

JOHN WAIHEE
GOVERNOR OF HAWAII



REC STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

'90 AGO 10 12 43
P. O. BOX 621
HONOLULU HAWAII 96809

REF: OCEA: JN

OFC. OF ENVIRONMENTAL
QUALITY CONTROL

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

KEITH W. AHUE
MANABU TAGOMORI
RUSSELL N. FUKUMOTO

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

FILE: KA-6/26/90-2404
DOC.: 8786E

AUG 9 1990

Kalihinai Ridge

MEMORANDUM

TO: Office of Environmental Quality Control

FROM: William W. Paty, Chairperson
Board of Land and Natural Resources

SUBJECT: Document for Publication in the OEQC Bulletin
Environmental Assessment for Conservation District Use
Application KA-2404 for Subdividing approximately 55 acres
TMK: 5-2-2: 10

The above mentioned Chapter 343 Document was reviewed and a negative declaration was declared based upon the environmental assessment provided with the CDUA.

Please feel free to call me or Cathy Tilton of our Office of Conservation and Environmental Affairs, at 8-7837, if you have any questions.

Enclosure

1990-08-23-KA-FA

FILE COPY

ENVIRONMENTAL ASSESSMENT
FOR KALIHIWAI RIDGE - PHASE II SUBDIVISION

TMK: 5-2-02: 10; KILAUEA, KAUAI, HAWAII

LAND USE COMMISSION
STATE OF HAWAII
Oct 15 4 08 PM '90

Prepared for:

KILAUEA AGRONOMICS, INC.
Kilauea, Kauai

Prepared by:

PBR HAWAII
Honolulu, Hawaii

June 1990

ENVIRONMENTAL ASSESSMENT
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ENVIRONMENTAL ASSESSMENT

I. INTRODUCTION

A. Land Owner/Applicant

Kalihiwai Ridge - Phase II is owned by Kilauea Agronomics, Inc., a wholly owned subsidiary of C. Brewer and Company, Limited, and is described as TMK: 5-2-02:10, Kilauea, Kauai, Hawaii (hereinafter referred to as the "Property").

B. Description of Affected Environment

The subject Property is comprised of 952.837 acres, a portion of which is defined by the landowner as Kilauea Agricultural Subdivision Parcel 16 (872.6 acres). Subdivision of this parcel has received tentative approval by the County of Kauai Planning Commission as described in Exhibit V. The subject Property (also described as "Phase II") includes approximately 55 acres which is located adjacent to Kalihiwai Valley within the State Conservation District, Resource Subzone.

Adjoining properties consist of Halelea Forest Reserve to the south, Kalihiwai Valley to the west, an existing agricultural subdivision to the north, and other agricultural lands owned by Kilauea Agronomics, Inc. to the east. A ±248-acre guava orchard, processing plant, office and visitor center are also located north of the subject subdivision. The predominant landforms proximate to the project area include Kalihiwai Reservoir, Kalihiwai Valley and an existing large lot agricultural subdivision. Refer to Figures I, II, and IIIA.

C. Proposed Action and Statement of Objectives

The proposed actions involve: (1) amendment of the State Land Use Conservation District Boundary, and (2) the subdivision of lands within the Kilauea Agriculture Subdivision Parcel 16. Approval of the proposed amendment would reclassify approximately 19 acres of Parcel 16 from Conservation to Agriculture. Approximately 36 acres of the existing 55-acre Conservation District would remain after reclassification. Five of the 28 lots in the subdivision would continue to include portions of the Conservation District.

To reflect the on-site physical properties and proposed land uses of the site, the landowner is proposing subdivision of the 952-acre subject Property into 28 agricultural lots, all of which are to be used primarily for agricultural/residential purposes. These land uses are also proposed for the approximately 19 acres of the proposed subdivision currently located within the State Conservation District along the edge of Kalihiwai Valley. The reclassification of this area within the existing Conservation District reflects its suitability for agricultural purposes as proposed by the Applicant. The proposed action would result in only an additional 2 to 4 farm dwellings to the possible

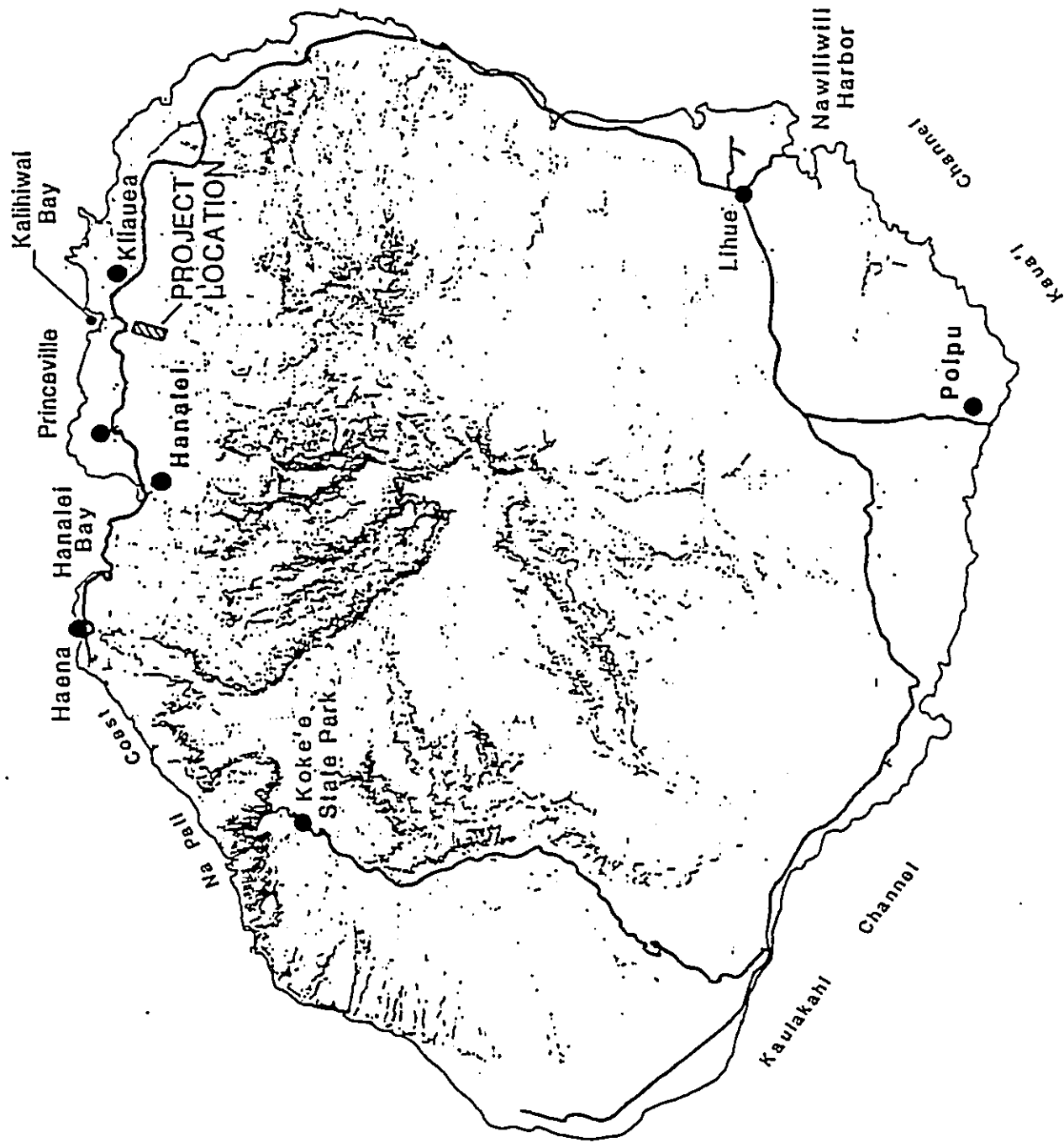
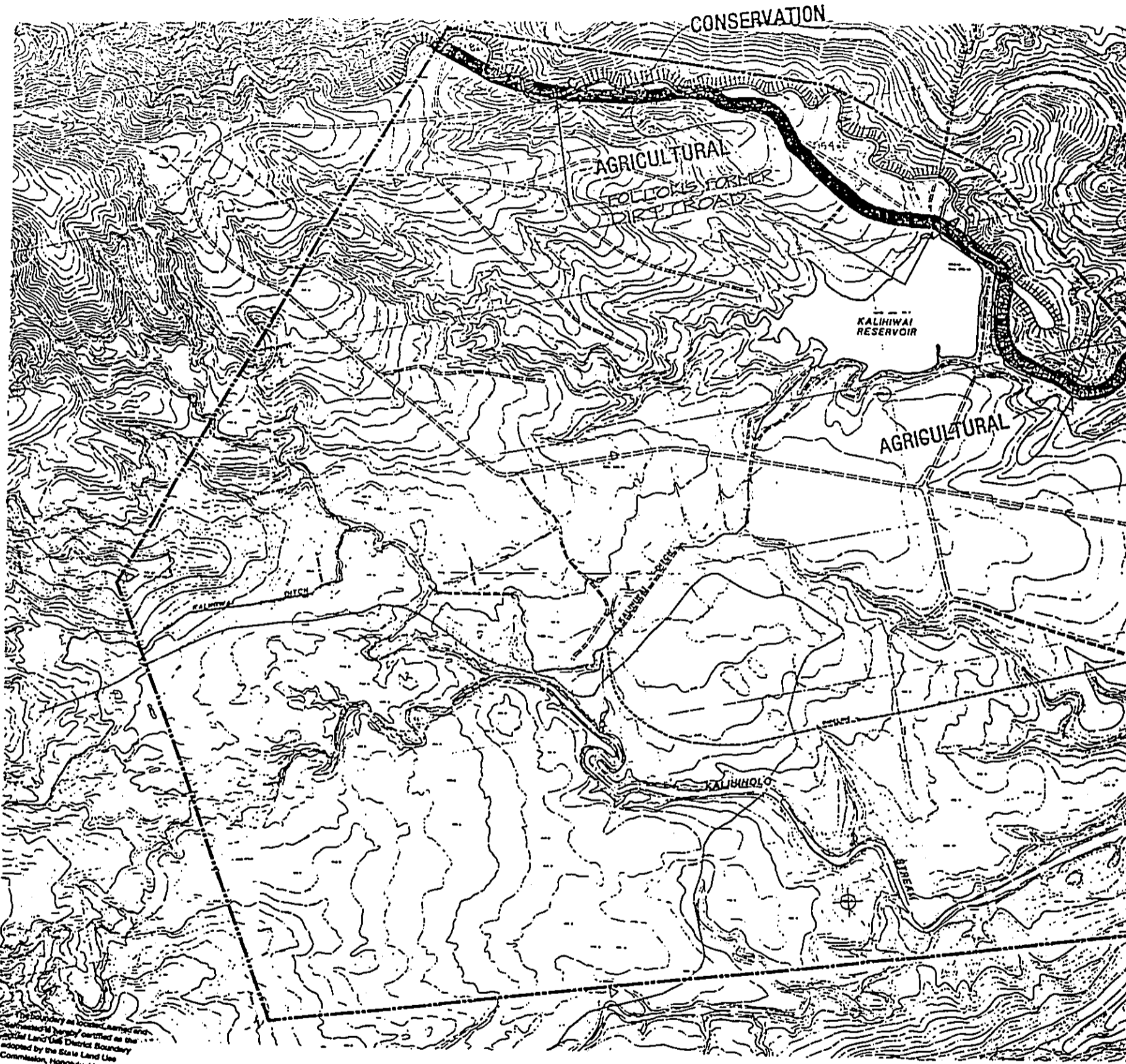


FIGURE I: ISLAND LOCATION MAP
KALIHUWAI RIDGE- PHASE II



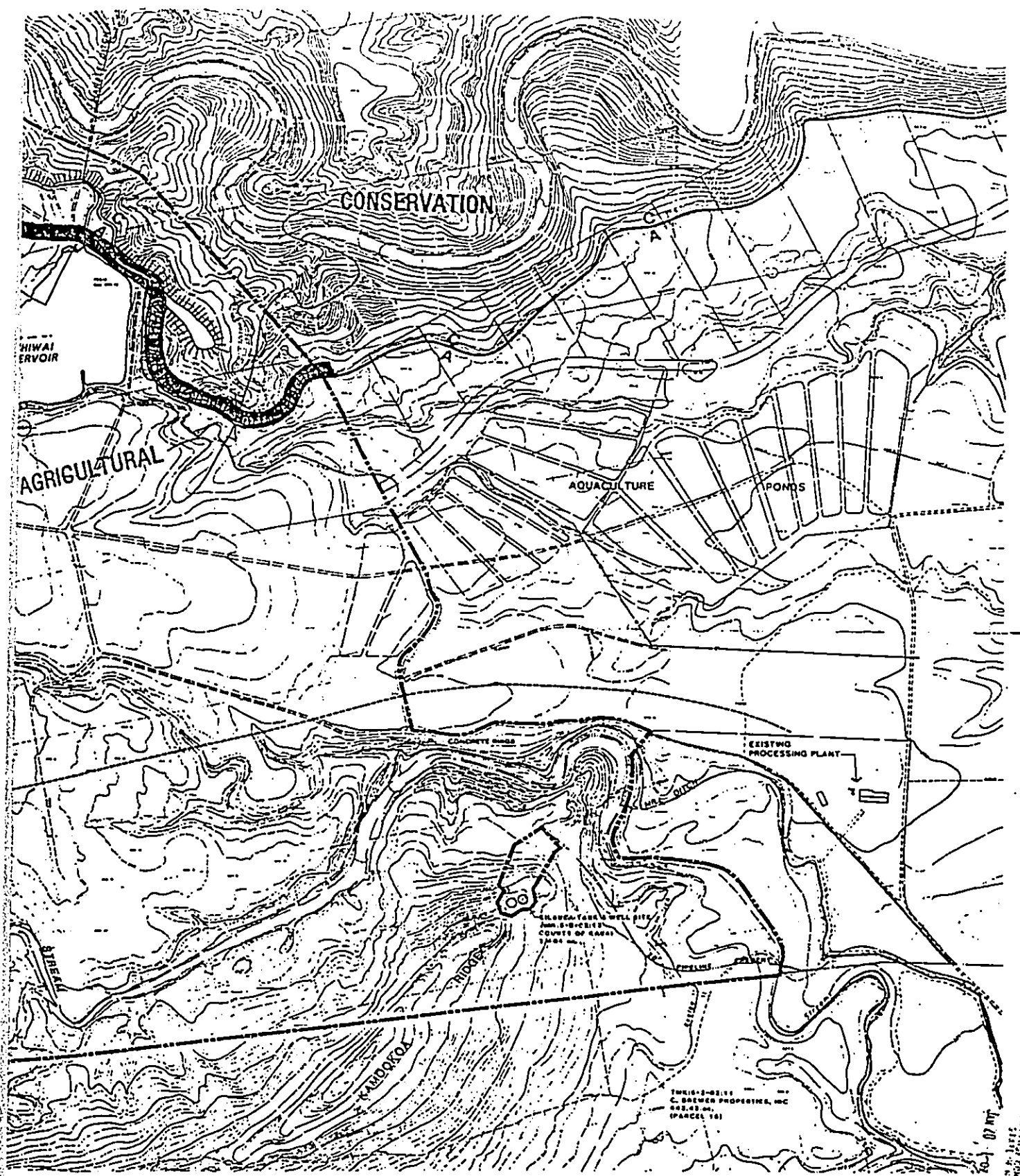
The boundary as located, named and described herein is hereby certified as the official land use district boundary adopted by the State Land Use Commission, Honolulu, Hawaii.

FEB 13 1989
 Date by *[Signature]*
 Enclosure Officer

(PLEASE NOTE REDUCED SCALE)

| LEGEND | |
|--------|---|
| | EDGE OF KALIHUAI RIDGE (>20% SLOPE) |
| | BOUNDARY INTERPRETATION FOR ADJACENT PARCEL |
| | CONSERVATION DISTRICT |

Boundary Interpretation No. 89 051



KALIHAIWAI RIDGE (>20% SLOPE)
 INTERPRETATION FOR ADJACENT PARCEL
 ON DISTRICT



STATE LAND USE
KALIHAIWAI RIDGE - PHASE II

KRAUUA, KAUAI

| | |
|-----------------|-----------------|
| 1. Conservation | 2. Agricultural |
| 3. Aquaculture | 4. Ponds |



C. BREWER PROPERTIES, INC.
 DATE: JUNE 19, 1988
 DRAWN BY: J. J. JAMES
 CHECKED BY: J. J. JAMES
 PROJECT NO.: 88-114-01-07
 PARCEL 101



88-114-01-07
 JAMES & JAMES
 BOUNDARY RUNNERS

85 to 100 permitted in the subdivision under the County's Comprehensive Zoning Ordinance.

The proposed Kalihiwai Ridge - Phase II subdivision would create 28 lots ranging in size from 5 to 25+ acres. Of the 5 lots currently influenced by the Conservation District, the following LUC classifications apply as illustrated in Figure V.

**TABLE 1
EXISTING CONSERVATION DISTRICT LOTS**

| <u>Lot #</u> | <u>Total Acres</u> | <u>Conservation Acres</u> | <u>Agriculture Acres</u> |
|---------------|--------------------|---------------------------|--------------------------|
| Lot 12 | 56.9 | 27.5 | 29.4 |
| Lot 15 | 10.8 | 9.0 | 1.8 |
| Lot 16 | 5.6 | 5.5 | 0.1 |
| Lot 17 | 5.2 | 3.3 | 1.9 |
| <u>Lot 18</u> | <u>36.9</u> | <u>10.0</u> | <u>26.9</u> |
| TOTALS | 115.4 | 55.3 | 60.1 |

To determine the above totals, a boundary interpretation was obtained from the Land Use Commission as illustrated in Figure II. According to the LUC interpretation, the Conservation District boundary was based on the location of Kalihiwai Valley, a former jeep trail that is no longer present, and the makai edge of the Kalihiwai Reservoir. The Conservation District also generally includes slopes in excess of 20 percent.

As herein described, the proposed Land Use District Boundary Amendment would result in the following land use district classifications for the proposed subdivision:

**TABLE 2
PROPOSED CONSERVATION DISTRICT LOTS**

| <u>Lot Number</u> | <u>Added Ag Acres</u> | <u>Total Ag Acres</u> | <u>Remaining Conservation Acres</u> | <u>Total Acres</u> |
|-------------------|-----------------------|-----------------------|-------------------------------------|--------------------|
| Lot 12 | 5.0 | 34.4 | 22.5 | 56.9 |
| Lot 15 | 6.5 | 8.3 | 2.5 | 10.8 |
| Lot 16 | 3.6 | 3.7 | 1.9 | 5.6 |
| Lot 17 | 2.0 | 3.9 | 1.3 | 5.2 |
| <u>Lot 18</u> | <u>2.0</u> | <u>28.9</u> | <u>8.0</u> | <u>36.9</u> |
| TOTALS | 19.1 | 79.2 | 36.2 | 115.4 |

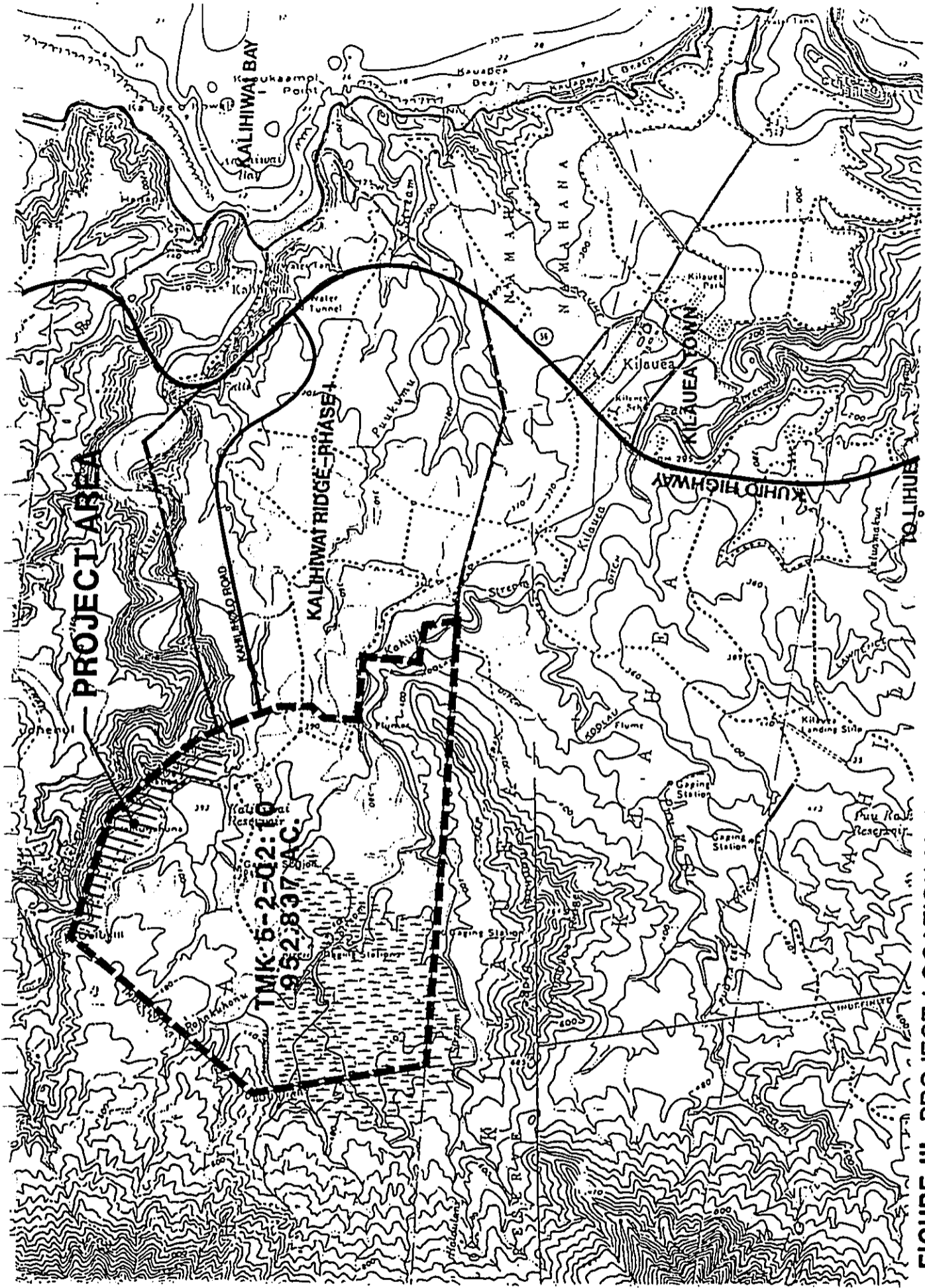


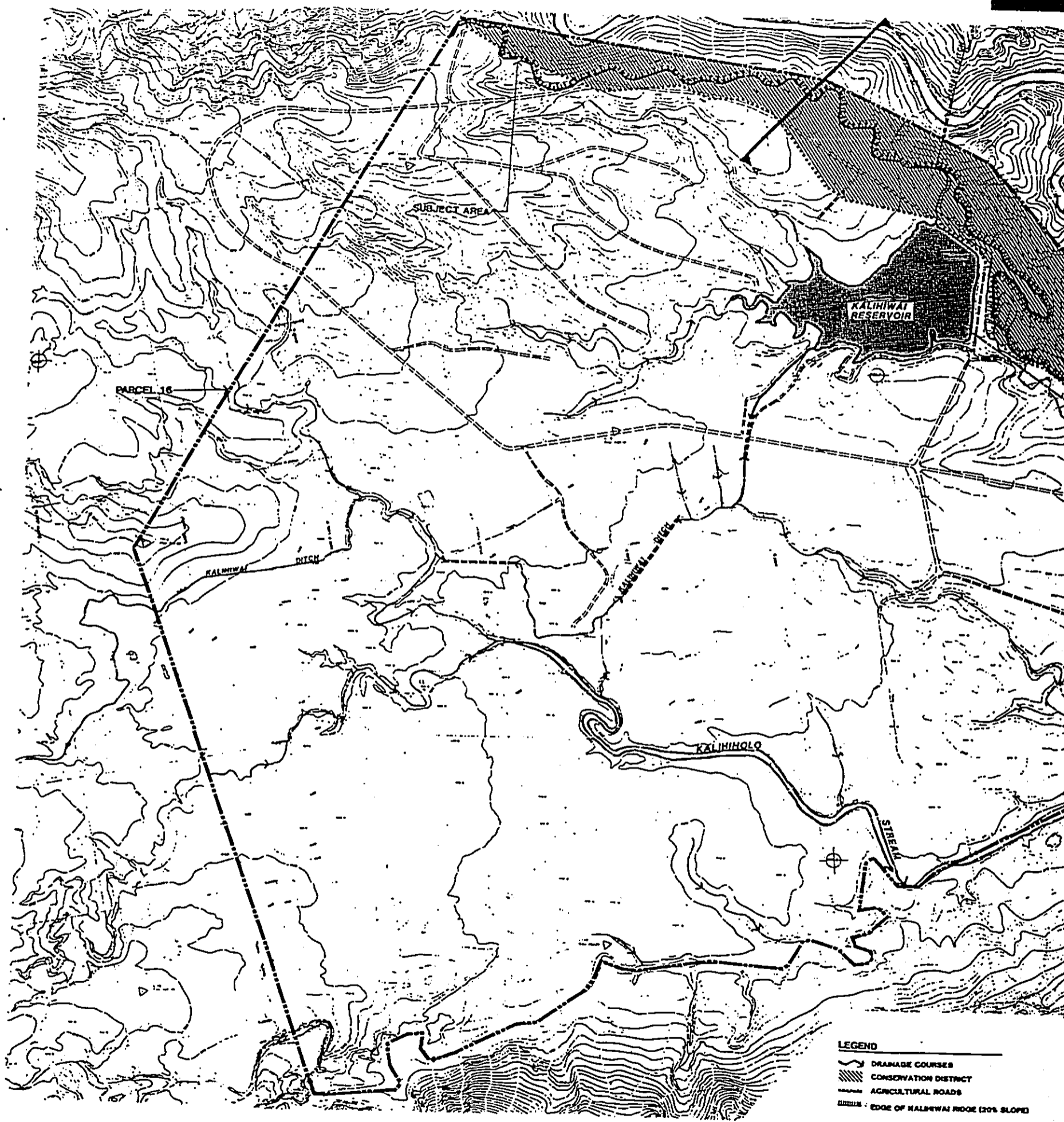
FIGURE III: PROJECT LOCATION MAP
KALIHUAI RIDGE-PHASE II

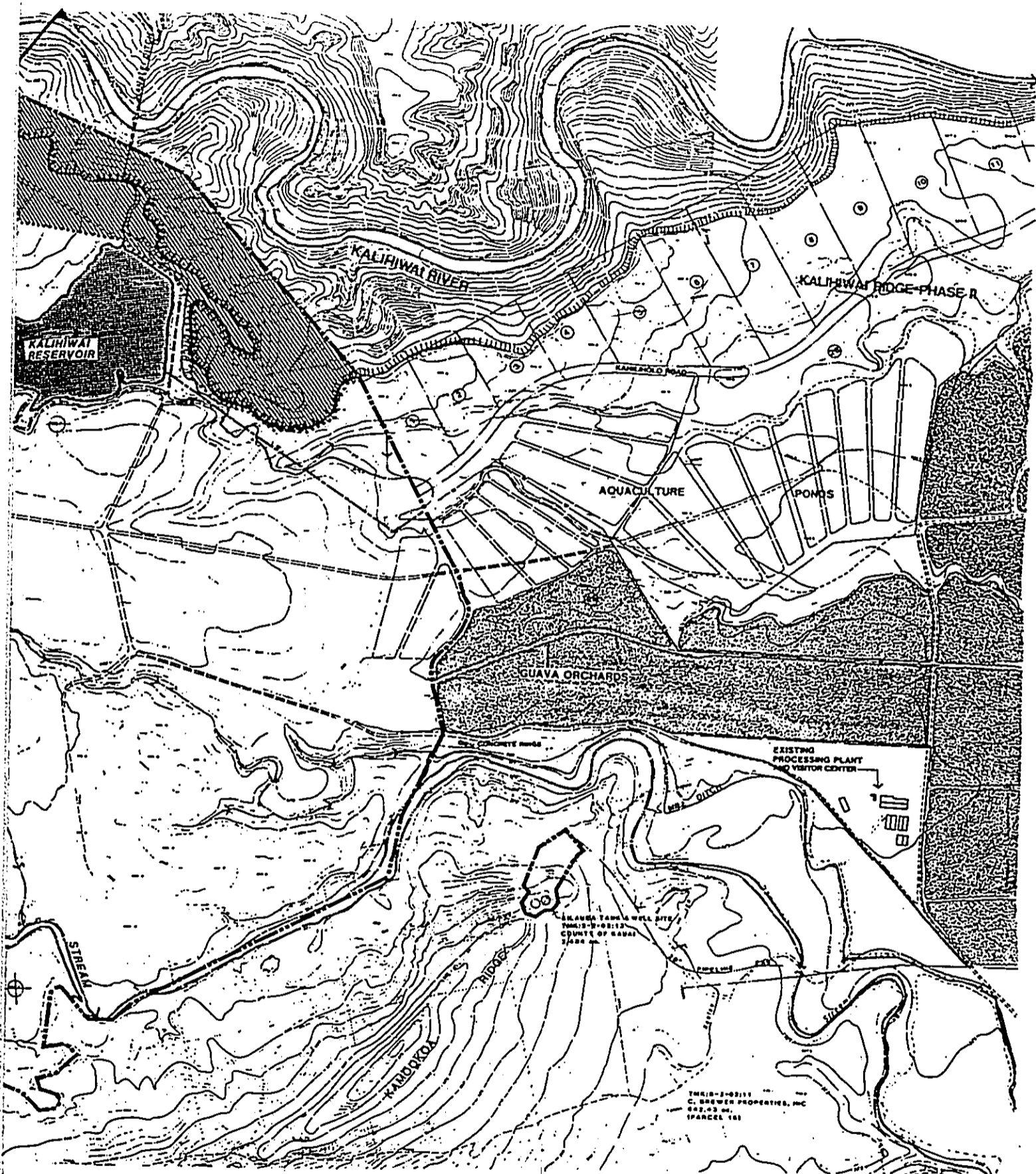
KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.

1/31/90







LEGEND

- DRAINAGE COURSES
- CONSERVATION DISTRICT
- AGRICULTURAL ROADS
- EDGE OF KALIHUAI RIDGE (20% SLOPE)



**FIGURE IIIA: EXISTING CONDITIONS
KALIHUAI RIDGE - PHASE II**

KALUA, KAUAI



KALUA AGRONOMICS, INC.

TMS: 2-0213
622.43 AC.
(PARCEL 10)



Generally, the overall project objectives are as follows:

1. Create additional economic uses and activities (diversified agriculture and/or residential) of areas not suitable and not planned for corporate/large scale agriculture through parcelization and diversification of ownership.
2. Reclassify the Conservation District boundary to reflect the LUC's "Standards for determining 'A' agricultural district boundaries" (Section 15-15-19), and "Standards for determining 'C' conservation district boundaries" (Section 15-15-20) as set forth in the Land Use Commission Administrative Rules, Title 15, Chapter 15.
3. Preserve the remaining 36.2 acres of Conservation District lands through deed restrictions that would limit the uses or enhancements within the Conservation District to: (1) those uses or enhancements consistent with the intent of the Resource Subzone and approved by the grantor, and (2) subject to the required approval of the Board of Land and Natural Resources.

To implement the objectives as set forth above, the Applicant will require applicable deed restrictions contained within the sales contract for the Property. The Conservation District portion of each lot will be defined by a metes and bounds description and a map depicting the restricted area of the Property. These clearly defined use limitations, enforced by deed restrictions, would ensure the long-term implementation of the Resource Subzone objectives as defined by the Board of Land and Natural Resources. The proposed deed restrictions are presented in Appendix B.

D. Regulatory Classification

Implementation of the proposed project will depend upon various State and County approvals. These include: (1) State Land Use District Boundary Amendment, (2) Conservation District Use Permit, and (3) County Subdivision Approval. As previously indicated, the project site is adjacent to existing and proposed agricultural/residential land uses and is comprised of generally vacant open space. No significant negative impacts on the environmental, cultural, recreation, scenic, historic, or other resources of the area are anticipated.

State Land Use (Chapter 205, Hawaii Revised Statutes)

The State Land Use Law regulates the classification and uses of land to accommodate growth and development, and to protect natural resources. As previously described, entitlement actions for the proposed project will include a State Land Use District Boundary Amendment (LUDBA) to reclassify approximately 19 acres of Conservation land into Agriculture. After



PROPO
EXISTI

KALIHUWAI
RESERVOIR

KALIHUWAI
DITCH

KALIHUWAI

KALIHUWAI

S. 29

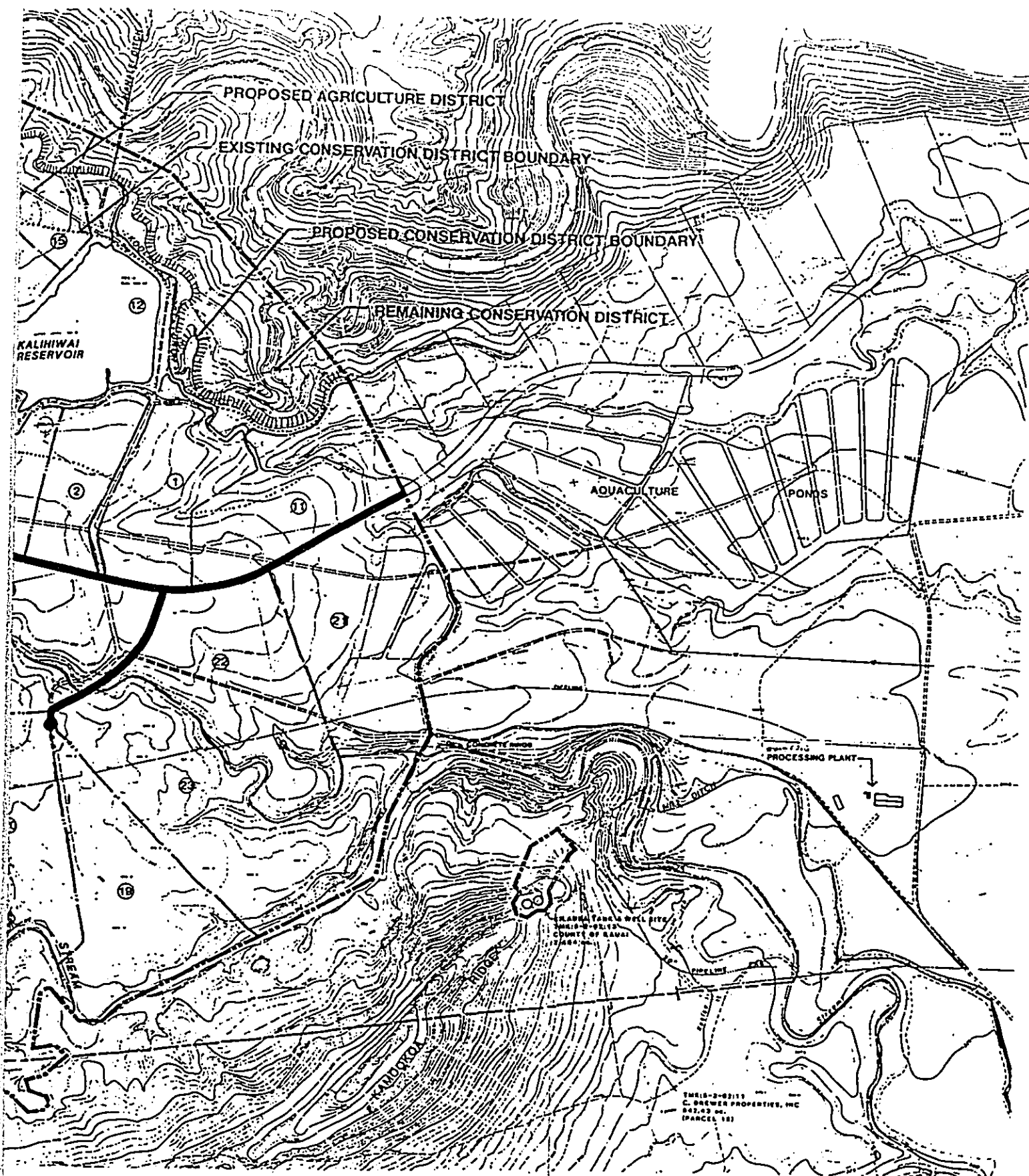


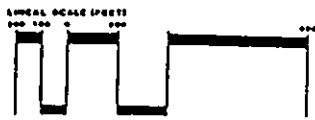
FIGURE III B: PROPOSED RECLASSIFICATION AREA
KALIHAIWAI RIDGE - PHASE II

KALAEVA, KAUAI



AREA SCALE

| | |
|------|------|
| 0 | 1000 |
| 1000 | 2000 |
| 2000 | 3000 |



C. BREWER PROPERTIES, INC.
 TMKIS-2-02113
 C. BREWER PROPERTIES, INC.
 847,02 SQ.
 (PARCEL 10)

DATE: JAN. 20, 1988
 REV. JAN. 20, 1988
 REV.

THIS MAP WAS PREPARED BY THE ENGINEERING
 DIVISION OF THE DEPARTMENT OF LAND AND
 NATURAL RESOURCES OF THE STATE OF HAWAII
 IN ACCORDANCE WITH THE REQUIREMENTS OF
 HAWAIIAN ZONING ACT, CHAPTER 215, HRS.

PBR
 ENGINEERS

reclassification, both Agricultural and Conservation districts will remain, but configured with new boundaries.

Accordingly, the following LUC "Standards for determining 'A' agricultural district boundaries" (Section 15-15-19), and "Standards for determining 'C' conservation district boundaries" (Section 15-15-20) as set forth in the Land Use Commission Administrative Rules, Title 15, Chapter 15, apply to the proposed LUDBA.

In determining the boundaries for the "A" agricultural district, the following standards generally apply:

- (1) Agricultural boundaries may include lands with significant potential for grazing or for other agricultural uses,

Response: The subject agricultural subdivision contains soils suitable for grazing and diversified agricultural uses, but not large scale soil based agriculture. Significant portions of these lands are currently located within the Conservation District. The proposed subdivision will facilitate the establishment of economically viable agriculture on land suitable for this purpose.

- (2) It may include lands surrounded by or contiguous to agricultural lands and which are not suited to agricultural and ancillary activities by reason of topography, soils, and other related characteristics,

Response: The subject reclassification area and proposed subdivision is adjacent to the State Conservation District (with lands not suitable for agriculture), and contiguous to other lands within the Agricultural District much more suitable for agricultural production.

- (3) Lands in intensive agricultural use for two years prior to date of filing of a petition . . . shall not be taken out of this district.

Response: The subject Property has not been utilized for intensive agriculture for many years. The site is essentially comprised of abandoned sugar cane fields and scrub vegetation. Additionally, no endangered plant species are known to exist on the subject Property. Providing an alternative to large scale corporate agriculture will facilitate the use of the subject Property for intensive agriculture.

In determining the boundaries for the "C" conservation district, the following standards generally apply:

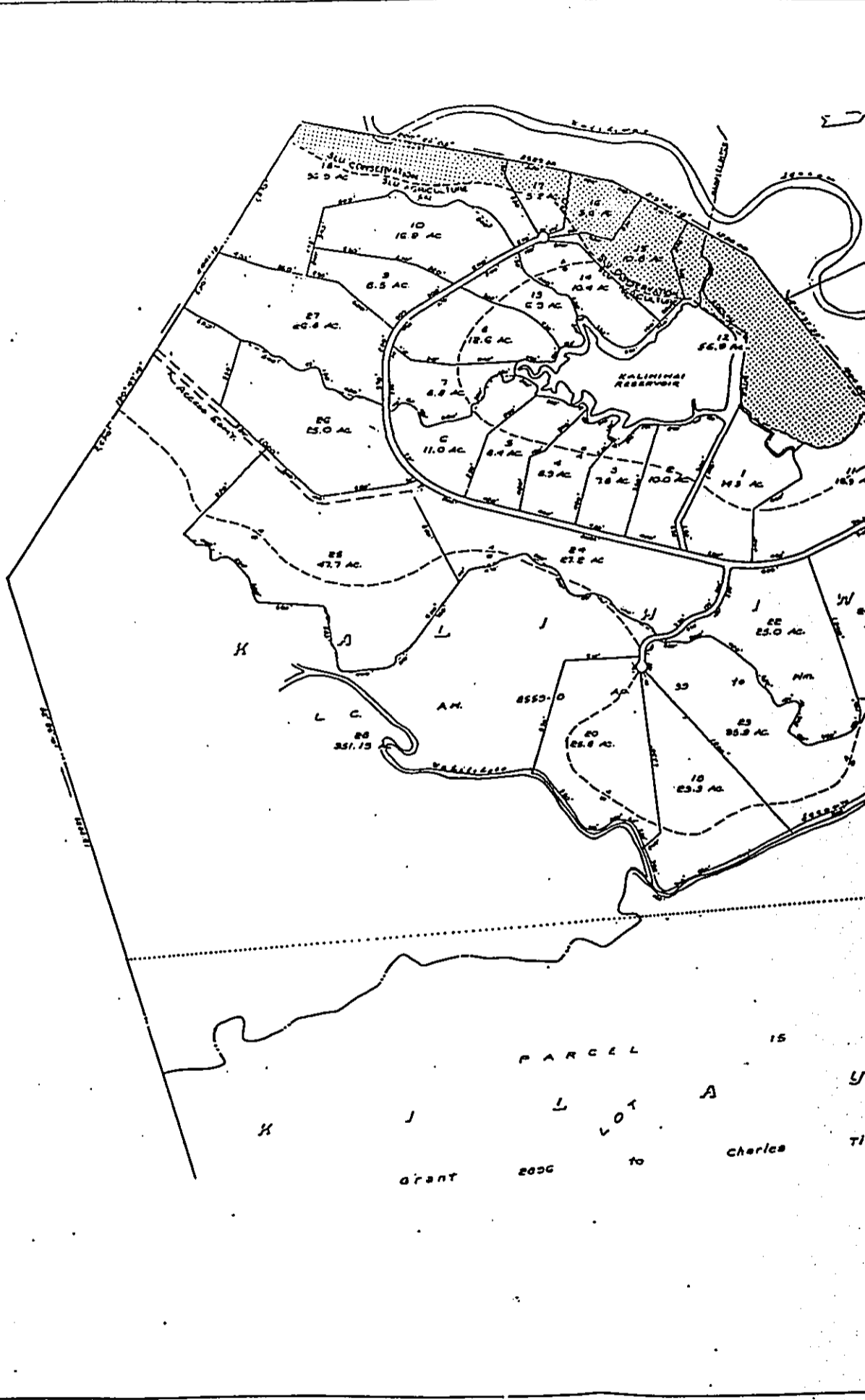
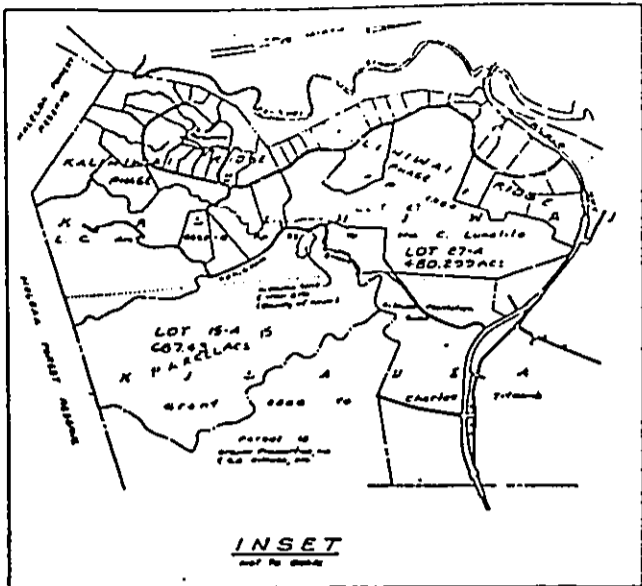
- (1) It shall include lands necessary for protecting watersheds, water resources, and water supplies,





FIGURE IV: PRELIMINARY SUBDIVISION PLAN
KALIHIWAI RIDGE - PHASE II

| | | | | |
|--|--|----------------------|--|---|
| | <p>SCALE</p> | <p>LEGEND</p> | <p>DATE 10/10/10 SCALE 1" = 100' PROJECT KALIHIWAI RIDGE - PHASE II PARCEL 101</p> | <p>KLAEUA AGRONOMICS, INC. 1000 KALAEUA RD., SUITE 100 KALAEUA, HI 96741 TEL: 808-241-1100 FAX: 808-241-1101 WWW.KLAEUAAGRONOMICS.COM</p> |
| | <p>PROJECT KALIHIWAI RIDGE - PHASE II PARCEL 101</p> | | | |

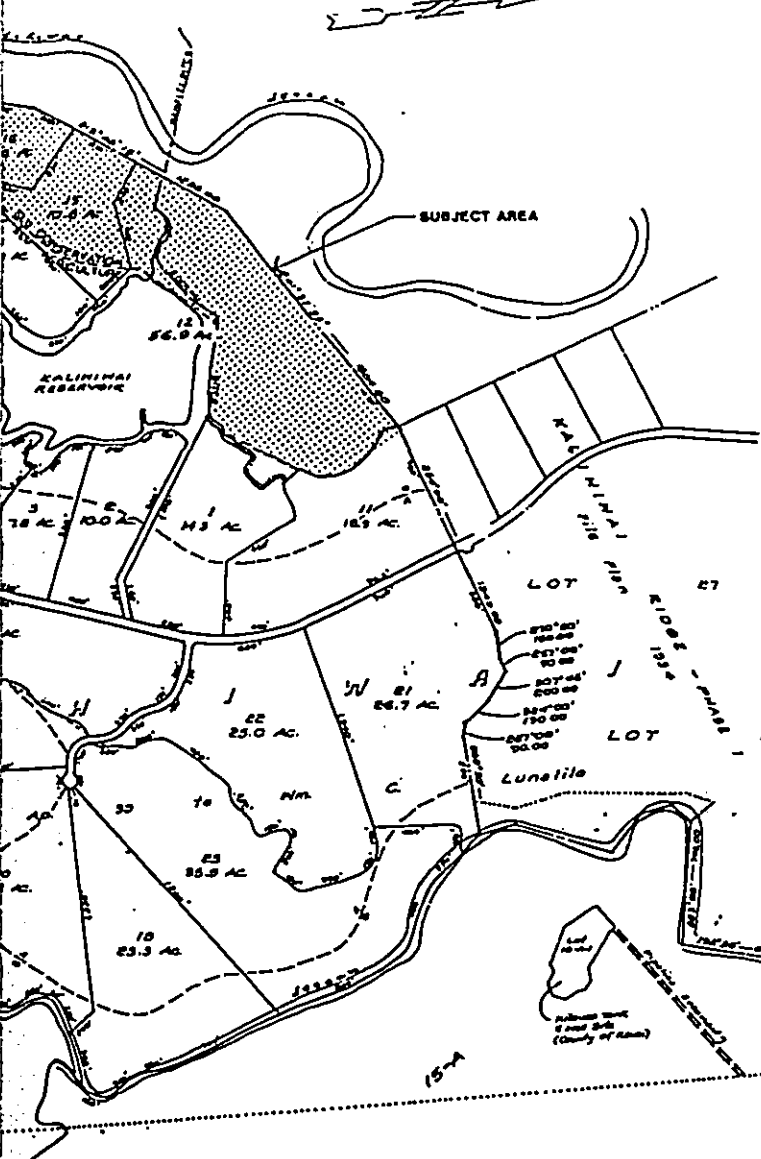


PRELIMINARY MAP
KALIHUAI RIDGE-PHASE II

CONSOLIDATION OF LOT 27, FILE PLAN 1334,
 LOT 31, BEING PORTION OF L.C. AN 8553-B-30,
 TO WM C LUNALILO
 AND PARCEL 15, BEING PORTION OF GRANT 2826
 TO CHARLES TITCOMB
 AND
 RESUBDIVISION OF SAID CONSOLIDATION
 INTO
 LOTS 1 TO 28, INCLUSIVE, 27-A AND 15-A
 AT KALIHUAI AND KILAUEA, HANAIE, KAUA, HAWAII

TAX MAP KEY: 5-2-0810
 5-2-0811
 5-2-1712C

OWNER: C. BREWER PROPERTIES, INC.
 ADDRESS: 745 Fort Street, Suite 1700
 Honolulu, Hawaii - 96815



LOT 15
 to Charles Titcomb

ONE E ARAM STREET
 LAHAE, HAWAII 96746

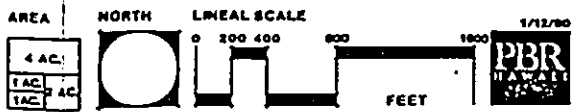


EDNA BLUMSTEIN AND ASSOCIATES, INC.

Edna Blumstein
 Registered Professional Engineer
 Certificate Number 4549

FIGURE V: TENTATIVELY APPROVED PRELIMINARY
 SUBDIVISION PLAN
KALIHUAI RIDGE-PHASE II

KILAUEA, KAUA KILAUEA AGRONOMICS, INC.



Response: None of the lands proposed for reclassification from Conservation to Agriculture are necessary for protecting watersheds, water resources, or water supplies. Management of the proposed subdivision and full time residency of various landowners will enhance the efficient use of water and replace the existing scrub vegetation with diversified agricultural plant production.

- (2) It may include land susceptible to floods, and soil erosion, lands undergoing major erosion damage . . . ,
- (3) It shall include lands necessary for the conservation, preservation, and enhancement of scenic, cultural, historic or archaeological sites and sites of unique physiographic or ecologic significance . . . ,
- (4) It shall include lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use
- (5) It shall include lands with a general slope of twenty percent or more which provide for open space amenities or scenic values.

The ±19 acres sought to be reclassified from the "Conservation" District to the "Agriculture" District do not meet the foregoing standards, but more appropriately meet the standards for the "Agriculture" District.

The area remaining in the "Conservation" District after the reclassification, conforms in varying degrees to each of the above criteria. Those portions of Kalihiwai River susceptible to flooding and with steep slopes will remain within the Conservation District. The scenic and visual impact of the proposed project is not significant. From within Kalihiwai Valley, no visible evidence of the adjacent diversified agricultural operations will be apparent to the observer.

Land Use Commission Administrative Rule 15-15-50(c)(17)

As the subject Property is not within the Special Management Area, as established by the County of Kauai, the provisions of Chapter 205A, HRS, are not applicable. The subject Property is remote from the shoreline and will not conflict with the purpose, intent, and guidelines of the Coastal Zone Management program as proposed.

Hawaii State Plan

The Hawaii State Plan provides long-range, comprehensive plans and policies which serve as a guide for the future growth within the State of Hawaii. Amendments to the land use district boundary must be consistent with these plans and policies. The following objectives and polices apply to the proposed project.

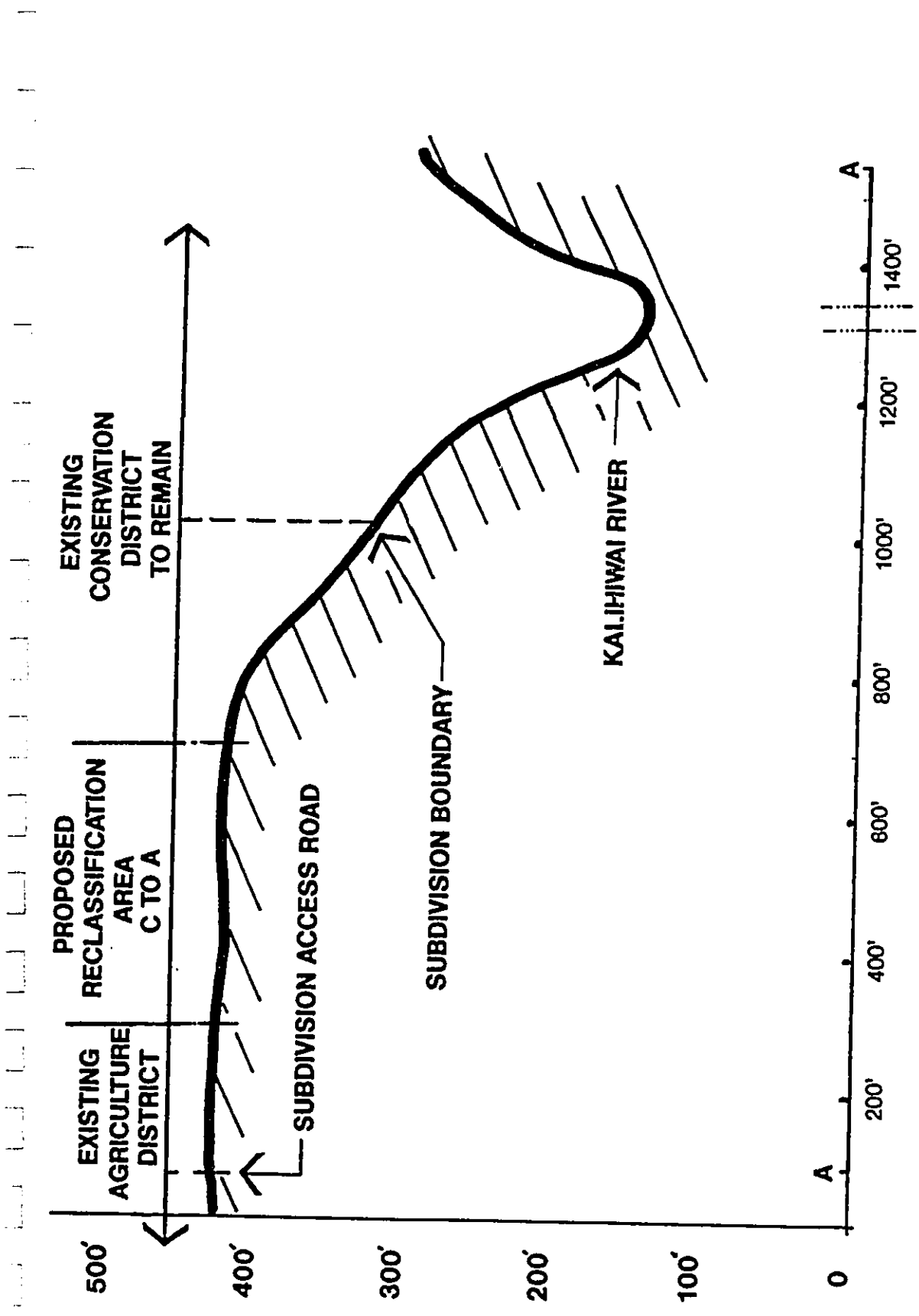


FIGURE VIA: CROSS SECTION A-A
KALIHIVAI RIDGE-PHASE II

KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



SC: 1"=200'

1/31/90

Objective:

- (a) Planning for the State's economy with regard to agriculture shall be directed toward achievement of the following:
 - (a)(1) Continued viability in Hawaii's sugar and pineapple industries,
 - (a)(2) Continued growth and development of diversified agriculture throughout the state.

Policies:

- (b)(6) Assure the availability of agricultural suitable lands with adequate water to accommodate present and future needs.

Response: The subject Property is not suitable for viable sugar or pineapple agricultural production. It is, however, suitable for various forms of diversified agriculture that would be facilitated by development of the proposed subdivision. Establishment of agricultural subdivisions on marginal agricultural land, such as that proposed, will indirectly assure the continued availability of other lands more agronomically suitable for large scale agriculture production.

Twelve State functional plans have also been prepared to manage and coordinate various functional area activities, and to guide resource allocation decision-making. Each plan addresses statewide needs, problems and issues, and recommends policies and priority actions to mitigate those problems and bring about desirable conditions. The following is highlighted from the State functional plans for agriculture and housing.

o Objectives for Agriculture:

Achievement of productive agricultural use of lands most suitable and needed for agriculture.

Response: The proposed action will enable the productive diversified agricultural use of a small area of "Prime" and "Other Important" agricultural lands as identified in accordance with Agricultural Lands of Importance to the State of Hawaii (ALISH) classification system (refer to Figure X). Prime agricultural lands are defined as lands that are best suited for agriculture due to soil quality, growing season, and moisture supply. In relation to the total Prime Agricultural lands on Kauai, the proposed project would utilize a very small percentage of this land for diversified agricultural purposes.

o Objectives for Housing:

Develop greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, livable homes located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals.

Response: The purpose of the proposed project would be to provide a "rural-type" of residential/agricultural housing and agriculturally related employment opportunities where few currently exist on the island of Kauai. Accordingly, the County of Kauai Comprehensive Zoning Ordinance will permit, upon subdivision of the subject Property, development of approximately 85 to 100 farm dwellings. The proposed reclassification of the ±19 acres would permit an additional 2 to 4 farm dwellings, depending on the size of the area within each lot deemed appropriate for a building site. By broadening the agriculturally based economy of the area in this fashion, expansion of both housing and employment opportunities will assist in diversifying the overall economic base of Kauai.

Department of Land and Natural Resources, Administrative Rules (Chapter 12)

According to the Administrative Rules of the Department of Land and Natural Resources, Chapter 12, the objective of the Resource Subzone is "to develop, with proper management, areas to ensure sustained use of the natural resources of those areas." Lands within the Resource Subzone should be suitable for: (1) growing and harvesting of commercial timber or other forest products, (2) hunting, fishing, hiking, camping, and picnicking, (3) lands susceptible to erosion, and (4) lands of unique physiographic quality.

To meet these criteria and to properly manage the Property, the Applicant will require a Conservation District Use Permit from the Board of Land and Natural Resources to allow the proposed subdivision of Conservation lands. Provisions for proper management of the remaining 36 acre Conservation area would be secured by: (1) DLNR's conditional approval of Conservation District Use Permit, and (2) through deed restrictions (refer to Appendix B) to "run with the land" as recommended by the Applicant.

County of Kauai General Plan and Zoning Provisions

The County of Kauai's General Plan (refer to Figure VI) has designated Parcel 16 into either "Open" (±650 acres) or "Agriculture" (±223 acres) land use areas.

According to the General Plan, the primary intent for classifying lands as agriculture is to establish:

[S]pecific controls on the subdivision and alteration of the designated lands shall be formulated to avoid the dissipation of agricultural potential and

to establish and maintain a proportionate mix of parcel sizes suitable to the requirements of existing and potential agricultural uses.

As such, the Applicant is proposing an agricultural subdivision to establish a proportionate mix of parcel sizes suitable to meet the economic needs of diversified agriculture, as opposed to corporate scaled agriculture which is not currently economically viable in this area.

Similarly, the General Plan's intent in designating lands in the Open district, is to "maintain or improve the natural characteristics of non-urban land and water areas that are of significant value to the public as scenic or recreational resources; or perform essential physical and ecologic functions important to the general health, safety and welfare of the public"

In addition, single family detached dwellings are a permitted use under Article 8 of the County's Comprehensive Zoning Ordinance for both the Agricultural and Open districts. Specifically, the Agricultural district permits "one dwelling unit for each parcel one acre or larger" and "one additional dwelling unit for each additional 3 acres in the same parcel, provided that no more than 5 dwelling units may be developed on any one parcel." For the Open district, applicable restrictions permit residential densities within the State Agricultural district (as in the case of the subject reclassification area) at one dwelling unit per 5 acres. As such, the proposed reclassification of ±19 acres of the Conservation district would permit only 2 to 4 additional single family dwellings under current zoning regulations if reclassified by the LUC.

Management of land uses within the County's Open district will comply with all applicable County zoning and subdivision regulations. Agriculturally based land uses that perform physical and ecologic functions important to the general health, safety and welfare of the public will be assured by the proposed land uses and maintenance of the open space qualities of the area.

Chapter 343, HRS - Environmental Impact Statement (EIS) Regulations

An Environmental Impact Statement (EIS), as defined by Chapter 343, HRS, and by the State Office of Environmental Quality Control is required if the proposed development is contrary to the County General Plan, the petition area were located in the SLUC Conservation District or shoreline setback areas, contained a historic site listed on the State or National Registers of Historic Places, or required the use of State or County funds.

Inasmuch as the proposed agricultural subdivision includes a portion of the State Conservation District, the proposed project is subject to the provisions of Chapter 343, HRS, and the Office of Environmental Quality Control (OEQC), Chapter 200 of Title 11, Administrative Rules. However, an Environmental

Impact Statement (EIS) would be required only if the accepting agency finds that the proposed reclassification and subdivision would have "significant environmental effects" [Section 11-200-6(b)].

II. TECHNICAL, ECONOMIC AND SOCIAL CHARACTERISTICS

As previously described, Parcel 16 includes approximately 872.6 acres of land, classified as both Conservation and Agriculture by the State Land Use Commission. Although none are currently being farmed by Kilauea Agronomics, Inc., approximately 19 acres have agronomic qualities more appropriately suited for the Agricultural District rather than the present Conservation District classification.

Reclassification and subdivision of the subject Property will not permit any "on the ground" or physical land use changes within the remaining Conservation District. The Conservation lands that are proposed for reclassification to Agriculture are not necessary for Conservation related uses as described in Section 15-15-20. Rather, approval of the proposed LUDBA would move the Conservation District boundary to its logical physiographic location along the Pali edge of the Kalihiwai River valley. The proposed Conservation District boundary to be located along the edge of Kalihiwai Valley is consistent with the boundary established for the balance of the Kalihiwai Valley area.

Although no physical improvements are proposed within the Conservation District, the related agricultural subdivision will include the construction of new roadways and related utilities (drainage structures, potable water, telephone, cable television, and electrical system). Easements for irrigation purposes will be provided where appropriate to serve the lots from various surface water sources.

Additionally, the newly classified agricultural lands would encourage economically viable diversified agricultural production on lands within an existing agricultural area. Delineation of new parcel boundaries would be by map only. Limited survey staking work is the only physical alteration that may apply within the Conservation District.

The project is intended to permit the subdivision and sale of lands now lying in disuse. This in turn would: (1) create additional economic uses for the agricultural lands such as diversified agriculture, (2) provide construction jobs during the development of subdivision infrastructure, (3) provide construction jobs for farm dwelling and support building construction, and (4) increase the anticipated need for various agriculturally related employment.

After the applicable approvals are in place, the proposed 28 saleable lots would permit the construction of an estimated 85 to 100 farm dwelling units. Assuming an occupancy ratio of 3.5 persons/farm dwelling units, an estimated maximum population of approximately 298 to 350 persons would be generated upon full occupancy of the subject subdivision.

As the proposed action (reclassification of ±19 acres from Conservation to Agriculture) could result in an additional 2 to 4 farm dwellings, and based on an occupancy of 3.5 persons/farm dwelling, the reclassification could generate an additional 7 to 14 persons upon full occupancy.

Actual construction of farm dwellings will depend on the type of agricultural activities undertaken, and other potential physical limitations such as soil suitability for septic systems, topography, and existing vegetation. Based on these considerations, a more realistic population estimate can be derived if the density patterns (approximately 50 percent of theoretical maximum) established in similar agricultural subdivisions in the Kilauea region (Kilauea Farms, Wailapa, Kahili Makai, etc.) is utilized. Based on the 50 percent maximum, approximately 149 to 175 persons (equating to 42 to 50 families) would be a more realistic expectation of population increase from the entire subdivision. Therefore, it is anticipated that the additional residential population generated by this project will not create a burden on public facilities or services in the area.

No significant long-term environmental impacts are projected to result from project development. From a land management perspective, the establishment of large lot diversified agriculture as opposed to the existing vacant land uses will result in generally positive environmental impacts. It is the Applicant's intent to establish land uses more environmentally suitable to this area than large scale corporate based agriculture or continuation of the current vacant condition.

Socioeconomic impacts of the proposed subdivision are expected to be positive, in that agricultural land not currently utilized will become much more productive while accommodating the housing needs of approximately 40 to 50 families. This population increase is not expected to adversely impact the social structure of the region, but provide a generally healthy economic stimulus to the region. Once construction of farm structures and subdivision infrastructure begins, overall economic benefits will result in job creation and increased State and County tax revenues.

During the construction phases of development, there will be a temporary increase in the number of jobs on Kauai. Consequently, an associated multiplier effect in related job creation and retail sales should be expected.

Development of the proposed project is anticipated to span a period of approximately 2 years with construction expected to begin upon final approval of subdivision plans. Implementation and construction timing of individual structures or infrastructure will be especially influenced by economic conditions and marketability of product. Current indications are that market acceptance of the Project will be more than adequate to absorb all lots as they enter the market.

III. GENERAL DESCRIPTION OF THE AFFECTED ENVIRONMENT

Description of Natural Environment

A. Climate

Characteristic of the North Shore region of Kauai, and more specifically Kilauea Town, the site receives annual rainfall of approximately 100 to 110 inches (refer to Figure VIB). Winds are generally east-northeast trade winds of 10 to 14 miles per hour.

B. Topography

The ±19 acres proposed for reclassification from Conservation to Agriculture, contain a gently rolling topography with slopes of approximately 0 to 20 percent (refer to Figure VIA). As such, topographical considerations associated with drainage and access characteristics necessary for productive agriculture are present within the reclassification area.

The Conservation District lands remaining after the LUDBA, however, have slopes in excess of 20 percent making them infeasible agriculture or any other economically viable uses. The edge of Kalihiwai Valley is clearly defined by this grade change from the stream's eroded valley to the relatively level, gently sloping upper plains of the Kilauea region. The elevations of the Conservation lands range from 320 feet within the more makai areas to 510 feet at the mauka reaches of the site.

The grade separation between the lower limits of the project and the Conservation District boundary range from 200 to 400 feet (refer to Figure VIA).

C. Site Photograph

The following site photographs provides an overview of the subject area depicting the physical site conditions and character of the Conservation lands to be included in the proposed agriculture subdivision. Refer to Figure VII.

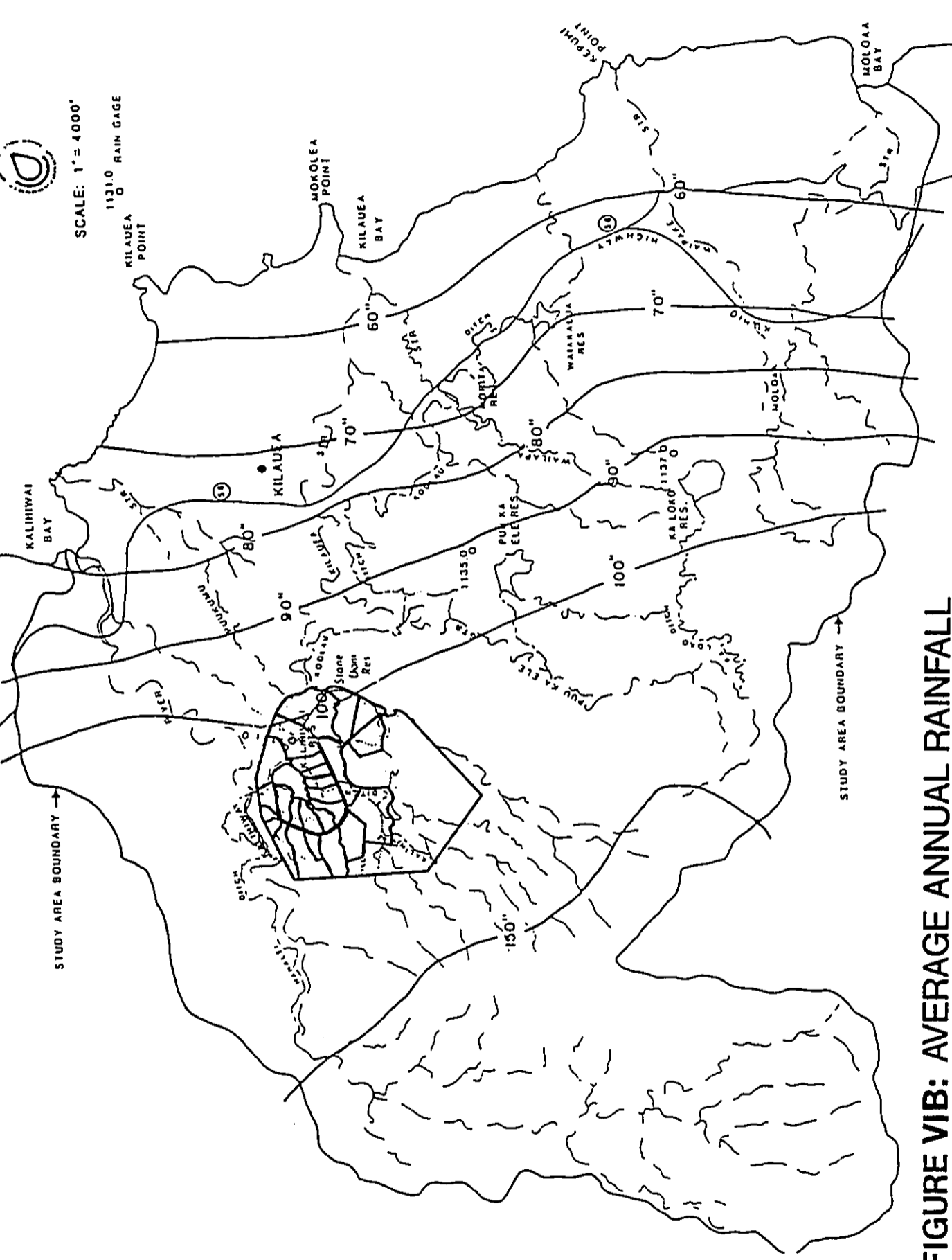
D. Agriculture

As previously described, the Kilauea Agricultural Subdivision Parcel 16 is currently comprised of approximately 817 acres located within the State Agricultural District and approximately 55 acres located within the Conservation District. A proposed Land Use District Boundary Amendment would remove approximately 19 acres from the Conservation District and reclassify it to Agriculture.



SCALE: 1" = 4000'

11310 RAIN GAGE
KILAUEA POINT



**FIGURE VIB: AVERAGE ANNUAL RAINFALL
KALIHUWAI RIDGE-PHASE II**

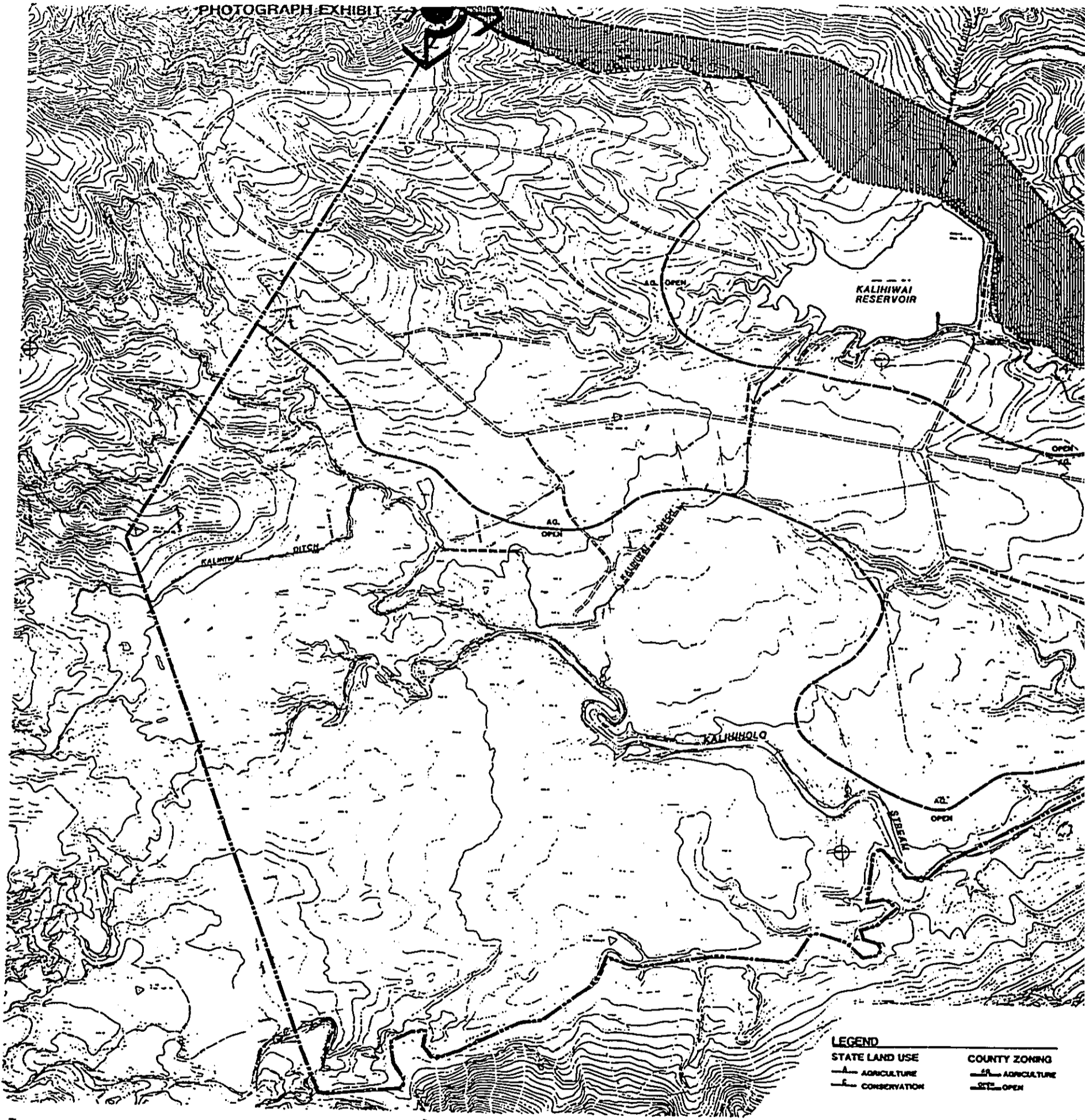
KILAUEA, KAUAI KILAUEA AGRONOMICS, INC.



SC: 1" = 4000'

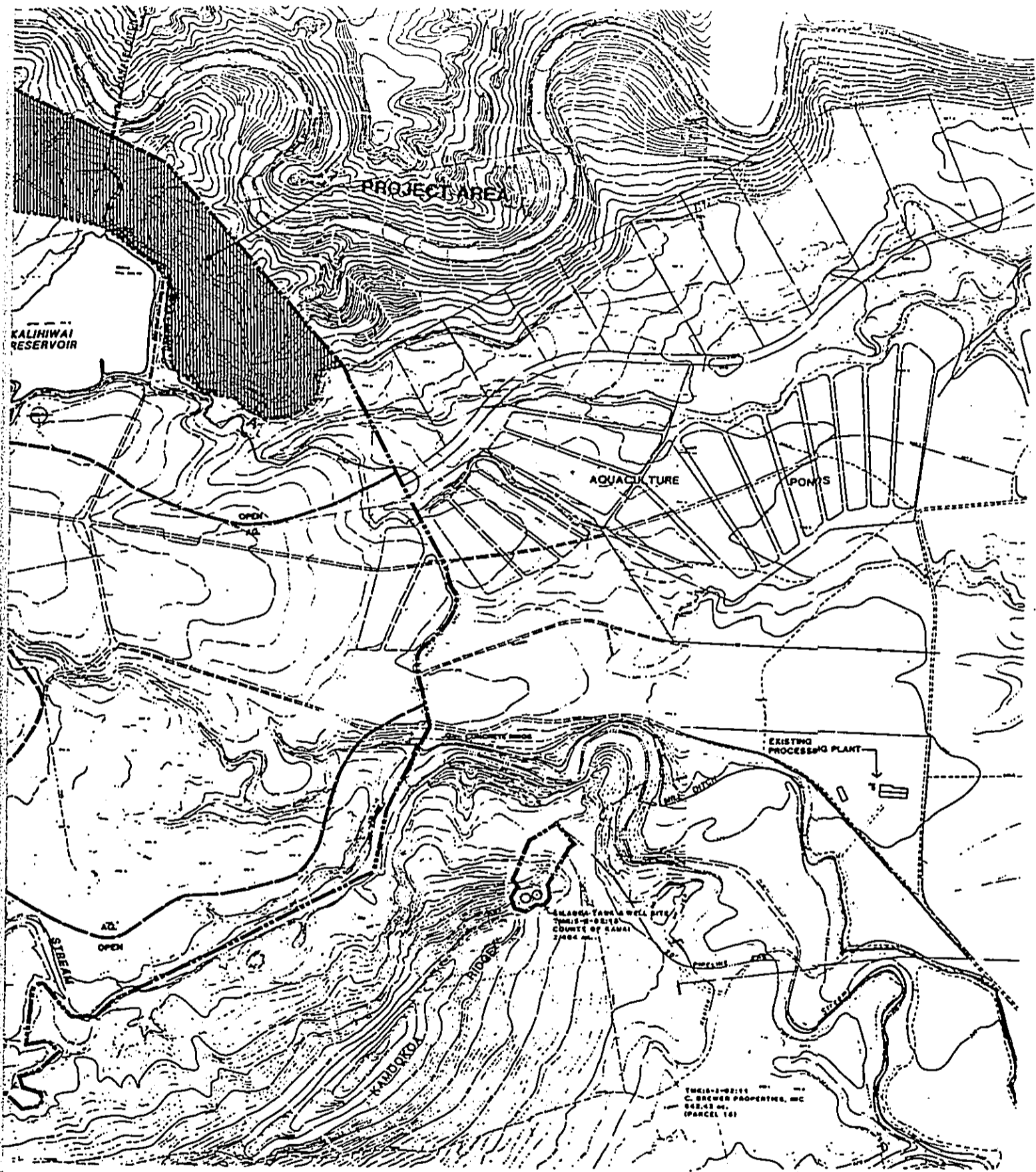
1/31/90

PHOTOGRAPH EXHIBIT



LEGEND

| STATE LAND USE | COUNTY ZONING |
|----------------|---------------|
| — AD. OPEN | — AD. OPEN |
| — CONSERVATION | — ST. OPEN |



**FIGURE VII: REGULATORY CLASSIFICATION
KALIHUWAI RIDGE - PHASE II**

LEGEND

| | |
|-----------------------|----------------------|
| STATE LAND USE | COUNTY ZONING |
| — AGRICULTURE | — AGRICULTURE |
| — CONSERVATION | — OPEN |



**KALAUWA, KAUAI
AREA SCALE**

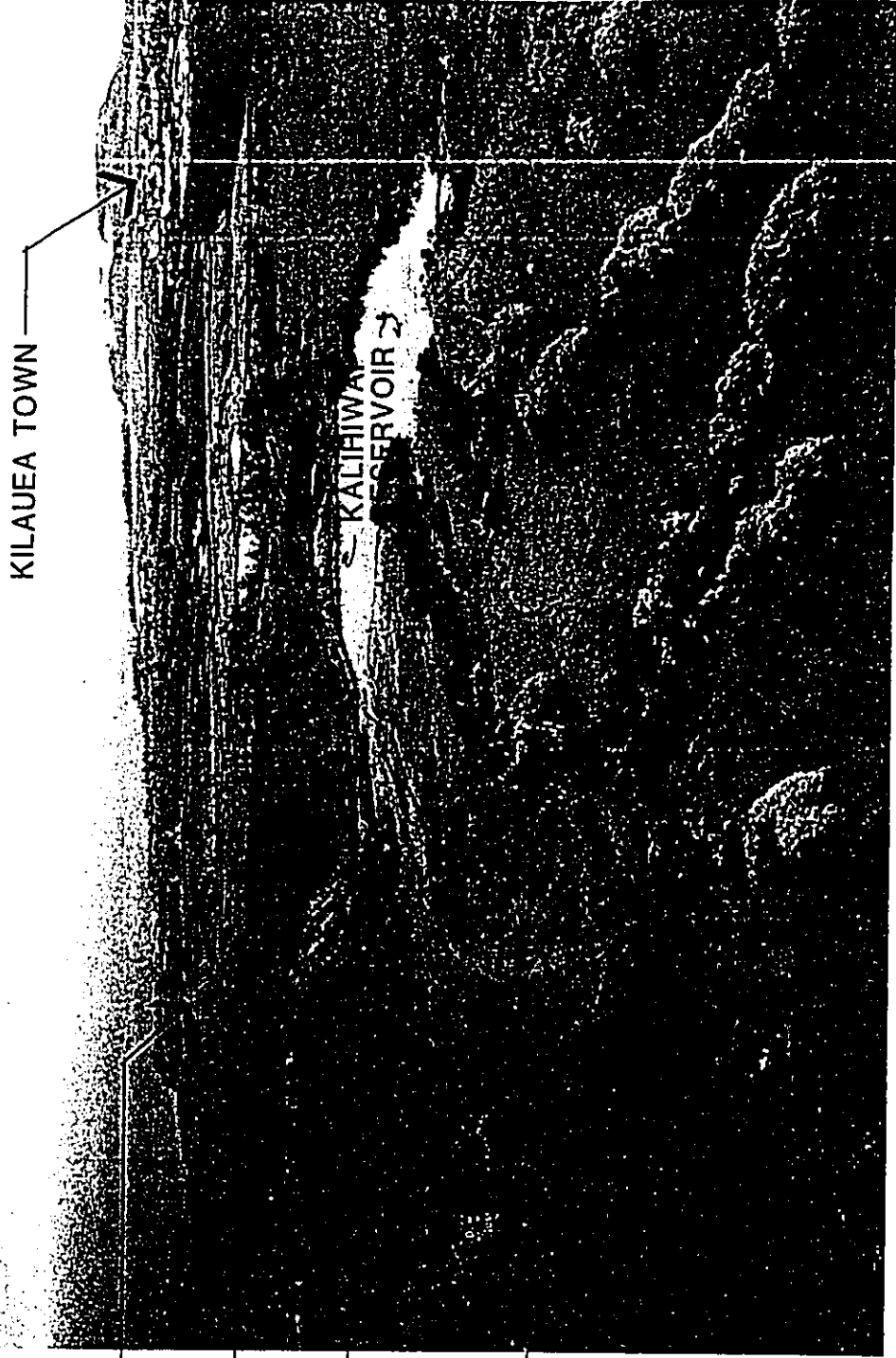
| | |
|------|------|
| 0 | 1000 |
| 1000 | 2000 |
| 2000 | 3000 |



KALAUWA AGRONOMICS, INC.
 DATE: APRIL 10, 1999
 REV: JAN 20, 2000
 REV: 08/20/00
 REV: 08/20/00
 REV: 08/20/00

**TABLE 2-0210
 000.000.00
 (PARCEL 10)**

**BBR
 HAWAII**



KILAUEA TOWN

KALIHUWA
RESERVOIR

GUAVA ORCHARDS

APPROX.
PROJECT LIMITS

APPROX.
CONSERVATION
DISTRICT BOUNDARY

KALIHUWA RIVER

KALIHUWA RESERVOIR LOOKING MAKAI

FIGURE VIII: SITE PHOTOGRAPH

KALIHUWA RIDGE--PHASE II

KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



PROPOSED
RECLASSIFICATION
AREA

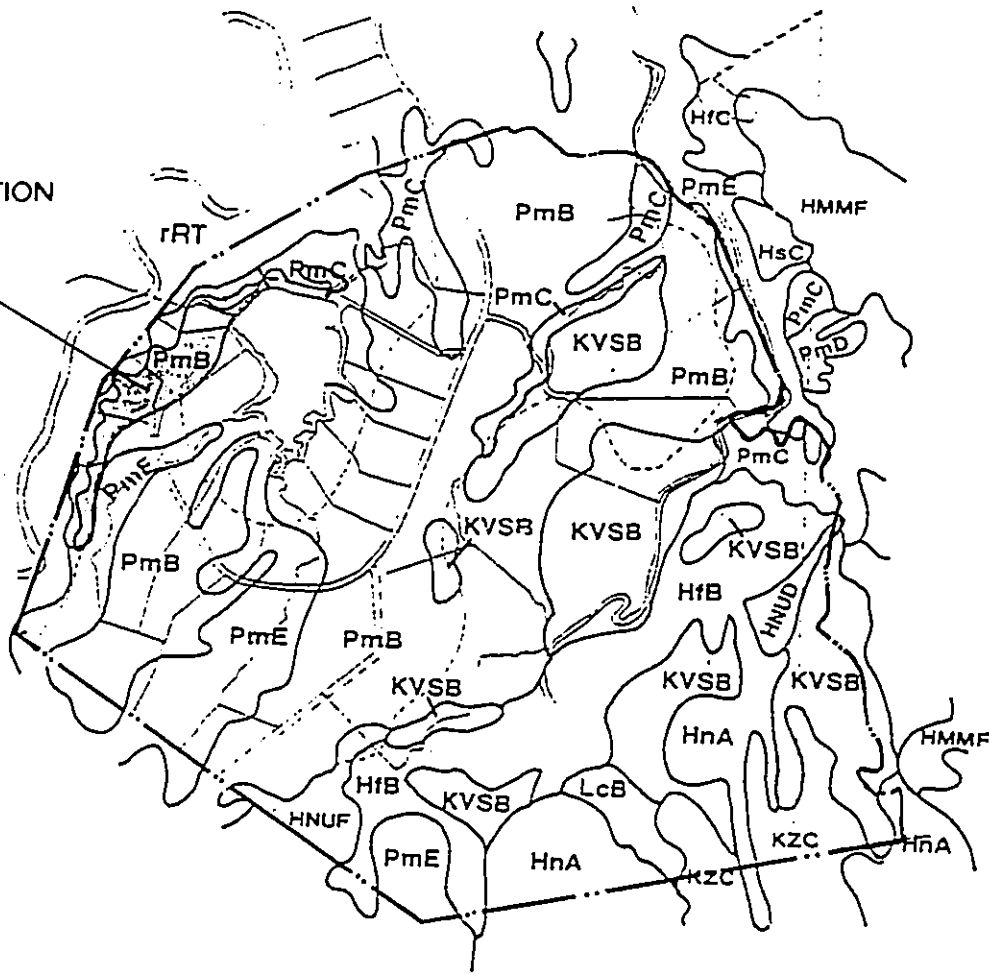
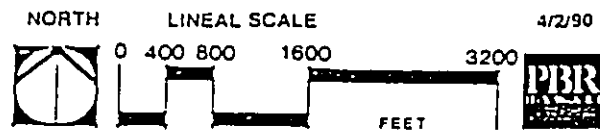


FIGURE IX: SOILS

KALIHIWAI RIDGE - PHASE II

KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



The U.S. Department of Agriculture Soil Conservation Service, "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai," identifies soils within Parcel 16 as Rough Mountainous Land (rRT), and Pooku silty clay (PmB and PmC). Refer to Figure IX.

The Pooku silty clay extends to the edge of the Kalihiwai Gulch and is located primarily within the existing and proposed Agricultural District. This soil series consists of well-drained soils located on uplands used for pasture and sugar cane production. The soil is dark-brown silty clay approximately 14 inches thick with a subsoil up to 48 inches thick. Permeability is moderately rapid, runoff slow, and erosion hazard no more than slight. Capability classification is IIS, non-irrigated.

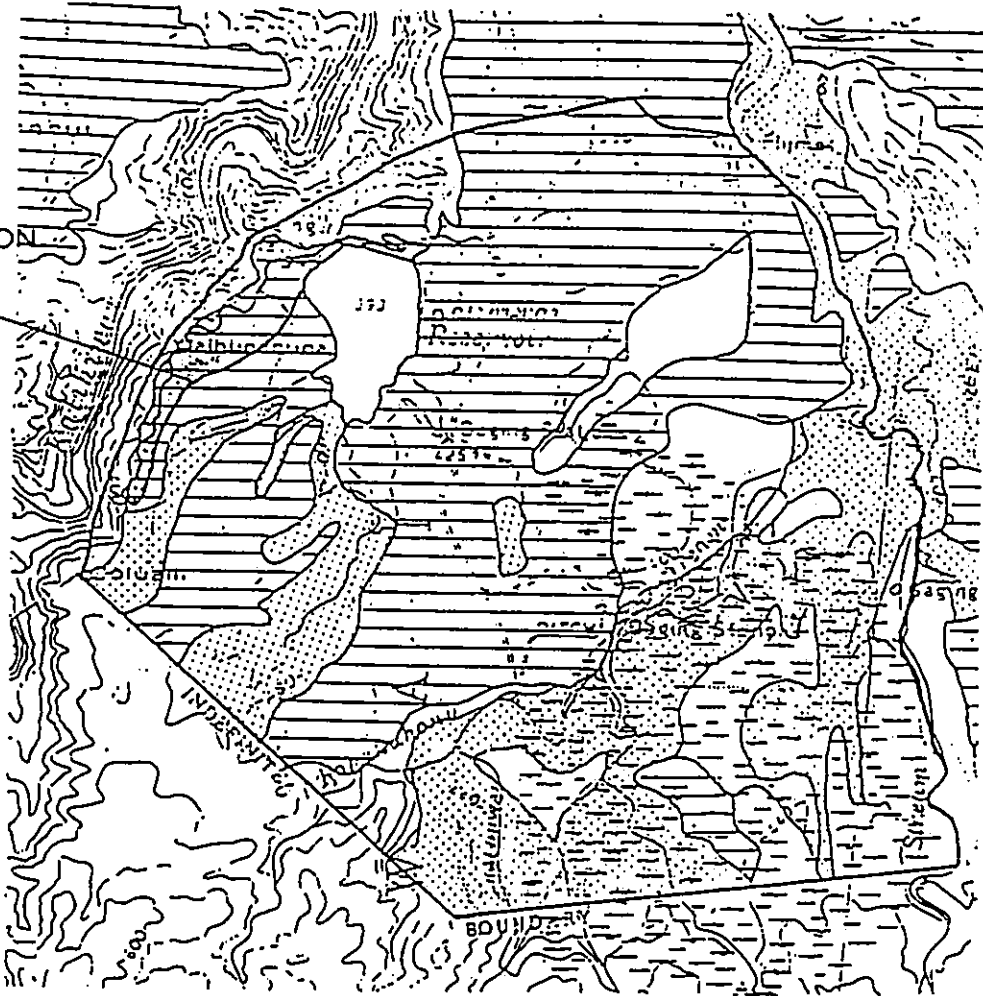
The Rough mountainous land (rRT) characteristic of the proposed Conservation District area occurs in mountainous areas and consists of very steep land broken by numerous intermittent drainage channels. The soil mantle is very thin ranging from 1 to 10 inches. The land surface is dominated by deep, V-shaped valleys that have extremely steep side slopes and narrow ridges between the valleys. Rock land, rock outcrop, soil slips, and eroded spots make up 20 to 40 percent of the total acreage for this soil type. This soil type is not suitable for agriculture and should be protected from erosion hazards.

The Agricultural Lands of Importance to the State of Hawaii (ALISH) classification system identifies approximately 85 percent of the subject subdivision as "Prime" or "Other Important." The remaining 15 percent is not classified and is comprised of portions of the subject Conservation District lands, Kalihiwai Reservoir, and a small low-lying area near Kahilihoho Stream. Prime agricultural lands are defined as lands that are best suited for agriculture due to soil quality, growing season and moisture supply.

Of the ±19 acres sought to be reclassified, the ALISH system identifies approximately 100 percent of the proposed Agriculture District (currently within the Conservation District) as "Prime" agricultural land.

In terms of overall productivity ratings based on the Land Study Bureau system of agricultural classification, the subject subdivision contains portions of "C", "D" and "E" rated lands. The boundaries of these classifications can generally be described as "D" lands located east of Kalihiwai Reservoir, and "E" rated lands located primarily within the Conservation District and to the north, south, and west of Kalihiwai Reservoir within the existing Agricultural District. Only a small portion of "C" lands are identified within the proposed subdivision in the northern or makai portion of the site within the existing Agricultural District. The ±19 acres sought to be reclassified contains all "E" rated lands.

PROPOSED RECLASSIFICATION AREA



LEGEND:

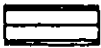


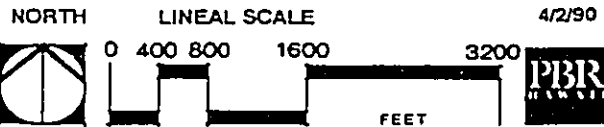
-  PRIME AGRICULTURAL LAND
-  UNIQUE AGRICULTURAL LAND
-  OTHER IMPORTANT AGRICULTURAL LAND

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

KALIHIWAI RIDGE - PHASE II

KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



4/2/90

PROPOSED
RECLASSIFICATION
AREA

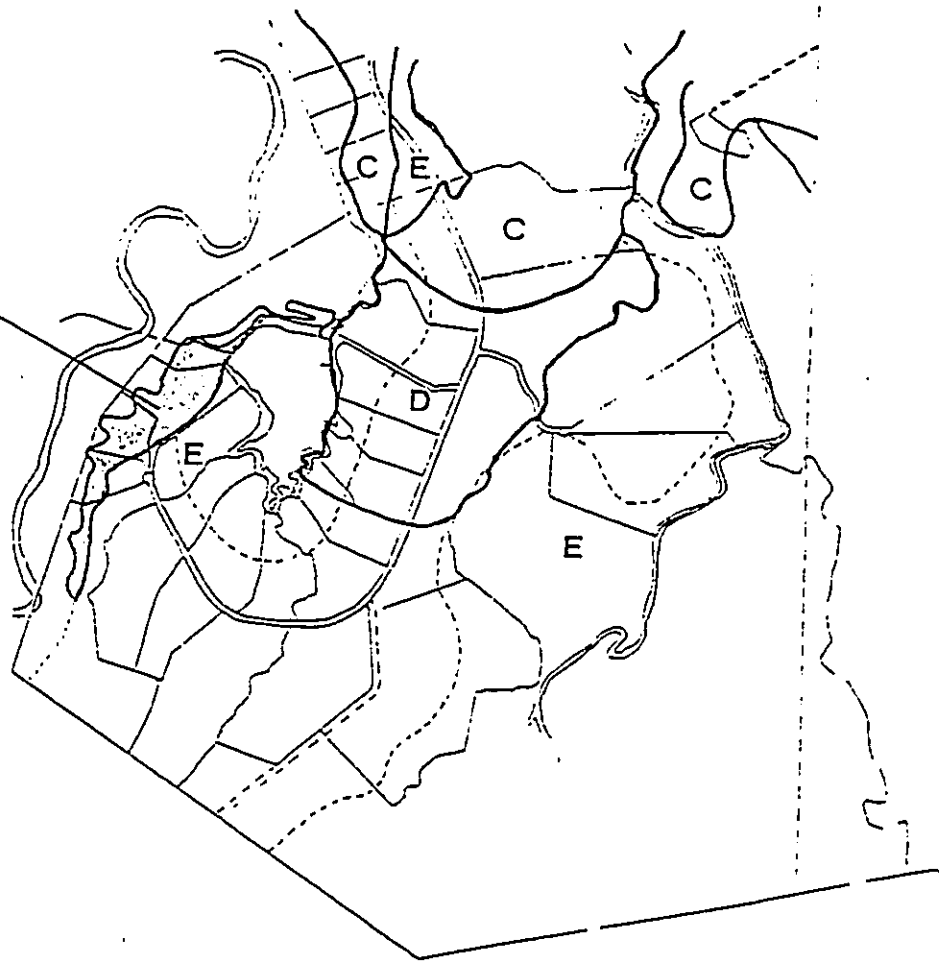
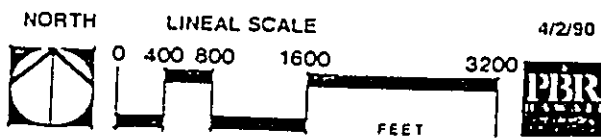


FIGURE XI: LAND STUDY BUREAU
KALIHIWAI RIDGE - PHASE II

KILAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



As indicated by the favorable soil types and ALISH designation of "Prime" agriculture land, the subject reclassification area is more suitable for the smaller scale forms of diversified agricultural production, rather than for large scale plantation agriculture.

E. Flora

According to Appendix C, Botanical Assessment, Kalihiwai Ridge, Phase II, the subject reclassification area consists of abandoned sugar cane fields now overgrown by introduced or alien shrubs and grasses. A few species native to the Hawaiian Islands can be found on the site, mostly located on the bluff's edge. These are uluhe, 'ohi'a, hala, Pycnus, and ricegrass. None of these plants are an officially-listed threatened and endangered species; nor are any proposed or candidates for such status (U.S. Fish and Wildlife Service 1985; Herbst 1967). All are found in similar environmental habitats throughout the islands. Only the 'ohi'a is endemic, that is, it is native only to the Hawaiian Islands. The others occur widely throughout the Pacific and the tropics.

The Botanical Assessment concludes, "Given the disturbed nature of the site, there is little of botanical interest or concern and the proposed change in land use is not expected to have a significant negative impact on the botanical resources. There are no botanical reasons to impose any restrictions, impediments, or conditions to this site."

F. Fauna

According to Appendix D, Field Survey of the Avifauna and Feral Mammals at Kalihiwai Ridge, Kauai, March, 1990, the only endemic species recorded during a field survey of the Conservation District was the Hawaiian Duck or Koloa (Anas wyvilliana). Koloa are more common on Kauai than elsewhere in the State, and often occur in mountain streams as well as coastal wetlands. Other possible endemic birds might also be found in the area, but were not recorded during the survey. There are no endemic amphibians, land reptiles, or mammals in the Hawaiian Islands. Those that do exist have been introduced into the environment intentionally or accidentally by man. None are considered endangered species.

The only observed resident indigenous (Native) birds identified in the survey were two adult Black-crowned Night Heron or Aku'u (Nycticorax), observed along the southern edge of Kalihiwai Reservoir. This species is not endangered and has recently experienced recent growth in population as a result of the development of the aquaculture industry.

The Pacific Golden Plover (Pluvialis fulva) were identified as the only migratory indigenous species identified on the subject Property. Plover prefer open areas such as mud flats, roads, plowed fields, pastures and large lawn areas. These

populations have remained relatively stable over many years and could be expected to utilize land uses proposed for the project area.

The only endemic Hawaiian land mammal is the Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), a sub-species of the American Hoary bat. The Hawaiian bat occurs primarily on the island of Hawaii, but is quite abundant on Kauai. No Hawaiian Hoary Bats were identified on the subject Property.

All other mammals in the area are introduced and many of these alien species have proven to be highly detrimental to man, his buildings, products and some of his agricultural crops as well as a native forest and their animal life. Some of these animals were first brought in by Captain Cook and his men, such as the feral cattle, goats, sheep and pigs, which have inhabited the Hawaiian forest throughout history from the time of Captain Cook. None of these mammals that may occur on the site are considered endangered or threatened species.

Based on the findings of the field survey (refer to Appendix D), the present environment provides a limited range of habitats which are utilized by the typical array of exotic birds one would expect at this elevation and in this type of disturbed habitat on Kauai. However, clearing the land of dense brush and establishing short grass habit would result in the decline of some species and increase in the number of Pacific Golden Plover and Western Meadowlark populations.

In addition, Kalihiwai Reservoir and surrounding abandoned aquaculture ponds (not within the subject Property) provide foraging and nesting opportunities for native waterbirds. Management of Kalihiwai Reservoir and surrounding agricultural operations will be coordinated with appropriate state and federal agencies to mitigate potential impacts to existing habitats.

G. Views and Open Space

Limited views of the subject Conservation lands from the Kalihiwai Ridge or Valley are dominated by the distant mountain range and Kalihiwai River and the valley floor below. Other distant views across to the Princeville pasture lands to the west and to the Pacific Ocean beyond Kalihiwai Bay are also available. Due to the steep slope of the valley walls and dense vegetation, the portion of Conservation District lands to be retained includes those lands that provide permanent open space within the Kalihiwai Valley.

Views will be altered from the present vacant condition to a more structured or managed diversified agricultural area. Farm dwellings will be limited in height and setback from property lines in accordance with County regulations. Proposed landscaping programs, building placement, lot configuration, and roadway placement will be sensitive to the natural landscape. Proposed maximum densities that could average approximately 8.7 acres/unit to

10.25 acres/unit will leave the existing rural visual character essentially unchanged or enhanced.

H. Drainage

According to the Flood Insurance Rate Map (FIRM), none of the project site is located within any flood hazard zone or designated floodway. Only makai portions of Kalihiwai Stream are located within Flood Zone A. Although the volume of runoff will increase to a limited extent after project development due to establishment of impermeable surfaces, drainage improvements will accommodate all anticipated flows.

Generally, drainage basins influencing the project area are defined by the Kalihiwai Valley within the existing Conservation District and the drainage basin of Kalihiwai Reservoir. Beyond the abrupt valley edge, the upper lands slope away from Kalihiwai and towards an intermittent stream that ultimately feeds the lower reaches of the Kalihiwai Stream.

No significant topographical alterations are planned that would significantly modify existing drainage patterns. Only roadway construction and minimal grading required for dwelling unit building pads will alter on-site drainage patterns. All drainage improvements including culverts, catch basins, etc., will be designed in compliance with applicable County of Kauai standards.

I. Noise and Air Quality

The ambient noise and air quality in the region is excellent. The only air and noise quality impacts that may result are during the project construction phases. However, fugitive dust generated during construction can be mitigated through various techniques in accordance with applicable erosion control standards. Noise impacts will be mitigated to the greatest extent possible through the use of mufflers on construction equipment and through daytime construction periods.

Long-term air and noise quality will not be significantly impacted by the proposed subdivision.

IV. IMPACTS ON INFRASTRUCTURE AND PUBLIC SERVICES

A. Water

All proposed subdivision parcels will be serviced by the central water distribution system owned and operated by the County of Kauai. All necessary on-site water distribution system improvements will be funded by the Applicant in accordance with County of Kauai requirements.

B. Sewer

Sewage collection, treatment, and disposal will be undertaken in accordance with applicable State Department of Health (DOH) regulations. Inasmuch as the site is located mauka of the DOH Injection Control Line, septic systems with leach fields as approved by DOH will be utilized.

C. Roadways

Interior roadways will be constructed by the Applicant in accordance with County of Kauai subdivision regulations. The interior roadways will be dedicated to the County of Kauai upon completion.

D. Traffic

Based on 85 to 100 possible farm dwellings, and a more realistic build-out of 42 to 50 homes (approximately 50 percent build-out), the subdivision will generate 85 to 100 cars if each family had two cars. Given the capacity of Kuhio Highway and existing traffic conditions, the subdivision will not significantly impact the surrounding transportation system. The proposed reclassification of the 19 acres could generate between 2 and 4 additional vehicles on the foregoing basis.

E. Solid Waste

Solid wastes generated in the region are collected and disposed of in County landfills. The proposed project will not cause a change in the manner in which area-wide solid wastes are presently collected and disposed.

F. Utilities

Electrical service is provided by Kauai Electric Company, and telephone service provided by Hawaiian Telephone Company. Cable television is provided by Kauai Cable TV.

G. Recreational Services/Resources

Recreational facilities in the region are primarily associated with ocean related State and County resources along Kauai's north shore and private facilities provided by the Princeville resort community. Access to shoreline and coastal resources will not be affected. Although the population in the area may increase to a limited extent, the capacity of existing recreational facilities should not be significantly affected.

H. Police and Fire

Cumulatively, manpower needs may increase as a result of new residential development for both police and fire protection services. Overall fire protection capability, however, may increase as a result of water system improvements and elimination of the existing "scrub" vegetation within the proposed Agricultural District.

I. Schools

According to the State Department of Education, minimum enrollments for planning new schools are: elementary (400 students), intermediate (400), intermediate/high school (750), and elementary/intermediate/high school (1,000). Given the relatively minimal increase in regional population associated with the proposed subdivision, no new schools will be required as a result of project development.

J. Historic and Cultural Features

According to Appendix A, an archaeological survey of the subject reclassification area identified no archaeological or historic surface features in evidence. Additionally, there are no currently known archaeological sites within the project area. Based on this assessment, no further archaeological work was determined as necessary.

The closest known site is located approximately 200 feet across Kuhio Highway. Identified by the Department of Land and Natural Resources, State Historic Sites Division as Kihei Heiau (Site 137), it is located on the east side of Kalihiwai Valley just below the scenic waterfall, approximately 1.5 miles from the project site. The heiau measures 50 feet by 20 feet and is built up 5.5 feet at the front while the back is against the base of a bluff and faced for 4 feet on the inland end. At the back is an 8-foot extension built up 8 feet high, but only 3 feet wide. No paving remains and the walls are of broken stones.

If any evidence of archaeologically significant resources are uncovered during project grubbing and site preparation phases of development, the construction in that area will cease and the State Historic Sites Preservation Division of the Department of Land and Natural Resources will be immediately notified.

V. ALTERNATIVES CONSIDERED

Two alternatives have been considered by the Applicant that would meet project objectives, but result in significant advantages for Alternative A over Alternative B. In both alternatives, the boundary of the current Conservation District would be amended to follow Kalihiwai Ridge to reflect the natural topographical and vegetative patterns characteristic of the subject Property. The advantages and disadvantages of each are summarized below.

Alternative A:

The preferred subdivision configuration is reflected in Alternative A. Conservation lands are included within 5 lots of the proposed 28 lot agricultural subdivision as shown on Figure IIIB.

After the Land Use District Boundary Amendment is approved, this alternative provides for subdivision of the proposed 36-acre Conservation District into 5 lots that are also comprised of approximately 19 acres of reclassified Agricultural District lands (refer to Table 2). Lots containing a portion of Conservation District lands will be sold by the Applicant with deed restrictions limiting the use or enhancement of that portion of the lots containing Conservation lands.

It is the Applicant's intent to insure compliance with the objectives of the Resource Subzone by requiring that any use of Conservation lands receive prior approval of the grantor as well as that of the Board of Land and Natural Resources subject to Conservation District Use Application (CDUA) procedures. This alternative provides a lot configuration that is uniform, rational and contiguous, and associates the subject Conservation lands with the adjacent agricultural lands in a manner which best provides for the control and management of the Conservation lands.

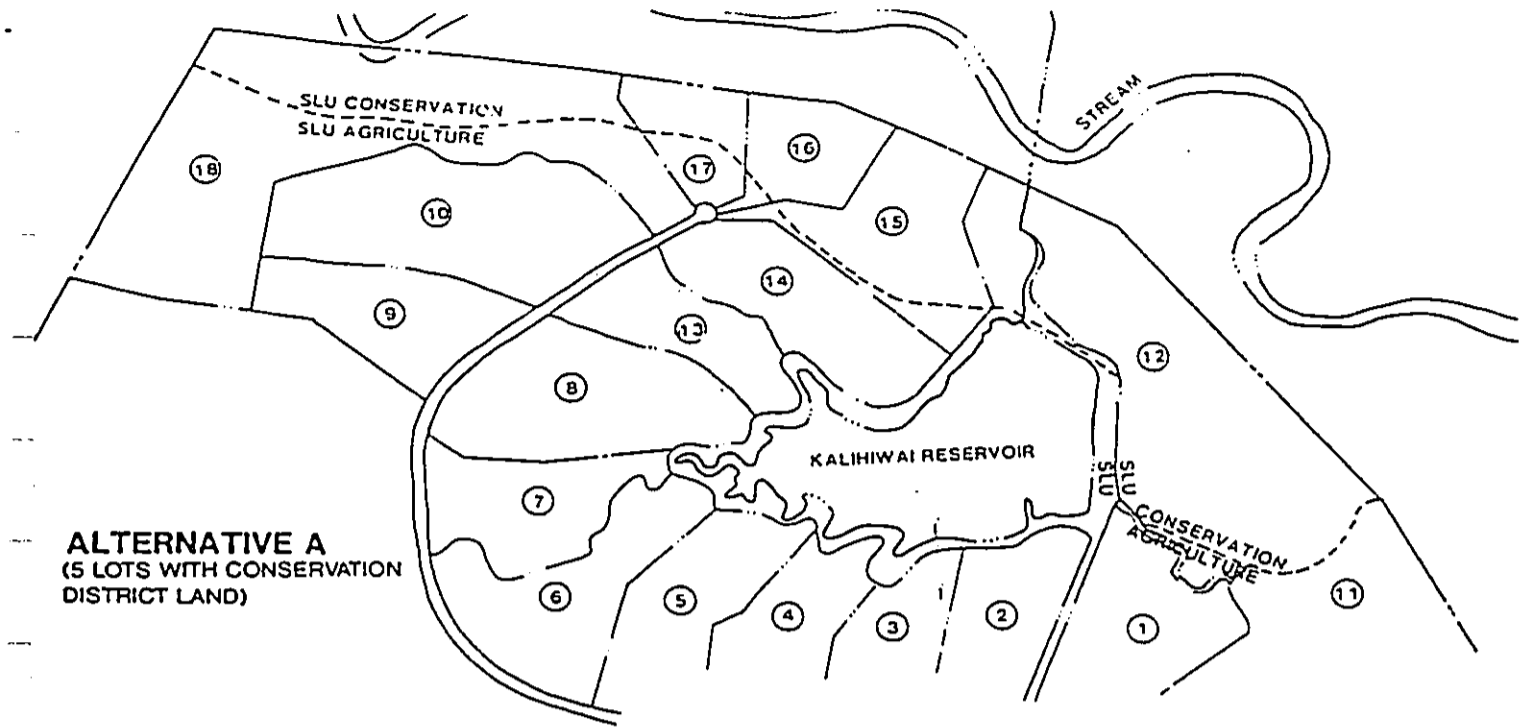
Alternative B:

Establish one adjacent or contiguous lot to include all Conservation District lands located within the subject agricultural subdivision as shown in Figure IIIB. This alternative places the Conservation District within one parcel whose boundary would also be defined by the Conservation District boundary.

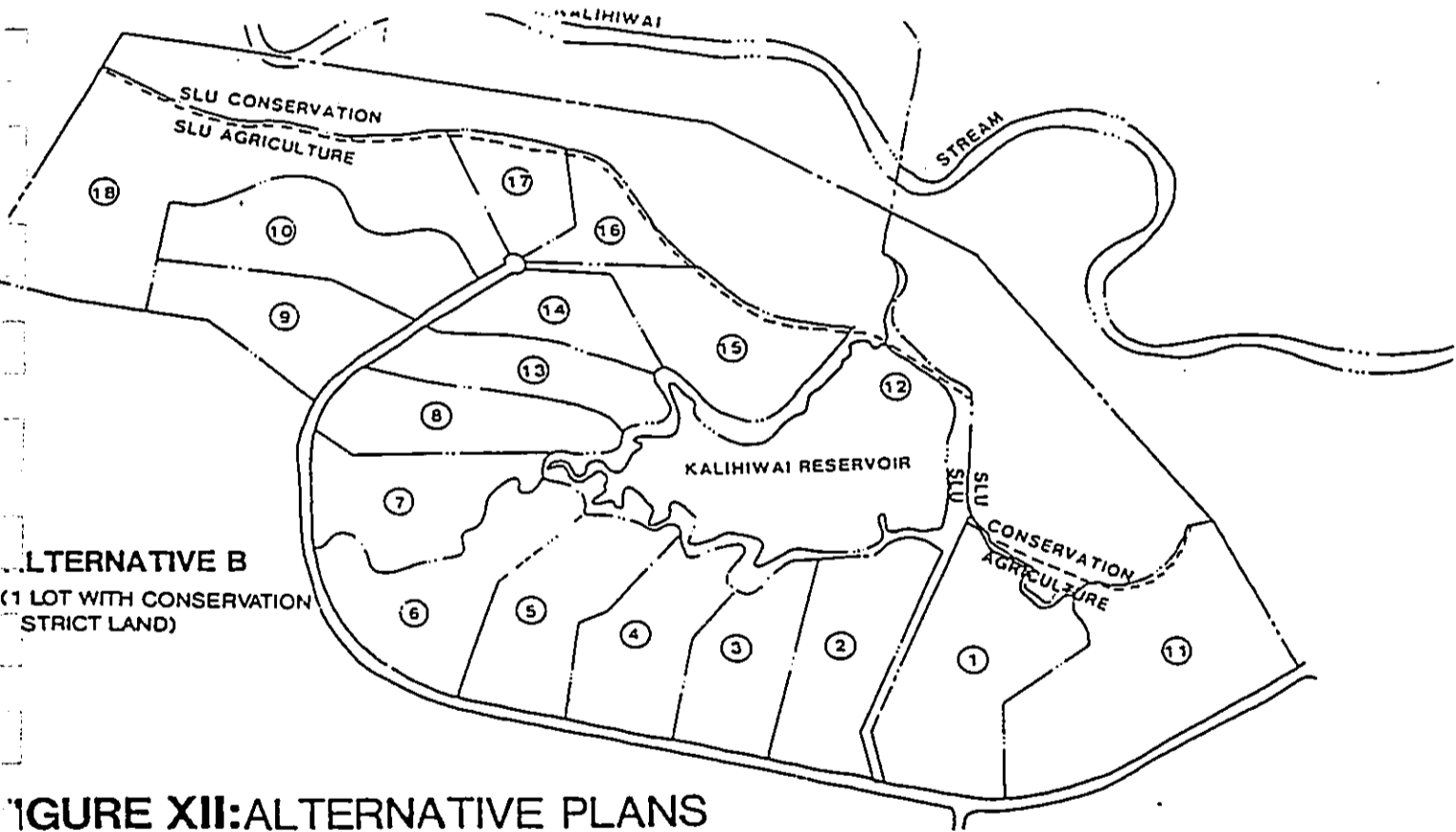
Although this alternative would eliminate the need for a Conservation District Use Permit, as none of the conservation lands would be subdivided or used for agricultural purposes, the resultant parcel configuration would be highly irregular. In addition, management of the Conservation land within this parcel (whether owned by an individual or an association of owners) would be difficult given: (1) the large size of the parcel, (2) the difficulty in monitoring and enforcing activities on a daily basis, and (3) the lack of access to the area that lies along the Pali edge behind other neighboring parcels.

Based on these considerations, Alternative A is the preferred plan due to the resultant lot configuration and ability for each lot owner adjacent to the Conservation District

ALTERNATIVE A
 (5 LOTS WITH CONSERVATION
 DISTRICT LAND)



ALTERNATIVE B
 (1 LOT WITH CONSERVATION
 STRICT LAND)



**FIGURE XII: ALTERNATIVE PLANS
 KALIHIWAI RIDGE-PHASE II**

LAUEA, KAUAI

KILAUEA AGRONOMICS, INC.



VI. SUMMARY OF MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

No significant impacts to the Conservation District lands are anticipated. Since the proposed agricultural subdivision would result in no physical changes or new land uses within the Conservation District, no specific mitigative measures are recommended. However, to ensure continued management of the Conservation District lands in a manner compatible with the intent of Conservation District regulations, deed restrictions applicable to the effected lots are needed.

As an example, sales contract provisions and deed restrictions as shown below would be incorporated for those lots that contain Conservation lands. These deed restrictions are identical to those imposed on Lots 1 to 14, inclusive, of the Kalihiwai Ridge Subdivision, Phase I. In addition to the deed restrictions and CDUA conditional approval, the physical nature of the terrain (over 30 percent slope) and the *clearly defined valley edge*, make it very unlikely from a physical standpoint that any significant alterations to the Conservation lands would be undertaken.

A. Deed Restriction

Grantee covenants for himself, his heirs, successors and assigns that he is aware of the existence and location of the conservation zoned portion of the land conveyed herein and agrees not to engage in any use or enhancement without first obtaining the prior written approval of grantor and then submitting required applications to the Board of Land and Natural Resources and obtaining its approval. Refer to Appendix B.

B. Sales Contract Provision

Buyer represents to Seller that he is aware of the existence and location of the conservation zoned portion of the land conveyed herein and agrees not to engage in any use or enhancement without first obtaining prior written approval of Grantor and then submitting the required applications to the Board of Land and Natural Resources and obtaining its approval. This provision will survive the closing date.

Note: The above conditions are identical to those used in similar Conservation District Use Permit (CDUA for the Kilauea Agricultural Subdivision, Kilauea, Kauai; File No.: KA-7/27/87-2064).

VII. DETERMINATION

As previously described, it has been determined that development of the vacant agricultural land into an agricultural subdivision appropriate for diversified agricultural uses, is not expected to have a "significant environmental effect" on the Property or surrounding environment.

As such, it is determined that the proposed project will not have a significant impact on the environment and that a negative declaration is appropriate. An Environmental Impact Statement (EIS), therefore, would not be required.

In considering the significance of potential environmental effects, the Applicant has evaluated the sum of effects on the quality of the environment and the overall cumulative effects of the proposed action. The Applicant has considered every phase of the proposed action, the expected consequences, both primary and secondary, and the cumulative as well as the short and long-term effect of the proposed action. As a result of these considerations, the Applicant has determined that:

- o The proposed action will not involve an irrevocable commitment to any significant natural or cultural resource;
- o The proposed action may increase the range of beneficial uses of the environment;
- o The proposed action appears to be in concert with the State's and County's long-term environmental policies, goals and guidelines;
- o The proposed action will not involve significant secondary impacts such as population changes or effects on public facilities that are not already contemplated;
- o The proposed action does not appear to include elements that would substantially affect public health or overall environmental quality;
- o The proposed action will not affect known rare, threatened or endangered species or habitats;
- o The proposed action will not detrimentally affect long-term air or water quality or ambient noise levels; and
- o The proposed action is individually limited and should not have a significant cumulative effect upon the environment or involve a significant commitment for larger actions.

In consideration of the findings derived from the preceding Environmental Assessment, it is concluded that the proposed limited subdivision of the Conservation District meets all applicable objectives of the Resource Subzone through deed restriction and sales contract provisions requiring grantor pre-approval and Conservation District Use Application processing for any use or enhancement within the subdivided Conservation District lands. As such, a finding of "no significant environmental impact" is therefore determined.

BIBLIOGRAPHY

Ahuimanu Productions, for U.S. Army Corps of Engineers, An Ornithological Survey of Hawaiian Wetlands, December 1977.

Bennett, Wendell C., Archaeology of Kauai, Bernice P. Bishop Museum, Bulletin 80, 1931.

Bingham Engineering, For Island Power Company, Inc., Hanalei River Hydroelectric Project, February 1987.

County of Kauai, Office of Economic Development, 1981 Kauai Statistical Review, 1981.

County of Kauai, for Kauai County Council, 1982 Kauai General Plan Update, June 1982.

EDAW Inc. and Muroda, Tanaka & Itagaki, Inc., for County of Kauai, Kauai General Plan, March 1970.

Planners' Collaborative, for County of Kauai, 1982 Kauai General Plan Update, June 1982.

State of Hawaii, Department of Land and Natural Resources, Conservation District Inventory, Island of Kauai, July 1977.

State of Hawaii, Department of Land and Natural Resources, State Historic Preservation Plan and Technical Reference Document, September 1980.

State of Hawaii, Department of Planning and Economic Development, Hawaii's Resources: Inventory and Policies, 1978.

State of Hawaii, Department of Planning and Economic Development, State Conservation Lands Plan and Technical Reference Document, September 1980.

State of Hawaii, Department of Planning and Economic Development, The State of Hawaii Data Book: 1982, November 1982.

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, Washington D.C.: U.S. Government Printing Office, August 1972.

U.S. Department of Agriculture, State of Hawaii, Department of Land and Natural Resources and the East Kauai Soil and Water Conservation District, Kilauea Agricultural Water Management Study Report, June 1984.

U.S. Department of Agriculture, Forest Service/Soil Conservation Service, Kilauea Agricultural Water Management Study Report, June 1984.

U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Boundary and Floodway Map: County of Kauai, undated.

U.S. Department of the Interior, Geological Survey, Summary of Available Data on Surface Water, State of Hawaii: Volume 1, Island of Kauai, Open File Report 81-1056; Honolulu, Hawaii; November 1981.

University of Hawaii, Department of Geography, Atlas of Hawaii, Honolulu: The University Press of Hawaii, 1983.

APPENDIX A
Archaeological Study



JOSEPH KENNEDY
Archaeologist

ARCHAEOLOGICAL CONSULTANTS
of
HAWAII

59-624 Pupukea Rd.
Haleiwa, Hawaii 96712
(808) 638-7442

Mr. Thomas Witten
PBR Hawaii
1042 Fort St. Suite 300
Honolulu, Hawaii 96813

April 2, 1990

RE: SURFACE RECONNAISSANCE OF 15 ACRES (TMK:5-2-02:10 por)
LOCATED AT KALIHIWAI RIDGE, KILAUEA, ISLAND OF KAUAI.

Dear Mr. Witten:

At the request of your office, Archaeological Consultants of Hawaii, Inc. has performed a reconnaissance of the property described above. For the purpose of this survey, the property was divided into four sections, A, B, C and D.

Area A is the lower north east area of the property. Here the ground is very wet, if not swampy due in part to the existence of a pipe existing from the hillside with a gate valve. Vegetation in this section consists of California grass, hau, mango and guava. No cultural features were present.

Area B is somewhat more clear than Area A and features an irrigation ditch along ridge west of reservoir. The only feature noticed was an irrigation pipe. Vegetation consisted of mango, java plumb and hau.

Area C, top of the property. Vegetation consists of sugarcane, lauhala, rose apple, bamboo and guava. No cultural features were observed.

Area D. Formerly a sugarcane field. Flat, obviously cleared by machine at some earlier date. Possible to see reservoir 300 meters away. No cultural features were observed.

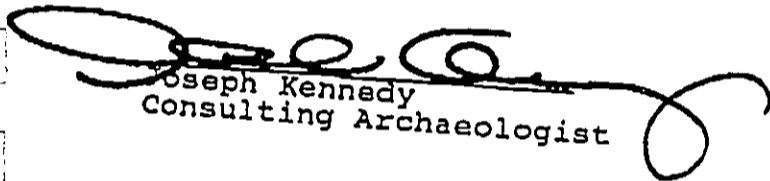
Informant testimony from Kilauea Agribusiness personnel indicated that all four survey sections were once in sugarcane. Our survey results seem to support this information.

T. Witten
4-2-90
Page 2.

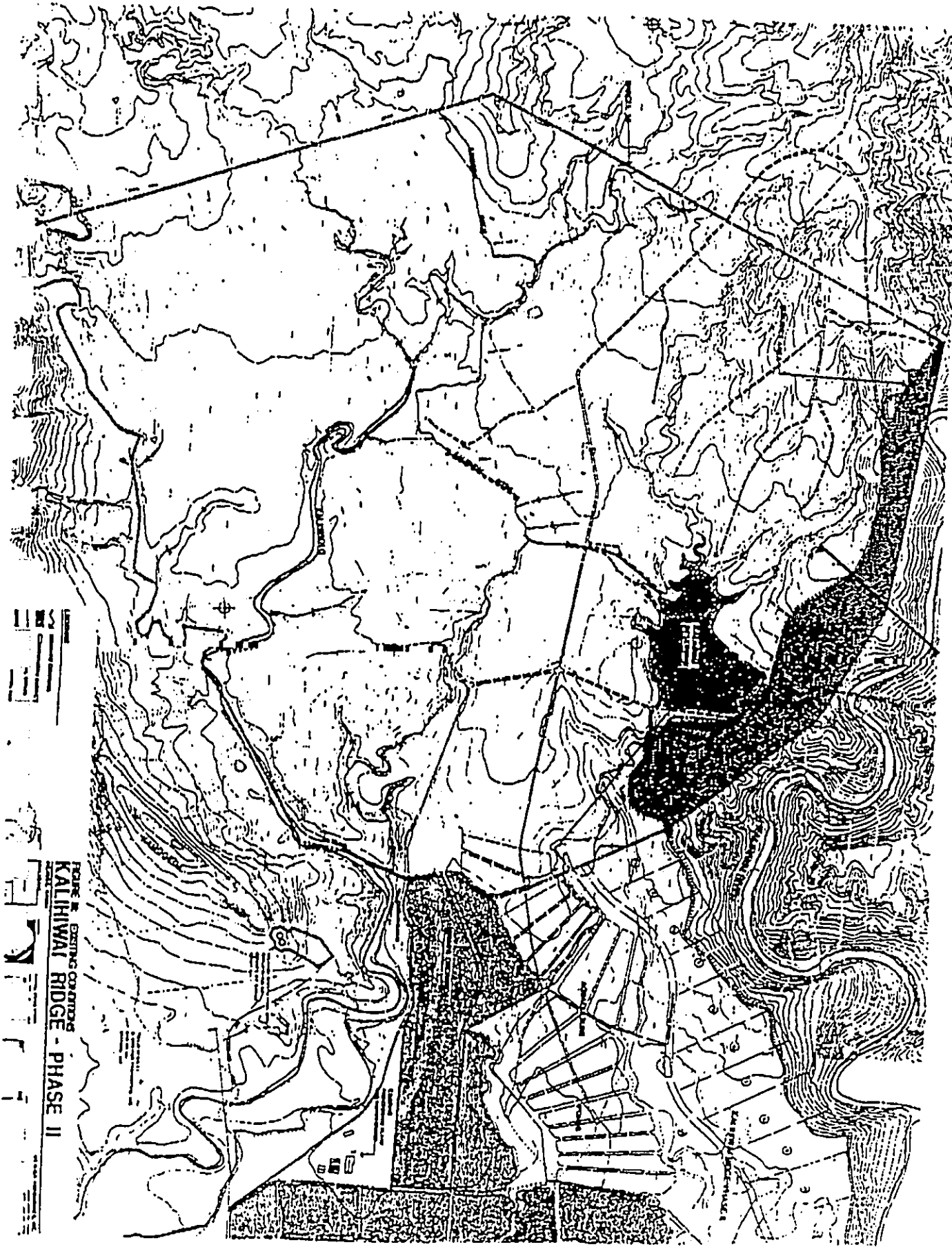
In sum then, no archaeological or historic surface features were noticed after a systematic search of the subject property. It is our opinion that no further archaeological work is necessary at this location.

If there are any questions regarding this report, please feel free to contact me.

Aloha,



Joseph Kennedy
Consulting Archaeologist



APPENDIX B
Proposed Deed Restrictions

RECORDATION REQUESTED BY:
C. BREWER PROPERTIES, INC.
P O. Box 1826
Honolulu, Hawaii 96805

RECORDATION RETURN TO:
C. BREWER PROPERTIES, INC.
P O. Box 1826
Honolulu, Hawaii 96805

Westworth 544-6231

RETURN BY: MAIL () PICK-UP (✓)

SEEK ORIGINAL OF THE DOCUMENT
RECORDED AS FOLLOWS:
STATE OF HAWAII

4.6 pg.1

OFFICE OF
BUREAU OF CONVEYANCES

Received for record this 11th
day of October, A.D. 1988
at 11:36 o'clock A.M.
Recorded at LHM 22452
486

SPACE ABOVE THIS LINE FOR REGISTRAR'S USE

DECLARATION AFFECTING CONSERVATION DISTRICT LANDS

THIS DECLARATION AFFECTING CONSERVATION DISTRICT LANDS is made as of the 3rd day of October, 1988, by C. BREWER PROPERTIES, INC., a Hawaii corporation, whose principal place of business is Suite 1700, 745 Fort Street, Honolulu, Hawaii 96813, and whose post office address is P.O. Box 1826, Honolulu, Hawaii 96805, hereinafter called "Declarant",

W I T N E S S E T H :

WHEREAS, Declarant owns certain real property situate at Kalihiwai, Hanalei, Kauai, Hawaii, upon which it intends to develop a subdivision known as the Kalihiwai Ridge Subdivision; and

WHEREAS, certain of the lots of the Kalihiwai Ridge Subdivision (the "Affected Lots"), as more particularly described in Exhibit A attached hereto and made a part hereof, contain areas which have been designated for conservation district use (the "Conservation Lands"); and

WHEREAS, the State of Hawaii, Board of Land and Natural Resources (the "Board") has approved a Conservation District Use Application for the subdivision and development of the Kalihiwai Ridge Subdivision, including the Affected Lots, upon the terms and conditions hereinafter set forth;

NOW, THEREFORE, Declarant hereby declares that each of the Affected Lots shall, at all times, be owned, held, used and occupied subject to the provisions of this Declaration and to the covenants, conditions and restrictions herein contained. Until such time as the Conservation Lands within an Affected Lot are classified to a land use district other than conservation, the covenants, conditions and restrictions set forth in this Declaration shall run with the Affected Lot and shall be binding upon all persons acquiring any right, title or interest therein or thereto and shall inure to the benefit of Declarant, the Department of Land and Natural Resources of the State of Hawaii (the "DLNR"), the Board, and the heirs, personal representatives, successors and assigns of each.

1. Any construction, alteration, moving, demolition and repair of any building or other improvement on the Conservation Lands shall be subject to the prior approval of the Board and shall also be subject to the building and grading codes of the County of Kauai. Prior to the commencement of any construction, alteration, moving, demolition and repair of any building or other improvement within the Conservation Lands, four (4) copies each of the final location map, plans, and specifications for such work shall be submitted to the Chairperson of the Board or his authorized representative for approval, of which three (3) copies will be returned.

2. Any work or construction to be done on the Conservation Lands will be initiated within one year after the approval of the Board, and all work and construction must be completed within three (3) years after the Board gives its approval.

3. If any unanticipated sites or remains of historic or prehistoric interest (such as shell, bone or charcoal deposits, human burials, rock or coral alignments, paving, or walls) are encountered during any construction on the Conservation Lands, all work shall immediately stop and the person undertaking such work shall immediately contact the Historic Preservation Office of the DLNR.

4. The use of the Conservation Lands shall at all times comply with all applicable public health regulations, and all applicable statutes, ordinances, rules and regulations of the federal, state, and county governments.

5. So long as this Declaration applies to any Affected Lot, each deed or other instrument conveying the Affected Lot or any portion thereof containing Conservation Lands shall contain and be subject to the following restrictions:

(a) "Grantee covenants for himself, his heirs, personal representatives, successors and assigns that he is aware of the existence and location of the conservation zoned portion of the land conveyed hereby and agrees that he will not engage in any use or enhancement thereof without the prior written approval of C. Brewer Properties, Inc. and the Board of Land and Natural Resources."

(b) "Grantee covenants for himself, his heirs, personal representatives, successors and assigns to indemnify and hold harmless the State of Hawaii and C. Brewer Properties, Inc. from and against any loss, liability, claim or demand for property damage, personal injury and/or death, arising out of any act or omission of the Grantee, his heirs, personal representatives, successors and assigns, or any officer, director, employee, contractor or agent of Grantee, relating to or connected with this Declaration Affecting Conservation District Lands or the development, improvement or use of the Conservation Lands."

6. The terms and conditions contained in this Declaration shall run with each Affected Lot and each portion thereof, until such term as the Conservation Lands within such Affected Lot or portion thereof shall be classified to a land use district other than conservation.

IN WITNESS WHEREOF, Declarant has executed this Declaration the day and year first above written.

C. BREWER PROPERTIES, INC.

By B.G. Munnihan
Its Senior Vice President

By [Signature]
Its Vice-President

STATE OF HAWAII)
) SS.
CITY AND COUNTY OF HONOLULU)

On this 3rd day of October, 1988,
before me appeared B. G. MOYNAHAN
and G. C. WENTWORTH
to me personally known, who, being by me duly sworn, did
say that they are Senior Vice President and
Vice-President, respectively, of
C. BREWER PROPERTIES, INC., a Hawaii corporation; that the
seal affixed to the foregoing instrument is the corporate
seal of said corporation; that said instrument was signed
and sealed in behalf of said corporation by authority of
its Board of Directors; and said B. G. MOYNAHAN
and G. C. WENTWORTH acknowledged
said instrument to be the free act and deed of said
corporation.

Helen L. Francis
Notary Public
State of Hawaii

My Commission expires: 8/18/92

EXHIBIT A

Those certain parcels of land situate at
Kalihiwai, Hanalei, Kauai, Hawaii, described as Lots 1 to
14, inclusive, of the Kalihiwai Ridge Subdivision, as
shown on File Plan 1934, recorded in the Bureau of
Conveyances of the State of Hawaii.

APPENDIX C
Botanical Assessment

CHAR & ASSOCIATES

Botanical/Environmental Consultants

4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

March 1990

BOTANICAL ASSESSMENT KALIHIWAI RIDGE PHASE II KILAUEA, HANAIEI DISTRICT, KAUA'I

C. Brewer Properties, Inc. plans to request a land use boundary amendment on approximately 15 acres of conservation land located along the bluff of their Kalihiwai Ridge Phase II property. The purpose of the amendment is to have the conservation district boundary follow the bluff edge consistent with the remainder of the property. The land use change is from "Conservation" to "Agricultural". The lands that are not usable (over the edge of the bluff) will remain in the conservation district and no improvements made.

An assessment of the botanical resources found on the ±15-acres proposed for land use change was conducted on 19 March 1990. The objectives of the field survey were to (1) describe the vegetation, and (2) search for threatened and endangered plant species protected by federal and state laws.

A walk-through survey method was used. Access was provided by a 4-WD road, starting from the Kalihiwai Reservoir boundary mauka to where the property adjoins a banana farm. Scientific names used in this report follow Lamoureux (1984) for the ferns and Wagner et al. (in press) for the flowering plants.

DESCRIPTION OF THE VEGETATION

At one time, sugar cane (Saccharum officinarum) was cultivated on this land and the adjacent gently sloping areas. The abandoned fields are now overgrown by weedy scrub vegetation and a few remnant patches of sugar cane can still be found in this scrub especially where it abuts the banana farm.

The open scrub is composed of shoebutton ardisia (Ardisia elliptica) and guava (Psidium guajava) shrubs, 12 to 15 ft. tall, with California grass (Brachiaria mutica) forming dense mats between the shrubs. In a number of places, however, California grass may be replaced by hairy sword fern (Nephrolepis multiflora). Other associates of the open scrub are scattered trees of guarumo (Cecropia obtusifolia), Java plum (Syzygium cuminii), and albizia (Paraserianthes falcataria), 18 to 25 ft. tall. Ferns such as uluhe (Dicranopteris linearis), neke (Cyclosorus interruptus), and wood fern (Christella parasitica) may be locally abundant. Common grasses and forbs include Hilo grass (Paspalum conjugatum), Glenwood grass (Sacciolepis indica), Ageratum houstonianum, sensitive plant or puahilahila (Mimosa pudica), pohekula (Centella asiatica), Pycneus polystachyos, spiked elephant's foot (Elephantopus spicatus), and Spanish clover (Desmodium incanum).

The 4-WD road running through portions of the +15-acre site is overgrown with ricegrass (Paspalum scrobiculatum). Other plants common on the road are dropseed (Sporobolus indicus), carpetgrass (Axonopus fissifolius), Ageratum, and Spanish clover.

A dense strawberry guava (Psidium cattleianum) forest with scattered trees of kukui (Aleurites moluccana), hala (Pandanus tectorius), guarumo, and Java plum is found along the bluff's edge. A few tall trees of 'ohi'a (Metrosideros polymorpha), 25 to 30 ft. tall, can be found just beyond where the bluff's edge

drops steeply into Kalihiwai Valley. In general, the forest is so dense that very little light reaches the forest floor and leaf litter and fallen branches predominate. The forest floor is sparsely vegetated with seedlings of strawberry guava and shoe-button ardisia. A few clumps of hairy sword fern and basketgrass (Oplismenus hirtellus) can be found where the canopy is more open.

DISCUSSION AND RECOMMENDATIONS

The land being proposed for the land use change consists of abandoned sugar cane fields now overgrown by introduced or alien shrubs and grasses. A few species native to the Hawaiian Islands can be found on the site, most are located on the bluff's edge. These are uluhe, 'ohi'a, hala, Pycneus, and ricegrass. None of these plants is an officially listed threatened and endangered species; nor are any proposed or candidate for such status (U. S. Fish and Wildlife Service 1985; Herbst 1987). All are found in similar environmental habitats throughout the islands. Only the 'ohi'a is endemic, that is, it is native only to the Hawaiian Islands. The others occur widely throughout the Pacific and the tropics.

Given the disturbed nature of the site, there is little of botanical interest or concern and the proposed change in land use is not expected to have a significant negative impact on the botanical resources. There are no botanical reasons to impose any restrictions, impediments, or conditions to this site.

References

- Herbst, D. 1987. Status of endangered Hawaiian plants. Hawaiian Botanical Society Newsletter 26(2): 44-45.
- Lamoureux, C. H. 1984. Checklist of Hawaiian Pteridophytes. Unpublished manuscript.

U. S. Fish and Wildlife Service. 1985. Endangered and threatened wildlife and plants; Review of plant taxa for listing as Endangered and Threatened Species; Notice of review. Federal Register 50(188): 39526-39527 plus 57-page table of species.

Wagner, W. L., D. R. Herbst, and S. H. Sohmer. In press. Manual of the flowering plants of Hawai'i. Univ. of Hawaii Press and B. P. Bishop Museum Press, Honolulu.

APPENDIX D
Avifauna and Feral Mammals Assessment

FIELD SURVEY OF THE AVIFAUNA AND FERAL
MAMMALS AT KALIHIWAI RIDGE, KAUAI

Prepared for

.PBR-Hawaii

By

Phillip L. Bruner
Assistant Professor of Biology
Director, Museum of Natural History
BYU-H
Laie, Hawaii 96762

12 March 1990

FIELD SURVEY OF THE AVIFAUNA AND FERAL
MAMMALS AT KALIHIWAI RIDGE, KAUAI

INTRODUCTION

The purpose of this report is to summarize the findings of a one day (8 March 1990) bird and mammal field survey conducted at Kalihiwai, Kauai (see Fig.1 for actual location of survey site). Also included are references to pertinent literature and unpublished reports on the fauna of similar habitats elsewhere on Kauai.

The objectives of the field survey were to:

- 1- Document what bird and mammal species occur on the property or may likely occur given the types of habitats available.
- 2- Provide some baseline data on the relative abundance of each species.
- 3- Suggest some possible changes that might occur in the faunal populations of this area should the habitat be altered from its present state.

GENERAL SITE DESCRIPTION

Kalihiwai Ridge is located on the N coast of Kauai (see Fig.1). The property is covered in dense second growth exotic forest with an understory of grass and fern. Some of the dominant trees on the property are: Guava (Psidium guajava), Java Plum (Syzygium cumini) and Umbrella or Octopus Tree (Brassaia actinophylla).

Weather during the field survey was cloudy with intermittent showers. Winds were gusty trades.

STUDY METHODS

Field observations were made with the aid of binoculars and by listening for vocalizations. Attention was also paid to the presence of tracks and scats as indicators of bird and mammal activity. A total of seven census or count stations (Fig.1) were established and eight minute counts were made of all birds seen or heard at these stations. These counts provide the basis for the abundance estimates given in this report. The abundance estimates are actually relative figures since these numbers represent only data from a single day at a particular time of the year and under a limited set of environmental conditions. Different data may be obtained at other times when some species are more vocal,

and hence detectable. Between these count stations additional observations of birds were also kept. Reports of birds in similar habitats elsewhere on Kauai were consulted in order to acquire a more complete picture of the species that might be expected in this area (Bruner 1979, 1985, 1986, 1988a, 1988b, 1989a, 1989b, 1989c; Pratt et al. 1987; Hawaii Audubon Society 1989).

Observations of feral mammals were limited to visual sightings and evidence in the form of scats and tracks. No attempts were made to trap mammals in order to obtain data on their relative abundance and distribution.

Scientific names used herein follow those given in the most recent American Ornithologist's Union Checklist (A.O.U. 1983), Hawaii's Birds (Hawaii Audubon Society 1989), A Field Guide to the Birds of Hawaii and the Tropical Pacific (Pratt et al. 1987), Mammal Species of the World (Honacki et al. 1982) and Tropical Trees of the Pacific (D. Hargreaves and B. Hargreaves 1970).

RESULTS AND DISCUSSION

Resident Endemic (Native) Birds:

The only endemic species recorded during the survey was the Hawaiian Duck or Koloa (Anas wyvilliana). Three Koloa were seen flying from the Kalihiwai River in the direction of the aquaculture ponds (see Fig.1). Koloa are more common on Kauai than elsewhere

in the State and they often occur in mountain streams as well as coastal wetlands. Other possible endemic birds which might be found in the area, although not recorded on this survey, include: Short-eared Owl (Pueo) (Asio flammeus sandwichensis) a bird which often hunts over forest and grasslands, Common Moorhen or Alae Ula (Gallinula chloropus sandvicensis), American Coot or Alae Ke'oke'o (Fulica americana alai) and Black-necked Stilt or Ae'o (Himantopus mexicanus knudseni). The Kalihiwai Reservoir and the surrounding wetlands offer foraging opportunities for waterbirds. The nearby aquaculture ponds also provides an attractive waterbird habitat.

Resident Indigenous (Native) Birds:

Two adult Black-crowned Night Heron or Aku'u (Nycticorax nycticorax) were observed along the southern edge of Kalihiwai Reservoir. Aku'u feed on a wide variety of prey including mice, frogs, fish, insects, prawns and young birds. This species is a common wetland bird which is not endangered and in fact has in the last few years probably experienced a recent growth in its population as a result of the development of the aquaculture industry. No other resident indigenous species would be expected at this site.

Migratory Indigenous (Native) Birds:

Four Pacific Golden Plover (Pluvialis fulva) were found along roads on the property. Plover prefer open areas such as mud flats,

exposed reefs, plowed fields, pastures and large lawn areas such as golf courses and parks. Johnson et al. (1981) and Bruner (1983) have shown plover are extremely site-faithful on their wintering grounds (returning each day and each year to the same spot and maintaining this behavior throughout their life time). Plover also establish foraging territories which they defend vigorously. Such behavior makes it possible to acquire a fairly good estimate of the abundance of plover in any one area. These populations likewise remain relatively stable over many years (Johnson et al. 1989).

No other migratory shorebirds were observed nor would any be expected.

Seabirds:

Red-footed Booby (Sula sula) and Wedge-tailed Shearwater (Puffinus pacificus) nest at Kilauea, Kauai. The endangered Newell's Shearwater or A'o (Puffinus newelli) nests in the mountains on Kauai. No seabirds were seen on this property.

Exotic (Introduced) Birds:

A total of 14 species of exotic birds were recorded during the field survey. Table One shows the relative abundance of these species. Some other species that could occur in the area but were not recorded on this survey include the Greater Necklaced Laughing-thrush (Garrulax pectoralis), Common Barn Owl (Tyto alba) and Chestnut Mannikin (Lonchura malacca).

Feral Mammals:

One feral cat was seen on the survey. Rats and mice were not observed but undoubtedly occur on the property. Without a trapping program it is difficult to conclude much about the relative abundance of rats, mice and cats at this site. However, it is likely that their numbers are not dramatically different from what one would find elsewhere on Kauai in similar habitats.

Records of the endemic and endangered Hawaiian Hoary Bat (Lasiurus cinereus semotus) are sketchy but the species does occur on Kauai (Tomich 1986). Little is known of their natural history, distribution and ecological requirements. No bats were recorded on this survey.

CONCLUSION AND RECOMMENDATIONS

A brief survey such as this one can at best provide a limited perspective of the wildlife present in the area. Not all species will necessarily be observed during the actual survey, in addition, the number of species and the relative abundance of each species may vary throughout the year due to available resources and reproductive success. Species which are migratory will quite obviously be a part of the ecological picture only at certain times only to later disappear or become a less significant part of the of the ecosystem (Williams 1987). Thus only long term studies can

provide the insights necessary to acquire a definitive perspective of the bird and mammal populations in a particular area. However, when brief field studies are compared with data gathered from other similar habitats the value of the conclusions which can be drawn are significantly increased.

In terms of broad conclusions related to bird and mammal populations found on the project site the following are offered:

- 1- The present environment at the project site provides a limited range of habitats which are utilized by the typical array of exotic birds one would expect at this elevation and in this type of disturbed habitat on Kauai. Populations (relative abundance) of exotic species in this area do not appear to differ dramatically from other surveys taken in similar habitat on the island of Kauai (Bruner 1985, 1986, 1988a, 1988b, 1989a, 1989b, 1989c).
- 2- Native species, both endemic and indigenous, were recorded on the survey. The species recorded and their relative abundance were within the limits of expectation for this site given the nature of the habitats available.
- 3- Clearing the land of the dense brush that covers the site would result in a decline in species which prefer thickets for cover and foraging. Such species include: Hwamei (Garrulax canorus), White-rumped Shama (Copsychus malabaricus) and

Japanese Bush-warbler (Cettia diphone). The creation of open short grass habitat would result in an increase in the number of Pacific Golden Plover and would permit the Western Meadowlark (Sturnella neglecta) to take advantage of this area.

- 4- In order to obtain more data on mammals, a trapping program would be required. The brief observations of this survey did not reveal any unusual mammal activity. The endemic and endangered Hawaiian Hoary Bat was not observed but potentially could occur in the area.

RECOMMENDATION

Kalihiwai Reservoir and surrounding wetlands including the nearby aquaculture ponds provide foraging and nesting opportunities for native waterbirds. Any development on the adjacent lands should recognize this potential and be designed in such a way as to avoid negative impacts to these wetlands. This would include pollution by pesticides and herbicides. Consultation with the appropriate state and federal agencies, ie. Fish and Wildlife Service, should be made in order to discuss and plan measures that would protect the wetland in this area.

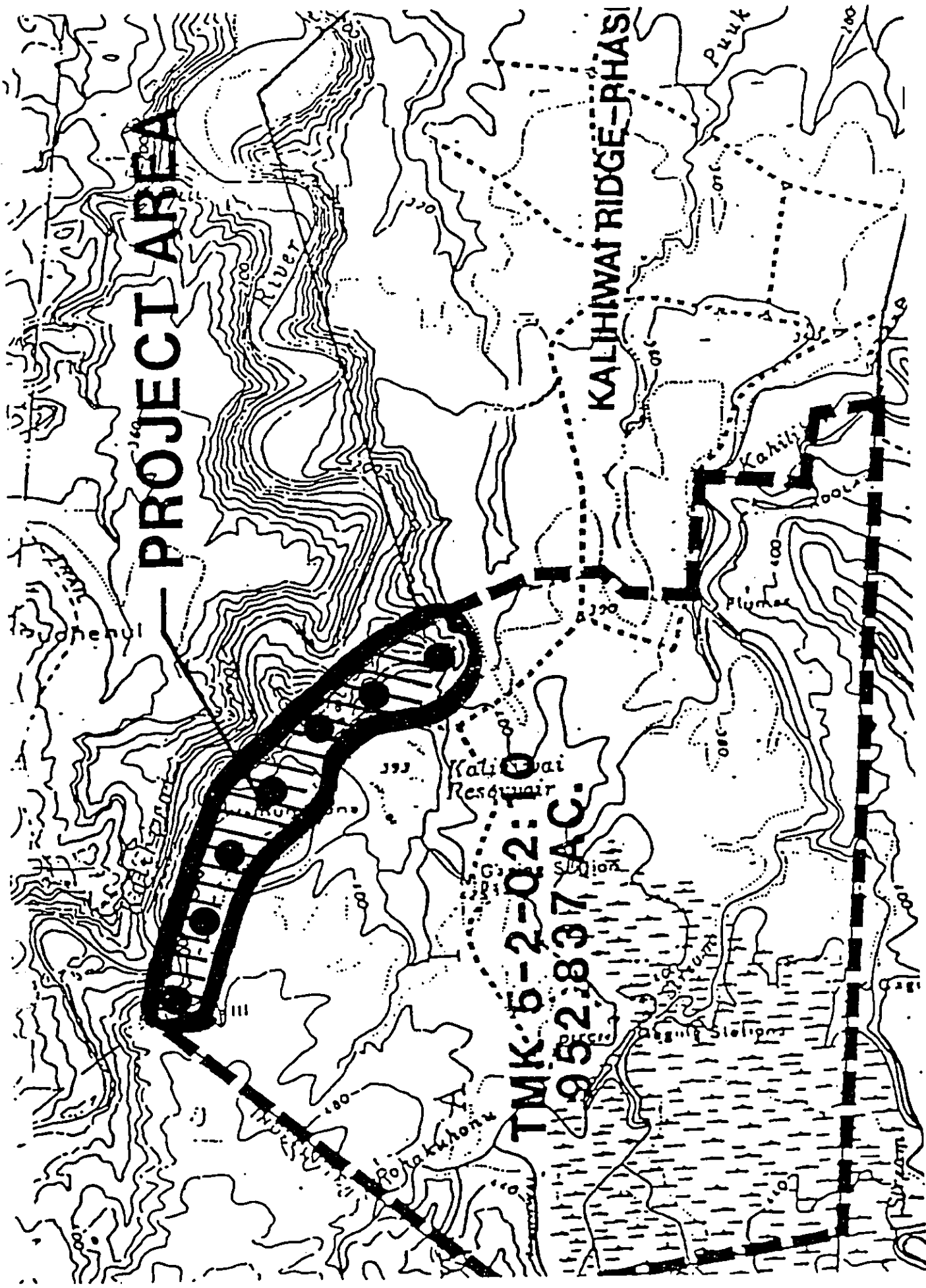


Fig. 1. Project area with eight minute count stations indicated by solid circles.

Relative abundance of exotic birds, Kalihiwai Ridge, Kauai

| COMMON NAME | SCIENTIFIC NAME | RELATIVE ABUNDANCE* |
|----------------------|-------------------------------|---------------------|
| Feral Chicken | <u>Gallus gallus</u> | R = 4 |
| Cattle Egret | <u>Bubulcus ibis</u> | C = 5 |
| Ring-necked Pheasant | <u>Phasianus colchicus</u> | R = 6 |
| Spotted Dove | <u>Streptopelia chinensis</u> | U = 4 |
| Zebra Dove | <u>Geopelia striata</u> | C = 7 |
| White-rumped Shama | <u>Copsychus malabaricus</u> | U = 3 |
| Hwamei | <u>Garrulax canorus</u> | A = 10 |
| Japanese Bushwarbler | <u>Cettia diphone</u> | A = 12 |
| Common Myna | <u>Acridotheres tristis</u> | C = 8 |
| Northern Cardinal | <u>Cardinalis cardinalis</u> | C = 6 |
| Red-crested Cardinal | <u>Paroaria coronata</u> | R = 4 |
| Japanese White-eye | <u>Zosterops japonicus</u> | A = 12 |
| House Finch | <u>Carpodacus mexicanus</u> | C = 9 |
| Nutmeg Mannikin | <u>Lonchura punctulata</u> | C = 6 |

* (see page 11 for key to symbols)

KEY TO TABLE 1

Relative abundance = Determined by frequency on eight minute counts in appropriate habitat. Number which follows is average of all counts over the course of the entire survey for that species in appropriate habitat.

A = abundant (ave. 10+)

C = common (ave. 5-10)

U = uncommon (ave. less than 5)

R = recorded but not on a count station (number which follows is total individuals recorded during entire field survey)

SOURCES CITED

- American Ornithologist's Union 1983. Check-list of North American Birds. 6th edition. American Ornithologist's Union, Washington, D.C.
- Bruner, P.L. 1979. An Avifaunal and bat survey of Phase II development project at Princeville, Kauai, Unpubl. ms.
- _____ 1983. Territorial behavior of wintering Pacific Golden Plover in Hawaii. ms. (Paper presented at the 100th meeting of the Amer. Ornith. Union).
- _____ 1985. An Avifaunal and feral mammal survey of the Foster Petroleum Corporation proposed Light Industrial Park property Trk 5-2-05 (Parcel 23, 24 and 40) Kilauea, Kauai, Unpubl. ms.
- _____ 1986. Faunal survey of Makaleha Valley, Kapaa, Kauai, Unpubl. ms.
- _____ 1988a. Survey of the avifauna and feral mammals for the Kauai Lagoon's proposed third golf course, Lihue, Kauai. Unpubl. ms.
- _____ 1988b. Field survey of the avifauna and feral mammals at Grove Farm Properties, Lihue/Puhi, Kauai. Unpubl. ms.
- _____ 1989a. Field survey of the avifauna and feral mammals at Puu Po'a Point. Princeville, Kauai. Unpubl. ms.
- _____ 1989b. Field survey of the avifauna and feral mammals at Princeville, Kauai. Unpubl. ms.
- _____ 1989c. Field survey of the avifauna and feral mammals at Moloa'a, Kauai. Unpubl. ms.
- Hawaii Audubon Society. 1989. Hawaii's Birds. Fourth Edition. Hawaii Audubon Society, Honolulu.
- Honacki, J.H., K.E. Kimman and J.W. Koeppl ed. 1982. Mammal species of the world: A taxonomic and geographic reference. Allen Press, Inc. and the Association of Systematic Collections, Lawrence, Kansas.
- Hargreaves, D. and B. Hargreaves. 1970. Tropical trees of the Pacific. Ross-Hargreaves. Lahaina, Hawaii.

- Johnson, O.W., P.M. Johnson and P.L. Bruner. 1981. Wintering behavior and site-faithfulness of Golden Plovers on Oahu. 'Elepaio 41(12):123-130.
- Johnson, O.W., M.L. Morton, P.L. Bruner and P.M. Johnson. 1989. Fat cyclicality, predicted migratory flight ranges and features of wintering behavior in Pacific Golden-Plovers. Condor 91:156-177.
- Pratt, H.D., P.L. Bruner and D.G. Berrett. 1987. A field guide to the birds of Hawaii and the tropical Pacific. Princeton Univ. Press.
- Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press, Honolulu.
- Williams, R.N. 1987. Alien Birds on Oahu, 1944-1985. 'Elepaio 47(9):87-92.

4.0 ADDITIONAL INFORMATION

SECTION 4.0

ADDITIONAL INFORMATION

PLAN DOCUMENTS

The following figures have been included in Section 3: Environmental Assessment to indicate the location, existing conditions, and ownership of the subject area and the proposed subdivision.

A. List of Figures

| <u>Figure</u> | <u>Description</u> | <u>Following Page No.</u> |
|---------------|--|-------------------------------|
| I | Island Location Map (scale: 1" = 3.0 miles) | 1 |
| II | State Land Use Boundary | 1 |
| III | Project Location Map (scale: 1" = 2,000') | 2 |
| IIIA | Existing Conditions (scale: 1" = 2,000') | 2 |
| IIIB | Proposed Reclassification Area | 2 |
| IV | Preliminary Subdivision Plan (scale 1" = 400') | 4 |
| V | Tentatively Approved Subdivision | 4 |
| VIA | Cross Section A-A (scale 1" = 200') | 5 |
| VII | Regulatory Classifications (scale: 1" = 200') | 12 |
| VIII | Site Photograph | 12 |
| IX | Soils | 12 |
| X | Agriculture Lands of Importance to State of Hawaii | 13 |
| XI | Land Study Bureau | 13 |
| XII | Alternative Plans | 19 |

CONSTRUCTION PLANS

No construction is proposed within the Conservation District of the subject project area.

MAINTENANCE PLANS

No activities or uses within the Conservation District are planned at this time; any future use or activity will be subject (through deed restriction) to a Conservation District Use Application and approval of the Board of Land and Natural Resources.

MANAGEMENT PLANS

The management of the resource subzone will be accomplished by restricting any activities within the Conservation District through a deed restriction that would clearly define the limits of the Conservation District.

SUBZONE OBJECTIVES

In accordance with Title 13-2-13 of the Administrative Rules of the Department of Land and Natural Resources, "the objective of the Resource subzone is to ensure sustained use of the natural resources of those areas." Inasmuch as the proposed subdivision will result in no significant physical changes to the Conservation District Subzone R, the proposed action is consistent with objective of the Conservation subzone as described.

DEED RESTRICTION EXHIBIT

See Section 3.0, Environmental Assessment, Appendix B.

5.0 BIBLIOGRAPHY

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Ahuimanu Productions, for U.S. Army Corps of Engineers, An Ornithological Survey of Hawaiian Wetlands, December 1977.

Bennett, Wendell C., Archaeology of Kauai, Bernice P. Bishop Museum, Bulletin 80, 1931.

Bingham Engineering, For Island Power Company, Inc., Hanalei River Hydroelectric Project, February 1987.

County of Kauai, Office of Economic Development, 1981 Kauai Statistical Review, 1981.

County of Kauai, for Kauai County Council, 1982 Kauai General Plan Update, June 1982.

EDAW Inc. and Muroda, Tanaka & Itagaki, Inc., for County of Kauai, Kauai General Plan, March 1970.

Planners' Collaborative, for County of Kauai, 1982 Kauai General Plan Update, June 1982.

State of Hawaii, Department of Land and Natural Resources, Conservation District Inventory, Island of Kauai, July 1977.

State of Hawaii, Department of Land and Natural Resources, State Historic Preservation Plan and Technical Reference Document, September 1980.

State of Hawaii, Department of Planning and Economic Development, Hawaii's Resources: Inventory and Policies, 1978.

State of Hawaii, Department of Planning and Economic Development, State Conservation Lands Plan and Technical Reference Document, September 1980.

State of Hawaii, Department of Planning and Economic Development, The State of Hawaii Data Book: 1982, November 1982.

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, Washington D.C.: U.S. Government Printing Office, August 1972.

U.S. Department of Agriculture, State of Hawaii, Department of Land and Natural Resources and the East Kauai Soil and Water Conservation District, Kilauea Agricultural Water Management Study Report, June 1984.

U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Boundary and Floodway Map: County of Kauai, undated.

U.S. Department of the Interior, Geological Survey, Summary of Available Data on Surface Water, State of Hawaii: Volume 1, Island of Kauai, Open File Report 81-1056; Honolulu, Hawaii; November 1981.

University of Hawaii, Department of Geography, Atlas of Hawaii, Honolulu: The University Press of Hawaii, 1983.

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)
C. BREWER PROPERTIES, INC.)
To Amend the Land Use District)
Boundary to Reclassify Approxi-)
mately 19.0 Acres from the)
Conservation District to the)
Agricultural District at Kalihiwai,)
Kilauea, Kauai, Hawaii, Tax Map)
Key No.: 5-2-02: Portion 10)

DOCKET NO. A90-661

C. BREWER PROPERTIES,
INC.

This is to certify that this is a true and correct
copy of the document on file in the office of the
State Land Use Commission, Honolulu, Hawaii.

OCT 17 1990

Date

by *[Signature]*
Executive Officer

FINDINGS OF FACT, CONCLUSIONS OF LAW
AND DECISION AND ORDER FOR A DETERMINATION OF A
NEGATIVE DECLARATION FOR A STATE LAND USE
DISTRICT BOUNDARY AMENDMENT

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STATE OF HAWAII

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

| | | |
|-------------------------------------|---|-----------------------|
| In the Matter of the Petition of |) | DOCKET NO. A90-661 |
| C. BREWER PROPERTIES, INC. |) | C. BREWER PROPERTIES, |
| |) | INC. |
| To Amend the Land Use District |) | |
| Boundary to Reclassify Approxi- |) | |
| mately 19.0 Acres from the |) | |
| Conservation District to the |) | |
| Agricultural District at Kalihiwai, |) | |
| Kilauea, Kauai, Hawaii, Tax Map |) | |
| Key No.: 5-2-02: Portion 10 |) | |

FINDINGS OF FACT, CONCLUSIONS OF LAW
AND DECISION AND ORDER FOR A DETERMINATION OF A
NEGATIVE DECLARATION FOR A STATE LAND USE
DISTRICT BOUNDARY AMENDMENT

The Land Use Commission (hereinafter referred to as "LUC"), having examined the environmental assessment filed by C. Brewer Properties, Inc. (hereinafter "Applicant") on September 11, 1990, at its meeting of September 27, 1990, in Kahului, Maui, hereby makes the following Findings of Fact, Conclusions of Law and Decision and Order:

FINDINGS OF FACT

DESCRIPTION OF THE AFFECTED PROPERTY AND PROPOSED ACTION

1. The subject property consists of approximately 19.0 acres and is designated within the State Land Use Conservation District.
2. The subject property is identified as Kauai Tax Map Key Number: 5-2-02: portion of 10 (hereinafter the "Property").

3. The Property is located mauka of Kuhio Highway at Kilauea, abutting and overlooking Kalihiwai River Valley. The Kalihiwai Reservoir lies to the southeast of the Property.

4. The Property is adjacent to an existing agricultural subdivision to the north, agricultural lands owned by Kilauea Agronomics, Inc. to the east and a guava orchard and processing plant and visitor center also to the north.

5. Kilauea Agronomics, Inc. owns the Property in fee and has authorized Applicant to file a petition for a land use district boundary amendment.

6. Formerly used by Kilauea Plantation for sugar cultivation, the Property is presently vacant and overgrown.

7. The elevation of the Property ranges from 390 to 495 feet above mean sea level.

8. The slope is generally between 0% to 20% throughout the Property with steeper areas along the edge of Kalihiwai River Valley.

9. The existing drainage pattern for the Property is towards Kalihiwai River. The Property is not within any flood zone.

10. Rainfall for the area averages between 100 and 110 inches per year.

11. The predominant soil for the area is identified by the U.S. Soil Conservation Service as Pooku silty clay which is characterized as drained soil located on uplands and used for pasture and sugarcane cultivation.

12. The Property consists of abandoned sugarcane fields now overgrown by introduced or alien shrubs and grasses. A few species native to the Hawaiian Islands can be found on the site, mostly located on the bluff's edge. These are uluhe, 'ohi'a, hala, Pycneus, and ricegrass. None of these plants are an officially-listed threatened and endangered species; nor are any proposed or candidates for such status.

13. The only endemic fauna species recorded during a field survey of the Conservation District was the Hawaiian Duck or Koloa. The Koloa is more commonly seen on Kauai than elsewhere in the State, and can often be seen in mountain streams as well as coastal wetlands. Other possible endemic birds may also be found in the area but were not sighted during the survey. There are no endemic amphibians, land reptiles, or mammals in the Hawaiian Islands. No endangered fauna were found on the Property.

14. An archaeological survey of the Property identified no archaeological or historic surface features in evidence. Additionally, there are no currently known archaeological sites within the project area.

15. Petitioner seeks reclassification of the subject Property and proposes that the property constitute a portion of an agricultural subdivision with the balance of the subdivision to remain within the Agricultural District.

IMPACTS OF THE PROPOSED ACTION

16. Applicant indicates that according to the environmental assessment (EA) prepared for the project, no significant topographical alterations are planned that would significantly modify existing drainage patterns. All drainage improvements will be designed in compliance with applicable County of Kauai standards.

17. The EA concludes that long term air and noise quality will not be significantly impacted by the proposed subdivision.

18. With respect to water supply, sewer, roadways, traffic, solid waste, and utilities, the EA concludes that the proposed project will be in compliance with applicable state and county standards and that no adverse impacts are anticipated on these services.

PROCEDURAL MATTERS

19. Applicant filed its Petition for district boundary amendment and its EA on September 11, 1990.

20. On September 27, 1990, the LUC conducted a meeting on the matter. The County of Kauai took no position on Petitioner's request to approve a negative declaration and the Office of State Planning did not oppose Petitioner's request.

21. At its meeting of September 27, 1990, the LUC determined that an Environmental Impact Statement is not required and accepted Applicant's Environmental Assessment.

CONCLUSIONS OF LAW

Pursuant to Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Hawaii Administrative Rules, entitled "Environmental Impact Statement Rules," the LUC concludes that the proposed action does not require an Environmental Impact Statement.

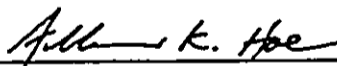
ORDER

IT IS HEREBY ORDERED that the proposed action by Applicant, C. Brewer Properties, Inc., in Docket No. A90-661, be and the same is hereby declared not to require an Environmental Impact Statement pursuant to Chapter 343, Hawaii Revised Statutes and Chapter 200 of Title 11, Hawaii Administrative Rules, entitled "Environmental Impact Statement Rules."

IT IS FURTHER ORDERED that the Petition be accepted for filing as of September 27, 1990.

Done this 17th day of October 1990 per motion of September 27, 1990 at Honolulu, Hawaii.

LAND USE COMMISSION
STATE OF HAWAII


By ALLEN K. HOE
Its Acting Chairman

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of) DOCKET NO. A90-661
C. BREWER PROPERTIES, INC.) C. BREWER PROPERTIES,
To Amend the Land Use District) INC.
Boundary to Reclassify Approxi-)
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Agricultural District at Kalihiwai,)
Kilauea, Kauai, Hawaii, Tax Map)
Key No.: 5-2-02: Portion 10)

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Findings of Fact, Conclusions of Law and Decision and Order for a Determination of a Negative Declaration for a State Land Use District Boundary Amendment was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by certified mail:

HAROLD S. MASUMOTO, Director
Office of State Planning
State Capitol, Room 410
Honolulu, Hawaii 96813

CERT. PETER A. NAKAMURA, Planning Director
Planning Department, County of Kauai
4280 Rice Street
Lihue, Hawaii 96766

CERT. MICHAEL BELLES, ESQ.
County Attorney
Office of the County Attorney
County of Kauai
4396 Rice Street, #202
Lihue, Hawaii 96766

CERT. WALTON D. Y. HONG, ESQ., Attorney for Petitioner
P. O. Box 1727
Lihue, Hawaii 96766

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
465 South King Street, Room 104
Honolulu, Hawaii 96813

DATED: Honolulu, Hawaii, this 17th day of October 1990.


ESTHER UEDA
Executive Officer