ALAN M. ARAKAWA
MAYOR

200 South High Street
Wailuku, Hawaii 96793-2155
Telephone (808) 270-7855
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OFFICE OF THE MAYOR
County of Maui

January 19, 2005

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

SUBJECT: Finding of No Significant Impact (FONSI) for Aloha House Expansion and Improvements Project
TMK: (2) 2-5-04:05, Makawao, Maui, Hawaii

The County of Maui, has reviewed the comments received during the 30-day public comment period which began on July 23, 2004. The County of Maui has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the next available *Environmental Notice.*

Enclosed is a completed OEQC Publication Form and four copies of the final EA. Please contact Agnes Hayashi, CDBG Program Manager, at (808) 270-7213 if you have any questions.

Sincerely,

ALAN M. ARAKAWA
Mayor, County of Maui

RECEIVED
'05 FEB -4 P12:56
OFC. OF ENVIRONMENTAL QUALITY CONTROL

Enc.
c: Aloha House
CDBG
Wayne Arakaki

ALOHA HOUSE
EXPANSION & IMPROVEMENTS

IKE DRIVE
MAKAWAO, MAUI, HAWAII
TMK: (2) 2-5-04:05

ENVIRONMENTAL ASSESSMENT

Prepared For:
ALOHA HOUSE, INC.

P. O. Box 791779
Paia, Maui, Hawaii 96779

Prepared By:

Wayne I. Arakaki Engineer, LLC
P. O. Box 884
Wailuku, Maui, Hawaii 96793
Ph. No. (808) 242-5868 * Fax No. (808) 242-5865

February 2, 2005

LINDA LINGLE
GOVERNOR OF HAWAII

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
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E-mail: oeqc@health.state.hi.us

August 23, 2004

Ms. Agnes Hayashi
Community Development Block Grant Program
County of Maui
2005 S. High Street
Wailuku, Hawai'i 96793

Mr. Wayne Arakaki
Wayne I. Arakaki Engineer, LLC
1867 Vineyard Street
Wailuku, Hawai'i 96793

Dear Ms. Hayashi and Mr. Arakaki:

The Office of Environmental Quality Control (OEQC) has reviewed the draft environmental assessment entitled "Aloha House Expansion and Improvements, Tax Map Keys No. 2-5-04, parcel 5, situtated in the judicial district of Makawao. OEQC offers the following comments for your consideration and response.

1. **Description of Aloha House, Its Purpose and Function**: The draft environmental assessment (DEA) does not clearly describe what the transitional dormitories are for. Are they for college students? Are they for homeless persons? Are they for the general public meeting certain socio-economic criteria? Please rewrite the description including: the nature and purpose of Aloha House, Inc.; the nature and purpose of the transitional dormitories; the population to be served by these transitional dormitories. Please also re-evaluate as necessary, the determination of significance in light of the above.

Thank you for the opportunity to comment. If there are any questions, please call Mr. Leslie Segundo, Environmental Health Specialist, at (808) 586-4185.

Sincerely,

Genevieve Salmonson

GENEVIEVE SALMONSON
Director

OFFICE OF THE MAYOR

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM

COUNTY OF MAUI
200 SOUTH HIGH STREET, WAILUKU, HAWAII 96793

ALAN M. ARAKAWA
Mayor
AGNES M. HAYASHI
Program Manager
TESSA N. TANAKA
Specialist

Phone: (808) 270-7213
Fax: (808) 270-7159

January 19, 2005

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

SUBJECT: Environmental Assessment for Aloha House Expansion and Improvements Project
TMK: (2) 2-5-04:05, Makawao, Maui, Hawaii

Thank you for OEQC's review of the draft environmental assessment for the subject project. In response to the comments in your letter dated August 23, 2004 requesting clarification, the description of Aloha House, its purpose, and function will be rewritten to include the following additional information:

> The transitional dormitories are for clients of Aloha House's substance abuse treatment and related services program. These services include different levels of treatment from detoxification to therapeutical residence. Clients are mainly individuals residing in Maui County. Individuals generally reside in the facility an average of 60 days. The facility houses approximately 200 clients each year, with more than 50% of this number being at or below the federal poverty level.

If you should have any questions, please contact me at (808) 270-7213.

Sincerely,

AGNES M. HAYASHI
CDBG Program Managher

c: Jud Cunningham
Wayne Arakaki

S:\ALL\CDBG\Environ\Aloha House 02-1 and 03-7).wpd

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Introduction

This environmental assessment report and supporting documentation is for the proposed re-development of an existing Transitional Dormitory, Building 'A', called **Aloha House.** The transitional dormitories are for clients of Aloha House's substance abuse treatment and related services program. These services include different levels of treatment, from detoxification to therapeutical residence. Clients are mainly individuals residing in Maui County. Individuals generally reside in the facilities an average of 60 days. The facilities house approximately 200 clients each year, with more than 50% of this number being at or below the federal poverty level.

The report provides a description and plans for the proposed project, existing environmental conditions, potential significant impacts, mitigation measures, social and economic characteristics, infrastructure and utility system requirements, and the relationship to community land use plans and policies. The information presented here is drawn from site visits, planning and engineering studies and drawings prepared for the proposed project. Some of the information here has been acquired from other sources, e.g., environmental characteristics of the proposed project site and the surrounding areas.

The subject parcel is located along the mauka side of Ike Drive, approximately 300 feet East of the intersection of Baldwin Avenue and Ike Drive. The site is next to the old Maunaolu College. The parcel is approximately 5.430 acres and slopes gently in a Southeast to Northwest direction. The piece of property is identified as TMK: (2) 2-5-004:005 which is in the Makawao region. The current County zoning of the property is "Interim"; the Community Plan designates this parcel for Public/Quasi-Public use. A "Special Use Permit" was granted to Aloha House for the operation of their programs at this site; the permit covers use of existing buildings and future improvements.

The proposed project is to demolish an existing structure to its floor level. The building currently serving as a transitional dormitory, is to be replaced with a single story structure with a small open entry lanai. The new structure is designed to double the occupancy of the current structure; from 4 beds to 8 beds. The electrical and plumbing service will be upgraded to meet current building code standards. There is adequate fire protection and potable water to meet this project's demand.

Aloha House is a non-profit organization. This project is required to be in compliance with all applicable federal and state environmental regulations.

(A) ENVIRONMENTAL SETTING

The property is currently have several buildings on the site, please see the attached site plan. The road fronting the project site is paved with no curb gutters or sidewalks. The road pavement is approximately 20 feet wide. The site has been used for many years. The proposed project is to replace two existing dwellings. The new buildings will not be larger and will retain the same foot print as the existing buildings. It is highly unlikely that we will uncover any archaeological remains, because of prior grubbing and use of the site.

The project site is surrounded by buildings that houses non-profit groups. The North direction is old Maunaolu College building. The East direction has similar dwellings for non-profit organizations. The South direction is the campus cafeteria, multi purpose, and Counseling Support Services buildings. The West direction has a driveway and parking area. Beyond, that are similar dwellings for non-profit groups.

There will be no site work that will alter the existing grounds for this project. We are replacing two existing dwellings, that is beyond repair. All power utilities will remain above ground. The existing septic system will be used and have capacity for the new development. The new building will be constructed to Maui County standards. There is no drainage system for the project site. There will be no increase of runoff since the buildings will be replaced with added floor area.

(B) EVALUATION OF IMPACTS QUALITY OF ENVIRONMENT

Archaeological, Historical, and Cultural Resources

The subject parcel has been grubbed and graded through the years of use and

improvements on this parcel. There are no visible remains of any historic or archaeological artifacts on the property. During construction of the proposed dwellings, should any remains be found, we will contact the State Historic Preservation Division. A archaeological monitor will be on site during the excavation. We are sending a copy of this report to The Department of Land and Natural Resources, State Historic Preservation Division. No further action will be taken, unless DLNR request for additional information.

Air and Noise Quality

The air and noise quality of the project site are typically similar with residential or agriculture areas. The traffic along Baldwin Avenue is usually light, with a minimal amount of noise being generated by traffic. The surrounding buildings, which are mainly used for "Transitional" residential living is relatively quiet.

Generally, mornings are calm with light winds coming from the North. By noon, Northeasterly trade winds dominate and periodically carries dust, generated from traffic, sugar fields and construction operations in the immediate area. The noise regime of the project site is dominated by the recreational and local traffic.

Air quality may be affected somewhat by increased dust emissions generated during the construction phase of the proposed project. Mitigation measures in conformance with State and Maui County grading and erosion control regulations will be implemented to minimize potential air quality problems due to construction generated dust and smoke.

Potential noise impacts may be realized during the construction and site preparation stages from the operation of heavy equipment can be reduced by limiting construction work to specific daylight hours and by equipping construction machinery with residential type mufflers.

Flora and Fauna

Vegetation in the subject parcel site is common to the area. It consists of koa, , Christmas berry, guava, hilo grass, yellow fox tail and lantana. These various species exist in surrounding parcels with very little on the subject parcel, which is mostly grassed. No known endangered species was observed within the site or surrounding parcels. This land type is used for pineapple, sugar cane, pasture lands or home sites.

Wildlife within the subject parcel's vicinity are mainly birds such as doves, cardinals, mynahs, and finches. Mammals such as the small Indian Mongoose and mouse rats are common but few on the project site. There are no known endangered or threatened species of wildlife inhabiting the area.

Coastal Water Quality

Marine studies conducted indicate a relatively small inventory of off shore organisms which include algae, sand crabs, sea urchins and fish such as manini, mamao and wrasse. The Paia shoreline is located approximately 3 miles from the project site.

Accordingly to the Department of Health, Chapter 54 "Water Quality Standards," the waters in the Paia area are considered Class A, and are to be preserved. Presently, the runoff from the project site flows to gulch crossing Ike Drive where the existing drainage patterns directs the flow to ocean. Initially, during project construction, coastal waters may be impacted due to increased erosion of exposed areas according to County of Maui construction standards (**BMP**) Best Management Practices and adhere to timely application of landscaping and ground covers to reduce the erosion potential during this phase.

Flood and Tsunami Zone

The subject area parcel is located in an area that is designated as Zone 'C', being areas of minimal flooding. Data was provided by the Flood Insurance Rate Map (FIRM),

effective June 1, 1981, prepared by the Federal Emergency Management Agency, Federal Insurance Administration. The project site is **not located** in an area that is considered as 'Wetlands'.

Drainage

The existing runoff generated on the subject parcel sheets flows in a southeast to northwest direction. The runoff exits the lot and continues along Ike Drive. It is eventually directed into a gulch further the road. A portion of the runoff from the project site also is being directed to several on-site dry wells, that was constructed from the prior new buildings. Please see the attached 'Drainage Report', from previous development. Basically the proposed development will not increase the present runoff. The existing foot print of the dwellings will be the same. There will be **no increase** of runoff due to development for the adjoining and downstream properties and all natural drainage patterns will remain the same. Since there is no change of runoff the development will not alter the environment, due to development.

Roadways

The project site, currently access from Ike Drive which connects to Baldwin Avenue. There is an existing private driveway which connects to Ike Drive to the project site. We are not proposing to do any additional road improvements for this project. Since the buildings are being replaced. There would be no additional traffic being generated after the project is completed.

SIGNIFICANT ADVERSE EFFECT ON THE ENVIRONMENT

IRREVOCABLE COMMITMENT

The proposed project will not have a major impact scenic views of the ocean or any ridge lines in the area. We are following the requirements on height restrictions by the County of Maui. The visual character of the area will have a minimal amount of change. The buildings will be replaced with new dwellings, but the size will remain the same. This project will be compatible with the surrounding land use plans of this area.

Development of the two new dwellings will follow established designed standards to ensure the safe conveyance and discharge of storm runoff.

As previously noted, no significant archaeological or historical sites are known to exist with the project site. Should any archaeological significant artifacts, bones, or other indicators of previously onsite activity be uncovered during the construction phases of development, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

BENEFICIAL USES OF THE ENVIRONMENT

The property is surrounded with buildings of similar use. The South side of the property is open with agricultural lands being used. The North side has open space and not being used. There are no multi-family and commercial developments in this area. To return the site to vacant or open space is not practical from both a social and economic perspective.

GOVERNMENT LONG-TERM ENVIRONMENTAL POLICIES

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

AFFECT THE ECONOMIC OR SOCIAL WELFARE

The proposed project will provide a significant contribution to Maui's future population by providing support services to the Public needs so that we may "live and work in harmony" in a high quality living environment. The proposed project is designed to support the economic and social welfare of the community and will not negatively or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project's development is responding to projected population growth rather than contributing to new population growth.

SECONDARY IMPACTS

Existing and planned commercial/ residential development projects within Maui community will contribute to a future population growth rate that will require expansion of public and private facilities and services. These improvements will become necessary as the overall population grow. However, the proposed project has been designated for Public/ Quasi-Public use in the Paia Community Plan. There will be no increase demand on public facilities and will not cause adverse effect on the existing facilities. In addition, new employment opportunities will generate new sources of direct and indirect revenue for individuals and the County of Maui, by providing both temporary and long term employment opportunities during construction period. Indirect employment in wide range of service related industries will also be created from construction during project development.

NO SIGNIFICANT ADVERSE EFFECTS

The proposed development will replace two existing buildings that are beyond repair. The new buildings will significantly mitigate the visual impact of the development as viewed from outside the site while the overall design will increase the usage of the area. Makai views from the subject property are non-existent, however, they are not significant nor generally available to the public in the property's present restricted condition.

AFFECT RARE, THREATEN OR ENDANGERED SPECIES

No endangered plant or animal species are located within the proposed project site.

STATE PLAN, COUNTY'S GENERAL PLAN, COMMUNITY PLAN

State of Hawaii Land Use

The proposed project is located with the 'Agriculture' district and which is not acceptable, and should be upgraded to the 'Urban' classification. This requirement is for Chapter 205, Hawaii Revised Statues, with the Land Use Commission. Because of the nature of the project, any restriction of use has been waived.

Maui County General Plan

The project follows the policies and objectives of the Maui County General Plan which is based on long term planning. The policies is to have a diversified environment for permissible and harmonious employment for the County of Maui. The objectives is to expand the County of Maui economic base and support groups.

Paia Community Plan

The Paia Community Plan are currently designated as Public/ Quasi-Public classification. Aloha House project follows the current designation for this classification. The community plan follows certain guidelines and standards which reflects the community's feelings on the various projects in this area.

Zoning

The present zoning for this parcel is Interim, with a two story maximum height. The existing zoning is not consistent with the Paia Community Plan. A Special use permit was granted for non-profit projects in this area. The proposed development is to replace two existing dwellings, which previously obtained building permits, from the County of Maui.

DETRIMENTAL TO AIR OR WATER AND NOISE LEVELS

Any possible impact to near shore ecosystems resulting from surface runoff, will be mitigated by the establishment of on-site retention basins during the construction phases of development. After development, the landscaping will be brought back to its original condition, there will be no negative impact to the ecosystem.

ENVIRONMENTALLY SENSITIVE AREAS

Development of the property is compatible with the above criteria since there are not environmentally sensitive areas associated with the project and physical character of the project site which has been previously disturbed by construction of the existing and newly constructed buildings. As such, the property no longer reflects a "natural environment". Shoreline and adjoining parcels will not be impacted by the development.

ALTER NATURAL LAND FORMS

By planning now to address the future needs of the community and the County, the Aloha House project is consistent with the long term plans for the Paia and Maui Community. No views will be completely obstructed or be visually incompatible with the surrounding area.

Due to topographic characteristics of the property, views of the area to be developed are generally not significant although they are visible. The majority of the proposed project will only be visible from Ike Drive and not Baldwin Avenue.

(C) ALTERNATIVES

ALTERNATIVE "A"

Alternative "A" represents the proposed action. This alternative provides for the replacement and construction of the two existing dwellings and associated improvements. The proposed improvements will enhance the existing living conditions.

ALTERNATIVE "B"

Alternative "B" involves constructing the proposed improvements elsewhere on the property. Alternative site locations were considered, however, due to the location of the existing residence and the existing site character, the review and analysis determined that the proposed location of the improvements was the most suitable. The applicant had considered construction of the proposed improvements on another lot, but it would be too costly and the distant location would be a problem.

ALTERNATIVE "C"

Alternative "C" is the no action alternative. The proposed improvements are considered necessary and fulfills the requirements of Aloha House. The new and upgraded living facility will enhance the existing site.

(D) EXISTING SERVICE AND MITIGATING MEASURES

EXISTING WATER SYSTEM

The water service is provided by the Department of Water Supply, County of Maui. A 12" waterline from Department of Water Supply's water tank is extended to the project site. This water line supplies potable water and fire protection to the project site. There is adequate water service for the proposal project. The area does not require an irrigation system based on the high rain fall for this area. There is adequate water for this use and does not require County water.

EXISTING SEWER SYSTEM

The sewer service is provided by an individual waste water system. There are no County Sewer System for this area. The proposed buildings will be using the existing Individual Waste Water System. There are no plans for an additional Septic System.

EXISTING DRAINAGE

The existing run off sheets flows in a South East to North West Direction. The runoff exits off the project site on to Ike Drive and continues on to a gulch. There are existing dry wells located on the project site. There are no major flooding problems located at this site. Please see the attached drainage report.

EXISTING SOLID WASTE DISPOSAL

A Private Disposal company, provides trash removal for Aloha House. The replacement of the two buildings will increase the amount of trash sightly but is considered as a

minor effect.

ELECTRICAL AND TELEPHONE SYSTEM

The project will be using the existing overhead utilities for electrical power and telephone. There are no underground service that is required by the County of Maui.

RECREATIONAL, EDUCATIONAL AND HEALTH CARE FACILITIES

The proposed building replacement will not have an impact on the recreational, educational and health care facilities. The new buildings will provide support for the Aloha House facilities. The improvements will provide additional Health Care services to the community.

(E) IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT

The construction of the proposed improvements would involve the commitment of land, labor, funding and material resources for the proposed action.

There are no other significant irreversible and irretrievable commitments of resources have been identified in connection with the proposed action.

DETERMINATION, FINDINGS AND CONCLUSIONS
DETERMINATION

SIGNIFICANCE CRITERIA

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

A. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The proposed project will not impact scenic views of the ocean or any ridge lines in the area. The visual character of the area will change from older residential dwelling to two new residential buildings which is compatible with the surrounding land use plans of this area. Development of the two new dwellings will follow established design standards to ensure the safe conveyance and discharge of storm runoff.

As previously noted, no significant archaeological or historical sites are known to exist within the project site. Should any archaeological significant artifacts, bones or other indicators of previously onsite activity be uncovered during the construction phases of development, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

B. Curtails the range of beneficial uses of the environment;

Although the subject project is zoned for interim use and the State Classification is 'Agriculture', the parcels adjoining this property is under Public/ Quasi-Public use. To return the site to agricultural use is not practical from both an environmental, social and economic perspective.

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

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

D. Substantially affects the economic or social are of the community or state;

The proposed project will provide a significant contribution to Maui's future population by providing additional resources to "live and work in harmony" in a high quality living environment. The proposed project improvement is designed to support the economic and social welfare of the community and will not negatively or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project's development is responding to projected population growth rather than contributing to new population growth.

E. Substantially affects public health;

Impacts to public health may be affected by air, noise and water quality impacts, however, these will be insignificant or not detectable, especially when weighed against the positive economic, social and quality of life implications associated with the project. Overall, air, noise and traffic impacts will be significantly positive in terms of public health as compared to the "no action" alternative.

F. Involves substantial secondary impacts, such as population changes or effects on public facilities;

Existing and planned commercial/residential development projects within Maui community will contribute to a future population growth rate that will require expansion of public and private facilities and services. These improvements will become necessary as the overall population of growth. However, the proposed project (**building replacement**) will not in itself generate new population growth, but provide needed support of the area's present and future population.

In addition, new employment opportunities will generate new sources of direct and indirect revenue for individuals and the Maui County by providing both temporary and long term employment opportunities during construction period. Indirect employment in a wide range of service related industries will also be created from construction during project development. Long term employment, will be to maintain the new facilities.

G. Involves a substantial degradation of environmental quality;

The proposed development will improve the existing Aloha House facilities. There will be buildings improvements and the addition of some minor landscaping around the building will significantly mitigate the visual impact of the development as viewed from outside the site.

Makai views from the subject property are not available. The proposed building improvements are being completed to replace older uninhabitable dwellings. The new building and improvements, will allow the users to maintain a better environment for rehabilitation.

H. Individually limited but cumulatively has considerable effect on the environment, involves a commitment for larger actions;

By planning now to address the future needs of the community and the State, the Aloha House Improvements is consistent with the long term plans for the Maui community. No views will be obstructed or be visually incompatible with the surrounding area.

I. Substantially affects rare, threatened or endangered species of its habitat;

No endangered plant or animal species are located within the proposed project site.

J. Detrimentally affect air or water quality or ambient noise levels;

Any possible impact to near shore ecosystems resulting from surface runoff, will be mitigated by the establishment of on-site retention basins during the construction phases of development. After development, with the use of the new drainage system, there will be no negative impact to the ecosystem.

K. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as flood plains, tsunami zone, beach erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

Development of the property is compatible with the above criteria since there are not environmentally sensitive areas associated with the project and physical character of the project site which has been previously distributed by construction of the existing buildings. As such, the property no longer reflects a "natural environment". Shoreline and adjoining parcels will not be impacted by the development.

L. Substantially affects scenic vistas and view planes identified in county or state plans or studies;

Due to topographic characteristics of the site and the location of the building area, views of the area to be developed are generally not significant from Baldwin Avenue. The majority of the proposed project will be visible from only Ike Drive access road.

M. Requires substantial energy consumption;

The location of the proposed project is located in Maui's non-profit area. The building improvements or replacement will reduce energy consumption. The existing buildings are old with inefficient plumbing and lighting fixtures. By providing newer electrical and plumbing fixtures the energy consumption would be less than the current use. Construction of the proposed project will not require substantial energy consumption relative to other similar projects.

CONCLUSION:

The project will not result in any adverse environmental impacts. Based on the findings, it is concluded that the proposed action will not result in any significant impacts. An Environmental Impact Statement (EIS) is not required.

Wayne I. Arakaki Engineer, LLC
P.O. BOX 884
Wailuku, Maui, Hawaii 96793

December 15, 2003

Director
Department of Public Works and
Environmental Management
County of Maui
Wailuku, Hawaii 96793

Dear Director,

Re: Drainage for TMK:(2) 2-5-004: 005
Aloha House Building replacement

The existing site is 6.21 acres which is located next to a small gulch that crosses Ike Drive. The parcel slopes at a 3% angle. There are no drainage or erosion problems that can be seen on the project site. Several dry wells have been installed when the new office was built. Also, the project is replacing two existing dwellings with the same. The foot print will remain the same. Based on this, there is no increase of runoff, and there is no adverse impact on adjoining properties. I have attached the previous drainage report for your review.

Please give me a call if you have any questions at (808) 242-5868. Thank you for your help with this matter.

Sincerely your,

Wayne I. Arakaki Engineer, LLC

DRAINAGE REPORT

PREPARED FOR

ALOHA HOUSE

TMK: (2) 2-5-004:005

PREPARED BY:

WAYNE I. ARAKAKI, P. E.
P.O. BOX 884
WAILUKU, HAWAII 96793

JUNE 2, 1997
JUNE 2, 1997 (Revised)

INTRODUCTION

This report has been prepared to evaluate the runoff attributed to the improvements.

PROPOSED PROJECT

A. LOCATION.

The subject parcel is located in the Hamakuapoko section of Makawao. The parcel is situated along Ike Drive and connects to Baldwin Avenue. The entrance of Ike Drive is approximately 4,500 feet northeast of the Haliimaile Road. The project site is approximately 6.215 acres.

B. PROJECT DESCRIPTION.

New structures are planned to be constructed. A dormitory, counseling center and a multi-purpose complex are scheduled to be built. These new building will replace other buildings that will be demolished. Drywells will be installed to accommodate runoff created by the new buildings.

EXISTING CONDITIONS

A. DRAINAGE.

The existing runoff generated on the subject parcel sheet flows in a southeast to northwest direction. The runoff currently exists the lot and continues along Ike Drive. It is eventually diverted into a gulch further down the road.

B. FLOOD AND TSUNAMI ZONE.

According to the Flood Insurance Rate Map (FIRM) effective June 1, 1981, prepared by the Federal Emergency Management Agency, Federal Insurance Administration, the subject parcel is located in Zone C, an area of minimal flooding.

HYDROLOGY CALCULATIONS.

The hydrologic calculations are based on the Drainage Master Plan for the County of Maui, and the Rainfall Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43, U.S. Department of Commerce, Weather Bureau.

Rational Formula Used:

Q = CIA
Q = Rate of flow (cfs)
C = Runoff coefficient
I = Rainfall intensity for a duration equal to the time of concentration (in./hr.)
A = Area (acres)

DETERMINATION OF RUNOFF (EXISTING CONDITION)

RUNOFF COEFFICIENT "C"

Infiltration	Medium	0.07
Relief	Rolling	0.03
Vegetal Cover	Good	0.03
Development Type	Hotel-Apt.	0.45
		0.58

AREA OF DRAINAGE BASIN (6.215 ACRES)

Area	= 6.215 acres
High Elevation	= 960 feet
Low Elevation	= 900 feet
Length	= 650 feet
Slope	= 9.2%

1 hour 50 year rainfall = 2.7 inches

I = 4.6 in./hr.
Q = 0.58 (4.6) (6.215)
Q = 16.6 cfs
1 hour 50 year rainfall

DETERMINATION OF RUNOFF (PROPOSED CONDITION)

RUNOFF COEFFICIENT "C" - (ROOF AREA)

Infiltration	Negligible	0.20
Relief	Rolling	0.03
Vegetal Cover	None	0.07
Development	Hotel - Apt.	0.45
		0.75

AREA OF DRAINAGE BASIN (ROOF AREA)

Area	= 0.17 acres
Elevation High	= 3.5 feet
Elevation Low	= 0 feet
Length	= 38
Slope	= 8%

Rainfall Intensity (in./hr.)

1 hour 50 year rainfall = 2.7 inches
"I" = 7.2 in./hr.

Q = (0.75) (7.2) (0.17)
Q = 0.92 cfs
1 hour 50 year rainfall

EXISTING RUNOFF (ROOF AREA)

EXISTING BUILDINGS (TO BE DEMOLISHED)

Q = (0.75) (7.2) (0.08)
Q = (0.43) cfs

Q = 0.92 cfs - 0.43 cfs

Q = 0.49 cfs Increase

NOTE:

The drywell will absorb the increase of runoff due to development. The total runoff of the proposed building was established at 0.92 cfs. less the demolished building runoff at 0.43 cfs. The increase due to development will be at 0.49 cfs.

CONCLUSION

The increase due to the proposed improvement will be 0.49 cfs. This additional runoff will be retained on the subject parcel and not add to the present drainage pattern.

The additional runoff will be accommodated by the construction of drywells. The runoff, which is the water from the roof tops of the new structures, will be diverted into the drywells.

Therefore, it is my professional opinion that there will be no adverse effect on downstream and adjoining properties.

DESIGN STORAGE:

* 12" PERFORATED DRAIN PIPE Vol. ϕ

$A = \pi r^2 = 3.143(0.5)^2$

$A = 0.786$

$Vol_{pipe} = 40\ FT \times 0.786 = 31.4\ FT^3$

* BALLAST ROCK 43% - VOIDS.

$Vol_{rock} = 4' \times 5' \times 45' = 900\ FT^3$

$= 900\ FT^3 - 31.4\ FT^3 = 868.6\ FT^3$

$868.6 \times 43\% = 373.5\ FT^3$

$373.5\ FT^3 \times 50\% = 186.7\ FT^3$

$186.7\ FT^3_{rock} + 31.4\ FT^3_{pipe} = \underline{218.1\ FT^3}$ ✓

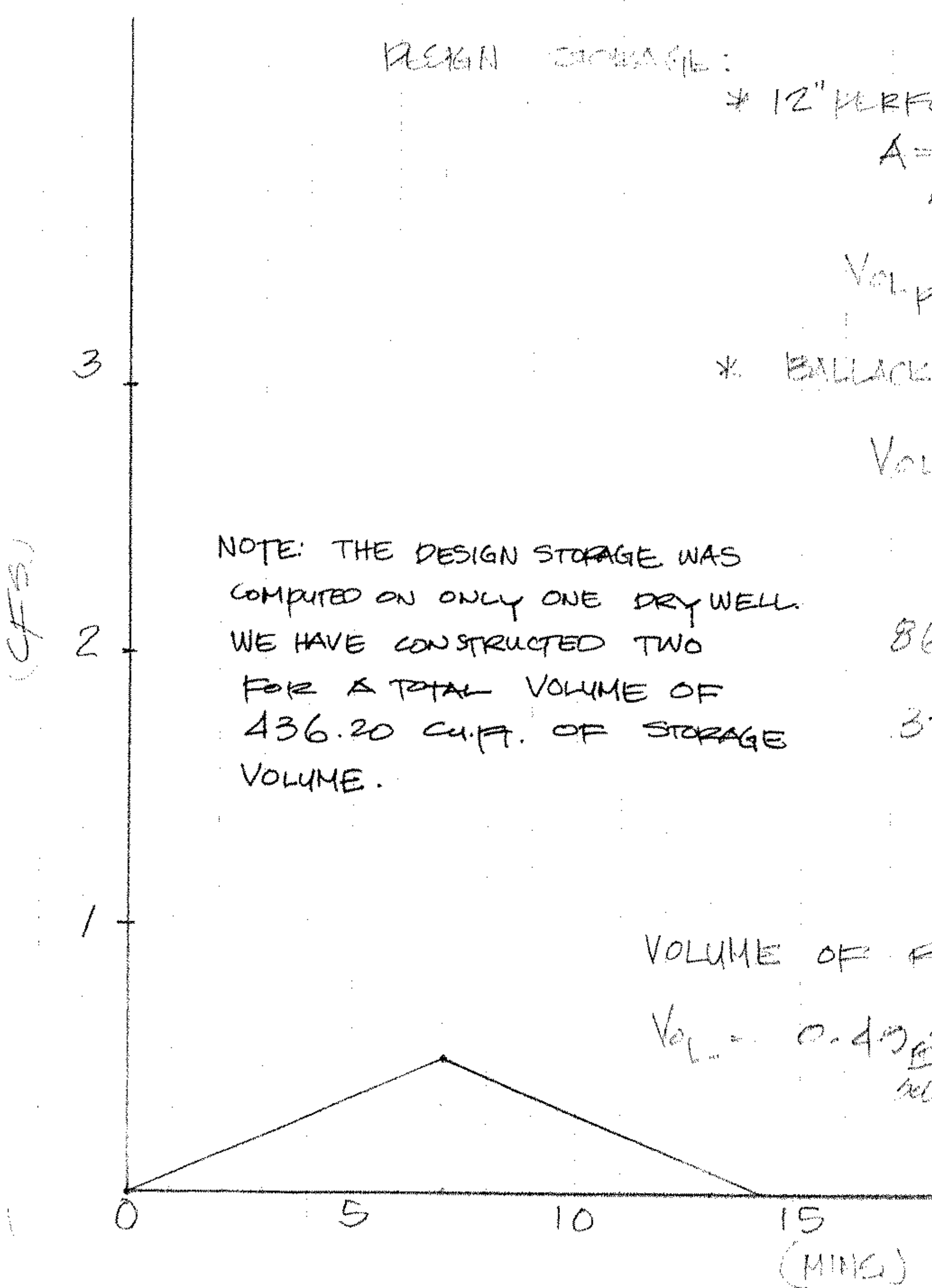
DESIGN VOLUME

NOTE: THE DESIGN STORAGE WAS COMPUTED ON ONLY ONE DRY WELL. WE HAVE CONSTRUCTED TWO FOR A TOTAL VOLUME OF 436.20 CU.FT. OF STORAGE VOLUME.

VOLUME OF RUNOFF 1 HOUR 50-YEAR STORM.

$Vol. = 0.49\ \frac{ft^3}{sec}(7.0)\ mins \times 60\ \frac{secs}{min} = 205.8\ FT^3$

206 FT³ REQ'D STORAGE



STORAGE VOLUME REQ'D.

SOIL EROSION CONTROL REPORT

UNIVERSAL SOIL LOSS EQUATION CALCULATION

Prepared for

Aloha House
Makawao, Maui, Hawaii

PREPARED BY

WAYNE I. ARAKAKI ENGINEER, LLC
P.O. BOX 884
WAILUKU, MAUI, HAWAII 96793

Date: December 2003

HESL ANALYSIS
UNIVERSITY SOIL LOSS EQUATION

These equations compute theoretical soil movement under water erosion conditions. This movement does not necessarily conclude that the soil is lost to the site, only that it is transported an incremental distance by the erosive forces.

HESL EQN E = RKLSCP (Ref. (6), Sec. 24-1.2 (K)

WHERE E = Soil loss in tons/acre/yr.

R = Rainfall for erosion in tons/ac./yr.
K = Soil erodibility factor, no. dimension.
L = Slope length in feet.
S = Slope in percent.
LS = Slope factor for eqn., no dimension.
C = Crop management factor, no dimension.
P = Erosion control practice factor, no dimension.

Factors for equation are developed from ref. (1).

R: (Plate M7-L-22937-4, sht 2 of 2), estimated = 190

K: Soil series from ref. (3), Pl. (Soil factor) = 0.15 Hamakuapoko Silty Clay

L: Slope length in predominant direction of overland runoff.
L factor = 150 ft

Overall elevation change across site.

V factor = (Assume elevation)
S factor = ((4.5 / 150) * 100) = 3%

LS: Ref (1), fig. 2 = .32

C: Ref (1), P. 7 for bare ground
C factor = 1

P: Ref (1) P. 7 for construction sites
P factor = 1

E: = RKLSCP
= (190) (0.15) (.32) (1) (1) = 9.12 tons/acre/yr.

Determine severity rating number.

$$H = (2FT + 3D) AE$$

F	=	1.00 downslope - downstream detriment - moderate
D	=	2.00 coastal water rating factor - class A
A	=	0.30 area of disturbed land (acres)
E	=	9.12 from previous equation
T	=	0.50 years - duration of land disturbance
		[(2) (1.0) (0.50) + 3 (2)] 0.30 (9.12)

$H = 19.2$

Standard severity rating (allowable) 50,000 > 19.2

$$50{,}000 = (2\,FT + 3D)\ A^*E$$

$E = 50{,}000 / 2.1 = 23{,}809$ tons per acre > 9.12

Coastal hazard: class 'A' waters are approx. 3 miles away from the project site.

CONCLUSION:

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

EROSION CONTROL PLAN

The following measures will be taken to control erosion during the site development period (estimated 4 months).

1. Minimize time of construction.

2. Retain existing ground cover until latest date to complete construction.

3. Early construction of drainage control features.

4. Use of temporary cutoff ditches and berms.

5. Install temporary area sprinklers in non-active construction areas when ground cover is removed. Water to be obtained from county water main adjacent to site.

6. Station water truck on site during construction period to provide for continuous sprinkling in active construction zones.

7. Contractor to follow the guidelines as stated in Chapter 20.08 SOIL EROSION AND SEDIMENTATION CONTROL, by the County of Maui. (Best Management Practices or bmps)

The development project is provided with adequate facilities for drainage control and storm water disposal. This together with ultimate ground cover will preclude any appreciable on-site erosion.

REFERENCES

1. Soil Conservation Service (USDA); Guidelines for Use of the Universal Soil Loss Equation in Hawaii. Technical Notes, March 1975. (Revised Draft).

2. County of Maui; (Ord. No. 816), Chapter 24, Soil Erosion and Sedimentation Control, June 13, 1975.

3. Soil Conservation Service (USDA); Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, Aug. 1972.

4. Hawaii Environmental Simulation Laboratory; Guidelines for Data Preparation, Part 1; Universal Soil Loss Equation Undated (Draft).

Water Meter Sizing

Domestic and irrigation water usage

for

Aloha House
Ike Drive
Makawao, Maui, Hawaii

TMK:(2) 2-5-04: 05

Prepared By:
Wayne I. Arakaki Engineer LLC
P.O. Box 884
Wailuku, Maui, Hawaii 96793

Date:
December 26, 2003

Customer or user info:

Aloha House

P.O. Box 791779
Paia, Maui, Hawaii 96779
TMK:(2) 2-5-04: 05

Existing Condition:

There is an existing water meter on the project site. The two existing residential dwelling has been in existence for a long time and will be replaced with two similar buildings. The plumbing fixture values will be that of low-flow.

Approximate water usage: The owners are applying for an Environmental Assessment for two building replacement. The water usage will be the same not increase in the amount. We are submitting a preliminary fixture list for the following plumbing hardware for your review and approval. There are no sprinkler systems on the project site.

Fixture	Domestic Amount	No. of Low-Flow Fixture Units	
Residential Building Fixture Inventory			
Shower stall	4	1.6	6.4
Lavatory sinks	4	0.6	2.4
Laundry Tray	1	1.6	1.6
Toilet (Flush)	4	1.7	6.8
Washing Machine	1	2.0	2.0

Continue on next sheet.

The combined fixture value total is 19.20 units. The existing water meter will be able to suport the existing and future expansion if any for domestic water usage. Please give me a call if you have any questions. (808) 242-5868 or Fax. (808) 2425865.

Submitted by

Wayne I. Arakaki

FIRE FLOW CALCULATIONS

Aloha House

Makawao, Maui, Hawaiii

TMK: (2) 2-5-04: 05

December 28, 2003

Prepared for:

Aloha House
P.O. Box 791779
Paia, Maui, Hawaii 96779

Prepared by

Wayne I. Arakaki Engineer, LLC
P.O. Box 884
Wailuku, Maui, Hawaii 96793

FIRE FLOW

Determine Area: There are two dwellings that will be replaced with new dwellings. The main residential dormitory is a dwelling has an approximate area of 1,470 sq.ft. The second dwelling is 1,079 sq.ft. The fire flow will be based on the larger dwelling with the floor area for 1,470 sq.ft.. Both buildings are single story.

Computations for main dwelling

The Finding: "F"

$$F = 18\ C\ (A)^{0.5}$$

F = the required fire flow gym

C = 1.5 for wood construction

A = the total floor area 1,470 sq. ft.

Adjustments:

1. A 25% reduction will be used for occupancies having a low fire hazard. This building is used for residential purposes.

2. There is no fire sprinklers.

3. An increase value due to exposure will be used:

North Side	=	25% (Existing structure 10 feet away)
East Side	=	0% (Driveway and parking area)
South Side	=	25% (Existing structure 10 feet away, cafeteria)
West Side	=	20% (Housing building 11-30 feet away)

(Information taken by map provided by Architect.)

Total increase value is 70%

CALCULATION "F"

A. $F = 18C(A)^{0.5}$

$C = 1.5$

$A = 1{,}470$ sq. ft.

$= 18(1.5)\,1{,}470^{0.5}$

F = 1,035 round to the nearest 250 use 1,000.

B. Less 25% for occupancies having a low fire hazard.

1,000 x (25%) = 250 GPM

1,000 - 250 = 750 GPM

C. Add 70% for building exposure to any structure within 150 feet

750 x (70%) = 525 GPM

D. Adjustments for fire flow.

NFF = 750 + 525 = 1,275 GPM

Rounding to the nearest 250 GPM, use 1,250 GPM.

The fire protection map shows that there is three fire hydrants located near the project site. There is a 12" D.I. waterline supplying water to Fire Hydrant No. 337 and a 8" waterline supplying water to Fire Hydrant No. 333 and a 6" waterline to Fire Hydrant No. 338. There is adequate fire protection for this project. Please see the attached fire protection map.

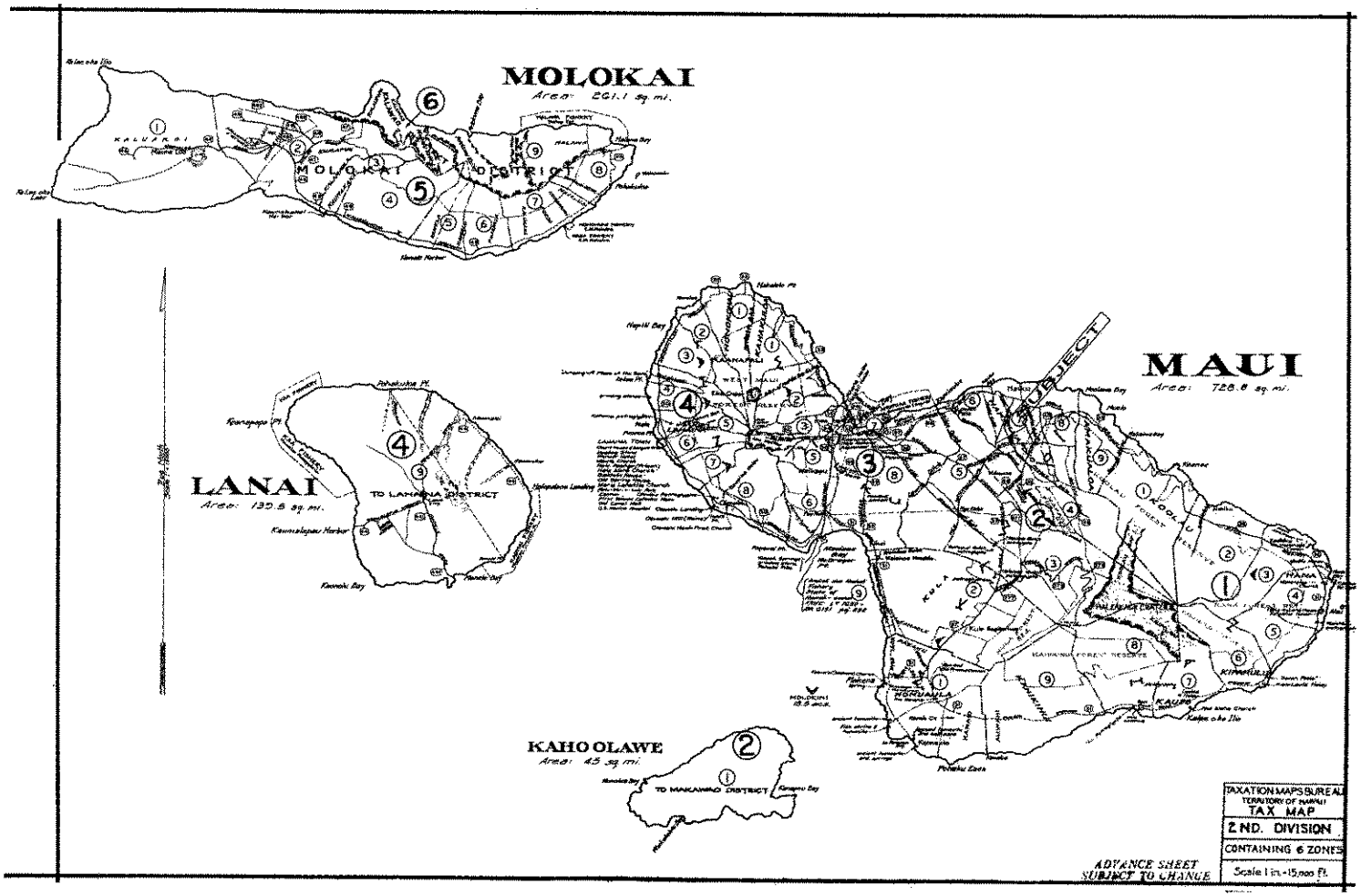

MOLOKAI
Area: 261.1 sq. mi.
MAUI
Area: 728.8 sq. mi.
LANAI
Area: 130.5 sq. mi.
KAHO OLAWE
Area: 45 sq. mi.
SUBJECT
TAXATION MAPS BUREAU
TERRITORY OF HAWAII
TAX MAP
2 ND. DIVISION
CONTAINING 6 ZONES
Scale 1 in. = 15,000 Ft.
ADVANCE SHEET
SUBJECT TO CHANGE

PLATE A1

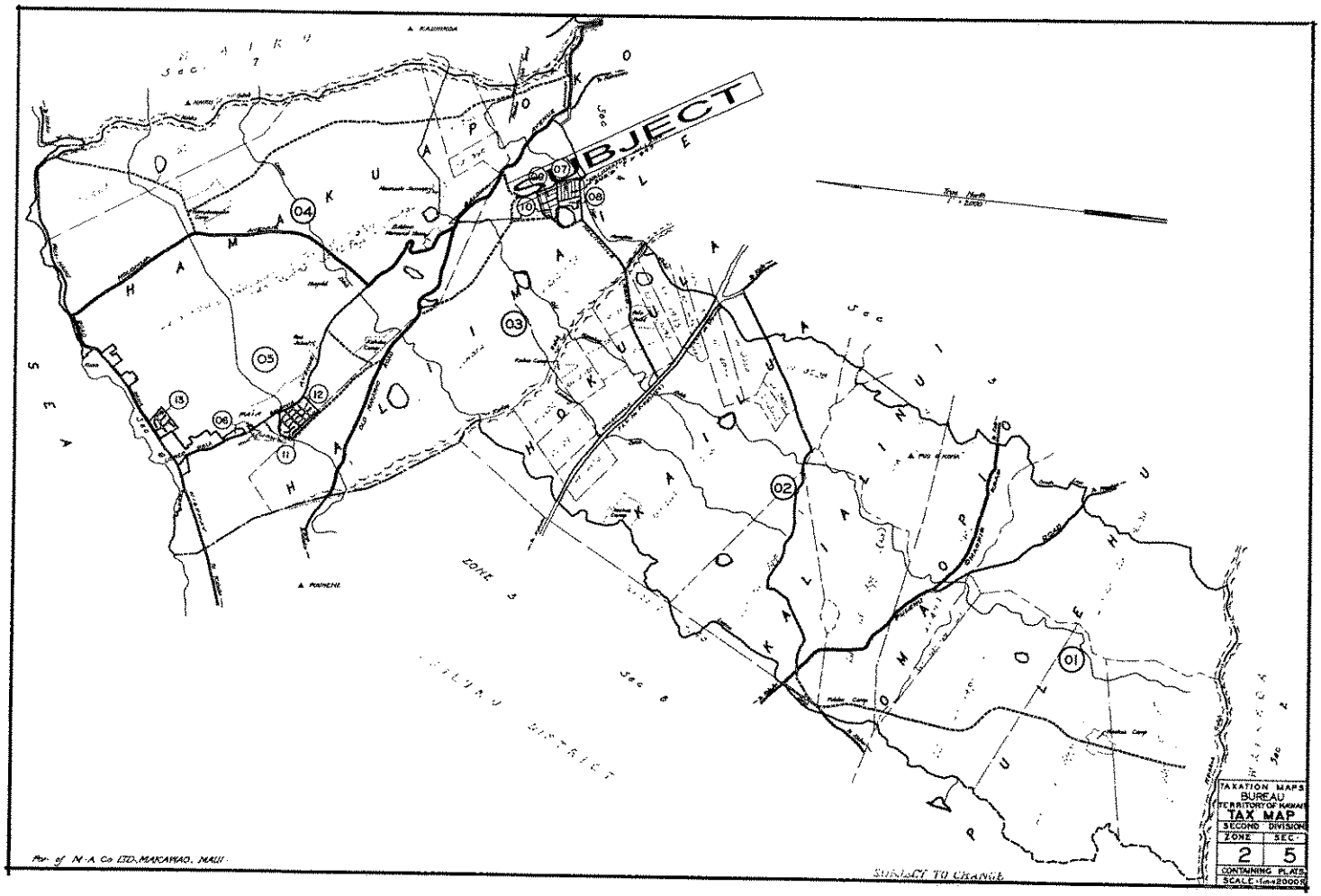
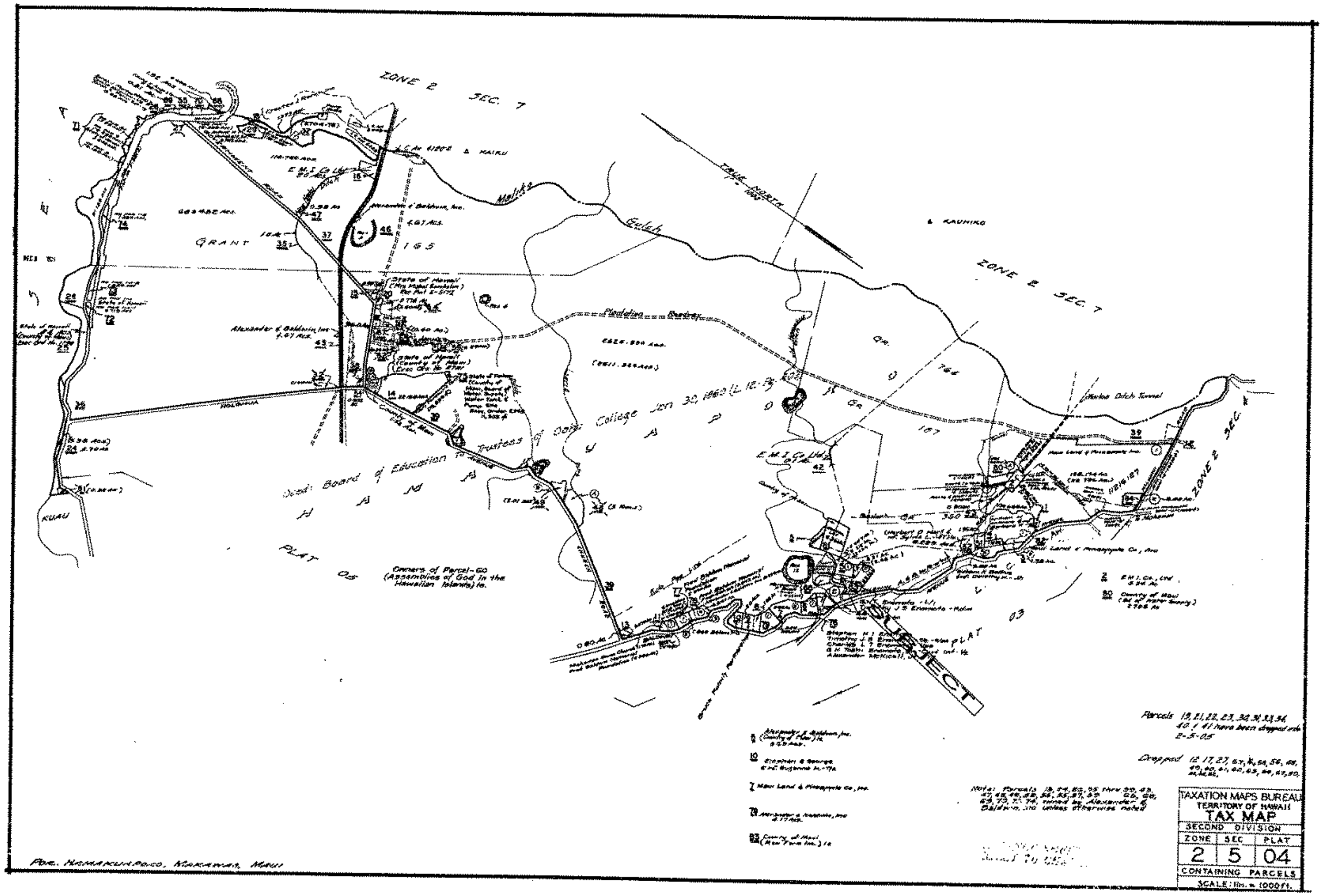
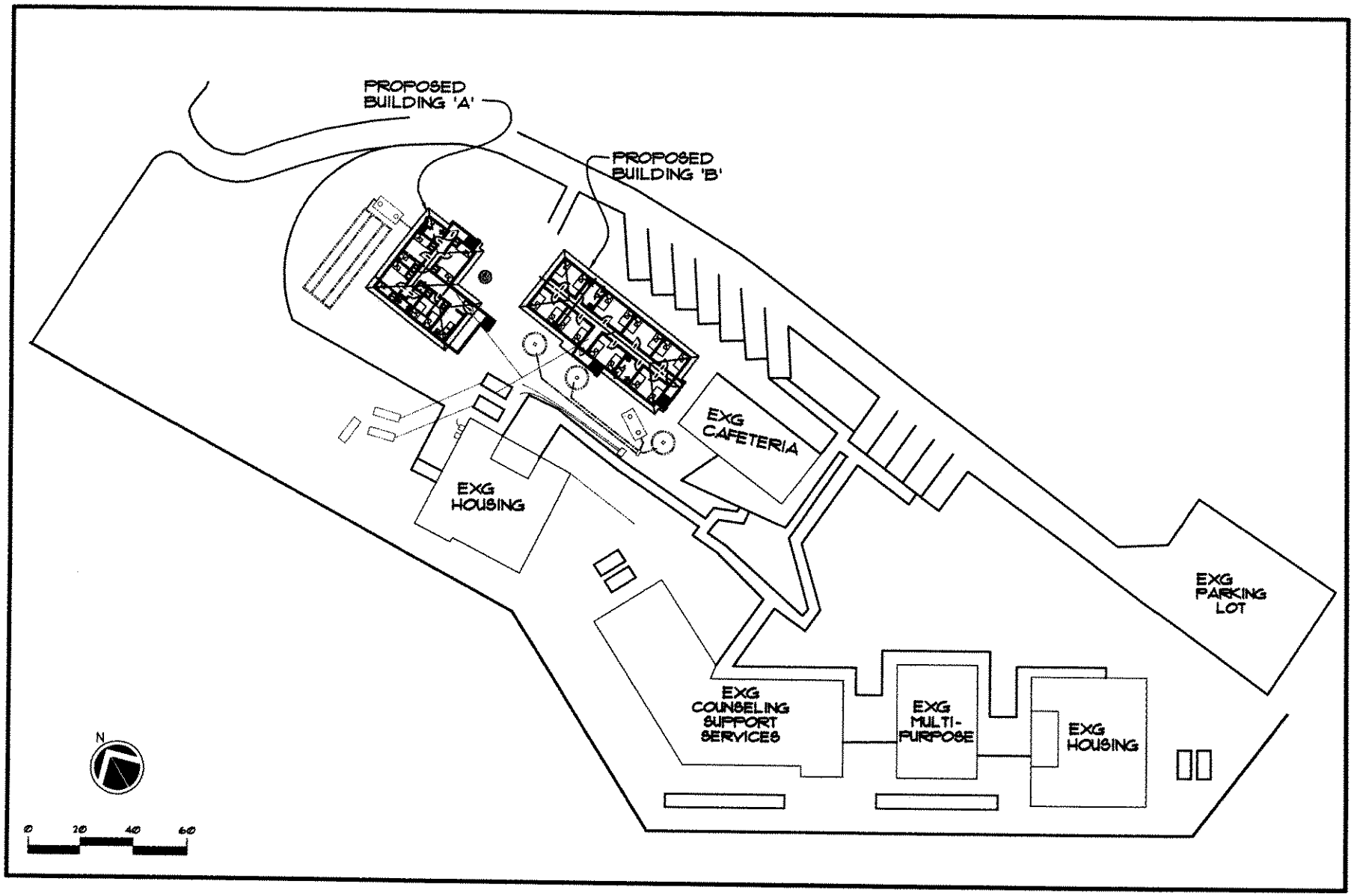

SUBJECT
TAXATION MAPS
BUREAU
TERRITORY OF HAWAII
TAX MAP
SECOND DIVISION
ZONE 2
SEC. 5
SCALE 1 in = 2000 ft
SUBJECT TO CHANGE

PLATE A2



ZONE 2 SEC. 7
TRUE NORTH
Maliko Gulch
GRANT 165
SUBJECT
PLAT 03
PLAT 05
Ocean
KUAU
Taxation Maps Bureau
Territory of Hawaii
TAX MAP
SECOND DIVISION
ZONE 2 SEC. 5 PLAT 04
CONTAINING PARCELS
Por. Hamakuapoko, Makawao, Maui

PLATE A3



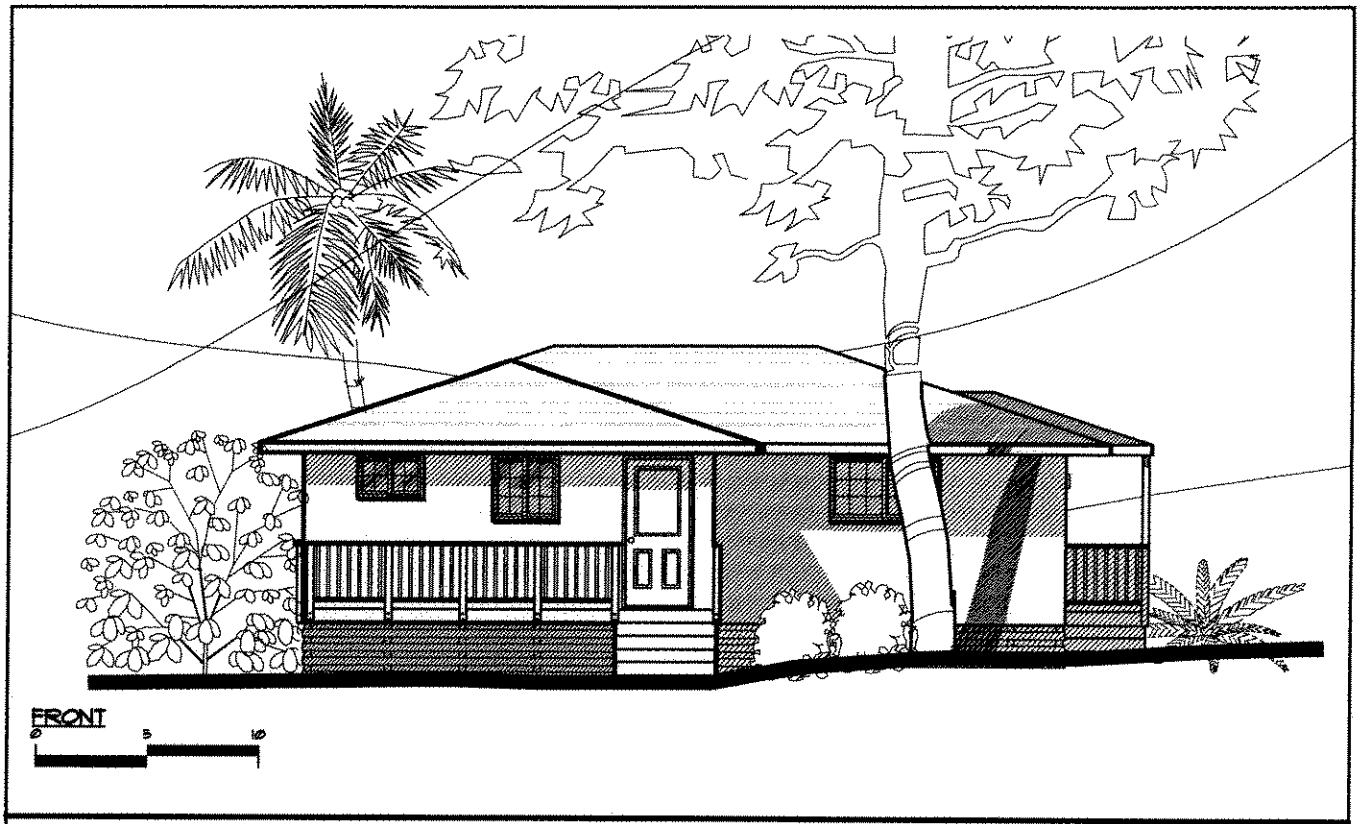
ALOHA HOUSE

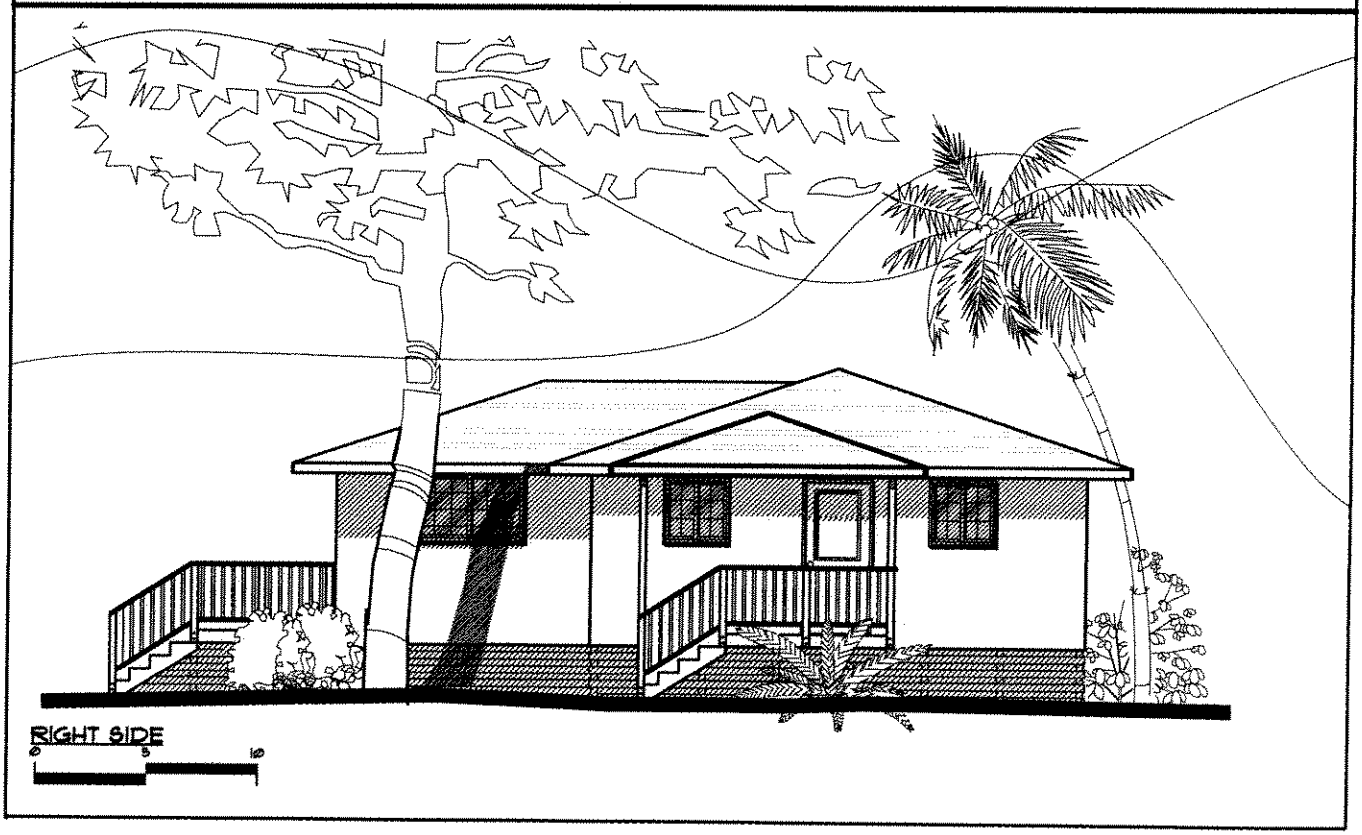
PROPOSED SITE PLAN 11-18-03

R. HARTMAN ARCHITECT LLC
A Limited Liability Company

200 Kalepa Place, 201
Kahului, Maui, Hawaii 96732
808-873-8575

PLATE B



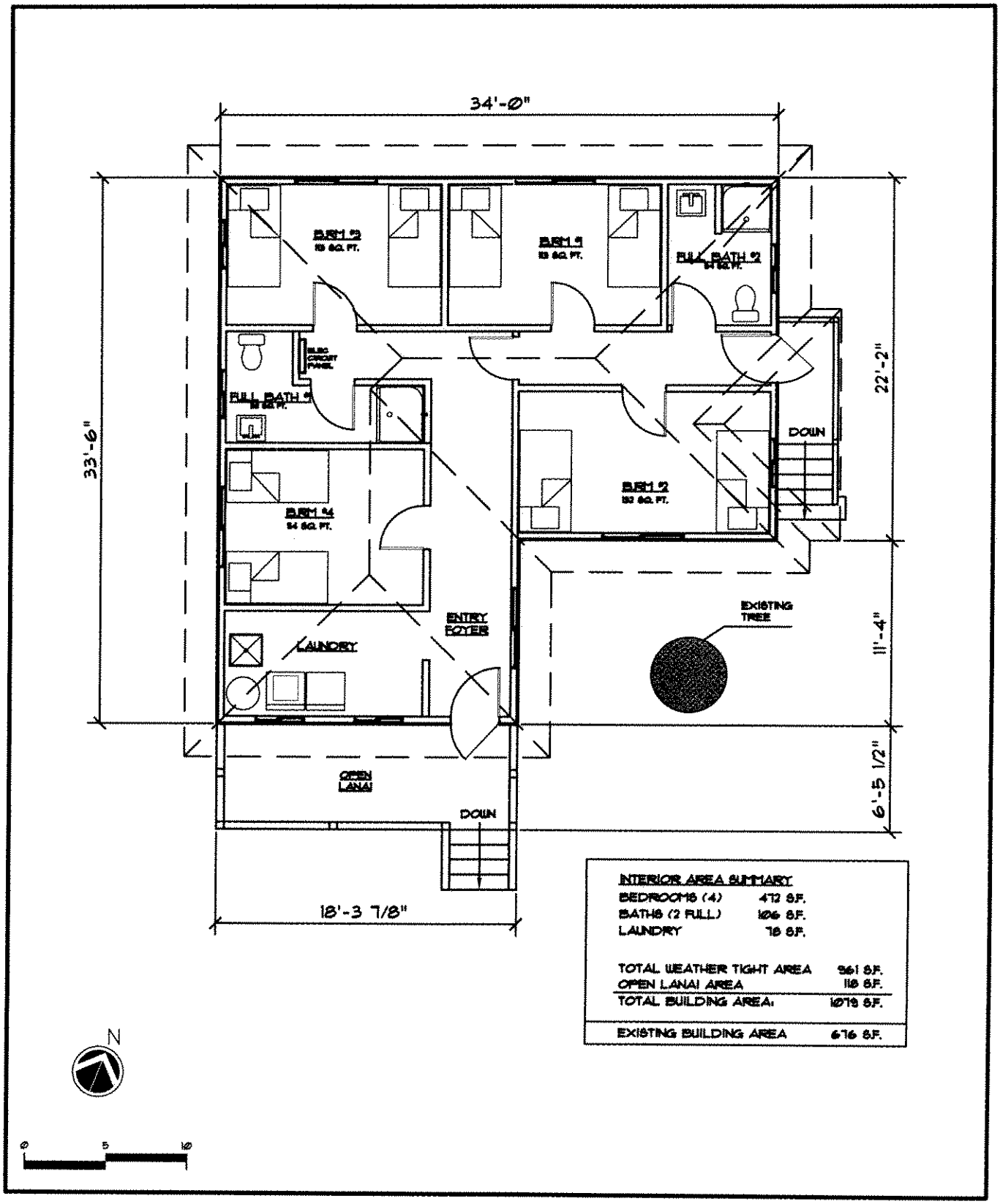


ALOHA HOUSE

BUILDING 'A' PROPOSED ELEVATIONS 11-18-03

R. HARTMAN ARCHITECT LLC
A Limited Liability Company

200 Kalepa Place, 201
Kahului, Maui, Hawaii 96732
808-873-8575



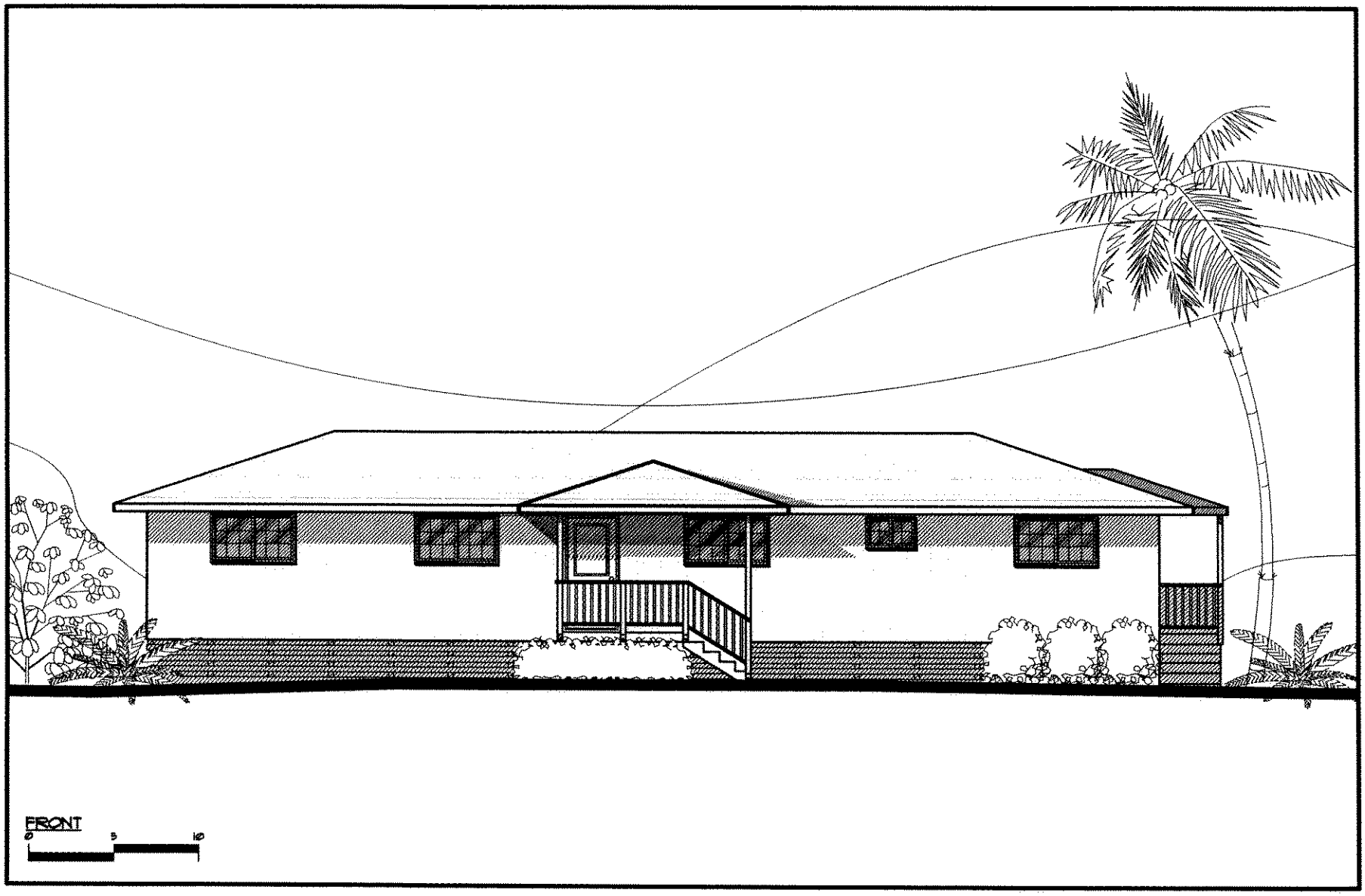
INTERIOR AREA SUMMARY	
BEDROOMS (4)	472 S.F.
BATHS (2 FULL)	106 S.F.
LAUNDRY	78 S.F.
TOTAL WEATHER TIGHT AREA	961 S.F.
OPEN LANAI AREA	118 S.F.
TOTAL BUILDING AREA:	1079 S.F.
EXISTING BUILDING AREA	676 S.F.

ALOHA HOUSE

BUILDING 'A' PROPOSED ELEVATIONS 11-18-03

R. HARTMAN ARCHITECT LLC
A Limited Liability Company

200 Kalepa Place, 201
Kahului, Maui, Hawaii 96732
808-873-8575

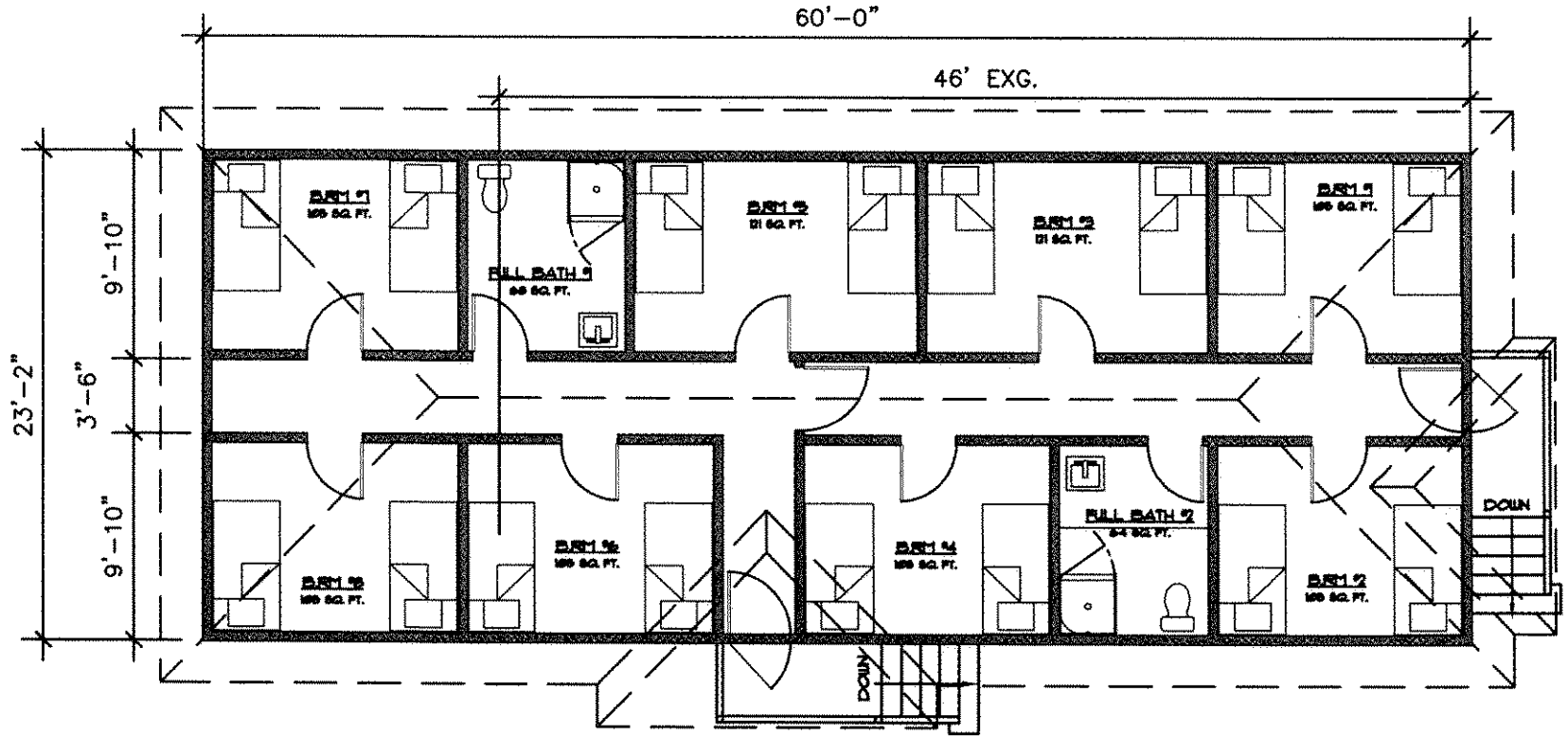


ALOHA HOUSE

BUILDING 'B' PROPOSED ELEVATIONS 11-18-03

R. HARTMAN
ARCHITECT LLC
A Limited Liability Company

200 Kalepa Place, 201
Kahului, Maui, Hawaii 96732
808-873-8575



INTERIOR AREA SUMMARY	
BEDROOMS (8)	872 S.F.
BATHS (2 FULL)	132 S.F.
TOTAL WEATHER TIGHT AREA	1390 S.F.
OPEN LANAI AREA ??	50 S.F.
TOTAL BUILDING AREA:	1440 S.F.
EXISTING BUILDING AREA	1020 S.F.

N

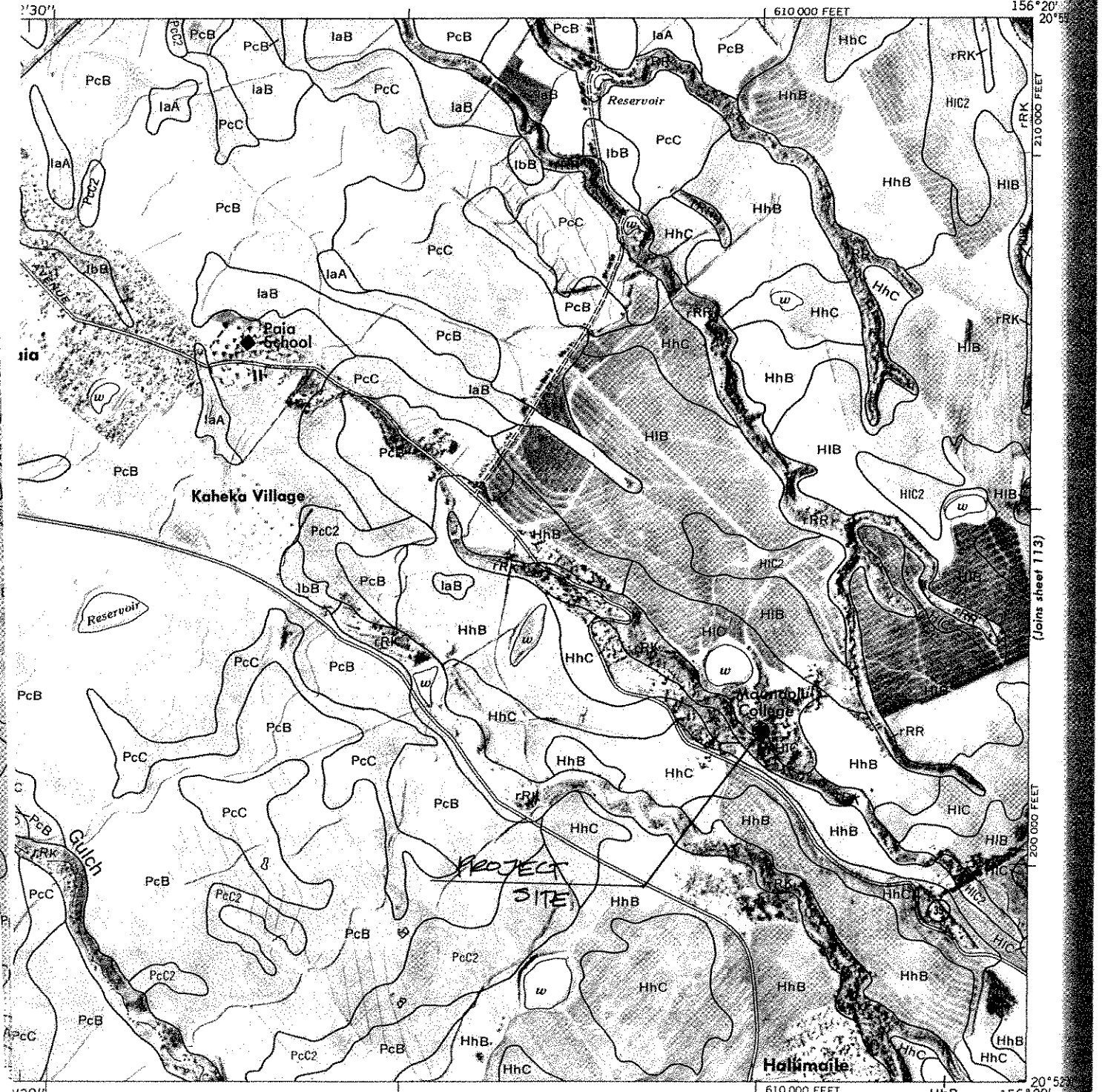
0 5 10

ALOHA HOUSE

BUILDING 'B' PROPOSED FLOORPLAN 11-18-03

R. HARTMAN ARCHITECT LLC
A Limited Liability Company

200 Kalepa Place, 201
Kahului, Maui, Hawaii 96732
808-873-8575



SOIL CLASSIFICATION MAP
PLATE D

Photobase from 1965 aerial photographs. 5,000-foot grid ticks based on Hawaiian plane coordinate system, zone 2. Old Hawaiian datum.

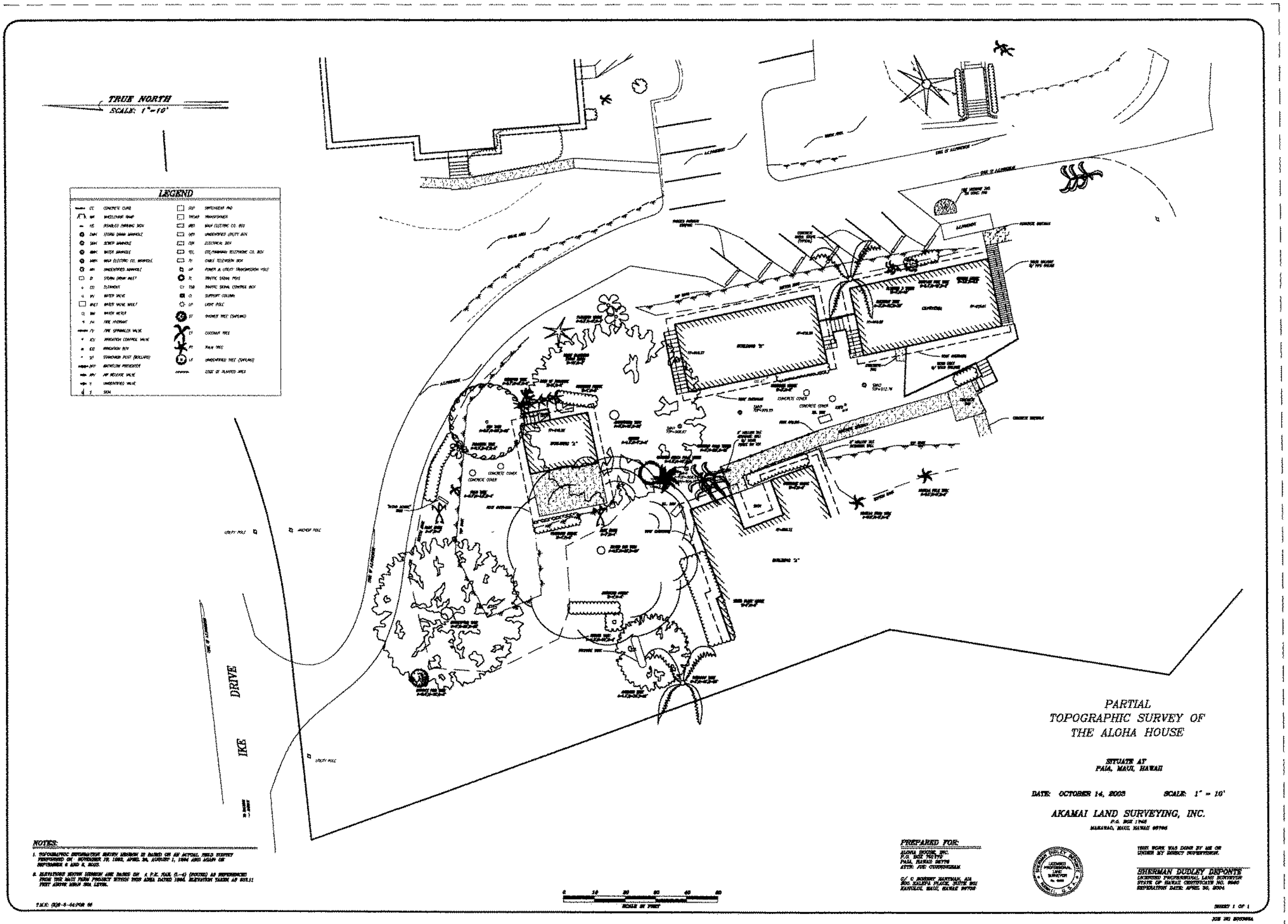
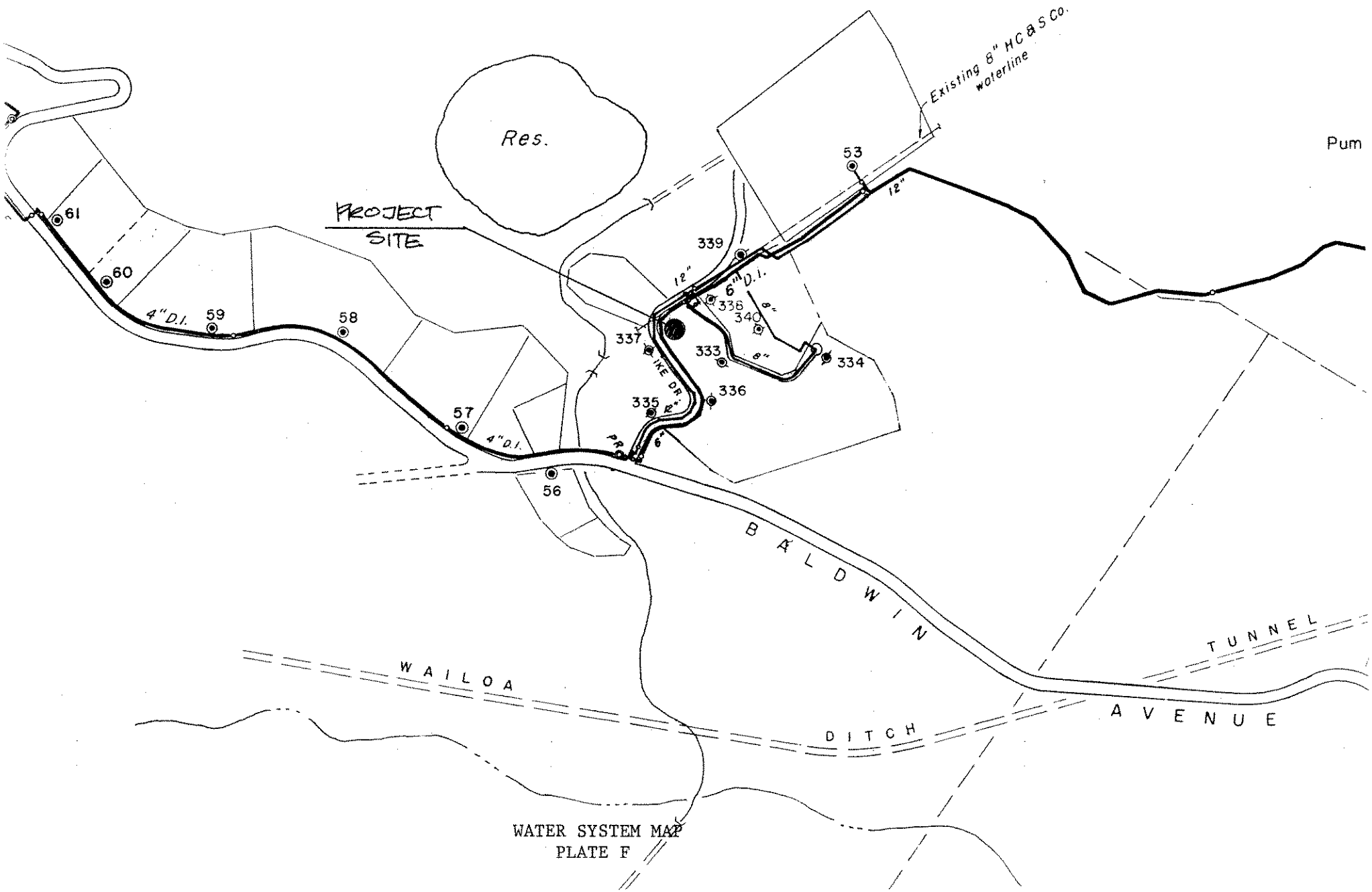
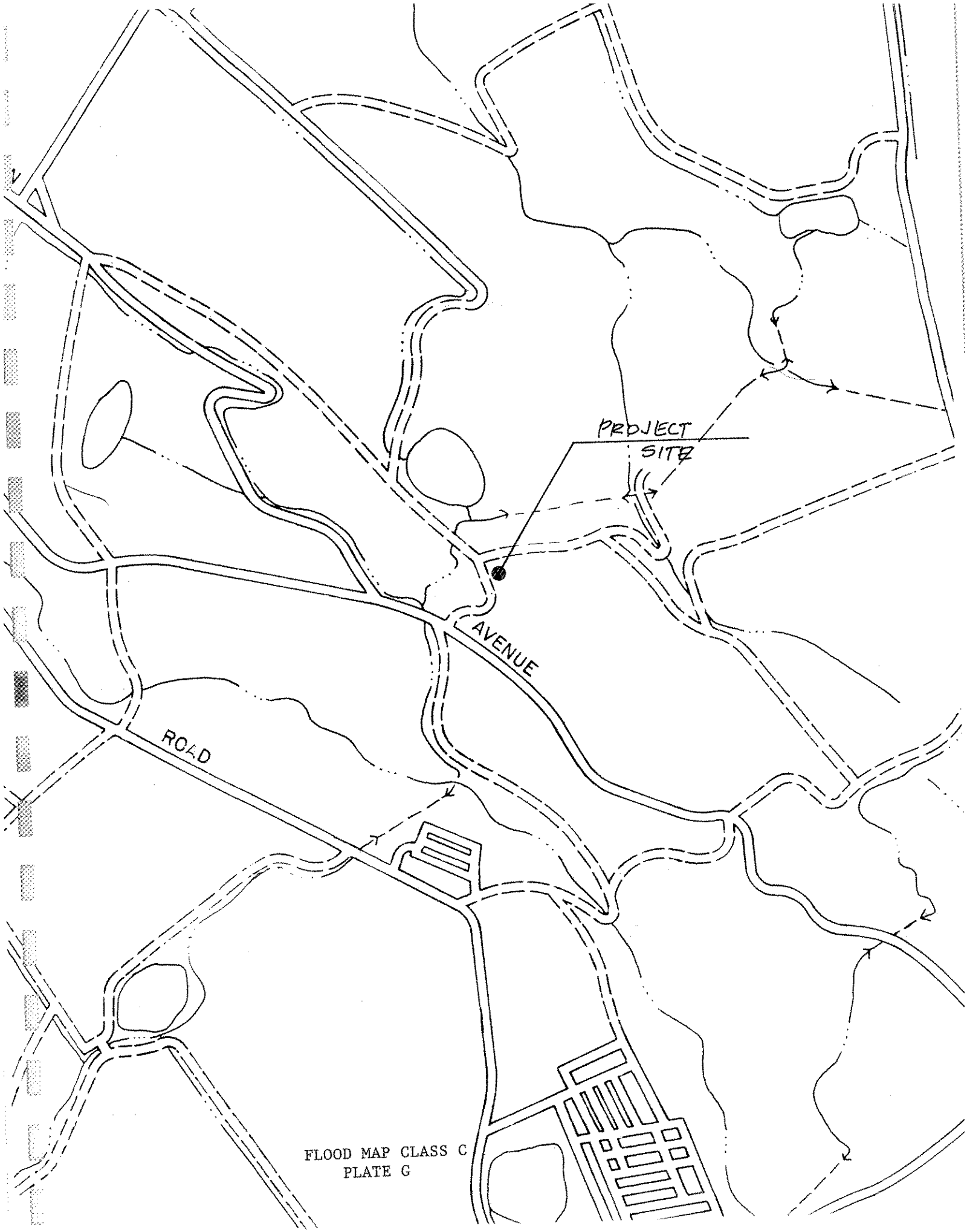

TRUE NORTH
SCALE: 1"=10'
LEGEND
IKE DRIVE
NOTES:
PARTIAL
TOPOGRAPHIC SURVEY OF
THE ALOHA HOUSE
SITUATE AT
PAIA, MAUI, HAWAII
DATE: OCTOBER 14, 2005
SCALE: 1" = 10'
AKAMAI LAND SURVEYING, INC.
PREPARED FOR:
SHERMAN DUDLEY DEPONTE
SCALE IN FEET

PLATE E



WATER SYSTEM MAP
PLATE F



FLOOD MAP CLASS C
PLATE G

ZONING FACT SHEET

USE ZONES	LOT AREA	LOT WIDTH	BLD'G. HT.	YARD SPACING			% LOT COVERAGE	FLOOR AREA RATIO
				FRONT	REAR	SIDE		
R-1 RESIDENTIAL	6,000 SF	60 FT	2 STORIES 30 FEET	15 FEET	1 STORY / 6 FEET 2 STORY / 10 FEET			
R-2 RESIDENTIAL	7,500 SF	65 FT	2 STORIES 30 FEET	15 FEET	1 STORY / 6 FEET 2 STORY / 10 FEET			
R-3 RESIDENTIAL	10,000 SF	70 SF	2 STORIES 30 FEET	15 FEET	1 STORY / 6 FEET 2 STORY / 10 FEET			
A-1 APARTMENT	10,000 SF	70 FT	2 STORIES 30 FEET	1 & 2 STORIES 15 FT	1 & 2 STORIES 15 FEET	1 & 2 STORIES 10 FEET	25%	LOT SIZE LESS THAN 3AC 50% OTHERS 40%
A-2 APARTMENT	10,000 SF	70 FT	4 STORIES	3 & 4 STORIES 20 FT	3 & 4 STORIES 20 FEET	3 & 4 STORIES 15 FEET	35%	90%
H-1 HOTEL	10,000 SF	LOT FRONTAGE 70 FT	2 STORIES	FRONT & REAR YARDS ½ THE HEIGHT OF THE BUILDING WITH A MINIMUM OF 15 FEET		1&2 STORIES 10 FT	25%	50%
H-M HOTEL	15,000 ST	LOT FRONTAGE 85 FT	6 STORIES			3&4 STORIES 15 FT 5&6 STORIES 20 FT	30%	100%
H-2 HOTEL	20,000 SF	LOT FRONTAGE 100 FT	12 STORIES			7&8 STORIES 25 FT 9-12 STORIES 30 FT	35%	150%
B-R RESORT COMMERCIAL	6,000 SF	60 FT	2 STORIES 35 FEET	15 FEET	NONE	NONE		
B-1 BUSINESS	6,000 SF	LOT FRONTAGE 60 FT	2 STORIES 30 FEET	15 FEET	1 STORY 6 FT 2 STORIES 10 FT	1 STORY 6 FT 2 STORIES 10 FT		
B-2 BUSINESS	6,000 SF	LOT FRONTAGE 60 FT	6 STORIES	NONE EXCEPT WHEN ABUTTING RESIDENTIAL, APARTMENT OR HOTEL DISTRICT THEN SPACING IN ACCORDANCE WITH ABUTTING DISTRICTS**				200%
B-3 BUSINESS	6,000 SF	LOT FRONTAGE 60 FT	12 STORIES					300%
BCT *COUNTRY TOWN	6,000	60 FT	2 STORIES 35 FEET	None (unless specified by adopted design guidelines)	REAR & SIDE none except when side or rear of lot abut districts requiring setback shall be as required in the district.			
M-1 INDUSTRIAL	7,500 SF	65 FT	4 STORIES OR 48 FEET	None if frontage within B or M district. Residential 10ft	REAR & SIDE none except when abutting Agriculture, Residential, Duplex, Apartment or Hotel district then 10ft			
M-2 INDUSTRIAL	10,000	75 FT	6 STORIES	None except 10 ft for street widening if applicable	REAR & SIDE none except when abutting Agriculture, Residential, Duplex, Apartment or Hotel district then 10ft			
AIRPORT	20,000 FT	100 FT	ESTABLISHED BY STATE AIRPORT ZONING BOARD	20 FT	NONE ON B OR M OTHERWISE 10 FEET	NONE IN B OR M OTHERWISE 10 FEET		
INTERIM	6,000 SF	LOT FRONTAGE 60 FT	2 STORIES / 30 FEET	15 FEET	1 STORY 6 FT 2 STORY 10 FT	1 STORY 6 FT 2 STORY 10 FT		
AGRICULTURE	2 ACRES	200 FT	FARM DWELLING 30 FEET; NON-DWELLING 35 FEET PLUS	25 FEET	15 FEET	15 FEET		10 PERCENT OF TOTAL LOT AREA (applies to farm dwellings but not to structures used to support agriculture)
RURAL RU-0.5	½ ACRE	100 FT	30 FEET	25 FEET	15 FEET	15 FEET		
RURAL RU-1	1 ACRE	150 FT	30 FEET	35 FEET	20 FEET	20 FEET		

All shoreline properties are subject to Shoreline Setback Laws

* Except where the side or rear yard abut a lot in any residential, apartment house, or hotel district, the abutting side or rear yard shall be10 feet.

** For apartment, apartment-hotel or hotel uses, spacing shall be in accordance with the requirements of apartment and hotel districts.

*** Provided however, that the height of such building or structure shall not exceed one and one half (1 ½) times the width of the widest street which it fronts.

revised: APRIL 18, 2000

P:\MAA\DOCS\ZONEFACT.SHT