

MILOLI'I - HO'OPŪLOA COMMUNITY DEVELOPMENT PLAN

MILOLI'I - HO'OPŪLOA COMMUNITY DEVELOPMENT PLAN



PAPA PONO MILOLI'I

Miloli'i, Hawai'i

September 1984

A FEW WORDS OF THANKS.....

This plan reflects the combined efforts of many to make possible a solution for a problem which has existed for over fifty years.

Public agencies at the county and state levels have joined with private organizations and most importantly the Miloli'i-Ho'opūloa community to jointly work on making individual land tenure a reality for the area. The Legal Aid Society, the State Department of Hawaiian Home Lands, the State Department of Land and Natural Resources, the Office of Hawaiian Affairs, and Alu Like have all assisted in preparing this plan.

Additionally, the artists and editors who contributed their talents and time to make this plan possible are owed a great debt of gratitude. Ms. T. Kehaulani Kruse, Ms. Ka'iwa Meyer, and Mr. Herman Pi'ikea Clark as well as Miss. Julie Cachola and Mr. David Chai all contributed greatly to the spirit and soul of this plan.

Finally, without the help and assistance of the members of the Miloli'i-Ho'opūloa community itself, this plan would not have been possible. Any measure of the plan's success is directly related to the many hours of thought and discussion into which the members of the community entered. It is to them and their tireless efforts that this plan is dedicated.

...PA'A PONO MILOLI'I

TABLE OF CONTENTS

KA 'ĀINA

- A. History..... 2
- B. Geography..... 20

KA PO'E

- A. Community Development
 - 1. Residential Development
 - a. Awarding Process..... 38
 - b. Land Preparation..... 47
 - c. Development Financing..... 47
 - d. Residential Construction..... 47
 - 2. Recreational Development
 - a. Trail Development..... 53
 - b. Canoe Landing and Halau..... 53
 - c. Community Picnic Area..... 54
 - d. Visitor Center/Library-Museum..... 54
 - e. Community Center Pavillion..... 55
 - 3. Infrastructure
 - a. Road Improvements..... 57
 - b. Telephone Service..... 57
 - c. Power Generation..... 57

d. Water Supply.....	58
e. Solid Waste Disposal.....	58
f. Sewage Disposal.....	58
4. Emergency Services	
a. Fire.....	60
b. Police.....	61
c. Medical.....	61
d. Water Safety.....	61
5. Historical Sites	
a. Archaeological Sites.....	62
b. Historical Sites.....	62
B. Economic Development	
1. Small Business Development.....	65
C. Timetable for Development	
1. Planned Activities by Category....-	68
2. Planned Activities by Year of Initiation.....	76
3. Planned Activities by Responsibility.....	80

ATTACHMENTS

A. 1910 Census-Residents	85
B. Act 62, SLH 1982	90
C. Act 83, SLH 1984	94

ATTACHMENTS (continued)

D. Executive Order 473/Executive Order 2418	98
E. Application Form for General Lease	104
F. General Lease Document	106
G. Title II, Administrative Rules (DOH); Chapter 57, <u>Private Wastewater Treatment Works and Individual Wastewater Systems.</u>	128
H. Compost Toilet Specifications	140

REFERENCES

Books, Periodicals, Reports

Carlquist, Sherwin; Hawaii, A Natural History, Pacific
Tropical Botanical Garden, Honolulu, 1980.

County of Hawai'i:

The General Plan, 1971.

Draft Kona Plan, 1983.

Public Access to the Shoreline, 1979.

Cox, Doak; Local Tsunamis in Hawai'i - Implications for
Hazard Zoning, Hawaii Institute of Geophysics, Envi-
ronmental Center CN 0020, August, 1979.

Cox, Doak and Joseph MOrgan; Local Tsunamis and Possible
Local Tsunamis in Hawaii, Hawaii Institute of Geo-
physics, Environmental Center CN 0014, November, 1977.

Ellis, William; Journal of William Ellis, Advertiser
Publishing Company, Honolulu, 1963.

Grave, Jean (editor); Marine Atlas of Hawai'i, University of Hawai'i Press, Sea Grant Miscellaneous Report, January, 1974.

Group 70 Planners; Preliminary Planning and Environmental Study for Farms of Kapua, Agricultural Concepts, Inc., Honolulu, nd.

Loomis, Harold; Tsunami Wave Run Up Heights in Hawaii, Hawaii Institute of Geophysics; NOAA-JTRE-161, HIG-76-5, May, 1976.

Maciolek, John and R.E. Brock; Aquatic Survey of the Kona Coast Ponds, Hawai'i Island, Sea Grant Advisory Report, Honolulu, 1974.

Merlin, Mark D.; Hawai'i Coastal Plants and Scenic Shorelines, Honolulu, 1977.

Mullineaux, D. and D. Peterson; Volcanic Hazards on the Island of Hawai'i, Open File Report 74-239, Hawaii, 1974.

Neal, Marie; Hawaiian Marine Algae, Bishop Museum Bulletin 67, Honolulu, 1930.

Nolan, Ron and Daniel Cheney; West Hawai'i Coral Reef Inventory and Atlas, US Army Corps of Engineers (Contract DAWC84-80-C-0013), Ocean Research Consulting and Analysis, Inc. Hawaii, March 4, 1981.

Pukui, Mary Kawena; 'Ōlelo No'eau, Bishop Museum Special Publication 71, Honolulu, 1983.

Schmitt, Robert; The Missionary Censuses of Hawaii, Bernice Pauahi Bishop Museum, Pacific Anthropological Records #20; Department of Anthropology, Honolulu, 1973.

Schmitt, Robert; Historical Statistics of Hawaii, University Press of Hawaii, Honolulu, 1977.

Titcomb, Margaret; Native Use of Fish in Hawaii, University Press of Hawaii, Honolulu, 1972.

State of Hawai'i:

Interim Functional Plans, 1981.

- o State Transportation Plan
- o State Water Resources Development Plan
- o State Historic Preservation Plan
- o State Recreation Plan
- o State Health Plan
- o State Education Plan
- o State Housing Plan
- o State Conservation Lands Plan

Water Quality Management Plan for the County of Hawai'i, Department of Health, vol. I and II (208 Study), October, 1978.

Fish Transit: Miloli'i Bay, Department of Land and Natural Resources, Division of Fish and Game, Honolulu, 1971.

Hawaii Register of Historic Sites File 10/65/7352, Department of Land and Natural Resources, Historic Sites Division, Honolulu.

Hawai'i Water Resources Plan, Department of Land and Natural Resources, Hawai'i Water Resources Regional Study, Honolulu, January, 1979.

Median Rainfall, State of Hawai'i; Department of Land and Natural Resources, Division of Water and Land Development Circular C88, June, 1982.

Municipal Solid Waste in Hawaii, Department of Planning and Economic Development, Honolulu, July, 1983.

State Comprehensive Outdoor Recreation Plan, Department of Planning and Economic Development, December, 1975.

Negative Declaration for Improvements at Miloli'i, Hawai'i, Department of Transportation, JOB H.C. 6058, December 14, 1977.

Atlas of Hawai'i, University of Hawai'i Department of Geography, Honolulu, 1983.

US Government:

Census 1910, US Department of Commerce; Hawaii County; ED 104/105 (Microfilm on file at Hawaii Public Library).

Flood Insurance for Hawai'i County, Federal Emergency Management Agency, Community Number 155166, February 1, 1982.

Soil Survey of Island of Hawai'i, State of Hawai'i, Soil Conservation Service in cooperation with Hawaii Agricultural Experiment Station, December, 1973.

ILLUSTRATION AND PHOTO CREDITS

Fronticepiece - Painting by T. Kehaulani Kruse

- p. 1 - Photo by H. Spoehr (Coastal Landscape)
- p. 7 - TMK 8-9
- p. 8 - TMK 8-9-04
- p. 13 - Bishop Museum Photo ("Lava Approaching Ho'opūloa Village")
- p. 13 - Tai Sing Loo Photo/Bishop Museum ("Lava Entering Village...")
- p. 14 - Tai Sing Loo Photo/Bishop Museum ("Lava Destroying Village..")
- p. 14 - Tai Sing Loo Photo/Bishop Museum ("Lava Destroying Village..")
- p. 15 - Tai Sing Loo Photo/Bishop Museum ("Lava Destroying Village..")
- p. 15 - Tai Sing Loo Photo/Bishop Museum ("Lava Destroying Village..")
- p. 17 - County of Hawaii/Department of Public Works (Survey Map)
- p. 21 - USGS Quad Map ("Miloli'i")
- p. 24 - Atlas of Hawai'i, p. 65
- p. 25 - State DLNR Circular C-88
- p. 26 - Soil Survey of the Island of Hawai'i, Sheet 174

- p. 28 - Local Tsunamis in Hawaii, p. 32
- p. 28 - Hawaii, A Natural History, p. 9
- p. 37 - Bishop Museum Photo (Baker Collection - "Drying Fish at Ho'opūloa"/ 1923)
- p. 40 - State DLNR base map ("Development Phases")
- p. 49 - House rendition by J. Kaulakakui
- p. 50 - House rendition by J. Kaulakakui
- p. 51 - House rendition by J. Kaulakakui
- p. 54 - Canoe hālau rendition by Herman Pi'ikea Clark
- p. 55 - Visitor center/library-museum rendition by Herman Pi'ikea Clark
- p. 55 - Community center pavillion rendition by Ka'iwa Meyer
- p. 56 - State DLNR base map ("Recreational Development")
- p. 59 - State DLNR base map ("Infrastructure Development")
- p. 63 - Photo by H. Spoehr ("Magoon House")
- p. 63 - Photo by H. Spoehr ("Hau'oli Kamana'o Church")
- p. 64 - State DLNR base map ("Historic Sites")
- p. 66 - State ULNR base map ("Economic Development")

KA 'ĀINA



A. History

The history of human settlement in the Miloli'i-Ho'opūloa area undoubtedly extends back into the first millennium A.D. though little remains in the area to tell of this story. Less than a mile to the north of the current community at Alika Bay are the visible remains of a hōlua slide and a number of ancient house sites. Less than a mile to the south at Honomalino Bay are more ancient house sites. These extensive sites suggest the area was once one of sizeable human activity.

The etymology of Hawaiian place names often adds interesting insights into place meanings. "Miloli'i" and "Ho'opūloa" are not exceptions to this. Authorities differ on the meaning of "Miloli'i." Some feel that the word means "first twist" in reference to the excellent sennit which was produced by the villagers.¹ Others indicate that it means "small swirling," a reference to the many ocean currents which generally flow past the village.² Unlike that of Miloli'i,

¹Nolan, Ron and Daniel Cheney; West Hawaii Coral Reef Inventory, US Army Corps of Engineers, Hawaii; March 4, 1981; p. 369

²Pukui, Mary K., Samuel Elbert and Esther Mookini; Place Names of Hawaii, University of Hawaii Press, 1981; p. 151

"Ho'opūloa's" meaning is clear and refers to "having been put in together for a long time" a reference to the activities of an ali'i husband, Omoka'a, and his wife, Okoe, who lived in the village and developed a reputation of putting visitors into their imu where they stayed "for a long time!"

Additionally, Hawaiian historian Mary Kawena Pukui makes reference to Miloli'i in her recently published work on Hawaiian proverbs:¹

*No Miloli'i aku la paha,
Ke Lōli'i ala.*

Perhaps the person is from
Miloli'i to be so relaxed.
(said of one who takes it
easy)

*O ka iki hāwa'e 'iho
la no ia o Miloli'i.*

Here is the little sea
urchin of Miloli'i.
(A boast-I am small but
potent)

In ancient times, there seems to have been a relationship between the ali'i of Miloli'i-Ho'opūloa (Kapalilua) and those of Kaua'i (Kaumuali'i). Legend has it that an ali'i from the Kaua'i line is buried at Umi Haihai, a small rise within the Miloli'i-Ho'opūloa community.

¹Pukui, Mary K., *'Olelo No'eau*, Bishop Muesum Special Publication #71, Honolulu, 1983; pp. 254 & 263.

The community's recorded history is tied closely to that of the church. In the early nineteenth century, missionaries occasionally would make the long journey from Kailua to preach and instruct in the ways of the Gospel. The Rev. William Ellis and his party by-passed the village on their eventful trip around Hawaii in 1823 but spent the night at nearby Honomalino. Their impression of the area is interesting.

Nothing can exceed the barren and solitary appearance of this part of the island, not only from the want of fresh water, but from the rugged and broken tracts of lava which it appears to be entirely composed.¹

In 1831 and again in 1835, the missionaries conducted the first complete census in Hawaii. The 1835 census included the villages of Miloli'i and Ho'opūloa under the District name of "Kapalilua."* At that time there were a total of 1,406 people recorded being in the district (486 kane/488 wahine/219 Keikikane/213 Keiki-wahine).²

By 1854, Miloli'i had grown to become the site of one of the

¹Ellis, William; Journal of William Ellis, Advertiser Publishing Co., Hawaii, 1963; p. 125.

²Ke Kumu Hawaii, December 9, 1835; p. 198

*Kapalilua included the villages at Alika Bay, Papa Bay, Ho'opūloa, Miloli'i, Omoka'a, Honomalina, and Kapua.

six major churches in the Kona District and had a congregation of 14 members.¹ By 1883, the size of the congregation had grown to warrant the Miloli'i church, Hau'oli Kamana'o, designated as a separate mission. The church is still standing and though moved from its original site by "an act of God," it provides a link to the past for the community's residents.

Other links can be traced back to the Great Mahele in 1848. The present Miloli'i-Ho'opūloa community spreads through four original land grants in the ahupua'a of Miloli'i, Ho'opūloa, and Omoka'a.

1. Grant 1581 issued by Kamehameha III in 1855 to Kama for 2.4 acres in the ahupua'a of Ho'opūloa.
2. Grant 2738 issued by Kamehameha IV in 1860 to Keli'ikuli for 1,453 acres in the ahupua'a of Ho'opūloa.
3. Grant 1585 issued by Kamehameha III in 1855 to Kaleohano for 275.5 acres in the ahupua'a of Miloli'i.
4. Grant 3079 issued by Kamehameha IV in 1870 to Kiekie for 98.02 acres in the ahupua'a of Omoka'a.

¹Hawaii Register of Historic Places File #10165/7352; Historic Sites Division, State Department of Land and Natural Resources.

These original grants were subdivided further by various Land commission Awards, each with its own long history (See Maps-next page). Early residents in isolated, rural areas did not always understand the process involved in obtaining legal title to land as defined by the Great Mahele. Residents in Miloli'i and Ho'opūloa were no different from their contemporaries.

Thus, many never bothered to legalize their land tenancy. Yet, glimpses of the area's past history with its agrarian lifestyle still live through the few "Native Testimonies" that are preserved in the early proceedings of the Land Commission at the Hawaii State Archives.

No. 10134 Matia Mahi 7 Dec. 1849

Kalopi sworn he has seen claimants, land.

Section 1 - Kaaa ili of Ho'opuloa ahupua'a, from Mahi in 1847.

Section 2 - Taro Kihapai in Papa 2, from Kaliuna in 1847.

no disputes.

Land surrounded by the Konohiki's land.

No. 8045 Anakalea 13 Dec. 1849

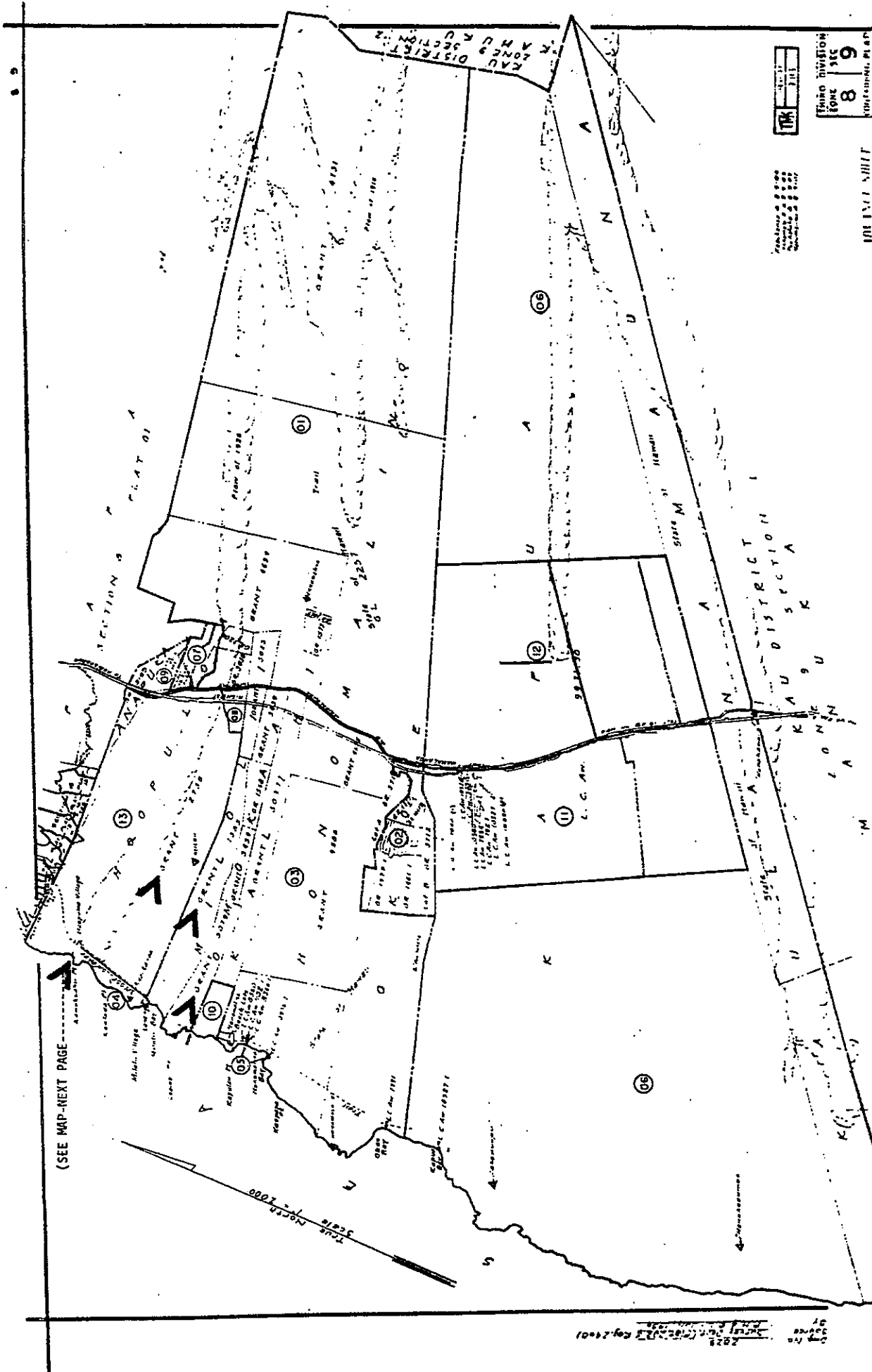
Kalopi and Lolohi sworn they have seen this land.

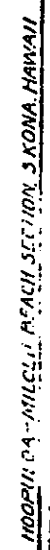
*Section 1 - 4 potatoe Kihapai in Palahae ili of Ho'opuloa,
given by Mahi in 1840.*

Section 2 - 3 taro kihapai in the ili of Namuku.

Section 3 - Taro Kihapai in the ili of Laulauaina.

JUL 21 1960





Section 4 - House lot in Palahae, from Mahi in 1840.

Land surrounded by the Kono'iko's land, good title.

No. 7995

A. Puua

5 Feb. 1848

Greetings to you, Kaawai, the Land Commissioner: Here is my claim for land at Ho'opuloa. There is 1 kahapai of taro, 100 fathoms by 8 fathoms; I have possessed it from the time when Liholiho was the ruler in 1838. It is in the 'ili of Puuhala, and I have paid the tribute for this place annually.

I have a house lot, 60 fathoms by 50 fathoms, completely enclosed by a stone wall. It is on the border of Ho'opuloa at the seashore and there is a coconut tree in it. Kindly award me this claim.

A. Puua, wife of Mahi

(signed)

No. 8045

Analakea

This house lot is on the island of Hawaii in District 3. Concerning my kihapai: Some kihapai are at Papala 'ili - 4 mala of sweet potatoes. At Nakuku 'ili are 3 mala of taro. In the mc'o land of Laulau is 1 mala of taro, making a total of 8.

This house lot is at Ho'opuloa.

Anakalea Kanakaole

(signed)

No. 8540

Kama

My house lot claim is 327 feet in circumference. Here is my claim in Ho'opuloa, Papalahai 'ili: 2 mala of bananas. At Puhala are 1 mala of taro, and 2 mala of sweet potatoes. At Namuku are 2 mala of sweet potatoes, and 1 of bananas. At Ilipaku are 5 mala of sweet potatoes, this is the ahupua'a of Anapuka. In Papa 2 ahupua'a, Mailekini 'ili, are 5 mala of taro, 1 uhi of yam, and 1 of sweet potatoes. District 3, island of Hawaii.

Kama

(signed)

No. 8543

Kahoohanohano

Here is my large 'ili, from the wooded upland to the dark sea. Ililoa is the 'ili. My kihapai of sweet potatoes, received from Hu, is in Haleokani 'ili. Miloli'i, District 3, island of Hawaii.

Kahoohanohano

(signed)

No. 10134

Matia Mahi

In my 'ili, from the upland koa to the sea, I have 4 kihapai of sweet potatoes, 1 of taro and 7 fallow. At Papa is 1 kihapai of sweet potatoes and 2 of taro. 1 house lot is in Ho'opuloa, Kona, Hawaii.

Matia Mahi

(signed)

The resident populations at Miloli'i and Ho'opūloa remained constant but small throughout the latter nineteenth century and declined slightly at the turn of the century.

The 1910 census of Miloli'i and Ho'opūloa reflected a total population of 98. This included 8 households at Miloli'i and 4 households around the bay at Ho'opūloa. (See Attachment A: 1910 Census-Residents).

In 1910, the census indicated 72 people living at Miloli'i and 26 at Ho'opūloa. Some of the noteworthy statistics for the community included:

A. Age Distribution

MILOLI'I			HO'OPŪLOA		
Male	Female	Age	Male	Female	
		80-89			
1	1	70-79			
3	2	60-69	1		
2	2	50-59		1	
2	3	40-49	1		
6	4	30-39	2	3	
4	7	20-29	1		
15	7	10-19	4	6	
<u>9</u>	<u>4</u>	<u>0-9</u>	<u>5</u>	<u>2</u>	
42	30	TOTAL	14	12	
72			26		

B. Ethnicity

	<u>Miloli'i</u>	<u>Ho'opūloa</u>	<u>Total</u>
Hawaiian	72	10	82
Pt. Hawaiian (Chinese)	-	13	13
Chinese	-	2	2
Japanese	-	1	1
Other	-	-	-
TOTAL	72	26	98

C. Occupation

	<u>Miloli'i</u>	<u>Ho'opūloa</u>	<u>Total</u>
Laborer (wood cutting)	5	-	5
Laborer (ground)	2	-	2
Fishing	13	3	16
Storekeeper	-	-	-
School teacher	1	-	1
Shipping Agent	1	-	1
Farmer	-	2	2
Unemployed*	50	21	71
Other	-	-	-
TOTAL	72	26	98

For the next sixteen years, the community remained much as it always had, but, then on the morning of April 18, 1926, life at Ho'opūloa was altered forever. Molten lava from Mauna Loa's Pu'u ō Ke'oke'o gradually approached and completely covered the small coastal fishing village. Many of

*Includes youngsters too young to work.

the families, lacking alternative shelter, moved the quarter mile down the coast to Miloli'i. There, they built new homes, mostly on government lands. Other residents moved mauka and found shelter as best they could.

Over the years, the villagers at Miloli'i have continued to stay on the land. Their rights to remain there have never been questioned, but legal tenancy has never been afforded them. In 1931, the governor of the territory set aside the area as a "public park" under the control and management of the then Board of Supervisors for the County of Hawaii. Under the public park provision, the governor gave the county full authority to create a "Hawaiian-village" at Miloli'i (See Attachment D, Executive Order 473, p. 98).

The County supervisors later asked that the lands be subdivided intoouselots for Miloli'i residents. A map subdividing a portion of the lands into 24ouselots was submitted to the County Engineer in 1941. Requests were made by residents to occupy the lots in 1943 and continued until 1954. While some of the lots were awarded, residents were never afforded title to them. (See Map next page).

In 1968, Governor John A. Burns canceled the Executive

COUNTY OF HAWAII
LAW. COUNTY DEPT. OF PUBLIC WORKS
HOUSE LOTS SUBDIVISION THROUGH
PORTION OF EXECUTIVE ORDER
10. 473

POPULOA DISTRICT OF S. KONA, HAWAII

Survey & Plan by W. K. Kamae Jan. 1941

Revised by E. K. Bright June 1945

Checked by B. Ichijo

Scale 1" = 100 Ft.

Submitted by: *E. K. Bright*
Chief Engineer

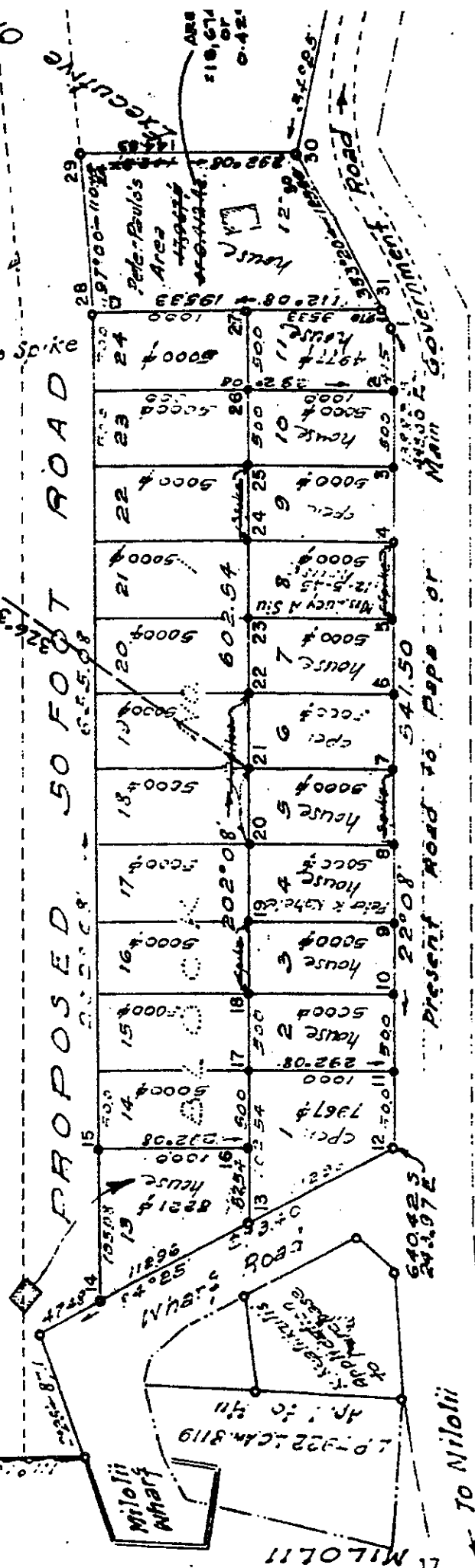
Approved by: *E. K. Bright*
Chairman & Executive Officer

IN THE PROJECT SITE

■ DENOTES DWELLING ON LOT

Executive Order 473 Net Area 52.6 Acs.

PROPOSED 50 FOOT ROAD



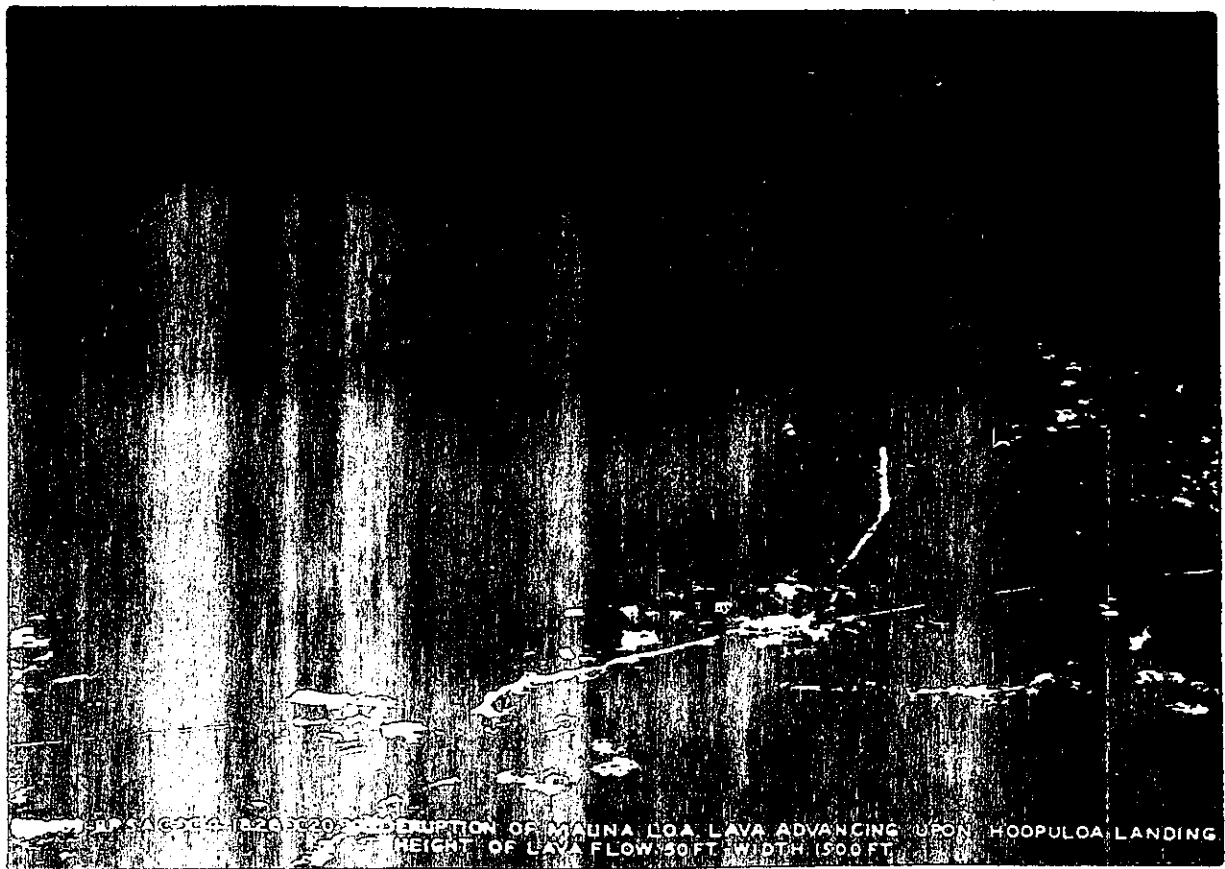
Order and the lands reverted back to the State Department of Land and Natural Resources for a then proposed land exchange with the Department of Hawaiian Home Lands.¹ However, the exchange was not consummated as the department did not have the legal means of directly leasing lands to Miloli'i residents. Then, the land tenancy rights of Miloli'i's residents were strengthened when, in 1982, the state legislature promulgated Act 62 which gave authority to the State Department of Land and Natural Resources to "negotiate and enter into long-term residential leases" with residents living at Miloli'i and others who were displaced by the 1926 flow (See Attachment B). Act 83, passed in 1984, extended the amount of time that Act 62 was to be in effect and provided that the Miloli'i community development would be exempt from "all statutes, ordinances, charter provisions, and rules of any governmental agency relating to zoning and construction standards for subdivisions, the development and improvement of land, and the construction of units thereon." The process of securing legal land tenancy for Miloli'i's residents was at last moving ahead.

On January 26, 1984, a public hearing was held by the Land Board to obtain public opinion for establishing Miloli'i

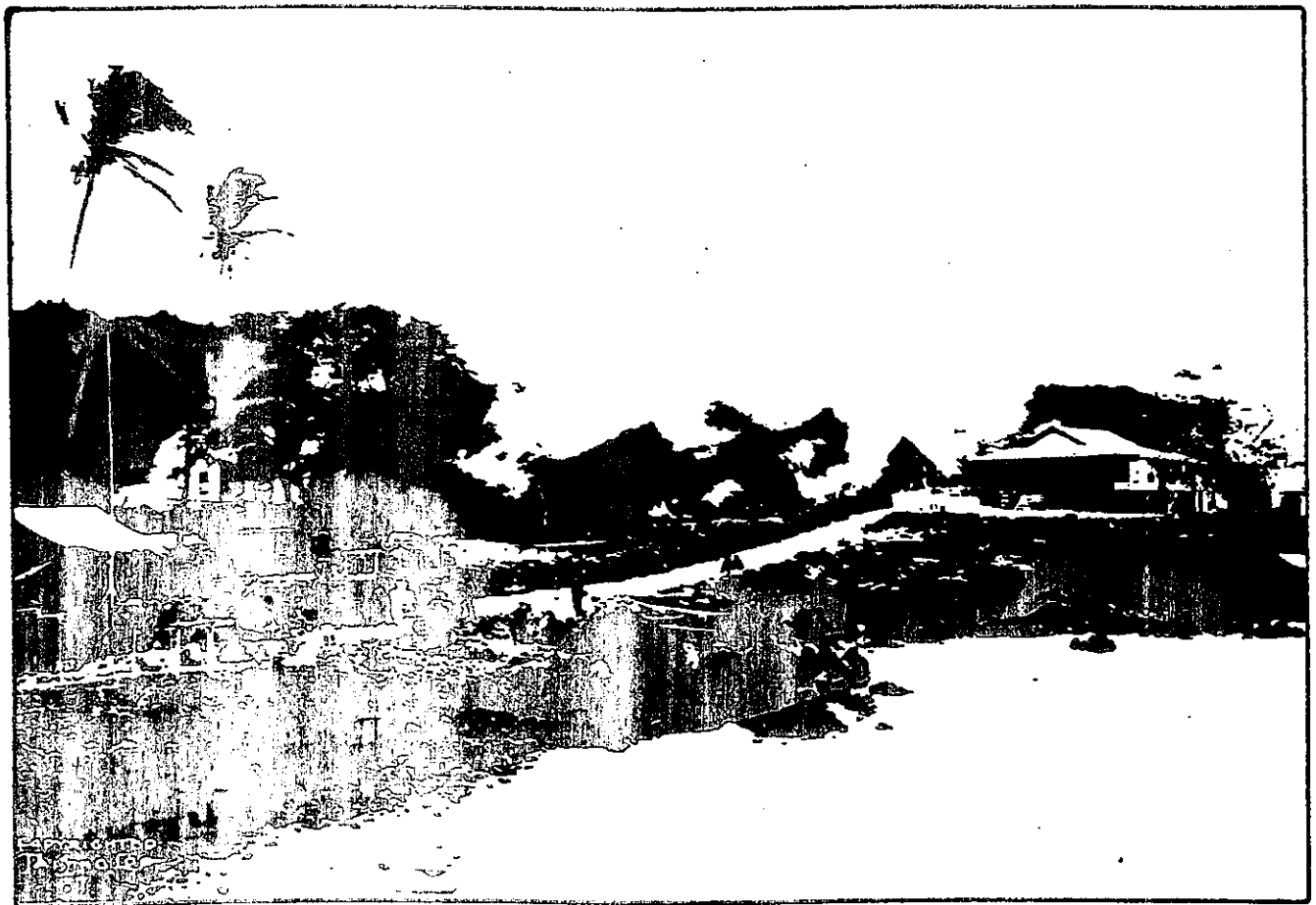
¹ See Attachment D, Executive Order 2418, p. 101.

as a "Special subzone" within Conservation District lands in South Kona. Eight persons testified-all in favor of the proposal. On June 22, 1984, the Land Board approved the establishment of the Miloli'i-Ho'opūloa Special subzone, and approved, pending review of a community plan, the Conservation District Use Application allowing for residential development and continued fishing activities in the area.

A community association, Pa'a Pono Miloli'i, was formed in October, 1980, in which all residents of Miloli'i and those entitled to reside there as defined by Act 62 were eligible for membership. The association has worked with the State Department of Land and Natural Resources, the State Department of Hawaiian Home Lands, the Office of Hawaiian Affairs, the County of Hawaii, the State Legislature, and the Legal Aid Society to complete the process of consummating long-term lease agreements between Miloli'i's residents and the State as authorized by Act 62 and reinforced by Act 83. These leases will finally provide legal tenancy to Miloli'i's residents and afford them the security that has alluded them for more than fifty years.



"Lava Approaching Ho'opūloa Village"



"Lava Entering Village at 5:15am"



"Lava Destroying Village at 5:30am"



"Lava Destroying Village at 6:21am"



"Lava Destroying Village at 8:15am"

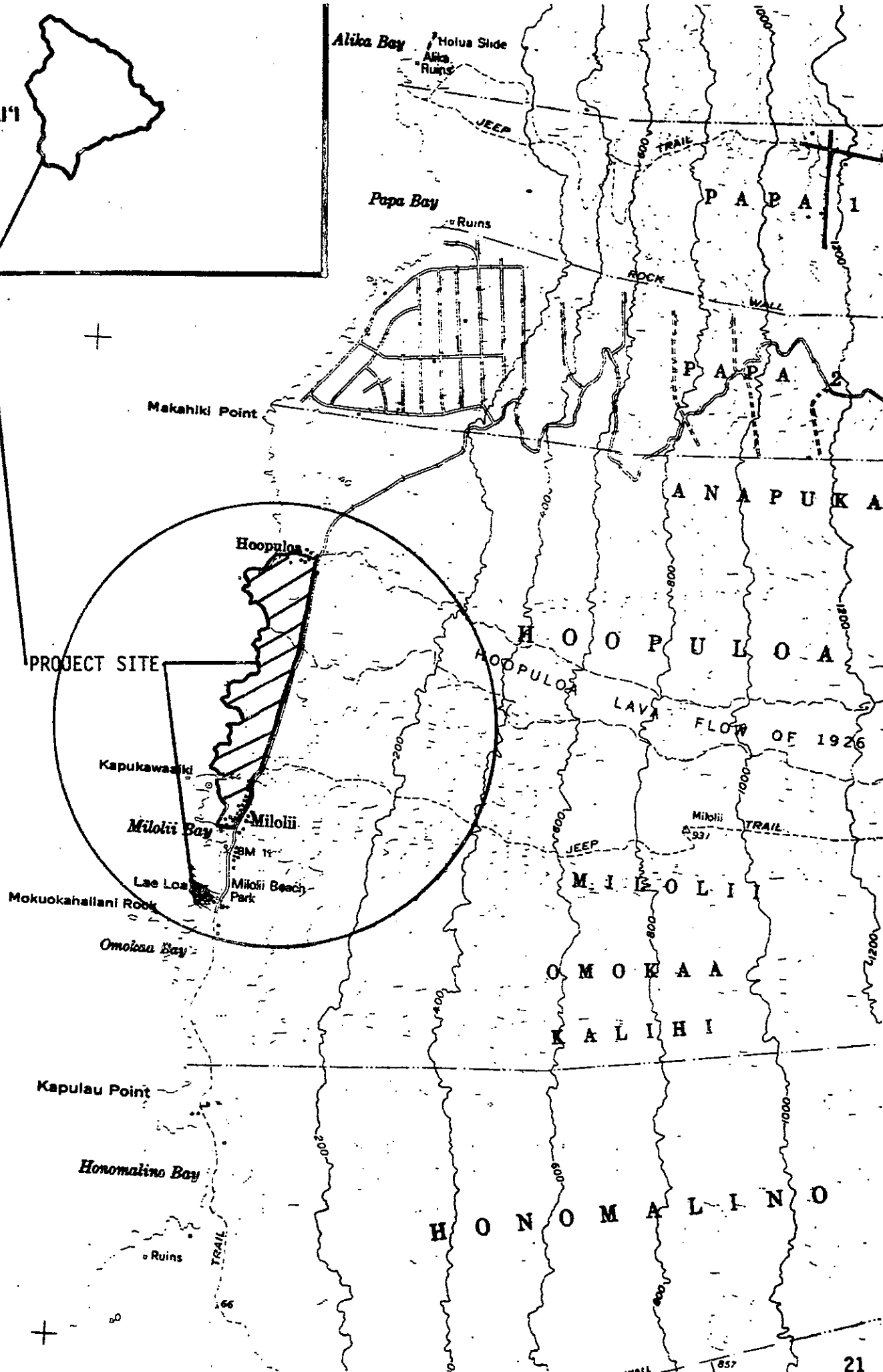


"Lava Destroying Village at 6:30am"

B. Geography

The Miloli'i-Ho'opūloa community lies in the shadow of its most dominant geologic feature, Mauna Loa. Lava flows from Mauna Loa have continually influenced the area. Since 1832, the volcano has erupted forty times. Eight flows have reached down the slopes into North and South Kona, and four have reached the ocean (1859, 1919, 1926, and 1950). The 1926 flow destroyed the village of Ho'opūloa, covering it with tons of 'a'ā lava.

The present coastal village of Miloli'i is located on the relatively flat Kapalilua coastal plain (see Map next page). The three bays in the immediate area, Ho'opūloa Bay, Miloli'i Bay, and Omoka'a Bay, offer little or no protection from ocean waves and surge. Shoreline features in the community include a black sand beach at Ho'opūloa Bay, broad, flat, and gently sloping lava flows extending into the sea between Ho'opūloa Bay and Miloli'i Bay, and shallow and exposed lava platform reefs extending from Miloli'i Bay on to Omoka'a Bay. The 1926 lava flow dominates the coastline on the Ho'opūloa side of the community. The other flows date from prehistoric times.



The elevation gradient to the uplands from the coastal village is steady, reaching 200 feet in elevation about 3,000 feet inland.

Within the vicinity of the village there are at least four small anchialine ponds; three to the south between Miloli'i Bay and Kapulau Point, and one just inshore from Kapulau Point. These ponds have a combined surface area of less than 1,100 square feet and are between one and four inches in depth. All have sandy/rocky bottoms.

A shallow shelf fifteen to twenty-five feet in depth is located off the village area. The shelf drops and then rises again to form a ledge which gradually falls off seaward at an increasing slope reaching a depth of about 120 feet 1,800 feet offshore.

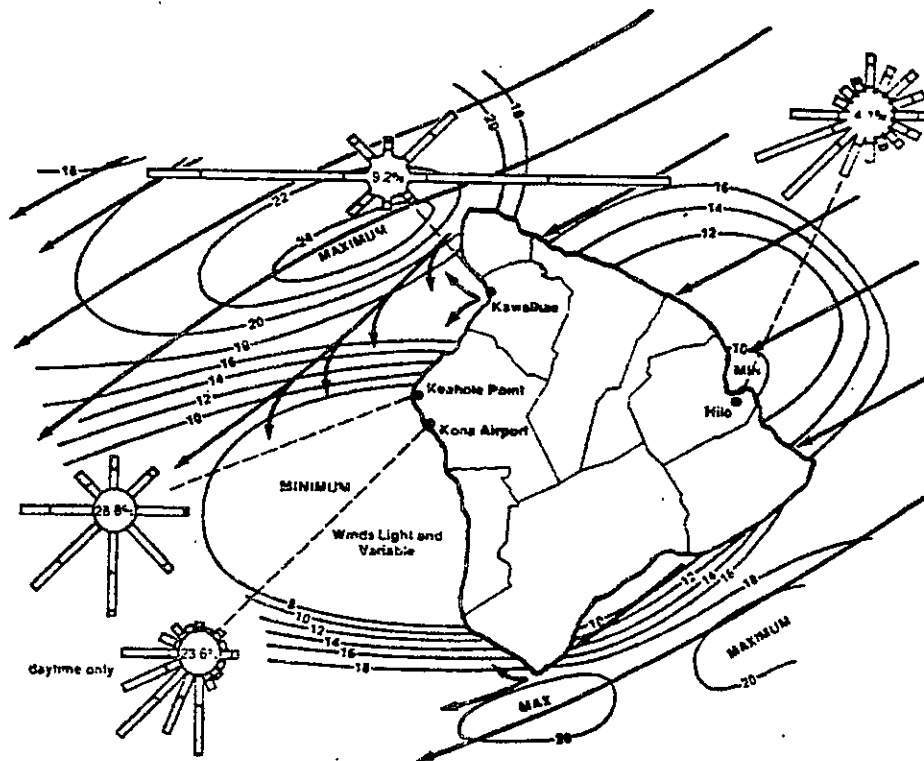
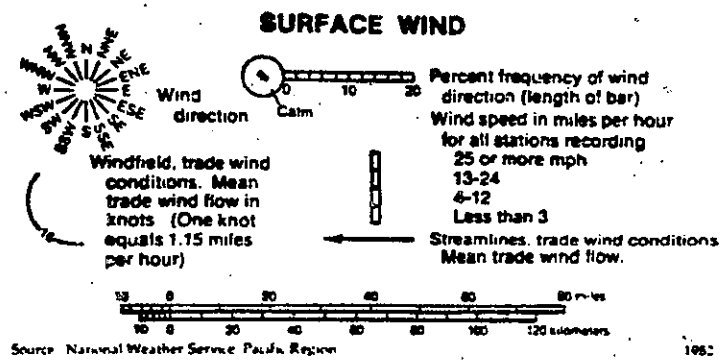
The US Army Corps of Engineers has identified three basic bottom types off Miloli'i.¹ From Ho'opūloa Bay to the North end of Miloli'i Bay, there is a smooth but somewhat irregular lava pavement covered by boulders eight to twelve

¹Nolan, Ron and Daniel Cheney; West Hawaii Coral Reef Inventory, US Army Corps of Engineers, Hawaii; March 4, 1981; p. 366.

feet in diameter, cobbles, and sand. Offshore from the 1926 lava flow is a dense cover of irregular and angular boulders and rock outcrops. Finally, from Miloli'i Bay along the north side of Omoka'a Bay and off Kapulau Point the bottom consists of shallow, flat-topped platforms sometimes having veneers of coral, rubble, and sand. These platforms have sheer twenty to thirty foot drop offs along their edges which range between five and ten feet below sea level.

There are also numerous deep fissures and channels which penetrate shoreward into the platforms. Large boulders lie at the foot of these drop offs. The boulder cover gradually declines to about sixty feet where the shelves merge into sandy bottom.

Miloli'i-Ho'opūloa's climate is similar to that of other coastal areas in the Kapalilua area. Though the island lies in the path of the northeast trade winds, Miloli'i is not influenced by them. Hualālai, Mauna Loa, and Kīlauea force the trade winds to rise over their northeastern slopes. When the winds hit colder air at the higher elevations, rain occurs. As the winds pass over the volcanoes they tend to remain at the higher elevations and do not descend into the lower elevations until they have passed well over

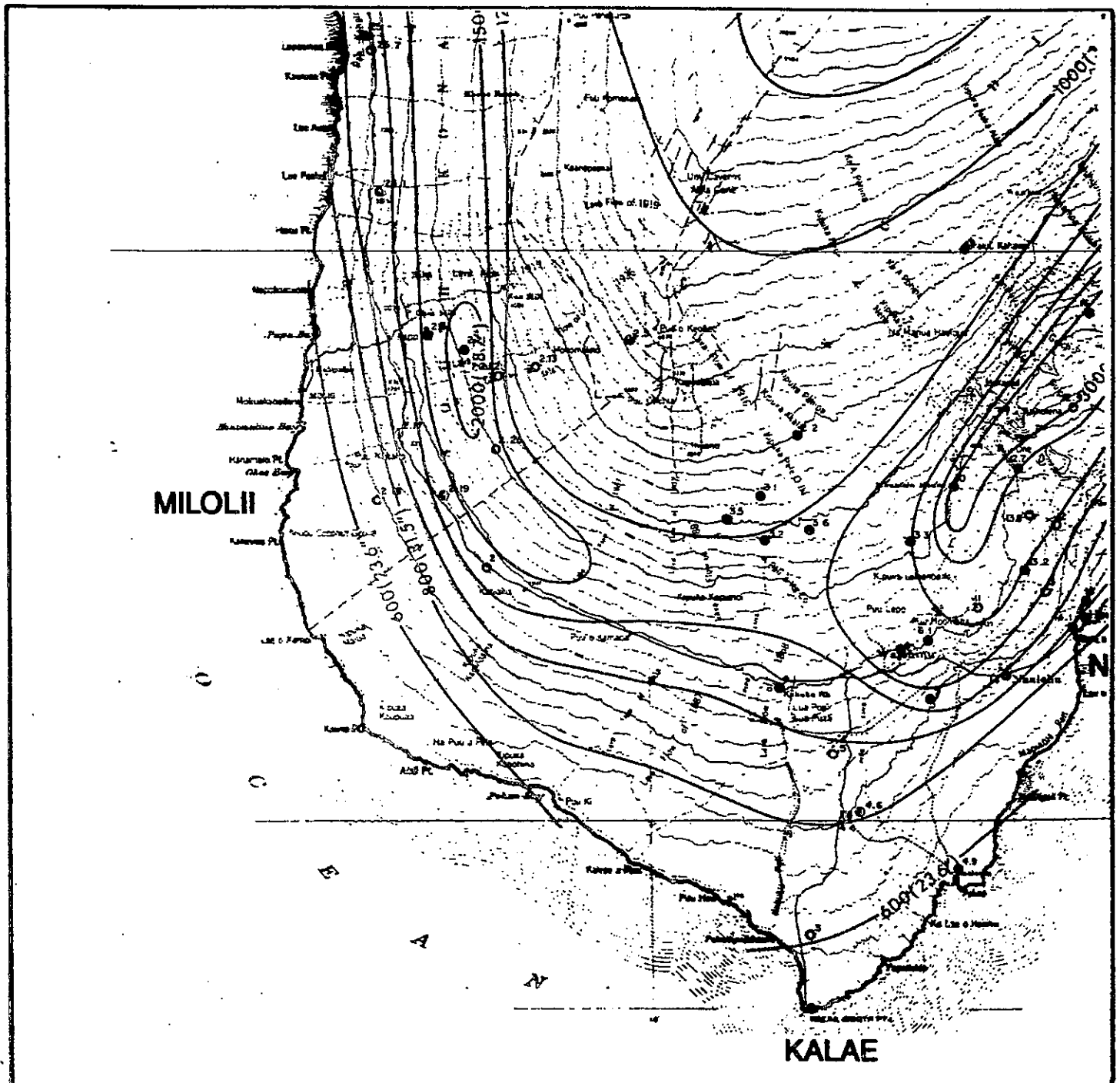


the island. This creates a "wind shadow" along the South Kona coast. Rainfall in this area is therefore primarily due to convection and averages in the Miloli'i-Ho'opūloa area about twenty-four inches annually.

The temperatures at Miloli'i-Ho'opūloa are fairly constant throughout the year. The average range in temperature is greater over the course of a day than it is from season to season. The annual mean temperature for the community is

MEDIAN ANNUAL RAINFALL

The isohyets are in millimeters and inches with the circles denoting rain gages. Miloli'i-Ho'opūloa falls just under 23.6" per year annual rainfall.



○

2



sharp pieces of lava piled in tumbled heaps. The portion of land covered by the 1926 flow has no soil and very little growth of any kind. The rough broken land is lava from prehistoric lava flows. There is little soil except that brought into the area by residents or created by crushing the lava into cinders. Vegetation is more advanced in these areas and includes large kiawe trees, shrubs, grasses, and miscellaneous planted ornamentals.

Groundwater resources are prevalent in the community, especially in the Miloli'i area. Their potential, however, is not known but the anchialine ponds previously mentioned do have a low salinity (5-6 ppt) which indicates the possible presence of a fairly stable resources.

Natural hazards in the forms of earthquakes, tsunamis, and lava flows have all been experienced in the Miloli'i-Ho'opūloa area. The lava flow threat is ever-present but not as frequent as one would expect. Since Captain Cook's arrival in 1778, two flows have entered the Miloli'i-Ho'opūloa area; in 1919 and again in 1926. The second threat, tsunamis, has destroyed property at Miloli'i Bay, but the hazard is not that great. Over the years, the average tsunami run-up

at Miloli'i has been below eight feet.¹ Additionally, the village at Miloli'i has been subject to some flooding over the past one hundred years.² The hazard from earthquakes is ever-present because of the island's volcanic nature. There are two fault zones in the Kona District and both are situated on the south-west flank of Mauna Loa in the Kapalilua area. The Kaholo fault system runs parallel to the shoreline just below the 1,000 foot elevation level between Papa Bay and Ki'ilae Bay. It has not been significantly active in historic times. The second fault system, known as the Kealakekua System, has been active and has generated a number of major earthquakes and small tsunamis which have been recorded at Miloli'i-Ho'opūloa.

The coastal waters around Miloli'i-Ho'opūloa are classified as "Class AA" waters by the State Department of Health and, as such, are protected for "oceanographic research, the support and propagation of shellfish and other marine life,

¹Cox, Doak; Local Tsunamis in Hawaii - Implications for Hazard Zoning, Hawaii Institute of Geophysics, Environmental Center CN 0020, August, 1979; p. 32.

²Flood Insurance Study, Hawaii County, Federal Management Agency, Community Number 155166, February 1, 1982: p. 28.

conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment."¹ All shoreline ecosystems and bottom ecosystems north of Miloli'i Bay are designated as "Class II" waters except the area around the 1926 lava flow. The flow area and the remainder of the coastal waters in the Miloli'i-Ho'opūloa area are "Class I" waters.

The US Army Corps of Engineers survey, noted earlier, found that coral development on the surrounding offshore platforms at Miloli'i Bay and its vicinity was "patchy." But coral formations do exist. In the high surge areas, colonies of Pocillopora meandrina are common but are supplemented with Porites lobata colonies in medium surge areas. The large boulders, referred to earlier, at the bases of the lava platforms are encrusted with heavy coral growth of Porites. The terrace bottom beyond the boulders is dominated by finger coral, Porites compressa. Coral growth generally disappears after the ninety foot depth level.

Besides corals, other animal life includes a number of species of echinoderms (sea urchins), including Tripneustes gratilla,

¹State Public Health Regulations, Chapter 37-A.

Diadema paucispinum, and Echinothrix diadema, and reef fish.

A 1970 fish survey at Miloli'i identified the more prevalent species:¹

Paurupeneus multifasciatus (Moana)

Pomacentrus jenkinsi (Jenkin's Damsel Fish)

Chromis vanderbiltsi (Vanderbil'ts Damsel Fish)

Acanthurus nigofuscus (Blackish-Brown Surgeon Fish)

Zebrasoma flavescens (La'i pala, Lau'ipala, Laukipala)

Acanthurus mata (Puala, Puwalu)

Ctenochaetus strigosus (Kole)

In addition, the "paku'iku'i" (Acanthurus achilles) a member of the surgeon fish family, is an abundant resident of Miloli'i's reef.

Marine plant life, or seaweeds, is also plentiful along the coast between Miloli'i and Ho'opūloa. At Papa Bay and Alika Bay where fresh water is discharged into the ocean, the green seaweed Limu pahapaha (Ulva Fasciata) is abundant.

The following list of seaweeds are found along the shoreline in the Miloli'i-Ho'opūloa area:

¹ Fish Transect: Miloli'i Bay; State Department of Land and Natural Resources, Division of Fish and Game, Honolulu, 1971.

Green Seaweeds: Caulerpa racemosa (hula manu, ai a ka honu, hulu moa, limoa)

Dictyosphaeria versluysii

Enteromorpha spp. (limu 'ele'ele)

Ulva fasciata (Limu pahapaha)

Chaetomorpha antennina

Brown Seaweeds: Dictyota friabilis (limu lipoa)

Padina spp.

Sargassum sp. (limu kala)

Turbinaria ornata (limu kala)

Chinoospora spp.

Sphacelaria sp.

Giffordia sp.

Red Seaweeds: Centroceras clavulatum

Ceramium sp.

Galaxaura spp.

Hypnea spp. (limu huna)

Pterocladia capillacea (limu loloa)

Ahnfeltia concinna

Amansia glomerata (limu ha'ula)

Corallina spp.

Desmia sp.

Laurencia spp.

Porphyra spp. (limu lū'au, lipahe'e)

The existing vegetation at Miloli'i-Ho'opūloa is representative of those species associated with dry and moderate rainfall such as kiawe (Prosopis pallida), lantana (Lantana camara), and koa haole (Leucaena leucocephala). The vegetation cover varies considerably along the coast due to the relative ages of the lava flows. Vegetation at the head of Alike and Papa Bays is particularly heavy indicating the presence of subsurface ground water. Vast areas within the community are void of vegetation, especially that portion located on the 1926 flow. At the southern end of the existing village at Miloli'i there is a large grove of ironwood trees (Casuarina spp.) and throughout the village there are various species of ornamentals and plants associated with human settlement such as bougainvillea (Bougainvillea spectabilis), and coconut (Cocos nucifera). Christmas berry (Schinus terebinthifolius) is found also extensively throughout the area.

While the portion of land covered by the 1926 flow is void of vegetation, the village at Miloli'i where human settlement now occurs is planted and the area planned for additional residential development at Ho'opūloa now has sparse vegetation consisting primarily of kiawe, koa haole, and

smaller shrubs and grasses.

Some native plants have been identified in the area. These include:

'Ilima-ku-kahakai (Sida Fallax)

Hala (Pandanus odoratissimus)

'Ūlei (Osteomeles anthyllidifolia)

Kou (Cordia subcordata)

The general lack of vegetation and the young geologic age at Miloli'i-Ho'opūloa do not provide suitable habitats for native Hawaiian fauna or endangered Hawaiian avifauna. The Hawaiian bat (Lasiurus cinereus semotus) is the only known "endangered" native mammal frequenting the Kapalilua area. The bat is highly mobile and tends to favor the coastal upland regions. No sightings have been recorded of this creature in the coastal Miloli'i area.

The following is a list of fauna and avifauna which presumably inhabit the Miloli'i-Ho'opūloa area and probably roam within the community on occasion:

Mammals: Hawaiian Bat (Lasiurus cinereus semotus -
'ope'ape'a

Feral Pig (Sus scrofa) - pua'a

Domestic Dog (Canis Familiaris) - 'ilīo

Domestic Cat (Felis catus) - pōpoki

Mongoose (Herpestes auropunctatus) -
'iole-mana kuke

House Mouse (Mus musculus) - 'iole li'ili'i

Polynesian Rat (Rattus exulans) - 'iole

Roof Rat (Rattus rattus) - 'iole-nui

Birds: Mynah (Acridotheres t. tristis)

House Finch (Carpodacus mexicanus frontalis)

Ricebird (Lonchura punctulata)

Barred Dove (Geopelia striata)

House Sparrow (Passer domesticus)

Northern Cardinal (Cardinalis cardinalis)

Spotted Dove (Streptopelia chinensis)

Japanese White-Eye (Zosterops J. japonica)

Pacific Golden Plover (Pluvialis fulva) - Kōlea

Hawaiian Owl (Asio Flammeus sandwichis) - pueo

Additional life has been found in previously noted anchialine ponds.¹ Three species of mollusks, Melania spp., Theodoxus spp.,

¹Maciolek, John and R.E. Brock; Aquatic Survey of the Kona Coastal Ponds, Sea Grant Advisory Report, University of Hawaii, 1974.

and Assimineia sp., and one species of shrimp have been found living in the three ponds, none of which is near the village area.

This concludes a brief review of the land at Miloli'i-Ho'o-pūloa; its history of human settlement and its inter-related physical and biological characteristics.

KA PO'E



A. Community Development

1. Residential Development

A. Awarding Process: Residential development being proposed by this plan will be on 53 acres of state-owned land on the makai side of the public road between Miloli'i Bay and Ho'opūloa Bay. Individuals have lived on portions of this property for, perhaps, hundreds of years. In recent times, however, the community at Miloli'i has existed in its present configuration for about fifty years. No legal recognition of the tenancy of those people living on state-owned land has ever been afforded by the state. With the passage of Act 62 and A-t 83, the mechanism for legitimizing tenancy at Miloli'i and Ho'opūloa was finally developed. The instrument of tenancy will be long-term (65 year) lessee between individual members of the Miloli'i-Ho'opūloa community and the State Department of Land and Natural Resources (See Attachment F; General Lease Document, p. 106).

There will be two phases to the awarding process of residential leases at Miloli'i-Ho'opūloa. Phase 1

encompasses the awarding of leases to individuals presently residing in residences constructed within the area described by Executive Order 473 (See Attachment C: Executive Order 473, p. 98). Phase 2 of the awarding process applies to all other persons eligible for leasehold awards at Miloli'i-Ho'opūloa under Act 62 and reinforced by Act 83 (See Map next page).

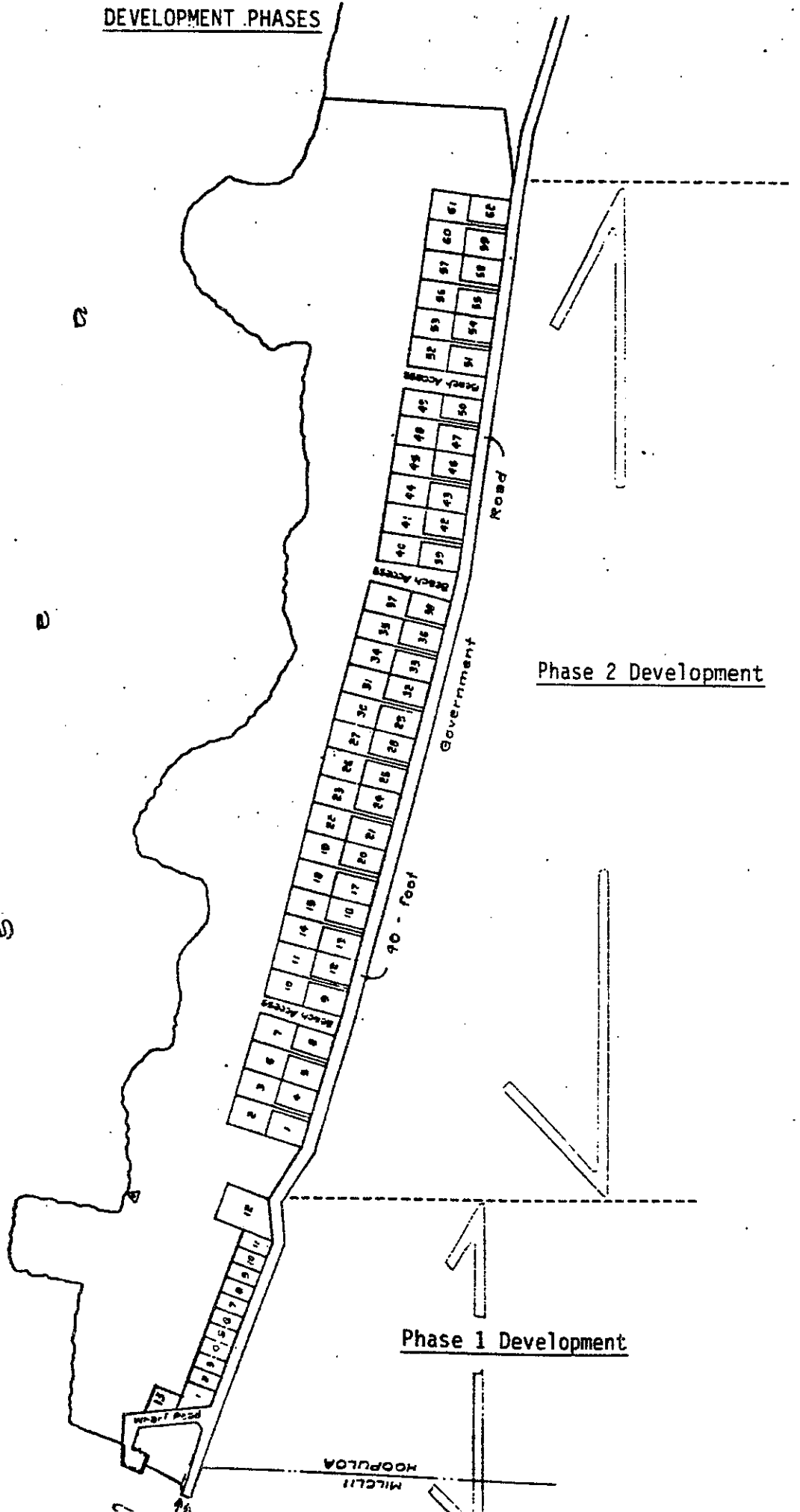
PHASE 1:

A total of fourteen 5,000 square feet residential lots have been surveyed and are potentially available for residential leasehold awards.

One of the fourteen lots, however, presently serves as access for the US Coast Guard to service the light at Kapukawa'a [See Map, p. 17 lot 9 (and 22)]. Until alternate access can be provided, this lot will continue to serve as the means for servicing the light.

DEVELOPMENT PHASES

TRUE NORTH



Phase 2 Development

Phase 1 Development

The process for awarding the remaining thirteen residential lot leases in Phase 1 will be as follows:

1. Lessee Designation: Each family currently residing on land described by Act 62 will designate one family member to accept the lease award for the lot on which its residence is located.
2. Consummation of Lease Award: The family member designated will be granted a long-term lease for the property on which its residence is located. Each of the residences will be "grandfathered." This will apply to all existing structures as long as they do not pose any health and/or safety hazard. Those structures which do pose a hazard must be removed or repaired to a standard satisfying the appropriate authorities.

Any new structures constructed on these lots must comply with all home construction and health requirements expected of Phase 2 lessees (See pages 47-48).

3. Successorship: Successorship will be determined by the inheritance laws of the State. A new lease will be awarded a successor for the duration of the original lease award.

PHASE 2:

Phase 2 residential development consists of awarding potentially sixty-two 10,000 square foot residential lots located in lands presently undeveloped between the village at Miloli'i and Ho'opūloa Bay. The land will be subdivided into lots running two deep along the makai side of the government access road. A twenty foot wide driveway will service four lots at a time; two in front and two behind. Each front lot will be 80 feet across the front and 125 feet deep. Each rear lot will be 90 feet across the front and 125 feet deep. Before allocation of the lots takes place, the State will be asked to conduct an archaeological reconnaissance survey of the Phase 2 lot area and to survey the area into the prescribed 62 lots. Once these tasks have been

completed, the allocation process for Phase 2 lots can proceed as follows:

1. Registration of Applicants: All persons who feel that they are eligible for a leasehold award will register with the State Department of Land and Natural Resources (See Attachment E: Application Form, p. 104).

A Public Notice proclaiming a 90-day registration period for all eligible persons to register will be published in Hawaii's major newspapers as well as those specific to the Big Island.

2. Verification of Applicants Eligibility: As applicants register, their application forms will be reviewed and their eligibility for leasehold consideration will be verified.

Act 62 defines eligible applicants as:

- (1) Persons who were displaced by, or are descendants of the refugees of, the 1926 Ho'opūloa lava flow and who actually resided and continued to reside in the

area set aside by Executive Order 473,
at some point prior to December 31, 1949;
or

(2) Persons awarded a lot in some manner
under the county management of Executive
Order 473, and who did not relinquish
such right to others or back to the
county, and who actually resided in the
area set aside by Executive Order 473,
at some point prior to December 31, 1949;
or

(3) Persons who resided in the area by
virtue of assignment of lot by those
persons who were awarded a lot in some
manner under the county management of
Executive Order 473; or

(4) Any heir, consanguineous or affined,
of any person qualifying under paragraph
(1), (2), or (3) of this section who has
established residence in the area des-
cribed in section 3 of this Act; or

(5) Persons who on the effective date of this Act reside on the parcel or parcels of land listed in section 4, have permits allowing them to reside on those parcels; and who can prove their claims to the Department of Land and Natural Resources under the provisions of the Act.¹

The State Department of Land and Natural Resources will utilize such means as is necessary to ensure verification of eligibility.

3. Selection of Applicants for Lease Awards:

At the appropriate time, place, and date to be named by the State Department of Land and

¹ Eligibility criteria as reported in Act 83.

Natural Resources, the names of verified eligible applicants will be drawn randomly.

The first name drawn will have first preference for one of the Phase 2 lots. The second name drawn will have second preference.

If the person's name drawn is not present at the drawing, he/she will be reserved a lot choice which will be made at the conclusion of the other awards. In other words, the absentee award winner may select a lot from those that are left. If there are none left, the absentee award winner will be assigned a lot award by the State. Trading of lots with other awardees prior to consummating the actual lease document will be permitted.

4. Consummation of Lease Awards: Leases between persons receiving lot awards and the State Department of Land and Natural Resources will be consummated in a timely and orderly fashion after the conclusion of the lot drawing process.
5. Successorship: Successorship will be determined by the inheritance laws of the State.

B. Land Preparation: While land preparation will not be necessary on lands awarded in Phase 1, it will be quite extensive in Phase 2. Once the surveying of the lots has been completed, the awarding process, noted above, can be completed. The individual lessees will have the responsibility of preparing their residential lots for residential construction. Grading and compacting activities will be necessary. These activities will be co-ordinated as much as possible with all new lessees to keep costs to a minimum. Generally, land preparation for residential construction will occur during the first year after the consummation of lease awards.

C. Development Financing: While the cost of residential development on awarded lots will be the responsibility of the individual families involved, the community association will continue to seek out potential resources for the community in housing development.

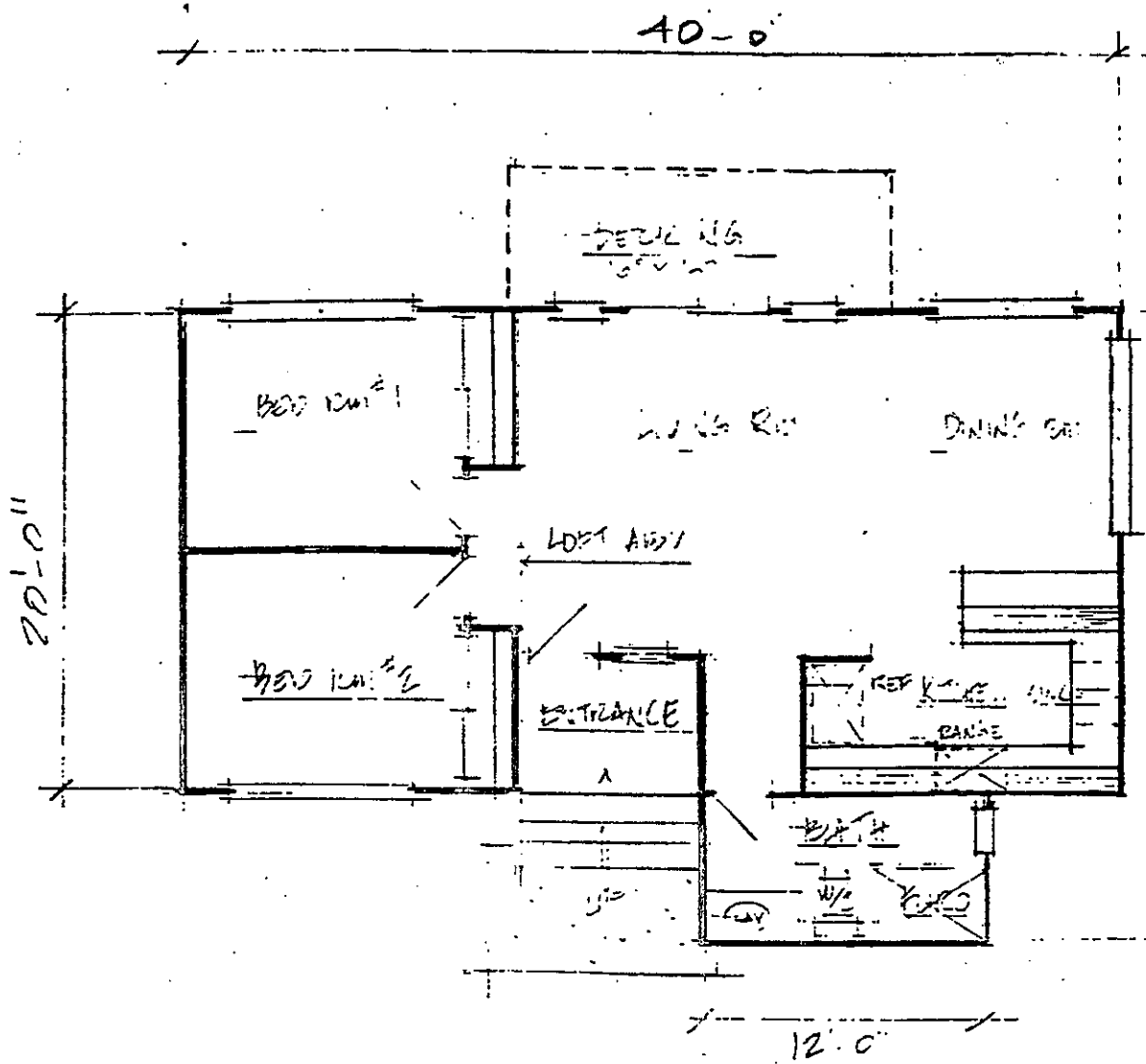
D. Residential Construction: Phase 1 residences will be "grandfathered." The community association will endeavor to undertake a number of community self-help projects aimed at up-grading residential construction

and toilet facilities of the "grandfathered" structures.

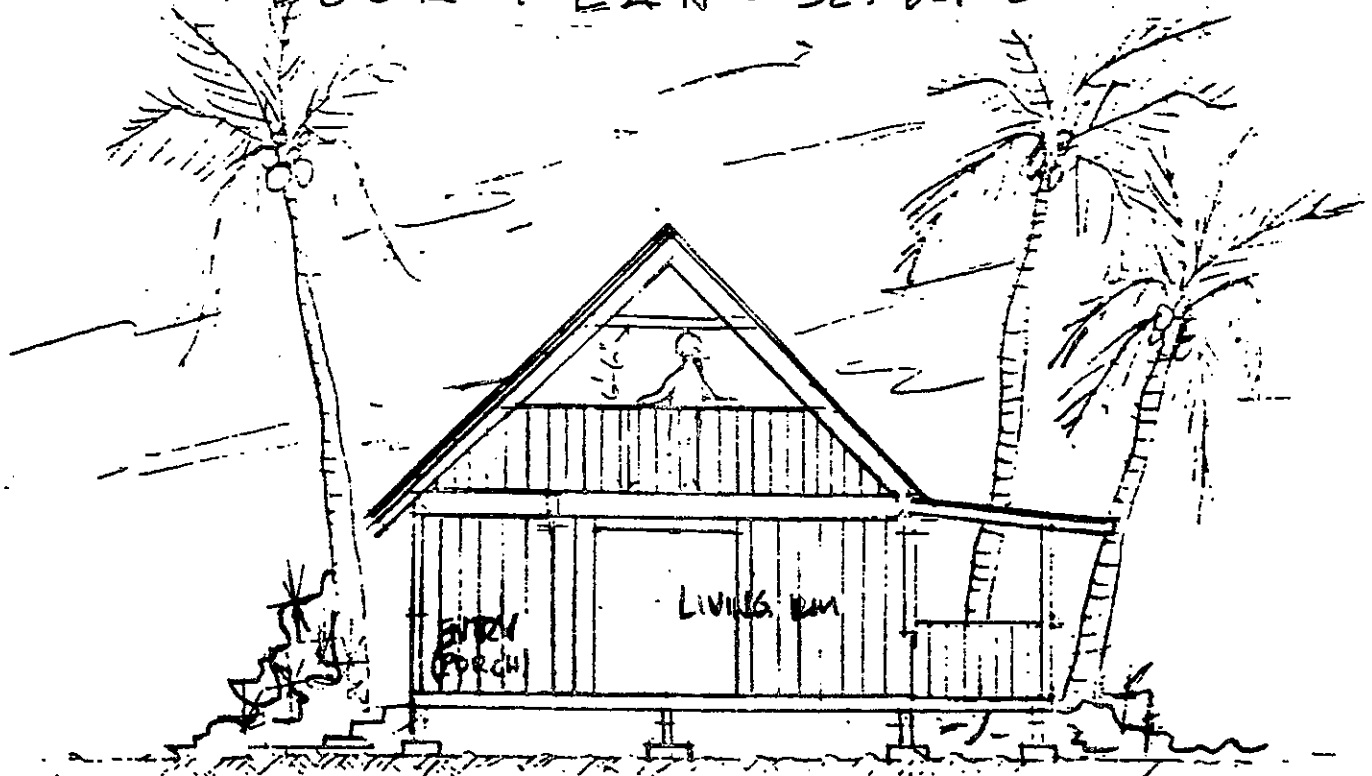
Lessees of Phase 2 lots will take all precautions to insure that debris, construction materials and wastes, paints and other preservatives, petroleum products, and household chemicals do not contaminate the ocean or coastal waters during their housing construction and subsequent settlement. A number of model house-types have been developed for possible consideration by Phase 2 lessees. These are noted on the following pages.

In addition to the health code, all residents in Phase 1 and Phase 2 at Miloli'i-Ho'opūloa will be required to abide by the following community regulations:

1. No chain link fences. Fences and walls should be constructed of natural materials-most appropriate, e.g. moss rock.
2. No piggeries. While there are economic benefits from raising such animals, the individual benefit realized does not over-ride the rights of the general community to maintain standards

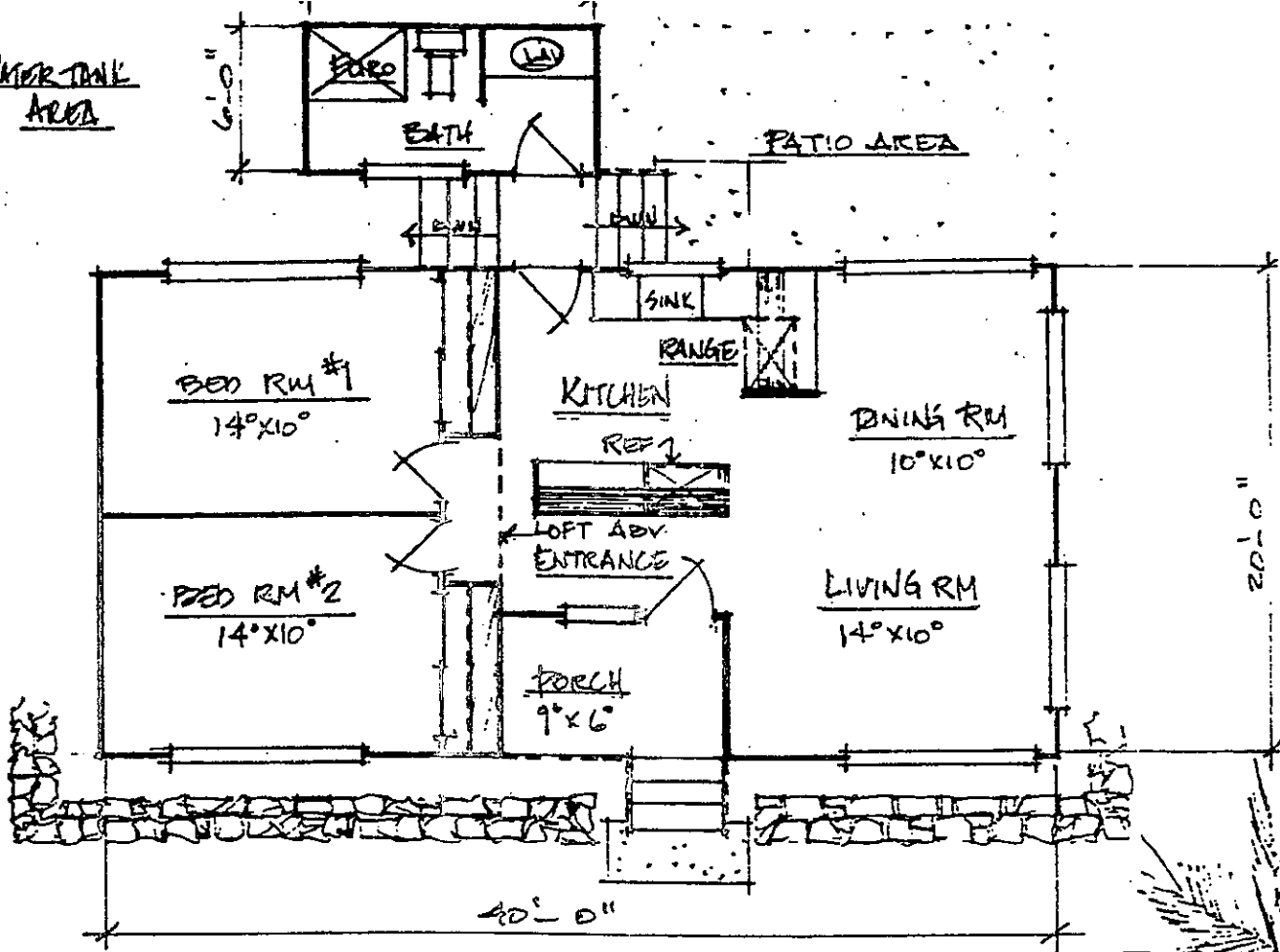


FLOOR PLAN • SC: 1/8" = 1'-0"

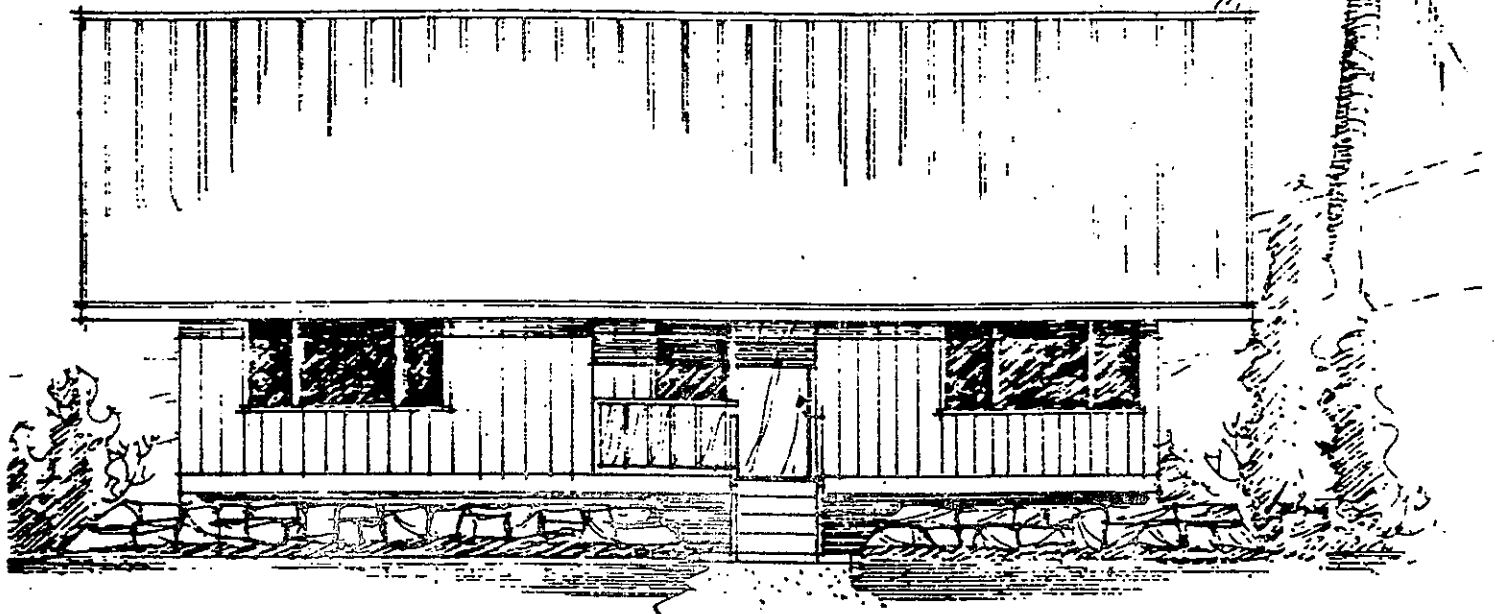


TYPICAL CROSS SECTION • SC: 1/2" = 1'-0"

WATER TANK AREA



FLOOR PLAN - SC: 1/8" = 1'-0"



FRONT ELEVATION

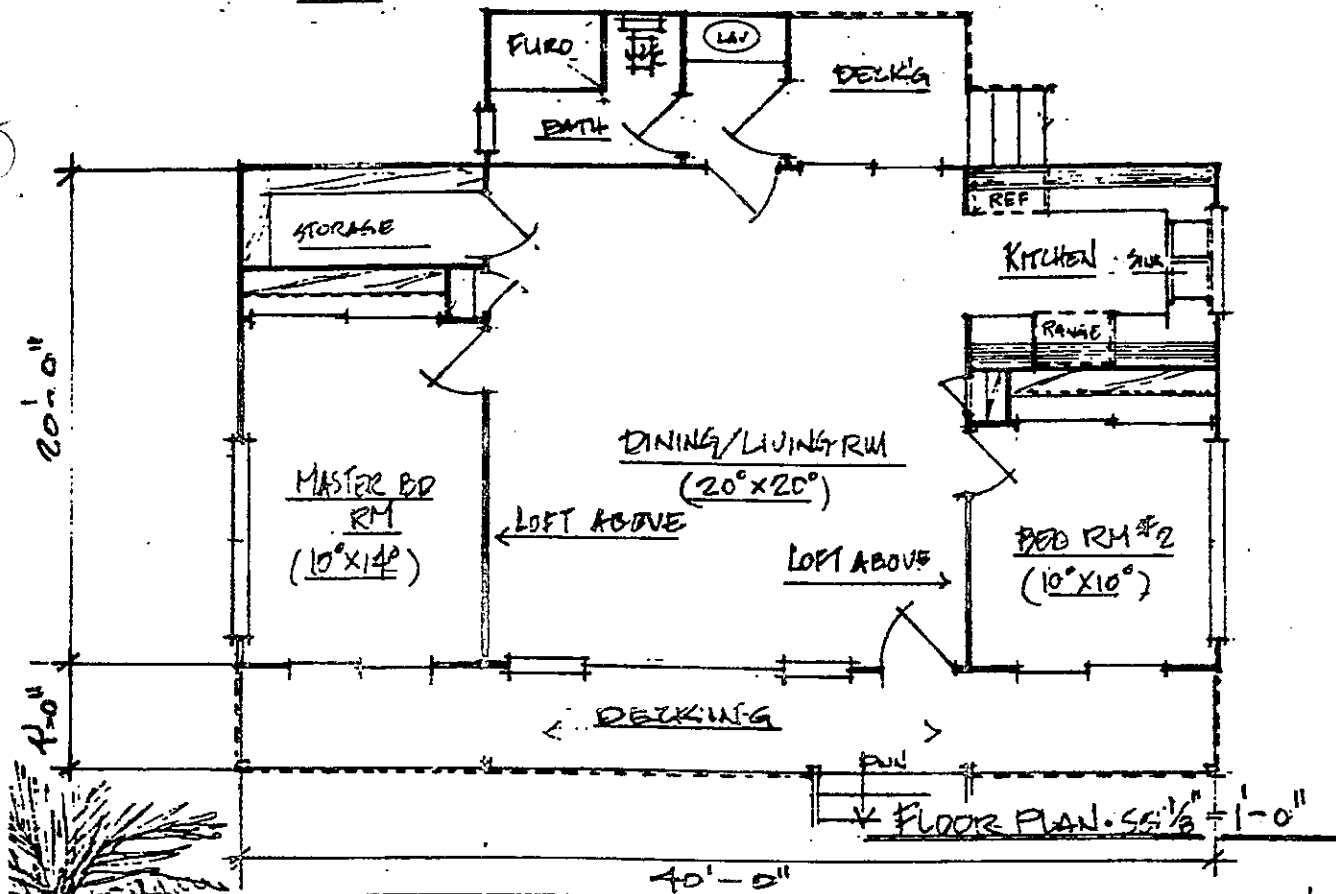
LIVING AREA : 300 sq

BATH RM : 72 sq

TOTAL : 372 sq

WATER TANK
AREA

GARAGE/PATIO AREA



FRONT ELEVATION

PLANTATION #1

LIVING AREA: 300 sf

BATH RM AREA: 72 sf

TOTAL: 872 sf

DECK AREA: 214 sf

usually acceptable in residential areas. Such standards do not include pigs.

3. Use of quality materials in construction. In all instances of construction, lessees have a responsibility to the general community to use "good" quality materials in their construction.
4. Painted or finished house structures. In order to protect the exteriors of constructed houses, paint or some protective coating must be applied.
5. Yard area and property free of debris. Lessees have to keep their property free of debris. This includes keeping property free of old permanently parked cars and other broken mechanical equipment.
6. Landscaping in some reasonable fashion.
7. House size a minimum of 800 square feet under roof (including lanai).
8. New houses outfitted with water catchment systems.

9. Lessees adhering to a planned timetable for residential development of their respective Phase 2 lots. Each lessee should develop their own respective timetable for development of his/her lot. Such timetable should include a plan for land preparation, financial development, and house construction.

2. Recreational Development

A number of activities are planned for enhancing the recreational opportunities in the community. These include:

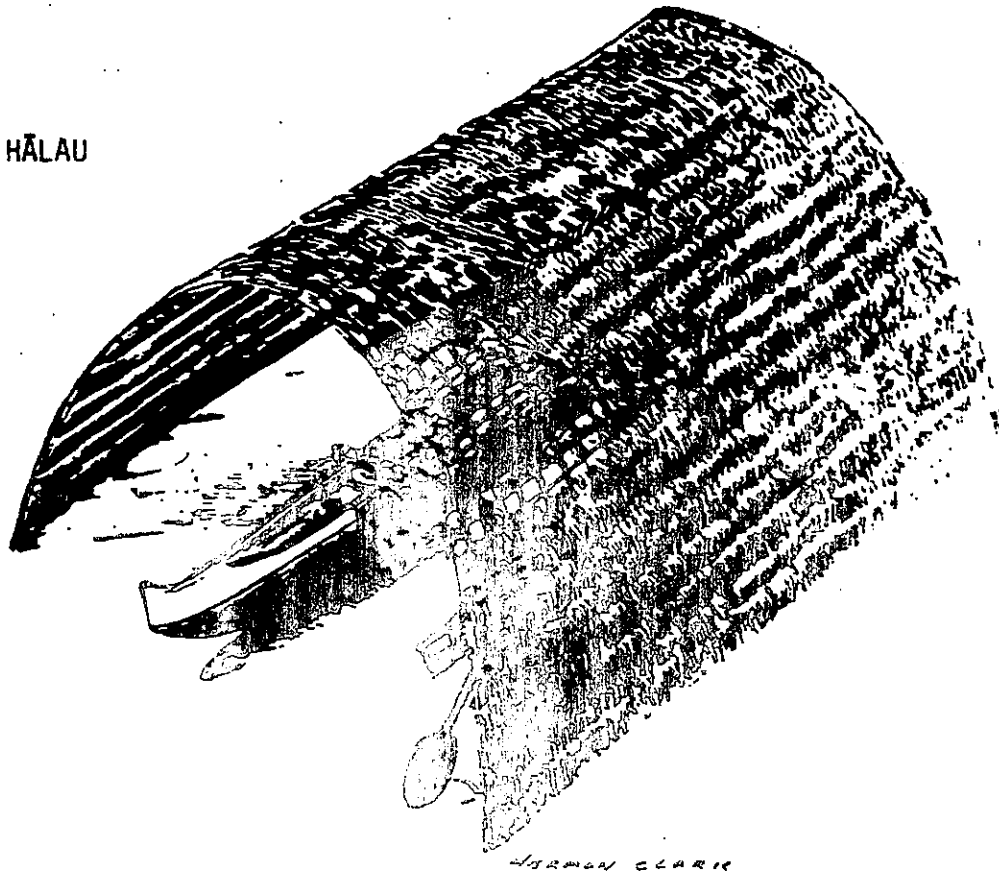
A. Developing trails for hiking and shoreline access:

The community will refurbish and maintain a series of fisherman trails which will link with the coastal trail at Papa Bay and Omoka'a Bay.

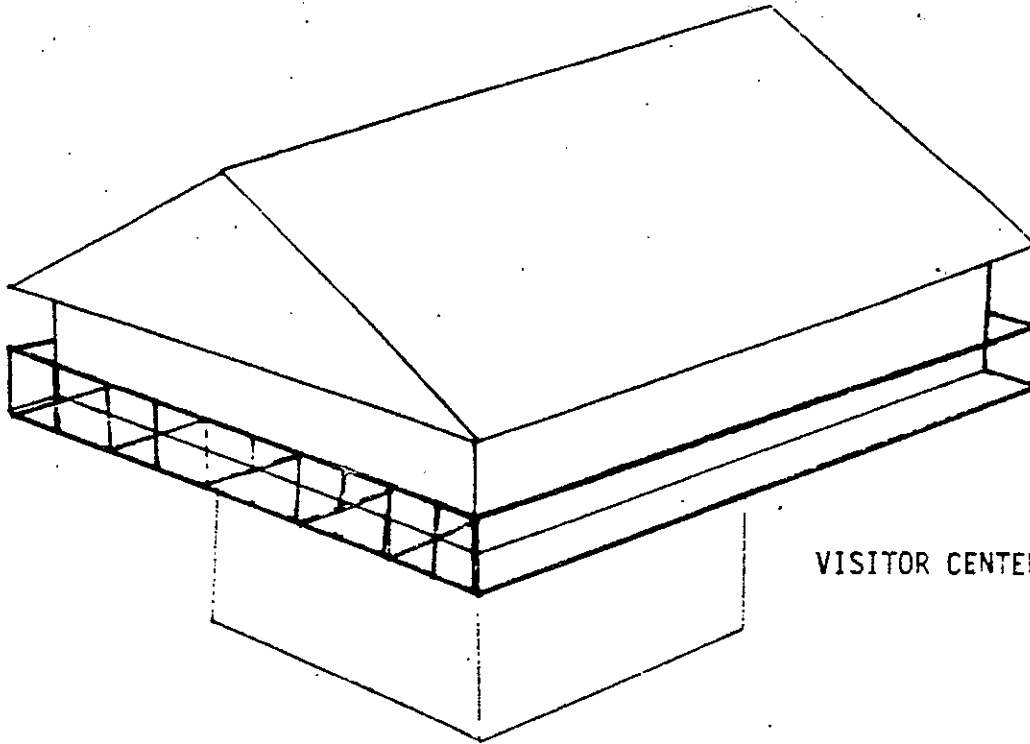
B. Improving landing and constructing canoe hālau:

The community will utilize Ho'opūloa Bay beach front for canoe paddling activities for its youth. A canoe hālau will be constructed to protect outrigger canoes when they are obtained. The hālau will be constructed of traditional materials.

CANOE HĀLAU

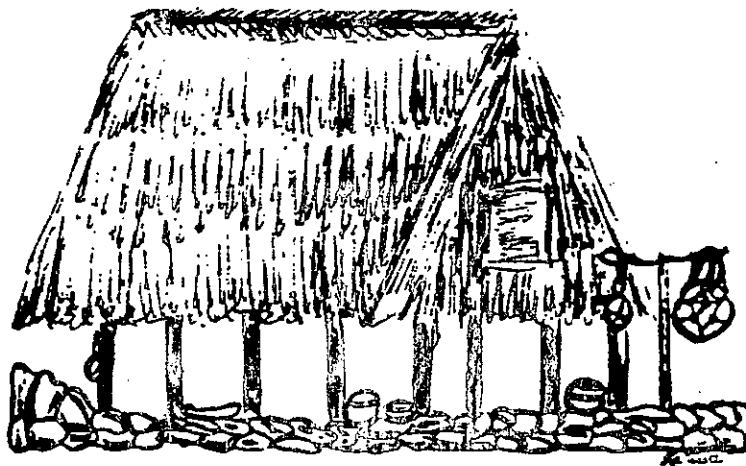


- C. Developing a community picnic area: The portion of the old coastline next to accretion land formed by the 1926 lava flow will be developed by the community into a picnic area which will be utilized by the community and the general public.
- D. Developing a visitor center/library-museum: A small, multi-purpose visitor center/library-museum will be constructed on accretion land from the 1926 flow. The center will provide visitors with an appreciation of the history of the Miloli'i-Ho'opūloa area.



VISITOR CENTER/LIBRARY-MUSEUM

- E. Developing a community center pavillion: The community will develop a community center near its planned picnic area. The structure will be of a simple pavillion design but will provide residents a place for social and sports activities.



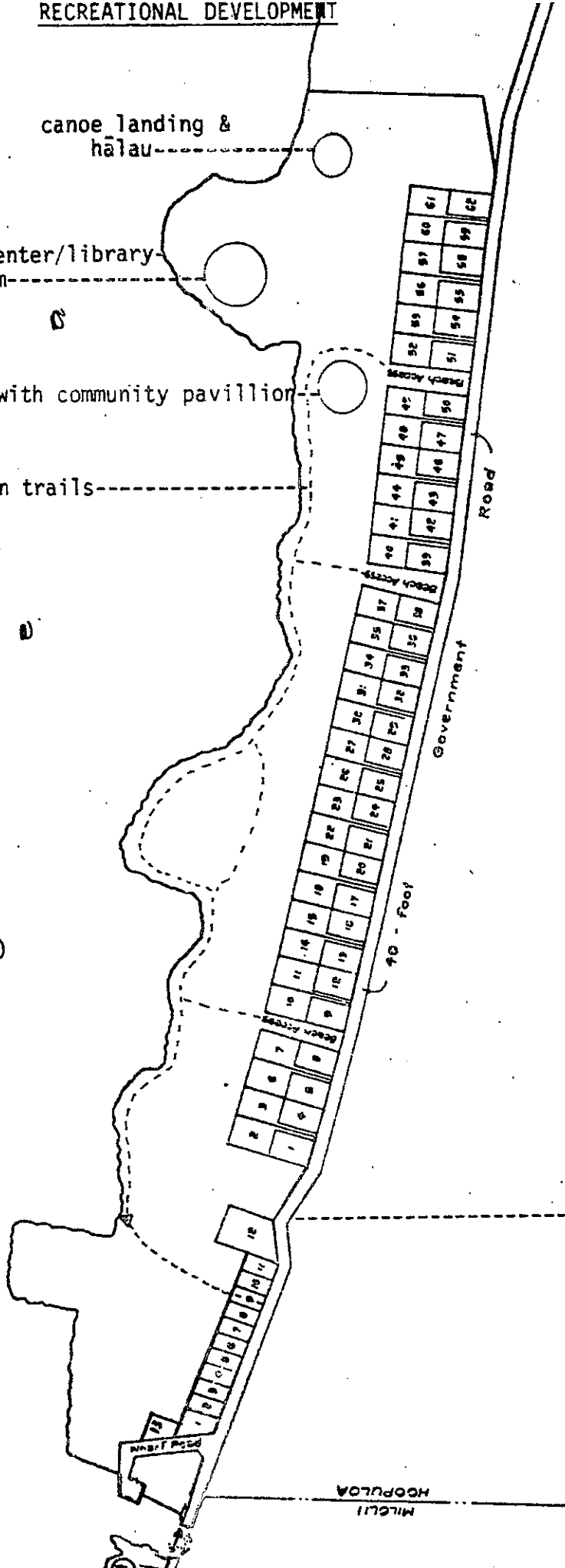
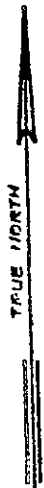
RECREATIONAL DEVELOPMENT

canoe landing & hālau

visitor center/library-museum

picnic area with community pavillion

fishermen trails



3. Infrastructure

- A. Road Improvements: The existing government road leading into the community from the Māmalāhoa highway is a ten foot paved roadway with a twenty-five foot right-of-way. It is planned to widen the paved road to twenty feet.

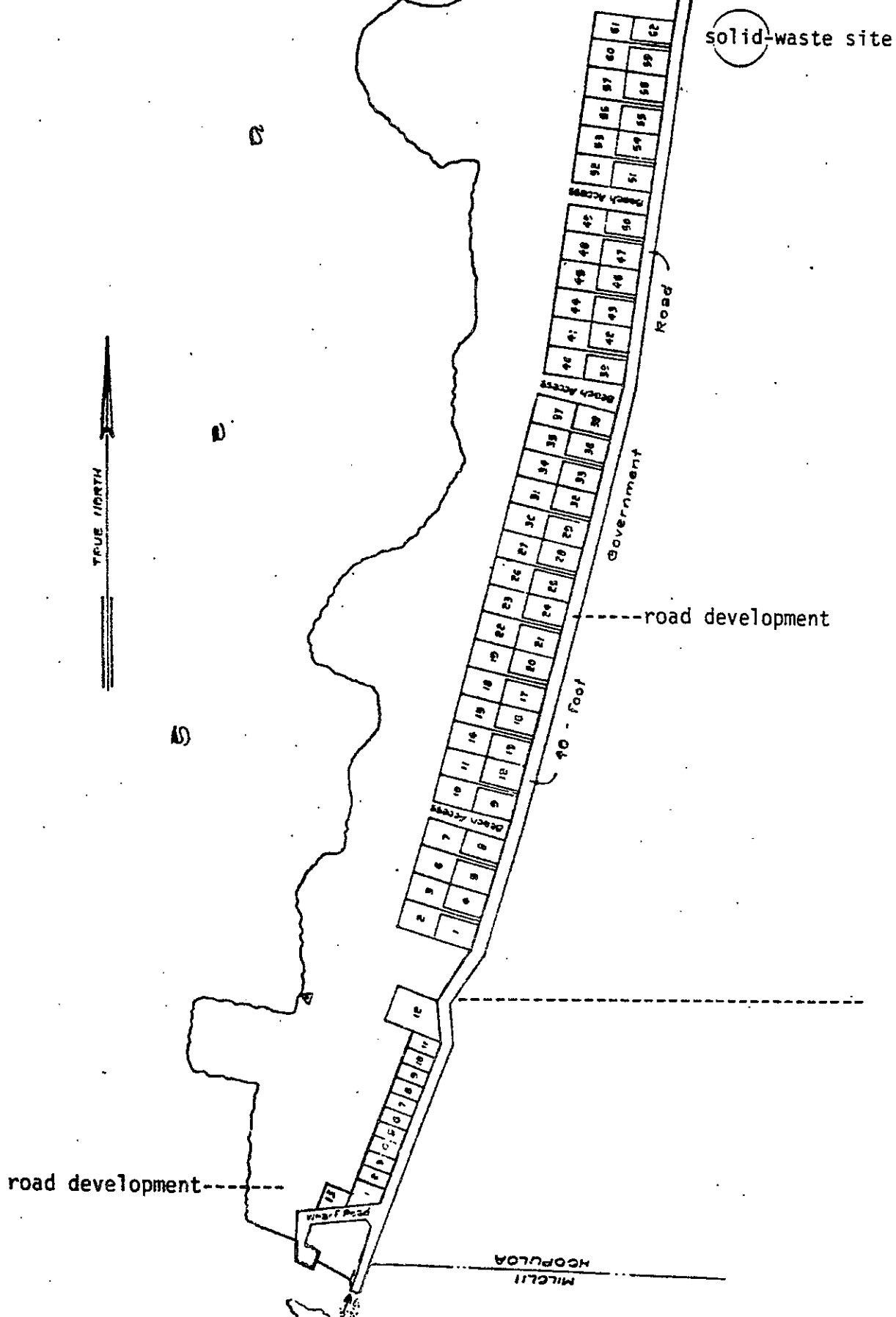
In addition, it is planned to develop the access road to Kapukawa'a light through the wharf area. This will allow for the community to then develop the current access route through one of the Phase 1 lots into a park and/or greenbelt area.

- B. Telephone Service: Currently, telephone service is available to Phase 1 lots. It is planned to provide service to Phase 2 lots as well. For this new residential area, the wires will be buried and underground service installation will be provided new residents. The line will extend to the planned visitor center/museum at Ho'opūloa.
- C. Power Generation: Electricity has not been extended to Miloli'i-Ho'opūloa. Power generation has been and will continue to be the responsibility of the individual

residents. Homes may be wired for portable power generation or for alternative energy systems from wind and/or solar energy. The community association will assist interested lessees with information about potential energy sources.

- D. Water supply: Presently, each of the families at Miloli'i-Ho'opūloa are responsible for obtaining and maintaining their own water supply. All new houses in the community must be built with water catchment systems. Such systems must be sanitary and have the capacity to supply water needs for the family unit.
- E. Solid-waste disposal: The current solid-waste disposal site will be relocated to another location (See map on next page). In conjunction with moving the site, the community association will initiate an educational program in the community aimed at recycling solid wastes.
- F. Sewage disposal: It is important that none of the residences at Miloli'i-Ho'opūloa pose any health and/or sanitation hazard. Through self-help projects, toilet facilities of the "grandfathered" residences

INFRASTRUCTURE DEVELOPMENT



will be upgraded and/or replaced by compost or septic tank systems. New residences will have to use either compost toilet systems or those which fully comply with State Health Department regulations (See Attachment G: Title II, Administrative Rules (DOH); Chapter 57, Private Wastewater Treatment Works and Individual Wastewater Systems, p. 128 and Attachment H: Compost Toilet Specifications, p. 140).

4. Emergency Services

The Miloli'i-Ho'opūloa community is distant from existing emergency services. The community plans to make itself as self-sufficient as possible.

- A. Fire: At least ten residents in the community will undergo training as volunteer firemen and participate in the various required training that is offered by the county. The community will obtain a surplus fire engine (tanker/pumper) which it will maintain and keep in good working condition. Firemen activities will be co-ordinated with the Hawaii County Fire Department.

- B. Police: At least four residents in the community will participate in the police auxillary program. They will participate in the required training and will assist the community in times of emergency.
- C. Medical: At least four residents in the community will participate in EMT (Emergency Medical Technician) training. They will be available to assist residents until more sophisticated medical assistance arrives from the Fire Department or the Kona Hospital. The community association will attempt to train one member in every household in American Red Cross Standard First Aid and cardio-pulmonary resuscitation.
- D. Water Safety: At least one resident in the community will be a member of US Coast Guard Auxillary and will be available for possible search and rescue operations if called upon. In addition, basic water safety training may be provided to the community by the American Red Cross and the County Department of Parks and Recreation.

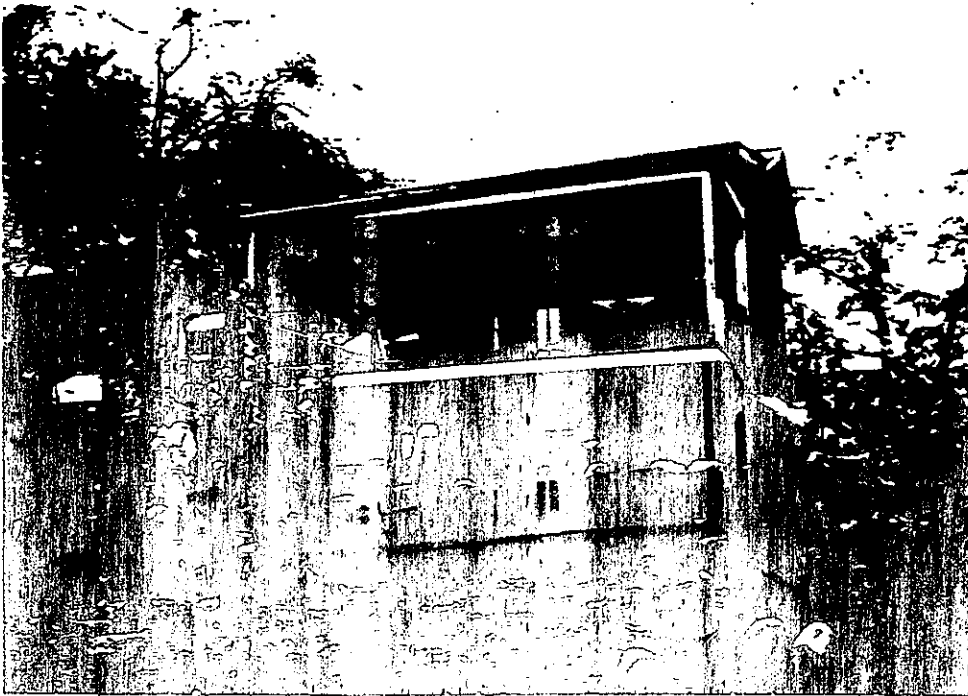
5. Historic Sites

The community will preserve and protect its archaeological and historical sites.

A. Archaeological Sites: The Miloli'i-Ho'opūloa area has had very little archaeological investigation. The community association, working with the state, will undertake an archaeological reconnaissance survey of the total lands in the community. This is in addition to the survey of Phase 2 lot lands. If the survey locates important sites needing further study, the community association is prepared to undertake such study. Among the areas which should be included in the initial survey are the trails, Umi Haihai, and some of the areas which may have served as house and/or religious sites.

B. Historical Sites: There are a number of post-contact sites and structures which also need documenting and, when appropriate, restoration. Some of the houses in the Phase 1 lots also exhibit unique architectural designs. These, too, should be preserved. The community will undertake an oral history project to capture the heritage of the Miloli'i and Ho'opūloa communities. Place names and their meanings will be an important aspect of this study. One of the larger projects being discussed is the restoration of Hau'oli Kamana'o Church.

Working with the private sector and the various Kona community and church organizations, the community association will attempt to bring this project to fruition.



MAGOON HOUSE, MILOLI'I

HAU'OLI KAMANA'O CHURCH,
MILOLI'I





Ho'opūloa Bay

Pu'uioa

Ulu-maha'i-ha'i

Kā'alaea Point

Umi Haihai

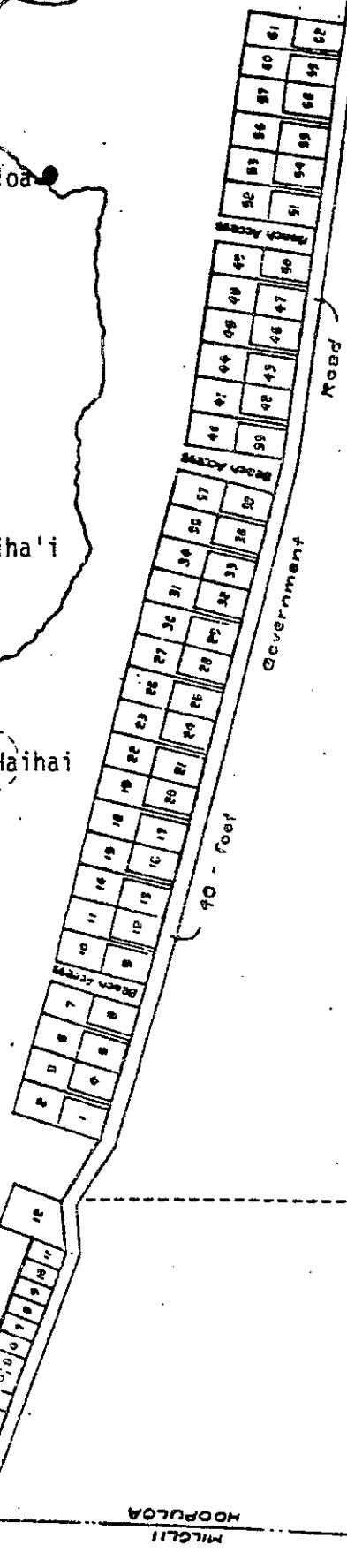
Wai'ea

Kapukawa'a

Kapoho

Miloli'i Bay

Hau'oli Kamana'o Church



MILOLI'I
HOOPULOA

B. Economic Development

1. Small Business Development

The community has been serviced for years by the Kaupiko store. The store provides residents with food items and gasoline. There is no desire within the community to develop an alternative, but, rather, to continue to utilize the services of the store.

An economic development planning zone has been defined by the community in which it plans to develop fishing-related activities. Current thoughts include developing a small fish outlet with chilling and/or freezing capacity.

In addition, the community association will encourage the development of cottage industry enterprises related to the cultural heritage of the community. Activities such as net making, lauhala weaving, opelu preparation, marine engine repairing, and canoe building will be encouraged.



MILGRI
HOOPULDA

C. TIMETABLE FOR DEVELOPMENT

1. Planned Activities by Category

ACTIVITY	Year	84	85	86	87	88	89	90	91	92	93	PRIMARY INITIATION RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATE EXPENDITURE Non-Resident/On-Going
A. Community Development														
1. Residential Development														
a. Awarding Process:														
1) To consummate residential lease agreements with current Miloli'i-Ho'opuloa residents (Phase 1)		x										State-DLNR	Legal Aid Society STATE-DLNR -DHHL Office of Hawaiian Affairs	
2) To conduct an archaeological reconnaissance of Phase 2 area		x										State-DLNR	Pa'a Pono Miloli'i	
3) To survey Phase 2 lots		x										State-DLNR	State-SURVEY	
4) To register and verify eligible applicants for Phase 2 lot lease awards		x	x									State-DLNR	Pa'a Pono Miloli'i Office of Hawaiian Affairs	
5) To draw names of applicants for Phase 2 lot lease awards			x									State-DLNR		
6) To consummate lease agreements with applicants for Phase 2 lots			x									State-DLNR		
b. Land Preparation:														
1) To clear Phase 1 lots of rubbish and debris		x										Pa'a Pono Miloli'i	State-DLNR HHCC -DHHL Private sector	
2) To clear Phase 2 lots of rubbish and debris			x	x								Individual residents	Federal-DOD HHCC Private sector	
3) To bulldoze and grade Phase 2 lots			x	x	x							Individual residents	Federal-DOD Private Sector	

1. Planned Activities by Category

ACTIVITY	Year													PRIMARY INITIATION: RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURE	
	84	85	86	87	88	89	90	91	92	93	Non-Recruiting	On-Going					
c. Development Financing:																	
1) To contact potential state and federal service providers for house financing	x	x	x										Pa'a Pono Milo- li'i	Federal-HUD/FHA/VA State-HHA Private sector			
2) To obtain financing for house construction		x	x	x									Individual residents				
d. Residential Construction:																	
1) To initiate community self-help projects for Phase 1 lot houses: o plumbing o carpentry o masonry		x	x										Pa'a Pono Milo- li'i	Federal-ACTION/ VISTA State-DOL -UE/Hilo Private-Alu Like -KS/BE -Fnds			
2) To design and construct new Phase 2 lot houses		x	x	x	x								Individual residents	Pa'a Pono Milo- li'i State-HHA Federal-HUD/FHA/VA Private sector			
2. Recreational Development																	
a. Trail Development:																	
1) To mark and clear coastal trail			x										Pa'a Pono Milo- li'i	State-DLNR -DOL County-CAP Private-Alu Like -Fnds			
2) To maintain coastal trail				x	x	x	x	x	x	x			Pa'a Pono Milo- li'i	County-P&R Private-Fnds			

1. Planned Activities by Category

ACTIVITY	Year	84	85	86	87	88	89	90	91	92	93	PRIMARY INITIATIVE RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURE Non-Recurring/On-Going		
b. Canoe Landing and Halau Construction:																
1. To clear landing for canoes at Ho'opuloa Bay				x								Pa'a Pono Milo- li'i	State-DOL -DLNR County-P&R -CAP Private-Alu Like -Fnds			
2. To construct canoe halau at Ho'opuloa Bay				x								Pa'a Pono Milo- li'i	State-DOL Private-Alu Like -KS/BE -Fnds			
c. Picnic Area Development:																
1. To design a public picnic area				x								Pa'a Pono Milo- li'i	State-DLNR County-P&R Private sector			
2. To clear area and landscape as designed				x								Pa'a Pono Milo- li'i	State-DOL County-P&R -CAP Private-Alu Like -Fnds			
3. To construct and place picnic benches, barbecue trays, and shelters as designed				x								Pa'a Pono Milo- li'i	State-DOL County-P&R Private-Alu Like -Fnds			
d. Visitor Center/Library-Museum Development:																
1. To design an appropriate structure		x	x									Pa'a Pono Milo- li'i	Private sector			

ACTIVITY	1. Planned Activities by Category													PRIMARY INITIATION RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURES	
	Year	84	85	86	87	88	89	90	91	92	93	Not-Required	On-Going				
2. To raise funds for construction					x	x							Pa'a Pono Milo-11'i	State-DOE Private sector			
3. To construct the building							x						Pa'a Pono Milo-11'i	Private sector			
4. To staff and maintain building								x	x	x	x		Pa'a Pono Milo-11'i	State-DOL/DOE Private-Alu Like -Fnds			
e. Community Center Pavillion Development:																	
1. To design appropriate structure			x	x									Pa'a Pono Milo-11'i	State-DLNR Private sector			
2. To raise funds for construction				x									Pa'a Pono Milo-11'i	State-Legislature Private sector			
3. To construct the building					x								Pa'a Pono Milo-11'i	Private sector			
4. To maintain the building						x	x	x	x	x	x		Pa'a Pono Milo-11'i	State-DLNR Private sector			
3. Infrastructure																	
a. Road Improvements:																	
1. To widen government access road						x	x						State-DOT County-PWD	State-Legislature			
2. To develop alternative access road to Kapuka-wa'a light							x	x					State-DOT Federal-DOT (USCG)	State-Legislature			

1. Planned Activities by Category

Activity	Year	84	85	86	87	88	89	90	91	92	93	PRIMARY INITIATION RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURES Non-Resident/On-Going
b. Telephone Service:														
1. To prepare trench for telephone service to Phase 2 lots				x								Hawaiian Telephone Co.	Pa'a Pono Miloli'i Private Sector	
2. To lay conduits for telephone wires				x								Hawaiian Telephone Co.	Pa'a Pono Miloli'i	
3. To connect telephone service as desired				x	x	x						Individual residents	Hawaiian Telephone Co.	
c. Power Generation:														
1. To provide information about potential energy resources			x	x	x							Pa'a Pono Miloli'i	State-DPED -UH County-R&D	
2. To utilize energy resources as desired			x	x	x	x	x	x	x	x	x	Individual residents		
d. Water Supply:														
1. To install water catchment systems			x	x	x	x						Individual residents	Private sector	
e. Solid-Waste Disposal:														
1. To prepare new site for solid-waste disposal			x									County-PWD	Pa'a Pono Miloli'i	
2. To relocate solid-waste container				x								County-PWD	Pa'a Pono Miloli'i	
3. To initiate educational waste-recycling program				x								Pa'a Pono Miloli'i	State-DPED -UH County-R&D	

1. Planned Activities by Category

ACTIVITY	Year—													PRIMARY INITIATION RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURES	
	84	85	86	87	88	89	90	91	92	93	Non-Recruiting	On-Going					
f. Sewage Disposal:																	
1. To upgrade existing toilet facilities in Phase 1 lot houses		x	x										Individual residents	Private sector			
2. To install new compost or septic tank systems in Phase 2 lot houses		x	x	x									Individual residents	Private sector			
4. Emergency Services																	
a. Fire:																	
1. To train at least 10 community residents in fire science for volunteer fire duty			x										Pa'a Pono Milo-li'i	State-UH/HCC County-BFD			
2. To obtain and to maintain a fire engine			x										Pa'a Pono Milo-li'i	State-DOT County-BFD/BFD/MFD/ KFD			
b. Police:																	
1. To train at least 4 community residents in police science for police auxiliary duty			x										Pa'a Pono Milo-li'i	State-UH/HCC County-HPD			
c. Medical:																	
1. To train at least 4 community residents as EMTs.			x										Pa'a Pono Milo-li'i	State-UH/HCC/DOH			

1. Planned Activities by Category

Activity	Year	84	85	86	87	88	89	90	91	92	93	PRIORITY INITIATIVE RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATED EXPENDITURES Non-Recurring/On-Going
2. To train one member in each household in first aid and cardio-pulmonary resuscitation				x								Pa'a Pono Milo- li'i	State-DOH Private-American Red Cross -Hawaii Heart Association	
d. Water Safety:														
1. To train at least 1 community resident for the US Coast Guard auxiliary				x								Pa'a Pono Milo- li'i	Federal-DOT(USCG)	
2. To provide lifesaving training for the community				x	x	x						Pa'a Pono Milo- li'i	Private-American Red Cross County-P&R Dept.	
5. Historical Sites														
a. Archaeological Sites:														
1. To conduct an archaeological reconnaissance survey of the Miloli'i-Ho'opuloa area		x	x									Pa'a Pono Milo- li'i	State-DLNR Private-Bishop Mus- eum, etc.	
2. To prepare plaques for important sites in the community			x	x								Pa'a Pono Milo- li'i	State-DLNR Private-Fnds	
b. Historical Sites:														
1. To develop a plan for the restoration of Hauoli Kamehameha Church				x								Pa'a Pono Milo- li'i	Hawaii Conference- UCC Private-Historic Hawaii Fnd., etc.	

1. Planned Activities by Category

ACTIVITY	Year	84	85	86	87	88	89	90	91	92	93	PRIMARY INITIATION RESPONSIBILITY	POTENTIAL RESOURCES	ESTIMATE EXPENDITURE Non-Recruiting / On-Going
2. To raise funds for the restoration of the church					x							Pa'a Pono Milo- li'i	Private sector	
3. To restore the church						x	x	x				Pa'a Pono Milo- li'i	Private sector	
4. To encourage owners of houses exhibiting unique architecture to keep them in good repair					x	x	x	x	x	x	x	Pa'a Pono Milo- li'i	Federal-DOL Private-Historic Hawaii Fnd	
5. To conduct an oral history of the community		x	x									Pa'a Pono Milo- li'i	Bernice P. Bishop Museum Private Sector	
B. Economic Development														
1. Small Business Development														
a. Economic Development Planning Zone:														
1. To develop plan for use of the area			x									Pa'a Pono Milo- li'i	Private sector	
2. To initiate and maintain planned use				x	x	x	x	x	x	x	x	Pa'a Pono Milo- li'i		
b. Cottage Industry Development:														
1. To encourage the development of cottage industry enterprises related to the cultural heritage of the community		x	x	x	x	x	x	x	x	x	x	Individual residents	Pa'a Pono Milo- li'i	

2. Planned Activities By Year of Initiation

1984

1. To consummate residential lease agreements with current Miloli'i-Ho'opuloa residents (Phase 1) (Ala1).
2. To conduct archaeological reconnaissance of the Phase 2 area (Ala2).
3. To survey Phase 2 lots for houses (Ala3).
4. To register and verify eligible applicants for Phase 2 lot lease awards (Ala4).
5. To clear Phase 1 lots of rubbish and debris (Alb1).
6. To contact potential state and federal service providers for house financing (Alc1).
7. To conduct an archaeological reconnaissance survey of the Milolii-Ho'opuloa area (A5a1).
8. To conduct an oral history of the community (A5b5).

1985

1. To draw names of applicants for phase 2 lot lease awards (Ala5).
2. To consummate residential lease agreements with applicants for Phase 2 lots (Ala6).
3. To clear Phase 2 lots of rubbish, brush, and debris (Alb1).
4. To bulldoze and grade Phase 2 lots (Alb2).
5. To obtain financing for house construction (Alc2).
6. To initiate community self-help projects for Phase 1 lot houses (Ald1).
7. To design and construct new houses on Phase 2 lots (Ald2).
8. To design appropriate structure for visitor center/museum-library (A2d1).
9. To design appropriate structure for community center pavillion (A2e1).
10. To provide information about potential energy resources (A3c2).

11. To utilize energy resources as desired (A3c2).
12. To install water catchment systems (A3d1).
13. To prepare new site for solid-waste disposal (A3e1).
14. To upgrade existing toilet facilities for Phase 1 lot houses (A3f1).
15. To install new compost or septic tank toilet systems in Phase 2 lot houses (A3f2).
16. To prepare plaques for important historical sites in the community (A5a2).
17. To develop plans for use of the economic planning zone area (B1a1).
18. To encourage the development of cottage industry enterprises related to the cultural heritage of the community (B1b1).

1986

1. To mark and clear coastal trail (A2a1).
2. To clear landing at Ho'opūloa Bay for canoe landing (A2b1).
3. To construct canoe halau for canoes at Ho'opūloa Bay (A2b2).
4. To design community picnic area (A2c1).
5. To clear area and landscape as designed (A2c2).
6. To construct and place picnic benches, barbecue trays, and shelters as designed (A2c3).
7. To raise funds for construction of the community center pavillion (A2e2).
8. To prepare trench for telephone service for Phase 2 lots (A3b1).

9. To lay conduits for telephone wires (A3b2).
10. To connect telephone service as desired (A3b3).
11. To relocate solid-waste container (A3e2).
12. To initiate educational programs on waste recycling (A3e3).
13. To train at least 10 community residents in fire science for volunteer fire duty (A4a1).
14. To obtain and to maintain a fire engine (A4a2).
15. To train at least 4 community residents in police science for police auxillary duty (A461).
16. To train at least 4 community residents as EMTs (A4c1).
17. To train one member in each household in first aid and CPR (A4c2).
18. To train at least 1 community resident for the U.S. Coast Guard Auxillary (A4d1).

1987

1. To maintain coastal trail (A2a2).
2. To raise funds for the construction of the visitor center/library-museum (A2d).
3. To construct community center pavillion (A2e3).
4. To raise funds for the restoration of Hauoli Kamana'o Church (A5b2).
5. To encourage owners of houses exhibiting unique architectural qualities to keep them in good repair (45b4).

1988

1. To maintain the community center pavillion (A2e4).
2. To widen government access road (A3a1)
3. To develop alternative access road to kapukawa'a light (A3a2).

1989

To construct visitor center/library-museum (a2d3).

1990

1. To staff and maintain visitor center/library-museum (A2d4).

3. Planned Activities By Primary Initiation Responsibility

STATE

o Department of Land and Natural Resources:

1. To consummate residential lease agreements with current Miloli'i-Ho'opuloa residents (Phase 1) (Ala1).
2. To conduct an archaeocological reconnaissance of Phase 2 area (Ala2).
3. To survey Phase 2 lots for houses (Ala3).
4. To register and to verify eligible applicants for Phase 2 lot lease awards (Ala4).
5. To draw names of applicants for Phase 2 lot lease awards (Ala5).
6. To consummate residential lease agreements with applicants for Phase 2 lots (Ala6).

o Department of Transportation:

1. To widen the government access road (A3a1).
2. To develop an alternative access road to Kapukawa'a light (A3a2).

COUNTY

o Public Works Department:

1. To prepare new site for solid-waste disposal (A3e1).
2. To re-locate solid-waste disposal container (A3e2).

PA'A PONO MILOLI'I

1. To clear Phase 2 lots of rubbish, brush, and debris (Alb1).
2. To contact potential state and federal service providers for house financing (Alc1).

3. To initiate community self-help projects for houses on Phase 1 lots (A1d1).
4. To mark and clear coastal trail (A2a2).
5. To maintain coastal trail (A2a2).
6. To clear canoe landing at Ho'opūloa Bay (A2b1).
7. To construct halau for canoes at Ho'opūloa Bay (A2b2).
8. To design community picnic area (A2c1).
9. To clear area and lanscape as designed (A2c2).
10. To construct and place picnic benches, barbecue trays, and shelters as designed (A2c3).
11. To design appropriate structure for visitor center/library-museum (A2d1).
12. To raise funds for construction of the visitor center/library-museum (A2d2).
13. To construct visitor center/library-museum (A2d3).
14. To staff and maintain visitor center/library-museum (A2d4).
15. To design structure for community center pavillion (A2e1).
16. To raise funds for a community center pavillion (A2e2).
17. To construct a community center pavillion (A2e2).
18. To maintain a community center pavillion (A2e4).
19. To provide information about potential energy resources (A3c1).
20. To initiate educational programs on waste recycling (A3e3).
21. To train at least 10 community residents in fire science for volunteer fire duty (A4a1).
22. To obtain and to maintain a fire engine (A4a2).

23. To train at least 4 community residents in police science for police auxillary duty (A4b1).
24. To train at least 4 community residents as EMTs (A4c1).
25. To train 1 member in each household in first aid and cardio-pulmonary resuscitation (A4c2).
26. To train at least 1 community resident for the US Coast Guard Auxillary (A4d1).
27. To provide lifesaving training for the community (A4d2).
28. To conduct an archaeological reconnaissance survey of the Miloli'i-Ho'opuloa area (A5a1).
29. To prepare plaques for important sites in the community (A5a2).
30. To develop a plan for the restoration of Hauoli Kamana'o Church (A5v1).
31. To raise funds for the restoration of the church (A5b2).
32. To restore the church (A5b3).
33. To encourage owners of houses exhibiting unique architecture to keep them in good repair (A5b4).
34. To conduct an oral history of the Miloli'i-Ho'opuloa community (A5b5).
35. To develop a plan fo the use of the designated economic development planning zone (B1a1).
36. To initiate and maintain planned use (B1a2).

HAWAIIAN TELEPHONE COMPANY

1. To prepare trench for telephone service to Phase 2 lots (A3b1).
2. To lay conduite for telephone wires (A3b2).

INDIVIDUAL RESIDENTS

1. To clear Phase 2 lots of rubbish and debris (Alb2).
2. To bulldoze and grade Phase 2 lots (Alb3).
3. To obtain funding for house construction (Alc2).
4. To design and construct new Phase 2 lot houses (Ald2).
5. To connect telephone service as desired (A3b3).
6. To utilize energy resources as desired (A3c2).
7. To install water catchment systems (A3d1).
8. To upgrade existing toilet facilities in Phase 1 lot houses (A3f1).
9. To install new compost or septic tank systems in Phase 2 lot houses (A3f1).
10. To encourage the development of cottage industry enterprises related to the cultural heritage of the community (B1b1).

ATTACHMENTS

ATTACHMENT A

According to the 1910 Census, the following individuals were living at Miloli'i and Ho'opūloa at that time.

NOTE: Some of the names may be mis-spelled due to the poor legibility of the microfilm print of the census records.

LOCATION: Hiloli's

NAME	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	ETHNICITY	AGE	MARRIED; DIVORCED; SINGLE; WIDOWED	# OF YRS PRESENTLY MARRIED	# OF CHILDREN BORN	# OF CHILDREN LIVING	FATHER'S PLACE OF BIRTH	MOTHER'S PLACE OF BIRTH	PRIMARY LANGUAGE SPOKEN	TRADE/PROFESSION	EMPLOYER/EMPLOYEE/SELF-EMPLOYED	ABLE TO READ	ABLE TO WRITE	OWN/RENT HOME
Beniamina, Jonn	Head	m	H	61	M/2	23			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	rent
Alahai	Wife	f	H	45	M/2	23	0	0	Hawaii	Hawaii	Hawaiian			yes	yes	
Kama, William	Brother in law	m	H	42	M/2	24			Hawaii	Hawaii	Hawaiian	Laborer	SE	yes	yes	
Louisa	Sister(wife)	f	H	42	M/2	24	14	12	Hawaii	Hawaii	Hawaiian			yes	yes	
Kalauli's	Niece	f	H	14	S				Hawaii	Hawaii	English			yes	yes	
John	Nephew	m	H	13	S				Hawaii	Hawaii	English			yes	yes	
Kaupe	Niece	f	H	12	S				Hawaii	Hawaii	English			yes	yes	
Laeone	Nephew	m	H	11	S				Hawaii	Hawaii	English			yes	yes	
Ka'apuni	Niece	f	H	-1	S				Hawaii	Hawaii						
Nai'ula, Keauimi	Nephew	m	H	17	S				Hawaii	Hawaii	English	Laborer	SE	yes	yes	
Beniamina, Jr	Nephew	m	H	2	S				Hawaii	Hawaii						
Kapawai, Joseph	Head	m	H	40	M/1	20			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	rent
Ka'iwa	Wife	f	H	38	M/1	20	15	7	Hawaii	Hawaii	Hawaiian			yes	yes	
Kanahikou	Son	m	H	18	S				Hawaii	Hawaii	English	Laborer/odd jobs	SE	yes	yes	
Abraham	Son	m	H	17	S				Hawaii	Hawaii	English			yes	yes	
Lu'ukia	Daughter	f	H	15	S				Hawaii	Hawaii	English			yes	yes	
Patalua	Son	m	H	12	S				Hawaii	Hawaii	English			yes	yes	
Kaipukia	Son	m	H	11	S				Hawaii	Hawaii	English			yes	yes	
Ka'iwa	Daughter	f	H	4	S				Hawaii	Hawaii						
Mailele, John	Son in Law	m	H	21	M/1	2			Hawaii	Hawaii	English	Fisherman	SE	yes	yes	
Julie	Daughter (wife)	f	H	17	M/1	2	1	1	Hawaii	Hawaii	English			yes	yes	
Keki	Grandson	m	H	-1	S				Hawaii	Hawaii						
Pohina, David W.	Head	m	H	57	M/1	37			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	rent
Kahalewai	Wife	f	H	52	M/1	37	12	9	Hawaii	Hawaii	Hawaiian			yes	yes	
Abraham	Son	m	H	34	S				Hawaii	Hawaii	English	School teacher/public school	SE	yes	yes	
Mable	Daughter	f	H	31	S				Hawaii	Hawaii	English			yes	yes	
Hattie	Daughter	f	H	22	S				Hawaii	Hawaii	English			yes	yes	
David, Jr.	Son	m	H	17	S				Hawaii	Hawaii	English	Laborer	SE	yes	yes	
Annie	Daughter	f	H	15	S				Hawaii	Hawaii	English			yes	yes	
Abraham, Jr.	Son	m	H	2	S				Hawaii	Hawaii						
Kaupiko, David	Head	m	H	37	M/1	11			Hawaii	Hawaii	English	Steamship Co. agent	SE	yes	yes	rent
Mali'imalie	Wife	f	H	36	M/1	11	0	0	Hawaii	Hawaii	English			yes	yes	

SYMBOLS: (1) Ethnicity- H/ Hawaiian J/ Japanese C/ Chinese (2) Situation- M/ Married D/ Divorced S/ Single W/ Widowed (3) Occupation- ER/ Employer EE/ Employee SE/ Self-Employed

LOCATION: Miloli'i

NAME	RELATIONSHIP	SEX	ETHNICITY	AGE	MARRIED; DIVORCED; SINGLE; WIDOWED	# OF YRS PRESENTLY MARRIED	# OF CHILDREN BORN	# OF CHILDREN LIVING	FATHER'S PLACE OF BIRTH	MOTHER'S PLACE OF BIRTH	PRIMARY LANGUAGE SPOKEN	TRADE/PROFESSION	EMPLOYER/EMPLOYEE/SELF- EMPLOYED	ABLE TO READ	ABLE TO WRITE	OWN/RENT HOME
Kiekie	Nephew	m	H	4	S				Hawaii	Hawaii						
Mia, John	Father-in-law	m	H	60	W				Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	
Kupuna	Daughter	f	H	29	S				Hawaii	Hawaii	Hawaiian			yes	yes	
George	Son	m	H	13	S				Hawaii	Hawaii	English			yes	yes	
Kapo	Grand-dau.	f	H	2	S				Hawaii	Hawaii						
Kaupiko, Katoiani	Head	m	H	29	M/1	7			Hawaii	Hawaii	English	Laborer	SE	yes	yes	rent
Maui	Wife	f	H	26	M/1	7	3	3	Hawaii	Hawaii	English			yes	yes	
Henry	Son	m	H	5	S				Hawaii	Hawaii						
Keawe	Son	m	H	3	S				Hawaii	Hawaii						
Katoiani, Jr.	Son	m	H	-2	S				Hawaii	Hawaii						
Kaupiko, Junior	Nephew	m	H	8	S				Hawaii	Hawaii						
Kawaimanalo	Grandfather	m	H	78	M/1	35			Hawaii	Hawaii		Fisherman	SE	yes	yes	
Mana	Grandmother	f	H	62	M/1	35			Hawaii	Hawaii				yes	yes	
Ka'aihueaina, W.	Head	f	H	70	W		8	3	Hawaii	Hawaii	Hawaiian			yes	yes	own
Elemakule	Son	m	H	38	M/2	2			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	
Kaiaulao	Daughter in law (wife)	f	H	51	M/2	2	0	0	Hawaii	Hawaii	Hawaiian			yes	yes	
Elemakule Melekule	Grand-dau.	f	H	13	S				Hawaii	Hawaii	English			yes	yes	
Ka'ana'ane, Jr.	Grandson	m	H	12	S				Hawaii	Hawaii	English			yes	yes	
Kaumu	Grandson	m	H	10	S				Hawaii	Hawaii	English			yes	yes	
Kuahua, Joseph	Grandson	m	H	35	M/1	3			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	
Keola	Grand-dau. (wife)	f	H	20	M/1	3	1	1	Hawaii	Hawaii	Hawaiian			yes	yes	
Opio	Grandson	m	H	17	S				Hawaii	Hawaii	English	Fisherman	SE	yes	yes	
Keoloha	Grandson	m	H	14	S				Hawaii	Hawaii	English			yes	yes	
Keoho	Grandson	m	H	12	S				Hawaii	Hawaii	English			yes	yes	
Joseph, Jr.	Grandson	m	H	-2	S				Hawaii	Hawaii						
Maiwai'ole, Thomas	Grandson	m	H	36	M/2	5			Hawaii	Hawaii	English	Fisherman	SE	yes	yes	
Milliana	Grand-dau. (wife)	f	H	26	M/1	5	1	1	Hawaii	Hawaii	English			yes	yes	
Mikolia	Grand-dau	f	H	2	S				Hawaii	Hawaii						
Kama, Joseph	Head	m	H	63	M/1	41			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	rent
Kamakapi	Wife	f	H	60	M/1	41	16	9	Hawaii	Hawaii	Hawaiian			yes	yes	
Liliu	Daughter	f	H	35	M/1	1	1	1	Hawaii	Hawaii	Hawaiian			yes	yes	
Maieka	Daughter	f	H	25	M/1	0	0	0	Hawaii	Hawaii	English			yes	yes	
Alvin	Grandson	m	H	15	S				Hawaii	Hawaii	English			yes	yes	

SYMBOLS: (1) Ethnicity- H/ Hawaiian J/ Japanese C/ Chinese
 (2) Situation- M/ Married D/ Divorced S/ Single W/ Widowed
 (3) Occupation- ER/ Employer EE/ Employee SE/ Self-Employed

LOCATION: Wailoah

NAME	RELATIONSHIP	SEX	ETHNICITY	AGE	MARRIED; DIVORCED; SINGLE; WIDOWED	# OF YRS PRESENTLY MARRIED	# OF CHILDREN BORN	# OF CHILDREN LIVING	FATHER'S PLACE OF BIRTH	MOTHER'S PLACE OF BIRTH	PRIMARY LANGUAGE SPOKEN	TRADE/PROFESSION	EMPLOYER/EMPLOYEE/SELF- EMPLOYED	ABLE TO READ	ABLE TO WRITE	OWN/RENT HOME
Annie	Grand-dau	F	H	13	S				Hawaii	Hawaii	English			yes	yes	
Makano, Paulo	Head	M	H	58	M/2	1			Hawaii	Hawaii	Hawaiian	Laborer	SE	yes	yes	own
Kaohu	Wife	F	H	40	M/2	1	8	4	Hawaii	Hawaii	Hawaiian			yes	yes	
Kaula Kellie	Stepson	M	H	24	S				Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	
Kaleohano, Apela	Son in law	M	H	24	M/1	4			Hawaii	Hawaii	English	Laborer	SE	yes	yes	
Kamele	Daughter (wife)	F	H	20	M/1	4	2	0	Hawaii	Hawaii	English			yes	yes	

SYMBOLS: (1) Ethnicity- H/ Hawaiian
J/ Japanese
C/ Chinese
(2) Situation- M/ Married
D/ Divorced
S/ Single
W/ Widowed
(3) Occupation- ER/ Employer
EE/ Employee
SE/ Self-Employed

LOCATION: Mo'opuloa

NAME	RELATIONSHIP	SEX	ETHNICITY	AGE	MARRIED; DIVORCED; SINGLE; WIDOWED	# OF YRS PRESENTLY MARRIED	# OF CHILDREN BORN	# OF CHILDREN LIVING	FATHER'S PLACE OF BIRTH	MOTHER'S PLACE OF BIRTH	PRIMARY LANGUAGE SPOKEN	TRADE/PROFESSION	EMPLOYER/EMPLOYEE/SELF- EMPLOYED	ABLE TO READ	ABLE TO WRITE	OWN/RENT HOME
Kaumu Keana, Mrs.	Head	F	H	58	W		3	2	Hawaii	Hawaii	Hawaiian			yes	yes	rent
Honolulu	Son	M	H	34	M/I	11			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	
Emalia	Daughter in-law, wife,	F	H	30	M/I	11	0	0	Hawaii	Hawaii	Hawaiian			yes	yes	
Etamakule, Emma	Grand-dau.	F	H	6	S				Hawaii	Hawaii						
Ito, Matsui	Boarder	M	J	28	S				Japan	Japan	Japanese	Fisherman	SE	yes	yes	
Kaulakeo, Kapetaka	Head	M	H	35	M/I	18			Hawaii	Hawaii	Hawaiian	Fisherman	SE	yes	yes	rent
Kalua	Wife	F	H	36	M/I	18	3	3	Hawaii	Hawaii	Hawaiian			yes	yes	
Kapika	Daughter	F	H	18	S				Hawaii	Hawaii	English			yes	yes	
Annie	Daughter	F	H	16	S				Hawaii	Hawaii	English			yes	yes	
Kaiwanine	Daughter	F	H	14	S				Hawaii	Hawaii	English			yes	yes	
Ng, Ai	Head	M	C	48	M/I	18			China	China	Chinese	Farmer	ER	yes	yes	rent
Kapalikapu	Wife	F	H	34	M/I	18	9	8	Hawaii	Hawaii	Hawaiian			yes	yes	
Mau Chiu	Son	M	H/C	15	S				China	Hawaii	English			yes	yes	
Kum Lam	Daughter	F	H/C	14	S				China	Hawaii	English			yes	yes	
Mau Kona	Son	M	H/C	13	S				China	Hawaii	English			yes	yes	
Mau Chong	Son	M	H/C	10	S				China	Hawaii	English			yes	yes	
Walter	Son	M	H/C	9	S				China	Hawaii						
Mau Hcy	Son	M	H/C	8	S				China	Hawaii						
Mau On	Son	M	H/C	6	S				China	Hawaii						
Ah Moe	Daughter	F	H/C	5	S				China	Hawaii						
Je, Apo	Head	M	C	60	W				China	China	Chinese	Farmer	SE	yes	yes	rent
Akem	Daughter	F	H/C	17	S				China	Hawaii	English			yes	yes	
Anaxona	Daughter	F	H/C	14	S				China	Hawaii	English			yes	yes	
Lum Quan Lum	Son	M	H/C	12	S				China	Hawaii	English			yes	yes	
Lum Quan Moon	Son	M	H/C	6	S				China	Hawaii						
Lum Quan Choy	Son	M	H/C	5	S				China	Hawaii						

SYMBOLS: (1) Ethnicity- H/ Hawaiian J/ Japanese C/ Chinese (2) Situation- M/ Married D/ Divorced S/ Single W/ Widowed (3) Occupation- ER/ Employer EE/ Employee SE/ Self-Employed

(To be made one and twelve copies)

ACT 62

THE SENATE

ELEVENTH LEGISLATURE, 19 82.

STATE OF HAWAII

S.B. NO.

2814-82

S.D. 2

H.D. 2

A BILL FOR AN ACT

RELATING TO PUBLIC LANDS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that a 1926 volcanic
2 eruption of Mauna Loa resulted in a lava flow which completely
3 destroyed a Hawaiian fishing village in the Milolii-Hoopuloa
4 area, thereby forcing the relocation of all its residents;
5 that the village residents relocated their domiciles to adja-
6 cent government land, through government invitation and
7 intervention; that county, territorial, and state governments
8 have attempted to mitigate the adverse effects of such a
9 natural disaster through permits, executive orders, and pro-
10 posed legislation which attempted to initiate a cultural park,
11 land exchanges, and fee simple title with the purposes of
12 granting long-term tenure and effecting final disposition of
13 the matter; and that the displaced Milolii-Hoopuloa residents
14 have continuously resided on such lands in a peaceful and
15 productive manner.

1 Accordingly, the legislature further finds that there
2 are compelling policy considerations in remedying the cir-
3 cumstances of such displaced persons, who have had justifiable
4 expectations in relying on past government action and initia-
5 tives; that there is a prevailing policy consideration in
6 preserving the unique cultural life of the Hawaiian community;
7 and that such policies may be accomplished by offering the
8 eligible resident members of the Milolii-Hoopuloa community
9 the opportunity to negotiate long-term residential leases
10 with the department of land and natural resources for parcels
11 upon which their homes are presently located.

12 SECTION 2. The department of land and natural resources
13 is authorized to negotiate and enter into long-term residential
14 leases not to exceed sixty-five years in duration with persons
15 who meet the following criteria:

- 16 (1) Persons who were displaced by, or are descendants
17 of the refugees of, the 1926 Hoopuloa lava flow
18 and who actually resided and continued to reside in
19 the area set aside by Executive Order 473, at some
20 point prior to December 31, 1949; or
21 (2) Persons awarded a lot in some manner under the county
22 management of Executive Order 473, and who did not
23 relinquish such right to others or back to the
24

county, and who actually resided in the area set aside by Executive Order 473, at some point prior to December 31, 1949; or

(3) Persons who resided in the area by virtue of assignment of lot by those persons who were awarded a lot in some manner under the county management of Executive Order 473; or

(4) Any heir, consanguineous or affined, of any person qualifying under paragraph (1), (2), or (3) of this section who has established residence in the area described in section 4 of this Act; or

(5) Persons who on the effective date of this Act reside on a parcel or parcels of land listed in section 4, have permits allowing them to reside on those parcels; and

who can prove their claims to the department of land and natural resources under the provisions of this Act.

SECTION 3. The lands eligible for long-term residential lease negotiations under section 2(1), (2), (3), and (4) of this Act are limited to a portion of those lands situated at Hoopuloa, South Kona, County of Hawaii, State of Hawaii, which were set aside for a public park under the control and management of the board of supervisors of the County of Hawaii with

1 authority to create a Hawaiian village, pursuant to the governor's
2 Executive Order No. 473, dated March 19, 1931, comprising an
3 area of 52.6 acres.

4 SECTION 4. The lands eligible for long-term residential
5 lease negotiations under section 2(5) of this Act are limited
6 to that parcel designated by tax map key 8-9-4-16, together
7 with right-of-way across the school lot.

8 SECTION 5. Any other law to the contrary notwithstanding,
9 including chapter 171, Hawaii Revised Statutes, the department
10 of land and natural resources is authorized to negotiate and
11 enter into lease agreements in accordance with the provisions
and limitations of this Act; provided that the authority
13 granted by this Act shall expire (1) when leases have been
14 negotiated and recorded in the bureau of conveyances for all
15 parcels meeting the criteria in Section 2 and Section 3, or
16 (2) on January 1, 1985, whichever occurs first.

17 SECTION 6. This Act shall take effect upon its approval.
18

19 EFFECTIVE: May 12, 1982
20
21
22
23
24

(To be made one and twelve copies)

ACT 83

THE SENATE

TWELFTH LEGISLATURE, 1984

STATE OF HAWAII

S.B. NO.

1890-84

S.D. 1

H.D. 1

A BILL FOR AN ACT

RELATING TO PUBLIC LANDS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Act 62, Session Laws of Hawaii 1982, is amended by
2 adding a new section to be appropriately designated and to
3 read as follows:

4 "SECTION 5. The department of land and natural
5 resources, on behalf of the State, is hereby
6 authorized to subdivide and provide for the creation
7 of a residential subdivision for persons who
8 receive long-term leases under the provisions of this Act,
9 which shall be exempt from all statutes, ordinances, charter
10 provisions, and rules of any governmental agency relating to
11 zoning and construction standards for subdivisions, the
12 development and improvement of land, and the construction of
13 units thereon; provided that the department of land and
14 natural resources finds the project is consistent with the
15 purpose and intent of this Act and meets minimum requirements
16 of health and safety."

SECTION 2. Act 62, Session Laws of Hawaii 1982, is amended by amending section 2 to read as follows:

"SECTION 2. The department of land and natural resources is authorized to negotiate and enter into long-term residential leases not to exceed sixty-five years in duration with persons who meet the following criteria:

- (1) Persons who were displaced by, or are descendants of the refugees of, the 1926 Hoopuloa lava flow and who actually resided and continued to reside in the area [are] set aside by Executive Order 473, at some point prior to December 31, 1949; or
- (2) Persons awarded a lot in some manner under the county management of Executive Order 473, and who did not relinquish such right to others or back to the county, and who actually resided in the area set aside by Executive order 473, at some point prior to December 31, 1949; or
- (3) Persons who resided in the area by virtue of assignment of lot by those persons who were awarded a lot in some manner under the county management of Executive Order 473; or
- (4) Any heir, consanguineous or affined, of any

1 person qualifying under paragraph (1), (2), or (3)
2 of this section who has established residence in
3 the area described in section [4] 3 of this Act;
4 or

5 (5) Persons who on the effective date of this Act
6 reside on a parcel or parcels of land listed in
7 section 4, have permits allowing them to reside on
8 those parcels; and

9 who can prove their claims to the department of land and
10 natural resources under the provisions of this Act."

11 SECTION 3. Act 62, Session Laws of Hawaii 1982, is amended by
amending section 5 to read as follows:

12 "SECTION [5.] 6. Any other law to the contrary
14 notwithstanding, including chapter 171, Hawaii Revised
15 Statutes, the department of land and natural resources is
16 authorized to negotiate and enter into lease agreements in
17 accordance with the provisions and limitations of this Act;
18 provided that the authority granted by this Act shall expire
19 (1) when leases have been negotiated and recorded in the
20 bureau of conveyances for all parcels meeting the criteria in
21 Section 2 and Section 3, or (2) on [January 1, 1985,]
22 January 1, 1987, whichever occurs first."

23 SECTION 4. Act 62, Session Laws of Hawaii 1982, is amended by
24

S.B. NO.

1890-84
S.D. 1
H.D. 1

Page 4

1 amending section 6 to read as follows:

2 "SECTION [6.] 7. This Act shall take effect upon its
3 approval."

4 SECTION 5. Statutory material to be repealed is bracketed.
5 New material is underscored.

6 SECTION 6. This Act shall take effect upon its approval.

7 Approved by the
Governor

APR 20 1984

Executive Order No. 473

Setting Aside Land for Public Purposes

J. LAWRENCE M. Judd, Governor of the Territory of Hawaii,
by virtue of the authority vested in me by paragraph q of Section 73 of the Hawaiian
Organic Act, and every other authority me hereunto enabling, do hereby order that the
following described public land be and the same is hereby set aside for public purposes,
to-wit, for a PUBLIC PARK, to be under the Control and Manage-
ment of the Board of Supervisors of the County of Hawaii,
with the authority to create and maintain thereon a Hawaiian
Village.

Government Land of Hoopuloa
between new Government Road and Seacoast,
Hoopuloa, South Kona, Hawaii.

Beginning at a spike on the North boundary of this
parcel of land, the coordinates of said point of beginning
referred to Government Survey Trig. Station "Kapukawaa" being
3415.5 feet North and 721.3 feet East, as shown on Government
Survey Registered Map 2367, and running by true azimuths:-

1. 272° 26' 292.0 feet;
2. 270° 00' 140.0 feet;
3. 351° 30' 224.4 feet to the West side of new Government
Road;
4. 7° 55' 1240.0 feet along the West side of the new
Government Road;
5. 14° 08' 1433.2 feet along same;
6. 17° 00' 430.0 feet along same;
7. 34° 25' 190.0 feet along same;
8. 353° 20' 135.0 feet along same;
9. 22° 08' 541.5 feet along same;
10. 34° 25' 273.4 feet along same;
11. 2° 25' 87.4 feet along same;

Thence along seacoast, along highwater mark, the
direct azimuths and distances between points
being:-

12. 111° 10' 161.0 feet;
13. 185° 20' 431.0 feet;

14.	103°	25'	219.0	feet;
15.	184°	10'	207.0	feet;
16.	276°	50'	297.0	feet;
17.	194°	45'	1060.0	feet;
18.	114°	40'	215.0	feet;
19.	218°	00'	806.0	feet;
20.	182°	20'	950.0	feet;
21.	83°	55'	131.0	feet;
22.	135°	39'	385.4	feet;
23.	209°	00'	286.0	feet;
24.	274°	00'	176.0	feet;
25.	207°	05'	232.0	feet;
26.	192°	05'	62.2	feet;

27. 272° 26' 123.7 feet to the point of beginning.

AREA 56-60/100 ACRES.

Excepting and reserving therefrom the accretion to Grant 1581 to Emma (Area 2-4/10 Acre) and accretion to L.C. Award 8045 Apana 1 to Anadarea (Area 1-6/10 Acre), LEAVING A NET AREA OF 52-60/100 ACRES.

In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the Territory of Hawaii to be affixed.
Done at the Capitol at Honolulu this 19th day of March, Nineteen Hundred and 31

Lawrence W. Judd

By the Governor:

[Signature]
Secretary of Hawaii

Approved as to form:

[Signature]
Deputy Attorney General

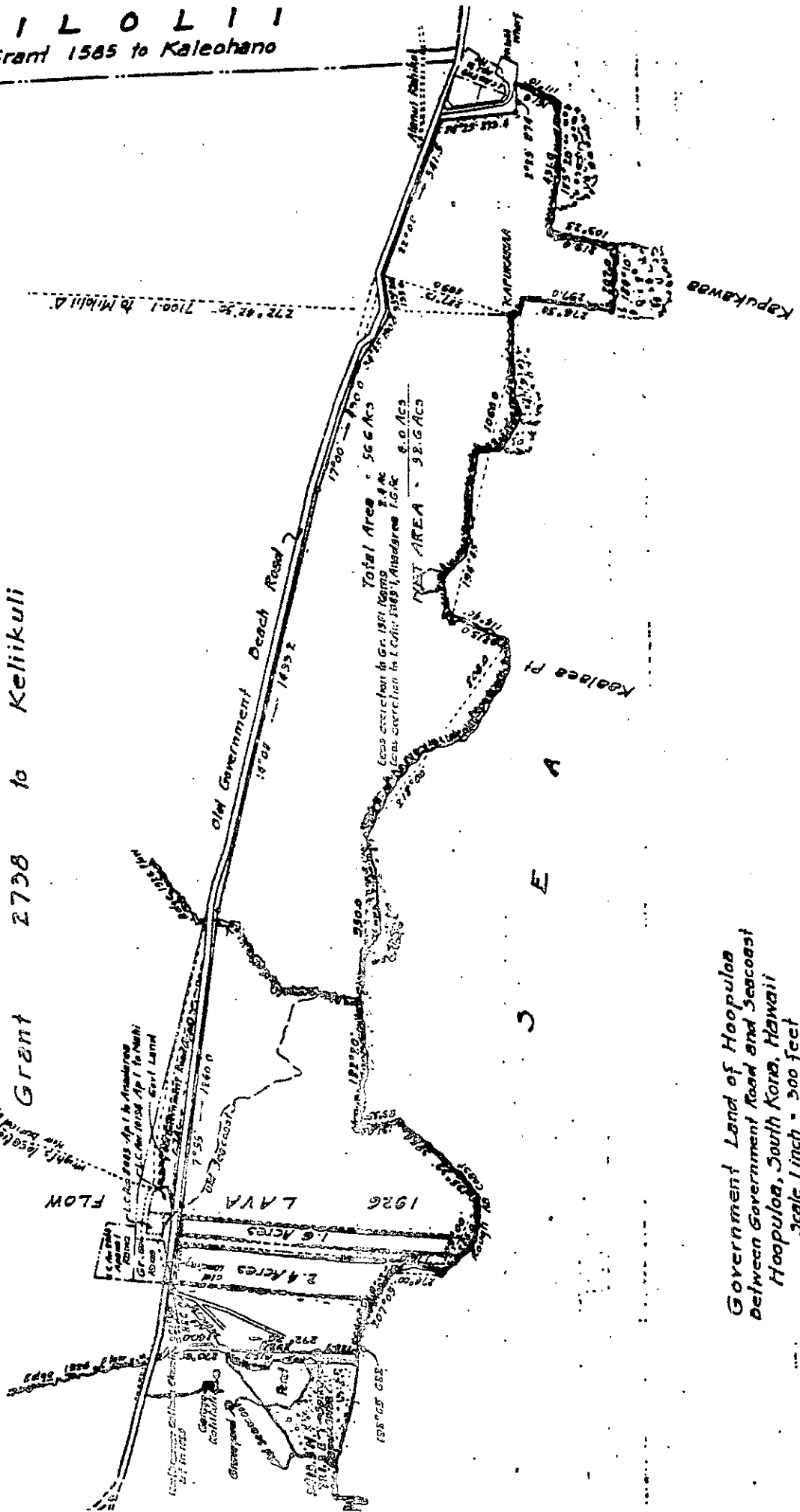
M I L O L I I

Grant 1585 to Kaleohano

TRUE NORTH
Scale 1 in = 300 ft.

H O O P U L O A

Grant 2708 to Keliikuli



Government Land of Hoopuloa
between Government Road and Seacoast
Hoopuloa, South Kona, Hawaii
Scale 1 inch = 300 feet

EXECUTIVE ORDER NO. 2418

CANCELLATION OF GOVERNOR'S EXECUTIVE ORDER
NO. 473, DATED MARCH 19, 1931

WHEREAS, by Governor's Executive Order No. 473, dated March 19, 1931, certain lands situate at Hoopuloa, South Kona, Hawaii, were set aside for Public Park (Old Hoopuloa Village) under the control and management of the County of Hawaii; and

WHEREAS, said lands are no longer required for the abovementioned purpose;

NOW, THEREFORE, I, JOHN A. BURNS, Governor of the State of Hawaii, by virtue of the authority in me vested by Section 103A-11, Revised Laws of Hawaii 1955, as amended, and every other authority me hereunto enabling, do hereby order that Executive Order No. 473, dated March 19, 1931, be and the same is, hereby cancelled and declared of no further force and effect.

SUBJECT to disapproval by the legislature by two-thirds vote of either the Senate or the House of Representatives or by majority vote of both, in any regular or special session next following the date of this Executive Order.

I, ~~John A. Burns~~, I have hereunto set my hand and caused the Great Seal of the State of Hawaii to be affixed Done at the Capitol at Honolulu this 16th day of December, Nineteen Hundred and 68.

Approved as to form:

[Signature]
Deputy Attorney General

Dated: 12-5-68

[Signature]
Governor of the State of Hawaii

State of Hawaii

Office of the Lieutenant Governor

This is to Certify That the within is a true copy of Executive Order No. 2418
cancelling land from the operation of Executive Order No. 473 the original of
which is on file in this office

In Testimony Whereof, the Lieutenant Governor of the
State of Hawaii, has hereunto subscribed his name
and caused the Great Seal of the State to be affixed

Thomas O'Shea
DONE in Honolulu, this 2nd day of
January, A.D. 1968

*done & signed
2/1/68*

Executive Order No. 2418
Cancelling Land from the
Operation of Executive
Order No. 473

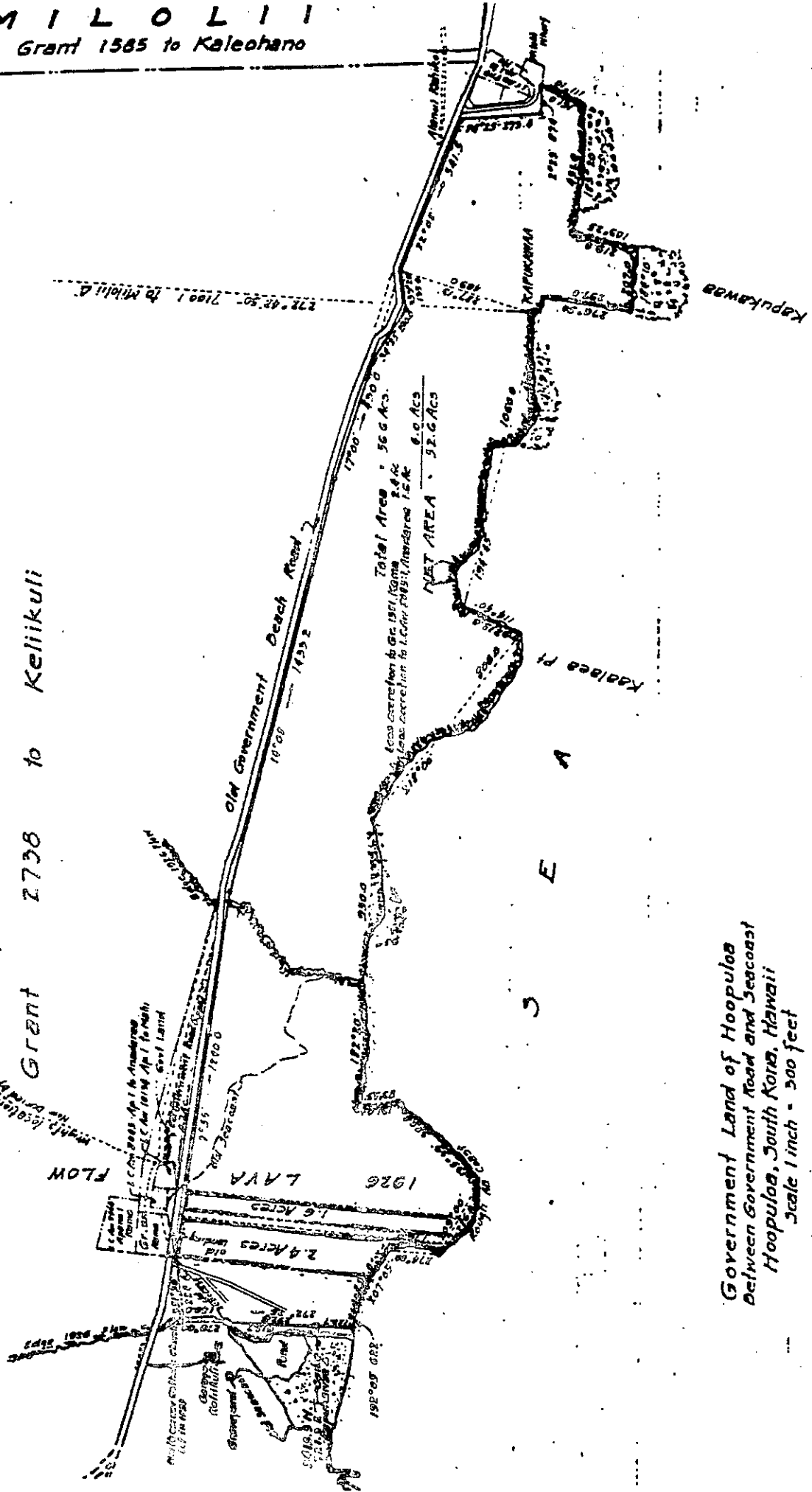
Land
Purpose
Date

TRUE NORTH
Scale 1 in = 500 ft

H O O P U L O A

Grant 2738 to Kelikuli

M I L O L I I
Grant 1585 to Kaleohano



Government Land of Hoopuloa
Between Government Road and Seacoast
Hoopuloa, South Kona, Hawaii
Scale 1 inch = 500 feet

ATTACHMENT E

**APPLICATION FOR GENERAL LEASE FROM THE DEPARTMENT
OF LAND AND NATURAL RESOURCES TO MILOLII-HOOPULOA
HOUSELOTS, SOUTH KONA, ISLAND OF HAWAII**

1. Name _____ Age & Birthdate _____
Address _____ Zip Code _____
Business Phone _____ Home Phone _____
Marital Status _____ Employment Status _____
Occupation _____ Gross Monthly Income _____
Father's Name _____ Mother's Name _____
2. DO YOU BELIEVE YOU ARE ELIGIBLE FOR A RESIDENTIAL LEASE OF
STATE LAND AT MILOLII-HOOPULOA UNDER THE PROVISIONS OF ACT
62, SESSION LAWS OF HAWAII, 1982, AND ACT _____, SESSION
LAWS OF 1984? _____ Yes _____ No
3. IF THE ANSWER ABOVE IS YES, CHECK THE APPLICABLE BOX WHICH
WOULD CAUSE YOU TO QUALIFY:
 - ___ a) I was displaced by the 1926 Hoopuloa lava flow and
actually resided in the area set aside by Executive
Order 473 at some point prior to December 31, 1949.
 - ___ b) I am the descendant of a refugee who was displaced by the
1926 Hoopuloa lava flow and I actually resided in the area
set aside by Executive Order 473 at some point prior to
December 31, 1949.
 - ___ c) I was awarded a lot in some manner under the County
management of the area set aside by Executive Order 473,
and I did not relinquish such right to others or back to
the County, and I actually resided in the area set aside
by Executive Order 473 at some point prior to December 31,
1949.
 - ___ d) I resided in the area set aside by Executive Order 473
by virtue of an assignment of a lot by a person who was
awarded a lot in some manner under the County management
of the area set aside by Executive Order 473.
 - ___ e) I am by (blood/marriage) an heir of a person who qualified
in category _____ described above. I am the heir of
_____ because I am related in the following way:

I have also resided in the area set aside under Executive
Order 473 at the following periods of time: _____

___ f) I resided on the parcel designated by Hawaii Tax Map Key B-9-4-16 on May 10, 1982, and have a permit which allows me to reside on this parcel.

___ g) Other: I feel that I am qualified for the following other reason: _____

4. Check One:

___ I am applying to participate in the lottery to be conducted for residential general leases in the new subdivision to be created.

___ I am applying for a general lease for the residence which I presently occupy which is located within the area set aside by Executive Order 473 and which is designated on the attached subdivision map as Lot No. ____.

5. You may contact the following persons to verify the accuracy of the information I have provided:

Name _____
Address _____
Telephone _____

Name _____
Address _____
Telephone _____

Name _____
Address _____
Telephone _____

* * * * *

I certify that the information provided above is true and accurate.

Date

Signature of Applicant

ATTACHMENT F

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

GENERAL LEASE NO. _____

between

STATE OF HAWAII
and

covering

LOT NO. _____, MILECLII-HOOPULOA LOTS
HOOPULOA, SOUTH KONA, ISLAND OF HAWAII, HAWAII

TABLE OF CONTENTS

	<u>Page</u>
PARTIES TO LEASE	1
AUTHORITY	1
TERM OF LEASE	2
ANNUAL RENTAL	2
REOPENING OF ANNUAL RENTAL	2
RESERVATIONS:	
1. Minerals and water	3
2. Prehistoric and historic remains	4
AGREEMENTS AND COVENANTS BETWEEN PARTIES:	
1. Payment of rent	5
2. Taxes, assessments, etc.....	5
3. Utility services	5
4. Covenant against discrimination	5
5. Sanitation	6
6. Waste and unlawful, improper or offensive use of premises	6
7. Compliance with laws	6
8. Inspection of premises	6
9. Improvements	6, 7
10. Repairs to improvements	7
11. Liens	7
12. Character of use	7
13. Dwelling Restriction	7, 8
14. Assignments, etc.....	8
15. Subletting	8
16. Indemnity	8, 9
17. Costs of litigation	9
18. Insurance	9, 10

TABLE OF CONTENTS (cont'd)

	<u>Page</u>
19. Mortgage	19, 21
20. Breach	11, 12
21. Right of holder of record of a security interest	11, 13
22. Condemnation	13, 14
23. Right to enter	14, 15
24. Acceptance of rent not a waiver	15
25. Extension of time	15
26. Quiet enjoyment	18
27. Surrender	15, 16
28. Non-warranty	16
29. Construction requirement	16
30. Termination by Lessee	16
DEFINITIONS	16
SIGNATURE PAGE	16
ACKNOWLEDGMENT PAGE	19
EXHIBITS A Through B	20

DEPARTMENT OF LAND AND NATURAL RESOURCES

GENERAL LEASE NO. S-_____

THIS INDENTURE, made this _____ day of _____, 19_____, by and between the STATE OF HAWAII, hereinafter referred to as the "LESSOR", by its Board of Land and Natural Resources, called the "BOARD", and _____, whose residence and post office address is _____, hereinafter referred to as the "LESSEE";

WITNESSETH:

THAT, pursuant to the authority granted by the Legislature to the State of Hawaii in Act 62 of the Session Laws of Hawaii 1982, as amended by Act 83 of the Session Laws of Hawaii 1984, and all other laws to the contrary notwithstanding, including Chapter 171, Hawaii Revised Statutes, the Lessee for and in consideration of the rent to be paid and of the terms, covenants and conditions herein contained, all on the part of the Lessee to be kept, observed and performed, does hereby lease and hire from the Lessor the premises known as LOT NO. _____, Milolii-Hoopuloa Lots, Hoopuloa, South Kona, Hawaii, more particularly described in Exhibit "A" and shown on the map marked Exhibit "B", attached hereto and made a part hereof.

TO HAVE AND TO HOLD the demised premises unto the Lessee for the term of sixty-five (65) years, commencing on the _____ day of _____, 19____, up to and including the _____ day of _____, _____, unless sooner terminated as hereinafter provided, the Lessor reserving and the Lessee yielding and paying to the Lessor at the Office of the Department of Land and Natural Resources, Honolulu, Oahu, State of Hawaii, rent as provided hereinbelow, payable in advance, without notice or demand, in semi-annual installments on November 30 and May 31 of each and every year during said term as follows:

A. For the first twenty-five (25) years, the sum of SIXTY AND NO/100 DOLLARS (\$60.00) every six months, for a total of ONE HUNDRED TWENTY AND NO/100 DOLLARS (\$120.00) per year.

B. The annual rental hereinabove reserved shall be reopened and redetermined at the expiration of the twenty-fifth (25th) and forth-fifth (45th) years of said term.

C. Determination of rental upon reopening of the annual rental. The rental for any ensuing period shall be established by negotiations between the Department of Land and Natural Resources and a recognized organization representing lessees under Act 62, subject to approval by the Board. Renegotiated rents shall be consistent with the legislative intent and purposes of said Act 62 and, as such, shall be established without comparison to the assessed fair market rental value of the leased properties or any neighboring properties at the time of the negotiations. If no agreement

on the new annual rent is reached within two months after negotiations commence, the matter shall be submitted to binding arbitration in accordance with Chapter 659, Hawaii Revised Statutes, each party to bear its own costs and expenses.

If the rental for any ensuing period has not been determined prior to the expiration of the preceding rental period, the Lessee shall continue to pay the rent effective for the previous rental period, but the Lessee shall, within thirty (30) days after the new rental has been so determined, make up the deficiency, if any.

In the event that this lease is terminated under paragraphs 20, 22, 30 or any other terms herein, any excess rent paid in advance by the Lessee shall be refunded to the Lessee or his heirs, assigns, or agents on a pro rata basis calculated from the date the premises are vacated.

RESERVING UNTO THE LESSOR THE FOLLOWING:

1. (a) Minerals and waters. All minerals as hereinafter defined, in, on or under the demised premises and the right, on its own behalf or through persons authorized by it, to prospect for, mine and remove such minerals and to occupy and use so much of the surface of the ground as may be required for all purposes reasonably extending to the mining and removal of such minerals by any means whatsoever, including strip mining. "Minerals", as used herein, shall mean any or all oil, gas, coal, phosphate, sodium, sulphur, iron, titanium, gold, silver, bauxite, bauxitic clay, diaspore, boehmite, laterite, gibbsite, alumina, all ores of aluminum and, without

limitation thereon, all other mineral substances and ore deposits, whether solid, gaseous or liquid, including all geothermal resources, in, on, or under the land, fast or submerged; provided, that "minerals" shall not include sand, gravel, rock or other material suitable for use and used in general construction in furtherance of the Lessee's permitted activities on the demised premises and not for sale to others.

(b) All surface and ground waters appurtenant to the demised land and the right on its own behalf or through persons authorized by it, to capture, divert or impound the same and to occupy and use so much of the demised premises as may be required in the exercise of this right reserved; provided, however, that as a condition precedent to the exercise by the Lessor of the rights reserved in this paragraph, just compensation shall be paid to the Lessee for any of Lessee's improvements taken; and provided further that the rights of the Lessor reserved in this paragraph shall be exercised only after written notice to and due consultation with a recognized organization representing Lessees and the Lessee(s) of property affected by such exercise.

2. Prehistoric and historic remains. All prehistoric and historic remains found on said demised premises; provided, however, that the rights of the Lessor reserved in this paragraph shall be exercised only after written notice to and due consultation with the recognized organization representing Lessee and the Lessee(s) of property affected by such exercise.

THE LESSEE COVENANTS AND AGREES WITH THE LESSOR AS
FOLLOWS:

1. Payment of rent. That the Lessee shall pay said rent to the Lessor at the times, in the manner and form aforesaid and at the place specified above, or at such other place as the Lessor may from time to time designate, in legal tender of the United States of America.

2. Taxes, assessments, etc. That the Lessee shall pay or cause to be paid when due, the amount of all taxes, rates and assessments of every description as to which said demised premises or any part thereof, or any improvements thereon, or the Lessor or Lessee in respect thereof, are now or may be assessed or become liable by authority of law during the term of this lease: provided, however, that with respect to any assessment made under any betterment or improvement law which may be payable in installments, Lessee shall be required to pay only such installments, together with interest, as shall become due and payable during said term.

3. Utility services. That the Lessee shall pay when due all charges, duties and rates of every description, including water, sewer, electricity, gas, refuse collection or any other charges, as to which said demised premises, or any part thereof, or any improvements thereon or the Lessor or Lessee in respect thereof may during said term become liable, whether assessed to or payable by the Lessor or Lessee.

4. Covenant against discrimination. That the use and enjoyment of the premises shall not be in support of any policy which discriminates against anyone based upon race, creed, sex, color, national origin or physical handicap.

5. Sanitation, etc. That the Lessee shall keep the demised premises and improvements in a clean, sanitary and orderly condition.

6. Waste and unlawful, improper or offensive use of premises. That the Lessee shall not commit, suffer or permit to be committed any waste, nuisance, strip or unlawful, improper or offensive use of the demised premises, or any part thereof, nor, without the prior consent of the Chairman or his authorized representative, cut down, remove or destroy, or suffer to be cut down, removed or destroyed, any large trees now growing on said premises.

7. Compliance with laws. That the Lessee shall comply with all of the applicable requirements of all municipal, state, and federal authorities and observe all municipal, state and federal laws pertaining to the said premises, now in force or which may hereinafter be in force; provided, however, that the Lessee need not comply with statutes, ordinances, charter provisions, and rules of any governmental agency relating to zoning and construction standards for subdivisions, the development and improvement of land, and the construction of units thereon but for requirements imposed by the Lessor.

8. Inspection of premises. That the Lessee will permit the Lessor and its agents, at all reasonable times during the said term, to enter the demised premises and examine the state of repair and condition thereof upon forty-eight (48) hours' advance notice in writing to Lessee.

9. Improvements. That the Lessee shall not at any time during said term construct, place, maintain and install on said premises any building, structure or other major

improvement of any kind and description whatsoever except with the prior approval of the Chairman or his authorized representative and upon such conditions as the Chairman or his authorized representative may impose, unless otherwise provided herein. The ownership thereof shall be in the Lessee until the expiration or termination of the lease, at which time the Lessee shall be responsible for removal of all improvements as provided in paragraph 27 herein.

10. Repairs to improvements. That the Lessee shall, at its own expense, keep, repair and maintain all buildings and improvements now existing or hereafter constructed or installed on the demised premises in good order, condition and repair, reasonable wear and tear excepted.

11. Liens. That the Lessee will not commit or suffer any act or neglect whereby the demised premises or any improvement thereon or the estate of the Lessee in the same shall become subject to any attachment, lien, charge or encumbrance whatsoever, except as hereinafter provided, and shall indemnify and hold harmless the Lessor from and against all attachments, liens, charges and encumbrances and all expenses resulting therefrom.

12. Character of use. That the Lessee shall use or allow the premises hereby demised to be used solely for residential purposes as the Lessee's principle domicile; provided that the Lessee may also store nets, boats, fishing related implements and catch and further provided that with the prior approval of the Board and upon such condition as the Board may impose, other uses may be permitted.

13. Dwelling restriction. That the Lessee shall not place or construct any dwelling unit in excess of one family dwelling unit on said demised premises and that such dwelling

unit shall be placed or constructed thereon in accordance with plans and specifications approved by the Chairman or his authorized representative; provided that a second family dwelling unit may be placed and constructed on said demised premises with the prior written approval of the Board and upon such conditions as the Board may impose.

14. Assignments, etc. That the Lessee shall not transfer or assign this lease or any interest therein, either voluntarily or by operation of law, and any transfer or assignment so made shall be null and void; provided, that with the prior written approval of the Board the assignment and transfer of this lease or unit thereof may be made if

- (1) The proposed assigns or transferee meets the eligibility criteria set out in Act 62 of the Session Laws of the State of Hawaii, 1962; and
- (2) The proposed assignee or transferee shall give in writing, as a condition precedent, to abide by and to be bound by the terms, conditions and covenants of the herein lease agreement.

15. Subletting. That the Lessee shall not rent or sublet the whole or any portion of the demised premises.

16. Indemnity. That the Lessee will indemnify, defend and hold the Lessor harmless from and against any claim or demand for loss, liability or damage, including claims for property damage, personal injury or death, arising out of any accident on the demised premises and sidewalks and roadways adjacent thereto or occasioned by any act or nuisance made or suffered on the premises, or by a fire thereon, or growing out of or caused by any failure on the

part of the Lessee to maintain the premises in a safe condition, or by any act or omission of the Lessee, from and against all actions, suits, damages and claims by whomsoever brought or made by reason of the non-observance or non-performance of any of the terms, covenants and conditions herein or the applicable rules, regulations, ordinances and laws of the federal, state, municipal or county governments.

17. Costs of litigation. That in case the Lessor shall, without any fault on its part, be made a party to any litigation commenced by or against the Lessee (other than condemnation proceedings), the Lessee shall and will pay all costs and expenses incurred by or imposed on the Lessor; furthermore, the Lessee shall and will pay all costs and expenses which may be incurred by or paid by the Lessor in enforcing the covenants and agreements of this lease, in recovering possession of the demised premises or in the collection of delinquent rental, taxes and any and all other charges.

18. Insurance. That the Lessee shall procure, at his or her own cost and expense, and maintain during the entire period of this lease, a policy or policies of basic homeowner's liability insurance in an amount acceptable to the Chairman, insuring the State of Hawaii, the Board and Department of Land and Natural Resources and their employees, and Lessee against all claims for personal injury, death and property damage; that said policy or policies shall cover the entire premises, including all buildings, improvements and grounds and all roadways or sidewalks on or adjacent to the demised premises in the control or use of the Lessee. The

Lessee shall furnish the Lessor with a certificate showing such policy to be initially in force and shall furnish a like certificate upon each renewal of such policy, each such certificate to contain or be accompanied by an assurance of the insurer to notify the Lessor of any intention to cancel any such policy prior to actual cancellation. The notice to cancel shall be sent to the Lessor at least sixty (60) days prior to the date of cancellation. The procuring of this policy shall not release or relieve the Lessee of his or her responsibilities under this lease as set forth herein or limit the amount of his or her liability under this lease.

19. Mortgage. That the Lessee shall not mortgage, hypothecate or pledge the said premises or any portion thereof of this lease or any interest therein without the prior written approval of the Board and any such mortgage, hypothecation or pledge without such approval shall be null and void.

Upon due application and with the written consent of the Lessor, the Lessee may mortgage this lease or any interest therein or create a security interest in the leasehold of the public land hereby demised. If the mortgage or security interest is to a recognized lending institution in either the State of Hawaii or elsewhere in the United States, such consent may extend to foreclosure and sale of Lessee's interest at such foreclosure to any purchaser qualified to lease these lands under the provisions of Act 62, Session Laws of Hawaii 1982.

"holder" shall include an insurer or guarantor of the obligation or condition of such mortgage, including the Department of Housing and Urban Development through the Federal Housing Administration, the Federal National Mortgage Association, the Veterans Administration, the Small Business Administration, Farmers Home Administration, or any other Federal agency and their respective successors and assigns or any lending institution authorized to do business in the State of Hawaii or elsewhere in the United States; provided, that the consent to mortgage to a non-governmental holder shall not confer any greater rights or powers in the holder than those which would be required by any of the aforementioned Federal agencies.

20. Breach. That time is of the essence of this agreement and if the Lessee shall fail to yield or pay such rent or any part thereof at the times and in the manner aforesaid within sixty (60) days after delivery by the Lessor of a written notice of such breach or default, or if the Lessee shall become bankrupt, or shall abandon the said premises, or if this lease and said premises shall be attached or otherwise be taken by operation of law, or if any assignment be made of the Lessee's property for the benefit of creditors, or shall fail to observe and perform any of the covenants, terms and conditions herein contained and on its part to be observed and performed, and such failure shall continue for a period of more than sixty (60) days after delivery by the Lessor of a written notice of such breach or default, by personal service, registered mail or certified mail to the Lessee at its last known address and to each

mortgagee or holder of record having a security interest in the denised premises, the Lessor shall thereafter give notice of its intent to terminate this lease, including the date, time and place of the Board's action to terminate this lease, at least seven (7) calendar days prior to said action date, without prejudice to any other remedy or right of action by the State for arrears of rent or for any other breach of contract.

21. Right of holder of record of a security interest. In the event the Lessor seeks to forfeit the interest created by this lease, each recorded holder of a security interest may, at its option, cure or remedy any default or breach within sixty (60) days, from the date of receipt of the notice hereinabove set forth, or within such additional period as the Lessor may allow for good cause, and add the cost thereof to the mortgage debt and the lien of the mortgage. Upon failure of the holder to exercise its option, the Lessor may: (a) pay to the holder from any monies at its disposal, including the special land and development fund, the amount of the mortgage debt, together with interest and penalties, and secure an assignment of said debt and mortgage from said holder or if ownership of such interest or estate shall have vested in such holder by way of foreclosure, or action in lien thereof, the Lessor shall be entitled to the conveyance of said interest or estate upon payment to said holder of the amount of the mortgage debt, including interest and penalties, and all reasonable expenses incurred by the holder in connection with such foreclosure and preservation of its security interest, less appropriate credits, including

income received from said interest or estate subsequent to such foreclosure; or (b) terminate the outstanding interest or estate subject to the lien of such mortgage, without prejudice to any other right or remedy for arrears of rent or for any preceding or other breach or default and thereupon use its best efforts to dispose of the land affected thereby to a responsible person who meets the qualifications stated in Paragraph 14 above, and who will assume the obligation of the mortgage and the debt thereby secured; provided, that a reasonable delay by the Lessor in instituting or prosecuting any right or remedy it may have hereunder shall not operate as a waiver of such right or to deprive it of such remedy when it may still hope otherwise to resolve the problems created by the breach or default. The proceeds of any disposition effected hereunder shall be applied first, to reimburse the Lessor for costs and expenses in connection with such disposition; second, to discharge in full any unpaid purchase price or other indebtedness owing the Lessor in connection with such interest or estate terminated as aforesaid; and the balance, if any, shall be paid to the owner of such interest or estate.

22. Condemnation. That, if at any time, during the term of this lease, or any portion of the demised premises should be condemned, or required for public purposes by any county or city and county, the rental shall be reduced in proportion to the value of the portion of the premises condemned. The Lessee shall be entitled to receive from the condemning authority (a) the value of growing crops, if any, which he is not permitted to harvest and (b) the

proportionate value of the Lessee's permanent improvements so taken in the proportion that it bears to the unexpired term of the lease; provided, that the Lessee may, in the alternative, remove and relocate its improvements to the remainder of the lands occupied by the Lessee. The Lessee shall not by reason of such condemnation be entitled to any claim against the Lessor for condemnation or indemnity for leasehold interest and all compensation payable or to be paid for or on account of said leasehold interest by reason of such condemnation shall be payable to and be the sole property of the Lessor. The foregoing rights of the Lessee shall not be exclusive of any other to which Lessee may be entitled by law. Where the portion so taken renders the remainder unsuitable for the use or uses for which the land was demised, the Lessee shall have the option to surrender this lease and be discharged and relieved from any further liability therefore; provided, that Lessee may remove the permanent improvements constructed, erected and placed by it within such reasonable period as may be allowed by the Lessor.

23. Right to enter. The Lessor or the County of Hawaii and the agents or representatives thereof shall have the right to enter and cross any portion of said demised land for the purpose of performing any public or official duties; provided however, that except in response to emergency situations, the Lessor or the County shall provide at least 48 hours notice in writing to Lessee prior to exercising such rights, and shall not otherwise interfere unreasonably with the Lessee or Lessees' use and enjoyment of the premises.

24. Acceptance of rent not a waiver. That the acceptance of rent by the Lessor shall not be deemed a waiver of any breach by the Lessee of any term, covenant or condition of this lease, nor of the Lessor's right to declare and enforce a forfeiture for any such breach, and the failure of the Lessor to insist upon strict performance of any such term, covenant or condition, or to exercise any option herein conferred, in any one or more instances, shall not be construed as a waiver or relinquishment of any such term, covenant, condition or option.

25. Extension of time. That notwithstanding any provision contained herein to the contrary, wherever applicable, the Board may for good cause shown, allow additional time beyond the time or times specified herein to the Lessee, in which to comply, observe and perform any of the terms, conditions and covenants contained herein.

26. Quiet enjoyment. The Lessor hereby covenants and agrees with the Lessee that upon payment of said rent at the times and in the manner aforesaid and the observance and performance of the covenants, terms and conditions hereof on the part of the Lessee to be observed and performed, the Lessee shall and may have, hold, possess and enjoy the demised premises for the term hereby demised without hindrance or interruption by the Lessor or any other person or persons lawfully claiming by, through or under it.

27. Surrender. That the Lessee shall, at the end of said term or other sooner termination of this lease, peaceably deliver unto the Lessor possession of the demised

premises, together with all improvements existing or constructed thereon unless removed as provided herein. Lessee shall be responsible for removing any and all improvements and personal property from the premises. If the Lessee fails to remove, the Board of Land and Natural Resources may remove any and all such improvements or personal property from the premises and place said property in storage at the cost and expense of the Lessee, and the Lessee does hereby agree to pay all reasonable costs and expenses for removal and storage of such property.

28. Non-warranty. The Lessor does not warrant the conditions of the leased premises, as the same is being leased as is.

29. Construction requirement. All construction of buildings, structures and improvements shall be in accordance with such plans and specifications as may be submitted by the Lessee to and approved by the Board of Land and Natural Resources, or its designated agent, if appropriate.

30. Termination by Lessee. The Lessee may terminate this lease at any time by giving thirty (30) days notice in writing to Lessor of his or her intention to terminate.

Definitions

As used herein, unless clearly repugnant to the context:

(a) "Act 62" shall mean Act 62 of the Session Laws of Hawaii 1982, as amended by Act 83 of the Session Laws of Hawaii 1984.

(b) "Chairman" shall mean the Chairman of the Board of Land and Natural Resources of the State of Hawaii or his successor.

(c) "Lessee" shall mean and include the Lessee herein, and his or her heirs, executors, administrators, successors or permitted assigns, according to the context hereof.

(d) "Holder of a record of a security interest" is a person who is the owner or possessor of a security interest in the land demised and who has filed with the Department of Land and Natural Resources and with the Bureau of Conveyances of the State of Hawaii a copy of such interest.

(e) "Recognized organization representing Lessees" shall mean Paa Pono Milolii or any other successor organization or successor community group whose membership is composed primarily of Lessees, provided, that all Lessees must be eligible for membership in the organization before the organization may negotiate or act for the Lessees.

(f) "Premises" shall include the land hereby demised.

(g) The use of any gender shall include all genders, and if there be more than one lessee, then all words used in the singular shall extend to and include the plural.

(h) The paragraph headings throughout this lease are for the convenience of the Lessor and the Lessee and are not intended to construe the intent or meaning of any of the provisions thereof.

(i) "Waste" shall be deemed to include, but not limited to, (1) permitting the premises or any portion thereof to become unduly eroded and/or failure to take proper precautions or make reasonable effort to prevent or correct same; and (2) permitting any material increase in noxious weeds in uncultivated portions thereof.

IN WITNESS WHEREOF, the parties hereto have caused
these presents to be executed this _____ day of
_____, 19_____.

STATE OF HAWAII

By _____
Chairperson and Member
Board of Land and
Natural Resources

And by _____
Member, Board of Land
and Natural Resources

LESSOR

LESSEE

APPROVED AS TO FORM:

Deputy Attorney General
Dated: _____

STATE OF HAWAII)
) SS.
COUNTY OF))

On this _____ day of _____, 19____, before
me personally appeared _____
to me known to be the person(s) described in and who executed
the foregoing instrument and acknowledged that _____ executed
the same as _____ free act and deed.

Notary Public, State of Hawaii
My commission expires: _____

**TITLE 11
DEPARTMENT OF HEALTH
CHAPTER 57**

**PRIVATE WASTEWATER TREATMENT WORKS AND
INDIVIDUAL WASTEWATER SYSTEMS**

S11-57-01	Definitions
S11-57-02	County ordinances and rules
S11-57-03	General requirements
S11-57-04	Operation and maintenance requirements for treatment works
S11-57-05	Effluent limitations applicable to treatment works
S11-57-06	Effluent monitoring and reporting
S11-57-07	General requirements for individual wastewater systems
S11-57-08	Specific requirements for individual wastewater systems
S11-57-09	Cesspools and seepage pits
S11-57-10	Household aerobic units
S11-57-11	Variances
S11-57-12	Prohibitions
S11-57-13	Penalties and remedies
S11-57-14	Severability

Historical Note: Chapter 57 of Title 11, Administrative Rules, is based substantially on Public Health Regulations, Chapter 38, Private Wastewater Treatment Works and Individual Wastewater Systems, Department of Health, State of Hawaii. [Eff. 10/31/66, am 8/5/73, am 8/6/79; R DEC 27 1983]

S11-57-01 Definitions. As used in this chapter:

"BOD₅" means five days biochemical oxygen demand which is a standard test indicating the quantity of oxygen utilized by wastewater under controlled conditions of temperature and time.

"Building" means a structure, permanent or temporary, built, erected, and framed of component structural parts designed for the housing, shelter, workplace, enclosure, or support of persons, animals, or property of any kind.

"Cesspool" means an excavation in the ground which receives untreated wastewater and functions by retaining the organic matter and solids discharging therein, but permits the liquid to seep through its bottom or sides to gain access to the subsurface ground formation.

"Composite sample" means sample(s) collected on regular intervals in proportion to the existing flow and then combined to form a sample representative of flow over a period of time. For the purposes of this chapter, a composite sample means at least four equally timed grab samples taken over a twelve consecutive hour per day period and proportioned according to the flow rate.

"County" means any county of the state.

"Director" means the director of health or his duly authorized agent.

"Disposal system" means any outlet, outfall sewer, seepage pit, cesspool, injection well, effluent irrigation system, tile field, disposal trench, or other facility or any combination thereof used in the disposal of wastewater including any wastewater transmission lines, pumps, power, or other equipment associated with the ultimate disposal of wastewater.

"Domestic wastewater" means the wastewater derived from ordinary human habitation or human activities including, but not limited to, wastewater from dwellings, hotels, hospitals, and comfort stations.

"Household aerobic unit" means a watertight receptacle which receives domestic wastewater from one dwelling unit or from other sources generating wastewater of a similar volume and strength, and retains solids, aerobically digests organic matter over a period of time, and allows the clarified effluent to discharge outside the tank into a disposal system.

"Individual Wastewater System" means a facility which is designed to receive and dispose of no more than 900 gallons per day of domestic wastewater. Individual Wastewater Systems which may involve treatment processes include but are not limited to cesspools, seepage pits and household aerobic units.

"Owner" means a person who has legal title to a treatment works or individual wastewater system.

"Person" has the same meaning as in section 342-1, HRS.

"Private" means not owned or operated by a federal, state, or county authority.

"Public sewer system" means wastewater treatment works, lines, pumping stations and appurtenances owned or operated by a federal, state, or county authority, or regulated as a public utility as defined by section 269-1, HRS.

"Seepage pit" means an excavation in the ground which receives the discharge from treatment units or individual wastewater systems and permits the effluent to seep through its bottom or sides to gain access to the subsurface ground formation.

"Sewer" means a pipe or conduit and other appurtenances that carries wastewater from buildings to a specific point for treatment and disposal.

"Standard methods" means the fifteenth edition of "Standard Methods for the Examination of Water and Wastewater" as published by the American Water Works Association, American Public Health Association and the Water Pollution Control Federation.

"State waters" has the same meaning as in section 342-31, HRS.

"Subsurface disposal system" means a disposal system which permits effluent to reach the underground geologic formation such as, but not limited to, a seepage pit, cesspool, injection well, tile field, disposal trench, or any combination thereof used in the disposal of wastewater including any wastewater transmission lines, pumps, power, or other equipment associated with the disposal of wastewater.

"Treatment works" means any plant, facility, or equipment used in the treatment of wastewater including the necessary pumps, power equipment, blowers, motors, holding tanks, flow splitter, and other process equipment, and its associated collection system and disposal system, excluding individual wastewater systems.

"Wastewater" means any liquid waste, whether treated or not, and whether animal, mineral, or vegetable including agricultural, industrial, and thermal wastes.

"Wastewater sludge" means the accumulated solids removed from wastewater by any liquid-solids separation process. Such solids may be a part of the raw wastewater or generated by a wastewater treatment process or any combination thereof.

"Water pollution" has the same meaning as in section 342-31, HRS. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-32, 342-33)

S11-57-02 County ordinances and rules. Any county may regulate wastewater disposal, management, design, construction, and the operation of private wastewater treatment works or individual wastewater systems as provided in section 342-19, HRS. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-19, 342-32)

S11-57-03 General requirements. (a) No person shall occupy or use a building unless the building is connected to a public sewer system.

(b) The use or occupation of a building by a human or humans is prima facie evidence of the generation of wastewater, and shall shift the burden of proving non-generation of wastewater to the owner, occupant or user.

(c) The following buildings are exempt from S11-57-03(a).

(1) Any building or facility which is located within a state agricultural land use district, county agricultural zoned district, or conservation land use district, provided that the building or facility is used in the operation of an agricultural enterprise, including the domiciling of agricultural workers, or is consistent with the conservation district use intent.

(2) Any building, part of a building, or combination of buildings generating wastewater at a rate which allows the utilization of one or more individual wastewater systems meeting the requirements of S11-57-07 thru S11-57-10 and particularly S11-57-07(a)(1). Whenever applicable, the design flow computations of the development shall be based on the table of quantities of sewage flows dated June 1981 located at the end of this section.

(3) Any building completely constructed as of the effective date of this rule.

(4) Any building under construction or to be constructed, and which has a valid building permit in effect when this rule takes effect.

(5) Any new building, part of a building or combination of buildings utilizing a private wastewater treatment works provided that the said private wastewater treatment works has been reviewed and approved by the appropriate county pursuant to S11-57-02.

(d) No person or owner shall cause or allow any treatment works or individual wastewater system to create or contribute to any:

(1) Human illness; or

(2) Public health hazard; or

- (3) Nuisance; or
- (4) Unsanitary condition; or
- (5) Wastewater spill, overflow, or discharge onto the ground or into surface waters; or
- (6) Contamination or pollution of state waters; or
- (7) Harborage of vectors, including insects and rodents; or
- (8) Foul or noxious odor; or
- (9) Public safety hazard; or
- (10) Contamination, pollution, or endangerment of drinking waters; or
- (11) Contamination or pollution of shellfish breeding grounds or growing waters; or
- (12) Noise law violation.

(e) In case of a violation of this chapter, the director shall initiate enforcement action against the owner(s) of the treatment works or individual wastewater system, and may initiate enforcement action against other persons to have the offending condition abated, corrected, removed, destroyed, or prevented. In addition, once a violation of this chapter occurs, the director may order the owner of the treatment works or individual wastewater system to take immediate actions to protect public health and safety.

(f) No person shall construct an individual wastewater system involving the subsurface disposal of wastewater in areas where such disposal methods may contaminate an existing or potential potable water source, except as approved in writing or by rule by the respective county board of water supply or department of water supply.

(g) No individual wastewater system shall be located at any point less than fifty feet from a stream, the ocean at mean sea level, a pond or a lake, unless otherwise approved by the director.

(h) Except as otherwise approved by the director, wastewater sludge shall only be disposed of at a public facility. The disposer of wastewater sludge shall have specific authorization from the owner of the facility to dispose of such wastewater sludge.

(i) Before abandoning, retiring, or permanently discontinuing use of a treatment works or individual wastewater system, the owner shall render it safe by removing it, filling it completely with earth, sand, gravel, rubble, or other similar materials, or both. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-32)

Table of Quantities of Sewage Flows

June 1981

Type of Establishment	Gallons Per Person Per Day (Unless Otherwise Noted)
Airports (per passenger)	5
Bathhouses and swimming pools	10
Camps:	
Campground with central comfort stations	35
With flush toilets, no showers	25
Construction camps (semi-permanent)	50
Day camps (no meals served)	15
Resort camps (night and day) with limited plumbing	50
Luxury camps	100
Cottages and small dwellings with seasonal occupancy (2 persons per bedroom minimum)	100
Country clubs (per resident member)	100
Country clubs (per non-resident member present)	25
Dwelling (2 persons per bedroom minimum)	100
Factories (gallons per person, per shift, exclusive of industrial wastes)	35
Hospitals (per bed space)	250+
Hotels with private baths (2 persons per bedroom minimum)	100
Hotels without private baths	50
Institutions other than hospitals (per bed space)	125
Laundries, self-service (gallons per wash, i.e., per customer) ...	50
Mobile home parks (per space)	250
Motels with bath, toilet, and kitchen wastes (per bed space)	50
Motels (2 person per bedroom minimum)	100
Picnic parks (toilet wastes only) (per picnicker)	5
Picnic parks with bathhouses, showers, and flush toilets	10
Restaurants (toilet and kitchen wastes per patron)	10
Restaurants (kitchen wastes per meal served)	3
Restaurants additional for bars and cocktail lounges	2
Schools:	
Boarding	100
Day, without gyms, cafeteria, or showers	15
Day, with gyms, cafeteria, and showers	25
Day, with cafeteria, but without gyms, or showers	20

Type of Establishment	Gallons Per Person Per Day (Unless Otherwise Noted)
Service stations (per vehicle served)	10
Swimming pools and bathhouses	10
Theaters:	
Movie (per auditorium seat)	5
Drive-in (per car space)	5
Travel trailer parks without individual water and sewer hook-ups (per space)	50
Travel trailer parks with individual water and sewer hook-ups (per space)	100
Workers:	
Construction (at semi-permanent camps)	50
Day, at schools and offices (per shift)	15

(2 of 2)

Extracted in part from the Public Health Service Publication No. 526, as revised by the National Technical Information Service, U.S. Department of Commerce.

\$11-57-04 Operation and maintenance requirements for treatment works.

(a) Any treatment works approved by the director prior to the effective date of this rule shall be allowed to operate as long as the following requirements are met:

- (1) All required components of the treatment works approved by the director including but not limited to pumps, blowers, electrical equipment, sewer lines, appurtenant structures, buildings, and fences shall be maintained and kept in working order by the owner.
- (2) The treatment works shall meet the applicable requirements of \$11-57-05 and \$11-57-06.

(b) Within thirty days after the fact, the owner shall notify the director of the permanent discontinuance of operation or dismantlement of the treatment works. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§342-4, 342-6, 342-32)

\$11-57-05 Effluent limitations applicable to treatment works. (a)

Treatment works utilizing subsurface disposal systems shall meet the following effluent limitations:

- (1) Biochemical Oxygen Demand (BOD₅). The BOD₅ in the effluent from a treatment unit shall not exceed thirty milligrams per liter based on a thirty-day arithmetic average of no less than four composite samples. However, no effluent grab sample shall exceed sixty milligrams per liter BOD₅ at any instant.
- (2) Suspended solids. The suspended solids in the effluent from a treatment unit shall not exceed thirty milligrams per liter based on a thirty-day arithmetic average of no less than four composite samples. However, no effluent grab sample shall exceed sixty milligrams per liter suspended solids at any instant.

(b) Treatment works utilizing effluent irrigation systems shall meet the following limitations:

- (1) Section 11-57-05(a) shall apply; and
- (2) Continuous disinfection. The median number of total coliform organisms in the effluent from a treatment works shall not exceed twenty-three organisms per one hundred milliliters, unless otherwise specified by the director on the basis of restrictions to public accessibility and public health considerations. For the purposes of this section, the median number of organisms shall be based upon no less than five effluent grab samples taken over a thirty-day period.

(c) The analysis, including the handling and preservation of samples to determine compliance with effluent requirements, shall be performed in accordance with standard methods. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-32)

\$11-57-06 Effluent monitoring and reporting. (a) Any operational private wastewater treatment works having design flows of more than ten thousand gallons

per day shall be subject to the monitoring and reporting requirements in §§11-57-06(b), (c) and (d).

(b) The owner or his duly authorized agent shall perform the operational tests indicated under §11-57-06(b)(1) and the test for chlorine residual indicated under §11-57-06(b)(2) and record the test results and other information indicated under this section:

- (1) Analysis of dissolved oxygen, pH, settleability of the contents of the aeration tank mixed liquor and effluent settleable solids;
- (2) Daily wastewater flow and analysis for chlorine residual; and
- (3) Complete log of maintenance performed, repairs, volume of sludge wasted and name of sludge hauler/disposer, if applicable;

(c) The frequency of performing operational tests and recording the test results and required information in §11-57-06(b)(1), (2) and (3) shall be as follows:

- (1) For wastewater treatment works having design flows of more than ten thousand but less than seventy-five thousand gallons per day, once per week; and
- (2) For wastewater treatment works having design flows equal to or greater than seventy-five thousand gallons per day, five times per week.

(d) Records of analysis required in §11-57-06(b) shall be kept on site and shall be made available for inspection to the director. In addition, the owner of a treatment works having design flows equal to or greater than seventy-five thousand gallons per day shall submit to the director weekly arithmetic averages of records required in §11-57-06(b). Records shall be submitted to the director by the fifteenth day of each of the following months: January, April, July and October, unless otherwise directed by the director. The owner or his duly authorized agent shall sign the records to be submitted to the director. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§342-4, 342-6, 342-32)

§11-57-07 General requirements for individual wastewater systems. (a) A single individual wastewater system shall:

- (1) Service not more than eight hundred gallons per day of domestic wastewater. Each individual wastewater system shall have an independent sewer system. For buildings utilizing two or more individual wastewater systems, neither the sewer system serving the wastewater system nor the individual wastewater systems shall be combined in any way.
- (2) Have a disposal component of sufficient capacity to accommodate the anticipated rate of flow of domestic wastewater into the individual wastewater system. Multiple cesspools may be used in any one individual wastewater system or multiple seepage pits may be used as the disposal component of any one individual wastewater system to achieve the requirements of §11-57-07(a)(1).

(b) No preconstruction clearance is required from the director before the installation of an individual wastewater system.

(c) In addition to the requirements of S11-57-03(g), no disposal component of any individual wastewater system shall be less than five feet from any property line and less than five feet from any dwelling.

(d) No person shall use the area adjacent to or above an individual wastewater system for purposes or activities or in a manner which may hinder the maintenance or repair of the system. Airspace directly and up to fifteen feet above a treatment component shall not be used for dwellings, places of business, or work places.

(e) All components of an individual wastewater system such as blowers, motors, and pumps which can serve as noise emitting sources shall be sited, sited and housed, or housed in order that any noise emitted would be in compliance with all applicable community noise code provisions.

(f) Whenever an owner retains a professional engineer especially qualified in the civil branch to design an individual wastewater system for a specific property, such system need not meet the requirements of S11-57-07(c), S11-57-09, S11-57-10 and, further, the owner need not demonstrate compliance to S11-57-07(a)(2) in the report filed with the director. [Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3) (Imp: HRS §342-32)

S11-57-08 Specific requirements for individual wastewater systems. (a) No person shall operate or use an individual wastewater system until after a report describing the system has been accepted by the director.

(b) The owner or intended user of the individual wastewater system shall file the report.

(c) Whenever an owner retains a professional engineer to design an individual wastewater system such professional engineer shall submit a letter from the owner of the proposed individual wastewater system designating the engineer as the owner's exclusive agent for the purpose of designing, supervising the installation of, and filing the report on the individual wastewater system for the subject property.

(d) The report shall include the following documents :

(1) A plot plan, drawn to scale, showing the location of:

(A) All buildings;

(B) All utility lines external to the building(s);

(C) Property lines and other legal boundaries; and

(D) The individual wastewater system(s).

(2) An "owner's certification statement," which shall state, "I certify that I am the owner of the individual wastewater system described on the attached plot plan and drawing(s) and that said individual wastewater system as installed complies with chapter 57, title 11, Administrative Rules, which I have read and understand."

(3) Whenever an owner retains a professional engineer to design an individual wastewater system, an engineering certificate will be required. Such certificate shall state, "The individual wastewater system described in the attached plot plan and drawing(s) has been

designed and installed by me or under my direct supervision. The system has been designed to avoid the situations listed in rule S11-57-03(d). The system has been designed to require no more than routine maintenance. The system has been designed to require the off-site transport of wastewater sludge, solids, or domestic wastewater, not more than once every three months throughout its effective operational life. The system has been designed and installed to have an effective operational life of at least _____ years."

(4) A drawing of the individual wastewater system.

(A) The drawing of an individual wastewater system with cesspools or seepage pits shall show all such cesspool and seepage pits to scale in cross section and shall show at least the ground surface, the cover, the inlet pipe, the bottom and sides of the cesspools and seepage pits, and the groundwater table level as described in S11-57-09(a) if that level is higher than the bottom of any cesspool or seepage pit in the system.

(B) The drawing(s) of an individual wastewater system which is submitted by a professional engineer shall bear the stamp of said engineer.

(e) The document described in S11-57-08(d) shall:

(1) Be presented to the director in triplicate;

(2) Commence with the plot plan;

(3) Note the tax map key number and street address of the project site on each sheet;

(4) Be eight and one-half by eleven inches in size;

(5) Be numbered consecutively by page/sheet and shall note the total number of pages/sheets per set (e.g. page 1 of 4); and

(6) Have graphic reference scales for and on plot plans and drawings.

(f) At the time the report is filed, the owner, or the owner's duly authorized agent on the owner's behalf, shall sign and date the owner's certificates in the presence of the director.

(g) For an individual wastewater system designed by an engineer pursuant to S11-57-07(f), at or before the time the report is filed, the engineer shall fill in the engineer's certificates with regard to the effective operational life of the system and shall sign and date the engineer's certificates.

(h) At the time the report is filed, the director shall determine whether S11-57-08(d), 11-57-08(e), 11-57-08(f), and 11-57-08(g), have been complied with, and only if they have been, shall the director accept the report for filing.

(i) If the director accepts the report as complete, the director shall sign the sets of documents under the signed owner's certificates and shall return all but one signed set to the owner, or the owner's duly authorized agent. The return of said signed documents shall constitute the director's acceptance of the report.

[Eff. DEC 27 1983] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-6, 342-32)

S11-57-09 Cesspools and seepage pits. (a) A cesspool or seepage pit used as the disposal component system of an individual wastewater system shall have the inlet pipe(s) at least five feet above the groundwater table's highest known level.

(b) A cesspool or seepage pit used as the disposal component of an individual wastewater system shall have the inlet pipe(s) at least one and one-half feet below the finished ground surface.

(c) Cesspools.

(1) Each cesspool shall be at least seven feet in outside diameter, clear opening, and shall have a minimum sidewall of at least ten feet below the inlet pipe. Multiple cesspools when used shall be spaced no less than ten feet apart from the outer edges.

(2) Sidewalls shall be properly protected against cave-in by means of approved types of concrete rings, hollow tile blocks, or other approved materials. When hollow tiles are used, the minimum size of the block shall be eight by eight by sixteen inches.

(A) In sandy subsoil formation, excavation voids behind the hollow tiles, precast rings or other liners shall have a minimum backfill of six inches of clean one-inch sized rocks or gravel, or other similar sized material.

(B) When natural geological formations are encountered which are sufficiently stable to prevent caving of sidewalls, such as rock, white coral, or other similar composition, the stable material may be used as sidewall lining in lieu of concrete rings or hollow tile blocks. The burden of demonstrating stability is on the person seeking to use said formation as sidewall lining.

(3) A structurally sound reinforced concrete cover protruding at least twelve inches beyond the perimeter of the unlined cesspool or seepage pit and resting on firm ground shall be provided for excavations of substantially stable sidewalls. Excavations requiring sidewall linings with either hollow tile blocks or precast concrete rings, shall have the reinforced concrete covers equal to the outside diameter of the linings. At least one watertight manhole, either round or square, tapered to a minimum of twelve inches in dimension shall be provided in the cover for inspection or for emptying of the contents when required. The top of each cover shall be at least twelve inches below the finished ground surface.

(d) Seepage pits.

(1) Seepage pits may be used with a household aerobic unit or as a supplementary addition to a cesspool.

(2) A seepage pit shall not be less than four feet in inside diameter and not less than ten feet in depth. Multiple seepage pits when used shall be spaced at least ten feet apart from the outer edges. All seepage pits shall conform to the construction requirements set forth in S11-57-09(c)(2), (3). [Eff. DEC 27 1991] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-32)

S11-57-10 Household aerobic units. (a) Only the household aerobic units which appear in the "Listing of Special Categories of Equipment, Products and Services," National Sanitation Foundation Testing Laboratory, Ann Arbor, Michigan, shall be used; the specific listing is the "Equipment Listed as Meeting National Sanitation Foundation Standard No. 40, Individual Aerobic Wastewater Treatment Plants"; and only the class I equipment listed shall be used.

(b) The household aerobic unit used shall be of adequate size to accommodate in an effective manner the anticipated rate of flow of domestic wastewater into the individual wastewater system.

(c) Each household aerobic unit shall discharge its effluent into a disposal system meeting the requirements of S11-57-09. [Eff. DEC 27 1993] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-32)

S11-57-11 Variances. Variances, variance applications and actions thereon shall comply with section 342-7, HRS. When acting on variances or their applications, the director shall also consider the objectives, policies, and guidelines of sections §§205A-2, 344-3 and 344-4, HRS. [Eff. DEC 27 1993] (Auth: HRS §342-3) (Imp: HRS §§342-3, 342-7)

S11-57-12 Prohibitions. Prohibition shall be as set forth in section 342-33, HRS. [Eff. DEC 27 1993] (Auth: HRS §342-3) (Imp: HRS §§342-3, 342-33)

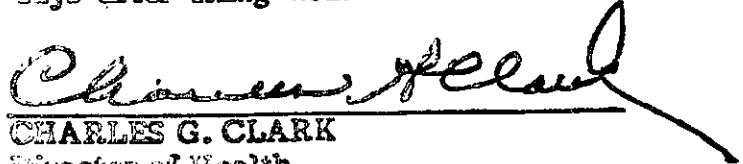
S11-57-13 Penalties and remedies. (a) Any person who violates any provision of this chapter shall be subject to the penalties and remedies provided for in sections 321-1B, 342-18, 342-11, 342-11.5, 342-12, 603-23, HRS.

(b) Violation of any provision of this chapter shall be grounds for permit or variance modification, suspension, or revocation. [Eff. DEC 27 1993] (Auth: HRS §§321-11, 342-31, 342-32) (Imp: HRS §§321-11, 342-18, 342-11, 342-11.5, 342-12, 603-23)

S11-57-14 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the application of such provision to other persons or circumstances, and the remainder of this chapter, shall not be affected thereby. [Eff. DEC 27 1993] (Auth: HRS §§321-11, 342-3, 342-32) (Imp: HRS §§321-11, 342-19, 342-32)

The rules repealing Public Health Regulations Chapter 38, Private Wastewater Treatment Works and Individual Wastewater Systems, Department of Health, State of Hawaii, and adopting Chapter 57 of Title 11, Administrative Rules on November 30, 1983, following public hearings held on January 3, 4, 5, 6, and 7, 1983, in Kauai, Oahu, Maui, Kona and Hilo, Hawaii respectively, are hereby adopted.

These rules shall take effect ten days after filing with the Office of the Lieutenant Governor.


CHARLES G. CLARK
Director of Health
State of Hawaii


Dated: 11-30-83

APPROVED:


GEORGE R. ARIYOSHI
Governor
State of Hawaii

Dated: 12-14-83

APPROVED AS TO FORM:


Deputy Attorney General

Filed: December 15, 1983

Effective Date: December 27, 1983

LT. GOVERNOR'S OFFICE
1983 DEC 15 AM 9 49
REC'D. BY

CAROUSEL COMPOST TOILET

The Carousel Compost Toilet uses no chemicals. The waste is digested by aerobic bacteria to an earth-like, odorless substance called compost.

This toilet is the only biological toilet with four separate, rotating composting chambers. The Carousel is manufactured in two sizes. The large size is designed for a family of four to six persons for year-round use, and the small model is designed for a family of two persons or second home use. The toilet will work without electricity if kept sufficiently warm, and the capacity can be increased by adding supplemental heat.

DATA TABLE

	Width	Height	Weight	Capacity or Volume
Carousel Toilet:				
Large container	51"	50"	180 lbs.	4-6 people
Small container	51"	30"	130 lbs.	2-3 people



NSF Seal No. 9543
US Patent No. 3,923,605

WATERLESS!

Do you realize that flush toilets waste FIVE GALLONS of water in every flush? The CAROUSEL composts all waste, including your kitchen scraps, to a useable humus. NO WATER IS USED!

PROVED

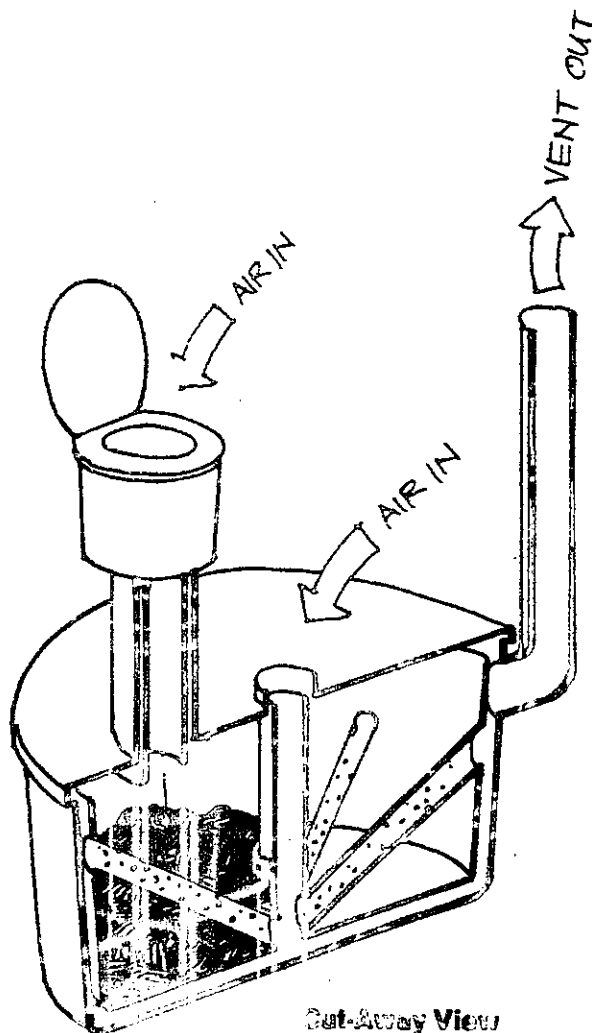
The National Sanitation Foundation award No. 8543 is your guarantee that the CAROUSEL COMPOST TOILET is safe, healthy, and non-polluting. The Hawaii Health Dept. will approve installations in homes labeled "Agricultural".

LOW MAINTENANCE

Each chamber is started with a bed of peat moss, and additional peat moss may be added occasionally, along with kitchen scraps. Each chamber is used for four to six months, and compost is removed from each chamber when it is time to re-use. That's all there is to it!

AS EASY TO INSTALL

Any handy person can install the CAROUSEL - no plumber or licensed person is required. The unit is shipped assembled, and all tools for installation are included. Extra parts are available for unusual installations.



ODORLESS

Composting waste generates a great amount of heat. The CAROUSEL COMPOST TOILET is designed to utilize this heat to generate air ventilation, which conveys air in through the toilet commode, and out through the vent pipe. (An electric vent fan is available if desired.) Any small odors are vented to the outside.

NATURAL

How long are we going to expect Mother Nature to clean up after us? The water we use to wash away our waste flows into our water table and into our bays and beaches. The CAROUSEL is Mother Nature's little helper because it stops this waste and converts it naturally to useable compost. NO POWER IS REQUIRED, except in cold climates.

POLLUTION FREE

The waste stops in the CAROUSEL COMPOST TOILET. No chemicals are added, nor is water wasted to wash raw sewage into our environment. The burning heat generated by composting kills all unhealthy micro-organisms, and the humus may be used to fertilize ornamental plants.