

BENJAMIN J. CAYETANO
Governor of Hawaii



174
Chairperson
MICHAEL D. WILSON
Board of Land and Natural Resources

Deputy Director
GILBERT COLOMA-AGARAN

Aquaculture Development
Aquatic Resources
Boating and Ocean Recreation
Bureau of Conveyances
Conservation and Environmental Affairs
Conservation and Resources Enforcement
Forestry and Wildlife
Historic Preservation
Land Management
State Parks
Water and Land Development

STATE OF HAWAII

'95 JAN 23 DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. Box 621
Honolulu, Hawaii 96809

REF: OCEA:SKK

JAN 20 1995

FILE NO.: KA-2743
I.D. NO.: 1709

MEMORANDUM

TO: Mr. Gary Gill, Director
Office of Environmental Quality Control

FROM: Honorable Michael D. Wilson, Chairperson
Department of Land and Natural Resources *Michael D. Wilson*

Subject: Negative Declaration for the Allerton Gardens at Lawai, Kauai
(Tax Map Key: 2-6-2: 1,4,5 & 6)

The Department of Land and Natural Resources has reviewed the comments received during the 30-day public comment period which began on October 23, 1994. We have determined that this project will not have significant environmental effect and have issued a negative declaration. Please publish this notice in the OEQC Bulletin as soon as possible.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA. Please contact Cathy Tilton of our Office of Conservation and Environmental Affairs at 587-0377, if you have any questions.

Enclosures

~~1995-02-08 - Allerton Gardens - Conservation District Use~~ FEB 8 1995

~~KA-~~
1995-02-08 - KA-^{PLANNER}FEA - Allerton Gardens Conservation District Use

FINAL ENVIRONMENTAL ASSESSMENT
OF THE
NATIONAL TROPICAL BOTANICAL GARDEN'S
USE OF THE
ALLERTON GARDENS
December 1994

DLNR
OCEA

94 DEC 19 AM 9:38

RECEIVED

FINAL ENVIRONMENTAL ASSESSMENT
OF THE
NATIONAL TROPICAL BOTANICAL GARDEN'S
USE OF THE
ALLERTON GARDENS
December 1994

TABLE OF CONTENTS

FINAL ENVIRONMENTAL ASSESSMENT

- IDENTIFICATION OF APPLICANTS 4
- IDENTIFICATION OF APPROVING AGENCY 4
- IDENTIFICATION OF AGENCIES CONSULTED4
- GENERAL DESCRIPTION OF ACTION'S TECHNICAL, ECONOMIC
SOCIAL, AND ENVIRONMENTAL CHARACTERISTICS 6
- SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT,
INCLUDING SUITABLE AND ADEQUATE LOCATION AND SITE MAPS ... 13
- IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS 15
- ALTERNATIVES CONSIDERED IF ANY 16
- PROPOSED MITIGATION MEASURES 16
- DETERMINATION17
- REASONS AND FINDINGS SUPPORTING DETERMINATION17
- AGENCIES TO BE CONSULTED IF AN EIS IS PREPARED17

MASTER CDUA EXHIBITS 1 - 25
(See Exhibit section for list of exhibits)

MASTER CDUA APPENDICES 1 - 6
~~(Appendix 6 contains the Draft EA Comments and Responses.)~~
See Appendices section for a complete list of all appendices)

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUAI
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

V. ENVIRONMENTAL REQUIREMENTS

1. Identification of applicants:

The applicant is the National Tropical Botanical Garden (NTBG). The NTBG is a non-profit organization chartered in 1964 by the 88th Congress of the United States (Public Law 88-449) to create a national resource in tropical horticulture and botany. In part, the NTBG's Congressional Charter requires them to "... operate and maintain for the benefit of the people of the United States and educational and scientific center in the form of tropical botanical gardens or gardens." The NTBG has used the subject property as an educational and research area since 1970, and today, according to the wishes of the late John Gregg Allerton, the NTBG manages the subject property as an integral part of the NTBG for the Trustees of the Allerton Gardens Trust (the landowners).

Contact person for this CDUA is Charles R. Wichman, Jr.

Charles R. Wichman, Jr.
National Tropical Botanical Garden
P.O. Box 808
Hanalei, Kaua'i, Hawai'i 96714

Phone (808) 826-5547; Fax (808) 826-4759

2. Identification of approving agency:

Department of Land and Natural Resources (DLNR) of the State of Hawaii.

3. Identification of agencies consulted in making assessment:

As part of the NTBG's preparation of this CDUA (in compliance with HRS 11-200-9) the following agencies, organizations, and individuals have been consulted and commented on the NTBG's plans to continue to use this area as they have for the past twenty plus years, and to use portions of existing roads on the subject property as part of a new visitor access route from their new visitors center which will be located outside the Conservation District on land currently owned by Alexander and Baldwin (A&B.). The comments received from these reviewers were used by the NTBG to fully develop their plans and this CDUA.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

State Government

Mr. Sam Lee, DLNR, Division of Land Management
Mr. Mike Laureta, DLNR, Division of Aquatic Resources
Ms. Nancy McMahon, DLNR, Historic Preservation Division
Ms. Esther Ueda, State Land Use Commission
Mr. Fred Talon, State Land Use Commission

County Government

Office of Emergency Permitting
Public Works Department; Road Construction and Maintenance Division
Water Department
Planning Department

Private Sector

Mr. Bill Balfour, Manager of McBryde Sugar Company
Mr. William Campbell, Manager of Kukui'ula Development Company Inc.
Mr. Tom Shigemoto, A&B Hawaii Inc.
Mr. Philip Moravcik, Department of Water Resources, UH Manoa
Dr. Teena Michael, Department of Botany, UH Manoa
Mr. Dan Coleman, Na Lima Kokua
Koloa Community Association
Sierra Club, local chapter
Poipu Rotary

Professional Consultants

Mr. Geoffrey Rausch	Environmental Planning and Design; Master Planners
Ms. Missy Marshall	Environmental Planning and Design; Master Planners
Mr. Tom Witten	PBR Hawaii; Land Use Planners/Landscape Design
Mr. Stan Duncan	PBR Hawaii; Land Use Planners/Landscape Design
Mr. Peter Taylor	P. N. Taylor Inc.; Civil Engineers/Surveyors
Mr. Fred Snyder	Snyder & Associates; Geotechnical Engineers
Mr. Steve Seiler	Landscape Architect; Land Use Planning/Permits
Mr. Uwe Schulz	UH. Schulz and Associates; Historical Architects
Mr. Don Wilson	Attorney at Law; Legal Counsel

In-house Consultants

Mr. Holbrook Goodale	NTBG; Vice Chair, Board of Trustees / Resident
Dr. William Klein, Jr.	NTBG; Executive Director
Dr. Diane Ragone	NTBG; Director of Horticulture and Senior Curator
Dr. David Lorence	NTBG; Director of Research
Mr. Scott Sloan	NTBG; Superintendent Lawai and Allerton Gardens
Mr. Richard Hanna	NTBG; Aquatic Biology / Research
Ms. Colleen Lopez	NTBG; Education Chair

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

Mr. Timothy Flynn	NTBG; Assistant Botanist
Mr. Charles Wichman	NTBG; Limahuli Gardens; CDUA / SMA Permits
Mr. Jerry Schultz	NTBG; Facilities Development
Mr. Hideo Teshima	Allerton Gardens; Manager / Historical Background

4. General description of the action's technical, economic, social, and environmental characteristics:

General Background Information

The applicants are requesting permission to continue to use the Allerton Gardens as an educational and research area, as they have since the NTBG was located in the Lawai valley in 1970. In addition to this historical use, the applicants are requesting the use of existing roads on the subject property to create a new visitor access route into the Lawai valley for the NTBG's visitors (Exhibits 1 & 9).

In 1938, the mouth of the Lawai valley (known historically as Lawai-kai), including the off-shore fishing rights (known as the *konohiki* rights to the Lawai Fishery), was purchased by the late Robert Allerton and his adopted son John Gregg (Exhibit 21). They continued to develop the gardens that had previously been started first by Queen Emma in the mid 1800's and Alexander McBryde in the early 1900's. Over the years the Allertons created what is today a world renown garden considered by experts to be a masterpiece of landscape design (Exhibit 2).

The Allertons have always been considered as two of the greatest supporters and founders of the NTBG. They were instrumental in lobbying the United States Congress to establish the NTBG in 1964 via Public Law 88-449 and in late 1964 they donated one million dollars to the newly created organization for land acquisition (Exhibit 3). It was with the Allertons' generous donation that nearly 200 acres of land in the Lawai valley, adjacent to and mauka (north) of Lawai-kai, were purchased and ground was broken for the NTBG on January 1, 1970 (Exhibit 1).

It was no accident that the NTBG was situated adjacent to Lawai-kai. Although, Robert Allerton passed away in December 1964, John Gregg Allerton always considered Lawai-kai as an integral part of the NTBG and used the estate to host many garden functions over the years (Exhibit 4). Visitors to the NTBG were considered as his guests and given regular tours of the estate. John Gregg Allerton recognized that the future development of a world-class botanical garden next to their estate would create a symbiotic relation between the two gardens that would prove beneficial to both.

In 1986, John Gregg Allerton passed away and left Lawai- Kai in trust to the First National Bank of Chicago (hereafter referred to as "the bank" or the "trustee"). He did this because he wished Lawai-kai to remain its own distinct entity with its own independent funding and management guidelines. It was also his intention that Lawai-

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

kai continue its relationship as an integral part of the NTBG by continuing to be used as an educational area for the NTBG's visitors and a research area for the NTBG's scientists. To facilitate his wishes, in his will Mr. Allerton instructed the "Trustee" (the bank) to create the Allerton Garden Trust which, among other things, would hold the Lawai-kai estate subject to several conditions. (Since the Allertons' acquisition of Lawai-kai, the name Allerton Gardens has become synonymous with Lawai-kai.) These conditions include, but are not limited to the following:

"... 2. Allerton Gardens shall be maintained by the Trustee as a garden for the education of the public and for botanical research. Allerton Gardens shall not be used as a public park or recreation area but shall be open to the public (at such time as the Trustee shall determine) for the enjoyment and education of those of the public who shall be interested in botanical gardens. An admission charge may be made to help defray the expenses of guides and other personnel necessary to protect Allerton Gardens. The Trustee may permit Allerton Gardens to be used for botanical research by such individuals or institutions as it shall deem advisable.

3. I direct that the Trustee shall maintain the Garden with as high a degree of care as they have been maintained by my father and me. I desire that neither the public use of the Gardens or its use for botanical research shall be allowed to interfere with or detract from the appearance of the Gardens as presently established. ..." (excerpts from Article IV, Section (b) of the WILL OF JOHN WYATT GREGG ALLERTON)

Mr. Allerton further instructed the bank that because they were so remote from the Lawai-kai estate that they could enter into a management agreement, or agreements, so that the Allerton Gardens would be used and kept the way he and his father had intended. He specifically stated that, should they do so, they should first consider the NTBG. According to Mr. Allerton's wishes, the bank has entered into a management agreement with the NTBG, for the preservation and use of this valuable resource area according to the conditions set forth in Mr. Allerton's will (Exhibit 5).

While Mr. Allerton clearly wanted the Allerton Gardens to be used as an educational and scientific resource, he was also very clear about not wanting it to be opened without any control to the public at large. He felt then, as does the NTBG and Allerton Garden Trust, that uncontrolled public access to Allerton Gardens would eventually ruin the beauty and unique attributes that the area had come to be known for. It is for this reason that the NTBG, in accordance with the management agreement with the Trustee, has carefully controlled visitor access to Allerton Gardens and Lawai beach for the last eight years.

On September 11, 1992, Hurricane Iniki devastated Kaua'i. The NTBG and Allerton Gardens were both severely hit causing millions of dollars worth of damage to both the

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

facilities and the grounds and disrupting the normal operations of the NTBG. Even now, after two years of struggling to recover, the NTBG has not yet been able to reopen its Gardens to the public or resume its educational intern program. Primarily this is due to the fact that the NTBG's visitors center and intern housing site, known as Kumuokalani (Kumu for short), suffered irreparable damage. For a number of safety and logistical reasons it was decided not to rebuild these facilities on the Kumu site. The Kumu site had never served as a good entrance to the gardens due to the steep and dangerous access road that descended into the valley from that site (Exhibits 1 & 6). Also, the Kumu site was located on land that was leased from A&B and indications were that A&B wanted the land returned in the near future.

In the spring of 1993, under the direction of Acting Director Marc Code (the NTBG's Director Dr. William Theobald had suffered a severe stroke in July 1992 just two months before Hurricane Iniki hit Kaua'i), the NTBG applied for and received the necessary permits from the County of Kaua'i to build a temporary visitors center and parking lot near its administrative buildings located on the west side of the valley at the end of Papalina Road. Although this facility was permitted it was never built.

In January 1994, after the NTBG completed a national search for a new director, Dr. William McKinley Klein, Jr. arrived to take the helm of the NTBG. Dr. Klein brought with him a lifetime of experience in managing scientifically oriented botanical gardens. Prior to coming to the NTBG Dr. Klein served as Director at the Fairchild Tropical Garden in Miami, Director of the Morris Arboretum at the University of Pennsylvania, and Assistant director at the Missouri Botanical Garden.

Upon his arrival, Dr. Klein immediately recognized the need to reopen the Gardens to the public, however he was certain that locating the temporary visitors center at the end of Papalina Road was not an appropriate solution. Papalina Road is a narrow road that winds its way through a quite neighborhood (Exhibit 7). Bringing up to 30,000 visitors a year through the neighborhood would certainly create bad community relations and could pose a serious safety concern to residents, their children, and their pets.

After looking into various options, Dr. Klein discovered that in 1990, the NTBG's trustees had commissioned Environmental Planning and Design to develop a plan for a new entrance to the Gardens. After looking at all of the options available to the NTBG, EPD had found that the best and safest route to bring visitors into the Lawai valley was via the old railroad bed which dropped gently into the valley on a grade of about three to eight percent. What made this proposal even more appealing was the fact that in the 1950's the train track's narrow gauge rails had been removed and the railroad bed converted into an interior service road for the Allerton Gardens (Exhibits 1 & 8).

Negotiations with A&B immediately commenced and have thus far resulted in an agreement that will allow the NTBG to immediately develop a temporary visitors center on cane land adjacent to the Allerton Gardens (Exhibit 9 and Appendix 1) and

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

eventually develop a permanent site for the visitors center directly across from the Spouting Horn in A&B's Kukui'ula Planned Community (Exhibit 10). Both the temporary site and the future permanent site are ideal in terms of accessibility and traffic flow since they are not in residential areas, close to the Spouting Horn, one of Kaua'i's most popular visitor destinations, and accessible via established county roads.

In April 1994, discussions were held with county planning officials about the feasibility of using both the temporary and permanent sites. County officials expressed strong support for both sites feeling that they were logical locations that complimented the County's long-range plans for the area. It was during this meeting that it was brought to the attention of the NTBG that the entire Allerton Gardens was zoned conservation by the state. This was a complete revelation that took everyone at the NTBG by surprise. Later discussions with Fred Talon at the State Land Use Commission revealed that the Allertons had requested the inclusion of their property within the Conservation District (CD) in 1964 in an effort to perpetuate the nature and use of their Lawai-kai estate as a private park (Appendix 2). The Allertons clearly viewed their property as a valuable asset that should be used and shared with a limited segment of the public. Its inclusion within the CD was meant to complement this goal not hinder it.

On April 6, 1994, NTBG Executive Director Dr. Klein and Limahuli Gardens Assistant Director Charles Wichman flew to Honolulu to meet with staff at the Office of Conservation and Environmental Affairs to discuss the implications of the Conservation District on their plans to reopen the Gardens as well as what would be needed to bring the Gardens into compliance with the conservation zoning. Based upon the process used by the NTBG to obtain their Conservation District Use Permit (CDUP) for its Limahuli Gardens and Preserve on the north shore of Kaua'i, it was generally agreed that the NTBG should seek to have the Allerton Gardens placed within a Special Subzone of the CD. However, that process would require several years of planning and permitting and would not allow the NTBG to resume its visitors program until completed. As an interim solution, it was decided that the NTBG should apply for an initial CDUP that would allow them to resume visitor operations and use of the Allerton Gardens in the existing Limited Subzone at a level not to exceed that which was in place at the time Hurricane Iniki hit on 9/11/92. Once this initial CDUP is obtained, the NTBG can continue the planning and permitting process that will eventually place the Allerton Gardens in a Special Subzone of the CD.

Thus, this CDUA is intended to address the resumption of normal educational tour operations in the Allerton Gardens at a level not to exceed that in place prior to 9/11/94 (estimated to be about 30,000 paying visitors annually, plus school groups which were exempt and handled separately from the pay-to-see visitors program) as well as the use of portions of the old railroad bed and existing driveway as an access route for visitors that come to tour the NTBG and Allerton Gardens (Exhibits 1 & 11).

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

It should be noted that while several of the structures in the Allerton Gardens were severely damaged or destroyed by Hurricane Iniki, this CDUA is not intended to address the repair or replacement of those facilities (Exhibit 12). This is primarily due to the fact that the insurance claims for the estate have not yet been settled and thus the necessary plans have not been developed that address the restoration or replacement of the damaged facilities. Once insurance claims have been settled a separate CDUA will be filed which will address those repairs.

Technical

Technically this action will allow the NTBG to:

- Resume the use of the Allerton Gardens as an educational resource for the NTBG's visitors as Mr. Allerton intended. This includes the use of existing pathways for pedestrian tours of Allerton Garden and some limited vehicular tours for physically challenged individuals.
- Preserve the Allerton Gardens in the manner and state that Mr. Allerton intended, that is, as a masterwork of landscape art for educational and research purposes.
- Use a portion of the old railroad bed, which now serves as an internal service road, and a portion of the existing driveway, as a new visitor access route into the NTBG and Allerton gardens.

Economic

The proposed action will have a small, but positive, impact on the economy of Kaua'i. In the year before Hurricane Iniki, NTBG was visited by approximately 30,000 people. Reopening NTBG will provide a stimulus for tourists to visit or extend their stay on Kaua'i. This action could increase revenues for hotels, restaurants, rental cars and other tourist related services.

Additionally, after Hurricane Iniki several employees associated with the NTBG's visitors center were discharged as the Gardens reduced the number of its employees. Reopening the NTBG and Allerton Gardens will provide year-round employment for several island residents.

Social

The proposed action will have the following social characteristics:

- **Improved Safety:** The proposed vehicular access which will use portions of the old railroad bed and driveway will provide a safe entrance into the Garden away from residential neighborhoods. Kumuokalani (Kumu), the previous visitors center, was located near the north end of the Lawai Valley at the end of a narrow residential street. From 1971 to 1991 access to Allerton and Lawai Gardens was on a steep,

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

winding, dirt road from Kumu (Exhibit 6). After a tour van accident on a particularly steep section, the van tours were routed from Kumu on the east side of the valley, through Kalaheo to the Garden's administrative complex at the end of Papalina Road on the west side of the valley (Exhibit 1). This new route also passed through narrow residential streets and had the potential to create unsafe conditions for residents (Exhibit 7).

- **Preservation of Site:** The proposed vehicular access over the old railroad will actually help to preserve and interpret this historical landmark. In discussions with state archaeologist Ms. Nancy McMahon, the applicants and Ms. McMahon were agreed that the proposed use would not only physically perpetuate this landmark but also provide interpretive opportunities that otherwise would not be available (Exhibit 1 & 8).
- **Enhancement of Site Interpretation:** Ms. McMahon and the applicants also felt certain that the continued use of the Allerton Gardens by the NTBG for educational tours and research would not have any negative impact on the many ancient and modern historical sites located in the valley, rather, the NTBG's view that these sites are educational assets useful in interpreting the history of the valley will promote their preservation and perpetuation (Appendix 3).
- **Enhancement of Educational Opportunities:** The educational programs offered in Lawai and Allerton Gardens will increase the public's awareness of the fragility of our natural and cultural resources, and stress the importance of preserving these resources for future generations. The use of Allerton Gardens as an educational area also heightens peoples awareness and appreciation for forms of traditional landscape architecture that are rarely seen today.
- **Improved Access:** Reopening the NTBG and Allerton Gardens to the public on a limited basis will provide educational opportunities to all kinds of visitors. Facilities and tours will be able to accommodate visitors with children, the handicapped, and the elderly.
- **Restoration of Volunteer Opportunities:** The NTBG volunteer organization, Na Lina Kokua, was formed in 1971 to support all the garden's activities. The tour program quickly became a major focus for the organization. Reopening a visitor's center and resuming tours of the Allerton Garden will provide the volunteers with an opportunity to share their knowledge of Hawaiian plants, history, and culture with garden visitors.
- **Protection and Community Involvement:** Programs emphasizing the importance of plant and aquatic resources in Hawaiian culture are being developed by the Education and Research departments at NTBG. Classes, workshops, and ongoing

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

research projects using the Native Plants Collection, the Lawai Stream, and Lawai Bay are planned. NTBG is also seeking community involvement in the possible future restoration of an ancient Hawaiian fishpond is located in the Allerton Gardens.

Environmental

Because the proposed action will not entail any change in the existing or future use of the subject property, there will be no negative environmental consequences or impacts.

The management and care given to the subject property by the Allertons from 1938 until the present is exemplary. The Allertons recognized the importance of maintaining a balance with nature and the negative impacts that would result from over use, or misuse, of the area. As a result of their strict management and ownership of the Konohiki rights to the Lawai Fishery, the Lawai bay is today considered a nearly pristine marine environment (Exhibit 13). State aquatic biologist Mr. Don Heacock told the applicants that Lawai-kai is considered as one of only two primary nesting sites for the federally endangered green sea turtle on Kaua'i. This clearly is the consequence of limited access and development of this area over the last 50 years.

The continued protection of this quality marine/coastal habitat in much the same manner as that which took place under the Allertons' tenure is a primary goal of the NTBG. Gardening of the terrestrial portion of Allerton Gardens will also continue in much the same manner as it has for the past 50 years. All horticultural practices are evaluated for their impact on the environment as well as their impact on the visual and auditory qualities of the Garden. No new practices or procedures will be instituted until they have been evaluated for their impact on the environment.

There is nothing that even comes close to the Allerton Gardens on Kaua'i--or for that matter anywhere else in the world. It is a world class masterwork of landscape art. Like other masterworks it needs to be protected but it also needs to be shared with those who would appreciate such a treasure. The proposed use of the subject property for educational tours is the most certain way to maintain accessibility while preserving a priceless asset for future generations.

Positive environmental impacts that will result from the NTBG's continued application of horticultural practices, biological monitoring, and educational use of the Allerton Gardens include but are not limited to:

- The establishment of research programs that will identify ways to improve the quality of Lawai Stream. Currently the Lawai stream is a degraded stream that suffers from upland stream diversions that remove a significant amount of the natural stream flow, agricultural runoff, removal of riparian vegetation. In spite of these problems the stream in its lower reaches is still very healthy and is the home of many aquatic species (Appendix 4).

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

- The re-establishment of the native coastal plant habitats at selected sites on the subject property. Much of the coastal habitat in the *moku* of Koloa has been invaded by alien plant species. Restoration of this habitat in Lawai will complement the high quality marine environment. According to Mr. Heacock, native coastal plant species, especially the strand vegetation, are important factors that help to determine if a beach is viable as a nesting site for green sea turtles. Introduced species, like the coconut tress, with their hard fibrous root system impeded the turtles ability to dig their nests and thus degrade the quality of the nesting habitat.

5. Summary description of the affected environment, including suitable and adequate location and site maps:

Allerton Garden is located at Lawai-kai in the *ahupua'a* of Lawai on the south shore of Kaua'i (Exhibit 14). In 1848 James Young Kanehoa was awarded Mahele Award 43, the *ahupua'a* of Lawai in the *moku* of Koloa, and in 1871, his wife and heir, Hikoni, deeded the *ahupua'a* of Lawai to Queen Emma. The oldest building on the subject property, the Queen Emma Cottage, was possibly built sometime before 1870 by James Young Kanehoa, Queen Emma's uncle, or his wife Hikoni (Exhibit 15).

Emma loved Lawai and after the death of her husband King Kamehameha IV in 1863, she spent a time of mourning there. The valley was her farm, where she grew Hawaiian staples such as taro, sugar cane, banana, noni, ohia ai, and breadfruit. She also began the planting of exotics such as bougainvillea, mango, and rice, at this time. In April 1871, Kamehameha V requested that she return to Honolulu for official duties and she left Lawai never to return.

In 1876, Emma leased the *ahupua'a* to Duncan McBryde for a term of 15 years, reserving her house lot (Mauna Kilohana) and several acres of taro *lo'i*. After Queen Emma's death in 1886, Mrs. Elizabeth McBryde purchased the *ahupua'a* of Lawai. The *mauka* lands were planted in sugar cane and the lower lands at Lawai-kai (meaning seaward portion of Lawai) were leased to Chinese farmers for rice and taro cultivation.

In 1899, Alexander McBryde was granted the land of Lawai in the lower valley, together with the *konohiki* fishing rights in the bay. Several years later, when it was decided to plant cane in the area where Mauna Kilohana stood on the eastern rim of the valley, Alexander rescued Queen Emma's cottage. It was cut into sections and lowered over the cliff to the valley floor. He lived in the cottage until a larger bungalow, Hale Pua, was built in 1915.

Alexander McBryde continued to develop the valley botanically in cooperation with Dr. Wilder, an early plant collector on Kauai. Visitors stopped at Lawai-kai to picnic in the "ironwood house" on their way to Waimea Canyon. They could also stroll

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

through the grounds planted with palms, gingers, plumerias, and ferns. This was the beginning of the use of Lawai-kai as a destination site for visitors (Exhibit 16).

Until Alexander McBryde's death in 1935, a great deal of Lawai-kai was planted in economic crops. Tenant farmers raised watercress, taro, rice, lotus root, and sweet potato, as well as household vegetables and animals. Fruit trees such as Longan, citrus, mango, and guava were there as well as banana and wine grapes.

In 1938 Lawai-kai was sold to Robert Allerton and his adopted son John Gregg. The McBryde bungalow was torn down and replaced by a house designed by John Gregg. After the Allertons moved into their new home they immediately began designing and laying out the garden (Exhibit 2).

The course of the river became the spine of the garden and a series of garden rooms and vistas unfolded between the river bank and the cliffs that rise behind. Water in abundance meant pools, water falls, fountains, cascades, the sound of water everywhere.

The genius of the place--the dramatic topography, water in its varied forms, the enormous potential for lush tropical growth--was discovered and with great imagination and effort brought forth over the years by Robert and John Allerton. World travelers, connoisseurs of art, garden lovers, talented landscape designers and plantsmen they introduced a cosmopolitan view of the garden arts to Hawaii. In their work one can find in the walled rooms a reminder of Hidcote in Gloucestershire; in the lattice pavilion of Diana's Fountain there is the reference to the Palladian Bridge at Wilton; the three pools recall the magnificent pools of the French Courances; while the Mermaid Fountain echoes the Villa Caprarola of Italy. In time the Allertons would create a masterpiece of landscape art, borrowing ideas where they would find them and executing them in local materials and with highly skilled local craftsmen, but always with a highly refined sense of taste and style.

In the last year of his life, Robert saw the realization of one of his dreams, the establishment of a tropical botanical garden which would contribute to the appreciation and understanding of the people of the United States. Robert was one of the five men to petition Congress for a charter for a non-profit tropical botanical garden in the early 1960's. As a result of their efforts, the National Tropical Botanical Garden (NTBG) was chartered by an Act of Congress in August 1964. On December 22, 1964, Robert died at the age of 91, and his ashes were scattered over Lawai Bay.

From 1964 until his death in 1986, John Gregg Allerton preserved as a memorial to his father the style of the garden plantings and landscape architecture which made Lawai-kai so famous. John Allerton also served on the NTBG's Board of Trustees and strongly supported the NTBG. It was his wish that the Allerton Gardens be preserved and used by the NTBG in perpetuity. Today, the NTBG continues the high horticultural

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

standards established by the Allertons by maintaining and using the Allerton Garden through a management agreement with the First National Bank of Chicago, named by Mr. Allerton's will as the Trustee of the Allerton Garden Trust.

Ecologically Lawai-kai was once a part of the lowland dry-forest and coastal ecosystems. Due to the land-use changes mentioned above, it is not surprising that the terrestrial ecosystems found on the subject property today are dominated by introduced plant species (Exhibit 17). In fact, a botanical survey of the Allerton Gardens (Appendix 3) found very few native species. As such, it was not surprising that no species considered rare, threatened, or endangered by either the State of Hawaii or the U.S. Fish and Wildlife Service were found growing naturally during the survey (a few rare or endangered native species being cultivated by the NTBG in the Allerton Gardens). The area also contains a degraded stream and some wetland areas, which historically were planted in taro, rice and lotus in the early part of this century.

To the south, the property ends in a white sand beach surrounded on both sides by basaltic points. The marine environment of Lawai bay is considered to be nearly pristine and the white sand beach is one of only two primary nesting sites for the endangered green sea turtles on Kaua'i. Shoreline access to this area is restricted by the topography of the basaltic cliffs on both the east and west sides of the bay. Over the years this has allowed the Allertons to completely control all terrestrial access to the beach and bay. The past fifty years of limited public access is the primary reason this area is today considered a nearly pristine marine environment.

See Appendix ⁴3 for additional information on the historical, biological, and ecological descriptions of the affected environment.

6. Identification and summary of major impacts:

No negative impacts have been identified that would occur as a result of the proposed action. Some of the positive impacts that would result from the proposed action include:

- A safe entrance for visitors to the Allerton and Lawai Gardens.
- Increased educational and research opportunities for the community and visiting public.
- Preservation of the historic railroad entrance into the Lawai valley.
- Perpetuation of the nearly pristine quality of Lawai bay.
- Some improvement in stream quality and selected coastal habitats.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

7. Alternatives considered, if any:

Although no negative impacts have been identified that will result from the proposed action, the following alternatives were considered as part of the planning process undertaken by the NTBG (Exhibit 1):

- Rebuild the visitor's center at Kumu and resume tours by using the steep, dangerous dirt and gravel cane road down into the Lawai and Allerton Gardens.
- Rebuild the visitor's center at Kumu and resume tours by bringing visitors through two residential areas so that they can enter the Lawai Garden via the administrative entrance. This alternative still requires that visitors be brought down a steep and often dangerous paved road into the Lawai and Allerton Gardens.
- Build a visitor's center at the administrative complex and resume tours down the dangerous steep paved road into Lawai and Allerton Gardens.
- Resume tour operations in the Lawai Garden via one of the above alternatives and not utilize the Allerton Gardens as a destination for the NTBG's visitors.

All of these alternative were explored in depth and found to have serious shortcomings from either a health and safety standpoint or from an educational standpoint. It is thus the applicants opinion that their request to continue to use the Allerton Gardens as an educational and research area, as they have since 1970, and to use portions of the old railroad bed (currently an internal access road) and existing driveway as a new visitor access route into the NTBG and Allerton Gardens is clearly the best alternative and the only one worth serious consideration.

7. Proposed mitigation measures:

Because no major negative impacts were identified, there are no proposed mitigation measures. However, the National Tropical Botanical Garden is dedicated to mitigating all impacts that could result from their use of the Allerton Garden. As such the NTBG is constantly monitoring the status of the Gardens and taking appropriate action as needed.

A garden masterpiece as Allerton Gardens must be counted among the most fragile and transient works of art. But like all gardens it was also created through the sharing of it. In a very real sense a garden is not a garden until it is shared. And perhaps the greatest threat and most certain course to its destruction is to cut it off from an admiring public and simply take a passive stance with regard to access. A system of controlled access is the best way to preserve both the natural and garden artifacts that have been assembled on this truly remarkable site.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION V (Final Environmental Assessment)

8. Determination:

Due to the lack of negative impacts resulting from the proposed action, it has been determined that no EIS is required. Thus, a **NEGATIVE DECLARATION** should be filed with the Office of Environmental Quality (OEQC) by the accepting authority.

9. Reasons and findings supporting determination:

The supporting reasons and findings are based on HRS 343 11-200-12, and fully supports the determination of a **NEGATIVE DECLARATION** for the proposed action. It has been determined that:

- The proposed action will not involve a loss or destruction of any natural or cultural resource.
- The proposed action will not curtail the range of beneficial uses of the environment.
- The proposed action will not conflict with the State's long-term goals or guidelines as expressed in Chapter 344, HRS.
- The proposed action will not substantially affect the economic or social welfare of the community or State.
- The proposed action will not adversely affect the health and welfare of the public.
- The proposed action will not create substantial secondary effects, such as population changes or infrastructure demands.
- The proposed action will not have a negative cumulative effect on the environment.
- The proposed action will not and does not commit or involve the State in larger actions, nor does it commit any State owned resources to the realization of the objectives of the proposed action.
- The proposed action will not negatively affect a rare, threatened, or endangered species or its habitat.
- The proposed action will not negatively affect an environmentally sensitive area.

10. Agencies to be consulted in the preparation of EIS, if applicable.

Due to the determination of a **NEGATIVE DECLARATION** (in Section 8 above) this section is not applicable.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS, KAUA'I
MASTER APPLICATION - SECTION VI

VI. SUMMARY OF PROPOSED USE

The applicants are requesting permission to continue to use the Allerton Gardens as an educational and research facility, as they have since the NTBG was located in the Lawai valley in 1970. In addition to this historical use, the applicants are requesting the use of existing roads on the subject property to create a new visitor access route into the Lawai valley for the NTBG's visitors. This use is in compliance with the wishes of the late Robert and John Gregg Allerton who created the Allerton Gardens from 1938 to 1986 and who were responsible for the Gardens inclusion in the State's Conservation District.

Specifically, the proposed use will allow the NTBG as manager of the Allerton Gardens to create a new, and much safer, visitor access route into the Lawai valley by using a portion of an existing service access road (formerly an old railroad bed) which runs through the Allerton Gardens on the east side of the valley. The new access route will also use a short portion of the existing paved driveway which prior to Iniki provided access to the Allerton house from the end of Lawai road (Exhibits 1, 8, 9 & 11).

The proposed use will allow the NTBG to continue to bring paying visitors into the Allerton Gardens for an educational tour at a level not to exceed that in place prior to 9/11/92, or about 30,000 visitors annually. School groups will be exempt from this limitation. At this time the permanent type of visitor access vehicles have not been determined, but initially vans or open tour vehicles will be used.

The proposed use will include the continuation of the horticultural practices needed to preserve the Allerton Gardens at the same level of quality it has been kept at over the last 50 years. Specifically this includes the preservation of the character and ambiance of the estate including existing plant collections, structures, paths, roads, irrigation systems, etc. (It is impossible to list here all of the detailed actions needed to maintain the 80 plus acres of grounds that make up the Allerton Gardens.)

Also of importance is the proposed use of the Allerton Gardens for research. Specifically this will include the monitoring of the aquatic, wetland, and marine environments as well as the restoration of native vegetation in selected coastal areas.

In addition to the above proposed uses, the applicants wish to continue the historical use of the Allerton Gardens for residential use (the Allerton House, the Guest House and Queen Emma's Cottage have been used residentially since 1938) and as a place to host Garden related functions.

CONSERVATION DISTRICT USE APPLICATION

FOR

ALLERTON GARDENS

EXHIBITS

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

LIST OF EXHIBITS

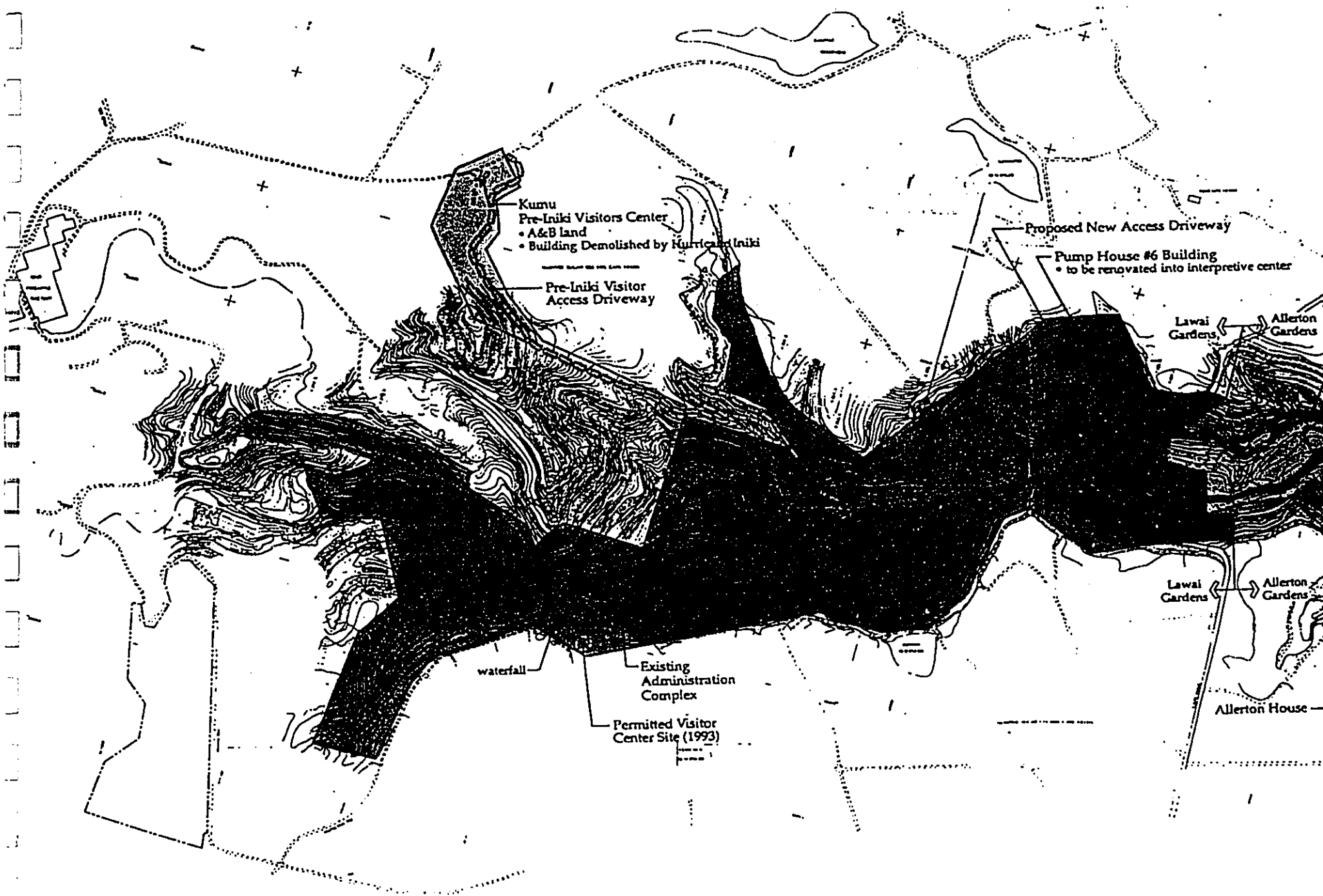
- EXHIBIT 1** LARGE-SCALE MAP OF PROPOSED VISITOR ACCESS ROUTE
- EXHIBIT 2** MAP OF ALLERTON GARDENS BY JOHN GREGG ALLERTON
- EXHIBIT 3** PUBLIC LAW 88-449 CHARTERING THE NATIONAL TROPICAL BOTANICAL GARDEN
- EXHIBIT 4** TOUR OF ALLERTON GARDENS LED BY JOHN GREGG ALLERTON
- EXHIBIT 5** MANAGEMENT AGREEMENT BETWEEN THE FIRST NATIONAL BANK OF CHICAGO AND THE NATIONAL TROPICAL BOTANICAL GARDEN
- EXHIBIT 6** ROAD FROM THE KUMU VISITOR CENTER INTO THE NATIONAL TROPICAL BOTANICAL GARDEN
- EXHIBIT 7** VISITOR ACCESS TO THE NATIONAL TROPICAL BOTANICAL GARDEN ALONG PAPALINA ROAD
- EXHIBIT 8** VIEW ALONG PROPOSED VISITOR ACCESS ROUTE
- EXHIBIT 9** SITE PLAN OF PROPOSED VISITOR CENTER
- EXHIBIT 10** FINAL CONCEPT PLAN FOR KUKU'ULA PLANNED COMMUNITY
- EXHIBIT 11** VIEW ALONG THE ALLERTON DRIVEWAY PORTION OF THE PROPOSED VISITOR ACCESS ROUTE
- EXHIBIT 12** STRUCTURES DAMAGED OR DESTROYED BY HURRICANE INIKI IN THE ALLERTON GARDENS
- EXHIBIT 13** VIEW OF LAWAI BAY FROM THE PROPOSED VISITOR ACCESS
- EXHIBIT 14** AERIAL VIEW OF THE ALLERTON GARDENS
- EXHIBIT 15** QUEEN EMMA'S COTTAGE AT LAWAI-KAI BEFORE HURRICANE INIKI

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

LIST OF EXHIBITS (Continued)

- EXHIBIT 16** MCBRYDES AND FRIENDS AT LAWAI-KAI
- EXHIBIT 17** VEGETATION MAP OF ALLERTON GARDENS
- EXHIBIT 18** EXISTING STRUCTURES IN THE ALLERTON GARDENS
- EXHIBIT 19** EXISTING UTILITIES IN THE ALLERTON GARDENS
- EXHIBIT 20** EXISTING ROADS AND TRAILS IN THE ALLERTON GARDENS
- EXHIBIT 21** ROBERT AND JOHN GREGG ALLERTON
- EXHIBIT 22** SHORELINE SURVEY OF THE ALLERTON GARDENS
- EXHIBIT 23** ADJACENT PROPERTY OWNERS TO THE ALLERTON GARDENS
- EXHIBIT 24** WETLAND DELINEATION OF ALLERTON GARDENS
- EXHIBIT 25** ALLERTON HOUSE AT LAWAI-KAI BEFORE HURRICANE INIKI

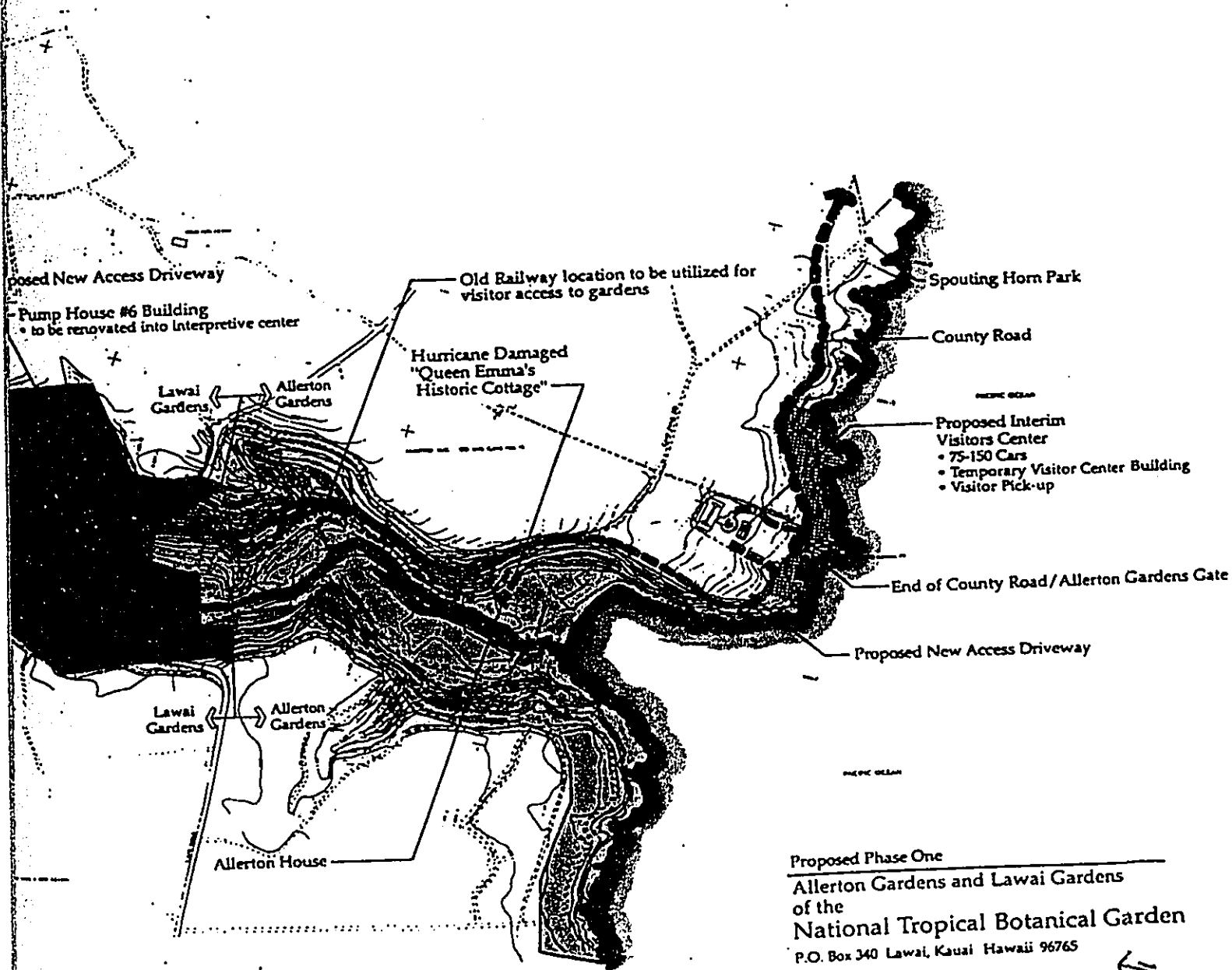
DOCUMENT CAPTURED AS RECEIVED



DOCUMENT CAPTURED AS RECEIVED

EXHIBIT 1

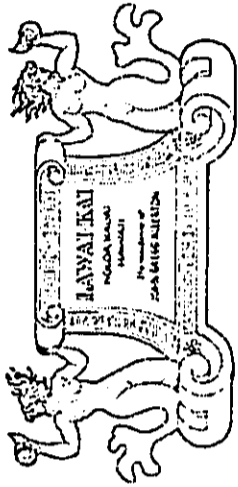
Area Plan of Lawai Valley



Proposed Phase One
Allerton Gardens and Lawai Gardens
of the
National Tropical Botanical Garden
P.O. Box 340 Lawai, Kauai Hawaii 96765

Freyer N. Taylor Incorporated - Consulting Engineers
PBR HAWAII - Landscape Architects
Environmental Planning & Design - Planners
Date: August 15, 1994





THE ALLERTON GARDENS were started by Queen Emma, the wife of Kamehameha IV. She lived here until 1873. Queen Emma was a great plant lover and is responsible for the great cliffs of bougainvillea back of the main house. After her death the property was acquired by the McBrydes also great horticulturists and friends of the early plant explorers. Alexander McBryde enlarged the collection of exotic plants and arranged the material in an artistic manner.

In 1918 the lower end of the valley was purchased by Robert Allerton, the father of the present owner, first as a winter home. John Allerton designed the present house, and they together enlarged the gardens, planned the water gardens and architectural features. They travelled to gather material to embroider the landscape and improve the collection of tropical plants.

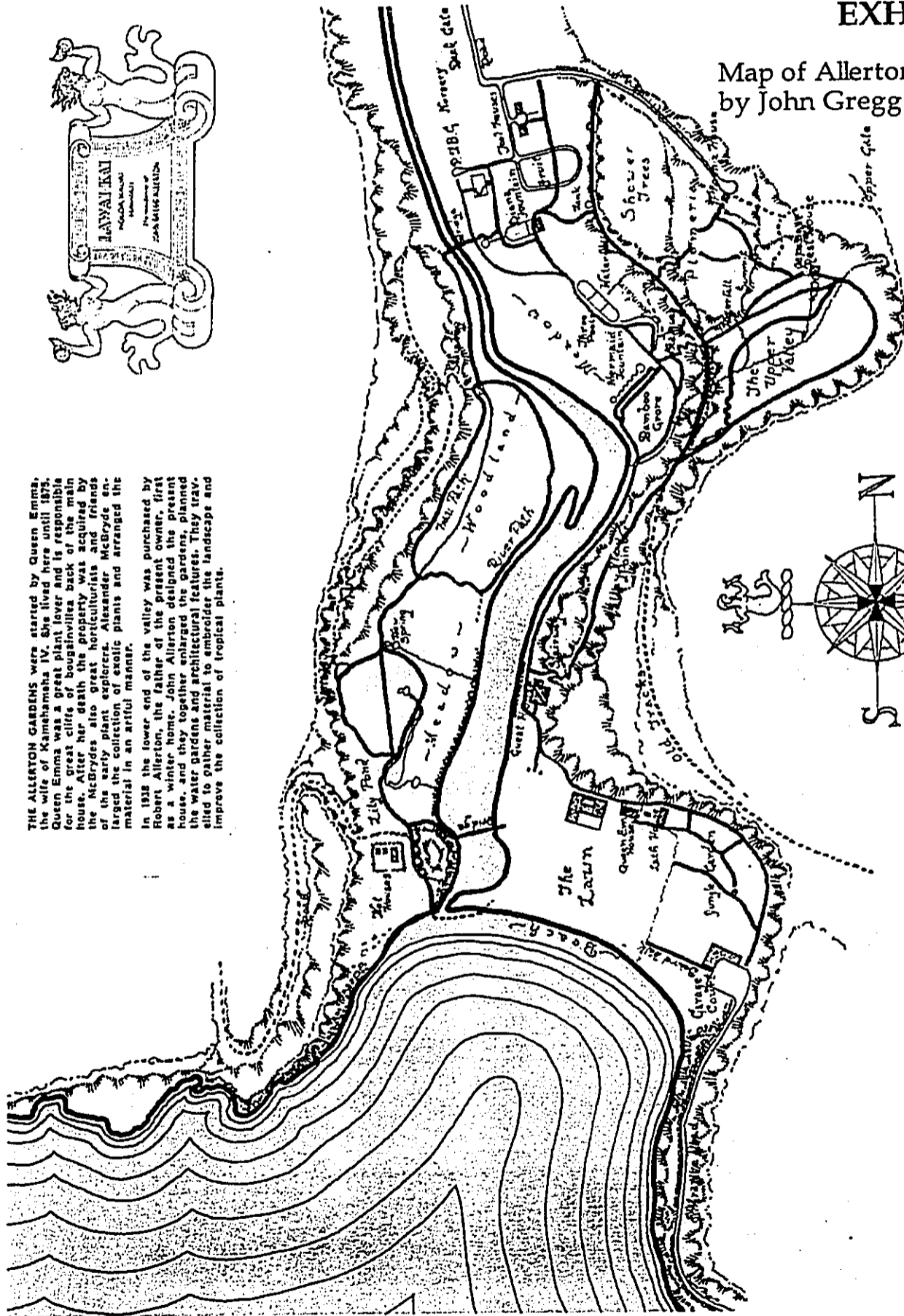


EXHIBIT 2

Map of Allerton Gardens
by John Gregg Allerton

RECEIVED AS FOLLOWS

EXHIBIT 3



Public Law 88-449
88th Congress, S. 1991
August 19, 1964

An Act

To charter by Act of Congress the Pacific Tropical Botanical Garden.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Pacific Tropical Botanical Garden. Charter.

CREATION OF THE CORPORATION

SECTION 1. The following persons: Henry Francis duPont, Winterthur, Delaware; Deane Waldo Malott, Ithaca, New York; Horace Marden Albright, Los Angeles, California; Robert Allerton, Kauai, Hawaii; and Paul Bigelow Sears, New Haven, Connecticut; and their successors, are hereby created and declared to be a body corporate by the name of Pacific Tropical Botanical Garden (hereinafter referred to as the "corporation") and by such name shall be known and have perpetual succession and the powers, limitations, and restriction herein contained.

COMPLETION OF ORGANIZATION

SEC. 2. The persons named in section 1 shall be the incorporators of the corporation and members of the initial board of trustees and are authorized to complete the organization of the corporation by the selection of other trustees and officers, the adoption of bylaws, not inconsistent with this Act, and the doing of such other acts necessary to carry into effect the provisions of this Act.

OBJECTS AND PURPOSES OF CORPORATION

SEC. 3. The objects and purposes of the corporation shall be—
(a) to establish, develop, operate, and maintain for the benefit of the people of the United States an educational and scientific center in the form of a tropical botanical garden or gardens, together with such facilities as libraries, herbaria, laboratories, and museums which are appropriate and necessary for encouraging and conducting research in basic and applied tropical botany;
(b) to foster and encourage fundamental research with respect to tropical plant life and to encourage research and study of the uses of tropical flora in agriculture, forestry, horticulture, medicine, and other sciences;
(c) to disseminate through publications and other media the knowledge acquired at the gardens relative to basic and applied tropical botany;
(d) to collect and cultivate tropical flora of every nature and origin and to preserve for the people of the United States species of tropical plant life threatened with extinction;
(e) to provide a beneficial facility which will contribute to the education, instruction, and recreation of the people of the United States.

78 STAT. 496.
78 STAT. 497.

POWERS OF CORPORATION

SEC. 4. The corporation shall have the following powers:
(a) to sue and be sued, and to complain and defend in any court of competent jurisdiction;
(b) to adopt, use, and alter a corporate seal;
(c) to choose such trustees, officers, managers, agents, and employees as the activities of the corporation may require;
(d) to adopt, amend, and alter bylaws, not inconsistent with the laws of the United States of America or of any State in which

EXHIBIT 3 (Continued)

Pub. Law 88-449

- 2 -

August 19, 1964

the corporation is to operate, or of the District of Columbia, for the management of its property and the regulation of its affairs;

(e) to make contracts;

(f) to take and hold by lease, gift, purchase, grant, devise, or bequest, or by any other method, any property, real, personal, or mixed, necessary or proper for attaining the objects and carrying into effect the purposes of the corporation, subject, however, to applicable provisions of law of any State or the District of Columbia (1) governing the amount or kind of such property which may be held by, or (2) otherwise limiting or controlling the ownership or any such property by a corporation operating in such State or the District of Columbia;

(g) to transfer, convey, lease, sublease, mortgage, encumber, and otherwise alienate real, personal, or mixed property; and

(h) to borrow money for the purposes of the corporation, issue bonds or other evidences of indebtedness therefor, and secure the same by mortgage, deed of trust, pledge, or otherwise, subject in every case to all applicable provisions of the Federal and State laws or to the laws of the District of Columbia; and

(i) to do any and all acts and things necessary and proper to carry out the objects and purposes of the corporation.

BOARD OF TRUSTEES

SEC. 5. (a) Upon enactment of this Act, the trustees of the corporation may select additional persons to serve as members of the board of trustees. The total number of trustees shall not exceed fifteen. The incorporators of the corporation shall each serve on the board of trustees for a term of at least three years.

(b) Except for the foregoing provision, the board of trustees of the corporation shall be selected in such manner and shall serve for such time as may be prescribed in the bylaws of the corporation.

(c) The board of trustees shall be the managing body of the corporation and shall have such powers, duties, and responsibilities as may be prescribed in the bylaws of the corporation.

OFFICERS

SEC. 6. (a) The officers of the corporation shall be a president, one or more vice presidents, a secretary, a treasurer, and such other officers as may be authorized by the bylaws of the corporation.

(b) The officers of the corporation shall be elected in such manner and for such terms and with such duties as may be prescribed in the bylaws of the corporation.

78 STAT. 497.

78 STAT. 498.

PRINCIPAL CORPORATE OFFICE AND TERRITORIAL SCOPE OF CORPORATE ACTIVITIES; RESIDENT AGENT

SEC. 7. (a) The corporation initially shall have its principal office in the District of Columbia and later at such place as may be determined by the board of trustees. The corporation shall have the right to conduct its activities in the United States and elsewhere but shall establish a tropical botanical garden or gardens only in the United States.

(b) The corporation shall maintain in the District of Columbia at all times a designated agent authorized to accept service of process for the corporation and notice to or service upon such agent, or mailed to the business address of such agent, shall be deemed notice to or service upon the corporation.

EXHIBIT 3 (Continued)

August 19, 1964

- 3 -

Pub. Law 88-449

MEMBERSHIP; VOTING RIGHTS

SEC. 8. (a) Eligibility for membership in the corporation and the rights and privileges of members shall, except as provided in this Act, be determined as the constitution and bylaws of the corporation may provide.

(b) Each member of the corporation, other than honorary and associate members, shall have the right to one vote on each matter submitted to a vote at all meetings of the members of the corporation.

LIABILITY FOR ACTS OF OFFICERS AND AGENTS

SEC. 9. The corporation shall be liable for the acts of its officers and agents when acting within the scope of their authority.

AUDIT OF FINANCIAL TRANSACTIONS; REPORT TO CONGRESS

SEC. 10. (a) The accounts of the corporation shall be audited annually in accordance with generally accepted auditing standards by independent certified public accountants or independent licensed public accountants, certified or licensed by a regulatory authority of a State or other political subdivision of the United States. The audit shall be conducted at the place or places where the accounts of the corporation are normally kept. All books, accounts, financial records, reports, files, and all other papers, things, or property belonging to or in use by the corporation and necessary to facilitate the audit shall be made available to the person or persons conducting the audit; and full facilities for verifying transactions with the balances or securities held by depositories, fiscal agents, and custodians shall be afforded to such person or persons.

(b) A report of such audit shall be made by the corporation to the Congress not later than six months following the close of the fiscal year for which the audit is made. The report shall set forth the scope of the audit and include such statements, together with the independent auditor's opinion of those statements, as are necessary to present fairly the corporation's assets and liabilities, surplus or deficit with an analysis of the changes therein during the year, supplemented in reasonable detail by a statement of the corporation's income and expenses during the year including (1) the results of any trading, manufacturing, publishing, or other commercial-type endeavor carried on by the corporation, and (2) a schedule of all contracts requiring payments in excess of \$10,000 and any payments of compensation, salaries, or fees at a rate in excess of \$10,000 per annum. The report shall not be printed as a public document.

78 STAT. 498.
78 STAT. 499.

BOOKS AND RECORDS; INSPECTION

SEC. 11. The corporation shall keep correct and complete books and records of account. It shall also keep minutes of the proceedings of its board of trustees, and committees having any of the authority of the board of trustees. The corporation shall also keep at its principal office a record of the names and addresses of its members entitled to vote.

All books and records of the corporation shall be open for inspection by any member of the corporation or his agent or attorney for any proper purpose at any reasonable time.

RECEIVED AS FOLLOWS

EXHIBIT 3 (Continued)

Pub. Law 88-449

- 4 -

August 19, 1964

78 STAT. 499.

DIVIDENDS

SEC. 12. The corporation shall have no power to issue shares of stock or to declare or pay dividends.

USE OF INCOME; LOANS TO OFFICERS, TRUSTEES, OR EMPLOYEES

SEC. 13. (a) No part of the income or assets of the corporation shall inure to any member, officer, or trustee, or be distributable to any such person during the life of the corporation or upon dissolution or final liquidation. Nothing in this subsection, however, shall be construed to prevent the payment of reasonable compensation to officers of the corporation in amounts approved by the board of trustees of the corporation.

(b) The corporation shall not make loans to its officers, trustees, or employees. Any trustee who votes for or assents to the making of a loan to an officer, trustee, or employee of the corporation, and any officer who participates in the making of such loan, shall be jointly and severally liable to the corporation for the amount of such loan until the repayment thereof.

USE OF ASSETS ON DISSOLUTION OR LIQUIDATION

SEC. 14. Upon dissolution or final liquidation of the corporation, all assets remaining after the corporation's liabilities have been satisfied, shall be distributed to the United States Government, to be administered by the Secretary of the Interior, under the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented, or to a State or local government to be used for a public purpose, in accordance with the determination of the board of trustees, consistent with the purposes of the corporation, and in compliance with the charter and bylaws of the corporation and Federal and State laws.

NONPOLITICAL NATURE OF CORPORATION

SEC. 15. The corporation, and its officers and trustees as such, shall not contribute to or otherwise support or assist any political party or candidate for elective public office.

EXCLUSIVE USE OF NAME

SEC. 16. The corporation shall have the sole and exclusive right to use and to authorize the use of the name "Pacific Tropical Botanical Garden."

RESERVATION OF RIGHT TO AMEND OR REPEAL CHARTER

SEC. 17. The right to alter, amend, or repeal this Act is expressly reserved to the Congress.

Approved August 19, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 1635 (Comm. on the Judiciary).

SENATE REPORT No. 234 (Comm. on the Judiciary).

CONGRESSIONAL RECORD, Vol. 110 (1964):

July 23: Passed Senate.

AUG. 3: Considered and passed House, amended.

AUG. 6: Senate concurred in House amendments.

RECEIVED AS FOLLOWS

DOCUMENT CAPTURED AS RECEIVED

EXHIBIT 4

John Gregg Allerton Hosting Event at Lawai-Kai



EXHIBIT 5**Authorization from First National Bank of Chicago**

Three First National Plaza
Chicago, Illinois 60670-0103
Telephone: (312) 732-4240
Fax: (312) 732-7088

Howard M. Sanders
Vice President

July 27, 1994

Dr. William McK. Klein
Executive Director
National Tropical Botanical Garden
P.O. Box 340
Lawai, Hawaii 96765

Re: John Allerton Estate
Allerton Gardens Trust

Dear Dr. Klein:

This will confirm our understanding of the Management Agreement between First National Bank of Chicago as Trustee of the Allerton Gardens Trust and the National Tropical Botanical Garden, dated April 25, 1994. Specifically, the Management Agreement authorizes you to act as our representative and sign all necessary documents relating to the acquisition of a Conservation District Use Permit (CDUP) from the State of Hawaii and a Special Management Area Permit (SMAP) from the county of Kauai. It is our understanding that a CDUP and a SMAP are required in order for NTBG to proceed with the development of the new Visitors Center and entrance to the Allerton and Lawai Gardens that will enable us to reopen these gardens to the public.

Sincerely,

HMS:id

View Down Road to Garden from Old Visitor Center

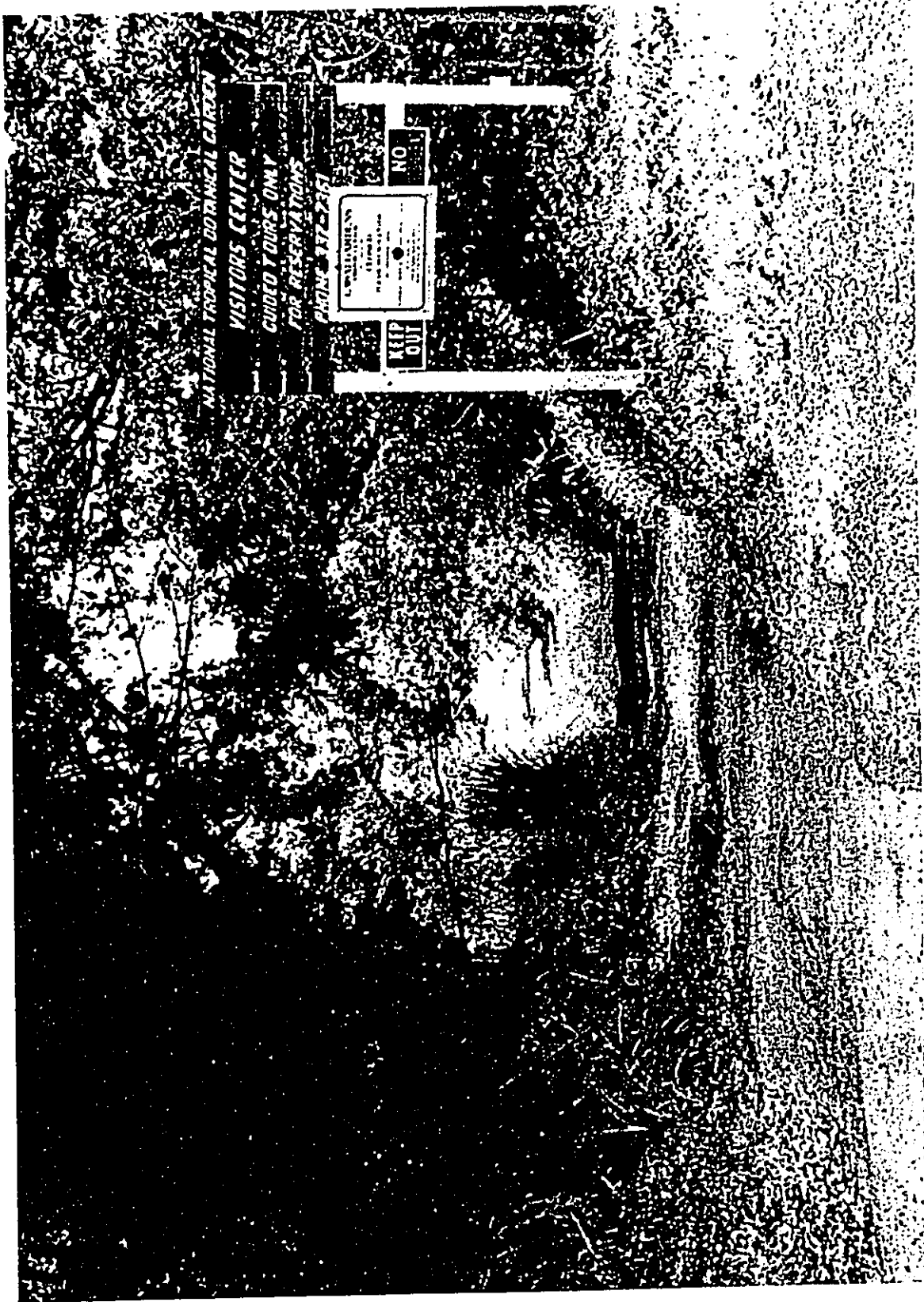


EXHIBIT 7

Visitor Access to Garden on Papalina Road

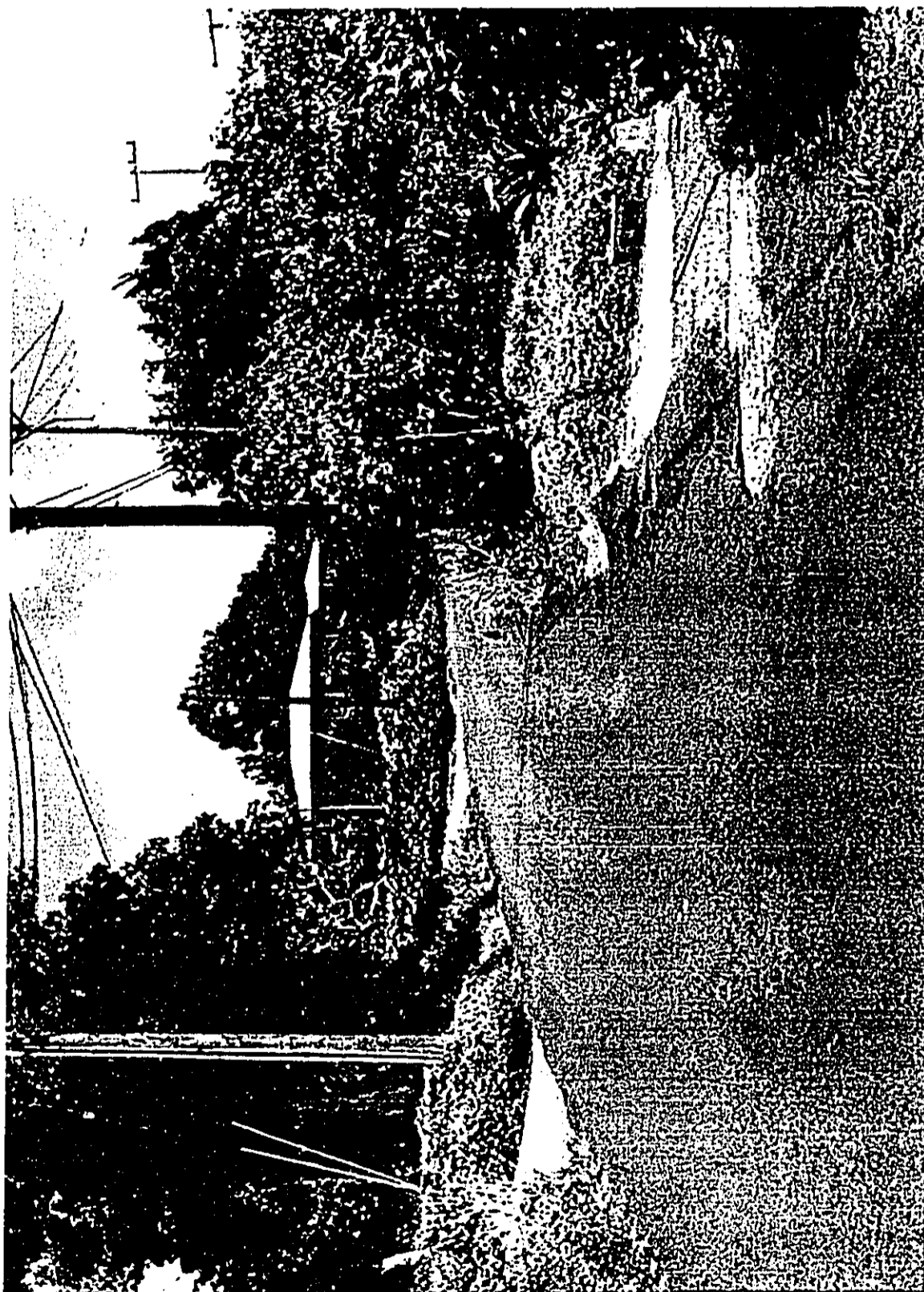


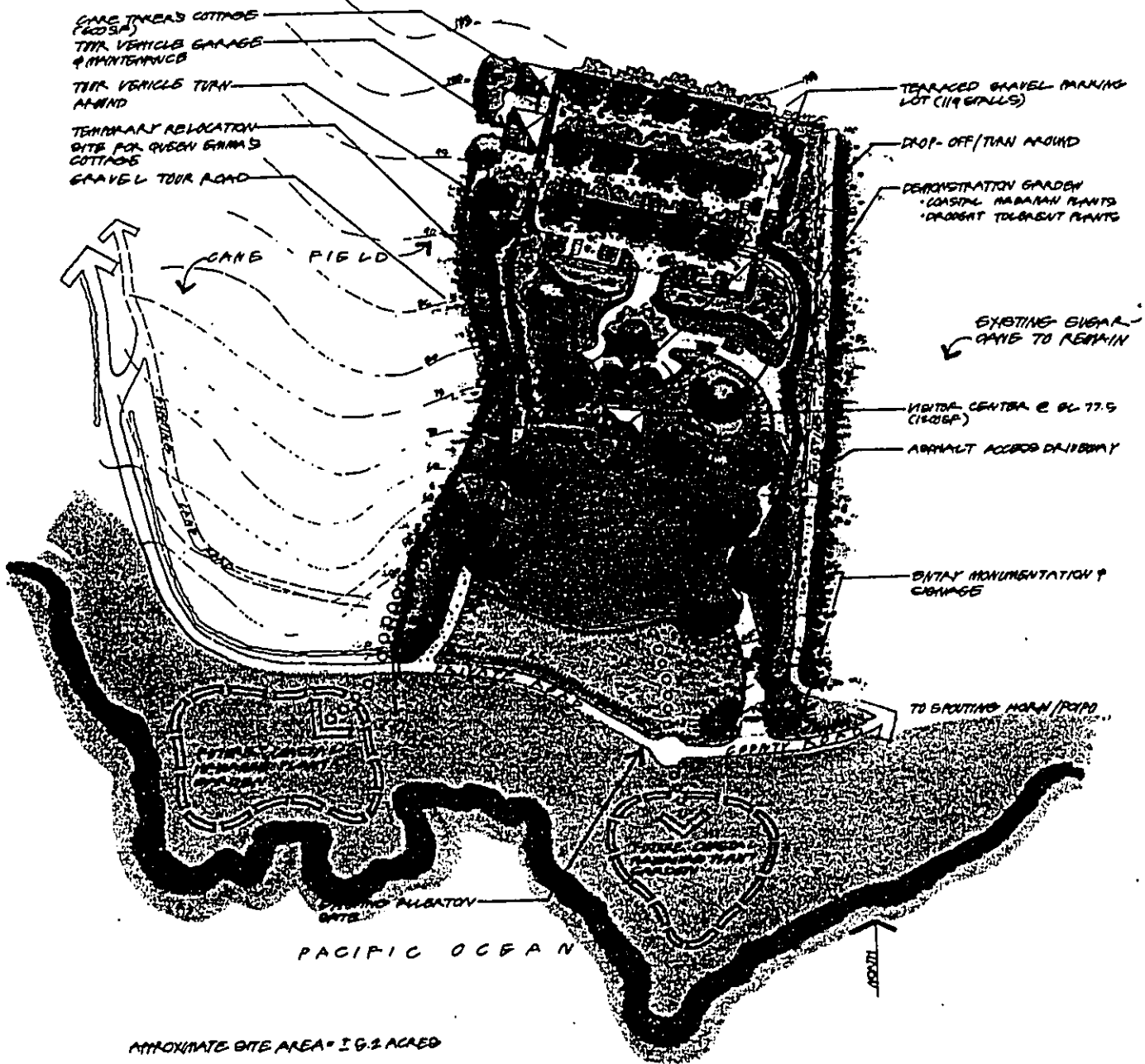
EXHIBIT 8

View Along Proposed Visitor Access



EXHIBIT 9

Site Plan for Proposed Visitor Center



APPROXIMATE SITE AREA = 19.2 ACRES

Visitor Center
CONCEPTUAL LANDSCAPE PLAN
 National Tropical Botanical Garden
 Lawai, Kauai, Hawaii

Date: August 15, 1994



EXHIBIT 10

Kukui'ula Planned Community Master Plan

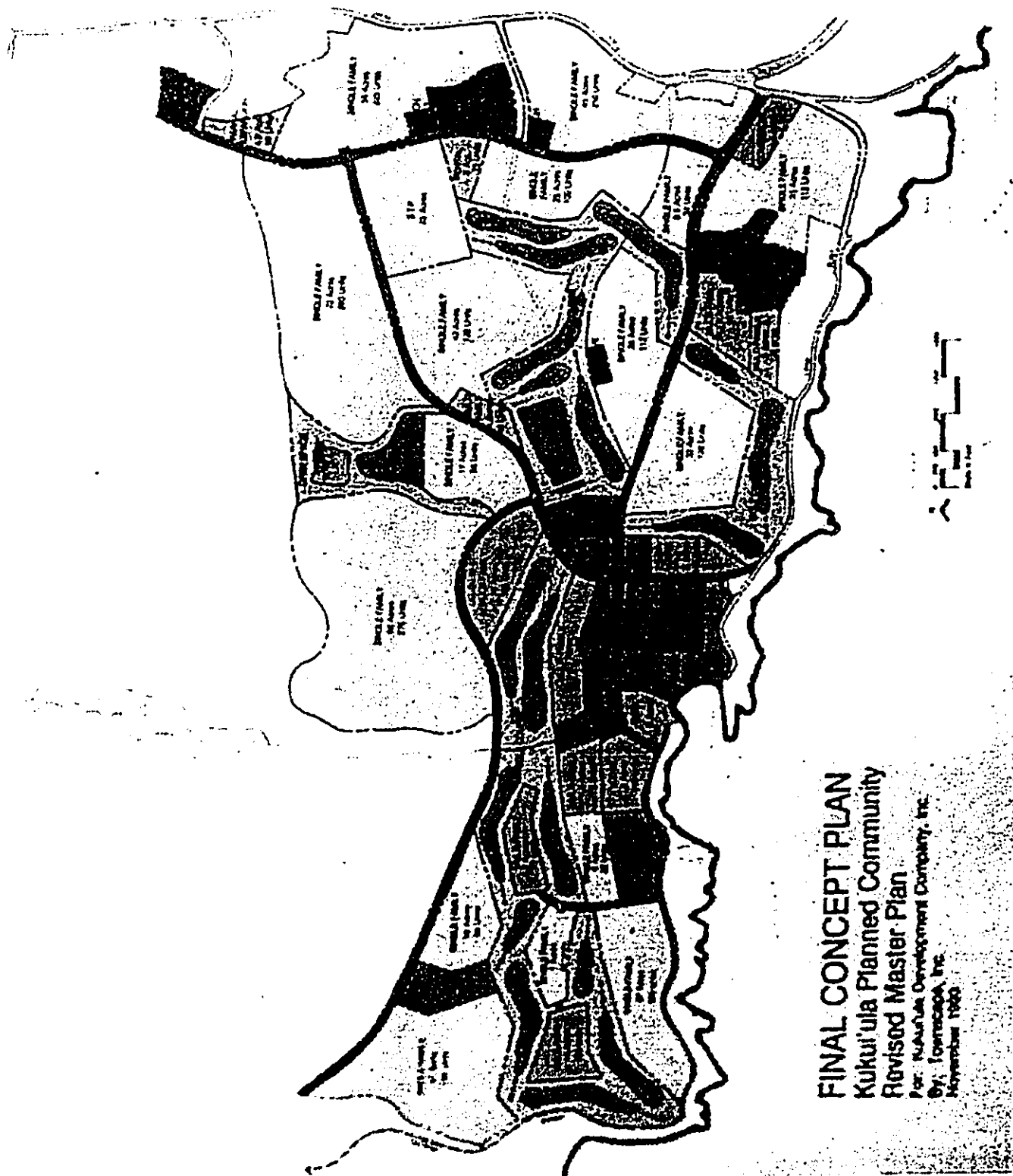


EXHIBIT 11

View Down Allerton Driveway into Allerton Gardens

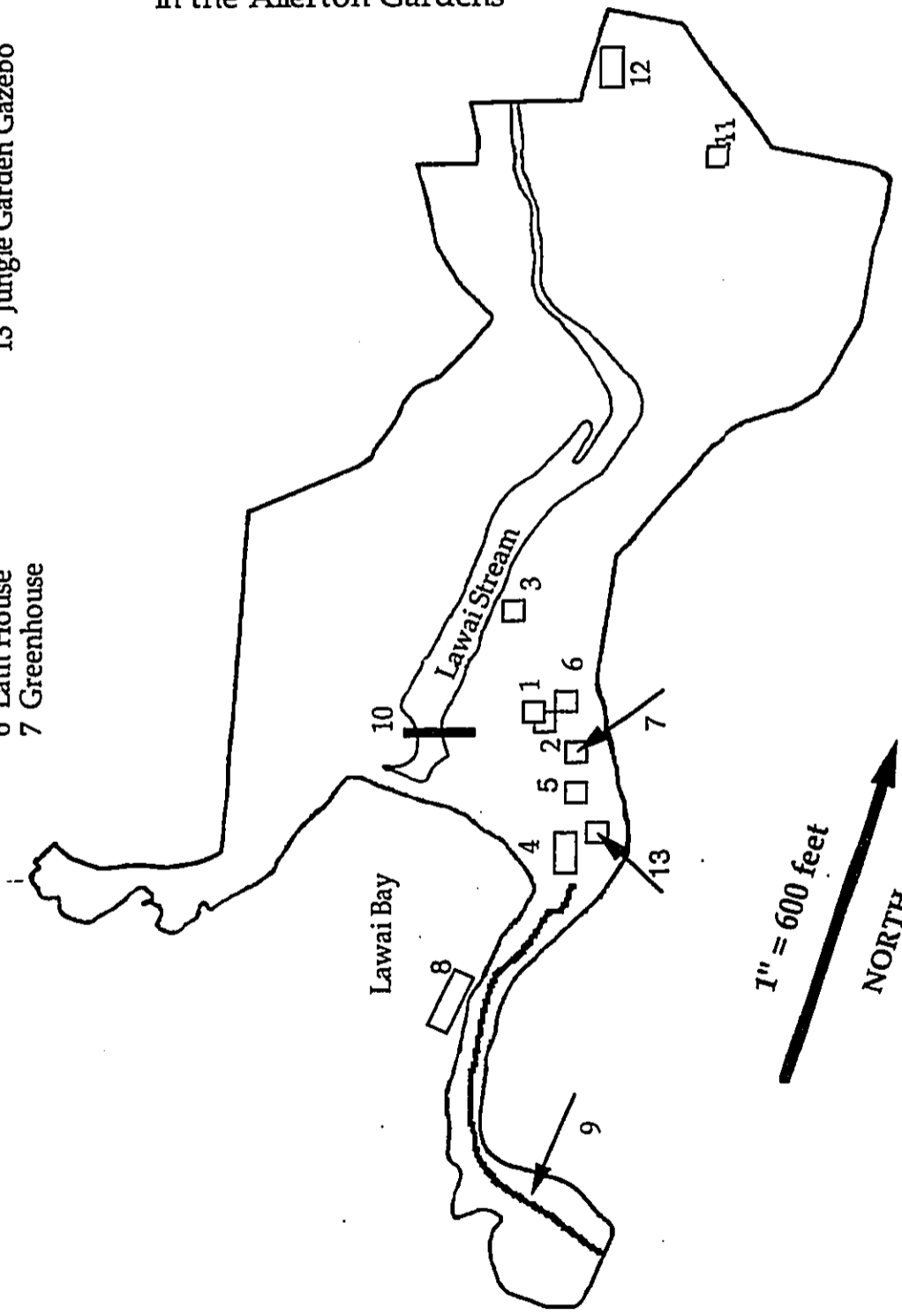


EXHIBIT 12

Damaged or Destroyed Structures in the Allerton Gardens

- 1 Allerton House
- 2 Queen Emma's Cottage
- 3 Guest House
- 4 Garages
- 5 Storage Building
- 6 Lath House
- 7 Greenhouse
- 8 Sea Wall
- 9 Driveway
- 10 Foot Bridge
- 11 Phoenix House
- 12 Upper Tool Shed
- 13 Jungle Garden Gazebo

- 1 Allerton House
- 2 Queen Emma's Cottage
- 3 Guest House
- 4 Garages
- 5 Storage Building
- 6 Lath House
- 7 Greenhouse



View of Lawai-Kai from Visitor Access Road



Aerial View of the Allerton Gardens

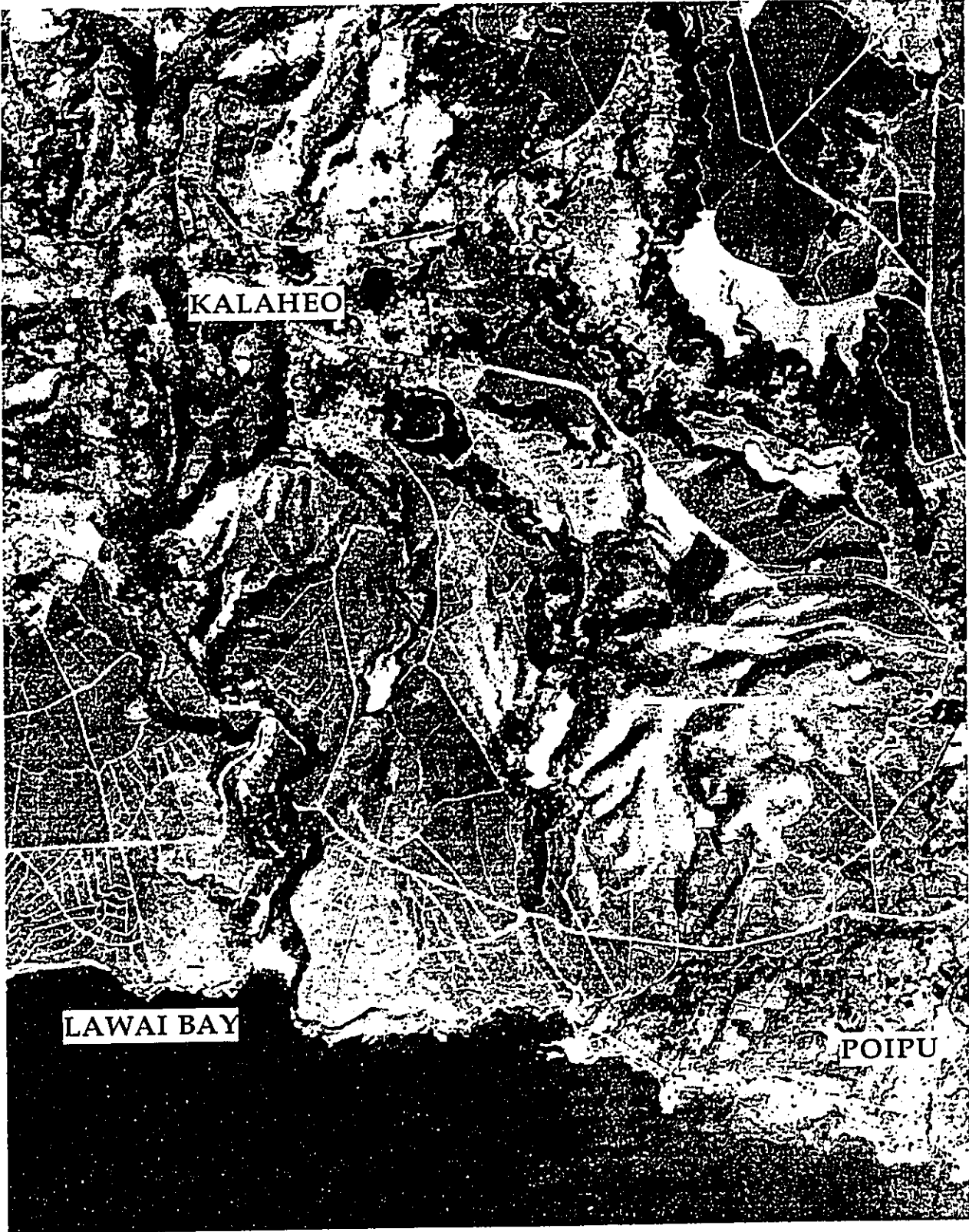


EXHIBIT 15

Queen Emma's Cottage at Lawai-Kai Before Hurricane Iniki

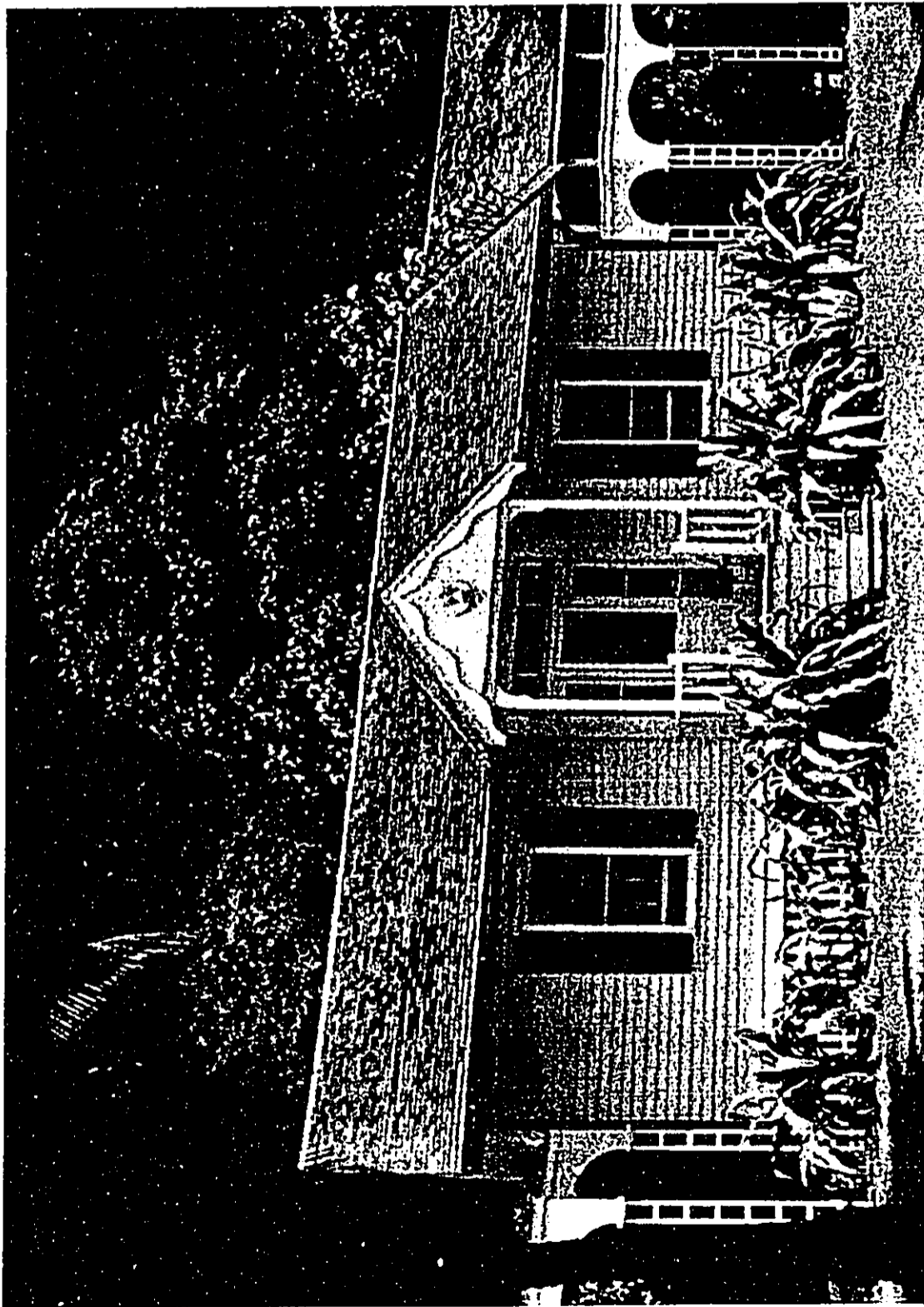


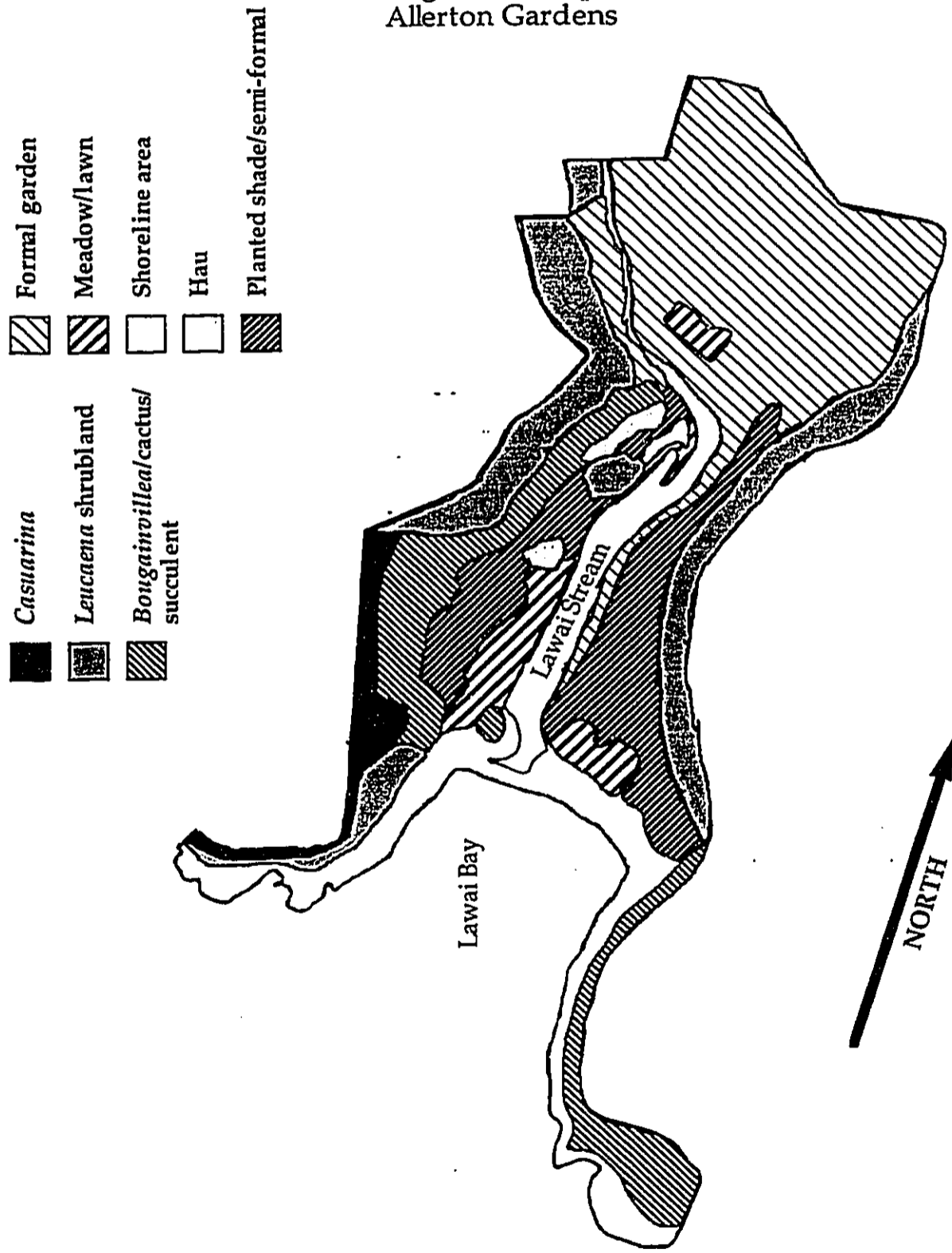
EXHIBIT 16

A Party of McBrydes and Friends at Lawai-Kai About 1910



EXHIBIT 17

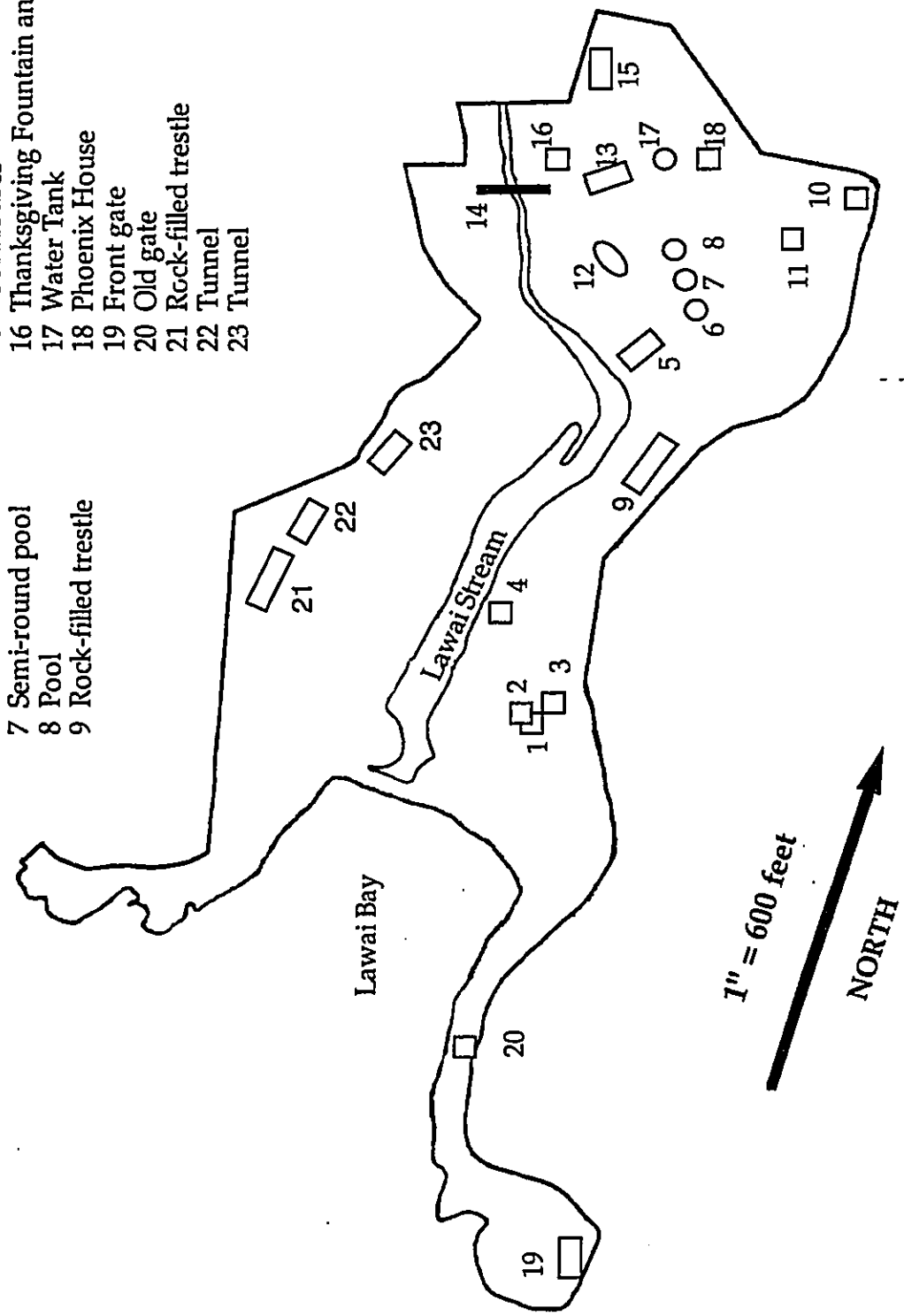
Vegetation Map of the Allerton Gardens



- 1 Queen Emma's Cottage
- 2 Allerton House
- 3 Lath House
- 4 Guest House
- 5 Mermaid Fountain
- 6 Pool
- 7 Semi-round pool
- 8 Pool
- 9 Rock-filled trestle
- 10 Japanese Rest House
- 11 Upper Valley Tool Shed
- 12 Three Pools Fountain
- 13 Diane Fountain and Gazebo
- 14 Bridge
- 15 Tool Houses
- 16 Thanksgiving Fountain and Gazebo
- 17 Water Tank
- 18 Phoenix House
- 19 Front gate
- 20 Old gate
- 21 Rock-filled trestle
- 22 Tunnel
- 23 Tunnel

Existing Structures in the Allerton Gardens

EXHIBIT 18



Existing Utilities
in the Allerton Gardens

EXHIBIT 19

- Water/Irrigation lines
- Sewer line
- Drainage
- Electrical lines
- - - Telephone lines
- Water tanks
- Cesspools

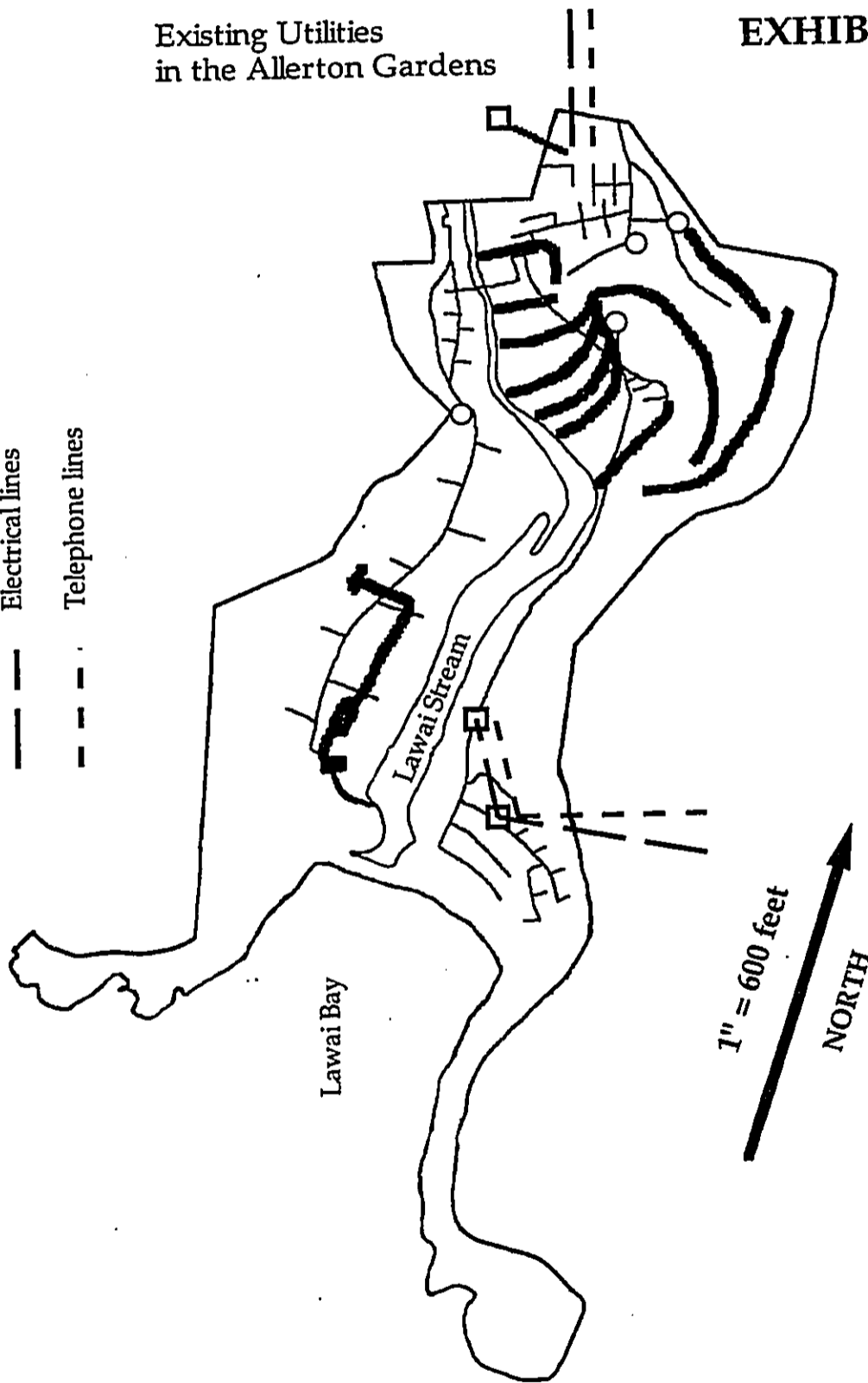


EXHIBIT 20

Existing Roads and Trails
in the Allerton Gardens

- 5' wide dirt paths
- 8' wide dirt maintenance roads
- 16' wide asphalt road
- - - 16' wide railway bed
- · - 16' wide dirt cane haul road

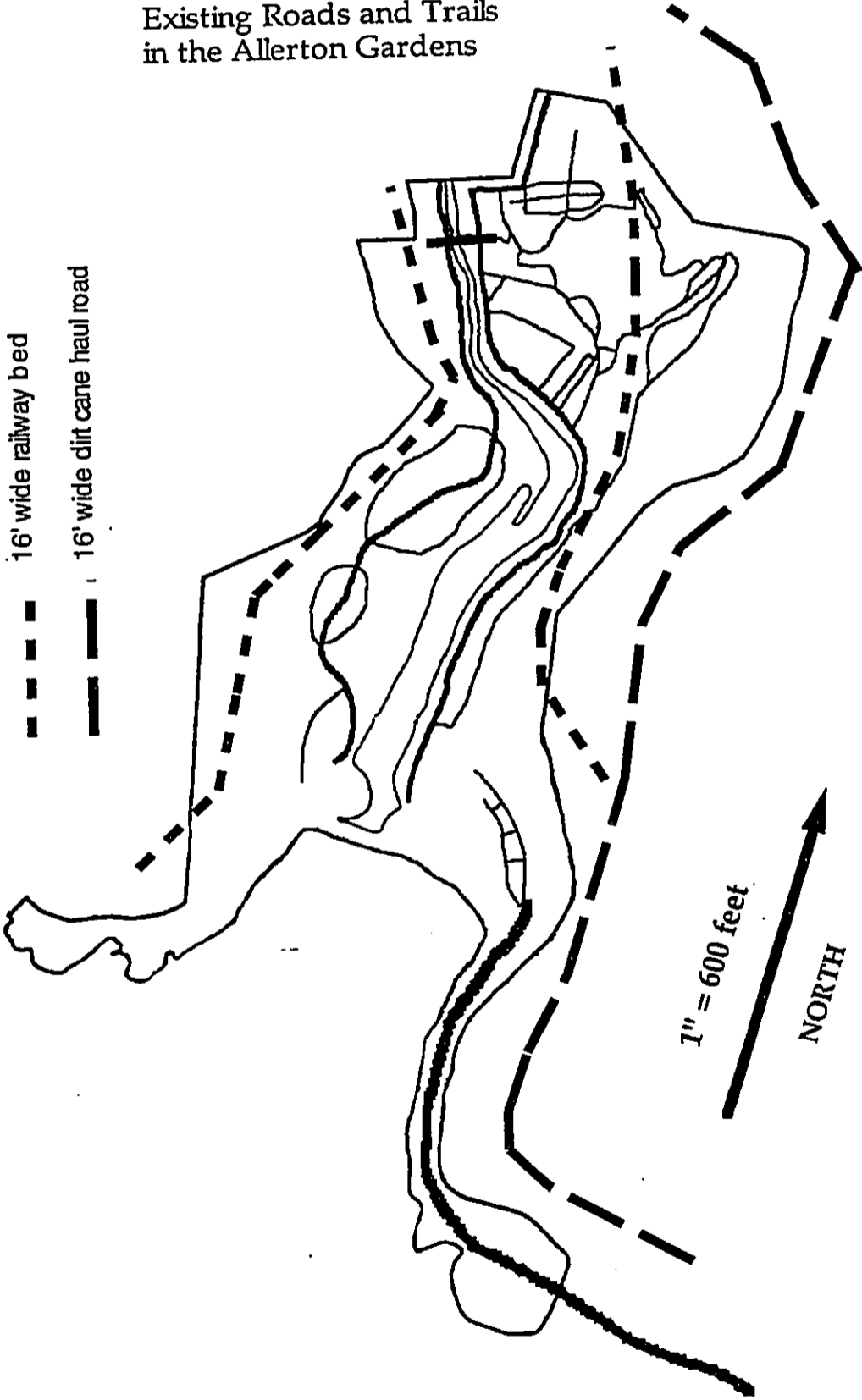


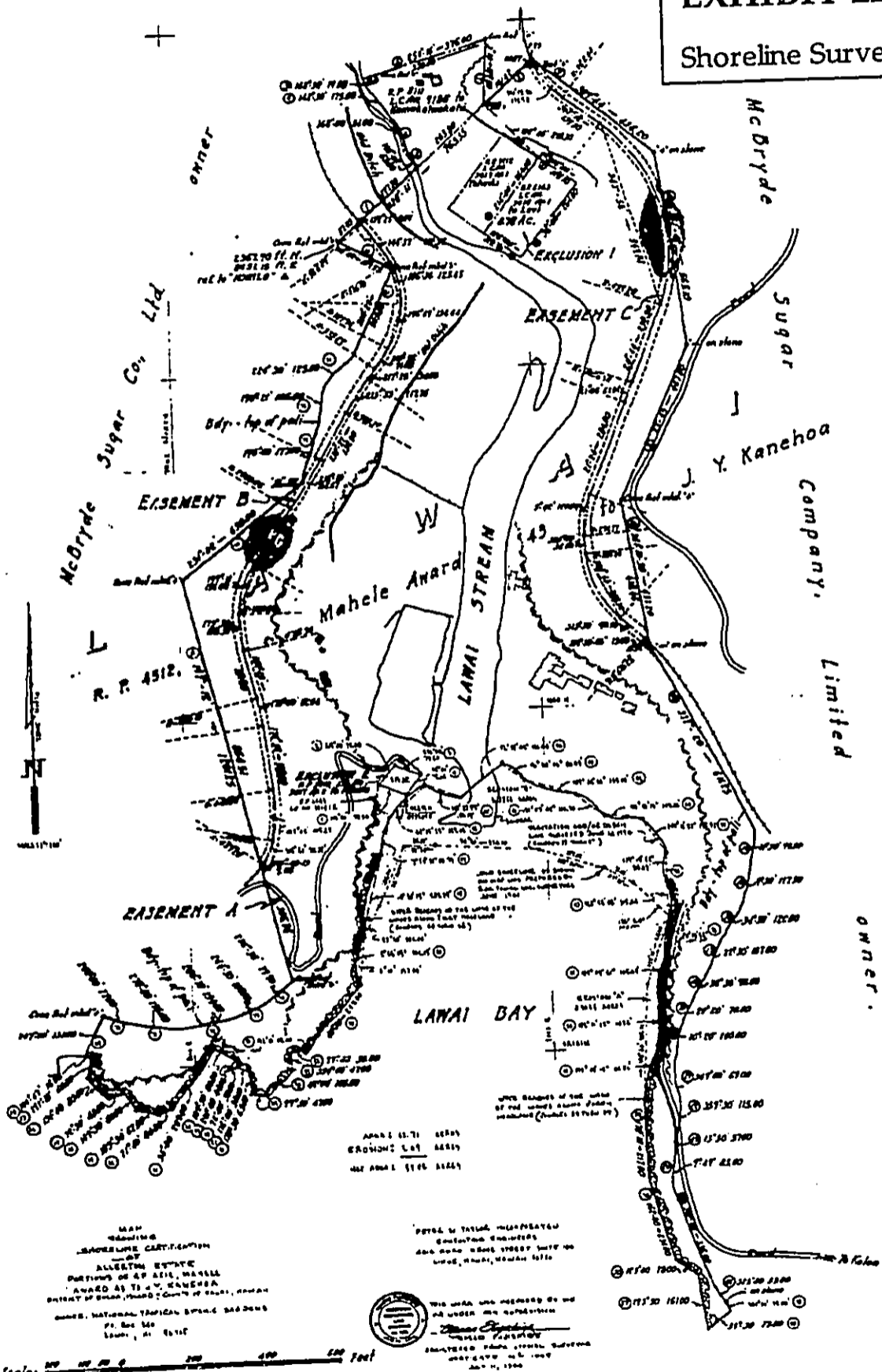
EXHIBIT 21

Robert and John Gregg Allerton at Lawai-Kai



EXHIBIT 22

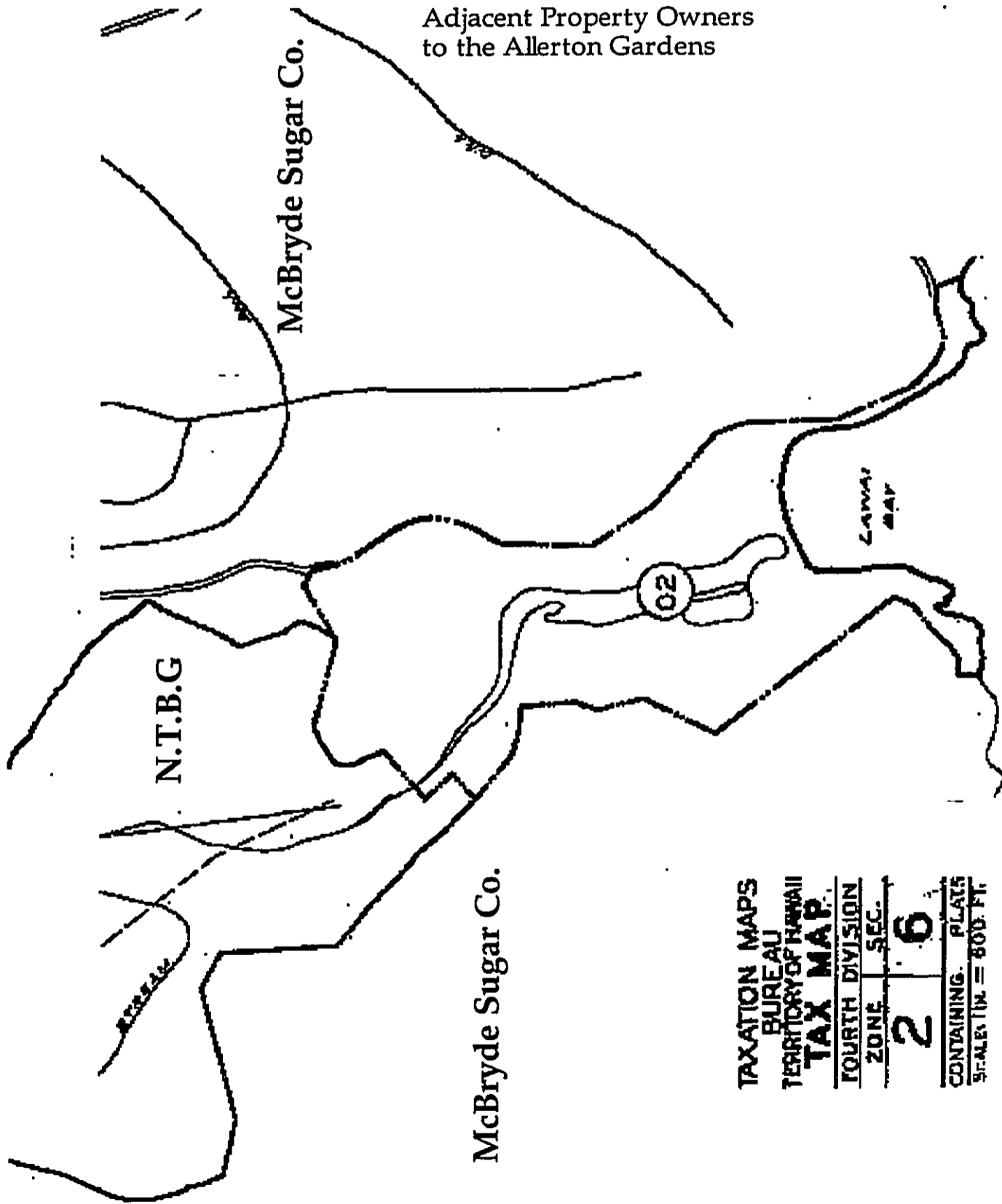
Shoreline Survey



THE (4) LINES RUN IN AREA 1

EXHIBIT 23

Adjacent Property Owners
to the Allerton Gardens



TAXATION MAPS
BUREAU
TERRITORY OF HAWAII
TAX MAP.
FOURTH DIVISION
ZONE | SEC.
2 | 6
CONTAINING PLATS
SCALE 1 IN. = 800 FT.

McBryde Sugar Co.

McBryde Sugar Co.

N.T.B.G.

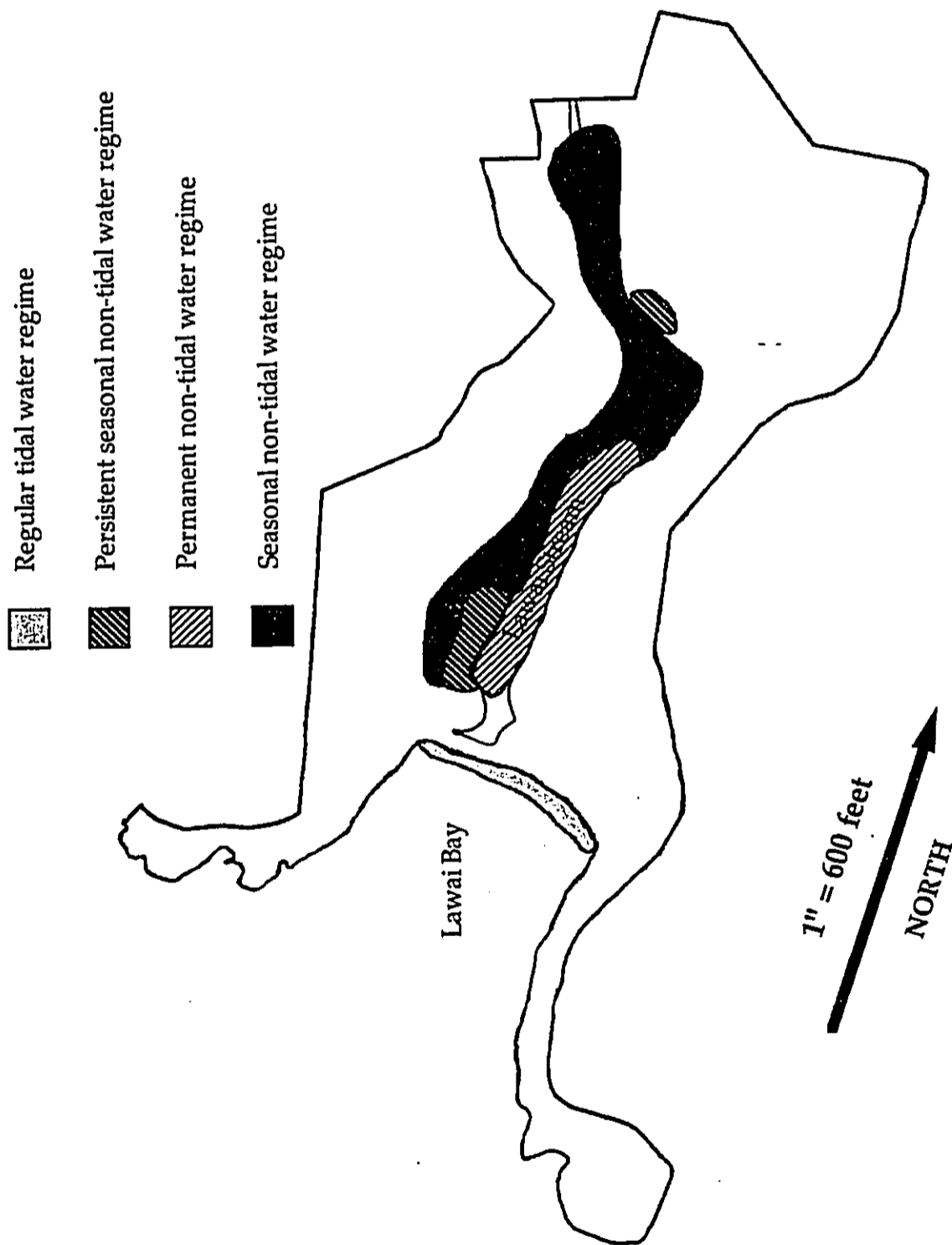
LAWAIA
WAY

02

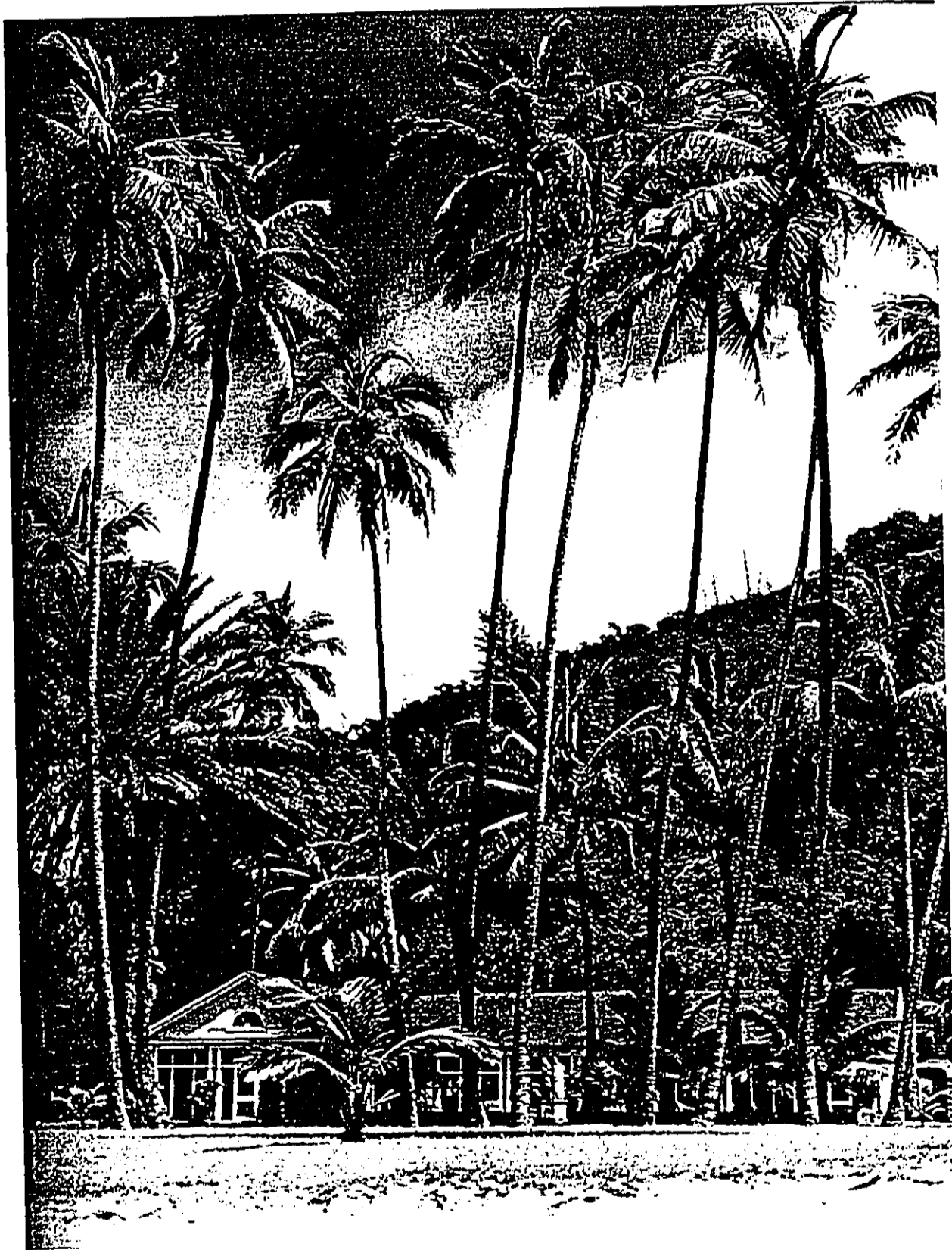
P.O. 200

EXHIBIT 24

United States Corps of Engineers Delineation of Wetlands in the Allerton Gardens



Allerton House at Lawai-Kai



CONSERVATION DISTRICT USE APPLICATION

FOR

ALLERTON GARDENS

APPENDICES

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

LIST OF APPENDICES

- | | |
|-------------------|--|
| APPENDIX 1 | LEGAL DOCUMENTS |
| APPENDIX 2 | BOUNDARY INTERPRETATION |
| APPENDIX 3 | ARCHAEOLOGICAL SITES ASSOCIATED WITH ALLERTON GARDENS |
| APPENDIX 4 | BIOLOGICAL SURVEYS OF ALLERTON GARDENS |
| APPENDIX 5 | SITE MAPS WITH METES AND BOUNDS OF THE ALLERTON GARDENS |
| 6 | COMMENTS & RESPONSES |

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

APPENDIX 1

LEGAL DOCUMENTS

**LETTER OF AUTHORIZATION
FROM THE FIRST NATIONAL BANK OF CHICAGO**

RECD AUG 01 1994



Three First National Plaza
Chicago, Illinois 60670-0103
Telephone: (312) 732-4240
Fax: (312) 732-7088

Howard M. Sanders
Vice President

July 27, 1994

Dr. William McK. Klein
Executive Director
National Tropical Botanical Garden
P.O. Box 340
Lawai, Hawaii 96765

Re: John Allerton Estate
Allerton Gardens Trust

Dear Dr. Klein:

This will confirm our understanding of the Management Agreement between First National Bank of Chicago as Trustee of the Allerton Gardens Trust and the National Tropical Botanical Garden, dated April 25, 1994. Specifically, the Management Agreement authorizes you to act as our representative and sign all necessary documents relating to the acquisition of a Conservation District Use Permit (CDUP) from the State of Hawaii and a Special Management Area Permit (SMAP) from the county of Kauai. It is our understanding that a CDUP and a SMAP are required in order for NTBG to proceed with the development of the new Visitors Center and entrance to the Allerton and Lawai Gardens that will enable us to reopen these gardens to the public.

Sincerely,

HMS:id

**LETTER OF AUTHORIZATION
FROM THE MCBRYDE SUGAR COMPANY**

REC'D AUG 1 8 1994

KUKUI'ULA DEVELOPMENT COMPANY, INC.

August 15, 1994

Dr. William Klein
Director
National Tropical Botanical Gardens
P.O. Box 340
Lawai, Hawaii 96765


Re: Temporary Visitors Center

Dear Bill:

Enclosed is a letter authorizing the garden to apply for the various permits required for the temporary visitors center. Please let Tom Shigemoto or me know if you need anything else from us to submit the applications.

I will prepare a license agreement for the temporary visitors site as soon as I have received from you a map showing the area you plan to use.

Yours truly,


William H. Campbell
General Manager

WHC/cyp

enclosure

cc: Mr. W. A. Doane (w/enclosure)
Mr. W. D. Balfour, McBryde Sugar Company (w/enclosure)
Mr. T. H. Shigemoto (w/enclosure)

McBryde
SUGAR COMPANY, LIMITED

August 12, 1994

Dr. William Klein
Director
National Tropical Botanical Gardens
P. O. Box 340
Lawai, Hawaii 96765

Subject: Letter of Authorization for the
Temporary Visitor Center at
Kukui`ula, Kauai, Hawaii

Dear Dr. Klein:

This is to confirm that the National Tropical Botanical Gardens is hereby authorized to apply for the State Land Use Commission's Special Permit and the County's Use and Class IV Zoning and any other permit associated with the establishment and construction of the temporary visitor center. The site is indicated on the development plans and further identified as a portion of Tax Map Key: 2-6-03: 1.

If there are any questions from the authorities please contact Tom Shigemoto of A&B Properties, Inc. at 742-1515. Thank you.

Sincerely,



W. Allen Doane
President

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

**TITLE SEARCH OF
ALLERTON GARDENS**



FIRST HAWAII TITLE CORPORATION

EXCLUSIVE AGENT FOR CHICAGO TITLE INSURANCE COMPANY

201 Merchant Street, Suite 2000

Honolulu, Hawaii 96813

Ph: (808) 521-3411

Order No. 56211
Escrow No.

PRELIMINARY REPORT

TO: NATIONAL TROPICAL BONTANICAL GARDEN
P.O. BOX 808
HANAIEI, KAUAI, HAWAII 96714

ATTENTION: CHARLES R. WICHMAN, JR.

FIRST HAWAII TITLE CORPORATION hereby reports that title to the land hereinafter described in Schedule C is on May 19, 1994 at 8:00 A.M. vested in:

JOHN B. PICKFORD, as Trustee of the Allerton Gardens Trust in Hawaii, pursuant to an appointment by the First National Bank of Chicago dated November 1, 1990, in accordance with paragraph (e) of Article VI of the Will of John Wyatt Gregg Allerton

Subject only to those matters set forth in Schedule B hereof.

SCHEDULE B

SUBJECT TO:

1. Tax Key: 2-6-02-01 (4) - Area Assessed: 74.060 acres
Taxes for the Fiscal Year 1993 - 1994 in the amount of \$25.00 have been paid in full.
Tax Key: 2-6-02-04 (4) - Area Assessed: 69,696 square feet
Taxes for the Fiscal Year 1993 - 1994 in the amount of \$25.00 have been paid in full.
Tax Key: 2-6-02-05 (4) - Area Assessed: 81,719 square feet
Taxes for the Fiscal Year 1993 - 1994 in the amount of \$25.00 have been paid in full.
Tax Key: 2-6-02-06 (4) - Area Assessed: 12.120 acres
Taxes for the Fiscal Year 1993 - 1994 in the amount of \$25.00 have been paid in full.
2. Shoreline setbacks: "Shoreline setbacks established pursuant to the laws of the State of Hawaii, or any political subdivision thereof, and any ordinances, rules or regulations adopted or promulgated by any governmental authority pursuant to such laws."
3. Seaward boundary: "Determination of the seaward boundary of the land described herein pursuant to the laws of the State of Hawaii."
4. The rights of the United States of America, State of Hawaii, the municipality and the public, in and to that part of the premises in question falling in the bed of the Lawai Stream; also to the rights of the riparian owners in and to the free and unobstructed flow of the water of said stream, if any.
5. Grant of Easements to McBryde Sugar Company commonly referred to as Tax Map Key: 2-06-002:004 & 005(4).

SCHEDULE B - Section 2
Part II

6. Exceptions and reservations as contained in the following:

DEED

Dated: October 26, 1938
Recorded: November 4, 1938
Book: 1468
Page: 464
to which reference is hereby made.

7. Reservation as contained in the following:

DEED

Dated: December 5, 1939
Recorded: December 12, 1939
Book: 1535
Page: 417
to which reference is hereby made.

8. Reserving unto the Grantors, their heirs and assigns for so long and only so long as same be the burial place of the human remains now therein, the right to preserve as such burial place and have, free from use, occupancy or disturbance by said Grantee, his heirs or assigns, the graves in the westerly corner of the land of Royal Patent 3212, Land Commission Award 3417, Apana 2 to Pehuiki, as reserved in Deed dated March 26, 1940, recorded March 29, 1940 in the Bureau of Conveyances of the State of Hawaii in Book 1558 Page 254.

9. Covenants, conditions, restrictions and reservations as contained in the following:

AGREEMENT

Dated: March 18, 1941
Recorded: March 22, 1941
Book: 1628
Page: 105
Re: Water rights and service.

SCHEDULE B - Section 2
Part II

10. Reservation as contained in the following:

DEED

Dated: December 7, 1943
Recorded: December 16, 1943
Book: 1795
Page: 136
to which reference is hereby made.

11. Reservation as contained in the following:

DEED

Dated: May 27, 1952
Recorded: June 3, 1952
Book: 2591
Page: 43
to which reference is hereby made.

12. The terms, provisions, conditions and restrictions, if any, contained in that certain Allerton Gardens Trust in Hawaii, pursuant to an appointment by the First National Bank of Chicago dated November 1, 1990, to which reference is hereby made.

SCHEDULE C

All of that certain parcel of land being a portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa, all of Land patent 8111, Land Commission Award 9188 to Kamakahookahi, all of R. P. 3212, Land Commission Award 3417, Apanas 1 and 2 to Pehuiki, all of R. P. 6143, Land Commission Award 3414, Apanas 1 and 2 to Levi) situate at Lawai, Koloa, County of Kauai, State of Hawaii, containing an area of 74.060 acres, more or less, and commonly designated by Tax Map Key (4) 2-06-002:001, and Easement B, containing an area of 1.6 acres, more or less, commonly designated by Tax Map Key (4) 2-06-002:005, and Easement C, containing an area of 1.6 acres, more or less, commonly designated by Tax Map Key (4) 2-06-002:004, and all of that certain parcel of land (being a portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa), situate at Lawai, Koloa, County of Kauai, State of Hawaii, containing an area of 2.13 acres, more or less, and commonly designated by Tax Map Key (4) 2-06-002:006, an area of 0.55 acre, more or less, and formerly designated by Tax Map Key (4) 2-06-002:007, an area of 1.252 acres, more or less, and formerly designated by Tax Map Key (4) 2-06-002:008 and an area of 8.188 acres, more or less, and formerly designated by Tax Map key (4) 2-06-002:009 being commonly described as follows:

SCHEDULE C (continued)

Gross area 63.62 acres and net area of 62.71 acres. Lot 2 being portion of R. P. 4312, Mahele Award 43 to J. Y. Kanehoa, all of Land Patent 8111, L. C. A. 9188 to Kamakahookahi, all of R. P. 3212, L. C. A. 3417, Apana 1 to Pehuiki, all of R. P. 6143, L. C. A. 3414, Apana 2 to Levi, situate at Lawai, Koloa, Kauai, and all of the land at Lawai conveyed to ALEXANDER M. MCBRYDE by MCBRYDE ESTATE, LIMITED by Deed dated May 3, 1899, recorded in the Bureau of Conveyances of the State of Hawaii in Book 198 Pages 54-56, known as the McBryde "LAWAI BEACH AREA", and the Sea Fishery of Lawai containing an area of 1411 acres, more or less. Tax Map Keys 2-06-002:001 and 2-06-002:006, and Easement B, containing an area of 1.6 acres, more or less, commonly designated by Tax Map Key (4) 2-06-002:005, and Easement C, containing an area of 1.6 acres, more or less, commonly designated by Tax Map Key (4) 2-06-002:004. Said parcels having been conveyed to ROBERT ALLERTON by PHILIP L. RIES and BISHOP TRUST COMPANY, LIMITED, Trustees under the Will and of the Estate of Alexander Moxley McBryde by Deed dated October 26, 1938, recorded in said Bureau of Conveyances in Book 1468 Pages 464-476.

3.343 acres being Lots 4 & 5, portions of R.P. 4512, Mahele Award 43 to J. Y. Kanehoa, situate at Lawai, Koloa, Kauai, formerly Tax Map Key 2-06-002:008 and Pors 2-06-002:001. Conveyed to ROBERT ALLERTON by MCBRYDE SUGAR COMPANY, LIMITED by Ex. Deed dated December 5, 1939, recorded in said Bureau of Conveyances in Book 1535 Pages 417-422.

0.78 acre, being all of R. P. 6143, L. C. A. 3414, Apana 1 to Levi and 0.13 acre, being all of R. P. 3212, L. C. A. 3417, Apana 2 to Pehuiki, situate at Lawai, Koloa, Kauai. Tax Map Key 2-06-002: pors. 1. Conveyed to ROBERT ALLERTON by WILLIAM P. PUAOI, also known as William Puaoi and RACHAEL MOKE, also known as Rachael Moke and Rachel Moses, by Deed dated March 26, 1940, recorded in said Bureau of Conveyances in Book 1558 Pages 254-257.

15,217 square feet, portion of Lawai Beach Road abandoned, being portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa. Situate at Lawai, Koloa, Kauai. Tax Map Key 2-06-002: por. 1. Conveyed to ROBERT ALLERTON by TERRITORY OF HAWAII (now; known as the State of Hawaii), by Deed dated July 20, 1942, recorded in said Bureau of Conveyances in Book 1706 Pages 313-317.

4.50 acres, portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa. Situate at Lawai, Koloa, Kauai. Tax Map Key 2-06-002: por. 1. Conveyed to ROBERT ALLERTON by MCBRYDE SUGAR COMPANY, LIMITED, by Exchange Deed dated December 7, 1943, recorded in said Bureau of Conveyances in Book 1795 Pages 136-140.

6.706 acres, being a portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa, situate at Lawai, Koloa, Kauai. Tax Map Key 2-06-002: por. 1. Conveyed to ROBERT ALLERTON by MCBRYDE SUGAR COMPANY, LIMITED, by Deed dated May 27, 1952, recorded in said Bureau of Conveyances 2591 Pages 42-46, and

SCHEDULE C (continued)

8.543 acres, being a portion of R. P. 4512, Mahele Award 43 to J. Y. Kanehoa, situate at Lawai, Koloa, Kauai. Formerly Tax Map Key 2-06-002:009. Conveyed to ROBERT ALLERTON by McBRYDE SUGAR COMPANY LIMITED, by Deed dated March 18, 1941, recorded in said Bureau of Conveyances in Book 1628 page 105-116.

Being a portion of the land conveyed by the following:


DEED

Grantor: TOSHIO KANEKO, Ancillary Personal Representative of John Wyatt Gregg Allerton, also known as John Gregg Allerton, deceased, in Probate No. 860024, Circuit Court of the Fifth Circuit, State of Hawaii

Grantee: JOHN B. PICKFORD, as Trustee of the Allerton Gardens Trust in Hawaii, pursuant to an appointment by the First National Bank of Chicago dated November 1, 1990, in accordance with paragraph (e) of Article VI of the Will of John Wyatt Gregg Allerton

Dated: December 20, 1990
Recorded: December 27, 1990
Document No. 90-197555

FIRST HAWAII TITLE CORPORATION



Authorized Signature

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

APPENDIX 2

BOUNDARY INTERPRETATION



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

April 13, 1994

Ms. Esther Ueda
Executive Officer
STATE LAND USE COMMISSION
335 Merchant Street, Room 104
Honolulu, HI 96813

Subject: Boundary Interpretation for the Allerton Gardens in Lawai, Kauai-TMK2-6-02:1-9

Dear Ms. Ueda:

It recently came to our attention that the entire Allerton Gardens is located within the State's Conservation District. Because of this we have begun to compile the information needed to file a Conservation District Use Application (CDUA) with the Department of Land and Natural Resources (DLNR).

In our preliminary discussions with staff at the Office of Conservation and Environmental Affairs (OCEA), they indicated that we should obtain a boundary interpretation from the State Land Use Commission. In this regard we would like you to confirm the location of the Allerton Gardens, (TMK 2-6-02:1-9, see attached) within the Conservation District, as well as the date it was classified within the Conservation District and the reasoning behind its inclusion.

Should you have any questions concerning our request, please call Chipper Wichman at 826-5547. We greatly appreciate your attention to this matter and await your reply.

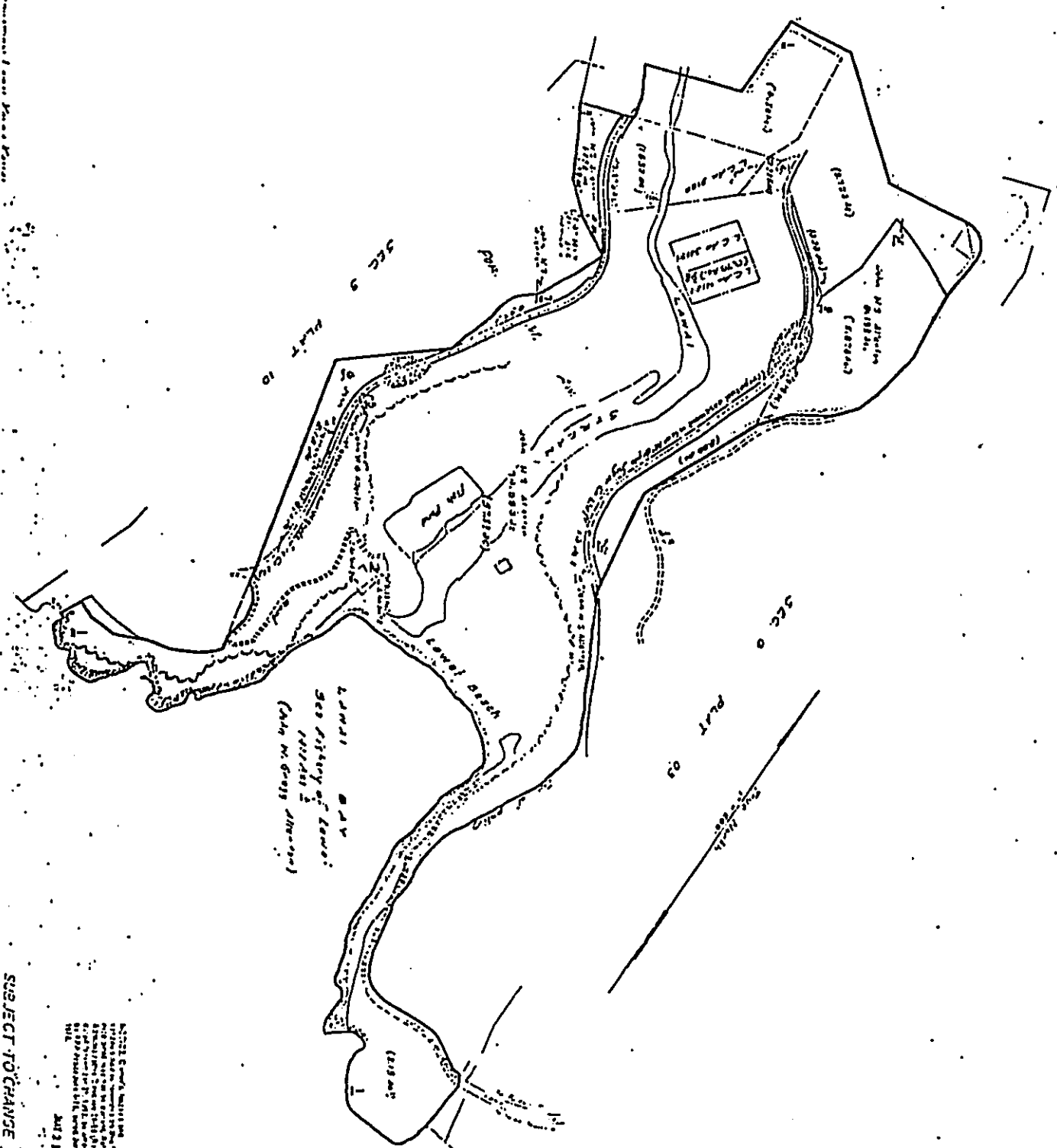
Sincerely,

William McK. Klein, Jr.
Director

cc: Howard Sanders, First National Bank of Chicago
Michael J. Shea, Esq., Sutherland, Asbill & Brennan
Charles "Chipper" Wichman, Limahuli Gardens

enc.: TMK Map of 2-6-02:1-9

Revenue Department of New Jersey



SUBJECT TO CHANGE

NOTICE TO PROPERTY OWNERS: This map was prepared by the State Tax Commission under authority of the State Tax Commission Act of 1934, Chapter 110, Laws of 1934, and the State Tax Commission Act of 1935, Chapter 110, Laws of 1935. It is subject to change without notice.

Original made 22 Nov

TAX IN CANVAS BUREAU
REVISION OF PLAN
TAX MAP
FORM DIVISION
DATE 1937 P. 43
2 6 02
STANDARD TABLES
SCALE 1" = 200'

JOHN WAIHEE
GOVERNOR



REC'D APR 21 1994 ESTHER UEDA
EXECUTIVE OFFICER

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

April 20, 1994

Mr. William McK. Klein, Jr., Director
National Tropical Botanical Garden
P.O. Box 340
Lawai, Hawaii 96765

Dear Mr. Klein:

Subject: Boundary Interpretation No. 94-13, Allerton
Gardens, Lawai, Kauai, TMK No.: 2-6-02: 1, 4, 5
through 9

Pursuant to your letter dated April 13, 1994 requesting a boundary interpretation for the subject parcels, we confirm that the subject parcels are designated within the State Land Use Conservation District. The subject parcels were put into the Conservation District on August 23, 1964.

Upon review of our records, it appears that the subject parcels were placed within the Conservation District previously due to the private park development of Lawai Bay and the topography of the area.

Should you have any questions on this matter, please call Fred Talon or Bert Saruwatari of my staff at 587-3822.

Sincerely,

A handwritten signature in cursive script, appearing to read "Esther Ueda".

ESTHER UEDA
Executive Officer

EU:bks

cc: OCEA
County of Kauai Planning Dept.
Glenn Y. Sato, Tax Maps & Records Supervisor
C&C of Honolulu, Department of Finance

cc: Chipper Wichman

**Land Use Districts for the State of Hawaii;
Recommendations for Implementation of the State
Land Use Law, Act 187 SLH 1961.**

**Prepared for the Department of Planning and Research
and the Land Use Commission
by**

Harland Bartholomew and Associates

1963

and interest to all the people of the State.

Two outstanding historic sites are recognized, the old Russian fort at the mouth of Waimea River, and one of the State's most valuable archeological features, namely, the skillfully cut stones lining Menchune Litch, lying in the southern end of the Waimea Canyon Conservation District.

AGRICULTURAL-CONSERVATION BOUNDARY LINE

1. Central Mountain - Plateau Area

Beginning at the Manoa Stream at the boundary of the Haena district, the Agriculture-Conservation line extends southward on the former Forest Reserve boundary at the upper limit of feasible grazing, where soils supporting plant cover suited to grazing give place to terrain so steep and rocky that it has no agricultural use. The former Forest boundary turns eastward and approximately at the point where it crosses the 750 foot contour, the line enters the former Forest Reserve to follow this contour up the side of Wainiha River Valley to Mauna Hina, cross the Wainiha River eastward and ascend to an elevation of 3500 feet at Kamakoanu, descend northward to 1500 feet, turn southeastward to cross Lumaha'i Stream and thence northward along Lumaha'i Valley at approximately 50 feet across the former Forest boundary, then follow the border of steep lands to the coastal highway, follow this northwestward across Lumaha'i Stream to a point above Wainiha Bay, and there drop to the sea. The line thus circumscribes the Wainiha and Lumaha'i River Valley grazing area, with good bottom lands and rougher slopes, all now in grazing.

From this point eastward past Lumaha'i Beach the Conservation District extends from the central mountains to the coast along Waikoko Ridge.

Starting at the west side of Hanalei Bay the line skirts the bottom of the steep east side of Waikoko Ridge southward to the former Forest boundary, follows this boundary eastward dividing steep, rough lands to the south from productive agricultural soils to the north. Again extending northward, eastward, and northeastward to outline rough, steep, unproductive land, it turns the point of the mountains at about 250 feet in elevation and outlines the productive soils of Hanalei Valley southward to where the valley narrows and the Hanalei clay loam becomes too stony to be of agricultural use.

From this point it returns on the east side of Hanalei Valley to turn eastward on the former Forest boundary past rocky and wet areas to Kapaka where it follows the steep rough canyon of Kalihiwai River northward outside the former Forest leaving the grazing soils to the west within the Agricultural District, and including the scenic waterfalls in the Conservation District before reversing to leave cane lands to the east in agriculture, and again crossing into the former Forest area to include a wet upland, Kamoukoua Ridge, and soils of the Haiku and Haiki series now in actual grazing in the Agricultural District, the line following the lower border

of steep, rocky unused land, turning northward at Kahoopulu along rough mountainous land, and finally coinciding with the former Forest boundary at the edge of this mountain land eastward and southward past Puu Konanae to follow the upper rim of Anahola Stream Valley westward. It continues within the former Forest boundary westward and southward, leaving the dam in Anahola Stream, and the leadwaters and several tributaries in the Conservation District, but including grazing soils of the Haiku series surrounding upper Kanehu Reservoir in agriculture.

At Pohukuhapai the line turns eastward along rocky land, crosses the former Forest boundary and extends to the limit of cultivation at Kaoho. It then borders a prong of agricultural lands to the vicinity of Mimino Reservoir.

It then turns southeastward to the upper border of Kapaa Stream Valley, following it eastward to the edge of Kapaa urban area; then commencing at the Kapaa urban area boundary on the south bank of the stream it follows this bank westward nearly to the former Forest Reserve boundary, leaving the stream valley and falls in the Conservation District for its scenic and recreational values.

The line crosses Kapaa Stream and joins the former Forest boundary, which for nearly four miles follows the approximate upper limit of agricultural soils, then crosses rough, broken land southwestward. At the point where the former Forest boundary crosses the 500 foot contour the line turns westward to follow the North fork of Waialua River for over a mile from a point just below the dam, thence west and south to Waikoko Stream and eastward and southward on the edge of rough, broken land to include a somewhat wet upland area of smooth topography in the Agricultural District. It intersects the Waialua-Hanamaulu District line and follows it to the former Forest Reserve line which it follows through broken upland to the south side of Kiloana Crater, thus outlining the practical upper limit of agricultural operation.

From Kiloana Crater the line turns eastward to include rough, broken uplands in Hanamaulu and Kalepa to a point about one mile above Kapaa. It turns southward, then westward, then southwestward across Nawiiliwili and westward in Haiku to encompass the roughest of the upland in conservation, then turns southward, westward, and northward around rough broken land, returning to the north side of Kiloana Crater, turns west on the Hanamaulu-Haiku boundary to the electric power line, where it crosses the former forest boundary, bears northwest, west, southwest, west, south, and southeast to the former Forest boundary, to include in agriculture a large area of grazing soil and smooth topography within the former forest.

It then traces the border of agricultural soils on the former Forest boundary southwestward and southward to Laauhihahai, thence southward on the same boundary along the line between steep and broken terrain and the belt of agricultural soils

eastward, used largely for pineapple, until it reaches a point on the Koloa-Lawai District line.

Following the former Forest boundary northward, then around Kahuamoa, and to Kapohakau, it turns westward following the approximate lower lands of steeper, rockier, more eroded lands across Kalaheo. It then proceeds southward and westward along the irregular former Forest boundary west of Papapahohola across Wahiawa Stream canyon nearly to Pohakea bench mark and northward along grazing lands to Puu Aukai, whence it follows the former Forest boundary on the divide boundary between Wahiawa and Hanapepe to Kapalao and from this point, it follows the western boundary of Lihue-Koloa Forest Reserve northward, separating grazed lands from ungrazed until the topography becomes too steep for grazing, where it leaves the former Forest boundary, turns westward and southwestward on the divide to Hauhill Stream.

Leaving that stream and the upper reaches of Hanapepe Canyon in conservation, it crosses Hanapepe Canyon and ascends to approximately 2,000 ft., turns northward and rises to about 4,000 feet west of Kalaluanahalehale on the Hanapepe-Makaweli divide boundary. It follows northward and northward leaving the rugged, ungrazable headwaters of Olokele River and Waiua Stream in conservation; but turns westward to include grazed lands in the headwaters of Halekua Stream and Koholoina Stream in the agricultural district, following the divide between the streams and Alakai Swamp. The swamp itself is clearly of value as a conservation area for watershed and storage, for a wildlife refuge, and for the preservation of rare endemic species of plants.

Thus following the divide to Kapukapala Ridge near Kaholuamanu, the line follows the ridge, placing the headwaters of Mokihona and Omaso Streams in agricultural grazing, but assigning the vast scenic complex of Canyons at the upper reaches of Waimea River in conservation. Lands that are left in grazing here and for a great distance eastward have marked scenic values, but are so inaccessible that, for the present, the grazing values are dominant.

The line turns southward to the east rim of Waimea Canyon, descends to Kekaha Ditch, follows the ditch along the upper valley slope to where a siphon carries the ditch water across the canyon, descends to the east edge of the valley floor, follows this position to the beginning of agriculture, crosses the stream to the western edge of the valley floor and follows the highway to the point of the mountain ridge, thus encompassing the world-famous archeological mystery - the cut stone lining of the Menchune Ditch which precedes the Polynesian culture found here by Captain Cook at the time of his discovery of the Islands. This culture had no stone-cutting skill of this nature.

The line ascends to the summit of the west side of Waimea Canyon, traces the rim to meet Keoke Highway, and follows this highway to a

point about one-fifth mile above the principal lookout to the canyon, the outstanding scenic attraction of Kauai, and perhaps the best in the State. At this point it breaks away westward along the northern edge of lands in the main under agricultural lease to Kekaha Sugar Plantation, and operated in sugar on the wider ridges, but grazed in the intervening canyons and gulches of this dissected plateau. The area also contains some small farms or homesteads. The line follows Kaulaula Valley to the coastal plain Barking Sands area, one of the greatest accumulations of beach sands in the State. It then follows the boundary between beach sands and the heavier productive sugarcane soils behind the coastal dunes to the border of the Kekaha urban area. While most of the Barking Sands area is now occupied by the military, it is considered that this expanse of sand bordering the coast for some eleven miles, would be of great public value for resort and recreational development should it be released at some future date by the military.

From this sand area to the point of beginning, the entire coastal border of high, spectacular seacliffs, with narrow, little-frequented valleys, is in the Conservation District, with the single exception of Kalalau Valley and adjoining valleys on either side. These valleys have outstanding scenic qualities, but are at present grazed by cattle, and are so inaccessible that few people enter them, though the view of Kalalau from above is one of the most magnificent in the State. The light grazing practiced below does little to harm the view. Therefore the Agriculture-Conservation line follows the impassable falls at the heads of these valleys.

2. Waiakamoo Area

The area of Waiakamoo and Ohaiula Valleys together with the steep escarpment front on either side is included in the Conservation District because of the steepness of the topography and its scenic qualities. The Agriculture-Conservation line demarks the upper rim of steep canyons and escarpment, except that it descends to follow the foot of the escarpment where it meets agricultural lands at its lower side.

3. Old Russian Fort Area

At the mouth of Wailua River the Russians early built a trading post and a rather elaborate fort of stone. This fort has recently been cleared of brush and made accessible to the public. The Agriculture-Conservation line around the area commences at the ocean, bears eastward then northward through canefields to give adequate room should further park development be needed, and terminates at the Waimea highway in such a way as to give broad access to the fort.

4. McBryde Park Area

This area, a former estate, was developed as a public park and golf course and given to the people for their enjoyment. The boundaries delineated

on the map are those of the Park limits.

5. Allerton Park Area

This area around Lawai Bay was developed and landscaped as a private estate. The owner is interested in having it perpetuated. The boundary surrounding it runs inland from the headland west of the bay to the vicinity of Lawai Pump, reverses and follows along rocky lands on the east side to the point on the east side of the Bay. The boundary is set indirectly by topography on the limits of the area developed for a park.

6. Koloa-Haiku Mountain Area

Beginning at the sea at the eastern end of the sand beach near Aweoweonui the Agriculture-Conservation line ascends the slope to about 300 ft., crosses a valley, and ascends to 250 ft. It then follows the approximate boundary of steep, rocky, agriculturally unusable land northward and then westward to the western end of the range above Waihohonu Stream. Running approximately on the 500-ft. contour it turns northward and follows the steep, rocky land to a point near the Hanapepe-Lihue Highway near Kahoaia. It swings broadly around the end of the range, and follows its eastern and northern boundary at 500 ft. to the eastern limit of agricultural soils, reverses sharply, and parallels Huleia Stream westward at the foot of the rocky slope past the western end of the ponded section of the stream. Here it crosses the stream northward, encompasses the low-lying stream border and climbs more than 200 ft. to circumscribe Menchune Fish Pond - held by a dike structure dating to dim pre-Hawaiian antiquity. Past this pond the line ends at the Nawiliwili urban boundary.

7. Kalepa Ridge - Wailua River - Sleeping Giant Area

Commencing at the ocean near the south bank of Wailua River, the line borders the lower river plain, proceeding thus westward to the foot of the slope of Kalepa Ridge and southward along the foot of the ridge. It thus defines the limit between productive agricultural soil, and the rough, broken, rocky, and eroded slopes of the ridge. It rounds the point of the ridge just above Hanamaulu, and follows the foot of the western slope of the ridge, which boundary lies about 150 ft. higher than the foot of the eastern slope, thus tracing the edge of agricultural soils northward to the rim of the steep escarpment of Wailua River Valley. It follows this south escarpment up the South Fork of Wailua River to include Wailua Falls.

It then proceeds downstream along the rim of the north escarpment of Wailua Valley, including Fern Grotto, to its fork with the North Fork. It then proceeds up the south rim of North Fork Valley in an irregular line to include Koholalele Falls, then tracing the smoother northern rim it returns to the foot of the slope of Sleeping Giant Ridge.

Starting upstream from Opaikaa Falls it follows the foot of Sleeping Giant Ridge along Opaikaa Stream northwestward, then turns somewhat east of northward at about 350 ft. of elevation to trace the boundary between the steep, rocky ridge and good agricultural soils to the west. Reaching the north end of the ridge near Konohiki Stream it turns southward along the approximate border between the ridge and productive agricultural lands to skirt the ends of the proposed Wailua urban area, then separates the lower ridge slope from rice paddies, crosses Opaikaa Stream, turns eastward a short distance from the bank of Wailua River, includes a park and historic hoiau in the Conservation District, and follows just above the river bank, crosses the highway to Kapaa, ending at the ocean.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

APPENDIX 3

**ARCHAEOLOGICAL SITES ASSOCIATED
WITH THE ALLERTON GARDENS**

ARCHAEOLOGICAL SURVEY AND EXCAVATIONS ON THE
ISLAND OF KAUAI, KONA DISTRICT
HAWAIIAN ISLANDS

by

William K. Kikuohi

August 1965

Sponsored by

The Committee for the Preservation of Hawaiian Culture

Ahupua'a of Lāwa'i

The name Lāwa'i refers to the present area between the ahupua'a of Kalāheo and Koloa. It is probably an ahupua'a in its own right. The area may have been named after the prominent valley running from the sea to the uplands. The name Lā-wa'i means the day to end the fishing tapu. The valley is well watered and has heavy growth of plants. The stream and pond at the mouth of the valley is well stocked with fish, shellfish and birds

Site 50. Lā-wa'i-kai

The valley was once owned by Queen Emma, wife to King Kamehameha III. It is said that she had all the caves on her property mapped. These maps or locations were given to an institution...archives?

The strip of land off the cliffs between Lā-wa'i-kai and Nomilu fishpond was said to be part of the original property of the Queen. This strip of land was the path on which the queen sent her retainers with the containers of young mullet fish from her own fishpond to Nomilu pond to be deposited there.

Parts of the original homestead of the Queen is still standing, her home was called Mauna-Kilohana.

50a. Opihi Rock

A large boulder which has a sharp right angle corner at one end. Numerous opihi shells found strewn about it gave the rock its name.

50b. Springs

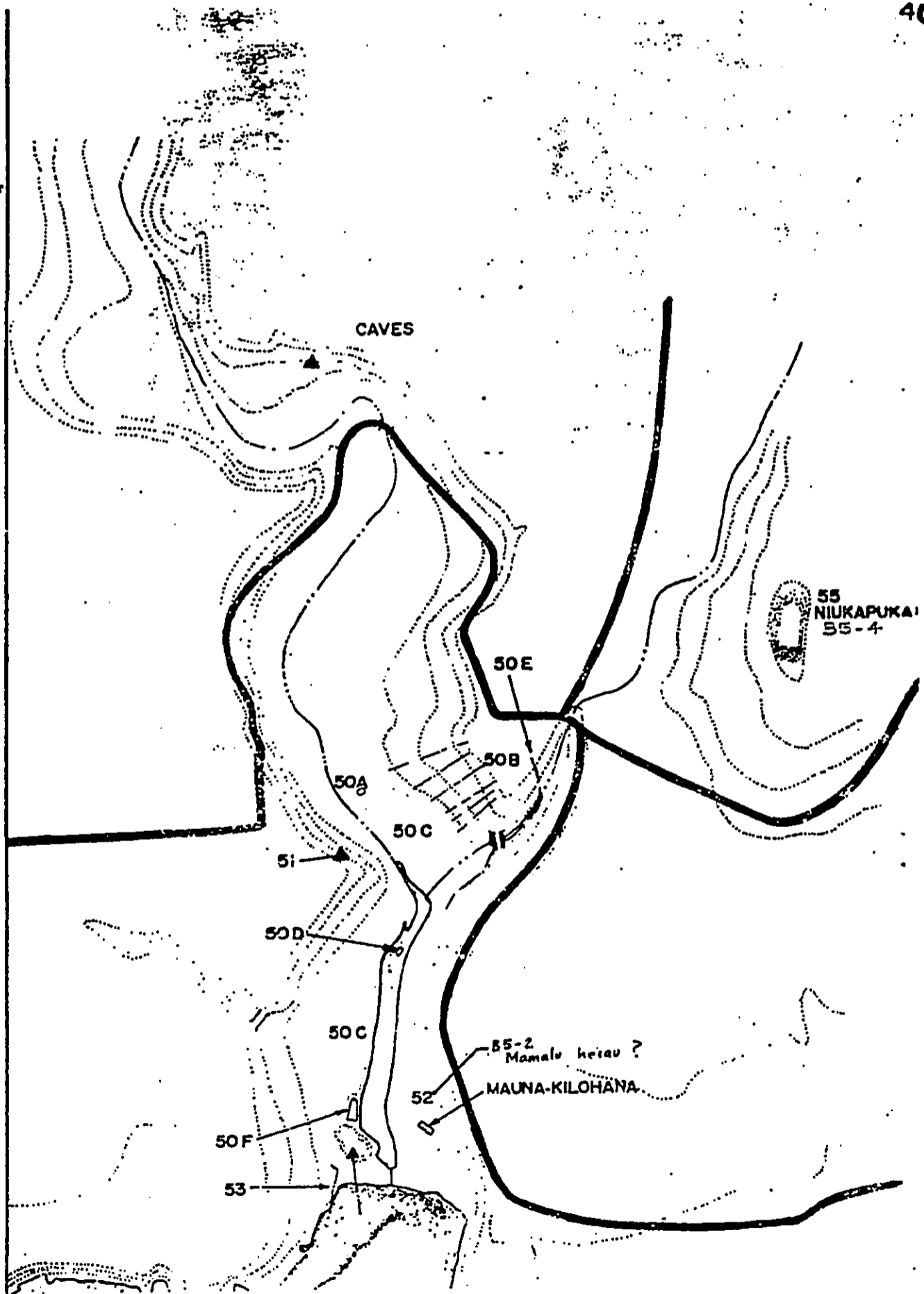
A large number of springs flow from crevices in the rock strata. The entire eastern valley side has springs which in the days of the Queen were diverted effectively to feed the taro patches.

50c.

50c. Taro Fields

The entire valley was once said to be cultivated into numerous taro plots. After the Queen sold the land the other owner McBryde maintained some of the plots while most were left to lie fallow.

These fields were fed by the numerous springs and from irrigation ditches, 'auwai, fed by the stream of Lāwa'i.



Site 50d. Hina Rock

A large boulder in the middle of Lāwa'i stream is said to be the body of Hina. The stone is completely covered by water but its mass can be distinguished.

Hina is said to be a female who after being ardently pursued jumped into the stream upon which she immediately turned to stone. The women of the region would stand on the stone and their romantic desires would be granted. Possibly a female phallic stone.

50e. Path

An old path once used by travelers and later by the Queen connected Lāwa'i-kai to Kukuilono. The path was closed by a stone wall but the lane is still marked.

50f. Fishpond

A fishpond located back of the large rock hill at the mouth of Lāwa'i-kai was once very productive. The stone walls are still in very good condition. The limits of the pond however are very vague because of overgrowth of weeds and shrubs. The tidal wave of 1946 swept through the pond and filled it with mud and debris.

The mullet raised at this pond was said to be very popular and considered a delicacy.

Site 51. Cave

A large cave was shown to the crew by Mr. John Gregg Allerton. The cave is located on the western side of the valley at about three-fourth to one mile from the mouth of the valley.

The cave was used by the Hawaiians but no evidence of any burial was found. Very dry grass was found all very brittle. The grass was evidently used as bedding. Later on the cave was used by the Japanese laborers as a place where they could gamble privately.

The cave was found on the face of a steep cliff.

Site 51.....continued

The point on the trail to the cave mouth was about 40 feet downward. The cave entrance is a long and narrow slit about 40 feet long and 5 feet high. The entrance was walled and once faced with dirt as a means of concealment. Portions of it still remain.

The cave has six caverns. A seventh and eight may possibly exist. Each cavern drops about 10 feet from each other and becomes very chilly. The third cavern condenses ones breath.

Two pits were dug in the front cavern. The pits were 5 feet square and dug to a depth of 4 inches. Nothing was found in either pits. A search of all the other caverns was undertaken but only dry grass and some kukui nut shells were found. Much of the floor of all the caverns were filled with rock from the roof. The debris was quite thick and extremely difficult to gauge if it is concealing any artifacts or midden. See figure 26.

Site 52. Mamalu Heiau B5-2

The heiau which nothing now remains was said to exist at the mouth of Lawa'i-kai valley. Thrum describes the heiau in this way;

"...this site is now completely destroyed... a small paved platform heiau about 200 feet in size, located on the beach; portions still to be seen." 14.

Site 53. Walled Area

On the western corner of the mouth of Lāwa'i-kai a stone wall can still be seen. The wall retains a backed-up area of red dirt sand and loam. Midden was seen at its lowest level on the wall face.

Site 54. Shelter Cave

At the mouth of Lāwa'i-kai valley there is a rock hill on which a cave was found. The cave passes through the entire hill.

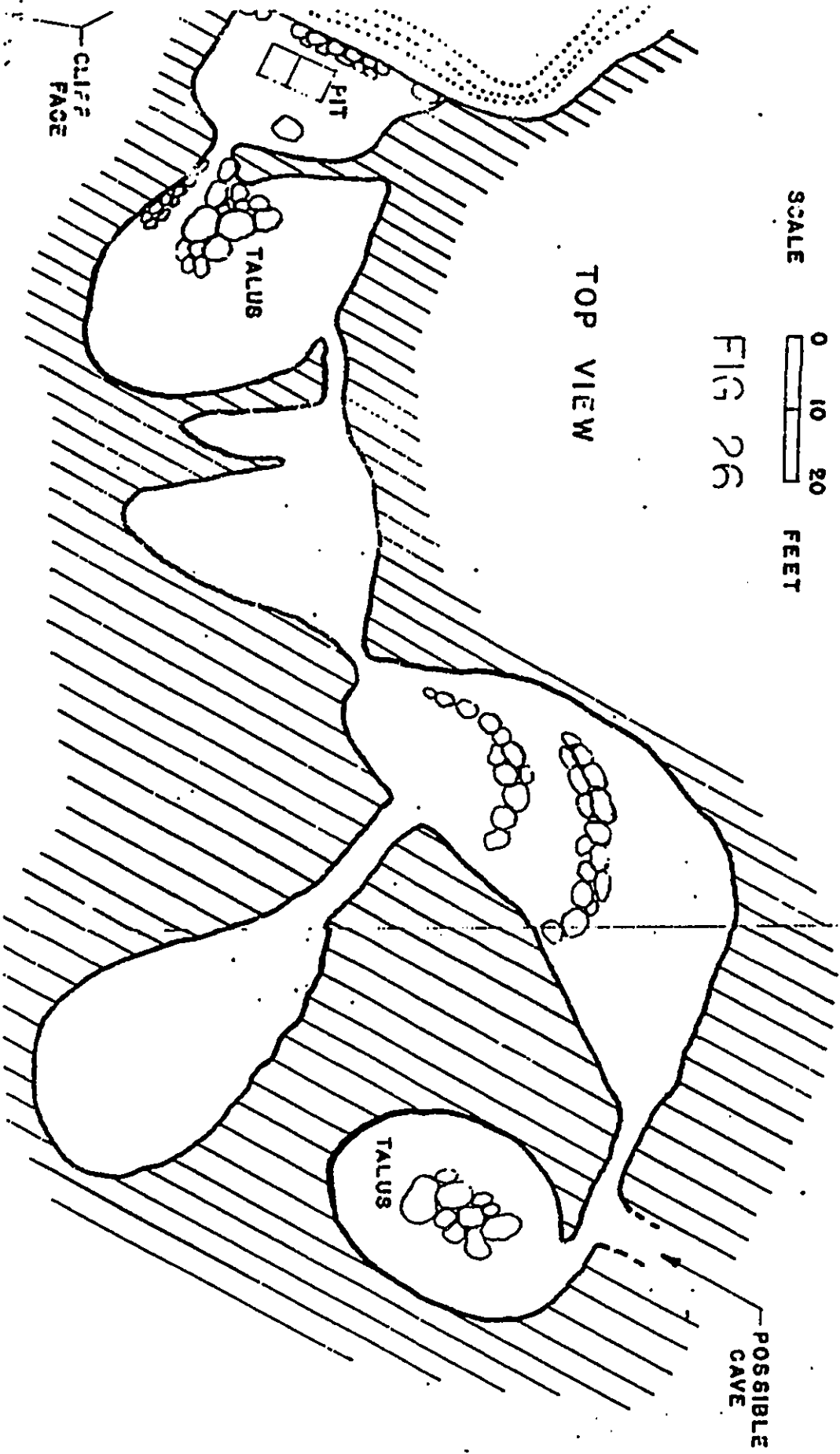
MN

SCALE



FIG 26

TOP VIEW



Site 54.....continued

Midden of various types such as kukui nut shells, bottles, pieces of wood and perhaps some bone was seen within it. The cave, if it was used by the people as a burial cave had no skeletal material in it. The dense growth of night-blooming cereus covered both entrances.

Site 55 Niukapukapu Heiau B5-4

Niukapukapu heiau was an exceptional temple in that the local people didnt want to reduce the grounds to sugar plantings because of their belief that these places carry harm to the destroyer.

The Japanese called this hill ^(Maru) Mariyama (Round Mountain). This temple lies on the top of the hill which is just a simple pile of small rocks. see figure 27.

Much of the heiau is in good condition, however, someone has added a depression at its eastern edge. Erosion has destroyed a small length of the western wall. The remaining structure remains the same as noted by Bennett;

"The outside measurements of this heiau are 46 by 95 feet. At the front, and for 60 feet on the east side, a section of the wall remains which is 3 to 4 feet wide, 3 feet high on the outside, and 1 to 3 feet high on the inside. Both east and west the steep sides of the hill are faced with stone. On the east side the cross-section shows the wall 3 feet high on the inside 3 feet high on the outside and 4 feet wide. At the base of the wall is a flat space 5 feet wide then a 1 foot drop and another space 2.5 feet wide, and then a 2 foot drop from whence the facing continues at an angle for 15 feet or more down the side of the seaward side of the wall the paving continues out for 15 feet." 15.

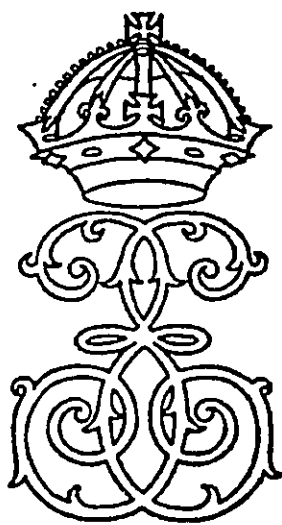
Site 56. Shelter Caves, Kūkui-'ula

Three caves were found all within 10 feet of each other. The main cave lies on sea level while the

Queen Emma
and
Lawai

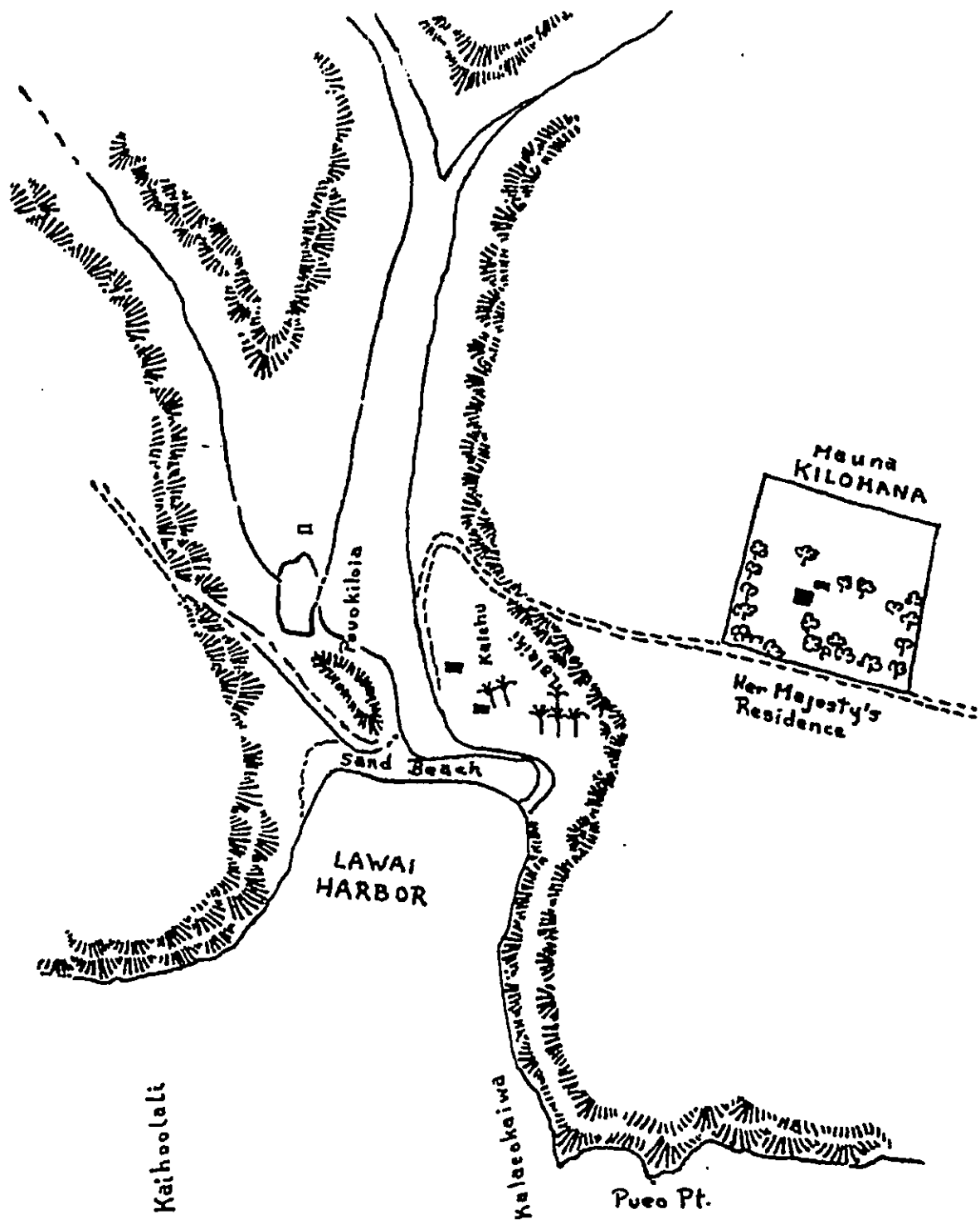
by

DAVID FORBES



©Copyright Kauai Historical Society 1970
First Printing April, 1970
Second Printing May, 1984

ISBN 0-9607542-2-9



Lawai as it appeared during Queen Emma's Ownership. Redrawn from a map by James W. Gay dated 1873 in the State Survey Office, Honolulu.

CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

APPENDIX 4

BIOLOGICAL SURVEYS OF THE ALLERTON GARDENS

- **BOTANICAL SURVEY OF PROPOSED VISITOR ACCESS THROUGH THE ALLERTON GARDENS**
- **CHECKLIST OF VASCULAR PLANTS OF THE ALLERTON GARDENS**
- **SURVEY OF AQUATIC AND WETLAND PLANTS IN THE ALLERTON GARDENS**
- **SURVEY OF AQUATIC FAUNA IN THE ALLERTON GARDENS**
- **CHECKLIST OF AVIAFAUNA IN THE ALLERTON GARDENS**

**BOTANICAL SURVEY OF PROPOSED VISITOR ACCESS
THROUGH THE ALLERTON GARDENS**

Botanical Survey of Proposed Visitor Access through the Allerton Gardens

A botanical survey of the vegetation found along the proposed visitor access was completed after twice walking the planned route. Emphasis was placed on locating endemic plant species, including those that are federally listed as threatened and endangered or those that are proposed as threatened and endangered species.

The proposed visitor access would begin just above and west of the gated entrance to the Allerton Gardens at a new visitors center which will be located on land owned by Alexander and Baldwin. The new visitor access route will follow the existing Allerton driveway for about 300 yards where it will then cross over and on to an existing cane haul road. The cane haul road follows the east rim of Lawai Valley to the junction with the existing railroad bed. From that point it would follow the railroad bed through the Allerton Gardens along the eastern side of Lawai Valley and continue into the southeastern portion of the National Tropical Botanical Garden, terminating near the common boundary of the Allerton Gardens and NTBG at a site known as "Pump House 6".

The vegetation of the site has been so altered over the past 150 years that it defies ready classification. The existing plants along the proposed visitor access are almost completely a mixture of weedy or naturalized species and cultivated, ornamental species that in many cases are naturalized locally themselves. Essentially, the present vegetation comprises a dry secondary shrubland.

The visitor access passes through four more or less distinct areas along the proposed route: 1) from the beginning of the Allerton driveway and along the cane road to where the railroad bed enters Allerton Gardens 2) from the garden boundary along the railroad bed up to the beginning of the maintained plantings; 3) through the maintained plantings of the Allerton Garden; 4) through the Allerton Garden's fallow land between the Allerton Garden boundary and the terminus at Pump House 6.

The beginning of the route is completely bounded along the eastern side by cultivated sugar cane (*Saccharum officinarum*). The western side is only slightly more diverse, first with *Casuarina glauca* (ironwood) and then *Leucaena leucocephala* (koa haole) and *Panicum maximum* (Guinea grass) dominating the rim. Nearing the Allerton Garden boundary, ornamental species such as *Bougainvillea glabra* (bougainvillea) and *Hylocereus undatus* (night-blooming cereus) appear quite commonly. Occasional large, scattered trees of *Ficus microcarpa* (Chinese banyan) are also encountered. Just at the junction of the cane haul road and the railroad bed, a large population of *Agave sisalana* (sisal) replaces most of the other species.

Continuing along the railroad grade the upper east side is dominated by *Leucaena leucocephala* with *Senna surratensis* (kolomona), *Panicum maximum*, and *Rivina humilis* (coral berry). Scattered populations of the

naturalized ornamentals *Callisia fragrans* (rectanthera), *Zebrina pendula* (wandering jew), *Cereus uruguayensis* (hedge cactus), and *Selenicereus boeckmannii* are also found. One rather steep area does harbor two questionably indigenous species: *Waltheria indica* ('uhaloa) and *Heteropogon contortus* (pili) (Wagner et al., 1990). The lower side of the road is dominated by plantings of *Bougainvillea glabra*, *Hylocereus undatus*, *Selenicereus boeckmannii*, *Euphorbia tirucalli* (pencil tree), and *Euphorbia lactea* (mottled candlestick), all overgrown with *Leucaena leucocephala*.

The maintained garden areas of the Allerton Gardens utilize a multitude of ornamental species in plantings that run the gamut from formal garden design to the planned chaos of a stylized jungle. These maintained areas continue along the tramway through the remaining portion of the estate.

The last section of the route passes through the National Tropical Botanical Garden. The vegetation found here consists of dry secondary shrubland. *Leucaena leucocephala* dominates the canopy layer with an understory dominated by *Rivina humilis* and *Kalanchoe pinnata* (air plant). *Panicum maximum* and various weedy herbs dominate the roadside. A few individuals of *Waltheria indica* were also seen scattered along the road. This secondary shrubland gives way to a semi-maintained "lawn" of mown *Panicum maximum*.

The vegetation bordering the proposed visitor access is dominated by introduced weedy or cultivated species. Two questionably indigenous species (*Waltheria indica* and *Heteropogon contortus*) were seen, but both are common pantropical species and are widespread throughout the Hawaiian Islands. *Waltheria indica* has even been listed in the *Handbook of Hawaiian Weeds* (Haselwood and Motter, 1966). No species considered rare, threatened, or endangered by either the State of Hawaii or the U.S. Fish and Wildlife Service were found during this survey. A list of all the species seen along the route has been included at the end of this report.

Checklist of Vascular Plants Along the Proposed
Visitor Access in the Allerton Gardens

Leptosprangiate Ferns

POLYPODIACEAE

Phymatosorus scolopendria (N.L. Burm.) Pichi.Serm.

PTERIDACEAE

Adiantum raddianum Presl

Pityrogramma calomelanos (L.) Link

Class Monocotyledones

AGAVACEAE

Agave sisalana Perrine

Furcraea foetida (L.) Haw.

Sansevieria cylindrica Bojer

Sansevieria trifasciata Prain

ARACEAE

Epipremnum pinnatum (L.) Engl.

Monstera deliciosa Liebmann

Philodendron pinnatifidum

COMMELINACEAE

Callisia fragrans (Lindl.) Woodson

Commelina diffusa N.L. Burm.

Zebrina pendula Schnizel.

CYPERACEAE

Cyperus gracilis R. Br.

LILIACEAE

Hippeastrum puniceum (Lam.) Voss

POACEAE

Brachiaria mutica (Forssk.) Stapf
Chloris barbata (L.) Sw.
Dactylis glomerata L.
Digitaria insularis (L.) Mez ex Ekman
Heteropogon contortus (L.) P. Beauv. ex Roem. & Schult.
Panicum maximum Jacq.
Rhynchelytrum repens (Willd.) Hubb.
Sporobolus indicus (L.) Br.

Class Dicotyledones

ACANTHACEAE

Thunbergia fragrans Roxb.

AMARANTHACEAE

Amaranthus spinosus L.
Amaranthus lividus L.

ANACARDIACEAE

Schinus terebinthifolius Raddi

APIACEAE

Centella asiatica (L.) Urb.
Ciclospermum leptophyllum (Pers.) Sprague

APOCYNACEAE

Alstonia macrophylla Wall. ex G. Don
Nerium oleander L.
Plumeria obtusa L.
Plumeria rubra L.

ARALIACEAE

Polyscias guilfoylei (Bull) Bailey
Polyscias nodosa (Bl.) Seem.
Schefflera actinophylla (Endl.) Harms

ASTERACEAE

Ageratum conyzoides L.
Bidens pilosa L.
Conyza bonariensis (L.) Cronquist
Emilia fosbergii Nicolson
Erechtites valerianifolia (Wolf) DC
Sigesbeckia orientalis L.
Sonchus oleraceus L.
Synedrella nodiflora (L.) Gaertn.
Vernonia cinerea (L.) Less

var. *parviflora* (Reinw.) DC

BIGNONIACEAE

Spathodea campanulata P. Beauv.

CACTACEAE

Cereus uruguayensis Ritter ex R. Kiesling

Hylocereus undatus (Haw.) Britt. & Rose

Opuntia ficus-indica (L.) Mill.

Selenicereus boeckmannii (Otto) Britton & Rose

CARICACEAE

Carica papaya L.

CASUARINACEAE

Casuarina equisetifolia L.

Casuarina glauca Siebold ex Spreng.

CLUSIACEAE

Clusia rosea Jacq.

CONVOLVULACEAE

Ipomoea indica (J. Burm.) Merr.

CRASSULACEAE

Kalanchoe pinnata (Lam.) Pers.

Kalanchoe tubiflora (Harv.) Raym.-Hamet

EUPHORBIACEAE

Aleurites moluccana (L.) Willd.

Chamaesyce hirta (L.) Millsp.

Chamaesyce hypericifolia (L.) Millsp.

Codiaeum variegatum (L.) Bl.

Euphorbia lactea Haw.

Euphorbia tirucalli L.

Phyllanthus debilis Klein ex Willd.

Ricinus communis L.

FABACEAE

Canavalia cathartica Thouars

Chamaecrista nictitans (L.) Moench.

subsp. *patellaria* (DC ex Collad.) H. Irwin & Barneby

var. *glabrata* (Vogel) H. Irwin & Barneby

Crotalaria pallida Aiton

Desmanthus virgatus (L.) Willd.

Leucaena leucocephala (Lam.) de Wit
Mimosa pudica L.
var. *unijuga* (Duchass. & Walp.) Griseb.
Pithecellobium dulce (Roxb.) Benth.
Samanea saman (Jacq.) Merr.
Senna surrattensis (N.L. Burm.) H. Irwin & Barneby

FLACOURTIACEAE

Dovyalis hebecarpa (G. Gardn.) Warb.

MALVACEAE

Abutilon grandifolium (Willd.) Sweet
Malachra alceifolia Jacq.
Malvastrum coromandelianum (L.) Garcke
subsp. *coromandelianum*
Thespesia populnea (L.) Sol. ex Correa

MORACEAE

Ficus microcarpa L. fil.

MYRTACEAE

Syzygium cumini (L.) Skeels

NYCTAGINACEAE

Bougainvillea glabra Choisy

OXALIDACEAE

Oxalis corniculata L.
Oxalis corymbosa DC

PHYTOLACCACEAE

Rivinia -humilis L.

PIPERACEAE

Peperomia leptostachys Hook. & Arnott

POLYGONACEAE

Antigonon leptopus Hook. & Arnott

PORTULACACEAE

Portulaca pilosa L.

PROTEACEAE

Grevillea robusta A. Cunn. ex R. Br.

RUBIACEAE

Ixora casei Hance ex Walp.

RUTACEAE

Murraya paniculata (L.) Jack
Triphasia trifolia (Burm. f.) P. Wilson

SOLANACEAE

Brugmannsia candida Pers.
Solandra maxima (Sesse & Mocino) P. S. Green
Solanum americanum Mill.
Solanum seforthianum Andr.

STERCULIACEAE

Waltheria indica L.

URTICACEAE

Pilea microphylla (L.) Liebm.

VERBENACEAE

Clerodendrum buchanani (Roxb.) Walp.
var. *fallax* (Lindley) Bakh.
Stachytarpheta urticifolia (Salisb.) Sims

**CHECKLIST OF VASCULAR PLANTS
OF THE ALLERTON GARDENS**

Checklist of Vascular Plants of the Allerton Gardens

- Denotes cultivated endemic Hawaiian plant
- Denotes wild growing endemic Hawaiian plant

ACANTHACEAE

Fittonia albivenis (Lindl. ex Veitch) Brummitt
Hemigraphis reptans (G. Forster) T. Anderson
Megaskapasma erythrochlamys Lindau
Odontonema cuspidatum (Nees) O. Kunth
Pseuderanhemum carruthersii (Seem.) Guillaum.
Ruellia devosiana Hort. Makoy ex E. Murr.
Ruellia graecizans Backer
Sanchezia speciosa J. Leonard
Thunbergia fragrans Roxb. . .
Thunbergia grandiflora Roxb.

AGAVACEAE

Agave attenuata Salm-Dyck
Agave sisalana Perrine
Agave sp.
Cordyline fruticosa (L.) A. Chev.
Dracaena aubryana Morren
Dracaena draco L.
Dracaena fragrans (L.) Ker.-Gawl.
Dracaena marginata Lam.
Dracaena reflexa Lam.
Furcraea foetida (L.) Haw.
Nolina bigelovii (Torr.) S. Wats.
Nolina stricta Lem.
Sansevieria cylindrica Bojer
Sansevieria trifasciata Prain
Sansevieria sp.
Yucca gloriosa L.

AMARANTHACEAE

Alternanthera tenella Colla
Amaranthus dubius Mart. ex Thell.
Amaranthus spinosus L.
Amaranthus lividus L.

ANACARDIACEAE

Schinus terebinthifolius Raddi
Spondias dulcis Parkins. ex Z
Spondias tuberosa Arruda

ANNONACEAE

Annona montana MacFad.
Artabotrys uncinatus (Lam.) Merr.

APIACEAE

Centella asiatica (L.) Urb.
Ciclospermum leptophyllum (Pers.) Sprague
Hydrocotyle sibthorpioides Lam.

APOCYNACEAE

Adenium coetaneum Stapf
Allamanda cathartica L.
Alstonia macrophylla Wall. ex G. Don
Cascabela thevetia (L.) Lippold
Nerium oleander L.
Ochrosia elliptica Labill.
Plumeria obtusa L.
Plumeria rubra L.
Stemmadenia littoralis (H.B.K.) L. Allorge
Thevetia thevetioides (Kunth) K. Schumann

ARACEAE

Alocasia cucullata (Lour.) G. Don
Alocasia macrorrhiza (L.) Sweet
Alocasia zebrina C. Koch & Hort. Veitch. Lf.
Anthurium andraeanum Lind.
Anthurium hookeri Kunth
Colocasia esculenta (L.) Schott
Dieffenbachia maculata (Lodd.) G. Don
Epipremnum pinnatum (L.) Engl.
Monstera deliciosa Liebm.
Monstera siltepecana Matuda
Philodendron erubescens C. Koch & Augustin
Philodendron pinnatifidum (Jacq.) Schott
Philodendron sp.
Scindapsus aureus (Lindl. & Andre) Engl.
Spathophyllum cochlearispathum (Liebm.) Engl.
Spathophyllum kochii Engl. & Krause
Syngonium auritum (L.) Schott
Syngonium podophyllum Schott
Typhonodorum lindleyanum Schott
Xanthosoma violaceum Schott

ARALIACEAE

• *Munroidendron racemosum* (C. Forbes) Sherff

Osmoxylon novo-guineense (R. Scheff.) Becc.
Polyscias guilfoylei (Bull) Bailey
Polyscias nodosa (Bl.) Seem.
Polyscias scutellaria (N.L. Burm.) Fosb.
Schefflera actinophylla (Endl.) Harms
Schefflera arboricola (Hayata) Hayata

ARECACEAE

Actinorhytis calapparia (Bl.) H. Wendl. & Drude ex Scheff.
Archontophoenix alexandrae (F.v. Muell.) H.A. Wendl. & Drude
Areca catechu L.
Areca triandra Roxb.
Arenga australasica (H. Wendl. & Drude) S.T. Blake apud H.E. Moore
Arenga undulatifolia Becc.
Basselinia sp.
Bismarkia nobilis Hildebrandt & H. Wendl.
Carpentaria acuminata Becc.
Caryota mitis Lour.
Caryota urens L.
Chambeyronia macrocarpa (Brongn.) Vieill.
Chamerops humilis L.
Chrysalidocarpus cabadae H. E. Moore
Chrysalidocarpus lutescens (Bory) H. Wendl.
Chrysalidocarpus madagascariensis (Hort.) Becc.
 var. *lucubensis* (Becc.) Jumelle & Perr.
Clinostigma samoense H. Wendl.
Coccothrinax fragrans Burret
Cocos nucifera L.
Corypha utan Lamarck
Cyrtostachys lakka Becc.
Cyrtostachys renda Blume
Dictyosperma album (Bory) H. Wendl. & Drude ex Scheff.
Elaeis guineensis Jacq.
Gulubia macrospadix (Burret) H. E. Moore
Heterospatha elata Scheff.
Hyophorbe lagenicaulis (L. H. Bailey) H. E. Moore
Hyophorbe verschaffeltii H. Wendl.
Hyphaene thebaica (L.) Mart.
Latania loddigesii Mart.
Latania lontariodes (J. Gaertn.) H. E. Moore
Latania verschaffeltii Lem.
Licuala grandis Wendl.
Licuala spinosa Thunb.
Livistona carinensis (Chiov.) J. Dransfield & N. W. Uhl
Livistona chinensis (Jacq.) R. Br. ex Mart.
Nenga wendlandiana Scheff.

Neodypsis decaryi Jumelle
Normanbya normanbyi (W. Hill) L. H. Bailey
Phoenix canariensis Hort. ex Chabaud
Phoenix reclinata Jacq.
Phoenix roebelinii O'Brien
Pinanga kuhlii Bl.
Polyandrococos caudescens (Mart.) Barb. Rodr.
• *Pritchardia aylmer-robinsonii* St. John
• *Pritchardia hardyi* Rock
• *Pritchardia lowreyana* Rock
• *Pritchardia minor* Becc.
Pritchardia pacifica Seem. & H. Wendl.
• *Pritchardia remota* Becc.
Pritchardia thurstonii F. Muell. & Drude
• *Pritchardia waialealeana* Read
Ptychosperma cf. *lauterbachii* Becc.
Ptychosperma cf. *lineare* (Burret) Burret
Ptychosperma macarthurii (H. Wendl. in T. Moore) Nichols
Ptychosperma propinquum (Becc.) Becc.
Ravenea rivularis Jumelle & Perr.
Rhapis excelsa (Thunb.) Henry
Rhopaloblaste augusta (Kurz) H. E. Moore
Serenoa repens (Bartr.) Small
Syagrus romanzoffiana (Cham.) Glassm.
Thrinax parviflora Sw.
Thrinax radiata Lodd. ex Desf.
Veitchia joannis H. Wendl.
Veitchia merrillii (Becc.) H. E. Moore
Veitchia montgomeryana H. E. Moore
Wodyetia bifurcata A. K. Irvine

ARISTOLOCHIACEAE

Aristolochia elegans M. T. Mast.
Aristolochia giberti Hook.
Aristolochia gigantea Mart. & Zucc.

ASPLENIACEAE

• *Asplenium nidus* L.

ASTERACEAE

Ageratum conyzoides L.
• *Artemisia australis* Less.
Bidens pilosa L.

Conyza bonariensis (L.) Cronquist
Crassocephalum crepidioides (Benth.) S. Moore
Eclipta alba (L.) Hassk.
Emilia fosbergii Nicolson
Erechtites valerianifolia (Wolf) DC
• *Lipochaeta connata* (Gaud.) DC var. *connata*
Parthenium hysterophorus L.
Pluchea carolinensis (Jacquin) G. Don
Pluchea indica (L.) Less.
Sigesbeckia orientalis L.
Sonchus oleraceus L.
Synedrella nodiflora (L.) Gaertn.
• *Tetramalopium filiforme* Sherff
var. *filiforme*
Vernonia cinerea (L.) Less
var. *parviflora* (Reinw.) DC
Wedelia trilobata (L.) Hitchc.

BALSAMINACEAE

Impatiens wallerana J.D. Hook.

BEGONIACEAE

Begonia coccinea Hook.

BIGNONIACEAE

Crescentia cujete L.
Jacaranda mimosifolia D. Don
Kigelia africana Benth. in Hook.
Macfadyena unguis-cati (L.) A. Gentry
Spathodea campanulata P. Beauv.
Tabebuia sp.

BIXACEAE

Bixa orellana L.

BOMBACACEAE

Durio graveolens Becc.
Durio zibethinus J. Murr.
Pachira aquatica Aubl.

BORAGINACEAE

Cordia sebestena L.
Cordia subcordata Lam.
Tournefortia argentea L. f.

BRASSICACEAE

Cardamine flexuosa With.
Nasturtium microphyllum Boenn. ex Rehb.

BROMELIACEAE

Aechmea bracteata (Sw.) Grisebach
Billbergia pyramidalis (Sims) Lindl.
Bromelia sp.
Pitcairnea angustifolia Solander
Portea petropolitana (Wawra) Mez
Tillandsia cyanea (A. Dietr.) Morr.
Tillandsia sp.

CACTACEAE

Cereus uruguayensis Ritter ex R. Kiesling
Epiphyllum sp.
Hylocereus costaricensis (Weber) Britton & Rose
Hylocereus undatus (Haw.) Britton & Rose
Opuntia cochenillifera (L.) Mill.
Opuntia ficus-indica (L.) Mill.
Selenicereus boeckmannii (Otto) Britton & Rose

CANNACEAE

Canna indica L.

CARICACEAE

Carica papaya L.

CARYOPHYLLACEAE

Drymaria cordata (L.) Willd. ex Roem. & Schult.
var. *pacifica* Mizush.

CASUARINACEAE

Casuarina equisetifolia L.
Casuarina glauca Sieb. in Preng.

CELASTRACEAE

Elaeodendron orientale Jacq.

CLUSIACEAE

Calophyllum inophyllum L.
Clusia rosea Jacq.
Garcinia mangostana L.
Rhedia edulis Planch. & Triana

COMBRETACEAE

Terminalia bentzoe (L.) L.f.
Terminalia catappa L.
Terminalia glabrata Forst.f.
Terminalia nitens Presl

COMMELINACEAE

Callisia fragrans (Lindl.) Woodson
Commelina diffusa N.L. Burm.
Dichorisandra thyrsiflora Mikan
Tradescantia spathacea (Swartz) Stearn cv. Concolor
Zebrina pendula Schnizel.

CONVOLVULACEAE

Ipomoea batatas (L.) Lam.
• *Ipomoea indica* (J. Burm.) Merr.
• *Ipomoea pes-caprae* (L.) R. Br.
 subsp. *brasiliensis* (L.) Ooststr.
Ipomoea trioloba L.
• *Jacquemontia ovalifolia* (Choisy) H. Hallier
 subsp. *sandwicensis* (A. Gray) K. Robertson
Porana paniculata Roxb.

COSTACEAE

Costus sp.
Tapeinocheilos ananassae (Hasskarl) K. Schumann

CRASSULACEAE

Kalanchoe beharensis Drake
Kalanchoe blossfeldiana v. Poelln.
Kalanchoe pinnata (Lam.) Pers. —
Kalanchoe tubiflora (Harv.) Raym.-Hamet

CUCURBITACEAE

Momordica charantia L.
• *Sicyos pachycarpus* Hook. & Arnott

CYCADACEAE

Cycas angulata R. Br.
Cycas circinalis L.
Cycas kennedyana F. Muell.
Cycas revoluta Thunb.
Cycas thouarsii R. Br.

CYCLANTHACEAE

Cyclanthus bipartitus Poit.

CYPERACEAE

Cyperus alternifolius L.

subsp. *flabelliformis* (Rottb.) Kukenth.

Cyperus gracilis R. Br.

Cyperus rotundus L.

Kyllinga brevifolia Rottb.

Schoenoplectus californicus (C.A. Mey.) Palla

DILLENiaceae

Dillenia suffruticosa (Griff.) Martelli

DRYOPTERIDACEAE

Diplazium esculentum (Retz.) Sw.

• *Nephrolepis cordifolia* (L.) Presl

EBENACEAE

Diospyros discolor Willd.

EUPHORBIACEAE

Aleurites moluccana (L.) Willd.

• *Chamaesyce celastroides* (Boiss.) Croizat & Degener
var. *amplectans* (Sherff) Degener & I. Degener

Chamaesyce hirta (L.) Millsp.

Chamaesyce hypericifolia (L.) Millsp.

Cnidocolus aconitifolius (Miller) J. M. Johnston

Codiaeum variegatum (L.) Bl.

Euphorbia heterophylla L.

Euphorbia lactea Haw.

Euphorbia tirucalli L.

Excoecaria cochinchinensis Loureiro

Jatropha integerrima Jacq.

Macaranga mappa (L.) Mull. Arg.

Pedilanthus tithimaloides (L.) Poit.

Phyllanthus debilis Klein ex Willd.

Phyllanthus tenellus Roxb.

Ricinus communis L.

FABACEAE

• *Acacia koa* A. Gray

Acacia simplex (Sparrman) Pedley

Bauhinia forficata Link

Bauhinia punctata C. Bolle

Bauhinia variegata L.
 var. *candida* (Roxb.) Buch.-Ham.
Brownea coccinea Jacq.
Canavalia cathartica Thouars
Cassia fistula L.
Cassia grandis L. f.
Castanospermum australe A. Cunn. & C. Fraser
Chamaecrista nictitans (L.) Moench.
 subsp. *patellaria* (DC ex Collad.) H. Irwin & Barneby
 var. *glabrata* (Vogel) H. Irwin & Barneby
Crotalaria pallida Aiton
Cynometra ramiflora L.
Delonix regia (Boj.) Raf.
Desmanthus virgatus (L.) Willd.
Desmodium incanum DC
Desmodium triflorum (L.) DC
Erthrina crista-galli L.
Leucaena leucocephala (Lam.) de Wit
Mimosa pudica L.
 var. *unijuga* (Duchass. & Walp.) Griseb.
Mucuna novo-guieensis Scheffr.
Ormosia monosperma (Sw.) Urban
Phyllocarpus septentrionalis J. D. Sm.
Pithecellobium dulce (Roxb.) Benth.
Prosopis pallida (Humb. & Bonpl. ex Willd.) Kunth
Samanea saman (Jacq.) Merr.
Senna surrattensis (N.L. Burm.) H. Irwin & Barneby
Strongylodon macrobotrys A. Gray
Tamarindus indica L.
 • *Vigna marina* (J. Burm.) Merr.

FLACOURTIACEAE

Dovyalis hebecarpa (G. Gardn.) Warb.

HELICONIACEAE

Heliconia acuminata L. C. Richard
Heliconia aemygdiana Burle-Marx
Heliconia aurantiaca Ghiesbreght ex Lemaire
Heliconia bihai (L.) L.
Heliconia caribaea Lamarck
 X *Heliconia bihai* (L.) L.
Heliconia chartacea Lane ex Barreiros
Heliconia imbricata (Kuntze) Baker
Heliconia indica Lamarck
Heliconia mariae Hook. f.

Heliconia metallica Planchon & Linden
Heliconia orthotricha L. Anderss.
Heliconia orthotricha L. Anderss. cv. She
Heliconia pendula Wawra
Heliconia platystachys Baker
Heliconia psittacorum L. f.
Heliconia psittacorum L. f.
 X *Heliconia spathocircinata* Arisequieta cv. Golden Torch
Heliconia rostrata Ruiz & Pavon.
Heliconia solomonensis Kress
Heliconia spathocircinata Aristeguieta
Heliconia stricta Huber
Heliconia talamancana Daniels & Stiles
Heliconia wagneriana Petersen

HERNANDIACEAE

Hernandia nymphaeifolia (Presl) Kub.

IRIDACEAE

Neomarica gracilis (Herb.) Sprague
Neomarica northiana (Schneev.) Sprague

LAMIACEAE

Leonurus sibiricus L.
Plectranthus amboinicus (Lour.) Spreng.
• *Plectranthus parviflorus* Willd.

LAURACEAE

Cinnamomum cf. *burmannii* (Nees) Blume
Cinnamomum camphora (L.) J. Presl
Persea americana Mill.

LEMNACEAE

Lemna perpusilla Torr.

LILIACEAE

Agapanthus praecox Willdenow.
 subsp. *orientalis* (Leighton) Leighton
Aloe arborescens Mill.
Aloe barbadensis Mill.
Aloe saponaria (Ait.) Haw.
Chlorophytum comosum (Thunberg) Jacques
Crinum augustum Roxb.
Crinum mauritianum Lodd.
Crinum pedunculatum R. Br.

Hippeastrum puniceum (Lam.) Voss
Liriope muscari (Decaisne) L. H. Bailey
Ophiopogon japonicus (L. f.) Ker-Gawl.

LOGANIACEAE

Fagraea berteriana A. Gray ex Benth.

LYTHRACEAE

Lagerstroemia speciosa (L.) Pers.

MALPIGHIACEAE

Galphimia gracilis Bartling
Malpighia coccigera L.
Malpighia puniceifolia L.
Stigmatophyllum ciliatum A. Juss.

MALVACEAE

Abutilon grandifolium (Willd.) Sweet
Hibiscus genevii Bojer ex Hook.
Hibiscus glaber Matsum. ex Nakai
• *Hibiscus kokio* Hillebr. ex Wawra
Hibiscus rosa-sinensis L.
• *Hibiscus tiliaceus* L.
• *Kokia drynarioides* (Seem.) Lewton
Malachra alceifolia Jacq.
Malvastrum coromandelianum (L.) Garcke
 subsp. *coromandelianum*
Malvaviscus arboreus Cav.
• *Sida fallax* Walp.
Thespesia populnea (L.) Sol. ex Correa

MARANTACEAE

Calathea burle-marxii Kennedy cv. Ice Blue
Calathea crotalifera Watson
Calathea lutea (Aubl.) G. F. Mey.
Pleiostachya pruinosa (Bull ex Regel) K. Schumann

MARATTACEAE

Angiopteris evecta (G. Forst.) Hoffm.

MARCGRAVIACEAE

Norantea guianensis Aubl.

MELASTOMATACEAE

Medinilla magnifica Lindl.

MELIACEAE

Aglaia odorata Lour.
Aphanamixis grandifolia Bl.

MORACEAE

Artocarpus altilis (Parkins. ex Z) Fosb.
Ficus elastica Roxburgh ex Horneman
Ficus lyrata Warburg
Ficus macrophylla Desf.
Ficus microcarpa L. fil.
Ficus montana Burm. f.
Ficus pseudopalma Blanco
Ficus pumila L.
Ficus cf. virens Aiton
Morus alba L.
Treculia africana Decne. ex Trecul.

MORINGACEAE

Moringa oleifera Lam.

MYRTACEAE

Eucalyptus deglupta Blume
Eugenia caryophyllus (Spreng.) Bullock & Harrison
Eugenia uniflora L.
Myrciaria vexator McVaugh
Pimenta dioica (L.) Merr.
Psidium cattleianum Sabine
Psidium guajava L.
Syzygium cumini (L.) Skeels
Syzygium malaccense (L.) Merr. & Perry

MUSACEAE

Musa coccinea Andr.
Musa ornata Roxb.
Musa X paradisiaca L.
Ravenala madagascariensis J. F. Gmel.
Strelitzia reginae Banks

NYCTAGINACEAE

Boerhavia coccinea Mill
Bougainvillea glabra Choisy
Mirabilis jalapa L.

NYMPHAEACEAE

Nelumbo nucifera Gaertn.

Nymphaea nouchali Burm. f.
Nymphaea sp.

OCHNACEAE
Ochna kirkii Oliver

OLEACEAE
Jasminum sambac (L.) Ait.

ORCHIDACEAE
Dendrobium sp.
Epidendrum sp.
Oncidium sphacelatum Lindl.
Vanda sp.

OXALIDACEAE
Averrhoa carambola L.
Oxalis corniculata L.
Oxalis corymbosa DC

PANDANACEAE
Freycinetia cummingiana Gaud.
• *Pandanus tectorius* S. Parkinson ex Z
Pandanus vandermeerschii Balfour f.

PASSIFLORACEAE
Adenia keramanthus Harms ex Engl.
Passiflora vitifolia HBK.

PHYTOLACCACEAE
Rivinia humilis L.

PIPERACEAE
• *Peperomia leptostachys* Hook. & Arnott

PITTOSPORACEAE
• *Pittosporum napaliensis* Sherff

PLANTAGINACEAE
Plantago major L.

POACEAE
Bambusa vulgaris Schrad. ex Wendl.
Brachiaria mutica (Forssk.) Stapf
Chloris barbata (L.) Sw.

Cynodon dactylon (L.) Pers.
Dactylis glomerata L.
Digitaria insularis (L.) Mez ex Ekman
Echinochloa crus-galli (L.) P. Beauv.
Eragrostis tenella (L.) P. Beauv. ex Roem. & Schult.
Eremochloa ophiuroides (Munro) Hack. in DC
• *Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult.
Oplismenus hirtellus (L.) P. Beauv.
Panicum maximum Jacq.
Pennisetum clandestinum Chiov.
Pennisetum purpureum Schumach.
Rhynchelytrum repens (Willd.) Hubb.
Saccharum officinarum L.
Sporobolus indicus (L.) Br.
• *Sporobolus virginicus* (L.) Kunth
Stenotaphrum secundatum (Walter) Kuntze
Thysanolaena maxima (Roxb.) Kuntze
Zoysia tenuifolia Willd. ex Trin.

POLYGONACEAE

Antigonon leptopus Hook. & Arnott
Coccoloba uvifera (L.) L.

POLYPODIACEAE

Phymatosorus scolopendria (N.L. Burm.) Pichi.Serm.
Platynerium bifurcatum (Cav.) C. Chr.
Platynerium vassei Poisson
Platynerium sp.

PORTULACACEAE

Portulaca oleracea L.
Portulaca pilosa L.

PROTEACEAE

Grevillea robusta A. Cunn. ex R. Br.
Macadamia integrifolia Maiden & Betche

PTERIDACEAE

Adiantum raddianum Presl
Pityrogramma calomelanos (L.) Link

PUNICACEAE

Punica granatum L.

RUBIACEAE

- Coffea arabica* L.
• *Hedyotis littoralis* (Hillebr.) Fosb.
Ixora casei Hance ex Walp.
Morinda citrifolia L.
Morinda jasminoides A. Cunn.
Paederia scandens (Lour.) Merr.

RUPPIACEAE

- *Ruppia maritima* L.

RUTACEAE

- Citrus aurantifolia* (Christm.) Swingle
Citrus grandis (L.) Osbeck
Clausena lansium (Lour.) Skeels
Murraya paniculata (L.) Jack
Triphasia trifolia (Burm. f.) P. Wilson

SAPINDACEAE

- Dimocarpus longan* Loureiro
Harpullia pendula Planch. ex F. Muell.
Litchi chinensis Sonn.

SAPOTACEAE

- Chrysophyllum cainito* L.
Manilkara zapota (L.) P. Royen
Pouteria caimito (Ruiz & Pavon) Radlk.
Pouteria campechiana (Kunth) Baehni
Pouteria sapota (Jacq.) H. Moore & Stearn
Pouteria ? viridis (Pittier) Cronq.

SCROOPHULARIACEAE

- *Bacopa monnieri* (L.) Weitst

SOLANACEAE

- Brugmansia candida* Pers.
Brunfelsia americana L.
Solandra maxima (Sesse & Mocino) P. S. Green
Solanum americanum Mill.
Solanum seafortianum Andr.

STANGERIACEAE

- Stangeria eriopus* (Kunze) Nash

STERCULIACEAE

Brachychiton acerifolium (A. Cunn. ex Donn) F. Muell.

Commersonia bartramii

Sterculia foetida L.

- *Waltheria indica* L.

THELYPTERIDACEAE

Thelypteris parasitica (L.) Levl.

THYMELAEACEAE

Phaleria disperma Baill.

- *Wikstroemia uva-ursi* A. Gray
var. *kauaiensis* Skotts.

TILIACEAE

Triumfetta semitriloba Jacq.

URTICACEAE

Pilea cadierei Gagnep. & Guillaumin

Pilea microphylla (L.) Liebm.

VERBENACEAE

Clerodendrum buchanani (Roxb.) Walp.

var. *fallax* (Lindley) Bakh.

Clerodendrum indicum (L.) Ktze

Lantana camara L.

Premna serratifolia L. Mant.

Stachytarpheta urticifolia (Salisb.) Sims

Tectona grandis L. f.

XANTHORRHOEACEAE

Xanthorrhoea minor R. Br.

ZAMIACEAE

Dioon edule Lindl.

Dioon mejiae Standl. & L. O. Williams

Encephalartos altensteinii Lehm.

Encephalartos arenarius R. A. Dyer

Encephalartos cupidus R. A. Dyer

Encephalartos dyerianus J. J. Lauranos & D. L. Goode

Encephalartos eugene-maraisii Verdoorn

Encephalartos ferox Bertol.

Encephalartos friderici-guilielmi Lehm.

Encephalartos ghellinckii Lehm.

Encephalartos horridus (Jacq.) Lehm

Encephalartos humilis Verdoorn
Encephalartos inopinus R. A. Dyer
Encephalartos laevifolius Stapf & Burtt Davy in Burtt Davy
Encephalartos lebomboensis Verdoorn
Encephalartos lehmannii Lehm.
Encephalartos longifolius (Jacq.) Lehm.
Encephalartos natalensis R. A. Dyer & Verdoorn
Encephalartos ngoyanus Verdoorn
Encephalartos paucidentatus Stapf & Burtt Davy in Burtt Davy
Encephalartos princeps R. A. Dyer
Encephalartos transvenosus Stapf & Davy
Encephalartos trispinosus (Hook.) R. A. Dyer
Encephalartos villosus (Gaertn.) Lehm.
Lepidozamia peroffskyana Regel
Zamia pumila L.
Zamia pseudoparasitica Yates
Zamia sp.

ZINGIBERACEAE

Alpinia nieuwenhuizii Valet.
Alpinia purpurata (Vieill.) K. Schum.
Alpinia zerumbet (Persoon) Burtt & Smith
Nicolaia elatoir (Jack) Horan.

ZYGOPHYLLACEAE

Guaiacum officinale L.

**SURVEY OF AQUATIC AND WETLAND PLANTS
IN THE ALLERTON GARDENS**

Survey of Aquatic and Wetland Plants in the Allerton Gardens

Aquatic plants may be loosely defined as plants that live in bodies of standing or running water such as lakes or streams. They may grow entirely underwater, with their leaves and flowers floating on the water's surface, or extending well above the surface. Wetland plants, on the other hand, grow in areas that are regularly flooded or where the water table is at or near the soil surface.

Wetland and aquatic plants were of great economic importance in the Lawai Valley. Until the 1850's the Hawaiians extensively cultivated taro in terraces on the valley floor. Later, plantation workers grew rice as well as taro and watercress in these terraces. At one time so much rice was grown in the valley that three rice mills were in operation. Edible lotus, *Nelumbo nucifera*, was also grown by plantation workers in the lower valley near the mouth of the Lawai Stream.

Alexander McBryde continued small scale farming of aquatic and wetland plants in the valley from 1900 to 1935. Robert Allerton purchased the property in 1938 and converted the land to a landscape garden. All cultivation of aquatic and wetland plants ceased except for the lotus, which he used in flower arrangements.

A checklist of the species of wetland and aquatic plants found at Lawai-Kai follows this narrative description. Most of them are growing in the marshy areas on the west side of the Lawai Stream near its mouth.

This marsh contains a patch of Great Bulrushes, *Schoenoplectus californicus*, which is naturalized or possibly indigenous. Growing nearby is water hyssop, *Bacopa monnieri*, a small, trailing succulent widespread in tropical and subtropical regions. Water lilies, *Nymphaea* sp., have replaced the edible lotus which were destroyed by Hurricane Iniki.

Two indigenous species, Ditchgrass, *Ruppia maritima*, and the green alga, *Enteromorpha flexuosa*, are found with the water lilies in the brackish pools on the west side of the stream. Also found in and around these pools are the following naturalized species: false daisy, *Eclipta alba*, Indian fleabane, *Pluchea indica*, umbrella sedge, *Cyperus alternifolius*, and Asiatic pennywort, *Centella asiatica*.

Further upstream is an area dominated by Buffalo grass, *Stenotaphrum secundatum*, and a thicket of hau, *Hibiscus tiliaceus*. Hau was brought to Hawaii by early Polynesian settlers who valued its light weight but strong wood and the fiber that can be extracted from its bark. Duckweed, *Lemna perpusilla*, is found in a waterway emptying into the stream near the bamboo grove. One of the smallest flowering plants, duckweed is found in temperate and tropical areas around the world.

The east side of stream has numerous coconut palms, *Cocos nucifera*, and Queen Emma's lily, *Crinum asiaticum*, near the mouth of the stream. Buffalo grass covers the stream bank in this area.

Checklist of Aquatic and Wetland Plants in the Allerton Gardens

Class Ulvophyceae

ULVACEAE

Entromorpha flexuosa (Roth) J. Ag.

Class Monocotyledones

AMARYLLIDACEAE

Crinum asiaticum L.

ARECEAE

Cocos nucifera L.

CYPERACEAE

Cyperus alternifolius L.

Schoenoplectus californicus, (C.A. May.) Palla

GRAMINAE

Stenotaphrum secundatum (Walter) Kuntze

LEMNACEAE

Lemna perpusilla Torr.

RUPPIACEAE

Ruppia maritima L.

Class Dicotyledones

APIACEAE

Centella asiatica (L.) Urb.

COMPOSITAE

Eclipta alba (L.) Hassk.

Pluchea indica (L.) Less.

MALVACEAE

Hibiscus tiliaceus. L.

NYMPHAEACEAE

Nymphaea sp.

SCROPHULARIACEAE

Bacopa monnieri (L.) Wettst.

**SURVEY OF AQUATIC FAUNA
IN THE ALLERTON GARDENS**

Survey of Aquatic Fauna in the Allerton Gardens

The climate and geology of the Lawai drainage basin influences the physical characteristics of the Lawai stream and the animal life it supports. The Lawai Stream is typical of streams found on volcanic islands throughout Oceania. These islands are generally small in area, but may rise thousands of feet above sea level. The drainage basins are small by continental standards, but may cross steep gradients between their source and the ocean.

The Lawai stream drains an area of only 6.6 square miles, which is small even by Hawaiian standards. Kauai's largest river, the Waimea River, has an 85 square mile drainage basin. The headwaters of the Lawai stream are less than six miles from the ocean, yet they are over 1,800 feet above sea level. Most of the drop occurs in the stream's first miles, but it drops over a 32-foot waterfall as it enters the Big Valley section of the National Tropical Botanical Garden, and drops another 120 feet before it reaches the ocean 1.5 miles away.

Another trait that the Lawai stream shares with streams throughout Oceania is that it is flashy and its flow can change dramatically over short time periods. This is due to the size of the area it drains, the gradient it crosses, the relative ability of rocks and soils in the drainage basin to absorb water, and the variability of the rainfall in the area.

Large variations in flow rates stress the organisms living in and around the stream. The water in slow moving or stagnant pools, that form during low flow periods, can become too warm for many animals. In addition, oxygen concentration in the water may drop in very low levels. High flow periods scour of the stream bed and carry heavy loads of silt which clog the gills of fish and prawns.

Changes in flow also lead to variations in the salinity of the water of Lawai Bay and the stream's lower reaches. Most aquatic organisms are physiologically adapted to live in either saline or fresh water, but not both. Some organisms can tolerate short periods of exposure to salinities beyond their normal range and a small number can thrive in a wide range of salinities. The salinity of the lower reaches of the Lawai stream fluctuates between 0 parts per thousand at high flow rates, and 15 parts per thousand at low flow rates.

Only five species of fish were able to reach and establish themselves in Hawaiian streams and none are truly freshwater. All of them spend their entire adult lives in freshwater and breed there, but upon hatching their larvae move out into the ocean. After a period of feeding the fry enter a stream nearest the area where the currents have carried them. This diadromous life cycle enabled these species to reach and spread throughout the Hawaiian Islands.

Three of these native stream fish are found in Lawai stream. The Common Goby, *Awaous stamineus*, and the Stripe Cheeked Goby, *Awaous genivittatus*, are common in the stream. The Eleotid, *Eleotris sandwicensis*, is found only in the lower reaches of the stream and the channels leading

into the Lotus ponds near the beach. The Common Goby and the Eleotrid are endemics, and the Stripe Cheeked Goby is indigenous.

Fish native to brackish water are found just upstream of the beach at Lawai-Kai. Pointed Tail Gobies, *Oxyrichthys lonchotus*, Hawaiian Flag-Tailed Fish, *Kuhlia sandvicensis*, and the Common Mullet, *Mugil cephalus*, were netted in this area. The Pointed Tail Goby and Flag-Tailed Fish are endemic, and the Common Mullet is indigenous.

Many species of freshwater fish have been introduced to Hawaii in the past two hundred years and several are abundant in the Lawai stream. Three species, the Swordtail, *Xiphophorus* sp., the Top Minnow, *Gambusia* sp., and a South American cichlid, *Cichla gigas*, were probably introduced as ornamental fish. Tilapia, *Tilapia zilli*, were introduced for food in 1955.

One shrimp species and one prawn species are native to Hawaiian streams and both are endemic. The shrimp, *Ataya bisulcata*, is common in the stream. The prawn, *Macrobrachium grandimanus*, is not uncommon, but far less abundant than the introduced Tahitian prawn, *Macrobrachium lar*.

The insect fauna of the stream is sparse, probably due to pesticide runoff. The adult introduced dragonflies, *Pantala flavescens* and *Anax junius*, are common in the valley but few aquatic nymphs of these species are found in the stream. No aquatic nymphs were found of the introduced damselfly, *Ischnura posita*, or the native damselfly, *Megalagrion* sp. The most common insects in the stream were larvae of the introduced caddis fly, *Cheumatopsyche analis*.

Other invertebrates around the stream include amphipods, *Orchestra pickeringii*, and isopods, *Philoscia* sp., which live in mud and moist rocks along the banks. Two endemic snails, *Neritina granosa* and *Theodoxus vespertina*, are found in the lower reaches of the stream in or near brackish water.

There are no endemic amphibians in Hawaii, but many species have been introduced. The Giant Neotropical Toad, *Bufo marinus*, is common along the proposed visitor access route, and its tadpoles and eggs are found in the stream. Bullfrogs, *Rana catesbiana*, have become established in the sump near Pump 6. Wrinkled frogs, *Rana rugosa*, were introduced from Japan in 1896 and are fairly abundant around the stream.

A checklist of the aquatic animals recorded along the portion of the Lawai Stream which runs through the Allerton Gardens follows this descriptive summary.

Checklist of Aquatic Fauna in the Allerton Gardens

- Denotes endemic Hawaiian species

Class Gastropoda

NERITIDAE

- *Neritina granosa*
- *Theodoxus vespertina*

Class Crustacea

PHILOSCIIDAE

Philoscia angusticauda

TALITRIDAE

Floresorchestia pickeringi

ATYIDAE

- *Ataya bisulcata*

PALAEMONIDAE

Macrobrachium lar

- *Macrobrachium grandimanus*

Class Insecta

AESHNIDAE

Anax junius

COENAGRIONIDAE

- *Megalagrion kauaiense*
- Ischnura posita*

HYDROPSYCHIDAE

Cheumatopsyche pettiti

LIBELLULIDAE

Pantala flavescens

Class Osteichthyes

CICHLIDAE

Cichla gigas
Tilapia zilli

ELEOTRIAE

- *Eleotris sandwicensis*

GOBIIDAE

- Awaous genivittatus*
- *Awaous stamineus*
 - *Oxyrichthys lonchotus*

KUHLIIDAE

- *Kuhlia sandwicensis*

MUGILIDAE

Mugil cephalus

POECILIIDAE

Gambusia affinis
Xiphophorus sp.

Class Amphibia

BUFONIDAE

Bufo marinus

RANIDAE

Rana catesbiana
Rana rugosa

**CHECKLIST OF AVIAFAUNA
IN THE ALLERTON GARDENS**

Avifauna Survey of the Allerton Gardens

Background

The ancestors of Hawaii's native flora and fauna crossed a wide oceanic barrier and relatively few species established themselves successfully. Those species that did become established left behind most of the competitors, predators, and diseases of their homeland. Hawaii's many islands, each with a diversity of habitats, provided opportunities for these colonists to embark on new evolutionary pathways.

Early human colonists radically modified avian habitats in the Hawaiian Islands through primitive agricultural development. They also brought pigs, dogs, and rats to the Islands. With Captain Cook came goats and European pigs, and other explorers brought sheep, cattle, horses, cats, and rodent species. The native flora, and the native bird populations they supported, were poorly adapted to withstand the onslaught of grazing and browsing animals. Rats became serious pests and predators, but mongooses, imported to control rats, were even more destructive to ground-nesting birds.

Over 150 species of alien birds have also been introduced to the Islands. Some of these that have established breeding populations pose a serious threat to native birds through direct competition, dissemination of new diseases and parasites, and ecosystem alteration.

In Lawai Valley, the native vegetation, and its associated native avifauna, was decimated by centuries of intensive agricultural practices. The only endemic birds are found along the Lawai Stream which the National Tropical Botanical Garden is restoring as a native ecosystem. These endemic species are: *Anas wyvilliana* (Hawaiian duck), *Fulica americana alai* (American coot), and *Gallinula chloropus sandvicensis* (Common moorhen).

A list of all the species recorded in the Allerton Gardens has been included at the end of this report .

Checklist of Avifauna in the Allerton Gardens

- Denotes endemic Hawaiian species

Class Aves

ANATIDAE

- *Anas wyvilliana*

ARDEIDAE

- Bubulcus ibis*
- Nycticorax nycticorax*

CHARADRIIDAE

- Pluvialis fulva*

COLUMBIDAE

- Geopelia striata*
- Streptopelia chinensis*

EMBERIZIDAE

- Cardinalis cardinalis*
- Paroaria coronata*

ESTRILDIDAE

- Lonochura malacca*
- Padda oryzivora*

FRINGILLIDAE

- Carpodacus mexicanus*

MIMIDAE

- Mimus polyglottus*

PHAETHONTIDAE

- Phaethon lepturus*

PHASIANIDAE

- Gallus gallus*
- Pavo cristatus*
- Phasianus colchicus*

PSITTACIDAE

- Psittacula krameri*

RALLIDAE

- *Fulica americana alai*
- *Gallinula chloropus sandvicensis*

SCOLOPACIDAE

Arenaria interpres
Heteroscelus incanus

STRIGIDAE

Asio flammeus sandwichensis

TURDINAE

Copsychus malabaricus
Garrulax canorus

TYTONIDAE

Tyto alba

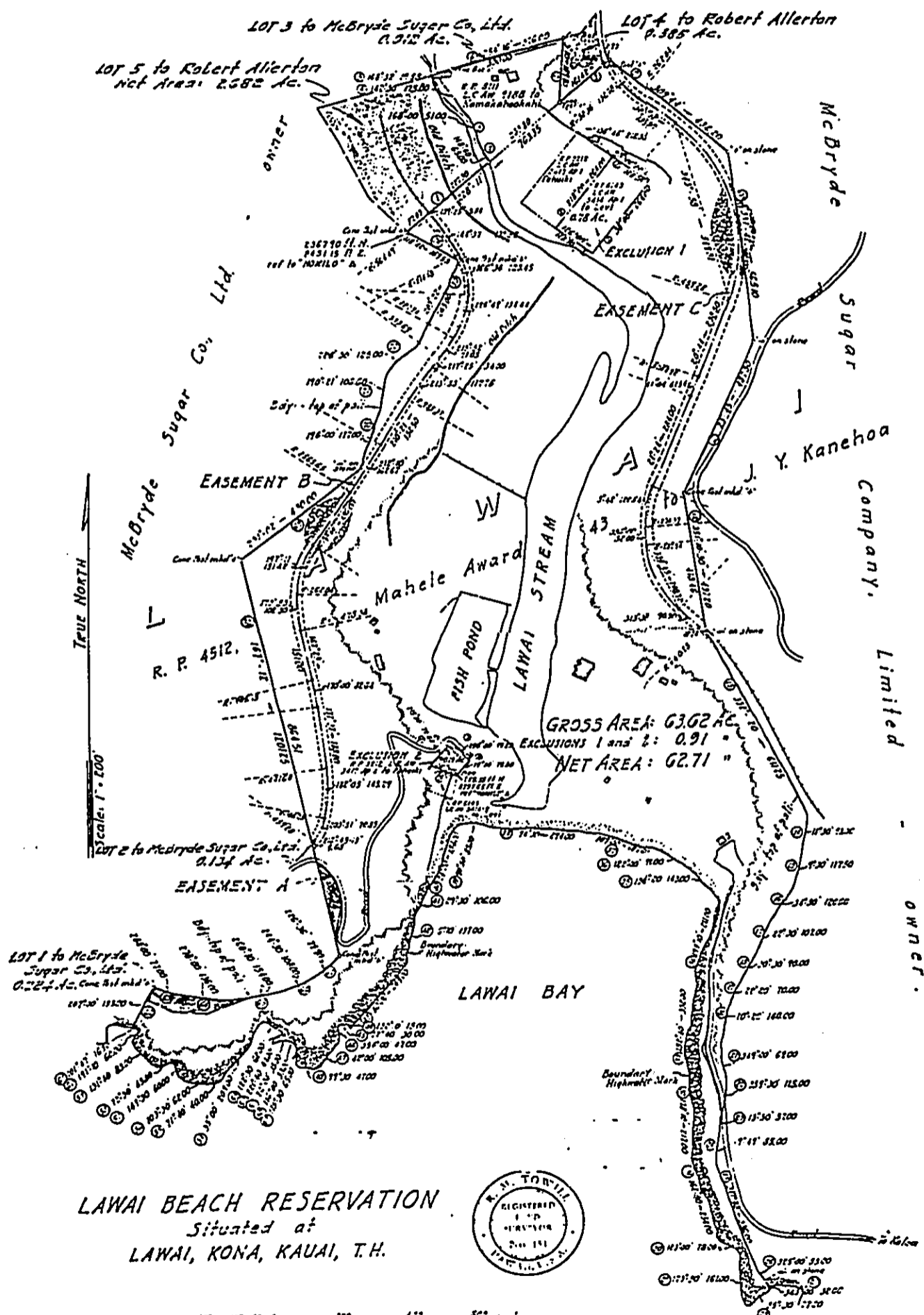
ZOSTEROPIDAE

Zosterops japonicus

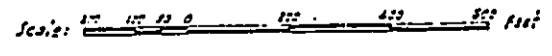
CONSERVATION DISTRICT USE APPLICATION FOR ALLERTON GARDENS

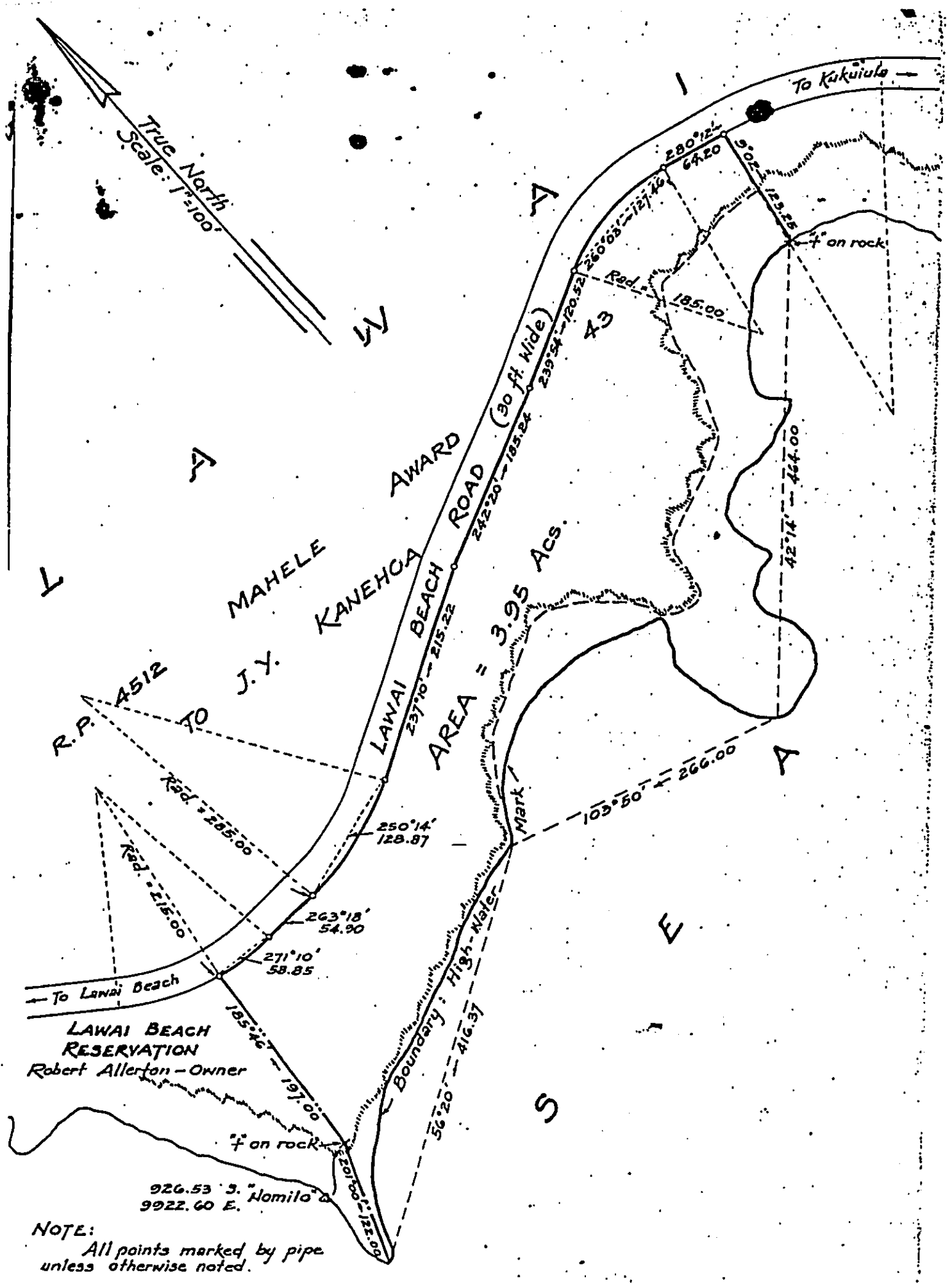
APPENDIX 5

**SITE MAPS WITH METES AND BOUNDS OF
THE ALLERTON GARDENS**



LAWAI BEACH RESERVATION
Situated at
LAWAI, KONA, KAUAI, T.H.





True North
Scale: 1"=100'

To Kakuia

MAHELE

KANEHOA AWARD

LAWAI BEACH ROAD (30 ft. Wide)

AREA = 3.95 Acs.

J.Y.

R.P. 4512 TO

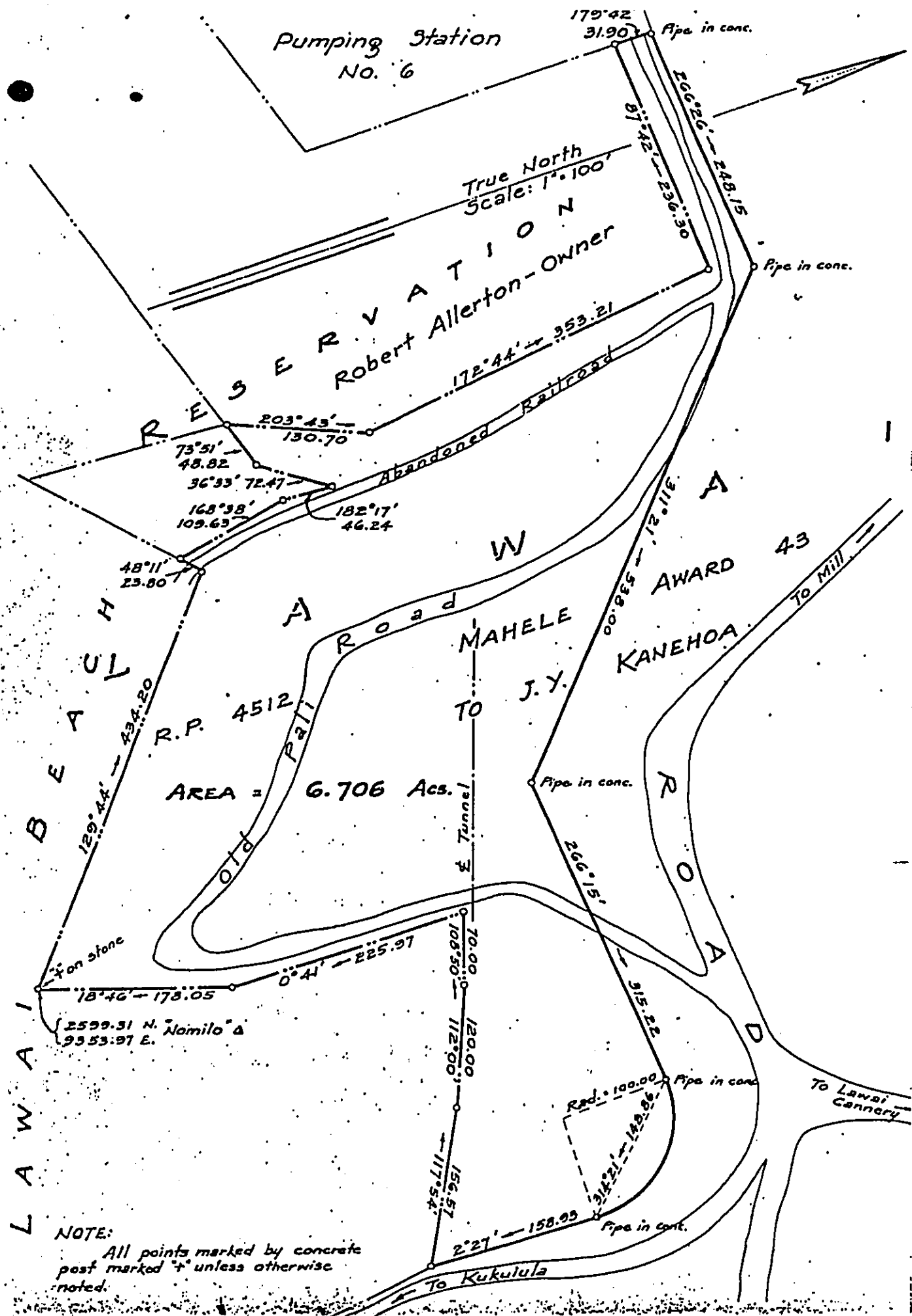
LAWAI BEACH RESERVATION
Robert Allerton - Owner

Boundary: High-Water

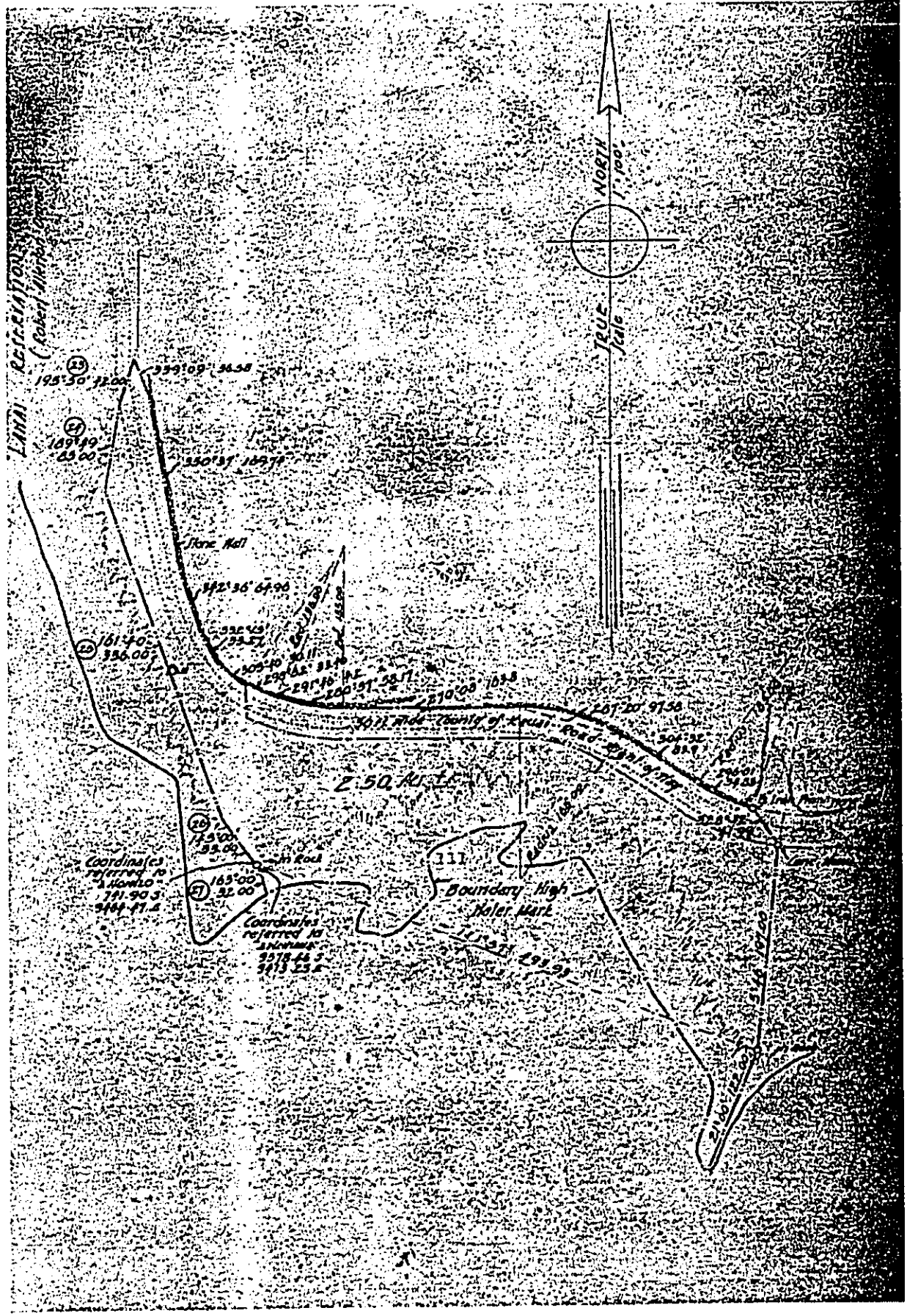
To Lawai Beach

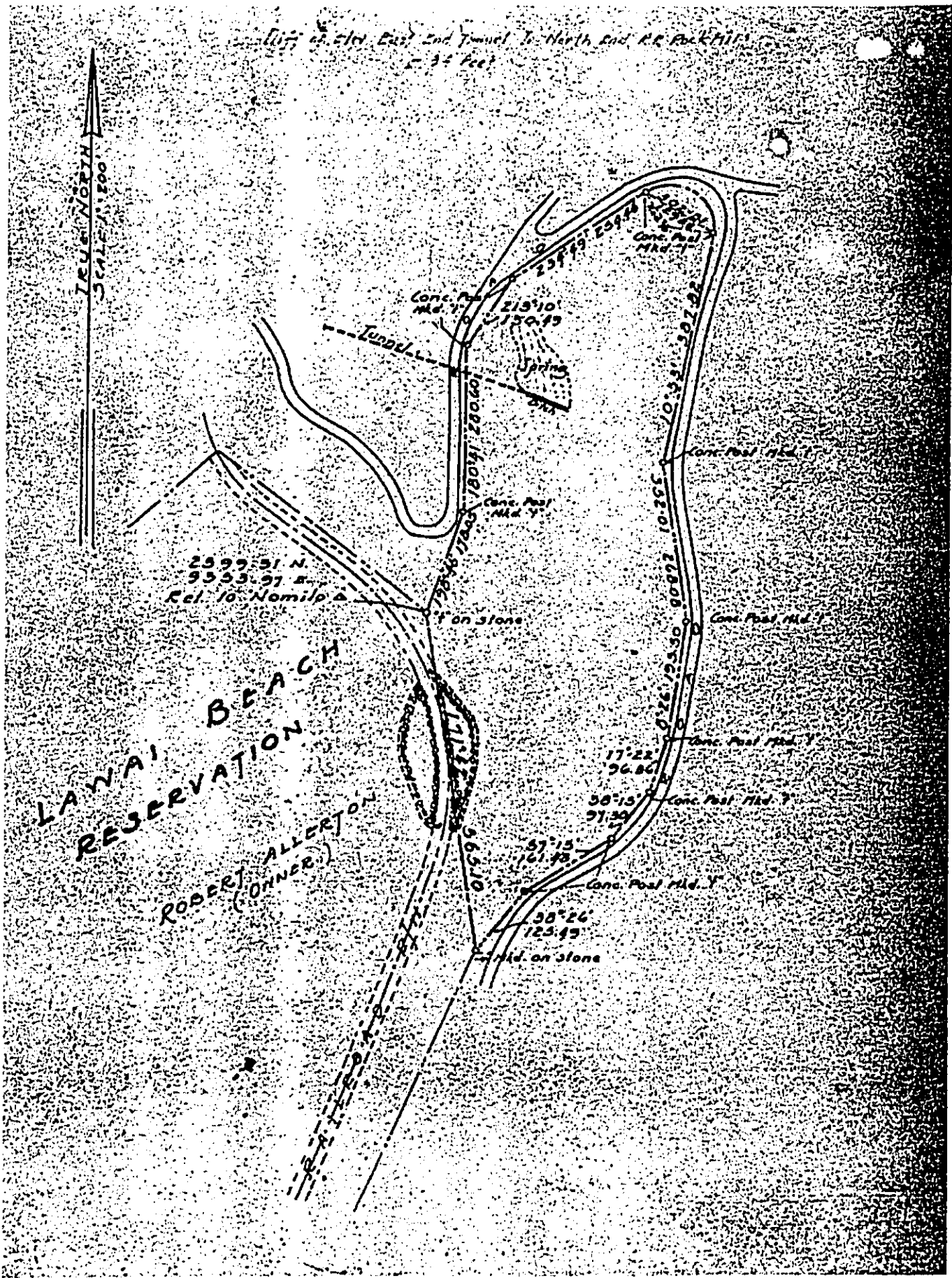
To Kakuia

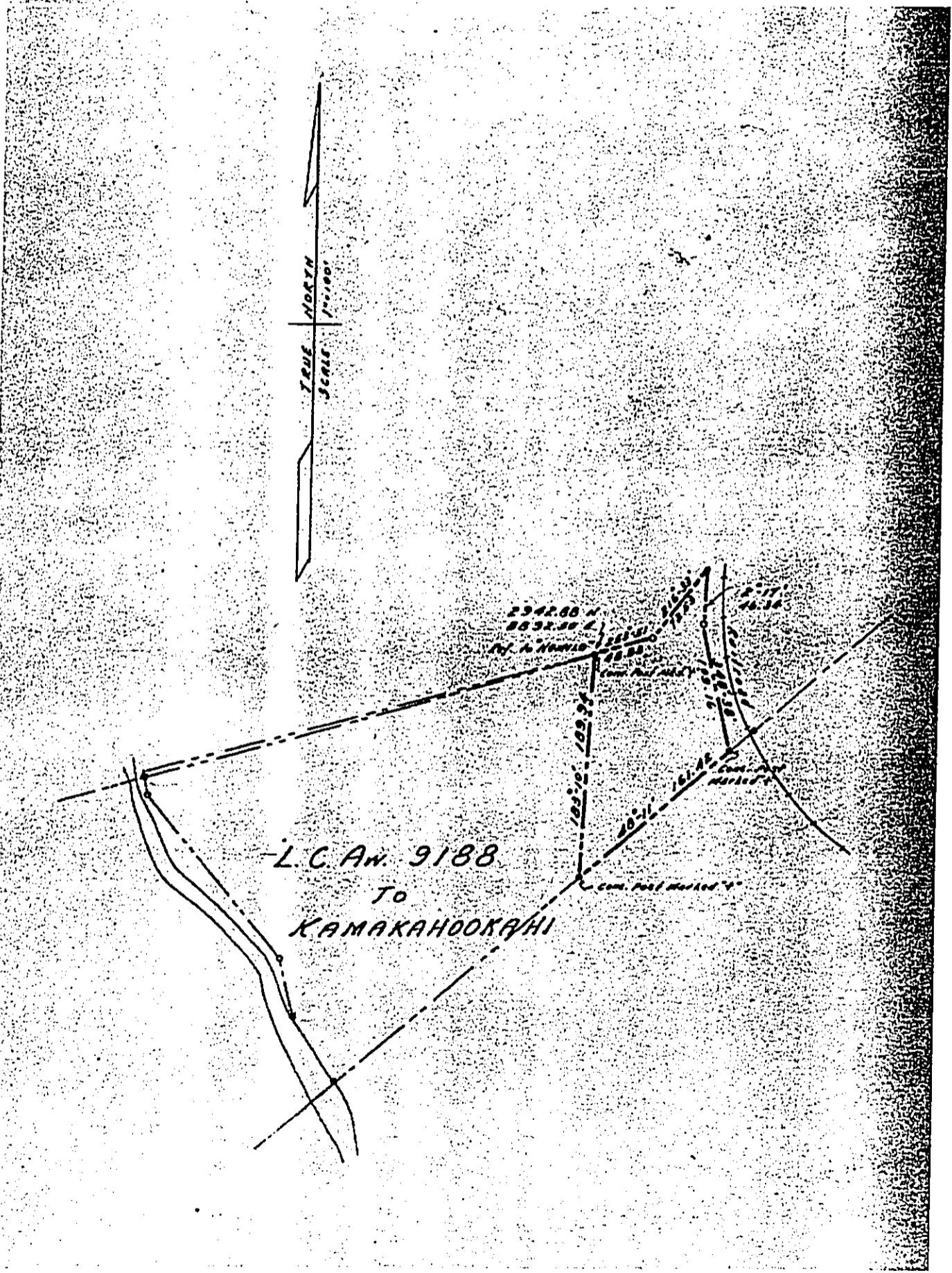
NOTE:
All points marked by pipe unless otherwise noted.

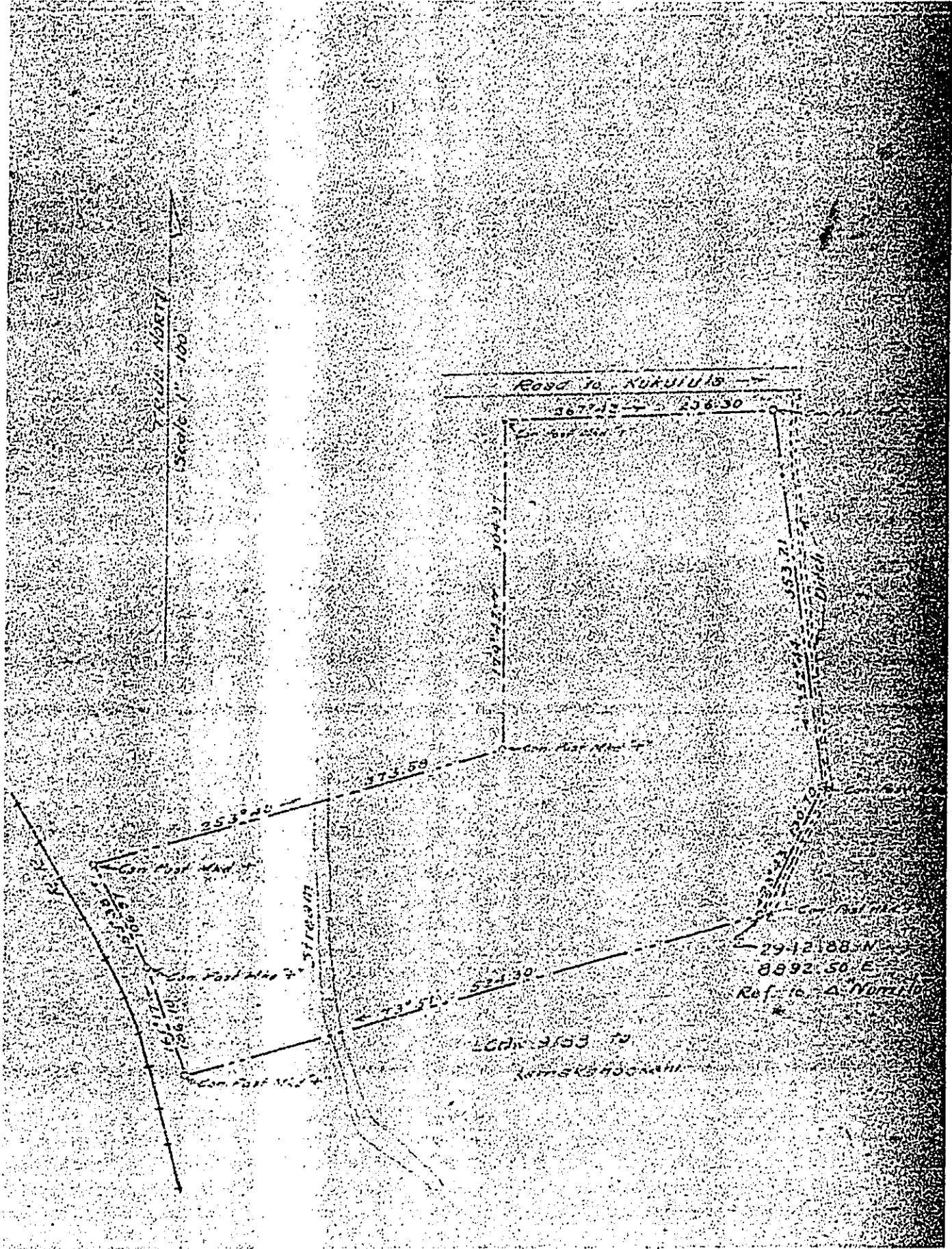


NOTE:
All points marked by concrete post marked + unless otherwise noted.









APPENDIX 6

DRAFT EA COMMENTS AND RESPONSES

A
P
P.
6

APPENDIX 6

DRAFT EA COMMENTS AND RESPONSES

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

REF:OCEA:SOR

2849
KEITH W. AMUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEPPELER, II
DONAL L. HANA'KE

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

FILE NO.: KA-2743
DOC. ID.: 2580a

NOV 30 1994

Mr. Charles Wichman, Jr.
Assistant Director, Limahuli Gardens
National Tropical Botanical Garden
P. O. Box 808
Hanalei, Hawaii 96714

Dear Mr. Wichman:

SUBJECT: Conservation District Use Application for the Allerton Gardens
at Lawai, Kauai (TMKs: 2-6-2: 1, 4, 5 & 6)

The Environmental Assessment (EA) submitted with the subject Conservation District Use Application (CDUA) was published in the OEQC Bulletin on October 23, 1994, as a Draft EA. The Draft EA underwent a formal 30-day review period which ended November 22, 1994. Pursuant to the Office of Environmental Quality Control's (OEQC) rules, the applicant is responsible for responding to all comments postmarked within the 30-day review period. We have enclosed comments from the State Department of Health and the State Historic Preservation that were received within the 30-day review period. We have also enclosed comments that we received as part of the processing of your application (but were not received within the 30-day review period). We would appreciate your response to these comments as well.

According to OEQC, following the end of this 30-day review period, any comments received along with their responses must be incorporated into the Final EA. If appropriate, the text, figures, tables, maps, and other ancillary parts of the EA should be revised.

We have tentatively scheduled your application for the February 24, 1995, Board meeting on Oahu. In order to meet OEQC's and the Department's processing deadlines, we suggest that your immediate attention be given to finalizing the subject EA and submitting six (6) copies to the Department by December 16, 1994.

Mr. Charles Wichman, Jr.

- 2 -

FILE NO.: KA-2743

Please be advised that non-compliance with Chapter 343, Hawaii Revised Statutes, will result in negative action on your application.

Also, on page 21 of the EA it states that there is a recorded grant of easement to McBryde Sugar Company on parcels 4 and 5. Although you indicate that McBryde has given the NTBG their blessing to use the easement as a new visitors' access route, we request that you submit written documentation from McBryde Sugar Company showing their concurrence with the project.

Thank you for your cooperation in this matter. Please feel free to contact Cathy Tilton of our Office of Conservation and Environmental Affairs at 587-0377, should you have any questions.

Very truly yours,


KEITH W. AHUE

Attachments

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

December 13, 1994

Mr. Keith W. Ahue, Chairperson
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Ahue:

Subject: Conservation District Use Application for the Allerton Gardens, Lawai, Kaua'i (KA-2743).

Thank you for your letter of November 30, 1994, transmitting the comments received during the formal review of the Draft EA of the Conservation District Use Application for the Allerton Gardens, Lawai, Kaua'i (CDUA KA-2743). Enclosed you will find six (6) copies of the Final EA as you requested. As required by law, the EA has been revised to include all comments received (even those received outside of the 30-day review period) and my responses as well as portions of the text, the cover, and the table of contents. I have also included the County SMA Permit which was issued to the NTBG for the proposed activity on November 30, 1994.

Keith, I would like to take this opportunity to respond to your concern about the recorded grant of easement to McBryde Sugar Company mentioned on page 21 of the Draft EA. As you know, the land is owned by the Allerton Gardens Trust, while the subject grant of easement to McBryde is specifically to haul sugar cane across the valley. While McBryde continues to have the right to use this easement to haul cane, the width of the easement as well as the diameter of the tunnels on the west side of the valley and the cuts through bed rock on the east side of the valley make it impossible for them to use it with their existing equipment, even as a one-way road. The subject easement was created long ago for the old narrow gauge train used up until 1938 and not for today's large cane-haul trucks.

Because of this, in the late 1930's, McBryde developed a new main cane-haul road which runs from the mill in Koloa to the mill in Wahiawa. This new road is much wider and safer and allows for two-way traffic even with today's large cane-haul trucks. The point where the existing main cane-haul road crosses Lawai valley is further up the valley on NTBG's property and thus outside of the Allerton property. This existing cane-haul road can be seen on Exhibit 14 as the broad white line running parallel to the coast. Because of these factors, McBryde Sugar Co. has no desire to resume the hauling of cane over the subject easement. Written documentation of their blessing of our application is contained in Appendix 1, Legal Documents, in the form of a letter to NTBG's Director, Dr. William Klein, authorizing NTBG to obtain all necessary permits associated with our application to establish a new visitors center and bring visitors in via the old railroad bed.

I hope that this has sufficiently answered your concerns. Should your staff have any additional questions or require more information have them call me directly at (808) 826-5547 or Fax me at (808) 826-4759.

Sincerely,

Charles R. Wichman, Jr., Director - Limahuli Gardens

Enclosures: Six (6) copies of the Final EA for Allerton Gardens, Lawai, Kaua'i

LIMAHULI GARDENS · POST OFFICE BOX 808, HANAIEI, KAUAI, HAWAII 96714

- ADMINISTRATOR
- ASST. ADMIN.
- DEV. BR.
- PLAN BR.
- RES. MGT BR.
- PROJ. CONTROL
- SW REC. PLAN.
- CLERICAL STAFF
- ADMIN. ASST.
- INTERP. BR.

STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 Office of Conservation and Environmental Affairs
 Honolulu, Hawaii

RECEIVED
 DIVISION OF
 STATE PARKS
 SEP 30 1 44 PM '94

- FOR
- CIRCULATE/POST/STAFF RM
 - COMMENTS & REC.
 - DRAFT REPLY
 - FILE
 - FOLLOW UP
 - INFO.
 - PUSH (DUE)
 - SEE ME
 - SEND COPY TO: _____

In reply, please refer

FILE NO.: KA-8/24/94-2743
 Acceptance Date: 9/21/94
 180-Day Exp. Date: 3/20/95
 DOC. NO.: 4906

[Handwritten signature]
 SEP 30 1994

MEMORANDUM

TO: *From:* Aquatic Resources; Conservation & Resources Enforcement;
 Forestry & Wildlife; Historic Preservation; Land Management;
 Natural Area Reserves System; State Parks; Water and Land
 Development; Water Commission

FROM: *Zo;* Roger G. Evans, Administrator
 Office of Conservation and Environmental Affairs

SUBJECT: REQUEST FOR COMMENTS
 Conservation District Use Application

APPLICANT: National Tropical Botanical Garden

FILE NO.: KA-2743

REQUEST: Resume use of Allerton Gardens

LOCATION: Lawai, Kauai

TMK(s): 2-6-2: 1, 4, 5 & 6

PUBLIC HEARING: YES X NO _____

DOCARE: Please conduct a field inspection on this project. Should you
 require additional information, please call Cathy Tilton at 7-0377.

If no response is received by the suspense date, we will assume there are
 no comments.

Attachment(s)

No comments. We support the project.

[Handwritten signature]
 RALSTON NAGATA, State Parks
 Administrator

Date: 10/3/94

RECEIVED
 94 OCT 3 AM 9:58
 DIRM
 OCEA

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

December 12, 1994

Mr. Ralston Nagata, Administrator
State Parks Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Nagata:

SUBJECT: State Parks Review of the Draft EA and CDUA KA-2743 for the Allerton Gardens Lawai, Kaua'i, Hawai'i.

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kaua'i. I recently received your comments dated September 30, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

Ralston, I appreciate your supportive comments. Please feel free to call me anytime to discuss any future concerns that your staff may have.

Sincerely,

Charles R. Wichman, Jr.
Director - Limahuli

JOHN WAITE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813

October 25, 1994

KEITH AJIYE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

JOHN P. KEPPELER II
DONA L. HANAKI

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCE ENFORCEMENT

CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

MEMORANDUM

LOG NO: 12858
DOC NO: 9410NM09

TO: Roger Evans, Acting Administrator
OCEA

FROM: *Don Hibbard*
Don Hibbard, Administrator
for State Historic Preservation Division

SUBJECT: Historic Preservation Review -- KA-8/24/94-2743
CDUA National Tropical Botanical Garden
TMK: 2-6-2: 1, 4, 5, & 6
Lawai, Koloa, Kauai

DIRECTOR
OCEA

94 OCT 27 AM 10:30

10-11-94

We have reviewed this draft EA and CDUA for the Allerton Gardens. It is our understanding that the National Tropical Botanical Gardens will be preserving significant historic sites. We believe that their proposal to open the area to the public will be beneficial to allow further interpretations of historic sites. We concur that using the old railroad berm, as an access, will not impact the site. We agree that the trails already existing in the area are not impacting any significant historic sites. Our staff archaeologist did conduct a visit with the applicant.

Eventually we would like to see the applicant development a preservation plan for the historic sites. This will include interpretation of these historic sites and a restoration plan for the fishpond.

Based on this information, we concur with the development plans of the Gardens which will have a "no adverse effect" on significant historic sites.

If you have any questions please call Nancy McMahon at 587-0006.

NM:jk

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

December 12, 1994

Mr. Don Hibbard, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Hibbard:

SUBJECT: Historic Preservation Review of the Draft EA and CDUA KA-2743 for the Allerton Gardens Lawai, Kaua'i, Hawai'i.

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kaua'i. I recently received your comments dated October 25, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

Don, I appreciate your supportive comments. As you noted it is our intention to preserve the historic sites located in the Allerton Gardens and to interpret them to our visitors. We are glad that you concur with our philosophy that reopening the area to the public will be beneficial by allowing these sites to be interpreted.

We look forward to working with your division in developing a preservation plan for the sites in the Gardens in the future. Please feel free to call me anytime to discuss any future concerns that your staff may have.

Sincerely,

Charles R. Wichman, Jr.
Director - Limahuli

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

1744I(66)

October 17, 1994

KA-2743

KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

JOHN P. KEPPELER, II
DONA L. HANA'IKE

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

MEMORANDUM

TO: MR. ROGER C. EVANS, Administrator
Office of Conservation and Environmental Affairs

FROM: MICHAEL G. BUCK, Administrator
Division of Forestry and Wildlife *[Signature]*

SUBJECT: CDUA National Tropical Botanical Garden KA-2743

This CDUA requests use of Allerton Gardens for up to 30,000 visitors per year. Although the National Tropical Botanical Gardens has been servicing large numbers of people, not all tours included the Allerton Garden. However, the use of the railroad right-of-way will bring up to 30,000 visitors through the Allerton Garden area.

The trail and road system in the valley is adequate for large numbers of visitors, and we support the proposal.

DLIR
OCEA

94 OCT 19 AM 11:50

RECEIVED

1011

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

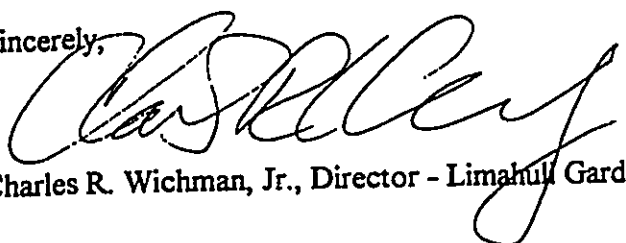
Mr. Michael G. Buck, Administrator
Division of Forestry and Wildlife
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Buck:

**SUBJECT: Division of Forestry and Wildlife Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii.**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received your comments dated October 17, 1994, from the Office of Conservation and Environmental Affairs (OCEA). We appreciate the support you have shown for our application. Please feel free to call me at 826-5547 should your division have any future concerns.

Sincerely,



Charles R. Wichman, Jr., Director - Limahuli Gardens

State of Hawaii
Department of Land and Natural Resources
DIVISION OF AQUATIC RESOURCES

October 17, 1994

MEMORANDUM

To: Paul Kawamoto, Program Manager
Aquatic Resources and Environmental Protection

From: Bill Devick, Program Manager
Recreational Fisheries

Subject: CDUA Review

Comments Requested By: Roger C. Evans, OCEA
Date of Request: September 30, 1994
Date Received: October 17, 1994

Summary of Proposed Project

Title: CDUA KA-8/24/94-2743. Resume Use of Allerton Gardens.

Project By: National Tropical Botanical Garden

Location: Lawai, Kauai

Brief Description: The project will repair damage to the area caused by Hurricane Iniki, enabling the gardens to be reopened to visitors ~~for~~ for use as a scientific research area. A new visitor access route is also proposed.

Comments: The history of Allerton Gardens and the National Tropical Botanical Garden is one of responsible environmental management. The modifications described should have no negative impact on Lawai Stream or Harbor. As a point of information, we suspect that the introduced fish identifications of *Tilapia zilli* and *Cichla gigas* may be in error.


Bill Devick

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

Mr. Paul Kawamoto, Program Manager
Division of Aquatic Resources
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Kawamoto:

**SUBJECT: Division of Aquatic Resources Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii;**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received Mr. Devick's comments dated October 17, 1994, from the Office of Conservation and Environmental Affairs (OCEA). We appreciate the support Mr. Devick has shown for our application. Please feel free to call me at 826-5547 should your division have any future concerns.

Sincerely,

Charles R. Wichman, Jr., Director - Limahuli Gardens


KA - 2743

6

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Commission on Water Resource Management
Honolulu, Hawaii

OCT - 6 1994

TO: Mr. Roger C. Evans, Administrator
Office of Conservation and Environmental Affairs

FROM: Rae M. Loui, Deputy Director 
Commission on Water Resource Management

SUBJECT: Draft Environmental Assessment and CDUA, National Tropical Botanical
Garden, Continued Use of Allerton Gardens, Lawai, Kauai, FILE. NO.
KA-8/24/94-2743



Based on the information provided with subject file, it is our understanding that streams will not be affected by the proposed project. If the proposed project will alter the bed or banks of stream channels, or if the proposed project will divert water from streams, the project may subject to the Commission's rules.

We appreciate the opportunity to review and comment on this document.

Should you have any questions regarding this memorandum, please do not hesitate to call David Higa at 587-0249.

DH:ss

DLNR
OCEA

94 OCT 6 AM 10:30

RECEIVED

1419

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

December 12, 1994

Ms. Rae Loui, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Ms. Loui:

SUBJECT: Commission on Water Resource Management Review of the Draft EA and CDUA KA-2743 for the Allerton Gardens Lawai, Kaua'i, Hawai'i.

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kaua'i. I recently received your comments dated October 6, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

You are correct in your understanding that streams will not be affected by the proposed project. It is not the intention of this application to alter the beds or banks of stream channels, or divert water from streams.

Please feel free to call me anytime to discuss any future concerns that your staff may have.

Sincerely,

Charles R. Wichman, Jr.
Director - Limahuli

KA-2743

JOHN WAIHEE
GOVERNOR OF HAWAII



RECEIVED

94 OCT 19 AM 9:02

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF LAND MANAGEMENT

DLNR
OCEA

3060 Ewa Street, Rm. #306
Lihue, HI 96766-1875

October 13, 1994

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

KD-94:1318

MEMORANDUM

To: Roger Evans
Attention: Cathy Tilton

From: Sam Lee

Subject: CDUA Request to Resume Use of Allerton Gardens,
National Tropical Botanical Garden, Lawai, Kauai

We have had the opportunity to review the CDUP application and Draft Environmental Assessment prepared by the NTBG regarding the proposed resumption of use for the property. We have no objections to the proposal, and concur that the uniqueness of this property should be preserved and protected.

Thank you for providing this opportunity to review the project. As requested, the materials are also being returned.

Enclosures

cc: Mason Young
Herbert Apaka, Jr.
ML:ml

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

Mr. Sam Lee, Kauai District Land Agent
Division of Land Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Lee:

**SUBJECT: Division of Land Management Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii;**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received your comments dated October 13, 1994, from the Office of Conservation and Environmental Affairs (OCEA). We appreciate the support you have shown for our application. Please feel free to call me at 826-5547 should your division have any future concerns.

Sincerely,

Charles R. Wichman, Jr., Director - Limahuli Gardens

JOHN WAIHEE
GOVERNOR OF HAWAII

RECEIVED



RECEIVED

PETER A.
DIRECTOR OF HEALTH

94 NOV 10 A 8: 07

STATE OF HAWAII NOV 15 AM 8:41
DEPARTMENT OF HEALTH

P. O. BOX 3378
HONOLULU, HAWAII 96801

DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

November 3, 1994

DLNR
OCEA

In reply, please refer to:

94-221/epo

To: The Honorable Keith W. Ahue, Chairperson
Department of Land & Natural Resources

From: Peter A. Sybinsky, Ph.D. *Peter A. Sybinsky*
Director of Health

Subject: Conservation District Use Application

Applicant: National Tropical Botanical Garden
File No. : KA-2743
Request : Resume the Use of Allerton Gardens
Location : Lawai, Kauai
TMK : 2-6-2: 1, 4, 5 & 6

We have reviewed the subject matter and have conducted an on-site survey of the property. We offer the following environmental health concerns for your consideration:

1. In accordance with Hawaii Administrative Rules (HAR), Chapter 11-60.1, "Air Pollution Control," the property owner/developer shall be responsible for ensuring that effective control measures are provided to prevent or minimize any fugitive dust emission caused by the construction work, including the off-site roadways used to enter/exit the project, from impacting the surrounding areas. These measures include the use of water wagons, sprinkler systems, dust fences, etc.
2. In accordance with HAR, Chapter 11-58.1, "Solid Waste Management Control," the property owner/developer shall be responsible for ensuring that grub material, demolition waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.
3. In accordance with HAR, Chapter 11-55, "Water Pollution Control" and 11-54, "Water Quality Standards," the property owner/developer shall be responsible for ensuring that the best management practices (BMP) are provided to prevent or minimize the discharge of

The Honorable Keith W. Ahue
November 3, 1994
Page 2

sediments, debris, and other water pollutants into
state waters.

We reserve the right to implement future environmental health
restrictions when more detailed information is submitted.

Should you have any questions, please call Mr. Clyde Takekuma,
Chief Sanitarian, Kauai District Health Office at 241-3323.

c: KDHO (Clyde Takekuma)

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

Peter A. Sybinsky Ph.D., Director of Health
Department of Health
P.O. Box 3378
Honolulu, HI 96801

Dear Dr. Sybinsky:

**SUBJECT: Department of Health Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii;**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received your comments dated November 4, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

The NTBG is fully committed to maintaining the quality of the environment and natural resources found in the Allertons Gardens. Because of this, we will not only comply with all of the stated sections of the Hawaii Administrative Rules (HAR), but we will strive to maintain the quality of the environment and resources at a level beyond that prescribed by the law. In responding to your comments I will address them in the order in which they were presented.

1. In accordance with Chapter 11-60.1 HRS, "Air Pollution Control", the NTBG will use all necessary measures to control fugitive dust emissions that could result from the very limited construction work as well as the use of existing roads as a new visitor access route into the NTBG and Allerton Gardens.
2. In accordance with Chapter 11-58.1 HRS, "Solid Waste Management Control", the NTBG will dispose of all solid waste, including grub material, demolition waste and construction waste in a manner, or at a site, approved by the DOH.
3. In accordance with Chapter 11-55 HRS, "Water Pollution Control", the NTBG will use the best management practices (BMP) to prevent, or minimize, the discharge of sediments, debris, and other pollutants into state waters.

In closing, we look forward to implementing the mitigation measures outlined above and also recognize your right to implement further environmental health restrictions in the future. Please feel free to have your staff call me at 826-5547 should they have any other concerns that we can address.

Sincerely,

Charles R. Wichman, Jr., Director - Limahuli Gardens



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Blvd, Room 6307
P.O. Box 50167
Honolulu, Hawaii 96850

KA-2743

In Reply To: CAW

OCT 20 1994

Mr. Keith W. Ahue
State of Hawaii
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Re: Conservation District Use Application for the Allerton Gardens at Lawai, Kauai, Hawaii

Dear Mr. Ahue:

The U.S. Fish and Wildlife Service (Service) has reviewed the Conservation District Use Application for the Allerton Gardens at Lawai, Kauai, Hawaii. The project applicant is the National Tropical Botanical Garden. The proposed project includes the reopening of the Allerton Gardens, which was closed to the public due to Hurricane Iniki in 1992, and construction of a new visitor access route. The new access route involves connecting two roads on the subject property and surfacing them with crushed coral and dirt. The work includes removal of a 16-foot wide earthen berm and damaged rock wall at the points of connection. The Service offers the following comments for your consideration.

Based on the available information, the Service does not anticipate significant adverse impacts to fish and wildlife resources in the project area. Therefore, the Service does not object to issuance of the requested permit.

The Service appreciates the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Christine Willis at 808/541-3441.

Sincerely,

Brooks Harper

Brooks Harper
Field Supervisor
Ecological Services

RECEIVED

OCT 25 11 08:00 AM '94

LAND & NATURAL RESOURCES

cc: DAR, Hawaii
CZMP, Hawaii
CWB, Hawaii

DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

94 OCT 24 11:08

RECEIVED

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

Brooks Harper, Field Supervisor
US Fish and Wildlife Service
P.O. Box 50167
Honolulu, HI 96850

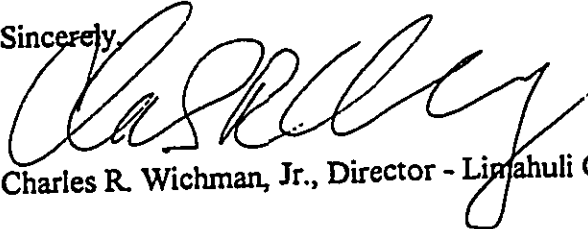
Dear Mr. Harper:

**SUBJECT: US Fish and Wildlife Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii;**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received your comments dated October 20, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

As you know, the NTBG is fully committed to maintaining the quality of the environment and natural resources found in the Allertons Gardens. Because this, I am sure that our staff will be working with the USFWS in the future to preserve Lawai bay as a primary nesting site for the endangered green sea turtle. Please feel free to have your staff call me at 826-5547 should they have any other future concerns that we can address.

Sincerely,


Charles R. Wichman, Jr., Director - Limahuli Gardens

KA-2743

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE

TO:

- CHAIRPERSON
- DEPUTY CHAIRPERSON
- NATURAL AREA RESERVES SYSTEM COMMISSION
- FISCAL OFFICE
- PERSONNEL OFFICE
- OFFICE OF CONSERVATION & ENV. AFFAIRS
- AQUATIC RESOURCES
- CONSERVATION AND RESOURCES ENFORCEMENT
- CONVEYANCES
- LAND MANAGEMENT
- STATE PARKS, OUTDOOR REC. & HISTORIC SITES
- WATER AND LAND DEVELOPMENT

FOR:

- SIGNATURE
- INFORMATION
- RETURN *to you*
- APPROPRIATE ACTION
- COMMENTS AND RECOMMENDATIONS
- DRAFT REPLY
- FILE

DIVISION
OF
CONSERVATION
& ENVIRONMENTAL
AFFAIRS

1994 OCT 8 PM 3:01

RECEIVED

attn: Cathy Tilton

REMARKS:

We have no comments, but thank you for the opportunity to review this most worthy endeavor! Betty Jones, Exec. Sec. NARS Commission.

FILE NO.: KA-2743

REQUEST: Resume use of Allerton Gardens

LOCATION: Lawai, Kauai

TMK(s): 2-6-2: 1, 4, 5 & 6

PUBLIC HEARING: YES X NO

DOCARE: Please conduct a field inspection on this project. Should you require additional information, please call Cathy Tilton at 7-0377.

If no response is received by the suspense date, we will assume there are no comments.

Attachment(s)

1994 OCT 8 PM 3:02
RECEIVED

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

December 12, 1994

Natural Area Reserve System Commission
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

**SUBJECT: Natural Area Reserves System Commission Review of the Draft EA and
CDUA KA-2743 for the Allerton Gardens Lawai, Kaua'i, Hawai'i.**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allerton Gardens, Lawai, Kaua'i. I recently received your very supportive comments dated October 6, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

Please feel free to call me should the NARS Commission have any future concerns.

Sincerely,

Charles R. Wichman, Jr.
Director - Limahuli

KA-27C

JOANN A. YUKIMURA
MAYOR



COUNTY OF KAUAI
PLANNING DEPARTMENT
4444 RICE STREET, SUITE 473
LIHUE, KAUAI, HAWAII 96766

DEE M. CROWELL
PLANNING DIRECTOR
NEIL L. AALAND
DEPUTY PLANNING DIRECTOR
TELEPHONE (808) 241-6677
FAX (808) 241-6699

October 10, 1994

R

Keith Ahue, Chairman
Dept. of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

DIARR
OCEA

'94 OCT 17 AM 11:01

RECEIVED

SUBJECT: Conservation District Use Application
File No.: KA-8/24/94-2743

Overall, we have no objections to the proposed project. However, our comments concerning the application are:

- a. The areas under application in the Conservation District portion are in the County's Special Management Area (SMA) and therefore are subject to the County's SMA Rules and Regulations. The applicant should consult with our office to determine the type of SMA Permit that will be required for the proposed activities.
- b. A field check revealed that grading will be required to cut the driveways. A Grading Permit should be obtained to conduct the work.
- c. As we understand, the current proposal is only a temporary site for the visitors' center. A permanent site will be developed later further east near the Spouting Horn Park. Because this site is only temporary, adjustments may have to be made to items in this application to accommodate the permanent facility. These items which may have to be modified may affect this CDUA. This matter should be discussed with the applicant.

Thank you for allowing us this opportunity to comment and should you have any questions, please feel free to contact Neil Aaland of our office at 241-6677.

Dee M. Crowell
DEE M. CROWELL
Planning Director

DEPT. OF LAND,
NATURAL RESOURCES
STATE OF HAWAII

OCT 17 AM 10:51

RECEIVED

FILE COPY



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 21, 1994

Mr. Dee M. Crowell, Director
Kauai County Planning Department
4444 Rice Street, Suite 473
Lihue, Hawaii 96766

Dear Mr. Crowell:

**SUBJECT: Kauai Planning Department Review of the Draft EA and CDUA KA-2743
for the Allertons Gardens, Lawai, Kauai, Hawaii;**

Thank you for your review of the National Tropical Botanical Gardens DRAFT EA and CDUA for the Allertons Gardens, Lawai, Kauai, Hawaii. I received your comments dated October 10, 1994, from the Office of Conservation and Environmental Affairs (OCEA).

As you know, the NTBG is fully committed to maintaining the quality of the environment and natural resources found in the Allertons Gardens, while also complying with all of the County's ordinances as outlined in your letter. In responding to your comments I will address them in the order in which they were presented.

- a. On November 4, 1994, the NTBG filed a SMA Permit Assessment Application with your department. It is our understanding after several discussions with your staff, primarily Mr. George Kalisik your CZM planner, that you will grant the NTBG a SMA Minor Permit sometime this month.
- b. After consulting with your staff, it appears that the road construction required to connect the Allertons driveway with the existing perimeter cane road will not require a grading permit. This determination was based upon the fact that the two roads are on the same existing grade and elevation, and that almost no material will be removed in the process. It is our intention to reuse the rocks removed from the stone wall within that area and to use what little dirt remains as part of the road bed.
- c. You are correct in your understanding that the current CDUA and SMA applications filed by the NTBG are intended to reopen the Gardens to pre-Iniki standards with a temporary visitors center located outside the Conservation District and Special Management Area. As outlined in our CDUA, we are also committed to an ongoing master planning process for the NTBG and Allerton gardens, and plan to file new CDUA and SMA permits in the future that will address our future development as well as any changes that maybe associated with a possible permanent visitors center across from Spouting Horn Park in A&B's proposed Kukuiula Planned Community. As part of our master planning process we intend to work with your department, the DLNR, A&B, and the community at large to identify and address issues that are concerns to all of us. Because of this, our currently filed CDUA and SMA applications are meant only to allow the NTBG to reopen our gardens at the level at which they were operating prior to the devastation and disruption caused by Hurricane Iniki on September 11, 1992.

In closing, we look forward to working with your department in the future and I urge your staff to call me at 826-5547 should they have any other concerns that we can address.

Sincerely,

Charles R. Wichman, Jr., Director - Limahuli Gardens

LIMAHULI GARDENS • POST OFFICE BOX 808, HANAIEI, KAUAI, HAWAII 96714

JOANN A. YUKIMURA
MAYOR



COUNTY OF KAUAI
PLANNING DEPARTMENT
4444 RICE STREET, SUITE 473
LIHUE, KAUAI, HAWAII 96766

*This letter only
concerns SMA Permit.*

DEE M. CROWELL
PLANNING DIRECTOR
NEIL L. AALAND
DEPUTY PLANNING DIRECTOR
TELEPHONE (808) 241-6677
FAX (808) 241-6699

November 30, 1994

William McK. Klein, Executive Director
National Tropical Botanical Garden
P.O. Box 340
Lawai, Hi 96763

Subject: Special Management Area Minor Permit SMA(M)-95-07
Improvements to existing roadways for use as visitor
access to the National Tropical Botanical Garden
TMK: 2-6-2: 1,4,5,6 Lawai, Kauai

Based on the information submitted, we have completed our review and assessment of the subject proposal and hereby issue a Special Management Area Minor Permit authorizing improvements to the existing Allerton driveway and maintenance road, and the existing cane haul road on A&B property to provide a new visitor access to the National Tropical Botanical Garden.

Approval of the application is subject to the following conditions:

1. The applicant shall consult with the County Department of Public Works to determine if a County grading permit is required, or if there are other requirements of the Department regarding the proposed development.
2. Prior to commencement of construction, the applicant shall provide written verification from the Department of Land and Natural Resources-Historic Preservation Division, that no adverse impacts on cultural or historic resources are expected as a result of the proposed development.
3. Public access to the shoreline including the beach fronting Lawai Bay shall not be prohibited or restricted beyond its current level. The applicant is advised that a public access way to the shoreline, consistent with conservation of sensitive natural resources, may be required as a condition of approval of future development.

AN EQUAL OPPORTUNITY EMPLOYER

November 30, 1994
Special Management Area Minor Permit
SMA(M)-95-7
Page 2

4. As represented by the applicant, the number of visitors to be served by the proposed new access shall not exceed pre-Hurricane Iniki levels.
5. The applicant is advised that this permit is only for improvements to and use of the new visitor access road. Renovations and improvements to the garden facilities, development of a new visitors center, or an increase in the number of visitors beyond pre-Hurricane Iniki levels may require additional Special Management Area or other Permits.
6. It shall be the applicant's responsibility to comply with the requirements of applicable County, State and Federal Agencies including the State Department of Land and Natural Resources-Office of Conservation and Environmental Affairs and the County Department of Public Works.

Also be informed that other permits or conditions from other agencies may be required prior to construction. The applicant is responsible for revolving these conditions with the other respective agency(ies).



Dee M. Crowell,
Planning Director