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Mayor

GEORGE N. KAYA
Director

CHARLES JENCKS
Deputy Director

LLOYD P.C.W. LEE, P.E.
Chief Staff Engineer



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

August 26, 1992

AARON SHINMOTO, P.E.
Land Use and Codes Administration

EASSIE MILLER, P.E.
Wastewater Reclamation Division

RALPH NAGAMINE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Solid Waste Division

MELVIN HIPOLITO
Highways Division

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'92 AUG 31 11:41

Mr. Brian J. J. Choy, Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

OFC. OF ENVIRONMENTAL
QUALITY CONTROL

Dear Mr. Choy:

SUBJECT: NEGATIVE DECLARATION FOR THE CLOSURE THE LANAI
SANITARY LANDFILL, TMK:4-9-2:01, LOT 761, LANAI,
HAWAII

The Department of Public Works has reviewed the final environmental assessment for the closure of the Lanai Sanitary Landfill and has determined that the project will not have any significant impacts on the environment. On the basis of our determination, we are filing a negative declaration for this project.

Enclosed please find four copies of the final environmental assessment. We request that the notice of the final environmental assessment be published in the September 8, 1992 issue of the OEQC Bulletin.

Please feel free to contact Mr. Andrew Hirose of my Solid Waste Division at telephone 243-7875 should there be any questions on this matter. Thank you.

Very truly yours,

GEORGE N. KAYA
Director of Public Works

AH:ah

Enclosures

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Harding Lawson Associates
Engineering and Environmental Services



FINAL
ENVIRONMENTAL ASSESSMENT
LANAI LANDFILL CLOSURE
LANAI, HAWAII

HLA Project No. 12431.004

1992-09-08-LA-FEA-Lanai landfill closure

SEP 8 1992

Harding Lawson Associates

An Assessment Prepared for:

County of Maui
Department of Public Works
Solid Waste Division
200 South High Street
Wailuku, Maui, Hawaii 96793

**FINAL
ENVIRONMENTAL ASSESSMENT
LANAI LANDFILL CLOSURE
LANAI, HAWAII**

HLA Project No. 12431.004

by

Harding Lawson Associates
803 Kamehameha Highway, Room 404
Pearl City, Hawaii 96782

KRP Information Services
1314 South King Street, Suite 951
Honolulu, Hawaii 96814

August 27, 1992

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DISTRIBUTION

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**SUMMARY
ENVIRONMENTAL ASSESSMENT**

Project: Lanai Landfill Closure

Location: Southwest Lanai between Kaunalapau Highway
and Kalamaiki Gulch

Island of Lanai
County of Maui

Tax Map Key: 4-9-2:01 Lot 761

Agency: County of Maui
Department of Public Works
Solid Waste Division

Consultant: Harding Lawson Associates
803 Kamehameha Highway, Room 404
Pearl City, Hawaii 96782
Phone: (808) 455-6551

Contact Person: Gerald Friesen, P.E.

I DESCRIPTION OF THE PROPOSED ACTION

A. Description of the Proposed Project

The County of Maui proposes to close the existing Lanai Sanitary Landfill by April 1994. At that time, either an interim landfill or a new landfill will be operational so that refuse collection will not be interrupted. The existing landfill is approximately 4 miles southwest of Lanai City, approximately one mile west of Lanai Airport, and is bounded on the north and south by Kalamaiki Gulch and Kaumalapau Highway (Plate 1).

The landfill extends over 15.7 acres and is at capacity. A site plan of the existing landfill is shown on Plate 2.

The subject parcel is owned by Dole Foods Company, Inc., and is maintained by the County of Maui. The landfill site and the adjacent areas are zoned for agricultural use.

B. Technical Characteristics

The proposed landfill closure will occur in four phases. The first two phases are the development of a closure plan and closure design, the third phase is the actual construction, and the fourth is post-closure monitoring. The first and second phases include the following background studies and design:

- Base map preparation;
- Solid waste inventory;
- Fire investigation;
- Soils survey of the island;
- Final cover investigation;
- Hydrogeologic investigation;
- Water use study;
- Gas sampling and monitoring;

- Hydraulics design for surface water drainage; and
- Final grading plan.

Applicable state and federal guidelines and regulations for closure and post-closure plan and design criteria include:

1. An 18-inch-minimum soil cover with permeabilities of 10^{-5} cm/s or less to limit rainfall infiltration, and a 6-inch-minimum erosion layer that can sustain vegetation; and
2. Post-closure monitoring as necessary to protect human health and the environment.

C. Socioeconomic Characteristics

The proposed closure will meet applicable state and federal guidelines and regulations to protect public health and the environment.

Jobs are not anticipated to be affected with the closing of the existing landfill. The County of Maui will have a new or an interim landfill at the time of closure which will require operators. The closing of the existing landfill and opening of the new landfill will be coordinated, and refuse collection is not expected to be interrupted.

D. Environmental Characteristics

Because the landfill is at capacity, a timely closure would provide mitigative measures to protect the environment by reducing leachate generation and controlling methane gas migration.

During construction of the final landfill cover, the air quality may be affected by dust and exhaust emissions. However, the increase is expected to be small since state and federal regulations regarding dust concentrations need to be met. Noise will increase during construction but is not expected to be significantly different from the current landfill operations.

II DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Physical Characteristics

1. Location

The Lanai Landfill site is in the southwestern region of Lanai, approximately one mile west of Lanai Airport (TMK 4-9-2:01, Lot 761). The landfill is bounded on the north by Kalamaiki Gulch and on the south by Kaumalapau Highway.

2. Topography and Soils

The landfill site elevations range from approximately 850 to 950 feet above mean sea level (MSL). The site currently slopes northwest from the highway towards the gulch. The proposed final grade of the landfill will maintain the northwesterly slope; however, the grade will be more gentle, not exceeding a 3:1 slope.

The surface soils in the vicinity of the site are classified as Novala silty clay loam (SCS, 1972). During a site reconnaissance, the soil was classified using the Unified Soil Classification System as reddish brown elastic silt. Saprolite and weathered basalt were found at depths of approximately 15 to 20 feet in an open cell at the east end of the site.

3. Flood Hazard

The Federal Emergency Management Agency has not determined flood hazards for the landfill site. Because of the site's high elevation and its slope towards the gulch, flooding has not historically been a problem.

4. Water Quality

a. Surface Water

There are no surface water systems or sources in use on the island of Lanai (County of Maui, 1990). No perennial streams currently exist on Lanai.

b. Groundwater

Beneath the site is an unconfined basal aquifer system, which is brackish and unfit for human consumption or useful for agriculture (Mink and Sumida, 1984; and Yuen, 1990). The nearest drinking water well or tunnel is approximately 4.5 miles northeast of the site, tapping into the high-level body aquifer in central Lanai. This high-level body aquifer provides Lanai's domestic and agricultural supply.

5. Wetlands

There are no wetlands in the project area.

6. Flora and Fauna

The landfill site is currently located within public hunting grounds. Thus, deer, along with a few mynahs and rats, may occasionally be found on site. According to the state Department of Land and Natural Resources, rare or endangered fauna are not found in Lanai.

No previous investigation was conducted for rare and endangered plants near the landfill. However, one was conducted approximately one mile north of the site at approximately the same elevation, where an endangered shrub was found that is registered with both state and federal agencies. The shrub was the *Abutilon menziesii* (red ilima).

Since the landfill site has previously been cleared and excavated, rare or endangered plants probably are not currently on site.

7. Air Quality

Because of the prevailing trade winds and lack of sources of air pollution, the air quality in the vicinity of the site is generally good. However, near the open refuse cells an odor associated with landfills can be detected.

8. Noise

Ambient noise is generally low with occasional noise from the one piece of heavy equipment (bulldozer) that spreads and compacts the refuse.

9. Scenic and Visual Resources

Currently, the active working area within the landfill cannot be seen from the highway. After major wind storms, paper and other debris blown from the active area can be observed. The County currently has a contract for removal of the stockpiles of old cars that can be seen from the highway.

B. Socioeconomic Characteristics

1. Population

According to the 1990 census, approximately 2,426 people reside on the island of Lanai, the majority living in Lanai City.

2. Land Ownership and Use

According to tax map records, the landfill site is on property owned by Dole Foods Company, Inc. Adjacent parcels or lots are also owned by Castle and Cooke, Inc., or one of their subsidiaries, with the exception of Kaunalapau Highway, which is owned and maintained by the state of Hawaii.

The area around the landfill site is primarily open land. The nearest land-use activities from the site are pineapple fields approximately 2,000 feet east of the site, and a veterinary clinic approximately 500 feet south of the site.

3. Employment

The County of Maui currently employs a small staff to collect refuse and operate the landfill. Approximately two employees are on site during landfill operating hours.

4. Historical/Cultural Resources

According to the State Historic Preservation Division Office, there are no historical sites in the vicinity of the landfill. The nearest historical site is along the coastline near Kaunalapau Harbor.

5. Transportation

Access to the site is via Kaunalapau Highway. Currently, County refuse collection trucks travel to and from the landfill twice a week during refuse collection days. Private vehicles haul in refuse throughout the week during landfill operating hours.

6. Utilities

No water, sewer, electrical or telephone services are at the site.

7. Permits/Waivers

The County currently has a permit from the state Department of Health to operate the landfill.

III PROBABLE IMPACTS OF THE PROPOSED ACTION AND MITIGATION MEASURES

A. Water Quality

1. Surface Water

The final landfill cover will be designed to provide adequate sloping for drainage. The sloping will be away from the roadway. Existing drainage systems from the highway onto the landfill site will be modified to reduce the amount of water flowing onto the site and the opportunities for soil erosion.

2. Groundwater

The final landfill cover will be designed to consist of an 18-inch soil layer with a permeability of 10^{-5} cm/s or less and a 6-inch erosion layer with vegetation cover. This final landfill cover, together with appropriate grading, will reduce infiltration into the landfill and the generation of leachate.

The landfill site is downgradient from and in a different aquifer than that which provides Lanai's water supply. No impact on Lanai's agricultural and domestic water supply is expected.

B. Air Quality

Short-term effects on air quality, primarily dust, can be anticipated during construction. Dust concentrations can be maintained with various construction methods, including water wagons. Dust and exhaust emission concentrations are limited by state and federal regulations.

Landfill gas monitoring probes will be installed to monitor the offsite migration of landfill gas. A passive landfill gas venting system will be designed and constructed as part of the closure system for the landfill.

C. Flora and Fauna

The landfill closure will create no adverse impacts on flora and fauna. Construction of the landfill cap includes installation of a grass cover. Grasses native to the area will be utilized.

D. Noise

Heavy equipment (dozer) will no longer be in daily use at the landfill after closure. Noise from normal landfill operations will cease. A temporary increase of noise will occur during construction. Construction is anticipated to occur during daylight and normal working hours.

E. Traffic

Additional traffic of workers driving to the site will increase during construction. Construction vehicles will travel only on public roadways between the landfill site and Kaumalapau Harbor as most of the equipment are expected to be shipped to the island. Traffic to existing landfill after closure will be required only for maintenance and monitoring.

F. Employment

Landfill closure will have little impact on employment since the County expects to have an interim or a new landfill in operation at the time of closure. The present landfill employees would operate the new landfill.

G. Final Land Use

The final land use will be natural open space. The existing stockpiles of cars will be removed from the site, and the open refuse cells will be covered with a soil layer. Vegetation similar to the surrounding areas will be propagated.

H. Permit

The development of the closure and post closure plan and design of plans and specifications will need to be approved by two government agencies including the state Department of Health, Solid Waste Branch, and County of Maui Building Department.

IV ALTERNATIVES TO THE PROPOSED ACTION

If the proposed closure of the existing landfill is not implemented, the landfill will reach capacity and will eventually be abandoned due to space limitations. According to state (Department of Health Administrative Rules on Solid Waste Management Title II, Chapter 58) and federal (40 CFR Part 258) guidelines and regulations, landfill closure design criteria need to follow standards and procedures for the final cover and post-closure monitoring. Thus, the no-action alternative is not recommended nor permitted by law.

V SIGNIFICANCE CRITERIA

In accordance with the environmental assessment procedure, the proposed landfill closure does not have significant adverse effects on the environment as follows:

- *Involves a loss or destruction of any natural or cultural resource* - There are no known natural or cultural resources associated with the existing landfill. The proposed closure would provide open space and protect and mitigate any impacts on the environment.
- *Curtails the range of beneficial uses of the environment* - The proposed project will be to close an existing landfill; thus, the project would not curtail beneficial uses of the environment in the area.
- *Conflicts with the state's long-term environmental policies or goals and guidelines* - The proposed project reflects compliance with state and federal guidelines and regulations for landfill closures.
- *Substantially affects the economic or social welfare of the community or state* - No adverse economic or social problems are anticipated by the closure of the landfill.
- *Substantially affects public health* - The proposed closure design and post-closure monitoring are to protect public health and the environment.
- *Involves substantial secondary effects, such as population change or infrastructure demands* - No increase in population will result from the proposed project. The County will have a new landfill or an interim landfill at the time of closure; thus, the effect on refuse collection is negligible.
- *Involves a substantial degradation of environmental quality* - The proposed project will improve the environmental quality of the site.
- *Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions* - A landfill closure will require a new landfill to be constructed elsewhere. An environmental assessment will be prepared for the new landfill separately.
- *Substantially affects a rare, threatened or endangered species or its habitat* - There are no known rare, threatened or endangered species or habitat currently existing at the landfill site.

- *Detrimently affects air or water quality or ambient noise levels* - Short-term impacts on air quality and noise are anticipated during construction, but will be limited by normal construction practices. The final landfill cover will be designed to decrease leachate generation and control methane gas migration. Thus, the proposed project will improve existing environmental impacts.
- *Affects an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters* - The landfill site is not located within the flood plain or tsunami zone. The proposed closure will reduce any existing environmental impact, and is not anticipated to affect any environmentally sensitive areas.

On the basis of the above criteria, we conclude that the proposed landfill closure will not have a significant adverse effect on the environment.

VI AGENCIES AND ORGANIZATIONS CONSULTED

The following agencies and organizations were consulted in preparing this environmental assessment:

- Department of Health
Solid Waste Branch
- County of Maui
Department of Public Works
- State Historic Preservation Division Office
- Department of Land and Natural Resources
- Department of Business Economic Development and Tourism
- U.S. Fish & Wildlife Service
- Lanai Company, Inc.

VII REFERENCES

Department of Business Economics Development and Tourism, 1991, *The state of Hawaii data book*.

Office of Environmental Quality Control (OEQC), 1991, *A guidebook for the Hawaii state environmental review process*.

Maui (County of), Department of Water Supply, 1990, *Maui county water use and development plan*, State of Hawaii, Department of Land and Natural Resources.

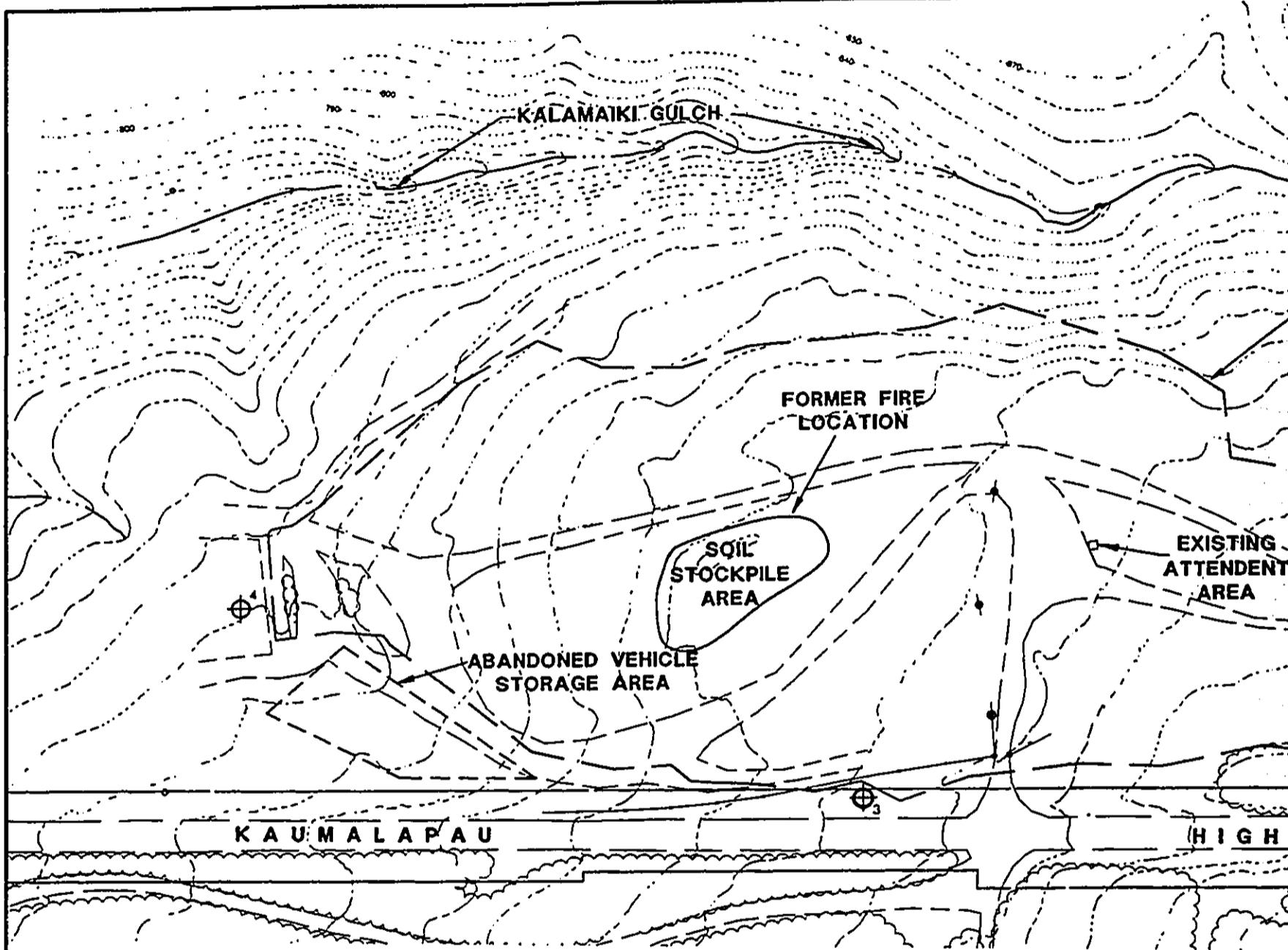
Mink, John and Stanley T. Sumida, 1984, *Aquifer classification, state of Hawaii*, Water Resources Research Center.

U.S. Soil Conservation Service (SCS), 1972, *Soil survey of islands of Kauai, Oahu, Maui, Molokai, and Lanai, state of Hawaii*.

Yuen, George A.L. and Associates, 1990, *Water resources protection plan*, volumes I and II, State of Hawaii, Department of Land and Natural Resources.

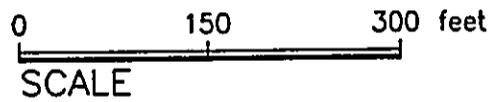
ILLUSTRATIONS

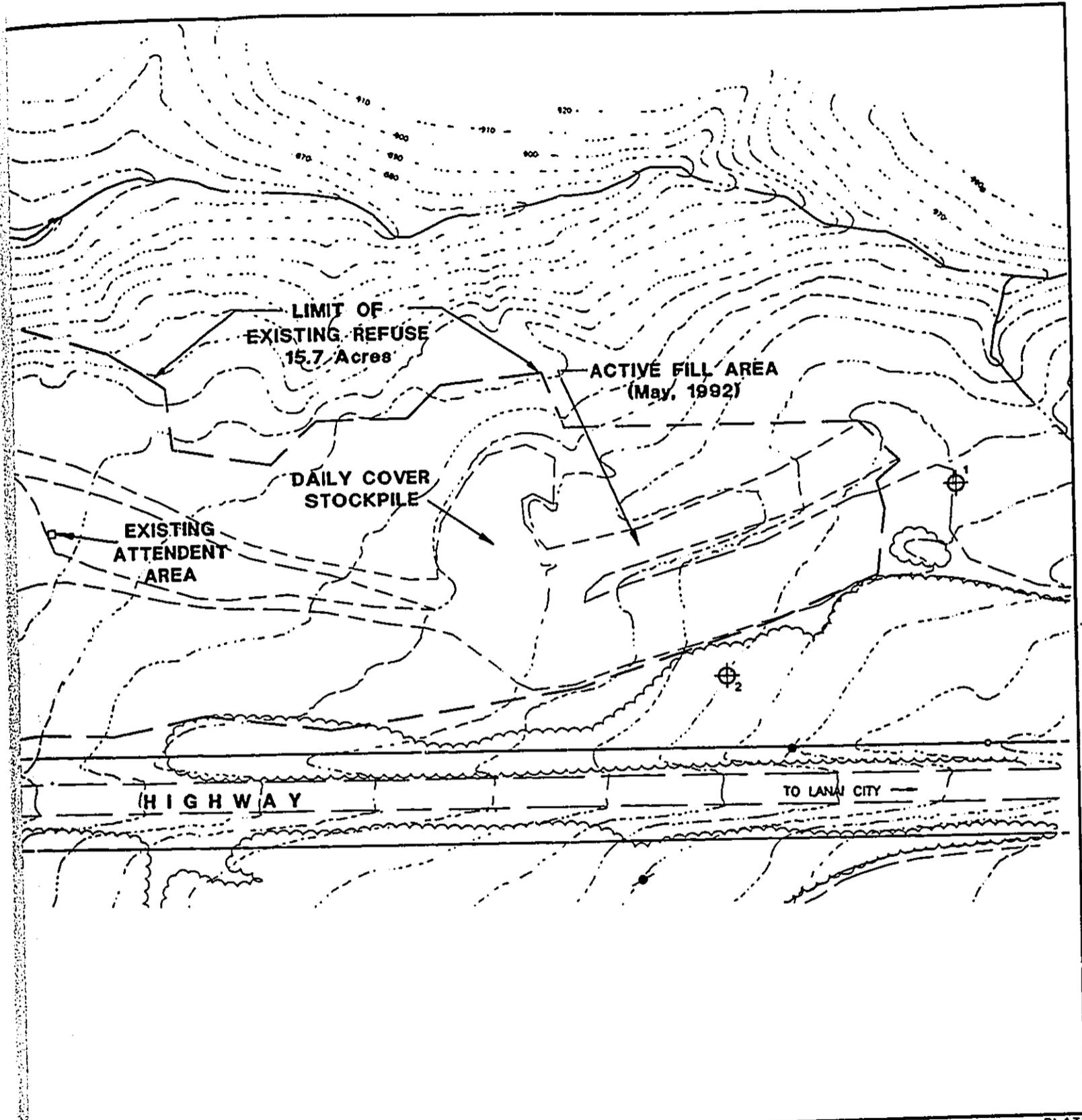
VIII ILLUSTRATIONS



- LEGEND**
- BRUSHLINE 
 - GULCH 
 - POLE 
 - FENCE 
 - GAS PROBE LOCATION AND DESIGNATION 

REFERENCE: Topography from aerial photographs taken by Air Survey Hawaii on June 5, 1992.





PLATE

2



Harding Lawson Associates
Engineering and
Environmental Services

Existing Site Plan
Lanai Landfill Closure
Lanai, Hawaii

DRAWN: dmg
JOB NUMBER: 12431.004

APPROVED: GF

FILE: 12431-2

DATE: 8/92

REVISED DATE

DISTRIBUTION
ENVIRONMENTAL ASSESSMENT
LANAI LANDFILL CLOSURE
LANAI, HAWAII

August 27, 1992

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6 copies:	County of Maui Solid Waste Division 200 South High Street Lanai, Maui, Hawaii 96793 Attention: Mr. Andy Hirose	2 - 7
1 copy:	Department of Health Solid and Hazardous Waste Branch Five Waterfront Plaza 500 Ala Moana Boulevard, Suite 250 Honolulu, Hawaii 96813 Attention: Mr. John Harder	8
4 copies:	Office of Environmental Quality Control 220 South King Street, 4th Floor Honolulu, Hawaii 96813 Attention: Mr. Brian J.J. Choy	9 - 12

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LANAI, HAWAII

August 27, 1992

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QUALITY CONTROL REVIEWER

George T.S. How
George T.S. How
Civil Engineer - 5104

19

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)
LANAI RESORT PARTNERS)
To Amend the Rural Land Use)
District Boundary into the Urban)
Land Use District for Approximately)
110.243 acres and the Agricultural)
Land Use District Boundary into)
the Urban Land Use District for)
Approximately 28.334 acres at)
Manele, Lanai, Hawaii, Tax Map)
Key No. 4-9-02: portion 1)

Docket No. A89-649

LANAI RESORT PARTNERS

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

APR 16 1991 by [Signature]
Date Executive Officer

APR 16 10 02 AM '91
LAND USE COMMISSION
STATE OF HAWAII

FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND DECISION AND ORDER

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)	Docket No. A89-649
LANAI RESORT PARTNERS)	LANAI RESORT PARTNERS
To Amend the Rural Land Use)	
District Boundary into the Urban)	
Land Use District for Approximately)	
110.243 acres and the Agricultural)	
Land Use District Boundary into)	
the Urban Land Use District for)	
Approximately 28.334 acres at)	
Manele, Lanai, Hawaii, Tax Map)	
Key No. 4-9-02: portion 1)	

FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND DECISION AND ORDER

Lanai Resort Partners (hereinafter "Petitioner"), a California general partnership registered to do business in the State of Hawaii, whose partners are MK Development, Inc., a Hawaii corporation, and Lanai Company, Inc., a Hawaii corporation, filed this petition on November 29, 1989, which was amended pursuant to §15-15-43 of the Hawaii Land Use Commission Rules on February 26, 27 and 28, 1990 and pursuant also to §15-15-70 of the Commission Rules on November 30, 1990 (hereinafter collectively referred to as "Petition"). The petition, as amended, was filed pursuant to Chapter 205, Hawaii Revised Statutes, and Title 15, Subtitle 3, Chapter 15, Hawaii Administrative Rules ("Commission Rules") as amended, to amend the land use district boundary of certain land at Manele, Lanai, Hawaii, Tax Map Key No. 4-9-02: portion of 1, covering

approximately 110.243 acres of land from the Rural District to the Urban District and approximately 28.334 acres of land from the Agricultural District to the Urban District situated at Manele, Lanai, Hawaii, Tax Map Key No. 4-9-02: portion of 1 (hereinafter the "Property") in order to develop a golf course, clubhouse and accessory uses. The Land Use Commission of the State of Hawaii (hereinafter the "Commission") having heard and examined the testimony, evidence and argument of counsel presented during the hearings, the proposed findings of fact and conclusions of law, and the proposed decision and order, hereby makes the following findings of fact, conclusions of law and decision and order:

FINDINGS OF FACT

PROCEDURAL MATTERS

1. On February 9, 1990, the Commission received an untimely Petition To Intervene in this proceeding filed by the Office of Hawaiian Affairs, Lanaians for Sensible Growth, Solomon Kaopuiki, John D. Gray and Martha Evans, who, on February 13, 1990, filed with the Commission a Motion To Extend Period Of Time To File Petition To Intervene. By Order dated March 9, 1990, the Commission, after having heard and considered both Motions on February 23, 1990, allowed the Office of Hawaiian Affairs and Lanaians for Sensible Growth to intervene in this proceeding and denied the requests of Solomon Kaopuiki, John D. Gray and Martha Evans to intervene in this proceeding.

2. On February 20, 1990, the Commission received a Motion To Continue Contested Case Hearing and for Production Of Documents filed by the Office of Hawaiian Affairs, Lanaians for Sensible Growth, Solomon Kaopuiki, John D. Gray and Martha Evans. By Order dated March 9, 1990, the Commission, after having heard and considered the Motion on February 23, 1990, denied the Motion.

3. On February 20, 1990, a prehearing conference was conducted at the Commission's office at which time the lists of exhibits and lists of witnesses of the parties were reviewed by all parties and the then proposed intervenors.

4. The Commission conducted hearings on this petition on March 8 and 9, July 12 and 13, August 30, 1990 and January 10, 1991, pursuant to notices published on January 24, 1990 in the Maui News and the Honolulu Advertiser. The Commission also, after due notices, heard, considered and acted on various motions of record on February 23, June 28 and October 29, 1990.

5. The following persons appeared and testified as public witnesses and/or submitted written comments:

Ron McOmber
John D. Gray
Lynn Kahochalahala
Martha Evans
Carol Ah Toong
Kay Okamoto
Elaine Kaopuiki
Fairfax Reilly
George Lidicker

Thad Hyland
Al Delos Reyes
Don Edelberg
Edwin Magaoay
Lindy Valentine
Cheryl Ono
Jerry Rabano
Steve Snow
Tom Mitsunaga
Jennifer Tamashiro
Sally Raisbeck
Lorie Lavai
Elizabeth Ann Stone
Florentino and Marvelina Hera

6. On March 9, 1990, Office of Hawaiian Affairs and Lanaians for Sensible Growth (hereinafter "Intervenor") orally moved for the preparation of an environmental assessment pursuant to Chapter 343 of the Hawaii Revised Statutes. On June 11, 1990, Intervenor filed Motion To Continue Hearing. After having heard and considered argument and memoranda of Petitioner and Intervenor on both motions on June 28, 1990, the Commission denied both motions on June 28, 1990 by Order filed on July 12, 1990.

7. On July 24, 1990, Petitioner filed a Motion To File Amended Petition For Amendment Of District Boundaries to effect reclassification of the Property into the Agricultural District. At a hearing on August 30, 1990, the Petitioner moved to withdraw its motion, and the Commission, by Order dated October 17, 1990, granted Petitioner's motion to withdraw its Motion To File Amended Petition For Amendment Of District Boundaries.

8. An untimely Petition for Intervention was filed by Elizabeth Ann Stone on August 21, 1990. After having considered the Petition To Intervene on August 30, 1990, the Commission denied the Petition To Intervene by Order dated October 4, 1990.

9. On October 11, 1990, Petitioner filed Motion To File Amended Petition For Amendment To District Boundaries to effect reclassification of approximately 120 acres of the Property in the Rural District into the Urban District and approximately 40 acres of the Property in the Agricultural District into the Urban District for golf course and accessory uses. The Commission, by Order dated November 30, 1990, granted Petitioner's said motion to file amended petition and required Petitioner to provide descriptions, maps, or surveys which accurately describe the Property.

10. On January 10, 1991 the Commission received a Metes & Bounds map under signature of a licensed registered surveyor accurately describing the amended Petition area.

DESCRIPTION OF PROPERTY

11. The Property consists of approximately 138.577 acres of land located west of and adjacent to the land within the existing Lanai Project District 1 (Manele) (hereinafter "Manele Project District") which is situated immediately north of and adjacent to Hulopoe Bay. The Property is located about nine miles southeast of Lanai Airport and about six miles southeast of Lanai City.

12. Approximately 110.243 acres of the Property are located within the State Land Use Rural District and approximately 28.334 acres of the Property are located within the Agricultural District.

13. The Property and its surrounding areas are not classified under the Agricultural Lands Of Importance to the State of Hawaii (ALISH) classification system. The USDA Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai identifies the soils in the area of the Property as Very Stoney Land (rVS). The Soil Survey indicates that on Lanai, this land type consists of stones and boulders underlain by soft, weathered rock and bedrock. A shallow, clayey soil occurs among the stones and boulders in a few places. The soil capability classification is VIIIs (soils having very severe soil limitations because of unfavorable texture or because they are extremely rocky or stoney). In the gulches, the rock outcrops and stones cover 60 to 90 percent of the surface.

14. The Property has Land Study Bureau Overall Productivity Ratings of E19 and E22. By this method of classification, the Property has very poor productivity potential for most agricultural uses.

15. Elevations within the area of the Property range from approximately 200 feet along the coastline to approximately 620 feet. Slopes range from 10% to 20%.

16. The climate of the Manele region is dry and arid. Average annual rainfall is about 15 inches. The pan evaporation rate for Manele is estimated to be 90 inches per year. The monthly pan evaporation data shows variation with the summer and winter seasons: 5 inches during the winter months and 10 inches during the summer months. Rainfall is seasonal. Most of the rain occurs in the winter months, November to March. Rainfall in this period can almost account for the entire annual rainfall.

17. Castle & Cooke, Inc., a Hawaii corporation, is the owner of the fee simple interest in the Property. Petitioner is the owner of a right to purchase the Property pursuant to an agreement between Castle & Cooke, Inc. and Petitioner. Castle & Cooke, Inc. has authorized Petitioner to submit this petition.

PROPOSAL FOR DEVELOPMENT

18. Petitioner proposes to develop an 18-hole golf course of which most of the holes and related uses will be located on the Property and a few holes will be located on the adjoining land within the existing urban Manele Project District.

19. No part of the Property is proposed for residential use.

20. Petitioner proposes to develop a "target" golf course. The term "target" comes from the idea that the only turf in the golf course will be for the tees, the fairways and

the greens with intervening areas between some of the tees, fairways and greens which intervening areas are left undeveloped in their natural states. The target golf course reduces the turf area to be irrigated and requires less irrigation.

21. The alignment of the golf course is being designed in a manner to avoid intrusion into areas containing significant archaeological sites. Petitioner has entered into an agreement with the Lanai community which provides a process for the determination and protection of archaeological sites.

22. The 18-hole golf course on the Property at Manele is proposed as an amenity of the proposed Manele Bay Hotel within the Manele Project District. Although primarily for hotel guest use, the course will be made available for Lanai residents at Kamaaina rates.

23. Total projected cost of the golf course and accessory uses is 28.5 million (in 1989 dollars) for cost items, as follows:

	<u>Cost (\$ million)</u>
Golf course construction	19.4
Clubhouse	1.5
Equipment and furniture	1.5
Site work	2.5
Other	<u>3.6</u>
	28.5

24. Assuming avoidance of undue delay after all State and County land use approvals are timely obtained, Petitioner anticipates to complete construction of the proposed 18-hole golf course in the Spring of 1992.

PETITIONER'S FINANCIAL CAPABILITY
TO UNDERTAKE THE PROPOSED PROJECT

25. a. Petitioner's Unaudited Statements of Income and Partners' Capital for the six months ending June 30, 1989, and the two months ending June 30, 1988 reflect total revenues at \$1,894,000 and \$50,000, respectively. Total costs and expenses for these periods were \$1,861,000 and -0-, respectively, leaving partnership earnings for the period at \$33,000 and \$50,000, respectively. Partners' capital at the beginning of the period was \$66,181,000 and -0-, respectively, and capital contribution during the period was \$38,050,000 and \$33,524,000, respectively, leaving partners' capital at the end of the period at \$104,264,000 and \$33,574,000, respectively.

b. Petitioner's Unaudited Statements of Cash Flow for the six months ending June 30, 1989 and the two months ending June 30, 1988 show cash at beginning of period at \$2,670,000 and -0-, respectively; net cash flow from operating activities at (\$13,235,000) and (\$5,233,000), respectively; cash flows from investing activities at (\$28,401,000) and (\$26,211,000), respectively; and cash flows from financing activities at \$38,050,000 and \$33,524,000, respectively. Cash at the end of the period is listed at (\$916,000) and \$2,080,000, respectively.

c. Petitioner's Unaudited Balance Sheets as of June 30, 1989 and 1988 reflect total assets of \$112,290,000 and

\$35,390,000, respectively. Total liabilities and partners' equity are listed as \$120,271,000 and \$37,206,000, respectively.

STATE AND COUNTY PLANS AND PROGRAMS

26. Approximately 110.243 acres of the Property are located within the State Land Use Rural District, and approximately 28.334 acres of the Property are located within the Agricultural District as reflected on the Land Use District Boundary Map of Lanai.

27. The Lanai Community Plan designates approximately 395 acres in the Manele area for the Manele Project District development. The Property is located adjacent and to the west and northwest of the project district.

28. The Lanai Community Plan designates the 110.243-acre parcel of the Property for Open Space use and the 28.334-acre parcel of the Property for Agricultural use.

29. Currently pending before the County of Maui are applications by the Petitioner for the amendments of the Lanai Community Plan and the Manele Project District to include the Property in the district.

NEED FOR PROPOSED DEVELOPMENT

30. At the present time, there is no 18-hole golf course on the island of Lanai. There is one existing 9-hole Cavendish golf course which has been provided by Castle & Cooke, Inc. for the Lanai residents at no cost to the community for many years.

31. The first 18-hole golf course on Lanai is now under construction at Koele as an amenity of the Koele Lodge, a 102-room luxury high-personal service hotel.

32. The proposed golf course at Manele, portion of which will be located on the Property, will be the second 18-hole golf course on Lanai as a vital amenity to support the success of the Manele Bay Hotel, a 248-room luxury high-personal service hotel.

33. A market assessment of the proposed golf course developments on Lanai--one 18-hole golf course at Koele and one 18-hole golf course at Manele--was prepared by Petitioner's consultant KPMG Peat Marwick.

34. According to the market assessment dated March 1989, affluent guests who are expected at Koele Lodge and Manele Bay Hotel have a higher propensity to golf at luxury high-personal service hotels than at resorts which attract budget or group visitors.

35. The market assessment indicates that the demand for golf at the two 18-hole golf courses is based upon the projected daily overnight resort population, which is estimated to range from 340 in the year 1991 to 1,438 in the year 2000. The total on-resort population would consist of hotel guests, and visitors and residents of the multi-family units and single-family residences planned at the two resorts at Manele and Koele. Occupancy rates for the two luxury hotels were projected to range from 45% in 1990 to 70% in 1996 at Koele

Lodge, and from 50% in 1991 to 80% in 1996 at the Manele Bay Hotel. The average occupancy rate for the multi-family and single-family units at both resorts is estimated at 50% by the market assessment.

36. According to the market assessment, luxury resort hotel guests play an average of 15 rounds per day per 100 guests. Based upon rounds of golf played at comparable resorts, the market assessment projects rounds of golf per 100 population for the two 18-hole golf courses on Lanai as follows:

- Resort hotel guests - The rate of play is estimated at 18 rounds per day per 100 guests at the Koele Lodge, and at 23 rounds per day per 100 guests at the Manele Bay Hotel (based on Manele Bay Hotel being expanded to 400 rooms).
- Resort multi-family guests and residents - The rate of play is expected to stabilize at 14 rounds per day per 100 guests.
- Resort single-family guests and residents - The rate of play is expected to stabilize at 11 rounds per day per 100 guests.
- Nonpaying guests - Complimentary rounds are expected to remain constant at about 4% of the total rounds played.

37. Based on the assumptions made above in paragraph 36, the market assessment estimates that demand for golf rounds would range from 70 rounds per day in 1991 to 260 rounds per day in 2000 as compared to average daily rounds on representative courses in this State which range from 85 to 225, with an average of 147 rounds per day.

38. The market assessment states that the supply of golf rounds at the two 18-hole golf courses proposed for Koele

and Manele are anticipated to grow from 100 rounds in 1991 (when the Koele course is scheduled to open) to 220 rounds in 1992 (when the Manele course is scheduled to open). Golf rounds are expected to stabilize to 260 rounds by 1999, meeting the demand for 260 rounds in 2000.

39. Based on the analysis as set forth in the market assessment, it is the opinion of Petitioner's consultant that an 18-hole golf course at Manele and an 18-hole golf course at Koele can be supported by the market.

IMPACT UPON RESOURCES OF THE AREA

Agricultural Resources

40. Of the Property, only 28.334 acres are within the Agricultural District.

41. The Property is rocky. The Soil Survey Interpretations (Lanai USDA Report 44) classify the soil in this area as very stoney land-rock association. The top soil layer is 6 to 30 inches thick and composed of dark, reddish-brown soil material containing many stones and boulders.

42. The Property is not classified under the Agricultural Lands of Importance to the State of Hawaii (ALISH). The Land Study Bureau rates the overall productivity of the petition area as E19 and E22. By these methods of classifications, the Property is not considered as agricultural lands of importance and has very poor productivity potential for most agricultural uses.

43. No agricultural activity exists on the Property. The State Department of Agriculture does not foresee significant impacts on the agricultural resources of the area should this petition be approved.

44. Based on the physical conditions of the Property and the current economic conditions of pineapple production on Lanai, the Property does not appear to be suitable or essential as an agricultural resource.

Water Resources

45. Lanai draws its domestic water and pineapple irrigation supply from the high level aquifer which has a sustainable yield of 6 mgd.

46. The proposed golf course at Manele of which the Property is to be a part, will be irrigated with nonpotable water from sources other than potable water from the high level aquifer.

47. Petitioner's golf course design consultant, Jack Nicklaus Golf Services, is projecting that 624,000 gpd will be required for irrigation of a "target" golf course, but Petitioner is conservatively projecting 800,000 gpd for irrigation of the golf course.

48. Petitioner proposes to provide alternate sources of water for golf course irrigation by developing the brackish water supply. According to Petitioner, Well Nos. 9 and 12 which have capacities of about 300,000 gpd and 200,000 gpd, respectively, have been tested but are not yet operational.

Well No. 10 which has a capacity of approximately 100,000 gpd with a possible potential of 150,000 gpd has also been tested and will be available. Currently available also is brackish water from Well No. 1 which is operational and which has a capacity of about 600,000 gpd.

49. Petitioner's civil, sanitary and environmental engineering consultant, James Kumagai, stated that it is only a matter of cost to develop wells for brackish water sources that are already there. The consultant also states that the brackish water sources necessary to supply enough water for golf course irrigation could be developed and be operational within a year.

Historical/Archaeological Resources

50. Archaeological survey of approximately 284 acres of land at Manele including 110.243 acres of the Property located within the Rural District was conducted by Petitioner's consultant, Hallett H. Hammatt, Ph.D. The survey indicated 22 sites with 75 individual features on the Property. Dr. Hammatt stated that ultimately a total of 27 sites and 78 individual features were found and while performing field work for the data recovery effort within the Rural District an additional 35 features were also found.

51. The survey identified 22 archaeological sites, including 75 individual features. The majority of the sites are concentrated in the eastern, makai portion of the study area, along both sides of a gulch which empties into Kapihaa

Bay. According to the survey, the entire complex of sites represents a well-preserved, permanent coastal village dating back to prehistoric times. The features identified include permanent habitation features, heiaus, fishing shrines, evidence of basalt extraction, numerous small fishing cave shelters, ground terraces, and burial platforms. The tightly clustered prehistoric coastal community was supported by basalt quarrying for exportation, fishing and limited farming of such dry crops as sweet potato. It appears that the community was abandoned at or before 1778, and only a few coastal shelters have been used by fishermen since that time.

52. The survey indicates that of the 75 features identified within the Rural-designated area, 6 were no longer significant, leaving 69 significant sites, based on the criteria established for the National and State Registers of Historic Places. The survey recommends preservation of the dense cluster of habitation sites, the heiau, and fishing shrines with testing and excavation of sites which cannot be preserved.

53. The Department of Land and Natural Resources, Historic Preservation Division ("DLNR-HPD") has identified an additional site, and two features in identified sites, that had been missed during the survey. As the historic preservation law requires evaluation by site, rather than by feature, DLNR-HPD has combined the feature evaluations of each site into

a site evaluation, resulting in 21 significant sites and 2 sites as no longer significant.

54. Pursuant to procedures and standards of DLNR-HPD, Petitioner's consultant submitted the survey and proposed mitigation measures for the sites. Thereafter a Data Recovery and Preservation Plan was filed to update the proposed mitigation measures which provided for:

Preservation of Sites:

- 1 (the best example of an adz quarry found in the study)
- 12 and 13 (complex of fishing shrine and associated structures)
- 14 (possible heiau and associated features)
- 18 (habitation and religious complex)
- 19 (complex of shelters, burials, cave, ahu and terraces), and
- 20 (occupation complex).

Recommendation of a viewplan with minimal land modifications from the heiau to the gulch sites and to the coast.

Data Recovery of all other sites (3, 4, 5, 6, 7, 8, 9, 10, 11, 11A, 12C, 19C, 21, 22A, 22B and 22C), plus the agricultural features areas by Sites 4, 5 and 14.

55. DLNR-HPD approved the Data Recovery and Mitigation Plan with the following amendments to provide for:

Preservation at additional sites:

- 17 (habitation and religious features), and
- 21 (petroglyph, to be relocated to one of the proposed preserve areas).

Data Recovery to include Sites 15 and 16.

Subsurface testing of certain sites, to collect information that would be useful for future interpretation of the sites.

56. Based on the data recovery plan as amended and approved by DLNR-HPD, Petitioner's consultant conducted field work for all sites that required further research and filed a post field work summary report. Upon review of the post field work report, DLNR-HPD found that the report has adequately addressed all the items raised by DLNR.

57. Most of the archaeological sites reported are not located within the Property. The few archaeological sites actually on the Property or which may potentially be affected by the use of the Property will be protected from intrusion either by the design of the golf course or by buffer zones. Petitioner has agreed to preserve the archaeological sites as recommended by Petitioner's archaeological consultant and DLNR-HPD. These archaeological sites are to be preserved within preserve areas with appropriate buffer zones agreeable to DLNR-HPD.

58. Archaeological survey of approximately 173 acres of land at Manele including 28.334 acres of the Property located within the Agricultural district was also conducted by Petitioner's archaeological consultant.

59. The survey of the 173 acre-parcel found only two sites. Site 1 was categorized as a temporary habitation

feature and Site 2 as a historic wall/fenceline associated with livestock management.

60. According to the Petitioner's consultant, the wall and fenceline (Site 2) utilized for livestock control would have no significance under the National and State Registers of Historic Places criteria, but Site 1 would fall in a category which indicates that the site may be likely to yield information important in prehistory or history.

61. Petitioner intends to preserve Site 1.

62. Site 1 and Site 2 are not located on the Property and by their distant locations in relation to the Property do not appear to be affected by the uses intended on the Property.

Flora and Fauna

63. Two biological surveys were conducted by Petitioner's biology consultant, Kenneth M. Nagata. The first survey covered land which included the 110.243 acres of the Property within the Rural District. The second survey covered land which included the 28.334 acres of the Property within the Agricultural District.

64. According to the Petitioner's consultant, the vegetation in the lands covered by both surveys were very similar. It generally consists of scattered, scrubby kiawe trees and a well-developed shrub layer of native ilima, hoary abutilon and uhaloa. Several grasses, including feather fingergrass, buffel-grass and the native pili grass, are also present. In addition, two panicums, Panicum torridum and an

unidentified specie, are found in moderate numbers. Forty-four species were found in the area. Fourteen are native, four of which--ilima, hoary abutilon, uhaloa and pili grass--constitute a significant portion of the total vegetation cover.

65. A native specie Canavalia lanaiensis was once considered to be rare and endangered, but is no longer as rare as originally thought. Petitioner's consultant stated that the specie is identical to those found on Kauai, Niihau and East Maui, and should rightfully be called C. pubescens. Petitioner's consultant also stated that he was not aware of any other areas on Lanai where C. pubescens exist. Consequently, the U.S. Fish and Wildlife Service has re-evaluated the status of the specie and in the next Federal Register, C. pubescens (including what we are presently calling C. lanaiensis) will be downgraded to Category II status, a class covering species for which the U.S. Fish and Wildlife does not have sufficient information to warrant listing as an Endangered Specie.

66. Although Canavalia lanaiensis is no longer as rare as once thought and no longer essential to be preserved, the consultant stated that it would be a good gesture if the two largest populations of Canavalia lanaiensis in the Manele gulch and near the cluster of archaeological sites were to be protected. The Manele gulch area and almost all of the archaeological sites are outside of the area of the Property.

67. The consultant believes that the population of Canavalia lanaiensis in the Manele gulch will adequately be protected if the gulch remains undisturbed without development. He also believes that the population near the archaeological sites will be protected with the preservation of the archaeological sites.

68. The biological surveys indicate that the faunal composition of the two study areas was found to be similar. No endangered animal specie was found. The urban and field birds common to the Manele-Hulopoe area include the Kentucky cardinal, barred dove, Japanese white-eyes, lace-necked dove, common mynah, ricebird, and house sparrow. Two game birds--Indian gray francolin and turkey--have been observed in this region. Two seabirds--red-tailed tropicbird and Bulwer's petrel--were also observed. In addition, the biological surveys indicate that axis deer are abundant throughout the region.

69. It is the opinion of Petitioner's biological consultant that there would be no significant effect upon the flora and fauna in the area of the Property by the proposed golf course development.

ENVIRONMENTAL QUALITY

Water Quality

70. The State Department of Health (DOH) classifies the waters off of Hulopoe-Manele Bay as class AA waters. DOH's Water Quality Standards, §11-54-03, states that "it is the

objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions."

71. Surface and subsurface water quality impacts may be generated from (i) application of fertilizers and pesticides on the golf course and (ii) potential movement of these chemicals as a component of surface water runoff into the coastal waters and or infiltration into the ground.

72. Petitioner's consultant, M & E Pacific, Inc., conducted an assessment of the uses of fertilizers and biocides on the project site and determined that there would be no negative environmental impacts based on the findings as follows:

a. Among the fertilizer elements, only nitrogen could possibly diminish water quality, but given the type of chemicals typically used for golf course maintenance, the irrigation water rates, leaching potential, the application rate of fertilizers and hydrogeologic processes, the impact of nitrogen from fertilizer would be insignificant.

b. The studies of Chang and Young (1977) and Dollar and Smith (1988) specifically investigated the coastal water impact of existing golf course maintenance and operation and found no measurable dissolved inorganic nitrogen concentrations attributable to golf course leachates to the open coast regime.

c. Even a seemingly severe situation with sugarcane cultivation in the Pearl Harbor Basin where two tons per day of fertilizer nitrogen have been applied over decades of time led to the finding that the affected groundwaters had concentrations of only 1.4 mg/l compared to the acceptable limit of 10 mg/l.

d. For the pesticides to be used, Petitioner's consultant states that, given the rate of application, transport factors, degradation processes, and hydrogeologic processes, the chemicals listed as being typical for golf course use will be immobilized and will not have an impact on the groundwater and coastal water. Although runoff from storm flows can carry pesticides to the coastal waters with the sediments, Petitioner's consultant concludes that the impact would also be negligible because the waters are in the open coast regime where sediments would be dispersed and the pesticides to be used are degradable and are not expected to persist in the environment.

73. Groundwater underlying the proposed golf course at Manele is too brackish for drinking water so that impact on the groundwater quality for drinking purposes is not a consideration in this instance.

74. Petitioner's consultant on marine ecology and fisheries biology, Richard Brock, Ph.D., stated that he has conducted studies for the University of Hawaii to monitor any change in coastal water quality and impact to the aquatic fauna

from the Waikoloa development which includes golf courses. From his studies, he found that:

a. While there has been increase in concentrations of inorganic nutrients attributable to golf course maintenance and operation, the increased levels fall within ranges of natural variability measured at other Kona Coast sites that have absolutely no development.

b. As the high nutrient water moves toward the sea, the nutrient concentration decreases due to mixing as well as biological up-take, and no elevation can be detected at the shoreline.

c. There is no evidence of negative impact to the aquatic community exposed to this high nutrient water as it moves to the sea.

75. In his study of the marine communities and water quality of the Hulopoe-Manele coastal waters, Petitioner's consultant, Richard Brock, stated that, presently, considerable debris and sediment reach the sea following heavy rains. Despite this occasional happening, the marine communities which he studied appear to be diverse and show no outward signs of negative impacts. He believes that the golf course development will improve vegetation resulting in less sediment runoff.

76. Petitioner states that it will comply with the Department of Health's eight conditions applicable to new golf course development.

Air Quality

77. The use of pesticides are routinely required in the maintenance of golf courses.

78. Source of air pollutants arising out of the development of a golf course on the Property will be from pesticides spray in the maintenance of the golf course.

79. Petitioner's agronomy and turf management consultant, Kent Alkire, states that there is a potential for pesticide spray to drift beyond the target areas. The consultant states that the use of drift control devices and modern spray equipment will substantially reduce or eliminate the amount of wind drift which could enter into nontarget areas or nearby surface waters.

80. The consultant states that all pesticides will be applied by Hawaii State certified applicators using the most modern equipment to deliver the chemicals.

Noise

81. Construction activity on the Property may generate noise temporarily during the construction period. Noise regulations under Chapter 43, Administrative Rules of the State Department of Health would govern such activity.

Visual Impacts

82. No residential units are proposed to be developed on the Property. Except for the support facilities of the golf clubhouse and accessory improvements, the Property will have the open space character of a golf course.

83. The "target" course concept will blend the environment in its natural state with the golf course.

Recreational Resources

84. Portions of the development on the Property bordering the ocean front will be in golf course fairways but will not limit pedestrian access along the coastline to fishing areas and scenic spots.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

Transportation Facilities

85. A traffic impact assessment report for the proposed Manele golf course project was prepared by Petitioner's consultant, Pacific Planning & Engineering, Inc. The traffic impact assessment included traffic forecasts from all known major land uses on Lanai until 2003, including the developments at Manele, Koele and Lanai City.

86. The traffic impact assessment focused on the impacts at the four intersections of KaunalaPau Highway with Lanai Airport Road, Manele Road, Fraser Avenue and Lanai Avenue. These intersections provide vehicular access/egress from all major uses on Lanai.

87. The traffic impact assessment reported findings and conclusions as follows:

a. The traffic forecasted for Manele Road will increase two-way peak hour traffic from the present 53 vehicles per hour to 388 vehicles per hour in the year 2003. The

forecasted total traffic is below the present reduced capacity of Manele Road (540 vehicles per hour) during the afternoon peak hour.

b. All study intersections in 1988 operated at Level of Service (LOS) A which indicates little or no traffic delays. In 2003 without the project, the level of service remains at A for all study intersections. With the Manele development, including the golf course, in 2003, all of the study intersections will continue to operate at LOS A for all turning movements except at the intersection of Kaumalapau Highway with Manele Road where the dirt road to the pineapple fields experiences a decrease of LOS from A to B.

c. The proposed Manele golf course will not significantly impact traffic flow on the study intersections.

88. Petitioner's consultant states that the traffic forecast volumes do not warrant the improvement of Kaumalapau Highway and Manele Road to full State standards. He states that the existing roads will accommodate the forecasted traffic. The consultant reports that the State will be providing shoulders and guardrail improvements for Kaumalapau Highway and resurfacing Manele Road in the near future with appropriated funds.

Water Service

89. Petitioner is now in the process of developing the brackish water supply for irrigation of the proposed golf

course. According to Petitioner, Well No. 1, which is operational and available, and Well Nos. 9, 10 and 12, which have been subjected to full testing, have aggregate brackish source capacity in excess of the projected requirements of 624,000 gpd to 800,000 gpd for the Manele golf course.

90. Maui Planning Department recommends that any use of potable groundwater for golf course irrigation should be limited and terminated within five years.

91. Petitioner intends to irrigate the golf course with nonpotable water, leaving only the clubhouse which will use potable water, the requirement for which should be insignificant.

Sewage Treatment and Disposal

92. As there will be no residential development on the Property, the limited wastewater anticipated from the Property is the domestic sewage from the golf clubhouse activities.

93. The golf clubhouse development can be sewerred to the wastewater system for the Manele Project District. The wastewater system includes three pump stations and a treatment plant which have been constructed.

94. The wastewater system is intended to accommodate the wastewater generated from the uses and densities permitted within the Manele Project District, including the Manele Bay Hotel and 416-unit residential development. The Manele Project

District is proposed to be enlarged to include the Property, and other lands, as recommended by Maui Planning Department.

Drainage

95. Petitioner's consultant, M & E Pacific, Inc., states that storm runoff from extreme storms would drain naturally through six major gulches and drainage ways that traverse the Property in a north to south direction. Under natural conditions, storm runoff is estimated to be a total of 3,360 cubic feet per second (cfs) from a drainage area of approximately 1,392 acres. The largest single discharge occurs through the gulch most distant from Hulopoe Beach at a rate of 1,320 cfs.

96. According to Petitioner's consultant, the drainage system that will be implemented for the development of the Property follows as closely as possible to the natural drainageways; that is, all the sheet flows will be directed toward gulches. Under the consultant's design of the drainage system, rainfall on the golf course itself, however, is to be retained as much as possible on the golf course.

97. The drainage design of the golf course to retain the storm waters not only provides irrigation but also reduces fertilizer and pesticide elements to be carried by water runoff to areas adjoining the golf course. Collection sumps will be installed throughout the golf course to collect surface runoff, thus, preventing most of the water containing applied pesticides from reaching nearby surface waters.

98. From its findings, Petitioner's consultant does not anticipate any negative impacts from the drainage and drainage system for the Property.

a. Given the topography of the Property in the order of 10 to 20 percent slopes, flooding on the Property is unlikely.

b. Rain induced erosion is small. The analysis made for the Manele project district area gave a severity rating number of 4,200 compared to the allowable rating of 50,000.

c. Coastal water bordering the Property are in the open coastal regime such that impact from discharges would be mitigated by the rapid mixing and dispersement of storm runoff and long periods between extreme storm events on the order of decades.

Solid Waste Management

99. It is anticipated by Petitioner's consultant, M & E Pacific, Inc., that the solid waste on the order of five pounds of refuse per capita per day will be generated from the area. Solid waste will be hauled away by private contractors to the County disposal area.

Schools

100. The Department of Education had commented, in its review of the original proposed golf course development on the Property and a proposed 425-unit residential development on

adjoining lands, that the effect of the subject residential development alone will not greatly impact the school.

101. The current proposal for development of the Property is for a golf course and accessory uses and not for residential uses; therefore, it would not impact the school.

Electrical and Telephone Services

102. Power requirement for the golf course development on the Property and a proposed 425-unit residential development on adjoining lands was estimated at 2,800 KW. Maui Electric Company has stated to Petitioner's consultant, M & E Pacific, Inc., that the power requirement can be readily supplied.

Other Public Services

103. Public services such as fire and police protection, medical services, parks and recreation are not expected to be significantly affected because the Property is to be developed as a golf course and no residential units are to be developed on the Property.

104. Petitioner has donated land to the County of Maui for the fire station and has committed to donate the land for the police station. Petitioner has also donated about 93,000 square feet of land for hospital purposes and is committed to donate land to the State for the airport.

SOCIO-ECONOMIC IMPACTS

105. An agreement has been reached by and between Castle & Cooke, Inc. and Lanaians For Sensible Growth and the

Office Of Hawaiian Affairs covering a variety of issues including socio-economic issues and specific issues related to the development on the Property.

106. The maintenance of the golf course will require a labor force of about 25 to 30 employees, over half of whom will be nonprofessional employees. The golf course development will include a clubhouse which would involve additional employees for food services.

107. According to a study by Jon K. Masuoka, Ph.D., and Wes J. Shera, Ph.D., when Lanai residents were asked in general how they felt about resorts coming to Lanai, 57% were positive, 28% had mixed feelings, 10% were negative, and 5% had no opinion. Most residents (77%) felt positive towards the economic impacts of resort development primarily because it would provide more jobs.

108. The study reported that the positive aspects of resort development were identified as more and better jobs and increased tax revenues while the negative aspects were identified as changes in the community, anticipated high cost of living, and strain on services and facilities.

109. Petitioner estimated a housing demand of 350 units from the hotel employment and community. This housing demand will be met by the following projects developed or being developed by Petitioner:

a. Lalakoa III: 144 single-family units for Lanai residents at significantly below cost.

b. Lanai City Apartments: 24 studio and one-bedroom units with rent subsidy, 19 of which units are under HUD rental guidelines.

c. Wailua Single-Family: 120 single-family homes to be sold at cost below affordable ceiling.

d. Wailua Multi-Family: 128 1-, 2-, 3-bedroom affordable apartments with rent subsidy.

110. Petitioner states that Castle & Cooke, Inc. has offered to donate land to the County of Maui for a County housing project, and the County has accepted on a preliminary basis. If the County develops the land, it is expected to produce 110 to 130 units.

111. Petitioner also states that Castle & Cooke, Inc. has offered to donate land to the State for a State housing project.

CONFORMANCE WITH THE HAWAII STATE PLAN

112. The reclassification of the Property to allow the development of the proposed Manele golf course conforms to the Hawaii State Plan, Chapter 226, HRS, as amended, including the following objectives, policies and guidelines:

§226-5(b)(2) Encourage an increase in economic activities and employment opportunities on the Neighbor Islands consistent with community needs and desires.

- §226-5(b) (3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.
- §226-6(a) (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.
- §226-8(b) (2) Ensure that visitor industry activities are keeping with the social, economic, and physical needs and aspirations of Hawaii's people.
- §226-8(b) (3) Improve the quality of existing visitor destination areas.
- §226-12(b) (1) Promote the preservation and restoration of significant natural and historic resources.
- §226-13(b) (2) Promote the proper management of Hawaii's land and water resources.
- §226-13(b) (3) Promote effective measures to achieve desired quality in Hawaii's surface, ground and coastal waters.
- §226-104(b) (2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.

113. The Manele golf course is proposed to be made part of the Manele Project District by amendment to the Lanai Community Plan. The Manele Project District and the Koele

Project District are the products of the Maui County approval processes with community participation toward well-planned developments consistent with community needs and desires. The Manele golf course will complement the hotel and other uses permitted in the Manele Project District and thereby serve to promote increased opportunities for Lanai residents to choose and pursue their socio-economic aspirations.

114. Pineapple has been the primary economic base of Lanai. With the phase-out of pineapple production, new employment opportunities must be created. The golf course will provide a varied range of employment choices from food services to course maintenance and management. The golf course development will add to and help diversify the economic opportunities in Lanai, an area especially lacking in convenient job choices for its residents.

115. Lanai has one nine-hole golf course called the "Cavendish Course." The second course on Lanai is the 18-hole course at Koele now under construction. Petitioner states that the Manele golf course is a vital amenity to support the success of the Manele Bay Hotel and the visitor industry on Lanai.

116. The Manele golf course has been designed to avoid intrusion onto the archaeological sites which are to be preserved. The golf course is to be constructed as a "target" course which incorporates the natural environment by leaving

areas between tees and fairways in their natural states. The "target" course concept also reduces and limits the total area to be irrigated and thereby serves to conserve water.

117. Petitioner has stated that the Manele golf course will be irrigated with nonpotable water from sources other than the potable water from the high level aquifer.

118. Petitioner states that the Manele golf course will be developed and managed according to an Integrated Pest Management Program prepared by Petitioner's consultant, Jack Nicklaus Golf Services. The goal of this program is to produce a high quality turf which can sustain the use for which it is intended and prevent environmental degradation.

119. The Property has not been used for agricultural purposes. The Property is not classified as agricultural lands of importance under the ALISH system and is designated with E19 and E22 overall productivity ratings under the Land Study Bureau classification system indicating very poor productivity potentials for agricultural uses. Such marginal or nonessential lands may be made available for appropriate urban uses.

CONFORMANCE TO STATE LAND USE URBAN DISTRICT STANDARDS

120. The Property is contiguous to the Manele Project District which is in the State Urban District.

121. The Property, with other lands, is intended to be made part of the Manele Project District by amendments to the Lanai Community Plan and the project district. The

Petitioner's applications for the amendments are now pending before the County of Maui.

122. The Property is proposed to be developed as a golf course to serve as an amenity of the Manele Bay Hotel.

123. Lanai City is located approximately six miles northwest of the Property. Sewage from the golf course activities will be disposed of through the wastewater system for the Manele Project District. The domestic water supply will be tapped off from the water distribution system constructed for the Manele Project District. Power requirements can be supplied by Maui Electric Company. Police and fire protection will be provided by the units at Lanai City.

124. The topography of the Property is satisfactory with slopes of 10% to 20%. The natural drainage pattern toward the gulches will be retained, and given the topography of the area of the Property, flooding is unlikely.

CONFORMANCE TO COASTAL ZONE POLICIES AND OBJECTIVES

125. The proposed reclassification of the Property for the development of the project conforms to the policies and objectives of the Coastal Zone Management Program Chapter 205A, HRS, as amended. If the reclassification is approved by the Land Use Commission and Community Plan amendments approved by the County of Maui, the Petitioner will need to apply for a Special Management Area Use Permit and Shoreline Setback Variance from the County of Maui.

RULING ON PROPOSED FINDINGS OF FACT

Any of the proposed findings of fact submitted by the Petitioner or the other parties not already ruled upon by the Commission by adoption herein, or rejected by clearly contrary findings of fact herein, are hereby denied and rejected.

Any conclusion of law herein improperly designated as a finding of fact should be deemed or construed as a conclusion of law; any finding of fact herein improperly designated as a conclusion of law should be deemed or construed as a finding of fact.

CONCLUSIONS OF LAW

Pursuant to Chapter 205 of the Hawaii Revised Statutes and the Hawaii Land Use Commission Rules, the Commission finds upon a preponderance of the evidence that the reclassification of the Property consisting of approximately 110.243 acres of land within the Rural District and 28.334 acres of land in the Agricultural District, situate at Manele, Island of Lanai, State of Hawaii, Tax Map Key: 4-9-02: portion of 1, to the Urban District, subject to the conditions in the Order, for a golf course, clubhouse and accessory uses, is reasonable, nonviolative of Section 205-2, Hawaii Revised Statutes, as amended, and is consistent with the Hawaii State Plan as set forth in Chapter 226, Hawaii Revised Statutes, as amended, and conforms to the Hawaii Land Use Commission Rules.

ORDER

IT IS HEREBY ORDERED that the Property, consisting of approximately 138.577 acres of land situate at Manele, Island of Lanai, State of Hawaii, Tax Map Key No. 4-9-02: portion of 1, and approximately shown on Exhibit "A", attached hereto and incorporated herein by reference, for reclassification from the Rural Land Use District to the Urban Land Use District as to 110.243 acres thereof and for reclassification from the Agricultural Land Use District to the Urban Land Use District as to 28.334 acres thereof, shall be and is hereby approved, and the District Boundaries are amended accordingly, subject to the following conditions:

1. Petitioner shall make available to the State at no cost, on a fee simple basis, 25 acres of land with no restrictions. Of these 25 acres, 10 acres shall be in the vicinity of Lanai City and 15 acres may be located at another site both agreeable to the Office of State Planning. Development on these sites shall be at a density comparable to existing developments in Lanai City. Prior to development of any improvement on the land, the State shall gain approval of Petitioner as to the conformity and harmony of the exterior design of the proposed improvements with neighboring sites and development of Lanai by Petitioner pursuant to its master plan. Should Petitioner withhold approval, the State may submit the matter to binding arbitration. If the land or so

much thereof is not utilized within a ten-year period, the unutilized portion shall revert back to Petitioner.

2. Petitioner shall make available 100 acres of land, with an adequate supply of water, to the State Department of Agriculture and or the County of Maui, for their establishment and operation of an agricultural park for Lanai residents, at nominal rents for a 55-year term, at site(s) agreeable to the State Department of Agriculture and the County of Maui.

3. Petitioner shall make the golf course on the Property available to Hawaii residents at percentage discounts comparable to percentage discounts available at other private courses open to the general public in the State as reviewed and approved by the Office of State Planning.

4. The Petitioner shall work with the State Department of Land and Natural Resources and the County of Maui to incorporate mauka pathways which may be tied to the golf course and residential area pathways which will provide alternate access routes to the accessible cliff coastline area.

5. In developing and operating the golf course and any future residential development in the Manele project district, petitioner shall protect public access along the accessible cliff coastline.

a. Petitioner shall dedicate a public easement along the accessible cliff coastline from Hulopoe Bay to the intersection of the coastline with the westernmost boundary of

the project area, which will allow public pedestrian access in perpetuity without obstruction or interference with such use, subject to reasonable rules and regulations for public safety, provided that access shall be maintained.

b. Petitioner shall cause to be established a setback zone of 50 feet from the edge of the cliff along the accessible cliff coastline from Hulopoe Bay to the intersection of the coastline with the westernmost boundary of the project area within which there shall be no improvements of any kind, other than improvements which may be reasonably necessary for purposes of public safety, and where the property will be left in its natural state; provided that the setback for the proposed 16th hole may have a setback of less than 50 feet subject to mutual agreement between the petitioner and LSG.

c. Petitioner shall cause the area within 75 feet of the edge of the cliff along the accessible cliff coastline from Hulopoe Bay to the intersection of the coastline with the westernmost boundary of the property area to remain in its natural state without improvements, except with respect to the three proposed signature holes of the golf course.

d. Petitioner shall prohibit any vertical improvements, other than landscaping and improvements allowed by county variances, to be constructed or erected within 150 feet of the edge of the cliff along the accessible cliff coastline from Hulopoe Bay to the intersection of the coastline with the westernmost boundary of the project area.

e. Petitioner shall work with Lanaians for Sensible Growth to incorporate mauka pathways which may be tied to golf course and residential area pathways which will provide alternative access routes to the accessible cliff coastline area.

f. Petitioner shall adopt golf course rules and provide mutually agreeable and appropriate signage which will protect the access along the public access areas and pathways.

g. Petitioner shall provide Lanaians for Sensible Growth with plans for the golf course layout, location of holes, access pathways, and signage in advance of any final approval of such plans by the appropriate governmental agencies.

h. Petitioner shall record with the appropriate governmental agency all necessary and appropriate instruments to accomplish the purposes of this paragraph.

6. Petitioner shall archaeologically data recover the significant historic sites identified as 3, 4, 5, 8, 9, 11 and CS1, and shall preserve the significant historic sites identified as 1, 6, portion of 7, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 27 and at least a portion of CS2. Petitioner shall submit a revised mitigation plan to the State Historic Preservation Division for review and approval. Full execution of the mitigation plan shall be verified by the State Historic Preservation Division prior to the start of any ground-disturbing activities. Petitioner shall preserve the historic sites identified for preservation, in perpetuity, by

establishing historical sites preserve area(s), with appropriate buffer zones as approved by the State Historic Preservation Division protected by a conservation easement pursuant to Chapter 198, HRS, as amended, or such other means as shall be reviewed and approved by the State Historic Preservation Division.

In addition, Petitioner shall immediately stop work and contact the State Historic Preservation Division should any previously unidentified archaeological resources such as artifacts, shell, bone or charcoal deposits, human burial, rock or coral alignments, pavings or walls be encountered during the project's development.

7. Petitioner shall preserve the colony of Canavalia pubescens, which occur near the cluster of historic sites to be preserved, if deemed necessary by the Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR, DOFAW). Petitioner shall submit a mitigation plan (which shall include measures to ensure that these native species are not physically impacted, or their microclimate altered, including the incorporation of appropriate buffer zones) to DLNR, DOFAW for review and approval. Full execution of the mitigation plan shall be verified by DLNR, DOFAW prior to the start of any ground-disturbing activities.

8. Petitioner shall only develop, construct, operate, and maintain the proposed golf course and any subsequent residential development in the Manele project

district and take appropriate preventative measures so that it will not cause any deterioration in the Class AA water quality standards currently in existence for Hulopoe Bay and the coastal waters adjacent to the Manele Bay Hotel and the golf course, or any comparable standards as may be established by law in the future, taking into account, temporary perturbations from natural occurrences.

a. The petitioner shall fully mitigate any condition caused by its development activities which results in deterioration of the standards referred to in paragraph 3.

b. The petitioner shall retain an environmental monitor, as may be mutually agreed between it and Lanaians for Sensible Growth for the purpose of monitoring the water quality standards referred to in paragraph 3. The monitor shall promptly make its results available to the State Department of Health. The monitoring program shall include baseline studies of such coastal waters and ongoing water quality monitoring on not less than a quarterly basis. The monitoring program will be conducted with a frequency and in a manner so as to be at least as effective, in the opinion of the monitor, as any other coastal water quality monitoring program for similar waters implemented in the State of Hawaii.

9. Petitioner shall comply with "The Eight (8) Conditions Applicable to This Golf Course Development", prepared by the State Department of Health dated April 7, 1989, introduced as the Office of State Planning's Exhibit Number 2.

10. Petitioner shall not utilize the potable water from the high-level groundwater aquifer for golf course irrigation use, and shall instead develop and utilize only alternative non-potable sources of water (e.g., brackish water, reclaimed sewage effluent) for golf course irrigation requirements.

In addition, Petitioner shall comply with the requirements imposed upon the Petitioner by the State Commission on Water Resource Management as outlined in the State Commission on Water Resource Management's Resubmittal - Petition for Designating the Island of Lanai as a Water Management Area, dated March 29, 1990.

11. Petitioner shall fund the design and construction of all necessary water facility improvements, including source development and transmission, to provide adequate quantities of potable and non-potable water to service the subject property.

12. Petitioner shall fund the design and construction of all necessary drainage improvements to the satisfaction of the State Department of Transportation and the County of Maui.

13. Petitioner shall upgrade Manele Road to State standards and/or construct a new access road for easier access to the Manele Project District and Manele Boat Harbor.

14. Petitioner shall undertake periodic monitoring of the traffic conditions within and adjacent to the Property throughout the project's development period as required by the State Department of Transportation.

15. Petitioner shall fund the design and construction of the appropriate wastewater treatment and disposal methods to the satisfaction of the State Department of Health and the County of Maui.

16. None of the land area reclassified may be utilized for anything but a golf course and improvements directly related to golf course operations.

17. Appropriate measures shall be taken to mitigate the short-term impact of the project relative to soil erosion from wind and rain; and ambient noise levels.

18. Nonpotable water sources shall be used towards all nonconsumptive uses during construction of the project.

19. The Property shall be included in the Lanai Community Plan as part of the Manele Project District.

20. Petitioner shall develop the property in substantial compliance with representations made to the Land Use Commission in obtaining reclassification of the property. Failure to so develop may result in reclassification of the property to its former land use classification.

21. Petitioner shall provide annual reports to the Land Use Commission, the Office of State Planning, and the County of Maui Planning Department in connection with the status of the project and Petitioner's progress in complying with the conditions imposed.

22. Petitioner shall give notice to the Land Use Commission of any intent to sell, lease, assign, place in trust, or otherwise voluntarily alter the ownership interest or development interest in the Property covered by the approved Petition prior to visible commencement of construction on the Property.

23. The Commission may fully or partially release these conditions as to all or any portion of the Petition Area upon timely motion and upon the provision of adequate assurance of satisfaction of these conditions by the Petitioner. Adequate assurance of satisfaction may be evidenced by execution of a certificate of satisfaction in recordable form stating that such condition has been satisfied, in whole or in part. The Office of State Planning will certify for itself and all state departments and agencies, and the County of Maui Planning Department will certify for itself and all county departments and agencies. Any other party to the boundary amendment proceeding may be asked to indicate whether they concur in the certification of satisfaction.

DOCKET NO. A89-649 - LANAI RESORT PARTNERS

Done at Honolulu, Hawaii, this 16th day of April 1991,
per motion on April 11, 1991.

LAND USE COMMISSION
STATE OF HAWAII

By 
RENTON L. K. NIP
Chairman and Commissioner

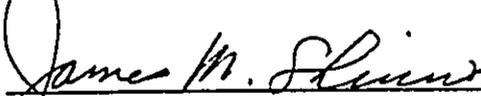
By 
ALLEN K. HOE
Vice Chairman and Commissioner

By (conflict)
ALLEN Y. KAJIOKA
Vice Chairman and Commissioner

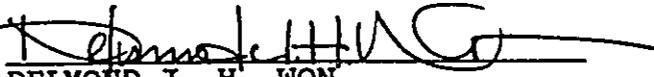
By 
KAREN S. AHN
Commissioner

By (absent)
EUSEBIO LAPENIA, JR.
Commissioner

By 
JOANN N. MATTSON
Commissioner

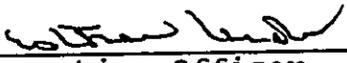
By 
JAMES M. SHINNO
Commissioner

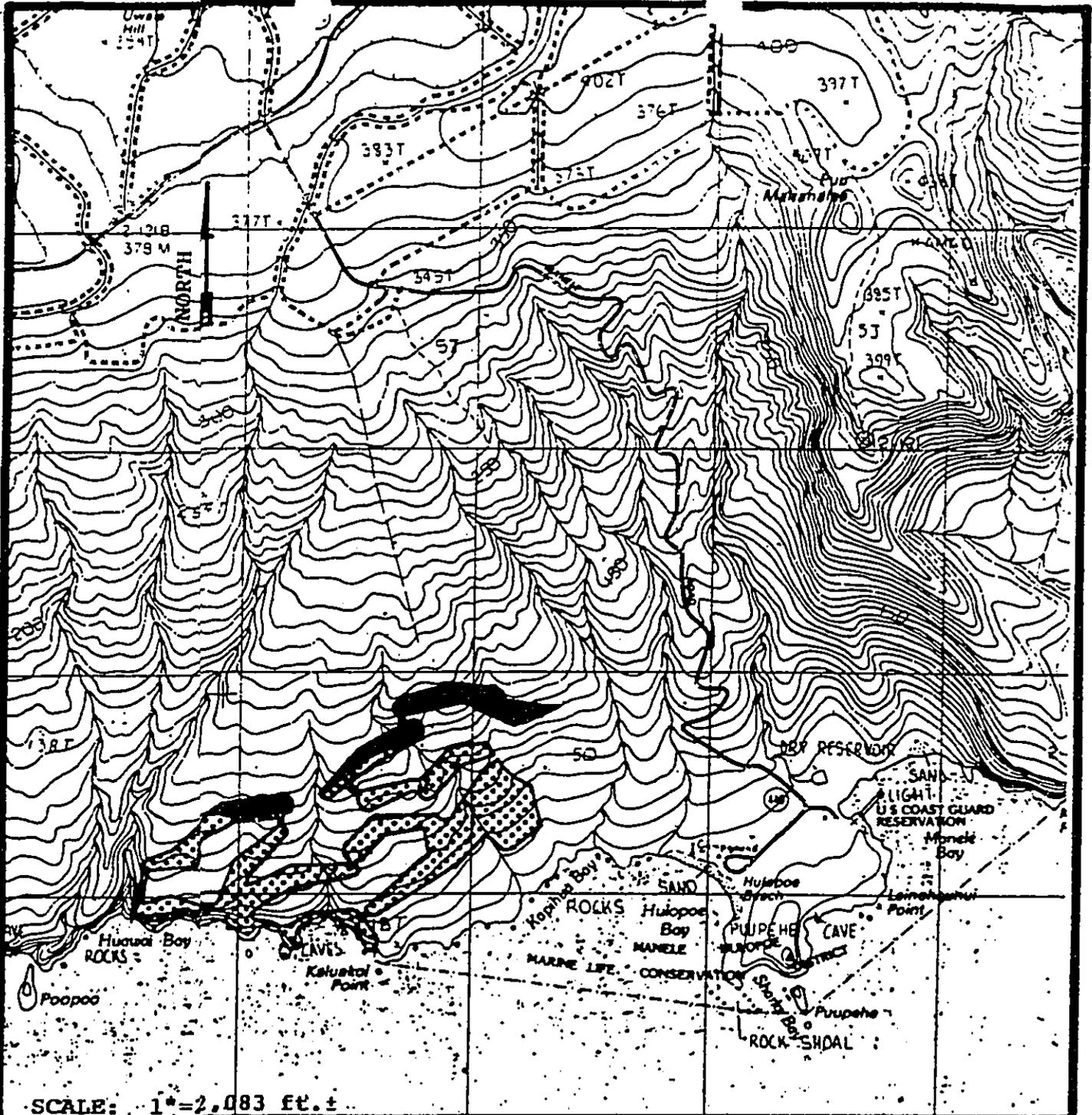
By 
ELTON WADA
Commissioner

By 
DELMOND J. H. WON
Commissioner

Filed and effective on
April 16, 1991

Certified by:


Executive Officer



SCALE: 1" = 2,083 ft. ±

L O C A T I O N M A P

DOCKET NO.: A89-649/LANAI RESORT PARTNERS
 TAX MAP KEY: 4-9-02: por. 1
 MANELE, LANAI, MAUI

-  AGRICULTURAL TO URBAN - APPROVED AREA
-  RURAL TO URBAN - APPROVED AREA

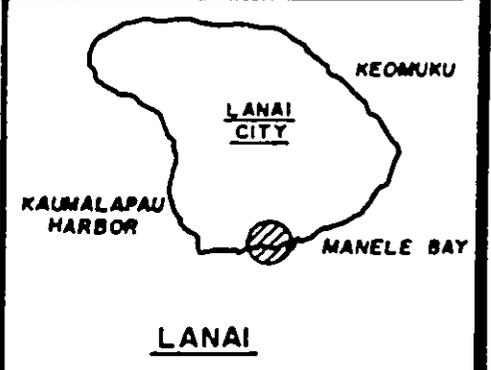


EXHIBIT A

STATE OF HAWAII
DEPARTMENT OF BUSINESS AND ECONOMIC DEVELOPMENT

DATE 4/7/95

SUBJECT:

LUC DOCKET NO. A89-649/LANAI RESORT PARTNERS

DUE _____

TO: 1 JERRY T. DEAC 2 _____

FROM: LEO ASUNCION, PLANNER, LUC.

3 _____ 4 _____

FYI COMMENT _____ REPORT _____ ACTION _____ SIGNATURE _____

5 _____ 6 _____

DRAFT _____ APPROVAL _____ RETURN _____ TYPE _____ CIRCULATE _____

7 _____ 8 _____

XEROX _____ COPIES FILE _____ APPROVED WITH CHANGES NOTED _____

MESSAGE OR COMMENTS:

Enclosed are copies of the April 16, 1991 Decision & Order issued in LUC Docket No. A89-649/Lanai Resort Partners (Mauele Golf Course).

Please note that Condition 13 was amended by Order dated December, 29, 1992. A copy of this Order is also attached.

Leo.

3. Irrigation

a. Water requirements of turfgrasses

Because rainfall is not uniformly distributed throughout the year, all golf courses are irrigated to supplement rainfall. Golf courses usually have permanent sprinkler irrigation systems with sophisticated controllers. Many are computer controlled, so that each sprinkler head on the golf course can be adjusted from a computer terminal to apply a selected amount of water on each cycle.

Golf greens are constructed of sand (or mixes dominated by sand), the water holding capacity is less than for other areas containing soil. For this reason, golf greens must be watered more frequently than other areas.

Typical evapotranspiration rates for well-watered turf in Hawaii range from 0.1 to 0.3 inches per day, depending on temperature, the amount of sunlight, relative humidity, wind speed and the amount of available water in the soil. Soils store approximately 0.5 to 2.5 inches of available water per foot of depth, depending on soil texture. Sands hold less, clays hold more. Irrigation should be applied when about one-half the available water has been used. The effective rooting depth for mown turf is approximately one foot. Therefore, turfgrasses will need to be watered every day to about once a week.

JTL
RR

Manele Golf Course and Golf Residential Project

EIS Fallacy? The Honor System

Taken from draft environmental impact statement, prepared for Lana'i Company, Inc. (November 1990).

Pages 1-7, 1-8

6.1.3 Historic and Archaeological Resources

IMPACT: Potential disturbance of archaeological or cultural features as a result of site excavation and grading.

MITIGATION: Should any sites be uncovered during construction, work will stop and the appropriate State and County officials notified. If necessary, data recovery will take place prior to any further construction in the area of concern.

There are many questions raised by mitigation measures such as this one. Who will ensure that the developer informs the proper officials, if indeed an important site is discovered? If the archaeological/cultural site discovered is located such that it would force abandonment of development plans, would the developer report it, or just build over it?

Granted, an extensive survey of the site is undertaken for developments requiring an EIS, but who can say that all possible sites are recorded in this? Underground artifacts/sites cannot always be unearthed in these surveys.

More doubt is added to this "honor system" when the developer is not "local", and doesn't have or intend to acquire other property in Hawai'i. With this in mind, why would the developer care about governmental or community interests in an archaeological site. Applying for various permits, construction, EIS preparation, labor, etc. have already cost the developer hundreds of thousands of dollars. Stopping construction halfway to completion of the project would not be a viable consideration.

inquiries

I have spoken with an archaeologist with the Historic Sites department in the Office of Hawaiian Affairs, and our conversation can be summarized by saying that there is really no enforcement of law in reference to archaeological sites. The permit issuing agency cannot afford to staff a monitor on the construction site on a daily basis. The permit may require that the developer notify a certain person, but this condition of the permit cannot be enforced feasibly.

Another point: How is the average construction worker going to know when they have come across a possible archaeological site? He might not know dog bones from human bones.

LA 01

-4-

4. Describe your experience which demonstrates your communication skills and abilities:

A. Preparing written reports, correspondence, analyses, RISS, etc.

B. Delivering briefings, training, classroom instruction, public testimony and other oral communications:

B. Delivering briefings, training, classroom instruction, public testimony and other oral communications:

FIS Manele Golf Course and Golf Residential Project

Summary of Potential Adverse Impacts and Mitigation Measures

6.1 Short Term Construction Period Impacts

6.1.1 Physical Environment

Impact #1: Alteration of soil and natural topography

Mitigation #1: How does public know that sodding and planting is actually done?

Need a monitor or enforcer

This is VOLUNTARY
Who will monitor the "comprehensive landscaping program" at each stage of development?
VAGUE

Impact #2: Clearing, grading, excavation

Mitigation #2: LAW Done in compliance w/county, state, federal requirements
Who enforces this?

I3: Potential disturbance of natural drainage patterns

M3: "Some sump drainage is planned" Where? VOLUNTARY

I4: Non-conforming visual elements

M4: Entirely VOLUNTARY - who enforces?
Developer enforces itself?

I5: Increase in surface H₂O runoff

M5: use of temp. drainage facilities to prevent erosion VOLUNTARY

6.1.2 Natural Environment

I6: Clearing of 620 acres of scrub and kawe forest vegetation

M6: increase ground cover through reseedling and landscaping. VOLUNTARY

6.1.3 Historic and Archaeological Resources

I7: Disturbing archaeological or cultural features

Changes to the Content of Environmental Assessments

DEQC could develop circulation lists and make them available to agencies
Expand scope of people/agencies consulted during preparation of EA

531-5261
521-5361

EIS acceptance \neq project approval

are mitigation measures realistic?
what if they fail?
what are the alternatives?

Manete Bay

ferry arrives from Lahaina east of Hulopoe, at Manete Bay

increase in use of ferry

increased ~~at~~ trips to and fro

increased fuel use

increased impact upon organisms in waterway

proximity to Halu Heiau

~~increased~~ increased tourist access to Heiau?

impact upon Heiau?

Short term construction impacts -

Physical Emission - alteration of soil and natural topography

clearing, grading, excavation of ~~458~~ 458 acres

disturbance of natural drainage patterns

increase of surface runoff

Natural Environment - clearing of 628 acres scrub and native vegetation

indigenous ~~animals~~ animals homeless?

ITEM 6: MANELE GOLF COURSE AND GOLF RESIDENTIAL PROJECT, LANAI, 10/91

MITIGATION

- 1) Immediate sodding and planting of cut and fill slopes after completion of grading work. *Voluntary*
- 2) Use of temporary drainage facilities to prevent mass surface erosion. *Law*
- 3) Reseed and landscape barren areas to mitigate adverse visual impact due to clearing site of scrub and kiawe vegetation. *Voluntary*
- 4) Natural landscape elements, including endemic species (e.g., 'ilima-uhaloa-pili grass association) will be used in landscaping plans for golf course and house lots to mitigate loss of naturally occurring vegetation. *Voluntary*
- 4) Should any additional archaeological/cultural sites be uncovered during construction, work will stop and the appropriate State and County officials notified. *Law*
- 5) Monitor the population of the rare plant, *Canavalia pubescens*, to determine extent of population and habitat to avoid when excavating for home sites. *Law*
- 6) Use of time release or rapid uptake fertilizers and application of approved biocides under direction of certified applicators; and long term comprehensive management program for the Manele-Hulopoe Marine Life Conservation District to mitigate potential long term effect on the groundwater and marine water quality due to nonpoint source pollution. *Voluntary*
- 7) Housing, recreation, social stress mitigation measures for various socioeconomic impacts. *Voluntary*
- 8) Increased air traffic and air facilities demand can be accommodated through implementation of the approved Lanai Airport Master Plan. *Voluntary*
- 9) Landscaping and water conservation measures including the use of xerophagic vegetation, implementation of the Lanai Water Master Plan (July 1990), and extensive exploratory well testing program. *Voluntary*

PERMITS/APPROVALS

- | | |
|--|--|
| <p>① ←</p> <p>② ←</p> <p>③ ←</p> <p>④ ←</p> <p>⑤ ←</p> <p>⑥ ←</p> <p>⑦ ←</p> <p>⑧ ←</p> <p>⑨ ←</p> | <p>1) Boundary Reclassification, State Land Use Commission</p> <p>2) Historic Sites Review, DLNR</p> <p>3) Project District Boundary Amendment, Maui Planning Commission, Maui County Council</p> <p>4) Lanai Community Plan Amendment, Maui Planning Commission, Maui County Council</p> <p>5) SMA Use Permit, Maui Planning Commission -</p> <p>6) Shoreline Setback Variance, Maui Planning Commission -</p> <p>7) Project District Phase II Approval, Maui Planning Commission -</p> <p>8) Plan Approval, Project District Phase III, Maui Planning Department</p> <p>9) Subdivision Approval, Maui Department of Public Works X</p> |
|--|--|

SMA
 Special
 Permit

Maui Planning Commission

243-7735

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)
LANAI RESORT PARTNERS)
To Amend the Rural Land Use)
District Boundary into the Urban)
Land Use District for Approxi-)
mately 110.243 acres and the)
Agricultural Land Use District)
Boundary into the Urban Land Use)
District for Approximately 28.334)
acres at Manele, Lanai, Hawaii,)
Tax Map Key No. 4-9-02: portion 1)

Docket No. A89-649

LANAI RESORT PARTNERS

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

DEC 29 1992 by *Paul A. ...*
Date for Executive Officer

DEC 29 10 24 AM '92
LAND USE COMMISSION
STATE OF HAWAII

ORDER GRANTING MOTION FOR ORDER AMENDING
CONDITION NO. 13 OF DECISION AND ORDER DATED APRIL 16, 1991

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)	Docket No. A89-649
LANAI RESORT PARTNERS)	LANAI RESORT PARTNERS
To Amend the Rural Land Use)	
District Boundary into the Urban)	
Land Use District for Approxi-)	
mately 110.243 acres and the)	
Agricultural Land Use District)	
Boundary into the Urban Land Use)	
District for Approximately 28.334)	
acres at Manele, Lanai, Hawaii,)	
Tax Map Key No. 4-9-02: portion 1)	

ORDER GRANTING MOTION FOR ORDER AMENDING
CONDITION NO. 13 OF DECISION AND ORDER DATED APRIL 16, 1991

Petitioner, Lanai Resort Partners, having filed its Motion For Order Amending Condition No. 13 of Decision and Order Dated April 16, 1991, on August 12, 1992, pursuant to Section 15-15-70, Hawaii Land Use Commission Rules, and

The Land Use Commission, having considered said motion at its meetings on September 9, 1992, at Lanai City, Hawaii and December 3, 1992, at Honolulu, Hawaii, and there being no objections from the other parties to this proceeding,

HEREBY GRANTS Petitioner's motion and amends Condition Number Thirteen of the Decision and Order dated April 16, 1991, to read as follows:

"13. Petitioner shall fund the design and construction of all transportation improvements necessitated by the proposed development identified by and to the satisfaction of the State Department of Transportation."

All other conditions to the Decision and Order dated April 16, 1991, are hereby reaffirmed and shall continue in effect.

DOCKET NO. A89-649 - LANAI RESORT PARTNERS

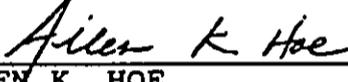
Done at Honolulu, Hawaii, this 29th day of December 1992,
per motion on December 3, 1992.

LAND USE COMMISSION
STATE OF HAWAII

By (conflict)
ALLEN Y. KAJIOKA
Chairman and Commissioner

By 
KAREN S. AHN
Vice Chairperson and Commissioner

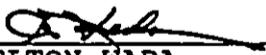
By (absent)
JOANN N. MATTSON
Vice Chairperson and Commissioner

By 
ALLEN K. HOE
Commissioner

By (absent)
EUSEBIO LAPENIA, JR.
Commissioner

By 
RENTON L. K. NIP
Commissioner

By (abstain)
TRUDY K. SENDA
Commissioner

By 
ELTON WADA
Commissioner

By 
DELMOND J. H. WON
Commissioner

Filed and effective on
December 29, 1992

Certified by:


for Executive Officer

END

CERTIFICATION

**I HEREBY CERTIFY THAT THE MICROPHOTOGRAPH APPEARING IN THIS REEL OF
FILM ARE TRUE COPIES OF THE ORIGINAL DOCUMENTS.**

2004

DATE

Erin A Nakamura

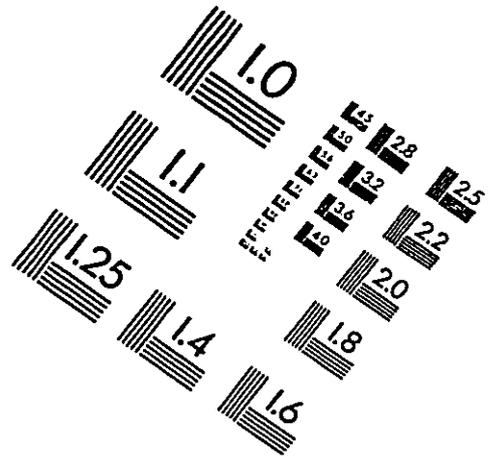
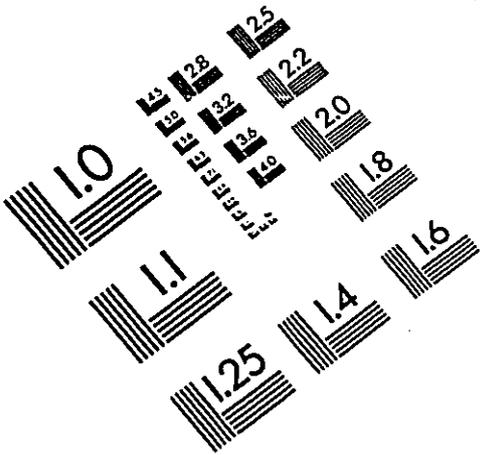
SIGNATURE OF OPERATOR



AIM

Association for Information and Image Management

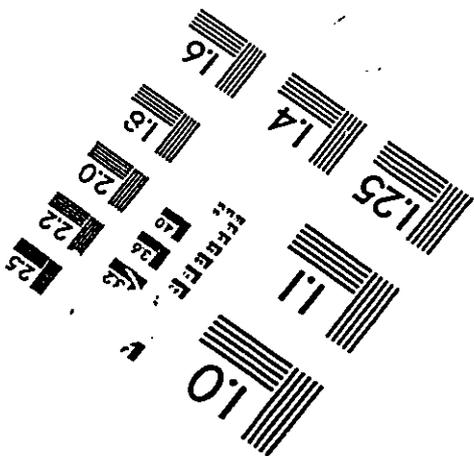
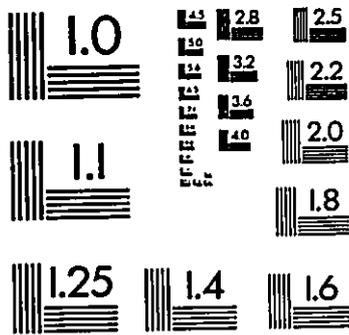
1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202



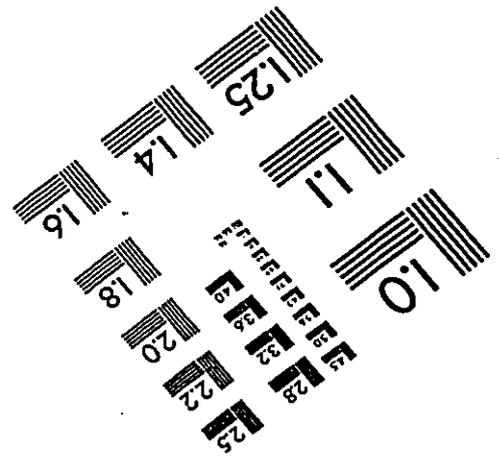
Centimeter



Inches



MANUFACTURED TO AIM STANDARDS
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