Assess Environmental Impacts on Tropical Islands and Coastal Areas*. October 1989.
- 5 Comprehensive Consulting Services of Hawaii, *Site Selection Study and Final Environmental Impact Statement, New Kihei Elementary School, Kihei, Maui*. April 1992.
- 6* Cordy, Ross, Army Corps of Engineers, *Cultural Resources Study: Archaeological Reconnaissance at Kihei Flood Control Project, Kihei, Maui*. September 1977.
- 7 Department of Geology, University of Hawaii, *Atlas of Hawaii*, Second Edition. 1983.
- 8* Donham, Thesara, K., *Archaeological Data Recovery Program Site 50-50-10-2475, Pi'ilani Residential Community - Phase I, Land of Waiohuli, Makawao District, Island of Maui*. 1990
- 9* Donham, Thesara, K., *Archaeological Inventory Survey, Pi'ilani Residential Community - Phase I, Land of Waiohuli, Makawao District, Island of Maui*. 1989
- 10* Donham, Thesara, K., *Archaeological Inventory Survey, Pi'ilani Residential Community, Phase II, Land of Keokea, Makawao District, Island of Maui*. 1990
- 11* Fredericksen, Water, M., Demaris Fredericksen, (Xamanek Researches), *Report on Archaeological Monitoring of Azeka Place Commercial Center, Kihei, Maui, Hawaii, TMK 3-9-02: 28, 80*. July 1990.
- 12* Fredericksen, Demaris, L., Walter M. Fredericksen, Erik M. Fredericksen, (Xamanek Researches), *An Archaeological Inventory Survey and Data Recovery Report for Lokelani*

- Intermediate School, Located in the Ahupua'a of Waiohuli, Makawao District, Island of Maui (TMK 2-2-02: por. 43). September 1993.*
- 13 Fukunaga and Associates, Inc., *Final Environmental Impact Statement for the Site Selection For the New Kihei Public Library*. June 1991.
 - 14* Kennedy, Joseph, *Archaeological Examination of TMK 3-9-02; 26, 84 and 154, Located at Kihei, Maui*. February 13, 1990.
 - 15* Kennedy, Joseph, *Archaeological Examination of TMK 3-9-02; 26 and 84, Located at Kihei, Maui*. October 13, 1988.
 - 16 Maui County Planning Department, *Kihei Community Plan Map*.
 - 17 Maui County Planning Department, *Maui County Zoning Map*.
 - 18 Michael T. Munekiyo Consulting, Inc., *Draft Environmental Assessment Napilihau Village Drainline*. March 1993.
 - 19 Norman Saito Engineering Consultants, Inc., *Drainage Master Plan For Kihei, Maui, Hawaii*. September 1994.
 - 20 Ronald M. Fukumoto Engineering, Inc., *Preliminary Engineering Report For Kihei School Off-site Drainage, Kihei, Maui, Hawaii*. September 1992.
 - 21 Sam O. Hirota, Inc., *Revised Environmental Impact Statement, Kihei Drainage Project, County of Maui*. April 1980.
 - 22 State Department of Business, Economic Development & Tourism, *The State of Hawaii Data Book 1993 - 94*.
 - 23 State Department of Business, Economic Development & Tourism, *The State of Hawaii Data Book 1983*.
 - 24 State Department of Business, Economic Development & Tourism, Land Use Commission, *Land Use Boundary Maps*.
 - 25 State Department of Land and Natural Resources, Division of Water and Land Development, *Rainfall Atlas of Hawaii, R76*. June 1986.

- 26 U. S. Department of Agriculture, Soil Conservation Service, *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. August, 1972.
- 27 U.S. Department of Transportation, Federal Highway Division and State Department of Transportation, Highway Division, *Piilani Highway, Final Environmental Impact Statement*. February 1977.
- Archaeological survey literature.

APPENDIX

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



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

DEPUTY
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

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

RECEIVED
STATE OF HAWAII
95 MAR 8 AM 8:18

March 6, 1995

Mr. George Z. Liu, Project Engineer
GMP Associates, Inc.
841 Bishop Street, Honolulu, Hawaii 96813

LOG NO: 14054
DOC NO: 9503KD03

Dear Mr. Ziu:

**SUBJECT: Information on Historic Sites - Environmental Assessment
for the Lipoa Street Improvements Project, Waiohuli and
Keokea, Makawao and Wailuku Districts, Island of Maui
TMK: 3-9-02, 08, 09; 2-2-02**

This letter is in response to your request for information regarding historical and archaeological investigations that have occurred in the area of the proposed Lipoa Street improvements project, Kihei. The information provided with your request does not include a description of the project. We are not, therefore commenting on the project at this time.

The "impact area" of the project as identified on the map attached to your February 9, 1995 letter includes an area approximately 500 feet wide, c. 250 feet along each side of Lipoa Street, between Piilani Highway and the shoreline. The "impact area" includes portions of the Kihei Elementary School lot, St. Theresa's Catholic Church, the Lipoa Office/Medical Center, the Maui Sun Hotel, and the proposed Piilani residential development. Portions of the ahupua'a of Keokea and Waiohuli, and the modern judiciary districts of Makawao and Wailuku are within the "impact area".

A portion of the proposed "impact area" is within the study area of an archaeological walk-through survey that was conducted in 1977 for the U.S. Corps of Engineers flood control project (*Kihei Flood Control Project: Archaeological Reconnaissance and Literature Search*, Ross Cordy 1977).

Cordy identified seven sites in the northern portion of Keokea during the 1977 survey, in the vicinity of the Kihei Elementary School. These included rock mounds, walls, enclosures, platforms, and surface midden deposits (Cordy 1977: 34-39). Some of these sites were relocated during subsequent surveys of the Piilani residential development.

Mr. Geroge Z. Liu
Page 2

The eastern portion of the "impact area", on both sides of Lipoa Street was included within the area of a reconnaissance survey for the proposed residential development, later known as the Piilani Residential Community (*Biological and Archaeological Reconnaissance TMK 2-2-02: Por. 42, Marvin T. Miura, 1982*). Nine archaeological sites were found within the area surveyed; these sites were later relocated and further documented during subsequent surveys (see below).

The area to the north of Lipoa Street near Piilani Highway was included in the study area of an inventory survey for the Phase I Piilani residential development (*Archaeological Inventory Survey, Piilani Residential Community - Phase I, Land of Waiohuli, Makawao District, Island of Maui, Theresa K. Donham 1989*). Two previously identified historic sites were located, and three new sites were identified during the survey. Data recovery work at one site indicated likely agricultural use of the area, as evidenced by terraced slopes (*Archaeological Data Recovery program, Site 50-50-10-2475, Theresa K. Donham 1990*).

The Piilani Phase II survey area was located immediately south of the existing Kihei Elementary School, and continued south to Welekahau Street (*Archaeological Inventory Survey, Piilani Residential Community - Phase II, Land of Keokea, Makawao District, Island of Maui, Theresa K. Donham 1990*). Sixteen sites with 30 component features were identified during this survey, including platforms, enclosures, walls, C-shapes, and surface midden. Known sites nearest to the "impact area" include the previously identified Site 50-10-1710, a high-walled enclosure. This site has been recommended for further data recovery work, should it be impacted by construction. Proposed future road construction in the area to the west of the school will possibly impact Site 1710.

Recent work in the vicinity of the Kihei Elementary school includes data recovery excavations at an overhang shelter site, which was identified during an SHPD inspection of the proposed Lokilani gym facility expansion project (*An Archaeological Inventory Survey and Data Recovery Report for Lokilani Intermediate School, Located at the Ahupua'a of Waiohuli, Makawao District, Island of Maui, Demaris L. Fredericksen et. al 1993*). Significant information regarding settlement and subsistence patterns, and radiocarbon dates were obtained during the excavation at this small site.

The proposed Route C corridor along the north side of Lipoa Street was recently investigated, and a buried cultural deposit was identified adjacent to an exposed bedrock formation (*Inventory Survey Report for Road "C" Corridor, Waiohuli Ahupua'a, Makawao and Wailuku Districts, Maui Island, Eric Fredericksen et. al 1995*). Data recovery excavations were conducted at this site, and a report

Mr. George Z. Liu
Page 3

is currently being prepared by Xamanek Researches (*Data Recovery Plan for Site 50-50-10-3529 Rock Shelter Located in Waiohuli Ahupua'a, Makawao District, Maui Island, Xamanek Researches 1994*). This site is probably within the "impact area" of the proposed Lipoa Improvements project.

An inventory survey has been conducted of two parcels along the north side of Lipoa Street, in the area of the present Maui Sun Hotel (*Archaeological Examination of TMK: 3-9-02: 26 & 84, Located at Kihei, Maui, J. Kennedy letter to Wayne Arakaki, October 13, 1988*). This survey was conducted after mechanical grubbing and grading had been completed. No sites were identified during this after-the-fact survey. It is not known whether sites were present prior to construction work.

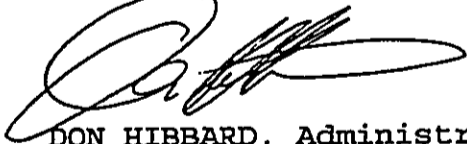
An inventory survey with subsurface testing was recently conducted for seven parcels comprising the Smith Trust property at the southeast corner of Lipoa Street and Kihei Road (*Archaeological inventory Survey on Smith Trust Property (Kihei), in Waiohuli Ahupua'a, Wailuku District, Maui Island, Hawaii, Walter M. Fredericksen et. al 1994*). No significant historic sites were identified within the 6.7 acre project area, which is the site of a proposed commercial center.

We have no records of archaeological work conducted west of Kihei Road along either side of Lipoa Street.

The reports mentioned above are available for viewing at the State Historic Preservation Division offices located in Honolulu and Wailuku, Maui. They will provide you with the background information needed to complete the Environmental Assessment for your project.

Please contact Theresa K. Donham at 243-5169 if you have any questions.

Sincerely,



DON HIBBARD, Administrator
State Historic Preservation Division

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