# CITY AND COUNTY OF HONOLULE COPY

650 SOUTH KING STREET HONOLULU, HAWAII 96813

FRANK F. FASI



DONALD A. CLEGG CHIEF PLANNING OPFICER

GENE CONNELL
DEPUTY CHIEF PLANNING OFFICER

KK/DGP 10/86-9908

October 30, 1986

Ms. Letitia N. Uyehara, Director Office of Environmental Quality Control State of Hawaii 465 South King Street, Room 104 Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Revised Supplemental Environmental Impact Statement (SEIS)

Heeia Kea Development Plan Amendment

Malama-Gentry Joint Venture

Heeia, Koolaupoko, Oahu, Hawaii

Tax Map Keys: 4-6-06: 1-3, 7-16, 22-51; 4-6-16: 32

We are notifying you of our acceptance of the above as an adequate fulfillment of Chapter 343, HRS.

Major issues considered to be controversial include:

- 1. Social Impacts of the proposed project.
- 2. Traffic Impact of the proposed project.
- 3. Increased usage of local recreational facilities.

Other concerns, which will be addressed by subsequent zoning, subdivision and other permit processes, include:

- 1. Water Commitment from the Board of Water Supply.
- Sewage Disposal Facilities Plan approved by the Department of Public Works.
- 3. Drainage Plan approved by the Department of Public Works.
- 4. Grading Plan approved by the Department of Public Works.

Ms. Letitia N. Uyehara, Director Page 2 October 30, 1986

- 5. Highway Improvement Plans, as required by the City Department of Transportation Services and the State Department of Transportation.
- 6. Allocation of Low and Moderate Income Housing to be coordinated with the Department of Housing and Community Development.

If there are any questions, please contact Keith Kurahashi of our staff at 527-6051.

Sincerely,

Conald Cleys

Chief Planning Officer

Department of General Planning

Ohn Dwhalea

JOHN P. WHALEN, Director Department of Land Utilization

Attach.

cc: Mr. Brian L. Gray

650 SOUTH KING STREET

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October 30, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Revised Supplemental Environmental Impact Statement (SEIS)

Heeia Kea Development Plan Amendment

Malama-Gentry Joint Venture

Heeia, Koolaupoko, Oahu, Hawaii

Tax Map Keys: 4-6-06: 1-3, 7-16, 22-51; 4-6-16: 32

We have determined that the above is an acceptable Supplemental Environmental Impact Statement document for the proposed project. This determination in no way implies a favorable recommendation on the applicant's request for any approvals or permits required by the Departments of General Planning and Land Utilization for this project.

There are a number of concerns that must be addressed by subsequent zoning, subdivision, and other permit processes. These concerns are included in the acceptance report which is attached.

Mr. Brian L. Gray Page 2 October 30, 1986

If there are any questions, please contact Keith Kurahashi of our staff at 527-6051.

Sincerely,

Donald A. CLEGG

Chief Planning Officer

Department of General Planning

JOHN P. WHALEN, Director

Department of Land Utilization

Attach.

cc: OEQC

ACCEPTANCE REPORT: CHAPTER 343, HRS

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)

HEEIA KEA DEVELOPMENT PLAN AMENDMENT

MALAMA-GENTRY JOINT VENTURE HEEIA, KOOLAUPOKO, OAHU, HAWAII

TAX MAP KEYS: 4-6-06: 1-3, 7-16, 22-51;

4-6-16: 32

#### A. BACKGROUND

The Supplemental EIS was prepared for Malama-Gentry Joint Venture. Malama-Gentry Joint Venture proposes to develop 310 single-family residences and 50 low-density apartment units, 4 acres of industrial, 1 acre of commercial, and 5.2 acres of park land on 68.5± acres of land at Heeia Kea, Koolaupoko, Oahu. The project site is designated Residential, Public and Quasi-Public and Agriculture on the Koolaupoko Development Plan Land Use Map.

An Environmental Impact Statement (EIS) was accepted by the City and County of Honolulu Department of Land Utilization (DLU) on April 5, 1983 to have a 389 single-family lot residential subdivision constructed on 102± acres of land at Heeia Kea, Oahu, Hawaii. The EIS was prepared in conjunction with a Special Management Area permit and was expanded to meet Chapter 343 requirements in conjunction with other potential approval requirements.

This Supplemental Environmental Impact Statement (SEIS) has been prepared in conjunction with a current application for an amendment to the Koolaupoko Development Plan Land Use Map. The SEIS discusses the differences and similarities of the current proposal with respect to the residential development presented in 1983. Emphasis has been placed on the discussion of traffic, sewage collection and disposal, and social characteristics since the size and impacts of the two projects, in other respects, are essentially identical.

The proposed project will include grading, roadway improvements, drainage improvements, sewer system improvements, water system improvements, and underground electrical and telephone improvements.

About 50 acres of the project site will be graded, with 140,000 cubic yards of excavation and 220,000 cubic yards of embankment.

Approximately 11,000 linear feet of 32-foot, 44-foot, and 56-foot right-of-way roadways will be provided. These roadways will be constructed to City and County standards. Access into the proposed project site will be provided by two intersections along Kamehameha Highway, which will be improved by the installation of acceleration, deceleration, and storage lanes. Traffic signal duct lines will also be provided at the intersection adjacent to the Heeia Small Boat Harbor.

There are three (3) existing 7.8-feet by 4.6-feet box culverts and one (1) existing 48-inch reinforced concrete pipe, which drain the project site into Kaneohe Bay. No improvements to these systems are anticipated; however, this will be verified by a Department of Public Works (DPW) review of a Drainage Report for the proposed project.

The project site lies in Zone D, an area of undetermined, but possible, flood hazard, as shown on the Flood Insurance Rate Maps (FIRM). DPW will verify the flood hazard requirements for the proposed project.

An on-site water system, consisting of 8-inch and 12-inch water lines and fire hydrants will be installed in accordance with Board of Water Supply (BWS) standards. It is projected that the project will have an average daily demand of 195,000 gallons and a 582,000 gallon peak daily demand. The BWS has indicated that a 0.3 million gallon reservoir will be required for this project. Future capacity increases to the water supply system are not anticipated; however, this must be verified by the BWS.

The proposed project will be connected to the municipal sewer system. One permanent pump station on-site will be necessary to achieve this connection. The sewage from the project site will be treated at the Kaneohe Sewage Treatment Plant, and disposed via the Mokapu Outfall. The design average and peak sewage flows, for the proposed project are 0.14 million gallons per day (mgd) and 0.83 mgd, respectively.

The proposed project's site improvements will cost between \$9 and \$11 million, and require 6 to 9 years to implement over 5 phases.

#### B. PROCEDURES

- A Supplemental EIS Preparation Notice, prepared by the applicant's engineering consultant appeared in the "Environmental Quality Commission (EQC) Bulletin" on July 23, 1986. This was distributed to all interested Federal, State, and City and County agencies, as well as community interest groups.
- 2. Comments from consulted parties were received until September 1, 1986, allowing all parties greater than the required 30-day minimum consultation period. Twenty-five (25) parties submitted written comments during this period, which were responded to in writing by the applicant.
- The Draft SEIS was received and distributed by the OEQC on September 5, 1986. The deadline for public review was then set for October 8, 1986.

4. Twenty-six (26) parties made replies to the Draft SEIS. The applicant made point-by-point responses to all substantive comments, within the 14-day response period.

#### C. CONTROVERSIAL ISSUES

A number of issues regarding the proposed project were considered to be controversial because differing "expert" opinions pertaining to a specific issue were presented by the applicant and a commenting party.

#### 1. Social Impacts of the Proposed Project

Several organizations and certain members of the surrounding community are concerned about the social impacts of the proposed project on the community. The applicant recognizes that social impacts cannot be totally resolved and has recommended mitigation measures to lessen the impact of the proposed project.

#### 2. Traffic Impact of the Proposed Project

The State and City Transportation agencies had no objections to the proposed project except for a recommendation that traffic signal duct lines be installed at the intersection adjacent to the Heeia Small Boat Harbor. The developer agreed to this recommendation.

Other organizations and certain members of the surrounding community, however, were concerned about the increase of traffic from the project and its impact on downstream traffic on Likelike and Pali Highway.

#### Increased Usage of Local Recreational Facilities

Certain members of the surrounding community are concerned about the increased usage of the Heeia Kea Boat Harbor, by the residents of the proposed subdivision, as well as their impact on other local recreational resources.

#### D. UNRESOLVED ISSUES

In general we concur with the listing of unresolved issues found on pages 99-100 of the Revised Supplemental EIS: potable water commitment, offsite sewer system improvements, impacts to Kaneohe Bay water quality, and social impacts. Prior to acceptance of an application for rezoning, the following additional information shall be required:

- 1. A water master plan approved by the Board of Water Supply.
- 2. Specific plans for offsite sewer system improvements approved by the Department of Public Works.

#### E. RESPONSE

The applicant made adequate point-by-point responses to all comments which were included in the Revised EIS. The topics of disagreement have been reviewed in the previous section of this report.

#### F. DETERMINATION

The Revised EIS is determined to be acceptable under the procedures and requirements established in Chapter 343, HRS, and the State "EIS Rules." This determination in no way implies a favorable recommendation on the applicant's request for any approvals or permits required by the Departments of General Planning and Land Utilization for this project.

Approved

DONALD A. CLEGG

Chief Planning Officer

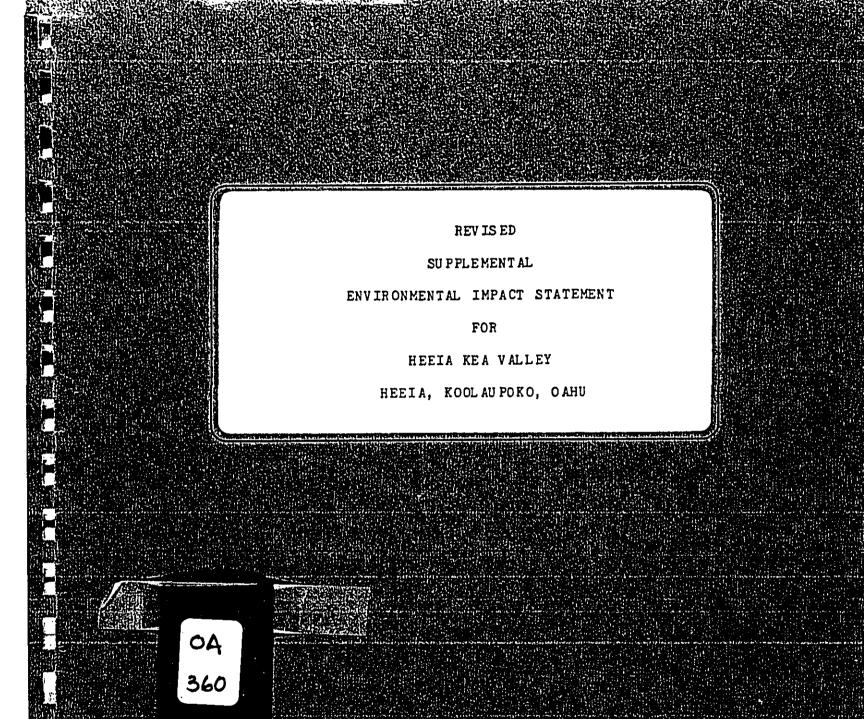
Department of General Planning

Approved

JOHN P. WHALEN

Director

Department of Land Utilization



# CENTY HOME CARSOCIATES, INC. CONSULAR EMPRESARIANCE CONSULAR EMPRESARIANCE

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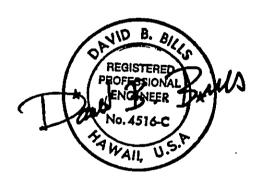
#### SUPPLEMENTAL

ENVIRONMENTAL IMPACT STATEMENT

FOR

HEEIA KEA VALLEY

HEEIA, KOOLAUPOKO, OAHU



#### Prepared By:

GRAY, HONG & ASSOCIATES, INC. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

October 22, 1986

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#### I. SUMMARY

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Malama-Gentry Joint Venture proposes to develop 310 single-family residences and 50 low-density apartment units, 4 acres of industrial and 1 acre of commercial land on  $68.5 \pm acres$  of land at Heeia Kea, Oahu, Hawaii.

An Environmental Impact Statement (EIS) was accepted by the City and County of Honolulu Department of Land Utilization (DLU) on April 5, 1983 to have a 389 single-family lot residential subdivision constructed on 102 + acres of land at Heeia Kea, Oahu, Hawaii. The EIS was prepared in conjunction with a Special Management Area permit and was expanded to meet Chapter 343 requirements in conjunction with other potential approval requirements. A Supplemental Environmental Impact Statement (SUP EIS) has been prepared in conjunction with a current application to the City and County of Honolulu Department of General Planning for an amendment to the Koolaupoko Development Plan Land Use Map. This SUP EIS has been prepared to discuss the differences/similarities of the current proposed project with respect to the residential development presented in 1983. Emphasis has been placed on discussion of traffic, sewage collection and disposal, and social characteristics, since the size and impacts of the two projects, in all other respects, are essentially identical.

# II. DESCRIPTION OF THE PROPOSED ACTION

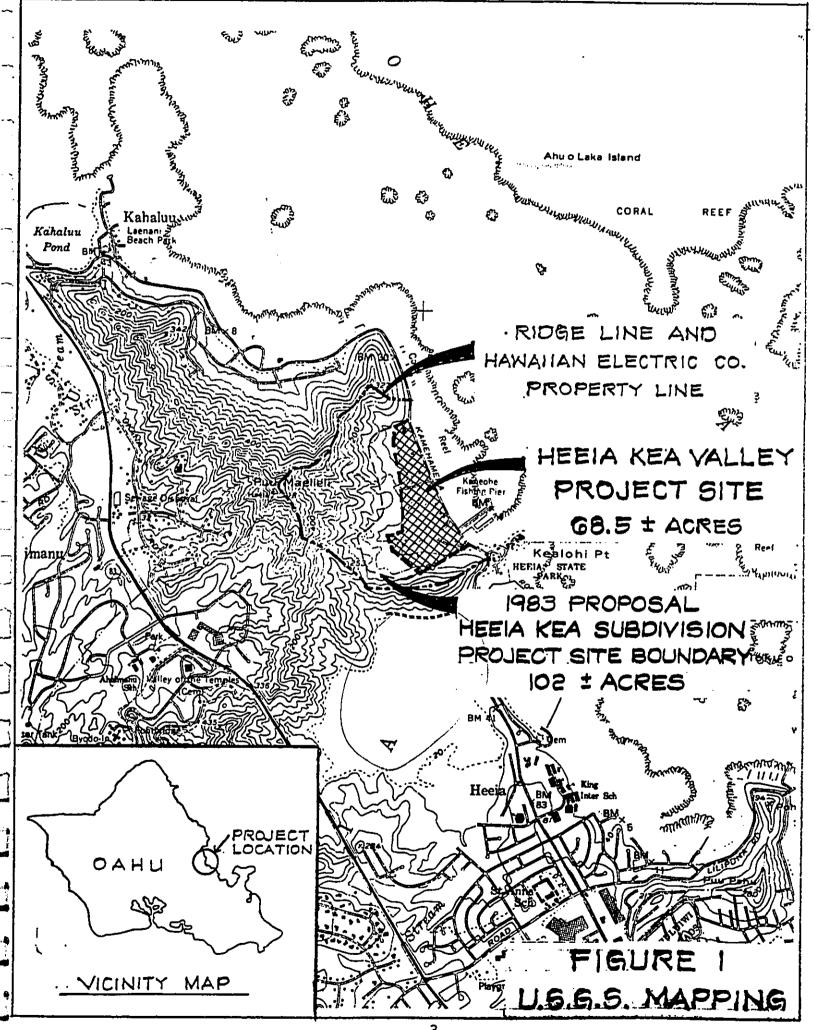
#### A. <u>Project Location</u>

The Heeia Kea Valley development will be located within Windward Oahu at Heeia, Koolaupoko, Oahu (see Location Map - Figure 1). This is the same site which was proposed for the Heeia Kea Subdivision. Both projects are on land which is a portion of 219.06 acres, all of which are owned by Kamehameha Schools/Bishop Estate and controlled by Hawaiian Electric Company, Inc. under a lease and agreement-of-sale. The total 219.06 acres are described by TMK: 4-6-06: 1 through 3, 7 through 16, 22 through 51 and TMK: 4-6-16: 32.

#### B. Statement of Objectives

Hawaiian Electric Company, Inc. originally entered into a long term lease and agreement-of-sale to acquire the project area for the purpose of constructing a steam generating plant to supply electricity to Oahu. Since the time of Hawaiian Electric Company's original agreement with Bishop Estate, a Class AA water quality classification has been assigned to Kaneohe Bay. Based on the Class AA classification of Kaneohe Bay and other factors, the construction of a steam generating plant is no longer feasible. Hawaiian Electric Company, however, is still committed to purchase the land.

Since the originally intended use of the project site is no longer feasible, the Hawaiian Electric



Company has explored other uses of the property. Based on market investigations, it has been determined that creation of single-family residential housing which includes low and moderate cost units will be responsive to market demands and will create the greatest economic utility of the site. Studies indicate that the site is well suited for residential housing.

Hawaiian Electric Company's objectives for creating the proposed subdivision are to provide marketable residential housing, including some low and moderate cost units, to serve the needs of Windward Oahu and to receive a reasonable return on invested capital.

These objectives as stated in the 1983 EIS for Heeia Kea Subdivision have not changed. However, a small portion (5.0 acres) of commercial/industrial development has been added to the project. Currently, Hawaiian Electric Company, Inc. and Gentry Companies have formed a joint venture called "Malama-Gentry" to pursue development of the property.

#### C. General Description of the Action's, Technical, Economic, Social and Environmental Characteristics

#### 1. Technical Characteristics

The 1983 EIS for Heeia Kea Subdivision described technical characteristics for a residential subdivision on 102 acres which would provide 418 ± units (see Figure 2 - 1983 Proposal Heeia Kea Subdivision). The current development

proposal (see Figures 3 and 4) includes a mix of residential, low-density apartments, commercial and industrial land uses. The commercial and industrial areas are intended to support the Heeia Small Boat Harbor and its recreational resources. Possible tenants could include activities such as a small convenience store, bait and tackle shop, trailer storage, boat yard and warehouse space. The technical characteristics of both projects are essentially identical. Table 1 summarizes the technical characteristics of the 1983 proposal as well as the current proposal. The following sections describe the various technical characteristics in greater detail.

Table 1

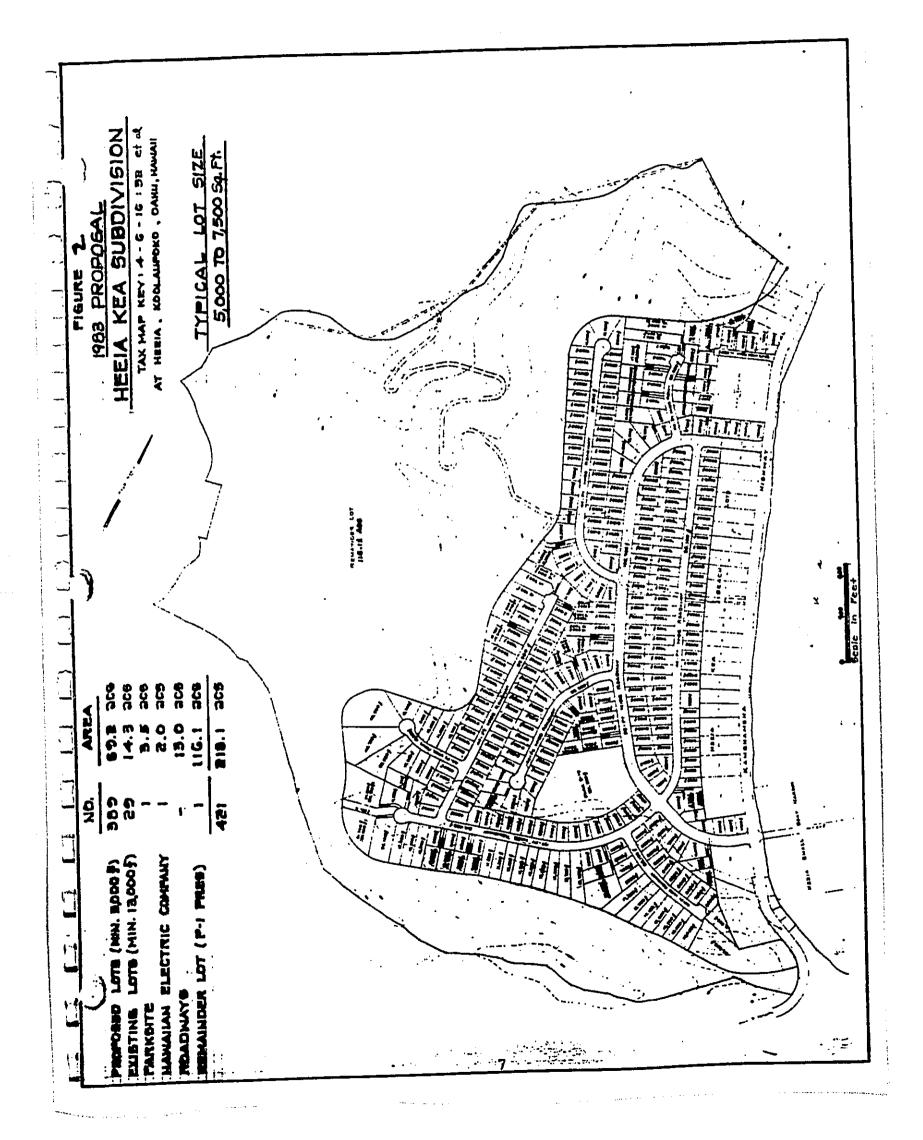
COMPARISON OF CURRENT ACTION AND 1983 ACTION

|    |   | <u>1983</u>                    |                                | <u> 1986</u>                            |                     |
|----|---|--------------------------------|--------------------------------|---|---------------------|
| 1. | Land Use  New Residential Existing Residential Low Density Apts Commercial Industrial Park Site | 82.2<br>14.3<br><br>2.0<br>3.5 | Units<br>389<br>29<br><br><br> | 47.8<br>8.0<br>2.5<br>1.0<br>4.0<br>5.2 | <u>Units</u> 310 50 |
|    | Subtotal  | 102.0                          | 418                            | 68.5                                    | 360                 |
|    | Agriculture<br>Preservation<br>Total  | 116.1<br>218.9                 | <br><br>418                    | 33.5<br>117.0<br>219.0                  | <br><u></u><br>360  |
| 2. | Earthwork Embankment Excavation   | 250,000<br>150,000             |                                |   | 000 C.Y.            |

| 3. | Roadway System On-site Improvements Off-site Improvements                                     | 12,500 L.F. 2-intersections at Kamehameha Highway with acceleration lanes, deceler- ation lanes and left-turn storage | 11,000 L.F. 2-intersections at Kamehameha Highway with acceleration lanes, deceler- ation lanes and left-turn storage       |
|----|---|---|---|
| 4. | <u>Drainage System</u>  | -mauka interceptor ditch -on-site undergrnd pipe system -no off-site improvements                                     | -mauka interceptor ditch -on-site undergrad pipe system -no off-site improvements   |
| 5. | Average Daily Flow Peak flow Storage Requirement Transmission main sizes (typical) Fire Flows | 195,000 gpd<br>585,000 gpd<br>0.3 million gals<br>8-inch (typical)<br>1,000 gpm-res.                                  | 194,000 gpd 582,000 gpd 0.3 million gals 8- & 12-inch (typical) 1,000 gpm-res. 1,500 gpm-apt. 2,000 gpm-com. 4,000 gpm-ind. |
| 6. | Sewer System Average Daily Flow Peak Flow Summary of Imprmts                                  | 0.17 mgd 0.97 mgd -2 pump stations -off-site force main to City & County system                                       | 0.14 mgd 0.83 mgd -2 pump stations with excess capacity -off-site force main to City & County system                        |
| 7. | Park and Landscaping  | 3.5 acre City<br>& County<br>dedicated park   | 3.5 acre City & County dedicated park. 1.7 acre landscape buffer with park adjacent to Kamehameha Highway.                  |
|    | a. <u>Grading</u> .   | The project site  | will be graded to   |

assure roadways maintain proper horizontal

and vertical alignment. Grading within pro-



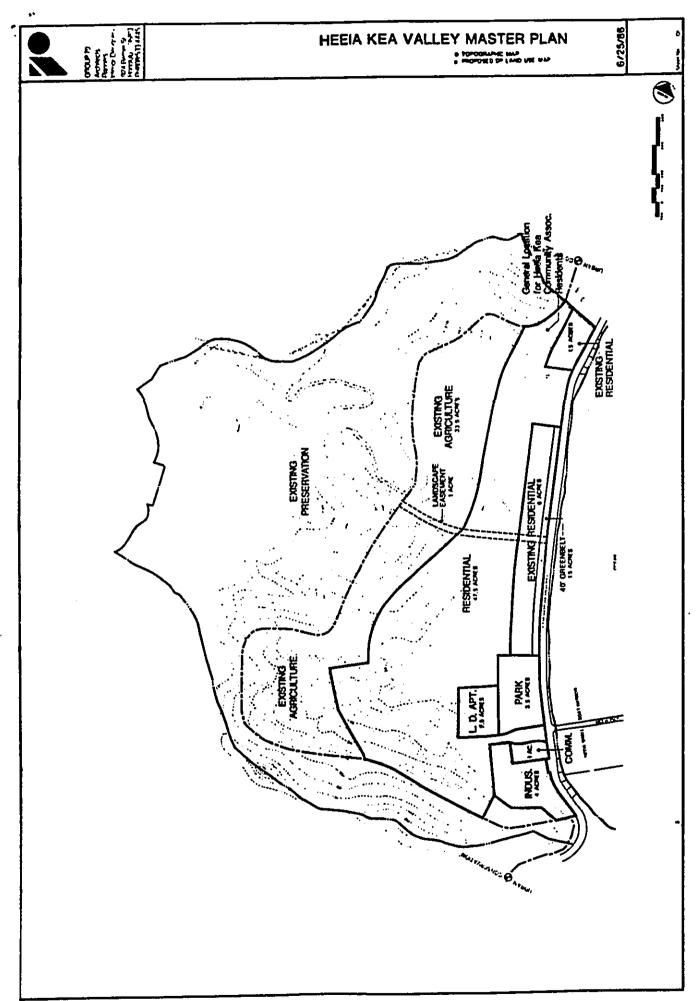


FIGURE 3 PROPOSED DP LAND USE MAP

posed lots will be required to insure proper lot drainage and to provide reasonably level lots for house construction. The average slope of the project area is approximately 10 percent. The total area to be graded is approximately 50 acres and the total amounts of excavation and embankment are 150,000 and 250,000 cubic yards, respectively.

A final grading plan and an accompanying erosion control plan will be submitted to the City and County of Honolulu Department of Public Works for approval. The erosion control plan will include temporary measures, such as incremental grading and use of filter berms and sediment traps, to minimize soil loss during construction. The major method of permanent erosion control is the reestablishment of vegetation (grassing) after grading.

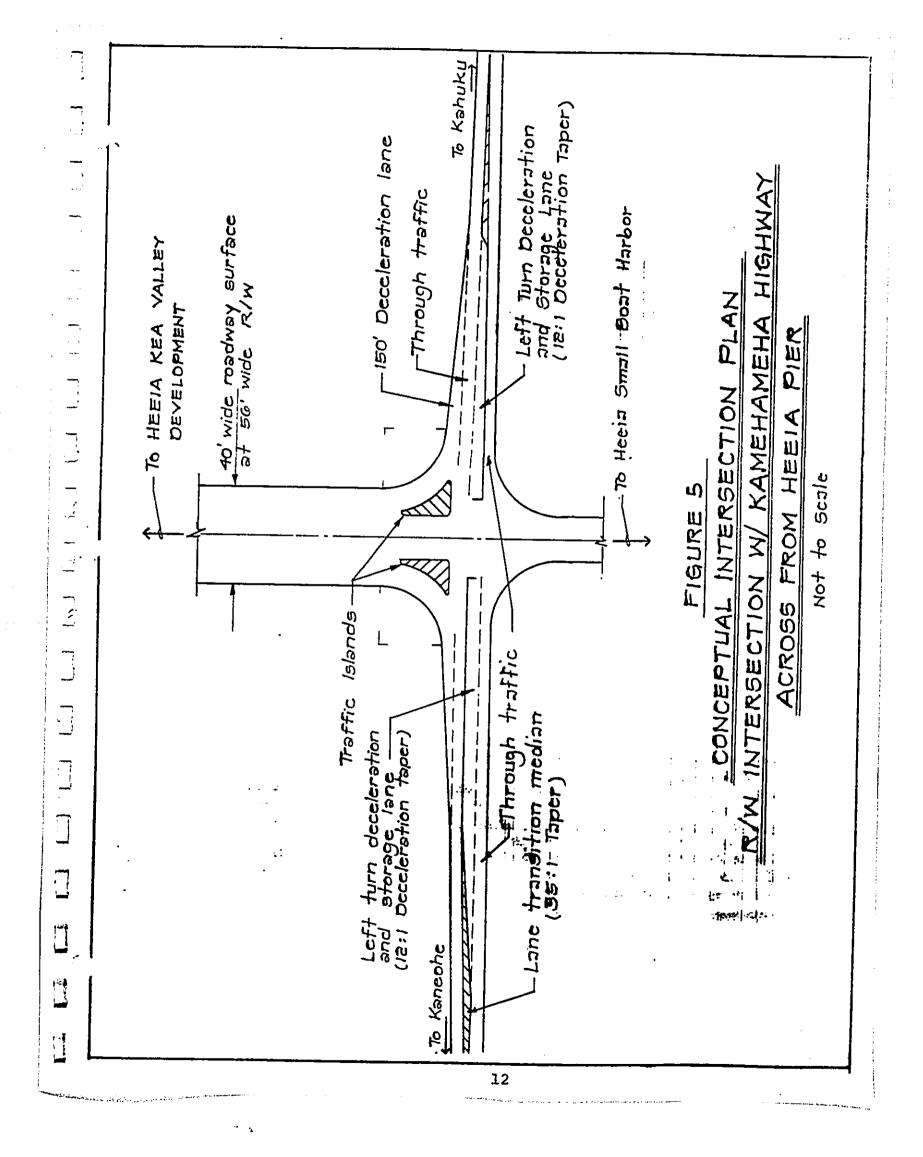
The above description which was included in the 1983 EIS is also applicable to the proposed project. Grading quantities under the current action will be reduced by approximately 10 to 15 percent as a result of the decrease in developed area.

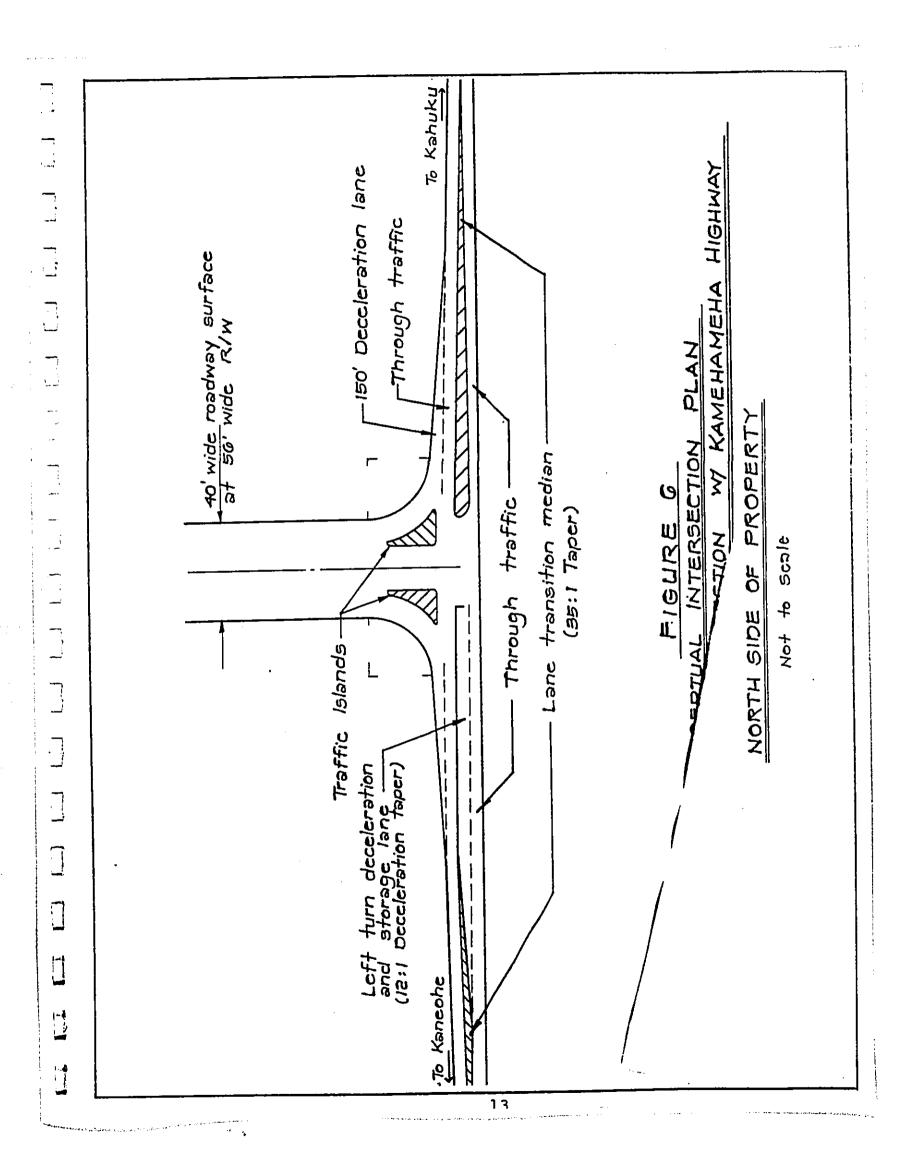
b. Roadway Improvements. Access to all subdivision lots will be provided by 12,500 linear feet of 56-foot, 44-foot and 32-foot

right-of-way roadways constructed to City and County standards. Improvements will be made to Kamehameha Highway where the two City and County right-of-ways intersect with Kamehameha Highway. The improvements will consist of installation of acceleration and deceleration lanes for the south-bound lane of Kamehameha Highway and the installation of left-hand turn storage and through lanes for north-bound traffic.

The above description of roadway improvements which was included in the 1983 EIS is essentially identical to the currently proposed action. A minor change to the currently proposed roadway system is the addition of a left-turn storage lane into the Heeia Small Boat Harbor. Further, the intersection across from Heeia Small Boat Harbor will require design coordination with the State of Hawaii Department of Transportation due to plans for Heeia Small Boat Harbor expansion. Figures 5 and 6 are conceptual presentations of the currently proposed intersections at Kamehameha Highway. Drainage Improvements. The project site is within a drainage basin bounded by Kaneohe Bay and the ridge line mauka of the project.

C.



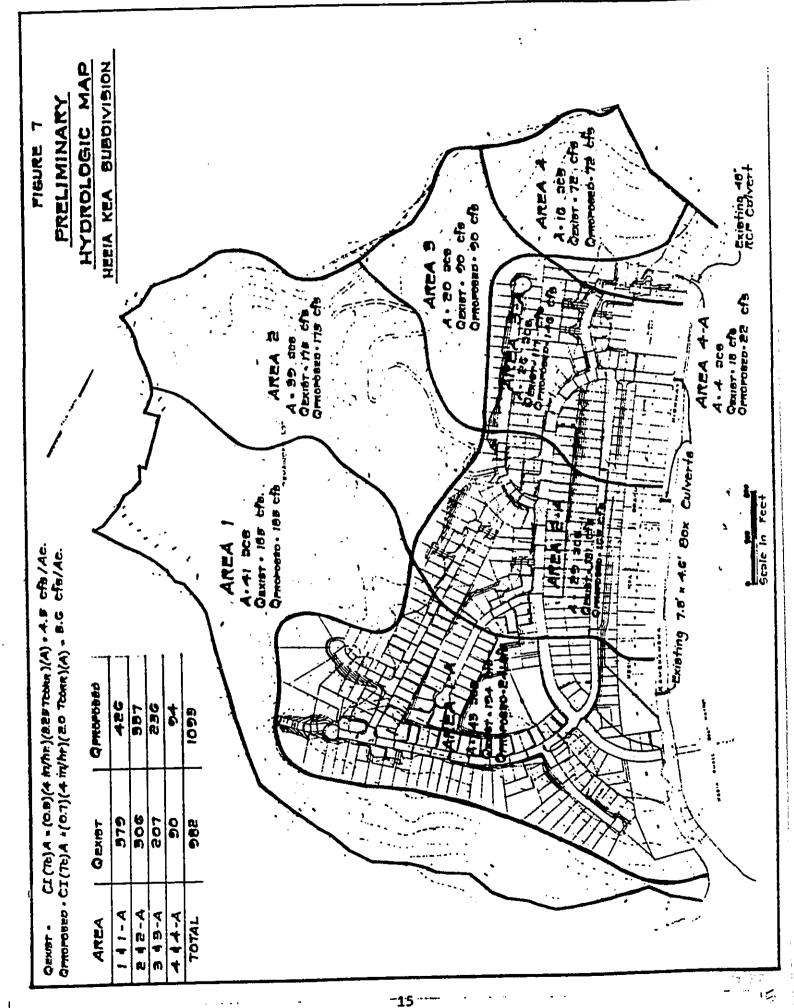


There are four existing dry gullies (subbasins) within the drainage basin which discharge all storm runoff into Kaneohe Bay.

The previous EIS states that the three existing box culverts and the existing 48-inch RCP drain line passing under Kamehameha Highway and discharging into Kaneohe Bay appear to have sufficient capacity to handle storm runoff anticipated from the development. Based on the fact that no additional drain outlets into Kaneohe Bay will be necessary, drainage improvements will be made within the proposed subdivision and will be limited to catch basins, field inlets, underground pipe sytems, and interceptor ditches. Drainage improvements below the Mean Higher Water Line (MHWL) are not anticipated.

The project site is within Zone D of the Flood Insurance Rate Map and is not subject to Ordinance 80-62 (Flood Hazard Districts) of the City and County of Honolulu. Zone D represents areas of underdetermined but possible flood hazard.

The above description of drainage improvements which was included in the 1983 EIS is also applicable and essentially identical to that required under the current



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development proposal. Figure 7 shows the preliminary runoff map contained in the 1983 EIS which is applicable to the current proposal.

Water System Improvements. The previous EIS stated that on-site water system improvements would consist of a 8-inch water lines and fire hydrants installed within the subdivision roadways, in accordance with the Board of Water Supply standards. The EIS also stated that the Board of Water Supply's 272' Punaluu System was adequate to serve the project's average daily demand of 195,000 gallons, a peak daily demand of 585,000 gallons, and residential fire flow requirement of 1,000 gallons per minute. million gallon reservoir was required for this project as indicated by the Board of Water Supply. The Board further indicated no water commitment will be granted until construction plans were prepared and approved.

On-site improvements for the proposed project as revised by this SUP EIS will consist of 12-inch and 8-inch water lines and fire hydrants installed within roadways. The project will have an average daily demand of 194,000 gallons and a 582,000 peak daily demand. A larger water line will be provided

in commercial and industrial areas to allow for fire flow requirements of 2,000 and 4,000 gallons per minute, respectively. A 1,500 gallon per minute fire flow will apply to the low-density apartment area.

As identified in the previous EIS, a water master plan will be prepared and submitted to the Board of Water Supply for approval.

The two proposals are essentially the same with the exception of the additional fire flow requirements for the low-density apartments, industrial and commercial areas.

. Sanitary Sewer System Improvements. The previous EIS stated that the only viable method of sewer collection and treatment was through connection to the City and County sewer system. Two alternative schemes were developed. The first alternative involved connection to the existing sewage pumping station and force main to Kaneohe Sewage Treatment Plant. The second alternative tied into an 8-inch gravity line proposed for Kahaluu-East. The City and County indicated preference for the first alternative with an additional requirement for two sewage pumping stations.

Sewage from the subdivision was masterplanned to be treated at the Kaneohe Sewage
Treatment Plant prior to disposal via the
Mokapu Outfall. The possibility of treating
all sewage from the Kaneohe-Kailua area at
one facility located in Kailua was also being
considered at that time. The design average
and peak flows for the total Heeia Kea
Subdivision were 0.17 million gallons per day
and 0.97 million gallons per day,
respectively.

Under the current action, the project will generate an average daily sewage flow of 0.14 million gallons per day and a peak flow of 0.83 million gallons per day. Therefore, the sewage flows identified in the previous and current actions are essentially identical.

It is proposed to pump sewage to the existing City and County Kaneohe Treatment Plant via the Heeia-North Subarea routing. This routing follows Kamehameha Highway and was the preferred alternative of the 1983 EIS. One permanent pump station built to County standards will be located on-site and will transfer all sewage to the existing sewage pump station site adjacent to the "long bridge." The "long bridge" pump

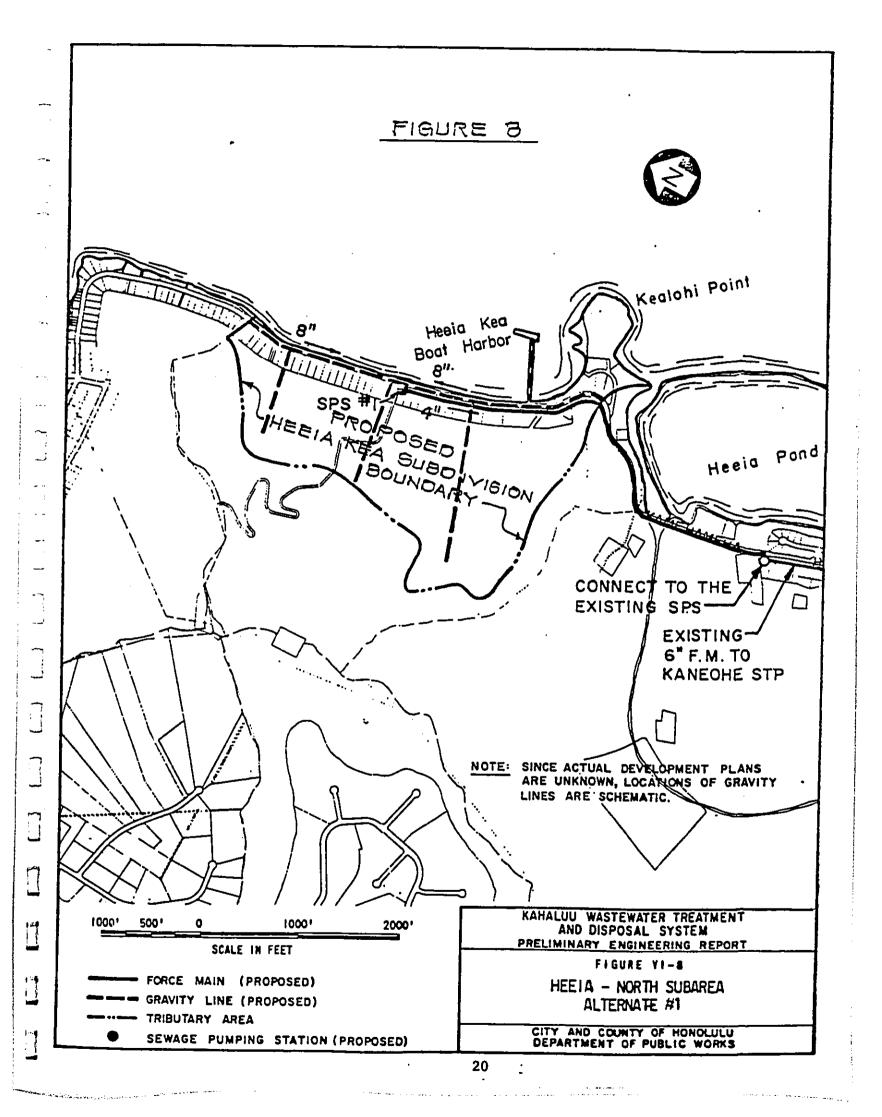
station site will be the project's point of connection to the City system (see Figure 8). The City has already committed to upgrade the existing pump station at the "long bridge." Operation and maintenance of the permanent pump station on-site will be by the City & County of Honolulu.

The Heeia Kea Subdivision will be provided with underground electric and telephone service. Connection to Hawaiian Electric Company and Hawaian Telephone Company existing systems will be made at Kamehameha Highway. The previous EIS stated that the existing systems appeared adequate and that both utilities have long-range planning to accommodate this project.

The above description of electric and telephone system improvements which was included in the 1983 EIS is also applicable to the currently proposed project.

E. Landscaping. Landscaping described in the 1983 EIS included trees along the subdivision roadways and a 3.5 acre park planted with a combination of shade trees, grassed lawns and hedges.

The currently proposed project will include the 3.5 acre park, which will be



dedicated to the City and County of Honolulu, in addition to a 1.7 acre landscaped buffer along Kamehameha Highway. The 3.5 acre park will fulfill the project's Park Dedication Ordinance requirements.

#### 2. Economic Characteristics

The 1983 EIS stated that the Heeia Kea Subdivision would offer an additional supply of single-family lots to meet market demands and serve residents of Oahu. A marketing study was prepared by Cowell & Co., Inc. in January 1983 to support that claim. The study concluded that there will be a good to excellent demand for single-family residential units developed at Heeia Kea.

marketing study in January 1985 (Appendix A). The study concluded that a strong demand for new single-family housing continues to exist in the Koolaupoko district. The location of the Heeia Kea property is also attractive for development since it provides excellent views to Kaneohe Bay and is within convenient driving distance to shopping facilities, schools, public facilities and establishments within the Kaneohe area. Proposed residential units will find excellent market acceptance and will satisfy a small portion of the demand for additional housing units in Kaneohe.

The study went on further to discuss commercial/industrial development. It was reported that there are only six acres of business-zoned land that are vacant and available for development, representing 5 percent of the total business-zoned land in Kaneohe to Kahaluu. In their opinion, the amount of business-zoned land available is inadequate to serve the area over the next 10 to 20 years.

#### 3. Social Characteristics

No changes to the social characteristics of the area have occurred since completion of the 1983 EIS. The previous EIS stated that the residential nature of the development would create a suburban atmosphere typical to that of existing residential subdivisions located in the general area. No significant change in social characteristics of the area was anticipated.

In conjunction with this supplement, a social impact analysis has been prepared. This assessment is contained in Appendix C and identifies diverse views of the affected residents with respect to development of the site.

## 4. Environmental Characteristics

No changes to the environmental characteristics of the area have occurred since completion of the 1983 EIS. As presented in 1983, soils are typical of Windward Oahu. Further, there are no

sandy beaches, notable viewplanes or beach access which will be affected. Field surveys and literature review found no evidence of rare, endangered or unique flora and fauna.

Drainage from the area enters Kaneohe Bay and both the previous development proposal as well as the current proposal will maintain this pattern. Sewage disposal in the area is by use of cesspool which will cease upon development. Finally, existing substandard structures on the mauka side of Kamehameha Highway will be removed as reported in 1983.

# D. Use of Public Funds or Land for the Action

The 1983 EIS stated that public funds or lands will not be used for the project. Left-turn storage lanes and acceleration and deceleration lanes on Kamehameha Highway will be constructed by the developer at the developer's cost. Roads will be created by the developer for public use and for Board of Water Supply access to the existing reservoir mauka of the site.

The above discussion of public funds and lands which was included in the 1983 EIS is also applicable to the proposed project.

#### E. Phasing and Timing of Action

Actual phasing and timing for construction of the project is dependent on the state of the economy, market conditions, approval of the proposed Koolaupoko

Development Plan amendment, and approval of a change of zone application. The previous EIS anticipated construction to be completed in five phases over a period of 6 to 9 years with a start not earlier than 1984. The proposed project is anticipated to have the same construction phasing with a projected start not earlier than 1988.

# F. Summary Technical Data

A summary of technical data was listed in the 1983 EIS. There are no changes to the technical data and the listing has not been duplicated in this supplement.

## G. <u>Historic Perspective</u>

As reported in the 1983 EIS, the site was used for pineapple cultivation until about 1930. During World War II, the site was occupied by the military for what appears to have been relatively intensive training for a Regimental Combat Team. Since World War II, the site has fallen into disuse and has become overgrown with weeds. A few substandard houses exist on the Heeia Kea residential lots along Kamehameha Highway. The lack of a permanent freshwater supply (ground or surface) has inhibited use of the land for agriculture.

Housing demand has stimulated the expansion of new housing into urban fringe areas such as Heeia, Ahuimanu, and Kahaluu. Existing land uses in the surrounding areas of the Windward coast include a mixture of residential, industrial, commercial and small-scale agricultural uses.

# III. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES, AND CONTROLS FOR THE AFFECTED AREA

The previous EIS discussed the relationship of the proposed project to the State Land Use Designation, Hawaii State Plan, City and County 1982 Oahu General Plan, City and County of Honolulu Zoning, Special Management Area, and Hawaii Coastal Zone Management (CZM) Program. Specific policies discussed were population, economy, physical environments, facilities systems, housing, leisure, physical development and urban design, culture, and recreation. The previous action generally complied with the intent of the policies and no significant adverse impacts were anticipated.

Under the current development proposal, the following considerations are included in the Development Plan Land Use amendment application:

#### A. City County Oahu General Plan Objectives

Population: The General Plan objectives for population are "to control growth...in order to avoid social, economic and environmental disruptions,...to plan for future population growth,...to establish a pattern of population distribution that will allow the people of Cahu to live and work in harmony."

The Department of General Planning (DGP), in its August 1985 report on "Residential Development Implications of the Development Plans," projected that Koolaupoko's population in 2005 would be 124,200, or 10,900 more than the 113,300 people estimated to be living in the area in 1984. DGP also projected that 4,900 additional housing units would be required to accommodate this

additional population. In contrast, vacant developable and underutilized lands were estimated to have a potential to accommodate only 4,400 additional housing units. The proposed Heeia Kea project could contribute 220 units toward meeting the need for 500 additional housing units.

Under the population distribution guidelines specified in the General Plan, Koolaupoko could accommodate up to 13.6% of Oahu's projected 2005 population, or a total of 129,800 people. This is 4,600 more people than projected by DGP for 2005. In other words, the actual population of Koolaupoko in 2005 could exceed the DGP projection by 5,600 and still be consistent with the GP population distribution guidelines. Using DGP's projected household size of 3.4 persons/unit for Koolaupoko, approximately 1,650 additional units would be required to house these people. To accommodate the full range of population growth permitted in Koolaupoko under the General Plan, sufficient additional land would have to be designated for residential development to permit the construction of a total of 2,150 new housing units. The 220 additional units which could be provided at Heeia Kea equal only 10% of this total increase.

The original 1977 and all subsequent revisions of the General Plan designate the Heeia Kea area as "urban-fringe" on the "Urbanized Areas" map of Oahu. Such areas generally have a suburban character, with a predominance of lower density residential development and supporting commercial and industrial districts. Ridgelines and other unbuildable lands are retained in open space to protect against unsuitable development and retain major natural areas within and between communities. The proposal for the project site mirrors this development character.

2. Economic Activity: The General Plan objectives for economic activity are "to promote employment opportunities,...to prevent the occurrence of large scale unemployment,...to bring about orderly economic growth on Oahu."

The currently proposed project includes the development of commercial/industrial facilities on a portion of the property adjacent to Kamehameha Highway near the existing Heeia Kea pier. The proposed commercial/industrial area will encourage the development of small businesses which will contribute to the economy of Oahu and provide employment opportunities.

Construction of the proposed project will provide short-term opportunities for construction employment. Also during construction, businesses

that supply construction material will be positively affected by the project.

Natural Environment: The General Plan objectives for the natural environment are "to protect and preserve the natural environment of Oahu,...to preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors."

The proposed master plan for the project is designed to minimize grading and alteration of existing topography and drainage patterns, and to retain mature trees on site for their integration into the future landscaping. The proposed development will not involve construction on the nearby shoreline or the bordering ridgelines. The project site is not a water recharge area nor does it contain any distinctive land forms or endangered plant species.

In addition to a 3.5 acre park, a 1.7 acre, 40-foot wide landscaped buffer strip will be provided along Kamehameha Highway between the project roadway intersections with the highway. This will be maintained as a private park. A trail easement will be provided that will connect the landscaped strip and the main interior roadway with an existing trail to mauka areas for hiking, gathering of plant materials, or other recreational and educational activities. The location of the trail has not yet been identified. Makai views from the most travelled public roadway in the area,

Kamehameha Highway, will not be disturbed as the project site is not in the line of vision from the highway to the ocean.

Housing: The General Plan objectives for housing are "...to provide decent housing for all the people of Oahu at prices they can afford,...to provide the people of Oahu with a choice of living environments which are reasonably close to employment, recreation, and commercial centers and which are adequately served by public utilities."

A choice of living environments will be provided in the form of three different housing types: low-density apartments, single-family homes built under the zero lot line concept, and single-family homes on conventional lots. Prices will correspondingly vary, with at least 10% of the units for low to moderate income households. Lots will also be made available at nominal cost to families residing on the project site.

The project is located only two miles north of Kaneche town, which is an employment, recreation and commercial center. Existing utilities are adequate with the exception of wastewater disposal. The proposed wastewater disposal system will be built to City and County standards and will connect to the existing City and County sewer system. These facilities will be dedicated to the City and County and its maintenance will be paid for by the collection of users' fees.

Transportation and Utilities: The General Plan objectives for transportation and utilities are "...to meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal,...to maintain a high level of service for all utilities,...to maintain transportation and utility systems which will help Oahu continue to be a desirable place to live and visit."

Utilities and infrastructure necessary to support the proposed project as stipulated in the General Plan will be provided as a part of the project development. The proposed development will connect to the City and County sewer system. In addition, the project will involve improvements on Kamehameha Highway to facilitate entry/exit onto the highway from the proposed project.

6. Energy: The General Plan objectives for energy are "...to conserve energy through the more efficient management of its use,...to fully utilize proven alternative sources of energy."

The residential and commercial/industrial structures on site will be designed to accommodate solar water heaters and/or energy efficient appliances.

7. Physical Development and Urban Design: The General Plan objectives for physical development and urban design are "...to ensure that all new developments are timely, well designed, and appropriate for the areas in which they will be located,...to create and maintain attractive, meaningful and stimulating environments throughout Oahu."

The applicant will provide all necessary infrastructure improvements for the project,

coordinated with the phasing of construction. The project will be compatible with the suburban atmosphere and lifestyle of the area. This will be accomplished by maintaining low densities and by preserving much of the valley as open space. The proposed commercial/industrial area is well located to serve the nearby Heeia Kea Pier, residents on site and in the vicinity, and those traveling on Kamehameha Highway.

Design guidelines will be established to control the scale and character of all future buildings, and the project will be developed in phases to ensure a cohesive and harmonious development. The proposed project will be designed to be compatible with the DP Common Provisions and the Koolaupoko DP Special Provisions.

8. <u>Culture and Recreation</u>: The General Plan objectives for culture and recreation are "...to protect Oahu's cultural, historic, architectural, and archaeological resources,...to provide a wide range of recreational facilities and services that are readily available to all residents of Oahu."

An archaeological reconnaissance survey was conducted at the Heeia Kea project site as part of the 1983 EIS. During the survey, six sites were found on the property. Excavation of these features could provide archaeological information on the area. It has been recommended that salvage excavations be conducted on all sites prior to

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construction. Any other significant artifacts or sites encountered during development will be reported to the State Historic Preservation Office.

# B. Development Plan Common and Special Provisions

1. General Urban Design Principles and Controls 
Public Views: The DP urban design principles and
controls for public views are: "public views
shall be protected,...maintain and enhance
available views of significant landmarks."

The project is mauka of Kamehameha Highway and will not affect views of the major visual feature in the vicinity, Kaneohe Bay.

The proposed project includes a 3.5 acre park fronting Kamehameha Highway. This provision of open space will provide public views from Kamehameha Highway toward mauka areas. Views along the project's Kamehameha Highway frontage will also be enhanced through the provision of a 1.7 acre, 40-foot wide landscaped buffer. The design and siting of all structures on site shall take into consideration appropriate building heights, setbacks, design and siting controls established in the Comprehensive Zoning Code, in order to enhance views of the ocean from the project site.

None of the views of major landmarks from public places identified in the Koolaupoko DP Special Provisions will be affected by the proposed project.

2. General Urban Design Principles and Controls Open Space: The DP urban design principles and
controls for open space are: "the City's
mountains, hills, shoreline and streams shall be
considered as major scenic, open space and
recreational resources. Adequate public access to
these resources shall be incorporated as part of
developments adjacent to them."

The open space resources of the hills mauka of the project site will be available to the public via trails from roadways and the public park in the project site. The project area does not contain any mountains, shoreline or streams. Public access to Kaneohe Bay will not be affected by the project since the project is located mauka of Kamehameha Highway.

The proposed project will not adversely affect the visibility, preservation, enhancement and accessibility of open space areas identified in the Koolaupoko DP Special Provisions.

General Urban Design Principles and Controls 
Vehicular and Pedestrian Routes: The DP urban
design principles and controls for vehicular and
pedestrian routes are: "landscaping shall be
provided along major vehicular arterials and
collector streets,...pedestrian corridors shall be
provided in heavy traffic areas."

A 40-foot wide landscaped strip will be provided along Kamehameha Highway to provide a visual buffer. Landscaping will also be provided along collector streets within the project site. Streetscape elements along project roadways will include plantings, street lamps, sidewalk paving treatments, coordinated street sign design and

building facades, and building setbacks. All parking areas on site will be visually buffered with landscaping.

Pedestrian corridors will be provided in the proposed commercial area. These corridors will include plantings, street furniture, attractive building frontages and other pedestrian-oriented design elements. These corridors will also be designed to minimize contact with vehicular movements.

General Urban Design Principles and Controls General Height Controls: The DP urban design principle and control for general height controls is as follows: "maximum allowable heights for structures in each land use classification and for designated special areas are specified in the special provisions of each development plan."

The applicant will comply with the maximum allowable heights for structures which are specified in the Koolaupoko DP Special Provisions.

5. General Urban Design Principles and Controls Energy Efficiency in Developments: The DP urban design principle and control for energy efficiency in developments is as follows: "efficient energy use shall be encouraged in all developments."

All structures on site will be designed to accommodate solar water heaters and/or energy efficient appliances.

6. General Urban Design Principles and Controls 
Existing Built-up, Single-Family Residential

Areas: The DP urban design principle and control
for existing built-up, single-family residential
areas is as follows: "new development in existing
communities shall generally be limited to that
which is compatible with or enhances the desired
physical and social character and lifestyle."

The project site is located in Heeia Kea, which Ordinance 83-8 describes as an area "where residential development of a low-density suburban character already exists". The proposed project will be designed to be compatible with the physical and social character and lifestyles of the existing neighborhood. The architectural design of all non-residential structures on site will be compatible in character with the surrounding residential uses.

7. General Principles and Controls for Parks,

Recreation and Preservation Areas: The general principles and controls for parks, recreation and preservation areas are: "suburban and new development areas shall include land for open space and recreation purposes at a minimum of 2 acres per thousand persons."

normally be required to include 2 acres of open space. The 3.5 acre park which will be dedicated to the City and County for active recreational purposes, and the 1.7 acre landscaped buffer along Kamehameha Highway which will be maintained as a private park, together provide more than 2-1/2 times this standard.

8. Identification of areas, sites and structures of historical significance: The objective of the identification of areas, sites and structures of historical significance is as follows: "the continued use, enhancement or preservation of such areas, sites and structures shall be incorporated or promoted in any applicable action by the City."

Salvage excavations on the six sites encountered during the archaeological survey will be conducted prior to construction. Any other significant artifacts or sites encountered during development will be reported to the State Historic Preservation Office.

9. Social Impact Management System: The objective of the social impact management system is: "to enable residents of an area who will be affected by a proposed development project to systematically examine the expected social impact of that development and,...to identify alternative ways of managing or mitigating any expected negative social impacts."

According to the Department of General Planning, the Social Impact Management system presently consists of consultations with the appropriate Neighborhood Boards.

parcel were opposed by certain community groups. Between September 1984 and June 1985, the applicant met regularly with members of Heeia-Kea Community Association, Hui Malama Aina O' Koolau, and the Waiahole-Waikane Community Association and representatives of Neighborhood Boards Nos. 30 and 29 under the auspices of the Conflict Management Program (CMP) of the Neighborhood Justice Center of Honolulu in an attempt to plan a development proposal which was acceptable to all parties (hereinafter referred to as the Planning Group). The Planning Group concluded its efforts with a

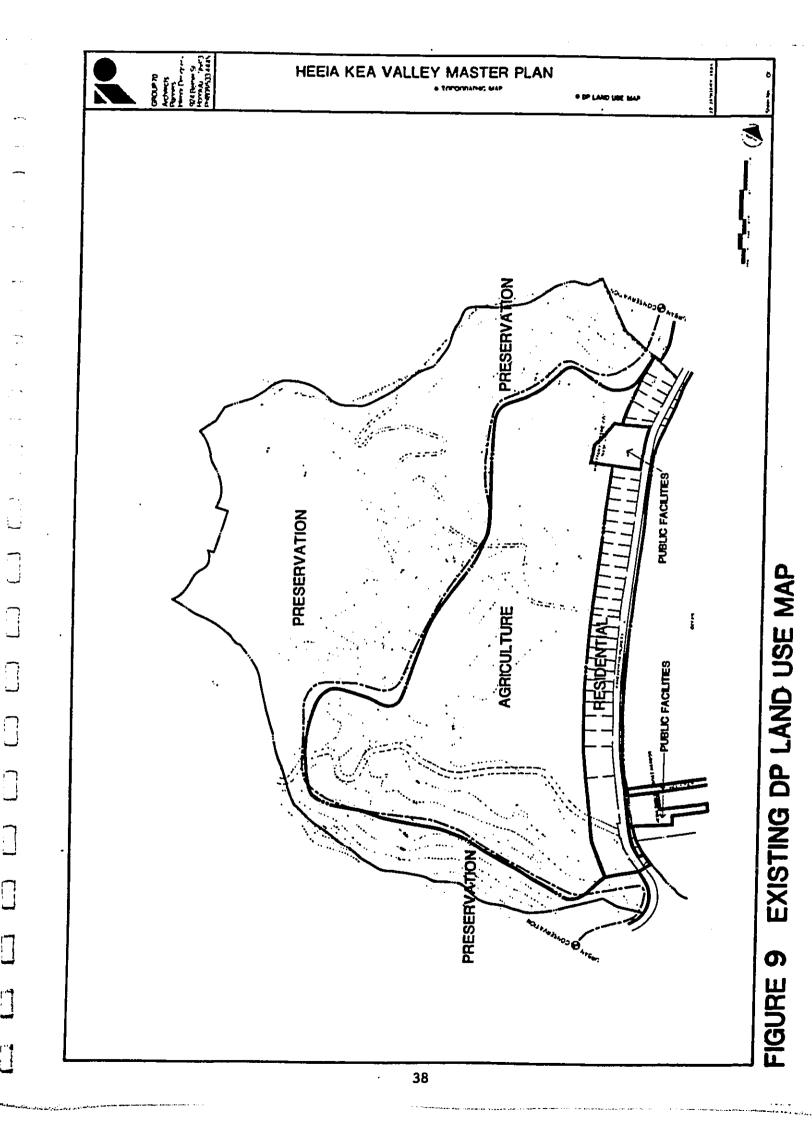
in June 1985. While much progress was made, some concerns with respect to the physical and social impacts of the proposed uses remain unresolved. Appendix C of this supplement contains a complete social impact analysis which further discusses social impacts on the community caused by the subject project.

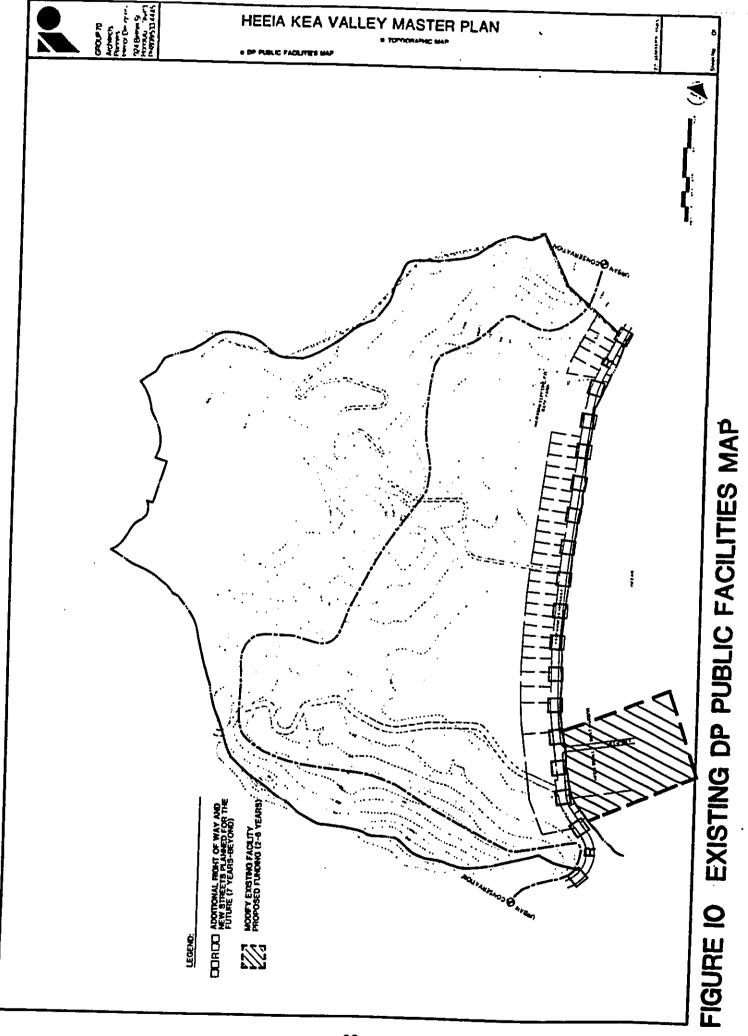
# C. Koolaupoko Development Plan Land Use Map

The existing DP Land Use Map designations for the project site are shown in Figure 9, and the proposed designations are shown in Figure 3. Nearby buildable areas -- i.e., lands in Kaneohe, on the opposite side of the ridge in Ahuimanu, and further north along Kamehameha Highway -- are all designated for development which is predominantly residential in character. The proposed land use pattern for this project is compatible with these surrounding uses.

# D. Koolaupoko Development Plan Public Facilities Map

See Figure 10 for existing Public Facilities Map designations for the project site. The impact of the proposed uses on public facilities and utilities is essentially identical to that provided in the 1983 EIS.





# IV. DESCRIPTION OF THE ENVIRONMENTAL SETTING AND THE PROBABLE IMPACT OF THE PROPOSED ACTION

# A. Physical and Chemical Characteristics

# 1. Physical Geography

The following discussion of physical geography summarizes that which was included in the 1983 EIS and is also applicable to the proposed project.

Windward Oahu generally consists of the steep cliffs of the Koolau mountain range which transitions to the coastal plains adjacent to Kaneohe Bay. The project site is located adjacent to Kaneohe Bay on coastal plains consisting of alluvial deposits. The average slope of the subdivision is approximately 10 percent. The slope increases mauka of the subdivision site to as much as 40 percent and rises to a ridgeline which varies in height between 500 and 600 feet.

The entire property comprises a self-contained watershed with four subbasins. Drainage is by overland flow that ultimately discharges into Kaneohe Bay through four drainage structures beneath Kamehameha Highway. There are no permanent streams on the property.

Approximately 250,000 cubic yards of earthwork will be required with approximately 50 acres being graded. The earthwork will have no direct adverse impact on the physical

characteristic of the site. The proposed drainage system consisting of catch basins and field inlets transporting runoff through existing drainage structures and into Kaneohe Bay will not have any adverse impact on the existing drainage patterns. Indirect impact on water quality will be discussed in a later section.

#### 2. Soils

The following discussion of soil characteristics summarizes that which was included in the 1983 EIS and is also applicable to the proposed project.

The soils of the Koolau coastal plains generally consist of the Kaena-Waialua and Lolekaa-Waikane soil associations. The soils on the project site belong to the Kaena-Waialua association. This association is described by Foote, et al (1972) as "Deep, mainly nearly level, and gently sloping, poorly drained to excessively drained soils that have a fine-textured to coarse-textured subsoil or underlying material; on coastal plains and talus slopes and in drainage ways".

From mauka to makai of the property the soils are Alaeloa silty clay (55%), Lahaina silty clay (35%), and Ewa silty clay (10%). The soils are suitable for a residential subdivision. The erosion hazard is moderate to low. A soils

engineering report will be prepared to specifically analyze the site conditions.

proposed grading and installation of utilities and roadways will have no direct adverse affect on the soils of the area. Vegetation cover will be destroyed during the preliminary construction phase of the project and will be ultimately replaced by landscaping. Soil loss during the interim periods, when soil is exposed and can potentially be washed away by surface runoff, can create an adverse impact on water quality.

## 3. Surface Water Quality

The following discussion of surface water quality summarizes that which was included in the 1983 EIS and is also applicable to the proposed project.

Under existing conditions, the site affects the surface water quality of Kaneohe Bay when there is sufficient rainfall to produce stormwater runoff which discharges into the bay via existing drainage structures. During dry weather conditions when no runoff is produced, the site has little or no effect on Kaneohe Bay water quality.

The Heeia Kea Subdivision will not change the existing conditions, i.e., the only time the project site will affect Kaneohe Bay is during periods when runoff is produced. The urbanized portion of the project will increase the total runoff volume by 15 percent -- representing a 0.1 percent increase to the total Kaneohe Bay watershed runoff. The impact to Kaneohe Bay is considered negligible recognizing that during periods when runoff from the project area is produced, the bay will be under considerable stress from runoff of the total Kaneohe Bay watershed.

Runoff from residential areas as compared to unurbanized areas have equal or lower nitrogen and suspended solid loading and higher phosphorous loading. However, the combined impact of all urban pollutant discharges is expected to be proportional to the increase in runoff to Kaneohe Bay -- approximately 0.1 percent.

The project will also have beneficial effects to the water quality with the elimination of the use of cesspools in the area adjacent to Kaneohe Bay.

## 4. Groundwater Quality

As stated in the 1983 EIS, the project site is makei of the Board of Water Supply "no pass

zone" and groundwater below the site is not a source of potable water. There is no existing impact to groundwater quality and the proposed subdivision will not create any new impact.

## 5. Air Quality

The following discussion of air quality summarizes that which was included in the 1983 EIS and is also applicable to the currently proposed project.

The previous EIS identified the fact that there are no upwind activities generating pollutants for miles and it is reasonable to assume that present air pollution levels are low.

The previous EIS discussed results of a carbon monoxide study conducted for this project. Based on a worst case analysis and complete development of the project, the predicted carbon monoxide concentrations were well below the State of Hawaii Air Quality Standards (AQS). Therefore, no significant impact on air quality was predicted for the project and no direct mitigation measures were proposed with respect to auto emissions.

Temporary short-term air quality impacts were anticipated during construction earthwork activities by fugitive dust and engine exhaust, both of which are subject to City and County and State regulatory controls. The amount of short-term construction-related air quality impacts were

anticipated to be within regulatory limits.

#### 6. Noise

The following discussion of noise impacts summarizes that which was included in the 1983 EIS and is also applicable to the proposed project. The discussion regarding aircraft noise has been updated to reflect current information but is essentially the same as that included in the 1983 EIS. Noise impacts relating specifically to the currently proposed project are discussed in the last paragraph of this section.

The previous EIS reported existing noise levels in and near the project site as being low for a majority of the time. Periodically, however, the project site is exposed to aircraft noise from the Kaneohe Marine Corps Air Station. According to information included in the 1983 Air Installation Compatibility Noise Zone (AICUZ) for Marine Corps Air Station Kaneohe Bay, approximately 1/3 to 1/2 of the project site is located within the Ldn 60-65 AICUZ contour. Chapter E, Current Noise Zones, of the AICUZ indicates that although an Ldn 65 dBA is normally compatible with residential land use on the mainland, additional consideration of compatibility should be given to planned residential land use in the Ldn 60-65 decibel noise zone. This is consistent with the findings of the land use compatibility study for the Honolulu International Airport which suggests that sound insulation may be needed to be incorporated in new housing construction in areas exposed to Ldn 60-65 dBA. It should be noted that these levels represent average noise levels and do not represent the short duration noise levels generated by passing aircraft that can be as high as 80 dBA.

The State of Hawaii noise regulation for residential areas in Chapter 43, Community Noise Control for Cahu indicates a 55 dBA level for daytime hours and 45 dBA for nighttime. These regulations, however, apply to stationary sources and do not apply to noise generated by aircraft.

Noise will be generated during construction and noise levels are regulated by State of Hawaii and OSHA standards. Certain activities such as earthmoving are not allowed during weekends nor non-working hours.

The project by itself should not substantially increase ambient noise levels. It was anticipated that the noise levels would be similar to other Windward urban areas.

The previous EIS addressed noise impacts in a project which only contained residential areas.

The proposed project has been modified to include approximately five acres of commercial and

industrial area. A small portion of these areas will abut area zoned for residential use. Therefore, under the current proposal there is a possibility that noise from the commercial and industrial districts could have an impact on the adjoining residential districts. Noise could be generated from stationary equipment such as exhausts and air-conditioning, as well as traffic vehicles such as trucks associated with commercial activities.

#### 7. Climate

The climate is typical of coastal Windward Oahu with temperatures varying between 73 and 80 degrees Fahrenheit and with rainfall averaging 44 inches per year.

## 8. Agriculture

The following discussion on agriculture summarizes that which was included in the 1983 EIS and is applicable to the currently proposed project.

In its existing condition, the site does not support agriculture. However, 46 acres within the valley have been designated by the Agricultural Lands of Importance to Hawaii (ALISH) as wother important agricultural land.

The previous EIS stated that of the 46 acres of land designated as ALISH, 25 acres were within the R-6 Residential District and 21 acres were

within the P-1 Preservation District. An agricultural feasibility study was prepared by Dr. Frank S. Scott, Jr., Ph.D, in conjunction with the previous EIS. The study listed six soil subseries existing on site with 40 to 45 acres of land near the makai portion of the project with soils suitable for agriculture. The study anticipated good orchid crop production and fair truck crop production based on ecological criteria. However, the subject land failed to meet criteria for market potential, profitability, comparative production advantage and production intensity. Production costs would be high due to steeper terrain and the requirement for City and County provided water. The study concluded that the project site is only marginally suitable for crop production.

Under the current City and County Zoning District Map, approximately 25 acres of ALISH land are now within AG-1 Restricted Agriculture District and 21 acres are within P-1 Preservation District. Under the proposed DP Land Use Map amendment, approximately 33.5 acres of land would be designated for agricultural use.

## B. <u>Biological Characteristics</u>

### 1. Flora

The previous EIS included a Flora Report prepared by Mr. Charles H. Lamoreux which stated

that no unique, rare, or endangered plants were found on the subdivision site. Inventory of plants included hau, hala, tropical almond, coconut, hable koa, java plum, and Christmas berry. Cultivated species introduced by man exist along the highway.

#### 2. Fauna

The previous EIS included a Fauna report prepared by Dr. Andrew J. Berger. The fauna on the project site was documented as consisting solely of introduced species, of which many are pests to man. No suitable habitat on the site for any endemic Hawaiian animals was identified.

As stated in the previous EIS, the proposed development will not have any adverse impact on native Hawaiian animals.

#### C. <u>Cultural Factors</u>

#### 1. Land Use

The project site is currently used for a few house sites near Kamehameha Highway and for a waste depository. Agricultural use has been reported as only marginally viable. As stated in the previous EIS, the proposed development of the site will not jeopardize any significant uses of the land. The current proposal preserves 33.5 acres of land for agricultural use.

## 2. Archaeological and Historical Resources

The archaeological and historic resources information included in the previous EIS is summarized below and is applicable to the currently proposed project.

An Archaeological Report was prepared in 1982 by Archaeological Consultants of Hawaii in conjunction with the previous EIS. Six sites were located on or near the R-6 residential portion of the project area. Three of the sites were terraces which appeared to have been used for agricultural purposes, two of the sites were identified as religious structures, and one site was identified as a bottle dump. The EIS suggested that consideration could be given to restoration and/or preservation of two of the shrines. It was also recommended that an archaeologist be present to monitor landclearing and grubbing.

From a historical perspective, there is little or no written information available on Heeia Kea. An early Alexander and Baldwin map indicated that land was devoted to pineapple cultivation between early 1900 through the 1930's. Military records indicate that a camp was constructed for a Regimental Combat Team during World War II. After the war, small family-sized

dwellings appeared on the property along Kamehameha Highway.

# 3. Aesthetics and Viewplanes

The 1983 EIS reported there is presently no aesthetic value to the site. It is currently restated that the aesthetic value of the site is diminished. The site is choked with weed species and littered with car bodies and waste. A view of Kaneohe Bay is limited due to existing hau and hala trees along the shoreline. The subdivision will make a view of the bay possible to residents of the upper portions of the subdivision. Views of Kaneohe Bay presently available to the general public travelling on Kamehameha Highway will remain unchanged.

# D. Traffic

The previous Environmental Impact Statement for the project site which was accepted in 1983 described development which would ultimately contain 418 residential units. The Environmental Impact Statement reported that the project would create two main intersections with Kamehameha Highway and each intersection would be equipped with acceleration lanes, deceleration lanes and left-turn storage lanes. One of these intersections was directly across from the existing Heeia Pier. It was reported that the project would create an additional 3,000 average daily vehicle trips and 300 peak hourly vehicle trips. Vehicle

distribution figures showing projected traffic were presented in the 1983 EIS and are still applicable today.

The previous Environmental Impact Statement further analyzed the intersection of Lilipuna Road/ Kamehameha Highway which is approximately two miles south of the proposed project site and at the northerly edge of Kaneohe Town. This intersection is the closest signalized intersection to the project site. Analysis conducted consisted of a critical lane analysis which is a simple planning tool that allows general evaluation of the capacity/adequacy of an intersection. Conflicting movements are tabulated and the degree to which the conflicting movements approach 1500 provides an indication as to how the intersection is performing. The critical lane analysis performed in conjunction with the previous Environmental Impact Statement generated values of 1290 conflicting movements and 1430 conflicting movements for the A.M. and P.M. periods, respectively. Under existing conditions the A.M. and P.M. values were 1220 and 1350, respectively. It was concluded that conflicting movement values were less than the 1500 guideline value but that the conflicting movement counts were approaching the guideline capacity value. (Recent review of the 1982 existing traffic data has revealed erroneous data. As described later in this section, traffic volumes at Lilipuna Road/

Kamehameha Highway/ Haiku Road have remained relatively stable).

The 1983 Environmental Impact Statement also briefly commented on the project's effect on regional traffic, and particularly the Kahekili Highway and Likelike Highway intersection as well as trans-Koolau corridors. It was reported that the peak hour period would increase until improvements were implemented. The major project to improve trans-Koolau traffic congestion was implementation of the H-3 Freeway.

This Supplemental Environmental Impact Statement identifies differences between the previous proposal and that which is currently under consideration. The current development proposal identifies 360 residential units, 4 acres of industrial development, and 1 acre of commercial development. The following table (Table 2) identifies traffic projections resulting from the current development plans as compared to that described in 1983. As identified, peak hourly traffic and average daily traffic generated from the project site are essentially identical to that described in 1983.

Table 2
TRAFFIC PROJECTION COMPARISON

| Land Use  | 1983 Proposal                                      | 1986 Proposal                                      |
|---|--|--|
|   | Average Peak Daily Hour Traffic Volume (ADT) (PHV) | Average Peak Daily Hour Traffic Volume (ADT) (PHV) |
| Residential<br>Industrial <sup>1</sup><br>Commercial <sup>1</sup> | 3,000 300  | 2,540 252<br>240 40<br>450                         |
| Total   | 3,000 300  | 3,230 292  |

<sup>(</sup>Source): National Cooperative Research Report 187
Quick-Response Urban Travel Estimation Techniques and
Transferable Parameters. Transportation Research Board,
National Research Council, Washington, D.C., 1978

with respect to improvements, it is proposed to create two main intersections from the project connecting to Kamehameha Highway. The intersections will be provided with acceleration lanes, deceleration lanes, and left-turn storage. Figures 5 and 6 provide a conceptual plan of the proposed intersections. This conceptual plan is identical to that proposed in the 1983 Environmental Impact Statement, with the exception that the entrance to the Heeia Small Boat Harbor has been shown. The State of Hawaii Department of Transportation indicates that there are plans to expand the harbor complex and detailed coordination with this Department will be required during design. However, the proposed plan to provide acceleration, deceleration and storage lanes at the Heeia Small Boat Harbor

Department during the consultation period of this Supplemental Environmental Impact Statement. In addition, traffic signal duct lines will be provided at the intersection adjacent to Heeia Small Boat Harbor.

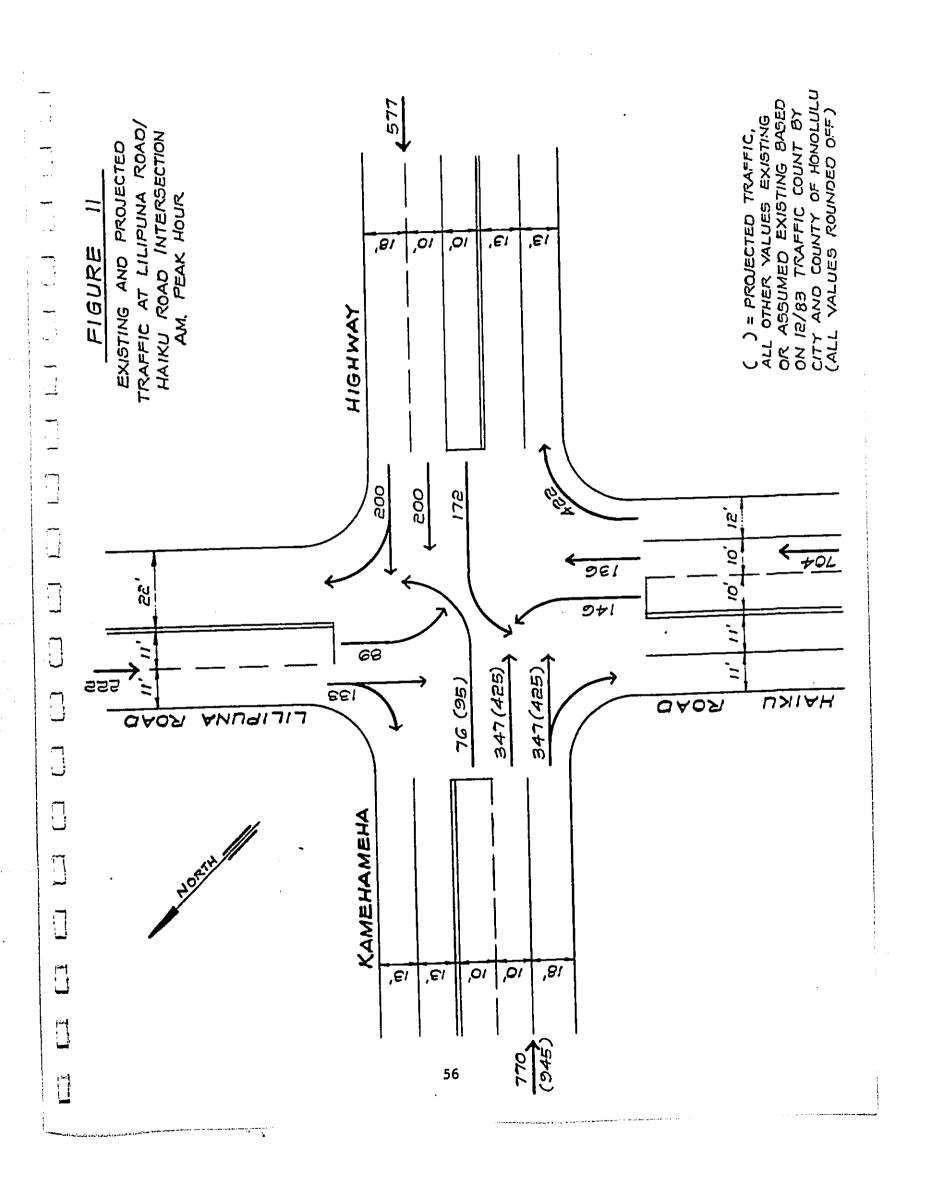
With respect to analysis of the Lilipuna Roadway/Haiku Road/Kamehameha Highway, the following schedule summarizes peak hour approach volumes for surveys taken in years 1982 through 1985.

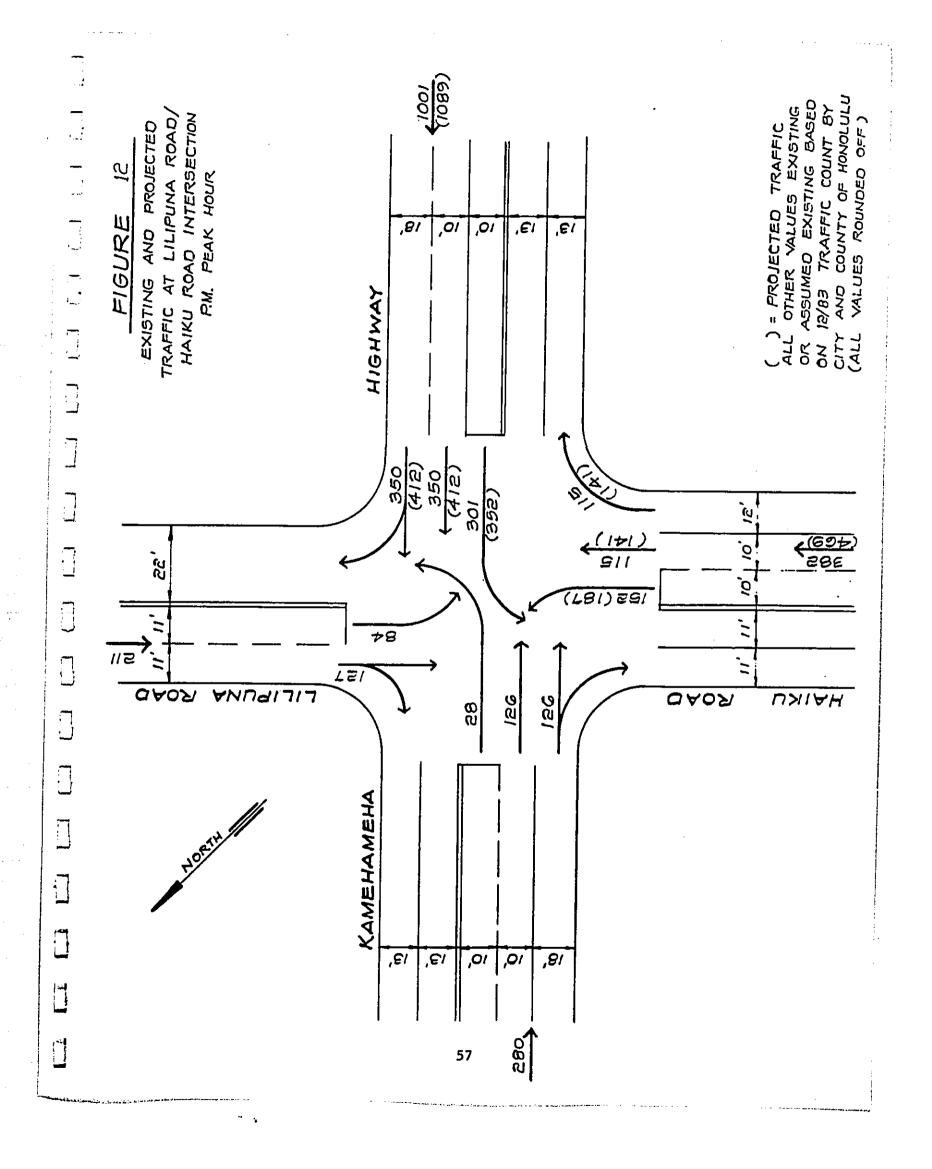
# Approach Volumes

| Year | A.M. Peak | P.M. Peak |
|------|-----------|-----------|
| 1982 | 1,869     | 2,091     |
| 1983 | 2,273     | 1,874     |
| 1984 | 2,079     | 1,873     |
| 1985 | 2,157     | 1,888     |

From the foregoing schedule, it is clear the level of peak hour traffic at this intersection has remained relatively stable and that the significantly higher volumes reported in the 1983 EIS (1982 data) were in error.

A critical lane analysis was performed using 1983 data since this is the highest peak hour occurring over the last four years. Figures 11 through 14 show the critical lane movement analysis for existing and proposed conditions. Under both A.M. and P.M. peak hour conditions the proposed development will generate



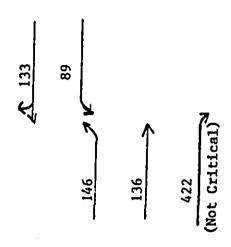


## FIGURE 13

#### CRITICAL LANE MOVEMENT CALCULATIONS

## A.M. Critical Lane Volume - Lilipuna/Haiku

#### 2 Phase Operation



146 + 133 = 279 ... Use is greater than 136 + 89 = 225

#### A.M. Critical Lane Volume - Kamehameha Highway

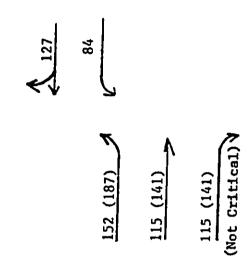
425 + 172 = 696 ... Use is greater than 200 + 95 = 295

- Projected A.M. Critical Lane Volume = 279 + 696 = 975 Vehicles
  Existing Critical Lane Volume = 279 + 519 = 798 Vehicles
  - 975 ∠ 1,500 Allowable ...
- ( ) = Projected Volume,
  All others existing or assumed existing conditions

#### FIGURE 14

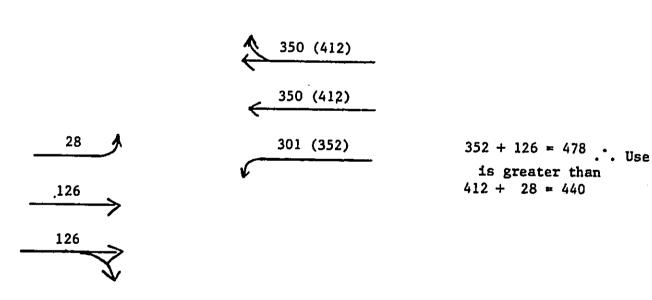
## P.M. Critical Lane Volume - Lilipuna/Haiku

## 2 Phase Operation



187 + 127 = 314 . . . Use is greater than 115 + 54 = 199

# P.M. Critical Lane Volume - Kamehameha Highway



- Projected P.M. Critical Lane Volume = 314 + 478 = 792 Vehicles
  Existing Critical Lane Volume = 279 + 476 = 755 Vehicles
  - 796 < 1,500 Allowable . . Below but close to recommended maximum.
- ( ) = Projected Volume,
  All others existing or assumed existing conditions

critical lane movement values of 975 and 796, respectively, which is less than the guideline value (1,500). It should be recognized that after complete development of the proposed project, there will be increased congestion at the Lilipuna Road/Kamehameha Highway intersection. However, as identified later in this section, there are current proposals for regional traffic improvements which will offset the increased traffic congestion at this intersection.

While it is not possible to propose specific improvements in conjunction with this development proposal which will improve the regional traffic pattern, it is possible to report the current status of regional traffic improvements which are being considered by appropriate governmental agencies which have jurisdiction over regional traffic. At the present time there are two agencies which have provided comments and/or recommendations and/or proposed improvement plans which address regional traffic considerations. These agencies are the State of Hawaii Department of Transportation and the City and County Department of Transportation Services. Both agencies recognize the need for regional traffic projects to improve traffic flow within Windward Oahu as well as improve traffic flow across the trans-Koolau corridor. The State of Hawaii Department of Transportation has specifically proposed and has been actively pursuing implementation of the H-3 Freeway system since the early 1970's.

Recently, the City and County of Honolulu has also suggested improvements which are specifically aimed at increasing the capacity of the trans-Koolau traffic system. Therefore, both government agencies have similar policies which acknowledge that additional capacity is required for the trans-Koolau corridor in conjunction with population growth on the Windward side of Oahu.

With respect to regional traffic improvements on the Windward side of Oahu, the State of Hawaii Department of Transportation and the City and County of Honolulu Department of Transportation Services have identified projects which will improve traffic flow in concert with trans-Koolau corridor improvements. The projects which are identified are: improvements to the Castle Junction interchange, improvements to the Likelike Highway/Kahekili Highway interchange and improvements to Kahekili Highway consisting of widening from Likelike Highway to Kamehameha Highway. latter two projects will specifically improve regional traffic flow in the Heeia/Ahuimanu/Kahaluu area. These regional traffic improvements are based on an analysis of existing conditions as well as population projections for growth in the Windward area.

With respect to timing considerations, it is anticipated that the currently proposed project will be developed in phases. The planning process, including

completion of the development plan amendment and change of zone will take approximately 18 months. proposed project will be implemented in phases of approximately equal size over a period of 6 to 9 years. Regional traffic improvements, including improvements to the trans-Koolau corridor, as well as those identified within Windward Oahu, are partially related to the disposition of the H-3 Freeway. For example, improvements to the Castle Junction intersection and the Kahekili/Likelike Highways intersection are subject to modification depending on the final design of the H-3 Freeway or other trans-Koolau traffic improvements. However, the foregoing Windward traffic intersection improvements and widening of Kahekili Highway will be implemented regardless of the outcome of the H-3 Freeway issue.

In addition to these foregoing, there are other factors which have been researched regarding both local and regional traffic. Appendix B contains a traffic analysis for the Heeia Kea project site based on development of 500 residential units. In conjunction with this analysis, census data and traffic data were compared. The following observations were reported:

- 1. The population within Windward Oahu grew from approximately 16,000 to 23,000 between census years 1970 and 1980.
- 2. The peak traffic flow using all trans-Koolau corridors has remained relatively constant

over the same period of time and up through 1983. This statement was true based on using 1-hour peak period as well as 3-hour peak period.

3. The average daily traffic utilizing the trans-Koolau corridor has remained relatively constant over a period starting in 1978 through 1983.

The foregoing observations indicate the trans-Koolau corridors are carrying what is considered to be the maximum volume during the peak hour period. However, it is surprising that the average daily traffic has not increased somewhat proportionately to the population growth within Windward Oahu.

Review of census data indicates there are definite trends in driver habits which provide an explanation why average daily traffic has not increased proportionately to population growth. These trends are identified below:

- 1. The amount of jobs within Windward Oahu has increased significantly faster than the population growth. Therefore, fewer Windward residents are dependent on Leeward Oahu for employment. One example of this factor is the opening of Windward Mall.
- 2. Significantly more people were using carpools in 1980 as compared to 1970. There was an

average of 1.17 persons per car utilizing the trans-Koolau corridor in 1970 as compared to 1.45 persons per car in 1980.

3. Use of public transportation has significantly increased between 1970 and 1980. In 1970, 0.7 persons per 100 households used public transportation to commute to work. In 1980, 6.9 persons per 100 households were using public transportation.

#### E. Public Utilities and Services

#### 1. Water

The 1983 EIS reported water will be made available to the site by connection to the Board of Water Supply's existing 272' Punaluu transmission system consisting of a 30-inch transmission main. The previous EIS determined that the project will have an impact on the capability of the Board of Water Supply's system, although not considered significant. The project's average daily flow of 0.2 million gallons per day and peak flow of 0.6 million gallons per day water consumption rates are part of the island's growth which has been master-planned. Additional storage capacity of 0.3 million gallons per day will be required by the project. The developer will be required to pay the Board of Water Supply's prevailing water system facilities charges for source-transmission.

Under the current development plan the project will require approximately an identical amount of water to meet average and peak demands. Current plans indicate water can be made available However, the by connection to the 272' system. exact hook-up point for the development's water system is dependent on the timing of the project in relation to the Board of Water Supply water development plans and will be determined when the Water Master Plan is submitted to the Board of Water Supply for review and approval. Small segments of 12-inch distribution main will be required to meet higher fire flows in the commercial and industrial districts, but the primary component of on-site transmission system will be a 8-inch main within the project's roadway system. The requirement for 0.3 million gallon storage capacity is still applicable. For the single-family residential units of this development, the present facilities charges range from \$523 for a 5/8-inch meter to \$4,184 for a 2inch meter. The developer will be required to pay the prevailing charges when water meters are installed for the development.

# 2. Sewage Treatment and Disposal

The project site under its existing conditions is served by cesspools. There is no

existing centralized sewage collection system for the area.

The Heeia Kea Valley project will be connected to the City and County master-planned sewer system for the area. The project will have a beneficial impact on the existing conditions by eliminating the need for sewage disposal utilizing cesspools.

The previous EIS stated that the project will have an impact on the existing City and County sewage treatment facilities. The average and peak flows anticipated for the subdivision were 0.17 mgd and 0.97 mgd, respectively. The 1983 EIS reported the additional load should not be significant since connections will not be made until all components of the sewer system have been reviewed and determined to be adequate or upgraded.

Under the current development plan the project will generate an average sewage flow of 0.14 mgd and peak flow of 0.83 mgd. The sewage flows are essentially identical to the 1983 proposal. The description of the existing conditions and probable impacts are also identical.

#### 3. Telephone and Electrical Service

An existing telephone and electrical system is located within the Kamehameha Highway right-of-

way fronting the project site. The existing system is adequate for the area and has the capacity to serve the project. As stated in the previous EIS, no significant impact is anticipated with respect to telephone and electric service.

#### 4. Solid Waste Collection

The City and County of Honolulu refuse collection vehicles presently pick up refuse in the area and will continue to do so for the Heeia Kea subdivision. Although no direct impact is anticipated regarding the method of collection, an impact will be caused by an increased demand on the island refuse collection system.

#### 5. Police and Fire Protection

The Heeia area presently has adequate police and fire protection. With respect to fire protection, the present site is halfway between the Kaneohe and Kahaluu stations. Response time and distance factors are 6 minutes and 3.2 miles, respectively. The previous as well as current actions will increase the workload for police patrols as well as increase the demand on the Fire Department. The previous EIS stated that increased demand on the Police Department and on the Fire Department will not be significantly adverse since both departments have current patrol responsibilities in the area. Property taxes from

the residential units will be partially used to increase necessary services.

The proposed project includes low-density apartment units. No structures are over 3-stories and additional fire support equipment such as ladder trucks will not be required based on consultation comments received from the Fire Department.

#### 6. Schools

A comparison of Department of Education estimates for total enrollment generated by the previously proposed subdivision and current action is as follows:

|                   | No. of children |              |
|-------------------|-----------------|--------------|
| <u>School</u>     | <u> 1983</u>    | <u> 1986</u> |
| Heeia Elementary  | 40-100          | 40-80        |
| King Intermediate | 10-25           | 10-20        |
| Castle High       | 15-40           | 15-35        |

In 1983 the Department of Education indicated that the three schools were capable of accommodating the increased enrollment. The Department of Education has now indicated that Castle High is operating at capacity and may require funding for additional classrooms. The tax base created by the proposed housing will contribute to this expansion.

#### 7. Recreation

There are no existing recreational facilities on the project site. Within the Heeia area, sites available for recreational activities include Heeia Small Boat Harbor and Heeia State Park. The previous and current actions both include a 3.5 acre park which will be dedicated to the City and County and developed in accordance with City and County standards. The park plans will be coordinated with the Department of Parks and Recreation. The proposed project will also include a 1.7 acre landcape buffer which will be maintained as a private park.

As stated in the previous EIS, the proposed subdivision will potentially increase usage of existing facilities. However, no significant adverse impacts on recreational activities in the area are anticipated provided the 3.5 acre park is appropriately planned and developed.

#### 8. Mass Transit

City and County bus service exists on Kamehameha Highway fronting the project and this bus service will serve the proposed project. Based on average values of 4.1 persons per household and a 25 percent bus use factor, the project could generate between 360 and 440 mass transit users on a daily basis.

Additional buses for routes serving the Heeia area will be provided as necessary based on an evaluation of the whole bus system's demand. If the bus system's capabilities do not suit the user needs, alternative modes of transportation (normally automobiles) will be found. As stated in the previous EIS, the proposed project's impact on the bus system is not anticipated to be significant.

#### 9. Ambulance Service

Availability of ambulance service was not discussed in the 1983 EIS. However, based on consultation comments received for this Supplemental EIS from the City and County of Honolulu, Department of Health, the ambulance fleet is adequate to handle emergency pre-hospital medical care and emergency ambulance services for the proposed development.

#### F. Social Characteristics

A study was prepared in August 1986 by Earthplan (Appendix C) which examined the project's potential social impacts, particularly as related to the character and culture of Kahaluu. The assessment's Study Area included the communities of Ahuimanu, Kahaluu, Heeia and Kaneche. A summary of the study's findings are as follows:

The communities of the regional "neighborhood" share some similar characteristics.

Compared to Oahu as a whole, both communities tend to have larger households, be more family-oriented and less mobile, and their median incomes are higher. Kahaluu and Kaneohe have relatively higher labor force participation and less unemployment than the islandwide community. The housing vacancy rate is very low in these communities and both experience a very high proportion of owner-occupied units.

In many cases, however, the population of these communities are different. Kaneohe has a lower educational level, and Kahaluu has proportionally more professional, administrative, and other white-collar workers. The median value of Kahaluu's owner-occupied units are much higher than those in Kaneohe and its median rent is lower than that of Kaneohe.

This information indicates that Kahaluu tends to have a more diverse population than Kaneohe, or Oahu as a whole.

while Kahaluu has more people who have attended college, it also has more people who did not attend high school. Its proportion of families below poverty level resembled the island's proportion, even though its median income exceeded the island median. Further, some of Kahaluu's residents have higher-than-average mortgage

payments, and the community's renters must allocate a higher percentage of their incomes to rent, even though their median rent is lower than that of Kaneohe or Oahu.

Another major difference between these communities is their growth patterns. While Kahaluu and Kaneohe share agricultural roots, the pace of urbanization in Kaneohe was much quicker than Kahaluu. Today, Kaneohe's suburban nature, with its shopping malls and planned communities, is a sharp contrast to the slower-paced changes in Kahaluu.

Given these differences in histories and residential makeup, Kahaluu and Kaneohe seem to have different goals and concerns. The community pools and Neighborhood Board minutes indicate that Kahaluu wishes to retain this rural pace and enhance their agricultural activities, while improving public services to a level typical of larger population base. Kaneohe's concerns center around their ability to accommodate their already growing population.

The Study Area reactions to the development of Heeia Kea are rooted in these differences in community directions and concerns. While no Study Area organizations have yet responded to the Preparation Notice of the Supplemental EIS, some have provided comments on previous proposals and

these are identified in this assessment. Most of their concerns were similar to those of Study Area people interviewed.

To further identify community feelings and concerns, interviews with seventeen Study Area residents were held. An effort was made to select individuals who collectively represented a diversity of interests. A summary of concerns raised by those interviewed is as follows:

- All those interviewed believed there is a strong need for housing in the area, and most felt that housing is appropriate for Heeia Kea. People differed, however, as to the type of housing the valley should accommodate. Some felt that Heeia Kea should have homes priced for average and higher income families. Others felt that Heeia Kea should address the need for low-priced homes.
- The project's traffic impacts on the immediately surrounding areas, as well as the regional trans-Koolau system, was raised by all those interviewed. Some indicated that they would be satisfied if the developer made necessary improvements to accommodate this particular project. While the others acknowledged that the regional problem "was not the applicant's problem", they also felt that the

applicant should either participate in solving the regional problem, or that the project should not proceed until the regional problem is solved.

- appreciation for the site's existing beauty and a desire to retain it. Some felt that, with proper planning, the proposed project could maintain and enhance this beauty. Others felt that any change to the existing character would be a negative one, although some of these people also felt that the trade-off would be worthwhile if the project were primarily affordable housing.
- Some people felt that Heeia Kea's most important value was that it serves as a transition, or buffer area, between suburban Kaneohe and rural/agricultural Kahaluu. This concern was expressed even though the proposed density would be lower than that of the abutting community on the Kahaluu side. These people were primarily Kahaluu residents and they wanted to retain this quality, either with a very low density residential project, or by establishing agricultural activities, or by planning for both uses through "whole valley planning".

frequently, were the need to continue to stimulate the construction activities in Windward Oahu which would, in turn, provide jobs; the noise impact of KMCAS aircraft on future Heeia Kea residents; the project's compatibility with the Heeia Kea pier and Kaneohe's Bay's ocean resources, particularly as related to Coastal Zone Management regulations; the future of the current residents; runoff into Kaneohe Bay; and the type of onsite industrial activities.

The bulk of concerns raised on the development of Heeia Kea center around quality of life issues which generally revolve around a personal and collective sense of well-being.

Such issues range from people's perception of how a project may affect an individual's daily activities and routine to how a project may ultimately impact a particular community's social fabric and goals for the future.

The social issues previously discussed generally fall into three categories of how people see this proposal affecting their quality of life: need for housing, inconveniences of inadequate public systems and infrastructure, and the creation or maintenance of a community identity.

#### Need for housing

While this need ultimately boils down to a personal need for housing, it is usually expressed by a community which feels that such a need exists in their midst.

Some people felt that more housing will allow young families to remain on the Windward side, as well as stimulate the economy, particularly the construction industry. Heeia Kea will improve this situation for those who believe that more market housing units are needed, or for those who are looking for a house at market rate.

should address the need of those who cannot afford to participate in the current housing market, most of whom are renters or are doubling up with their families, the project will allocate a portion of the proposed units for families with low and moderate incomes. These people were not satisfied with this level because they feel that Heeia Kea should house primarily families who cannot qualify for conventional housing.

# Inconveniences of Inadequate Public Systems and Infrastructure

The best example of this quality of life issue is traffic, which was the most common

concern on the Heeia Kea project.

The kinds of solutions recommended by the Study Area individuals depended largely upon their "acceptance" of the traffic problems. Those who were satisfied by the applicant making improvements for this project seem to feel that traffic is and will be a perennial problem and people must learn to live with it. Those who do not want to allow any new projects until the problem is solved seem to feel that the situation will eventually change for the better.

The medium of these two extremes is the position that the applicant should make improvements as necessary, but also participate in community efforts to solve traffic problems.

The extent to which Heeia Kea will affect this quality of life issue largely depends upon the timing of the project relative to regional roadway improvements. The applicant has indicated that the project will require a couple of years to obtain approvals and permits, and a couple of years beyond that for project build out. It is believed that some of the roadway improvements will

already be completed and this will minimize the impacts.

#### Maintenance or Creation of Community Identity

For some, the intangible transition quality of Heeia Kea signals the arrival at "country", even though there are suburbantype developments on both the Kahaluu and Kaneohe sides of Heeia Kea.

The question of impacting the regional identity therefore goes beyond the project's visual or residential compatibility with the surrounding area. It deals with whether or not this project will contribute to the desired direction and identities of the Kahaluu and Kaneche communities.

Some of the Kahaluu residents interviewed reflected a two-fold desire to retain the rural and agricultural qualities of the area, and, at the same time, to have an equally strong desire to have more of the facilities, amenities and public services associated with the larger population base. These people may feel that the current proposal will "threaten" the rural identity they wish to retain.

Others, however, felt that the community need for more facilities and amenities

outweighed the need to retain the area's rural nature, and they felt that more market developments will help "upgrade" Kahaluu by adding diversity. To them, the current proposal is an asset.

For the Kaneche residents interviewed, most did not discuss the project's value as a transition area. Rather, they centered on the project's infrastructure impacts. They did not seem to feel that the proposal would threaten their community identity.

Thus, in terms of community identity, some Kahaluu residents may feel that their rural identity would be threatened, even though the project site is abutted by single family residential development on the Kahaluu side and despite the distance between the project site and the actual agricultural activities. Other Kahaluu residents, and most Kaneohe residents, may not feel this identity impact either because they are accustomed to this type of project, or because the project is a step in the direction they wish for Kahaluu.

It is noted that the project's future idents will most likely have some consistent graphic characteristics as the existing Study population. Their incomes would probably be

similar to those already in the Study Area, and the family-orientation characteristic would probably be consistent with existing situations.

Further, the project site itself has a mixed identity. Because of the valley's proximity to both Kaneohe and Kahaluu, Heeia Kea is aligned with both communities, depending on the various boundary designations. Whereas it shares the same City Council member as Kaneohe and Kahaluu, its residents vote with Kaneohe residents for its State House Representative, and with Kahaluu residents for its State Senator.

Although it shares much history with Kaneohe and the overall Heeia ahupua'a, it is outside of the Heeia Census Designated Place (CDP). The project site lies in the Kahaluu CDP and is in the jurisdiction of the Kahaluu Neighborhood Board.

It is estimated that Koolaupoko's 1984 population was 113,260 persons, which is 10,931 persons less that the project 2005 population of 124,200 persons. The estimated 1,200 persons resulting from the proposed housing units (based on 3.4 persons per household) would be well within the projected target population.

The City Department of General Planning estimated that the 4,900 additional housing units would be needed to accommodate the projected 2005

Koolaupoko population and that the vacant developable and under-utilized lands have a potential to accommodate 4,400 units. This implies that to fully accommodate the 2005 population, 500 housing units are needed, in addition to the existing and potential housing supply.

Of the proposed 360 units, 120 could be built under the existing Development Plan designations, and these units are already accounted for in the housing supply identified by DGP. The net increased of proposed units is 240, and these would contribute to the estimated housing deficit of 500 units.

The tangible quality of life issues, such as the need for housing and traffic inconveniences, can be partially mitigated by the proposed project. However, the extent of the intangible quality of life impact, namely the impact on community identity, will depend largely on how the community perceives this project relative to their needs and desires.

# V. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The 1983 EIS discussed the following unavoidable adverse environmental effects which are also applicable to the currently proposed project:

- 1. Construction activities will cause minor and temporary increases in noise levels and air quality deterioration. Surface water quality deterioration related to construction will be proportional to the effectiveness of temporary erosion control measures.
- There will be a minor but adverse long term impact on the surface water quality of Kaneohe Bay resulting from an increased quantity of stormwater runoff.
- 3. The Heeia Kea development will produce a permanent demand on the Island's utilities, i.e. water, sewer, electric and telephone systems.
- The project will increase the amount of traffic on Kamehameha Highway and other Windward roadways. The result of increased traffic will be increased congestion and vehicle emissions. The level of service of traffic on Kamehameha Highway will be reduced as compared to ideal conditions but is anticipated that the level of service will be tolerable.
- 5. The noise level in the area resulting from Kaneche Marine Corps Air Station will approach the maximum permissible for residential areas.

6. There will be an increased demand on public facilities, i.e. schools, police protection, fire protection, libraries and recreational facilities.

In light of the foregoing adverse environmental effects, the rationale for proceeding with the proposed project is as follows:

- 1. None of the above adverse effects either singularly or cumulatively is expected to create any significant impact to the area. The proposed subdivision is not out of character with the environment and in fact is very similar in nature to almost all of the residentially developed areas north of Kaneohe town along Kamehameha Highway. The availability of infrastructure and potential views for homeowners make the site ideal for a residential area.
- 2. There is a strong demand for residential housing on Cahu in the median-income group. The proposed subdivision will provide for this market by creating lots of a size which are affordable to a median-income family. The subdivision is not geared toward mainland investment nor is it geared toward estate-type living. Some low and moderate cost units will be included in the project.
- 3. The economic viability of other types of development and in particular, diversified agriculture, are not realistic. Of the crops previously grown on the site, only pineapple achieved any success. This economic success terminated concurrently with the advent of

field mechanization requiring flatter and larger areas for crop production.

4. There is a concern among some within Windward Oahu that each new project that receives approval represents the project that opens the gate to transform the rural character of parts of Windward Oahu into a suburban area. However, neither the location or character of the project site represent such a threat to the community.

# VI. ALTERNATIVES TO THE PROPOSED ACTION

The previous EIS discussed the following alternatives to the proposed action:

- 1) no action
- 2) agricultural development
- 3) reduced density development (190 unit cluster arrangement)
- 4) alternative type housing (planned development and cluster).

These alternatives are also applicable to the revised project.

part of this supplement. Appendix D contains the complete feasibility analysis as prepared by Mr. Mark Yanagihara Brooks. Limiting factors for successful mariculture are fresh water costs, brackish water discharge limitations and high production yield requirements. The report concludes that neither aquaculture or mariculture are appropriate potential uses for land in the project area. The likelihood of sustaining viable mariculture on the site is minimal.

# VII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

As discussed in the previous EIS, development of the site will establish a long-term productivity as a source of median-income housing for Oahu residents. No short-term uses are proposed and no long-term losses concerning agriculture, fauna, water or scenic views are anticipated.

#### VIII. MITIGATIVE MEASURES TO MINIMIZE IMPACT

The 1983 EIS proposed the following mitigative measures to minimize the impact of unavoidable probable adverse environmental effects:

The adverse effects of construction noise will be mitigated by performing work utilizing heavy equipment during daytime hours and during weekdays. No grading activities or activities which produce high noise levels will be allowed during holidays, weekends or before 7:00 a.m. and after 4:00 p.m. In addition, the Contractor is responsible for obtaining a noise permit. Conditions of the noise permit are identification of activities which will exceed 55 decibels, as well as a description of the methods, i.e., mufflers and enclosures, which will be utilized to reduce higher noise levels.

The adverse effects of air quality deterioration during construction will be mitigated by wetting down loose soils when earthwork activities occur or when earth surfaces are exposed. Vehicle emissions from internal combustion engines of construction vehicles will be minimized by ensuring that engines are in proper operating condition.

Surface water quality deterioration will be mitigated by using an erosion control plan during grading. The plan will be reviewed and approved by the City and County of Honolulu. Erosion control will be in the form of performing work during drier periods of

the year and utilizing effective filter berms and sediment traps and sediment ponds. The maximum size grading increment which can be opened at any one time is 20 acres. Every grading increment must be completed and grassed prior to opening of additional increments.

- 2. The long-term adverse effects of surface water quality deterioration to Kaneohe Bay resulting from increase surface runoff are not anticipated to be significant. Permanent landscaping will be used to mitigate increased surface runoff. Landscaped areas will have a greater tendency to retain rainfall and runoff.
- 3. The adverse effects of permanent demands placed on the Island's utilities and facilities cannot be mitigated directly. However, the planning process, construction plan approval process and ultimate subdivision approval process will provide sufficient review to ensure that the project's demands will not significantly affect utilities and facilities. Any utilities and facilities which are inadequate will be upgraded in accordance with the requirements of the appropriate agency.
- The adverse effect of increased traffic will be mitigated by providing channelized intersections within Kamehameha Highway to facilitate turning motions and through traffic. The adverse effect of increased traffic within the Kaneohe area during peak traffic hours will be alleviated once projects, such as the State's H-3 project is completed. The level of traffic

- on Kamehameha Highway will be reduced as compared to ideal conditions, however, it will be tolerable.
- The effect of an increased noise level in the Heeia Kea area resulting from the project is not considered significant. No mitigation measures are proposed other than landscaping around the park area to provide a buffer for neighboring residents. The potential adverse effect of aircraft noise affecting those residential units within the Ldn 60-65 decibel noise zone can be addressed by proper disclosure to prospective buyers during sales and mitigated by the use of appropriate sound insulation/attenuation materials in house construction. It is proposed to utilize insulation and attenuation materials as described by FHA and HUD to meet mortgage requirements.
- It is expected that the additional archaeological work will be completed prior to construction to provide reasonable satisfaction that all significant archaeological value of the site has been appropriately evaluated. The following work will specifically be proposed in conjunction with six previously identified sites:
  - 1. Salvage excavations at all sites.
  - 2. Monitoring of all ground disturbing activities.
  - 3. Preservation of two shrine sites (HK-IV and HK-V).
  - 4. Implement a program of subsurface testing to assess the possibility of subsurface remains.

5. Provide additional historic literature review. The mitigation measures discussed in the 1983 EIS are

applicable to the currently proposed project. In addition, the following mitigation measures are proposed:

Greater setbacks requirements and landscaping buffers are required by the City and County of Honolulu's Comprehensive Zoning Code and Land Use Ordinance where abutting lots have different zoning. These requirements will help mitigate potential adverse impacts relating to noise generated by commercial and industrial areas which affect adjacent residential lots.

- Measures to minimize impact of noise generated by 2. construction activities are identified in State of Hawaii Title II, Administrative Rules, Chapter 43, Community Noise Control for Oahu and Chapter 42, Vehicular Noise Control for Oahu. Included are requirements for mufflers for construction equipment and vehicles requiring gas or exhaust discharge; requirement that traffic noise from heavy vehicles traveling to and from the construction site must be minimized near existing residential areas.
- Additional regional traffic improvements have been 3. identified which will help mitigate traffic congestion. These projects are Kahekili Highway/Likelike Highway intersection improvements and widening of Kahekili Highway. Reduced traffic congestion at Kahekili Highway will, in turn, reduce traffic congestion on Kamehameha Highway.

# IX. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The following discussion concerning commitment of resources was included in the 1983 EIS and is also applicable to the currently proposed project.

The 1983 EIS stated that the implementation of the Heeia Kea Subdivision will represent an irreversible and irretrievable commitment on the land. Project implementation will also represent an irreversible and irretrievable commitment on all utilities and facilities which would normally serve the area. These utilities and facilities are roadways, water, sewer, solid waste, schools, fire protection, police protection and recreational facilities. However, a major portion of the utility and facility commitments are the utilization of manpower and materials.

with respect to resources, only the commitment on the land and degradation to Kaneohe Bay will be nonrenewable for all practical purposes. The water commitment for the project involves a renewable resource which is generally observed to be in adequate supply and therefore, ample to serve this project as well as future growth.

The above statement concerning commitment of resources included in the 1983 EIS is applicable to the currently proposed project.

# X. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENT POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The 1983 EIS indicated that government policy normally directs growth and development in areas suitable for growth with an underlying concern for the environment. The adverse environmental impacts of the proposed project were reported as not significant as compared with the countervailing benefit of housing.

The statements above, included in the 1983 EIS, are applicable to the currently proposed project. However, the project's zoning district and land use designation are currently agricultural.

The SUP EIS identifies three considerations that offset the adverse environmental effects identified in this document. The Koolaupoko DP Land Use Map amendment has been proposed to address three problems facing the City and County:

- 1. The strong demand for new single-family and multi-family housing in the Koolaupoko District.
- 2. The equally strong demand for affordable housing.
- 3. The shortage of vacant industrial and commercial-designated land in the Koolaupoko District.

The currently proposed project will assist the City and County in meeting the needs caused by the inadequate housing supply and the lack of industrial and commercial land in Koolaupoko.

## XI. ORGANIZATIONS AND PERSONS CONSULTED

A Supplemental Environmental Impact Statement Preparation notice was published in the EQC Bulletin on July 23, 1986 for the Heeia Kea Valley, Koolaupoko District, Oahu. Concurrently with publication of the foregoing bulletin, 46 copies of the preparation notice and requests for consultation comments were sent to the agencies and groups identified in the table on the following page. Twenty-five groups or agencies responded with comments and all responses were answered. Appendix E contains a copy of the Supplemental EIS Preparation Notice. All consultation comments and responses are included within this section following the table of agencies and groups contacted for comments.

In addition to the foregoing comments, various consultants and experts were utilized to help prepare portions of the Draft Supplemental EIS. Persons and firms responsible for the preparation of this Draft Supplemental EIS include: Gray, Hong & Associates, Inc., Civil and Sanitary Engineers; Cowell & Co., Inc., Real Estate Consultants; Barry D. Root, Air Quality Consultant; Dr. Frank S. Scott, Jr., Ph.D., Agricultural Economist; Dr. Charles Lamoureux, Botanist; Dr. Andrew J. Berger, Zoologist; Joseph Kennedy, Archaeological Consultants of Hawaii; Mark Yanagihara Brooks, Aquaculture Consultant; Berna Cabacungan, Earthplan, Social Consultant.

XIII. AGENCIES AND ORGANIZATIONS INVOLVED IN THE CONSULTATION PERIOD

| Agency  | Date Notice<br><u>Mailed</u>      | Date of Comment               | Date of Response                 |
|---|-----------------------------------|-------------------------------|----------------------------------|
| City and County of Honolulu   |                                   |                               |                                  |
| Building Department<br>Honolulu Fire Department                                     | 7/22/86<br>7/22/86                | 7/28/86<br>8/12/86            | 9/2/86<br>9/2/86                 |
| Dept. of General Planning<br>Dept. of Parks and Recreation                          | 7/22/86<br>7/22/86                | 7/28/86<br>8/7/86             | 9/2/86<br>9/2/86                 |
| Board of Water Supply Police Department   | 7/22/86<br>7/22/86                | 8/11/86<br>7/28/86            | 9/2/86<br>9/2/86                 |
| Dept. of Public Works Dept. of Transportation Services                              | 7/22/86<br>7/22/86                | 8/1/86<br>8/1/86              | 9/2/86<br>9/2/86                 |
| Dept. of Land Utilization Dept. of Housing & Community Devl Dept. of Health         | 7/22/86<br>pmt 7/22/86<br>7/22/86 | 8/21/86<br>8/12/86<br>8/11/86 | 9/ 2/ 86<br>9/ 2/ 86<br>9/ 2/ 86 |
| State   |                                   |                               |                                  |
| Dept. of Education Dept. of Transportation  | 7/22/86<br>7/22/86                | 7/29/86<br>8/18/86            | 9/2/86<br>9/2/86                 |
| Dept. of Planning & Economic Devl<br>Dept. of Land & Natural Resources              | pmt 7/22/86                       | 8/13/86<br>(None)             | 9/2/86                           |
| Dept. of Health<br>Office of Environmental Quality C                                | 7/22/86                           | 8/14/86<br>(None)             | 9/2/86                           |
| Dept. of Agriculture Dept. of Hawaiian Home Lands Dept. of Social Services & Housin | 7/22/86<br>7/22/86                | 8/19/86<br>(None)             | 9/2/86                           |
| Hawaii Housing Authority State of Hawaii, State Main Libra                          | 7/22/86                           | 8/22/86<br>(None)             | 9/2/86                           |
| State of Hawaii, Kaneohe Regional<br>Library<br>Environmental Center, University    | 7/22/86                           | (None)                        |                                  |
| of Hawaii Water Resources Research Center,  | 7/22/86                           | (None)                        |                                  |
| University of Hawaii  | 7/22/86                           | 8/11/86                       | 9/2/86                           |
| <u>Federal</u>  |                                   |                               |                                  |
| Dept. of the Army, Corps of Engineers U.S. Dept. of the Interior,                   | 7/22/86                           | 8/4/86                        | 9/2/86                           |
| Fish and Wildlife Service U.S. Dept. of Agriculture,                                | 7/22/86                           | 8/18/86                       | 9/2/86                           |
| Soil Conservation Service U.S. Dept. of Defense,                                    | 7/22/86                           | (None)                        |                                  |
| U.S. Marine Corps   | 7/22/86                           | 7/29/86                       | 9/2/86                           |

| Agency   | Date Notice<br><u>Mailed</u>  | Date of<br>Comment           | Date of Response |
|--|-------------------------------|------------------------------|------------------|
| Other  |                               |                              |                  |
| Citizens Against Noise<br>Life of the Land<br>Kaneohe Outdoor Circle                                 | 7/22/86<br>7/22/86            | (None)                       |                  |
| American Lung Association of Hawa<br>Kahaluu Neighborhood Board No. 29                               | 7/22/86                       | (None)<br>(None)<br>(None)   |                  |
| Kaneohe Neighborhood Board No. 30<br>Kaneohe Community Council<br>Kaneohe Business Group             | 7/22/86<br>7/22/86            | (None)<br>(None)<br>(None)   |                  |
| Kaneohe Bay Community Association<br>Hui Malama Aina 'O Koolau<br>Key Project                        | 7/22/86<br>7/22/86<br>7/22/86 | (None)<br>8/21/86<br>(None)  | 9/2/86           |
| Sierra Club (Honolulu Group)<br>Heeia Kea Community Association<br>Honolulu Community Action Program | 7/22/86<br>7/22/86<br>8/19/86 | 8/22/86<br>(None)<br>(None)  | 9/2/86           |
| Mr. Ed Tsukasa<br>Mr. Kahu Edward Kealanahele<br>Mr. Peter Adler                                     | 7/22/86<br>7/22/86<br>7/22/86 | (None)<br>(None)<br>(None)   |                  |
| Kailua Neighborhood Board<br>Mr. and Mrs. Ronald Albu<br>Hawaiian Electric Company, Inc.             | 7/22/86                       | (None)<br>8/18/86<br>8/21/86 | 9/2/86<br>9/2/86 |

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August 18, 1986 Post Office Box 982 Kaneohe, Hawaii 96744

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Brian L. Gray Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Re: Supplemental Environmental Impact Statement for Proposed Development at Heeia Rea Valley, Oahu

Dear Mr. Gray:

We are residents of the area near the proposed development in Hecia Kea and will be directly and personally affected by the proposed development. Accordingly, we wish to be consulted parties in the preparation of the above-referenced EIS. We are particularaly concerned that the EIS address problems of traffic, noise, pollution and increased recreational competition in Kaneohe Bay, increased demands on public facilities and services, and impacts upon schools and overcrowding. Another important factor is the cumulative impact of this project in connection with other projects and areas already approved for development in the existing development plans and under current zoning for the windward side.

You may contact us at the above address. Thank you for this opportunity to have our concerns addressed.

Sincerely,

Parel & Fathy all

Mr. and Mrs. Ronald Albu P. O. Box 982 Kapeohe, Havaii 96744

SUBJECT: Heeis Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. and Mrs. Albu:

Thank you for your letter dated August 18, 1986 requesting that you be a consulted party of the Supplemental EIS. You will be notified when the Draft Supplemental Inpact Statement is available for review.

Your concerns regarding noise, pollution, recreation, education and public facilities were addressed in the Revised EIS prepared in 1983. The Supplemental EIS will summarize the previous findings. However, the Supplemental EIS will address traffic and social impacts which may differ from those reported in the previous EIS.

The previous EIS described development consisting of 418 units on 102 acres in Heeia Kea Valley. As identified in the Supplemental EIS Preparation Notice, the current proposal is for 360 units on 68.5 acres. Impacts with respect to noise, pollution, recreation, education and public facilities are no greater and more probably reduced than reported in 1983, and detailed discussion is not being devoted to these factors in the Supplemental EIS.

Your comments as well as our response will be incorporated into the Draft Supplemental EIS in accordance with Chapter 343, Bawaii Revised Statutes, EIS Regulations.

Very truly yours,

CRAY, BONG & ASSOCIATES, INC.

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119 WERCHANT STREET SUITE 607, HOMOLULU HAMAN 96813 TELEPHONE 18081 571 0.306

United States Department of the Interior

( )

FISH AND WILDLIFE SERVICE
100 ALA MONA BOULEVARD
P.O. 904 20167
HONDLULL, HARAII M810

AUG 18 1986

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Mr. Brian L. Gray Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Re: Supplemental EIS for Heeia Kea Subdivision, Heeia, Oshu

Dear Mr. Gray:

In response to your letter of July 22, 1986, the Service has reviewed the Preparation Notice for a Supplemental EIS concerning the proposed Heeia Kea subdivision, Heeia Valley, Oshu. We have no further comments to offer at this time. Thank you for providing this opportunity to evaluate the project's consequences upon fish and wildlife resources within our jurisdiction.

Ernest Rosaka Project Leader Office of Environmental Services

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Ernest Kosaka, Project Leader Office of Environmental Services United States Department of the Interior 10 th & Wildlife Service 300 Am Moans Boulevard P. O. Box 50167 Hobolulu, Hawaii 96850

SUBJECT: Breis Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Kosska:

Thank you for your letter dated August 18, 1986 regarding the Preparation Notice for the Supplemental EIS. Your letter will be incorporated into the Draft Supplemental EIS in accordance with Chapter 343, Bavail Revised Statutes, of EIS Rules and Regulations.

Should you have any questions please contact our office.

CRAY, HOMG & ASSOCIATES, INC. Very truly yours,

The R. P.

Save Energy and You Serve America!

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119 MERCHAVIT STREET SUITE 607, HONOLULU, HAMAIR DEBLO - TELEPHONE IBORI 521 0306

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GEORGE A. ARIYOSHI GOVERNOR

JACK K. SUMA CHAIRPERSON, BOARD OF AGRICULTURE

BUZANNE D. PLTERSON DENUTY TO THE CHAIRPERSON

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

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BRIAN L. GRAY, PE
DANIEL S.C. HONG, PE
DOYLD B. BILLS, PE
MICHAEL H. NOIMA, PE
BEVERLY G. ING, PE
ROBERT B. JONES

September 2, 1986

Size of Havail
DEPARTMENT OF AGRICULTURE
1428 So. King Street
Honolut, Havail 96814-2512
August 5, 1986

Mailing Address: P. O. Box 22159 Honoluly, Hawaii 96822-0159 AUG 7 1986

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Mr. Brian L. Gray Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

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Subject: Supplemental Environmental Impact Statement (EIS)
Preparation Notice for Proposed Development at Heela
Kea Valley, Oahu
TMK: 4-6-06: 1, 2, 4, 7 through 16, 22 through 55
4-6-16: 32

Dear Mr. Gray:

Pursuant to the subject notice as printed in the OEQC Bulletin (Volume II, No. 14, July 23, 1986), please be apprised that the Department of Agriculture would like to be a consulted party.

Please send pertinent correspondence to:

Mr. Jack K. Suwa Chairman, Board of Agriculture P. O. Box 22159 Honolulu, Hawaii 96822

Thank you very much.

Sincerely

EARL J. YAMAMOTO Agricultural Planner

Mr. Earl J. Yesmoto Department of Agriculture State of Havaii P. O. Box 22159 Honolulu, Havaii 96822-0159

SUBJECT: Reeis Res Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Tenenoto:

We have received your letter dated August 5, 1986 requesting to be a consulted party for the subject Supplemental Environmental Impact Statement. The Department of Agriculture is currently on the list of consulted parties and Preparation Rotice.

Should you have any questions plasse contact our office.

CLAY, HOME & ASSOCIATES, INC. Very truly yours,

5. Brin L. Gay

DI REPLY REFER TO:

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Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street Homolulu, HI 96813

Dear Mr. Gray:

Thank you for your letter of July 22, which contained the Preparation Notice Supplemental Environmental Impact Statement for Heela Kes Valley.

Although the Kaneohe Bay Community Association no longer exists, we would appreciate continuing to receive information such as this. Please delete the Kaneohe Bay Community Association from the address and send it to the Public Affairs Officer, Marine Corps Air Station, Kaneohe Bay, 96863-5001.

If you have any questions, please call me at 257-3319.

Hate R. Hault STANTON R. GOULD Captain, U.S. Marine Corps Public Affairs Officer Sincerely,

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

L. J. L.A.

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BRIAN L GRAY, PE DANIELS C. HONG, PE DANDB BLILS, PE MCHAEL H. MOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

September 2, 1986

Captain Stanton R. Gould Poblic Affairs Officer United States Marine Corps Marine Corps Air Station Mancohe Bay, Mavaii 96863-5001

SUBJECT: Beein ken Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Captain Gould:

We have received your letter dated July 29, 1986 regarding the subject Preparation Motice for the Supplemental Environmental Impact Statement (EIS). As requested, we have deleted Rabeohe Bay Community Association from our list of organizations involved in the consultation period. We will continue to send information to you.

Should you have any questions please contact our office.

CRAT, BONG & ASSOCIATES, INC. Very truly yours,

Fr. Brian L. Gray

119 MERCHANT STREET, SIMTE BOT, HONOLING, HAMMI BEB13 - TELEPHÜME BRRN 521-0306

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BOARD OF WATER SUPPLY CITY AND COUNTY OF HOMOLULU

HONOLÚLU, HAWAR 96843 630 SOUTH BERETAWA

FRANK F FASI Wayo

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DOMNA & GOTH. Charman EPREST & WATARY VCE Charman ALL TOW J. AGAUGH SSSTER W. DAWLINY AH CHCK. OSF RYDICHO W. GASHOWA RUSSILLI, SUTHL, JR WAYNE J. YAVASAKI

KAZUHAYAS#DA Manager and Chef Engineer AUG 1 3 1400 Jake Recovery

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·clion:

August 11, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Your Letter of July 22, 1986 on the Preparation of the Draft Supplemental Environmental Impact Statement for Heeia Kea Subdivision, THK: 4-6-06: 1, 2, 4, 7-16, 22-51 and 4-6-16: 32

Thank you for consulting with us on your proposed development.

We offer the following comments for your consideration:

- A Water Master Plan must be submitted for our review and approval. ij.
- The proposed amendment may result in the developer upgrading those improvements required for the Koolaupoko Development Plan. This potential upgrading would be due to the higher fire flows required for the Industrial and Commercial areas.

If you have any questions, please contact Lawrence Whang at 527-6138.

Very truly yours,

Manager and Chief Engineer KAZU HAYASHIDA

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIEL S.C. HONG, PE DAVID B. BILLS, PE MICHAEL H. NOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

September 2, 1986

Manger and Chief Engineer Board of Water Supply City and County of Honolulu 630 South Beretania Street Honolulu, Havaii 96843 Mr. Kezu Haysebide

SUBJECT: Reeia Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Bayashids:

We have received your letter dated August 11, 1986 regarding the subject Supplemental Environmental lapact Statement (EIS). The following responses are provided to address your comments:

- The Supplemental EIS will state that the water master plan will be prepared and submitted to the Board during the development process. :
- The complete water system, including any necessary upgrading required due to higher fire flows required for the Industrial and Connercial areas, will be analyzed and submitted to the Board in the project's water master plan. 2.

The Supplemental EIS will identify the current project's average daily flow, peak flow and fire flows by district. The Supplemental EIS will also identify the project's storage requirement of 0.3 MG. It will further be identified that portions of the project's on-site transmission system will be 12-inch to provide adequate fire flow to the bigher use districts. All of these preliminary engineering calculations are, of course, subject to your reviev.

Your comments as well as our response will be incorporated into the Draft Supplemental EIS in accordance with Chapter 343, Havail Revised Statutes, EIS Regulations.

In Brian L. Gray

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CRAY, BONG & ASSOCIATES,

Very truly yours,

119 MERCHANT STREET, SUITE 607, HONDLULU, HAMAR 96813 - TELEPHONE (808) 521 0306

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CITY AND COUNTY OF HONOLULU DEPARTMENT OF HEALTH

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1435 S. BERETANIA STRRET MONDLULU, MANAH DODIA

August 11, 1986

Mr. Brian L. Gray Gray, Mong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

SUBJECT: Request for Consultation Comments Supplemental Environment Impact Statement for Heela Kea Valley, Heela, Koolaupoko, Dahu

We have received your report on subject request. Our ambulance fleet should be able to handle the 911 calls for emergency prehospital medical care and emergency ambulance services generated by this project.

Sincerely,

(1 C. Mar. (2 Cost), Fr. A. ALM C. COM, M.D. Director and City Physician

ACC:nt

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Alms C. Corn, M.D.
Director and City Physician
Department of Health
City and County of Honolulu
1455 South Bretania Street
Honolulu, Havaii 96814

SUBJECT: Betia Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Dr. Corn:

Thank you for your letter dated August 11, 1986 regarding the Preparation incorporated for the Supplemental EIS. The information you have provided will be Bavail Revised into the Draft Supplemental EIS in accordance with Chapter 343,

Should you have any questions please contact our office.

Very truly yours,

CRAY, BORG & ASSOCIATES, INC.

the Brian L. Gray

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118 MEROHANT STREET SUME BOT, HONOLINU, HAMAR BEBLU - TELEPHONE (BOB) 571 0306

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FRANK F FASI

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\_TE-3810 \_PL 1.0392

August 1, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Grays

Subject:

Request for Consultation Comments
Supplemental Environmental Impact
Statement for Reeia Rea Valley
Heeia, Roolaupoko, Oahu
THR: 4-6-06: 1, 2, 4, 7 to 16, 22 to
4-6-16: 32

This is in response to your letter of July 22, 1986, requesting comments on the preparation of a Supplemental Environmental Impact Statement for the above project.

We believe that the scope of the additional studies as proposed in your preparation notice will provide the necessary information for us to assess the traffic impact of the project.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

Mr. John E. Birten, Director Department of Transportation Services City and County of Honolulu 650 South King Street, 3rd Floor Bonolulu, Bavaii 96813

SUBJECT: Heeis Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Birten:

Thank you for your letter dated August 1, 1996 regarding the Preparation Rotice for the Supplemental EIS. Your letter will be incorporated into the Draft Supplemental EIS in accordance with Chapter 343, Rawaii Revised Statutes, EIS Regulations.

Should you have any questions please contact our office.

Very truly yours,

CRAY, HONG & ASSOCIATES, INC.

119 MERCHANT STREET, BUTTE BOT, HOHOLUKU, HAMMI 96813 - TELEPHONE (ROB) 521 0306

XI. A-7

CITY AND COUNTY OF HONOLULU POLICE DEPARTMENT

FALLS P. FAL.

DUR REFERENCE CS-DB

DOUGLAS G. GIBS Bleuty Confr JUL 3 0 1986 Date Received

July 28, 1986

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Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Gentlemen:

Request for Consultation Comments Supplemental Environmental Impact Statement for Heeia Kea Valley Heeia, Koolaupoko, Oahu Subject:

We have reviewed the copy of the Supplemental Environmental Impact Statement Preparation Notice that you had forwarded.

The area will be serviced by police officers from the Kaneohe District Station.

ž Our concerns center around the dust and noise that will inevitably be generated during the construction phase of the proposed project and the impact it may have on public safety. have no further comment to offer at this time.

Thank you for the opportunity to review and connent on this project.

Sincerely,

DOUGLAS G. GIBB Chief of Police

By Mind (Sample La.

DAVID HEAUKULANI
Assistant Chief of Police
Administrative Bureau

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

ورانا

BRIAN L. GRAY, PE DANIEL SC HONG, PE DAVIDB, BILLS, PE MIGHAEL II MOJIMA, PE BEVERTS, ING, PE ROBERT B. JONES September 2, 1986

Mr. Douglas G. Gibb, Chief Bobolulu Police Department City and County of Honolulu 1455 South Beretania Street Honolulu, Havaii 96814

Preparation Notice for Supplemental Environmental Impact Statement (EIS) Beeis Kes Valley SUBJECT:

Dear Mr. Gibb:

Thank you for your letter dated July 28, 1936 regarding the subject Preparation Notice for the Supplemental E15. Responses to your concerns are provided as follows:

- We agree that the project will generate noise during construction. However, public safety should not be significantly compromised since noise levels must meet State and OSMA standards. Certain activities, such as earth-moving, will not be allowed during weekends or during non-working hours.
  - Temporary about term air quality impact can result from fugitive dust created during construction activities. However, the air quality impact is subject to City and County, as well as State regulatory controls, and is expected to be within regulatory limits. 5

The information you have provided will be included in the Draft Supplemental EIS. Should you have any questions please contact our office.

CRAY, HONG & ASSOCIATES,

Very truly yours,

INC.

Brian L. Gray

119 MERCHANT STREET, SUITE 607, HOMOLULU HANAN BERT3 TELEPHONE 18081 521 0306

X1. A-8

MONEL & LANGE

FL:3 1 1986 Jele Philas Action STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. D. BOX 1988
HORGIAN, PREM 8884

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIEL SC MOMG, PE DANID BILLS, PE MICHAEL N MJIMA, PE BLVERLY G ING, PE ROBERT B JONES

September 2, 1986

Hr. Brian L. Gray Gray, Kong, and Associates, Inc. 119 Merchant Street, Suite 607 Konolulu, Hawaii 96813

July 29, 1986

OFFICE OF THE BUPEAUTHOOFIT

Dear Mr. Gray:

SUBJECT: Comments on Supplemental EIS For Heeia Kea Valley Heeia, Koolaupoko, Oahu

Our review of the proposed 310 single family and 50 multi-family units indicates that it may generate the following student enrollment:

| APPROXIMATE<br>ERROLLMENT | 40 - 80<br>10 - 20<br>15 - 35                               |
|---------------------------|---|
| GRADE                     | к-6<br>7-8<br>9-12  |
| SCH00L                    | Heeia Elementary<br>King Intermediate<br>Castle High School |

Heeia Elementary and King Intermediate schools have adequate classrooms to accommodate the projected enrollment. Castle High School, on the other hand, is operating at capacity and may require funding for additional classrooms.

Please keep us informed of any developmental changes so that we may be able to respond to classroom needs in a timely manner.

Should you require any clarification, please call Mr. Richard Inouye at 737-4743.

mayan y. Ole Sincerely,

Francis M. Hatanaka Superintendent

... ... ...

cc OBS K. Takata, Windward Dist.

X1. A-9 AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Superintendent State of Breais Department of Education Queen Liliuokalani Building P. O. Dan 2360 Bonolulu, Havaii 96 804 Mr. Francis Batenske

SUBJECT: Heela Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Betenete:

Thank you for your letter dated July 29, 1986 regarding the Preparation Notice for the Supplemental EIS. The atudent enrollment figures you have provided will be incorporated into the Draft Supplemental EIS

Your comments as well as our response will be incorporated into the Draft Supplemental IIS in accordance with Chapter 343, Ravaii Revised Statutes, IIS Regulations.

Very truly yours,

CIAY, BONG & ASSOCIATES, INC.

for Brian L. Gray

DB:1t 1301-1

119  $\nu$ ERCHANT STREET SLITE BOT HOWOLLI LI HAWAII 10813 . TELEPHONE 18081 521 0306 XI , B=9

DPR/ADVANCE PLANNING

DEPARTMENT OF PARKS AND RECREATION

## CITY AND COUNTY OF HONOLULU

630 SOUTH KING STAFFT PONDLULU, MARAII 96818

40 Ä

Mr. Brian L. Gray Gray, Kong & Associates, Inc. 116 South King Street, Room 508 Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Recreational Assessment
Supplemental Environmental Impact Statement
Heela Kea Subdivision
TMK: 4-6-06 and 4-6-16

M: have reviewed the Supplemental Environmental Impact Statement for the proposed Heela Kea Subdivision and make the following comments and recommendation.

We did not have the opportunity to comment on the revised proposal for the Heeia kea Subdivision. Our previous comments of the project EIS review were sent to you on December 10, 1982. We have, however, determined that our recreational concerns for the revised proposal remain the same.

Although a 3.5-acre ...r. site has been designated on the proposed Development Plan Land Use Map. the supplemental report has not addressed the recreational impact that the project will have on our public park facilities in the Heria District.

We would once more like to emphasize that the proposed park must meet City standards and park dedication requirements. The determination of the park site as public or private must also be made at this time so that we may further assess the recreational needs of the project.

Please contact Mr. Jason Yuan of our Advance Planning section to discuss the project's recreational requirements to avoid delays in obtaining City approvals for the proposed project.

De note Sincerely yours,

TOM I. WEKDIA, Director

TIN:e1

Attach.

XI. A-10

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 116 South King Street, Room 508 Honolulu, Hawaii 96813

December 10, 1982

Dear Mr. Gray:

SUBJECT: RECREATIONAL ASSESSMENT
ENVIRONHENTAL IMPACT STATEMENT PREPARATION REPORT
THK: 4-6-06: 1, ET AL. L 4-67-16: 32

We have reviewed the Environmental Impact Statement Preparation Notice for the Heeia Kea Subdivision and make the following comments and recommendations.

The proposed project, which includes more than 400 lots, will have a significant impact on our public parks in this area. The nearest public parks, Heeia Playground and Kahaluu Field, are located over two miles away and could not effectively serve the future residents of this project. The designation of 3.5 acres for a park site is commendable and it could fulfill the recreational requirements if properly planned.

The report does not indicate whether the proposed 3.5-acre park will be developed as a public or private park. This determination should be made and included in the Draft EIS. In either case, the park could satisfy the requirements of the City's Park Dedication Ordinance No. 4621. It will be necessary to coordinate with our Department to establish the configuration, location and suitability of the park site to meet the park dedication and City standards and requirements. This should be done well in advance of any permit applications in order to avoid a delay in our Department approval.

Since the lands surrounding the project are designated conservation, we recommend that the preparation notice be referred to the State Department of Land and Matural Resources for their comments also.

Please contact Mr. Jason Yuen of our Advance Planning Section at 523-4695 to discuss the project's park dedication and City's requirements.

EIK:vc (Jason Yuen, Advance Planning)

FILE COPY

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Tom T. Nekots, Director Department of Parks and Recreation City and County of Honolulu 650 South King Street, 9th Floor Honolulu, Havsii 96804

SUBJECT: Regaration Notice for Supplemental Environmental Environmental Impact, Statement (EIS).

Dear Mr. Mekota:

Thank you for your comments dated August 7, 1986 regarding the Treparation Notice for the Supplemental EIS. We concur that the proposed project will create a demand on existing public park facilities in the Beria District. Bovever, it is our intent to develop a park area to meet the subdivision's needs as well as comply with the City's Park Dedication Ordinance.

The 3.5 acre park site is intended to be dedicated to the City and to satisfy the project's Park Dedication Ordinance requirements. You will be coordinated with to ensure that the park meets City standards and park dedication requirements. The 1983 EIS, as well as this Supplemental EIS, will state that the proposed 3.5 acre park will help off-set the additional recreational demand created by new residential units in the Heria Rea area.

Your letter as well as our response will be incorporated into the Supplemental ZIS.

CRAY, HONG & ASSOCIATES, INC.

Very truly yours,

L. R. R. E.

119 MERCHANI STREET, SUITE 607, HONOLULU, MANNI 96813  $\,\cdot\,$  TELEPHONE (808) 521-0306  $\,$  X1  $\,\star\,$  B= 10

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13:11-1 Jake Received... DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU FF. .....
PT. SMATTER, HARMAIL PRIN - 5440
12. ----

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

August 4, 1986

Acties: ....

BRIAN L. GRAY, PE DANIEL S.C. HOMG, PE DAND B. BILLS, PE MICHAEL H. MOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

September 2, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Thank you for the opportunity to review and comment on the Supplemental EIS Preparation Notice for Heela Kea Valley, Heela, Roolaupoko, Oahu. The following comments are offered:

a. Suggest coordination with Operations Branch (telephone: 438-9258) for potential need of a Department of the Army permit for the box culvert improvements.

b. According to the Flood Insurance Rate Map prepared by the Federal Insurance Administration for the City and County of Bonolulu, the area is in a Zone D designation which are areas of undetermined, but possible flood hazards (enclosure).

Sincerely,

Kisuf/Cheung Chief, Engineering Division

Enclosure

Mr. Kisuk Cheung Chiet, Engineering Division Department of the Army U. S. Army Engineer District, Honolulu Ft. Shafter, Havaii 96858-5440

SUBJECT: Reeia Kea Valley
Preparation Notice for Supplemental
Environmental Inpact Statement (EIS)

Dear Mr. Cheung:

Thank you for your letter dated August 4, 1986 regarding the Preparation Motice for the Supplemental EIS. We are providing the following responses to your comments:

- The Supplemental EIS will detail the acope of the project aufficiently to determine the need for Department of the Army permits. Based on our preliminary work, we do not foresee any need for Department of the Army permits. The existing box culverts under Emekmeha Highway appear adequate and will not be improved by this project. :
  - The project site is within Zone D and there is no requirement to comply with the City and County's Flood Ordinance (No. 80-52). However, a drainage report will be prepared and submitted to the City and County Department of Public Works during the development process. 5.

Tour comments and our responses will be incorported into the Supplemental

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GRAY, BONG & ASSOCIATES,

Very truly yours.

19 MERCHANT STREET SUITE 607 HOWOLLILD HAMAL BERT3 . TELEPHONE 40081521 02006

DB:1t 1301-1

X1. A-11

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

PONDLULU BUNCHFAL BUILDING 810 terra anna 11911 PONDLUC MARCH

FRANK F FABI

MEDIES E MUSICALA MESONA POSTENZA CONTRACTOR DE CONTRACTOR

Liets Racourd ...

July 28, 1986

[JU] 3 0 1896 PB 86-630

-40 Sie:

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Supplemental Environmental Impact Statement Heeia Kea Valley Heeia, Koolaupoko, Oahu

project.

We have no comments on the proposed Reeia Kea Valley

Thank you for the opportunity to review the Supplemental Environmental Impact Statement Preparation Notice for the project.

the withward Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: J. Harada

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Berbert K. Muraoka Director and Building Superintendent Building Department City and County of Ronolulu 650 South King, Street, 2nd Floor Hopolulu, Havaii 96813

SUBJECT: Beeis Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (E15)

Dear Mr. Muraola:

Thank you for your letter dated July 28, 1986 regarding the Preparation Motice for the Supplemental EIS. Your letter will be incorporated into the Draft Supplemental EIS in accordance with Chapter 343, Havaii Revised Statutes, EIS Regulations.

Should you have any questions please contact our office.

Wery truly yours,

CRAY, BONG & ASSOCIATES, INC.

M. Brian L. Gray

DB:1t 1301-1

119 MERCHAM STREET, SUITE 807, HONOLINLU, HAMMI 98813 TELEPHONE, 1906) 521-0306

XI. A-12

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

610 SOUTH KING STREET HONOLULU, KARAII 96813

.:

PUTSTILL BUTH AN OPPOSITE CONTRACTOR ENV 86-166 U ISBB 907 ሯ

August 1, 1986

Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Gentlemen:

Re: Supplemental EIS for Heela Kea Valley Heela, Koolaupoko, Hawaii (Tax Map Key: 4-6-06: Various & 4-6-16: 32)

We are responding to your request dated July 22, 1986, concerning the subject project.

- A drainage report should be prepared and submitted to the Drainage Section, Division of Engineering, for review and approval.
  - The design (sizing), construction, and operation and maintenance of the Wastewater pump station near the Heeia "long" bridge should be coordinated with the Division of Wastewater Hanagement. A construction schedule of off-site sewer improvements should be sent to this office. 7

Very Kruly

. KMITH, JR.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

BRIAN L. GRAY, PE DANIEL SC. HONG, PE DAVID B BILLS, PE MICHAEL H NOJIMA, PE BEVERLY G, ING, PE ROBERT B. JONES

Mr. Russell L. Smith, Jr. Director and Chief Engineer Department of Public Works City and County of Honolulu 650 South King Street Honolulu, Havaii 96813

SUBJECT: Heein Ken Falley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Smith:

Thank you for your letter dated August 1, 1986 regarding the Preparation Notice for the Supplemental EIS. We are providing the following responses to

The EIS prepared in 1983 contained a runoff map for the Resis Res watershed passing through the project. Off-site and on-site runoff criteria were developed and the existing drainage attuctures were identified. We are enclosing a copy of the drainage exhibit which was included in the previous EIS. A similar map as well as all calculations will be submitted to the Department of Public Works in the form of a drainage report during the development process.

It should be noted that the development area of the previous action (1981) was 102 acres, while the current development area is 68.5 acres. The runoff quantities generated by the current development will be slightly less than those shown on the attached exhibit.

Resarding the wastewater pump station near Heeia "long" bridge, the requirement for coordination with the Division of Wastewater Hanagement and your office will be identified in the Supplemental EIS,

CRAY, BORG & ASSOCIATES,

IKC.

Ju B R

119 MERCHANT STREET, SUTTE 607, HONOLULU HAMME 96813 . TELEPHONE (2005) 571-0306

A-13

Should you have any questions please contact our office.

Very truly yours,

XI. 8-13

. Aug 1 3 1986

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

is Air University of Hawaii at Manogan

Water Resources Research Center Holmes Hall 283 • 2540 Dole Street Honolulu, Hawaii 16822

September 2, 1986

11 August 1986

Mr. Brian L. Gray Gray, Hong & Associates 119 Merchant Street, Suite 607 Honolulu, Hawali 96813

Dear Mr. Gray:

Supplemental Environmental Impact Statement Preparation Notice, Heela Kea Valley, Heela, Koolaupoko, Oahu, Hawali, July 1886 Subject:

We have reviewed the subject notice and have no comment at this time. Thank you for the opportunity to comment. This material was reviewed by WRRC personnel.

Sincorely, Shusbayaler Edwin J. Musbayaler

Edwin T. Murabayashi EIS Coordinator

ETM: Ja

Mr. Edvin T. Murabayashi
E1S Cordinator
University of Bavaii at Manos
Water Resources Research Center
Bolmes Hall 283
2540 Dole Street
Bonolulu, Bavaii 96022

SUBJECT: Heein Res Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Murabayashi:

Thank you for your letter dated August 11, 1986 regarding the Preparation Hotice for the Supplemental E18. Your letter will be incorporated into the Draft Supplemental E18 in accordance with Chapter 343, Mavail Revised Statutes.

Should you have any questions please contact our office.

Very truly yours,

CRAY, BONG & ASSOCIATES, DIC.

Jan 2 Rei

DB:1t 1301-1

119 MERCHAMI STREEL SUME 607, MOMOLULLI, MAMMIR DERLU — TELEPHOME (808) 571 0306  $\chi_1^2$  ,  $\chi_1^2$  ,  $\chi_1^2$  ,  $\chi_1^2$  ,  $\chi_1^2$  ,  $\chi_1^2$ 

AN EQUAL OFFORTUNITY EMPLOYFK X1. A-14

CITY AND COUNTY OF HONOLULU DE SELOPMENT SEVELOPMENT S

630 SOUTH AND STREET MONORING HARANDERS PROME 633 4161

Affor

August 12, 1986

ROBERT BITABATO MCHAEL MH. MOON

Mr. Brian L. Gray, PE Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Supplemental Environmental Impact Statement Heela Kea Valley, Heela, Koolaupoko, Oahu THK: 4-6-06: 1, 2, 4, 7-16, 22-51 Area: 58.3 Acres Proposal: Amendment to the Koolaupoko Development Plan

We appreciate the opportunity to comment on the Supplemental EIS for the proposed Heeia Kea Valley project.

The proposal of constructing low-density spartment and single-family units in the agriculture district of the Development Plan has been reviewed by the DHED. The Department is mandated to provide housing units for low- and moderate-income families on Oahu. We note that a Development Plan change is needed, and in accordance with the current Departmental policy, we wish to request that at least ten percent of all residential developments be set aside for these groups. This request applies to all zone changes, cluster and planned development-housing applications. Such a a requirement is a reasonable means of recapturing the economic benefit conferred by favorable land use allocations and distributing that benefit for the general public benefit.

We request that the developer specify the location of the units, as well as the type of unit (1-bedroom, 2-bedroom, etc.) to be provided for low-and moderate-income families.

It should be noted that we are currently reviewing our policy relating to the ten percent set aside and will inform you of any specific policy adjustments adopted.

If you have any questions, please contact Mr. James Hiyagi of our Housing Division at 523-4264, who will assist the developer in formulating a program to provide these units.



GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

Mr. Mike Moon Department of Bousing and Community Development City and County of Bonolulu 650 South King Street Bonolulu, Hawaii 96813

SUBJECT: Heein Ren Valley
Preparation Notice for Supplemental
Environmental Impact, Statement (EIS).

Dear Mr. Moon:

Thank you for your letter dated August 12, 1986 regarding the Preparation Rotice for the Supplemental EIS. The Supplemental EIS will discuss the developer's intention to make available at least 10% of the units for low- and moderate-income families. Your request that the developer specify the location and type of units to be provided for the low- and moderate-income families will also be incorporated into the Draft Supplemental EIS. The location of these units will be the low-density apartment area as shown on the Development Plan Land Use Map contained in the Preparation Motice. The majority of units combination of one and two bedroom units, with the majority of units containing two bedrooms. Improved lots are also being set saide for families belonging to the Heria Res Community Association, some of whom are in the low-and moderate-income bracket, on the Kahaluu side of the valley as shown on the Development Plan Land Use Map contained in the Preparation Rotice.

We thank you for your participation in the ZIS rewiew process. Should you have any questions please contact our office.

Very truly yours,

GRAY, BONG & ASSOCIATES,

IIS JERCHANT STREET, SUITE 607, HONOLULU, HANNIA B6813 — TELEPHONE ROBI 571 0306

DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT HAVE STEEL TO DE STATE ING STOCKED HOME HAVE STEEL TO DE DES POOLE HAMBERS THE STEEL HOTE 

GORC I ANGER ENTER IN EITH MARKET DOWN ROBET A. UNVILLE

Ref. No. P-4852

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August 13, 1986 );

Mr. Brian L. Gray Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Supplemental EIS Preparation Notice for Heeia Kea Valley Subdivision, Koolaupoko, Oahu

We have reviewed the subject preparation notice and offer the

We understand that the proposed Development Plan (DP) land Use Hap District boundary depicted on Figure 2. According to records at the land Use Commission, we found that this boundary is apparently based on a 1963 boundary 18 apparently based on a 1963 boundary 1965. Accordingly, we recommend that a State land use district boundary interpretation be obtained prior to seeking the DP amendment.

Thank you for the opportunity to review and comment on the subject document.

Very truly yours, Many E.

cc: Office of Environmental Quality Control

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Kent M. Reith, Director State of Havaii Department of Planning and Economic Development P. O. Box 2259 Bonolulu, Havaii 96804

SUBJECT: Heeis Rea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Keith:

Thank you for your letter dated August 13, 1986 regarding the Freparation Commission regarding the Exertant EIS. We have contacted the State Land Dae According to their records, the last interpretation for the project area, boundary included in the proposed Development Plan Land Use made in 1964. The hased on the 1964 interpretation, Based on the 1964 interpretation, Based on the above, a new boundary interpretation does not appear to be necessary.

Should you have any questions please contact our office.

CRAT, HONG & ASSOCIATES, INC. Very truly yours,

En Brien L. Gray

119 JERCHAIT STREET, SUITE 607, HONDLULU, HAMMI B6613

X1. B-16

XI. A-16

PASSELL M. FURUMOTO EMENIM PMETER the Peccusians į

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B RRY MILE

DEPARTMENT OF BOCHA, SERVICES AND HOUSING HAWAII HOUSENG AUTHORITY
P. O. BOX 1797
DOCKIAN, MERHI BRIT

STATE OF HAWAII

86:PLMG/5384

August 22, 1986

Hr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Herchant Street, §607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Thank you for the opportunity to review and comment on the Preparation Notice for the Supplemental Environmental Impact Statement for Heela Kea Valley.

The Revised Environmental Impact Statement prepared in 1983 states that this development will provide housing in the median-income price range. Reference has been made that low and moderate cost units will be included in the project. However, the Hawaii Housing Authority would like to recommend specifically that at least ten percent (10%) of the units be specifically that at least ten percent (10%) of the units be rargeted for low and moderate income households. A similar request was previously recommended by the City and County of Foundailu, Department of Housing and Community Development.

We ask that we be kept apprised of the development as it progresses. For any further questions, please contact Colette Sakoda of my staff at 848-3226.

Sincerely,

RUSSELL H. FUKUHOTO Executive Director h. treen. K

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. CRAY, PE DANIEL S.C. HONG, PE DAYDB BILLS, PE MICHAEL H. NOSIMA, PE BEVERLY G. ING, PE ROBERT B. JOMES

September 2, 1986

Mr. Russell M. Tukumoto
Executive Director
State of Havaii
Department of Social Services and Housing
P. O. Box 17907
Hopolulu, Havaii 96817

SUBJECT: Reeia Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (E1S)

Dear Mr. Pukunoto:

Thank you for your letter dated August 22, 1986 regarding the Preparation Motice for the Supplemental EIS. The Supplemental EIS will include a discussion of the developer's intent to price at least ten percent of the bousing units for low to moderate income bouseholds, in line with the City and County General Plan objectives for bousing.

Should you have any questions please contact our office.

CIAT, BONG & ASSOCIATES, INC. Very truly yours.

Les Brian L. Gray

119 MERCHANT STREET, SUFFE 607 HONOLULU HAMMI BEGLU $\sim 1111$  EPHOME REGLI SZ1 0.306  $\chi_1 = 8 + 1.7$ 

X1. A-17

GEORGE R. ARIYDSHI GOVERNOR

MCK K. SUWA CHAIRPERSON, BOARD OF ADRICULTURE

SUZANNE D. PETERSON DEPUTY TO THE CHAIRPERSON

Malling Address: P. O. Box 22159 Hondully, Hawaii 96222-0159 AUG 2 F. 1986 Late Rotered ...

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 So. Ning Staret
Honolul, Hawaii 96318-2512
August 19, 1986 Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Herchant Street, Suite 607 Honolulu, Hawaii 96813

15. DB

Subject: Request for Consultation Comments
Supplemental Environmental Impact
Statement (EIS) for Heeia Kea Vallay
Heeia, Koolaupoko, Oahu
THK: 4-6-06: 1, 2, 4, 7 through 16 and 22 through 51
4-6-16: 32

Dear Mr. Gray:

The Department of Agriculture has reviewed the subject Supplemental Environmental Impact Statement and offers the following comments.

A summary of the proposed amendment, indicates that the development would generally consist of reduced residential densities in both the area involved and total units to be constructed. The proposal would reduce the current acres for Residential designation from 102 acres to 68.5 and actual units constructed would be scaled back from the current level of 418 to a total of 360. The balance of 33.5 acres remaining would be in the Agricultural designation and is located between the existing Preservation and Residential designations. Low Density Apartments and Commercial facilities totaling 51 acres would be developed out of the previously approved Residential area.

Our earlier comments (dated December 7, 1982) concerning the suitability of the project site for agricultural purposes, are attached for your review. We note that some of the soils are better suited for pasture, wildlife habitat, and orchards in the 33.5-acre area proposed for Agricultural designation. Erosion hazards can be severe in areas of steep slope and low water-holding capacity. The location of the proposed Agricultural designation has soil and slope conditions which may

Mr. Brian L. Gray August 19, 1986 Page -2-

adversely affect efficient agricultural use of the site. I there is an intent to utilize the area within the proposed Agricultural area, it should be included in the Draft Supplemental EIS.

Thank you for the opportunity to comment.

Sincerely,

Ack K. SUNA Chairman, Board of Agriculture

Attachment CC: OEOC

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Jack Suva, Chairperson Board of Agriculture State of Havail Department of Agriculture P. O. Box 22159 Hopolulu, Havaii 96822-0159

SUBJECT: Heeis Kes Valley
Preparation Notice for Supplemental
<u>Enviropmental Impact Statement (EIS)</u>

Dear Mr. Suva:

Thank you for your letter dated August 19, 1986 regarding the Freparation fortice for the Supplemental EIS. The currently proposed project does not intend to utilize the 33.5 acres of existing agricultural land between the proposed subdivision and the existing preservation land.

Should you have any questions please contact our office.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

DB:1t 1301-1

119 WERCHAMT STREET, SUME 607, HONOLONU, HAWAN PERTY . TELEPHONE BORISZYGDOS XI. B-18

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[ ] [ ] [ ]

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 1575
MODILILE, MININ 9881

August 14, 1986

e mate, phone rater to

Mr. Brian L. Hong, P.E. Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, HI 96813

Dear Mr. Hong:

Request for Consultation Comments - Supplemental Environmental Impact Statement (EIS) for Heeia Kea Volley, Heeia, Koolaupoko, Oahu TMK:4-6-06: 1, 2, 4, 7 through 16, 22 through 51 4-6-16: 32 4-6-16: 32 Subjects

The following concerns must be addressed when proparing the supplemental EIS for the proposed project:

- Noise emanating from commercial, industrial, and recreational activities may adversely affect adjacent residential areas. Mitigative measures must be incorporated to reduce noise impacts.
- Stationary equipment, such as air-conditioning units, exhaust fans, pumps, and compressors, must be designed so that noise emanting from such equipment will be in compilance with Title II, Administrative Rules, Chapter 43, Community Noise Control for Dahu. ~
- Military aircraft operations at the Kaneche Marine Corps Air Station may seriously affect residents of the proposed project. ĸ
- Activities at the Heels Kes Small Boat Harbor should also be considered as a source of noise affecting future residents. 4
- Construction activities must comply with the provisions of Title 11, Administrative Rules, Chapter 43, Community Noise Control for Oshu:

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- The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the regulations.
- Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers. ئے

The contractor must comply with the conditional use of the permit as specified in the regulations and conditions issued with the permit.

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Traffic noise from heavy vehicles travelling to and from the construction site must be minimized near existing residential areas and must comply with the provisions of Title 11, Administrative Rules, Chapter 42, Vehicular Noise Control for Oahu. ė.

Sincerely,

KS/rg

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. James Ikeda Deputy Director State of Hrvaii Department of Health P. O. Box 3376 Homolulu, Havaii 96801

SUBJECT: Beein Ken Valley Preparation Motice for Supplemental Environmental Impact Statement (EIS)

Dear Mr. Ikeda:

Thank you for your letter dated August 14, 1986 regarding the Preparation Notice for the Supplemental 215. We are providing the following responses to your comments:

- Mitigative messures to prevent moise from non-residential areas from affecting adjacent residential-soned lots are included in the City and County's Comprehensive Loning Code and Land Dee Ordinance in the form of minimum lot setbacks and landscaping. The proposed development will conform to these requirements. -
- Compliance with litle II, Administrative Rules, Chapter 43, Community Roise Control for Osbu, has been noted in the EIS as a requirement to belp mitigate noise problems.

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The pravious IIS discussed the impact of aircraft noise on the proposed subdivision. Based on the 1976 Air Installation Compatibility Noise Zone (AICUZ) Study completed for Kansobe Marine Corps Air Station, the project site is outside the Ldn 65 dBA area with the lower one-third of the project within the Ldn 60 dBA area. ë

It is our understanding that residential land use is compatible with noise levels of Ldn 65 dBA or less, based on current criteria. We further understand that some experts would like to see the acceptable noise level reduced to Ldn 60 dBA.

By comparison, the State of Havsii has noise level restrictions of 55 dBA (daytime) and 45 dBA (nighttime) for residential areas. These standards, however, do not apply to aircraft.

Mr. James Ikeda September 2, 1986 Page Two

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- The Supplemental EIS has been revised to include the identification of Reeis Kes Small Boat Barbor as a source of noise potentially impacting subdivision residents.
- The Supplemental E1S will note that the contractor must comply with Chapter 43, Community Noise Control for Oahu and Chapter 42, Vebicular Noise Control for Oahu, in an effort to mitigate construction noise impacts on existing Heeia Rea residents. ۶.

Should you have any questions please contact our office.

Very truly yours,

CRAY, HONG & ASSOCIATES, INC.

Fuerin L. Gray

DB:1t 1301-1

119 MERCHUM STREEL BUTE 607. HOWOLULL HAWAR 661  $\Omega$  . Telephone group 271-0306  $\chi I_1$  . B-19

## CITY AND COUNTY OF HONOLULU 100 500714 KING 578ET 100 500714 KING 578ET 100 500714 KING 578ET

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lu<u>z</u>ust 21, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. Consulting Engineers 119 Merchant Street #607 Honolulu, Hewaii 96813

Dear Mr. Gray:

Supplemental Environmental Impact Statement (EIS) Preparation Notice for Heeia Kea Valley Heeia, Koolaupoko, Oahu

Per your July 22, 1986 request for consultation comments, the Department of Land Utilization (DLU) offers the following:

- 1. The Department of General Planning (DGP) and the DLU will act jointly as accepting authorities. DGP is currently considering a request to amend the Koolaupoko Gevelopment Plan to accommodate this project. The DLU previously accepted the original EIS on the project. The DGP will act as lead in processing the Supplemental EIS.
- The section on the use of public funds or lands should be revised to indicate the degree of developer commitment to fund off-site sewerage improvements. ٠;
- Are there any future plans for the creation of a small-boat marina or any other ocean-based facility at the site? ë.
- Was there any consideration given to the use of part of the site for emergency electrical generation to provide power to Windward Oabu should the transmission lines be severed for extended time periods?

Should you have any questions, please contact Bennett Mark of our staff at 527-5038.

ery truly yours,

CHUPALLEU JOHN P. WALEN Director of Land Utilization

cc: DGP

A-20 ž.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

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September 2, 1986

BRIAN L. GRAY, PE DANIEL S.C. HONG, PE DAVID B BILLS, PE MICHAEL H NOJIMA, PE BEVERTY G. ING, PE ROBERT B JONES

Mr. John P. Whalen, Director Department of Land Unilization City and County of Honolulu 650 South King Street Honolulu, HI 96813

SUBJECT: Reeis Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Whalen:

Thank you for your letter dated August 21, 1986 regarding the Preparation Notice for the Supplemental EIS,

We are providing the following responses to your comments:

- The Supplemental E15 will identify Department of General Planning and DLU as the jointly accepting authorities for the
- There are no plans to use public funds or lands for off-site severage improvements. The developer will be funding the installation of the two sever lift stations. Force mains, which will be dedicated to the City, will also be installed at the developer's expense. ;
- There are no plans to craste a small boat marine or ocean-based facility at the site. The proposed commercial/industrial ares, however, will make available harbor-fast land in support of the existing Heela Kea pier facility. ٠.
- No consideration has been given to emergency power generation at the site. ÷

Should you have any questions please contact our office.

Very truly yours,

GRAY, HOWG & ASSOCIATES, INC.

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DB:1t 1301-1

119 MERCHANT STREET SUITE 607 HONOLULU HAMAI B6813 - TELEPHONE 18081521 0YOS X1 - B-20

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CITY AND COUNTY OF HONOLULU. 13.

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FIRE DEPARTMENT

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN I. GRAY, PE DANIEL S.C. HOHG, PE DAVD B. SILLS, PE MICHAEL H. MOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

August 12, 1986 Mr. Brian L. Gray Gray, Hong & Associates, Inc. Consulting Engineers 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

SUBJECT: REQUEST FOR CONSULTATION COMMENTS SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR HEETA KEA VALLEY HEETA, KOOLAUPOKO, OAHU

6 minutes 6 minutes 17 minutes 3.0 10.1 Kaneohe (Engine Co. 17) Kahaluu (Engine Co. 37) Kailua (Ladder Co. 18)

Sincerely,

LIONEL E. CAMARA Acting Fire Chief

LEC:HXX:sb

September 2, 1986

Mr. Frank Kahoobanohano Fire Chief Fire Department City and County of Hobolulu 1455 South Beretania Street, Ste. 305 Honolulu, Havaii 96814

SUBJECT: Heeia Kes Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Kahoohanohano:

Thank you for your letter dated August 12, 1986 regarding the Preparation Notice for the Supplemental EIS. The information that you provided will be included in the Supplemental EIS. Since the currently proposed project will not include buildings three or more stories, the requirement for ladder assistance will not exist.

Should you have any questions please contact our office.

CRAY, HONG & ASSOCIATES, INC. Very truly yours.

Ja & R. R.

119 JEFICHANI STREET, SUITE 607, HONOLULU, HAMAI 96813 . TELEPHONE (BOS) 521-0306  $$\rm X11_{\odot}-B-21$ 

X1. A-21

Thank you for the opportunity to review and comment on the subject EISPM. Current fire protection is provdied as follows:

PERSONNEL RESPONSE TIME Two engines and one ladder are the standard dispatch for all reported structure fires outside the Walkiki and metropolitan Honolulu area. Existing structure fires outside the Walkiki and metropolitan Honolulu area. Existing free protection is considered barely adequate for the proposed project in regards to distance and response time. Current Insurance Services Office (150) guidelines recommend a standard response distance of not more than four miles for engine and ladder companies (a ladder company may not be required where there are less than five buildings of three or more stories). A response time of three to five minutes is acceptable.

Should you have any questions, please contact Captain Henry Kaalekahi of our Administrative Services Bureau at 943-3848.

HAWAITAN ELECTRIC COMPANY, INC. - PO BOX 2750 - HONOLULLI, HI 96840-0001

EW 2-1 NV/G

AUG 2 2 1986 ë

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August 21, 1986

September 2, 1986

Brenner Munger, Ph. D., P.E. Langer Environmental Department (828) 548-6880

HEI

Hr. Brian L. Gray
 Gray, Hong & Associates, Inc.
 Consulting Engineers
 119 Merchant Street, Suite 607
 Honolulu, Havaii 96813

Dear Mr. Gray:

Subject: Supplemental Environmental Impact Statement for Heela Kea Valley

We have reviewed the above subject and have no comments. Sincerely, Browner Mung

SUBJECT: Beeia Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS) Mr. Brenner Munger Manager, Environmental Department Havaiian Electric Company, Inc. P. O. Box 2750 Honolulu, Havaii 96840-0001

Dear Mr. Mmger:

Thank you for your letter dated August 21, 1936 regarding the Preparation Rotice for the Supplemental EIS. Your participation in the EIS review process is appreciated.

Should you have any questions please contact our office.

CRAY, BOKG & ASSOCIATES, INC. Yery truly yours.

DB:1t 1301-1

A Hawaian Electric Industries Company

119 JUERDAWHT STREET, SUITE 607, HONOLULU, HAWAII 196813 - TELEPHONE 18081 521 0306

X1. B-22

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

X1. A-22

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DANTHANT BOULDS ON WALLEN TO SOON ADALD WEEK! WATH J YAMISARI Describe AUU 2 1 1966 Ž. were Kentered STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
MONOMOREMITY
MONOMOREMITY

STP 8.1511 HRATHIR10

August 18, 1986

Mr. Brian L. Gray, PE Gray, Hong and Associates, Inc. 119 Herchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Request for Consultation Comments Supplemental EIS for Heeia Kea Valley Heeia, Oshu

The proposed Heela Kea Subdivision is located in the immediate proximity of the Heela Kea Boat Harbor. The harbor lanes which are extensively utilized particularly during weekends and holidays. Since there are plans to expand the harbor facility, we wish to reaffirm our concern regarding the impact of mixing residential traffic with trailer boat traffic at the traffic condition is not ideal at this location and the projected traffic increases generated by both the harbor expansion and the stuation unless remedial action is planned.

Accordingly, we look forward to reviewing the traffic impact analysis report for this development. Special interest should be directed to the interaction at the harbor entrance with serious consideration given to mitigation measures such as providing turning movement storage and acceleration/deceleration lanes.

Very truly yours,

Hayne J. Yamasaki

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

BRIAN & GRAY, PE
DANIEL SC HONG, PE
DAVID B BILLS, PE
MICHAEL H HOJIMA, PE
BEVERLY G ING, PE
ROBERT B JONES

Mr. Wayne J. Ymasaki Director of Transportation State of Havai Department of Transportation 869 Punchbowl Street Honolulu, Havaii 96813

SUBJECT: Reein Rea Valley
Preparation Hotice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Ymseaki;

Thank you for your letter dated August 18, 1986 regarding the Preparation interactions with Emphamental EIS. The proposed development will have two main 1,500 feet north of the entrance to Besia Basil Bost Marbor and the other will Impact directly manks of this entrance. As presented in the 1983 Environmental Impact Exatement, both interactions are proposed with acceleration and the project site. These improvements were proposed to mitigate the impact of increased traffic and a left turn storage labe into increased traffic generated in the project site.

The Supplemental EIS will identify similar plans for both interactions, an additional mitigation measure for traffic utilizing the harbor complex, betailed plans for the intersection will be coordinated with your department during the development process. The key elements mecasary to mitigate traffic of the Supplemental myour consultation letter, will be provided in the text

Your consultation comments, as well as our response, will be incorporated in the Supplemental EIS.

Should you have any questions please contact our office.

CLAT, HORG & ASSOCIATES, Very truly yours,

to Bring L. Gray

119 MERCHANI STREET, SUITE 607, HOHOL ULU, HAMMI 86813 — TELEPHONE 180N 521 0305

X1. A-23

Thank you for this opportunity to provide comments.

X1. B-23

CITY AND COUNTY OF HONOLULU 98EI O S TAT: 450 50UTH KING STREET HENDLYLV, HARAN 04113

KK/DGP 7/86-9128 DENE COMILIE BOHALD A. CLEBS E-41 Pyterms Office 03

July 28, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. Conculting Engineers 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

This is in response to your request for consultation comments on a Supplemental Environmental Impact Statement (EIS) for Heela Kea Valley, Roolaupoko, Oahu.

We have reviewed the subject preparation notice and offer the following comments:

The Supplemental EIS should update your previous traffic study, including current traffic counts and analysis of the projected impact from this residential, industrial and connectial development. The intersection of Kamehameha Highway with Halku Road and Lilipuna Road should be analyzed using current traffic figures and projections, particularly since the previously projected P.M. critical lane volume was just 70 vehicles below the recommended maximum.

The supplemental EIS should also consider the traffic impact of the development on downstream facilities such as Kamehameha Highway, Kahekili Highway and Likelike Highway. The timing of any proposed improvements to these highways and the Kahekili/Likelike interchange should the discussed in relation to the timing of the proposed Heeia Kea valley development. Developer provided traffic improvements should also be discussed. The configuration of the proposed intersection providing access to the project in the vicinity of the entrance to the Heeia Kea Boat Harbor should be designed to accompodate traffic from the Boat Harbor. The State Department of Transportation should be consulted on this matter.

Mr. Brian L. Gray Page 2 July 28, 1986

- The project's water master plan should be reviewed to determine if it needs to be updated.
  - . .
- We agree with the preparation notice's intent to discuss the off-site sever improvements. We further recommend that consideration be given to providing sever connections to allow the Heeia Kea Harbor and Heeia State Park to connect to the proposed sever system. ÷

Should you have any questions concerning our comments, please call Keith Kurahashi at 527-6051.

Sincerely.

DONALD A. CLEGG Chief Planning Officer Vonest Cley

The proposal for accommodating the existing tenants should be discussed.

Thank you for the opportunity to comment.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1936

BRIAN L.CRAY, PE
DANIEL S.C. HOWG, PE
DAVID B. BILLS, PE
MICHAEL H WOJIMA, PE
BEVERLY G. ING, PE
ROBERT B. JONES

Mr. Donald A. Clegg Chiet Plannuing Officer Department of General Planning City and County of Bonolulu 650 South King Street Bonolulu, Hevaii 96813

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Preparation Motice for Supplemental Environmental Impact Statement (EIS) SUBJECT: Beein Ken Valley

Dear Mr. Clegg:

Thank you for your letter dated July 28, 1956 regarding the Preparation Motice for the Supplemental EIS. In response to your comments, we are providing the following information:

I. The Supplemental Environmental Impact Statement will update the traffic analysis for Kamehamehs Highway in front of the project and downstream intersections including Lilipuna Road/Kamehamaha Highway and Kahekili Bigbway/Likelike Highway. The most current traffic counts will be utilized to update the conflicting movement analysis for the Lilipuna Road/Kamehamaha Highway intersection which was previously included in the 1983 EIS. Since the preparation period of the Draft Supplemental EIS is occurring during the summer period when schools are not in assaion, 1983 traffic counts have been utilized at this intersection as obtained by the Department of Transportation Services. The previously prepared EIS utilized traffic counts obtained by the Department of Transportation

The 1983 EIS provided a brief discussion of regional traffic impacts. It is still believed that it is beyond the scope or ability of one particular project to provide a detailed analysis of the regional traffic consideration. This is especially true since large government agencies, including the State of Hevali Department of Transportation, as well as the City and County of Bonolulu Department of Transportation Services, have devoted considerable effort to developing regional traffic plans. The Supplemental EIS will identify the current plans to improve regional traffic as presented by the State of Havaii Department of Transportation and the City and County of Bonolulu Department of Transportation Services. Both agenties state that there are plans available to increase the amount of peak hour traffic moving from Windward Oshu to Leevard Oshu. The State of Hawaii Department of Transportation plan for accommodating increased trans-Koolau traffic is, and has been since the early 1970's, the completion of the H-3 freevay system.

119 MERCHANT STREET, SUITE 807, HONOLULU HANNI 66813  $\cdot$  TELEPHONE (ROBISTI-0306 X1 - B-24

Mr. Donald A. Clegg September 2, 1986 Page Tvo

With respect to regional considerations within Windward Oabu, both the City and County and the State identify three specific projects which will mitigate regional traffic congestion which presently occurs, as well as future congestion resulting from increased development within Windward Oahu. These projects are: improvements to Castle Junction Intersection, improvements to the Kahekili Highway/Likelike Highway intersection, and widening of Kahekili Highway Likelike Highway. These regional traffic considerations will be identified in the Supplemental EIS.

With respect to timing, any improvements to the trans-Koolau corridor are presently tied to the disposition of the H-J freeway system. It is the State's position that regional improvements within Windward Oahu such as the Castle Junction Interchange. Kahehili Nighwaylikelike Highway Interchange and Kmahemeha Highway widening are subject to modification until the outcome of the H-J freeway is resolved. Therefore, it is difficult to predict when actual improvements could occur. This fact will also be presented in the Supplemental ElS.

The State of Havaii Department of Transportation has provided consultation comments with respect to the Heria Small Boat Barbor. This department has suggested the use of acceleration/deceleration lanes and left turn storage lanes to mitigate traffic congestion at the small boat harbor entrance resulting from increased traffic. The 1983 EIS identified these types of improvements at this intersection and the current proposal will also identify similar improvements.

requiremental EIS includes an update of the project's water requirementa. The average daily flow, pask flow, fite flows and storage requirements have all been identified based on the current development plans. In reality, the design parameters are essentially identical to that which was presented in 1963. One exception is that Industrial/Commercial and low-density apartment districts all require larger fire flow than identified in 1983. The larger fire flow will result in easil portions of the on-site transmission system baving 12" lines rather than 6" lines as reported in 1983. These facts will be presented in the Supplemental EIS. ;

Mr. Donald Clegg September 2, 1986 Fage Three

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- the Beeia Rea Valley project site is to set aside a portion of the Beeia Rea Valley project site is to set aside a portion of the development area for these residents. The proposed Bevelopment Plan Land Use Hap provided in the Preparation Motice vill also be included in the Supplemental ES. This map identifies the general area which will be set aside as a relocation site for Heeia Rea Community Association residents should the project be developed. Agreements exist with the ten families to provide them improved lots for \$10.00 each in the eleventh family but no response has been received. ë.
- installation of two sewar improvements includes the installation of two sewage pusp stations and a force main connecting the project site to the existing City and County of Honolulu sewer system. The size of the proposed sewage pump station will be in excess of the capacity required for the subject project and will be sufficient to meet regional considerations. When this plan is implemented, there will be sufficient sewage pumping capacity for existing developments, including Beels State Park and Reeis Small Boat Barbor. Preliminary discussions have been held with the Department of Public Works regarding sewer improvements with respect to the project. Continued discussions will be held during the development process. This information will also be provided in the Supplemental ELS. 4

Your consultation comments as well as our response will be included in the Supplemental EIS.

Very, truly yours,

GRAY, HOMC & ASSOCIATES, INC.

Da For

DB:1t 1301-1

SIERRA CLUB, HAWAI'I CHAPTER

AUG 26 1936

HONOLULU GROUP P.O. BOX 11070, HONOLULU, HAWAI'I 96828 (808) 945-8494

1 d ... 1

August 22, 1986

Az: Supplemental Environmental Impact Statement for Heela Kea Valley Heela, Koolaupoko, Oanj Gray, Hong & Associates, Inc 119 Merchant Street, Suite 607 Horolulu, Hamail 96313

The Conservation Committee for the Monolulu Group of the Sierra Club have consistently expressed the following concerns re Heeia Kea.

The proximity to the shoreline of Kaneohe Bay

The development is not Coastal dependent, with the exception of the small connercial area which proposes to supply the users of the Pier. We are particularly concerned with the bollution of Kaneohe Bay, especially the siltation potential and highway run-off of the development. Although the plans for mitigation of these effects were discussed and accepted in the plans for mitigation of these effects were satisfied that the solutions would protect Kaneohe Bay sufficiently.

Cumulative impacts on the CZM.

This is a prime consideration of the CZM Law. The cumulative impact of such a large development on the Well-establshed and popular pier, be a serious consideration facility for the Whole area, should

The cumulative impact on an aiready busy highway is of even more concern. Any improvements to the trans-koolau system will not mitigate the traffic problems on Kam. Hwy. There seems to be no plan to widen the Long Bridge, nor to correct the curve between the proposed development and the bridge. Are the developers willing to construct their own connecting roadway to Kahokili Highway?

With regards to the cumulative population impacts, according to the anticipated population grawth, Windward Oahu has a sufficient amount Development here is not going to do anything this CZH parcel with housing. housing meds in the area. We would prefer to see the valley develope for aquaculture or flower farming. Even a small number of high-priced estates would be preferable to crowding into this valley.

III. Available water supply

The aquifer on Dahu is reaching its carrying capacity, as evidenced by the constant request to conserve water. Will the water for this stream systems on Dahu? At present, the Board of Waint in remaining that cance the effect on the Streams of Waint in Property Can be accepted to the streams of their present Windward Can Developers of this proposal willing the install a desailmation plant to satisfy their water needs?

The proposed changes to the original EIS in no may lessen Sterra Club's concerns.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

September 2, 1986

Mr. Cary Andersen, Chair Sierra Club, Havai'i Chapter Bonolulu Group P. O. Box 11070 Bonolulu, Mavaii 96828

BRIAN L. GRAY, PE DANIEL S.C. HOWG, PE DANDB BILLS, PE MICHAEL H. NOJIWA, PE BEVERLY G. ING, PE ROBERT B. JONES

SUBJECT: Reeia Rea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Andersen:

Thank you for your letter dated August 22, 1986 regarding the Prepatation Motice for the Supplemental EIS. We are providing the following responses to your coments:

1. Proximity to the shoreline of Kaneohe Bay

Your letter expresses concern with respect to pollution of Kancohe Bay. Runoff, as well as pollutant loads to the Bay, were discussed as a part of the 1983 E1S. We believe the presentation reasonably stated the facts regarding the effects on the Kancohe Bay estuary. We additional mitigation measures are proposed other than that previously stated. The primary impact to the Bay will be during construction when runoff carrying heavier silt loads can occur. This will be mitigated by utilization of temporary stosion control features such as siltation basins.

Cumulative impacts on the CZM Ares -5

The primary impact of the proposed project on the Reeia Small Boat Rarbor will be traffic. As presented in the 1983 EIS, intersections for the proposed project will utilize acceleration and decceleration lanes as well as left turn storage lanes. These features will mitigate traffic congestion at the pier entrance. The State of Hwail Department of Transportation has commented on the assemanter and has suggested implementation of features including acceleration and decceleration lanes as well as left turn storage lanes to offset traffic impacts.

Both the State of Havaii Department of Transportation and the City and County of Honolulu Department of Transportation Services have plans to widen Kahekili Highway from the Likelike/Kahekili Highway intersection to Kamehsmeha Highway. Implementation of this project is partially tied to the disposition of the H-3 Freeway system, since improvements to the

Mr. Gary Andersen September 2, 1986 Page Tvo

Rahekili Highway/Likelike Highway intersection are dependent upon the ultimate improvements to the trans-Koolau system. As soon as the Kahekili widening project is completed, it is anticipated that there will be a reduction of traffic on Kamehaweha Highway. There are no plans to construct a connecting roadway from the project to Kahekili Highway.

The cumulative impacts of development within Beeia Kea Valley were also discussed as a part of the 1963 EIS. These impacts will be summarized in the Supplemental EIS. Bowever, no additional details with respect to cumulative impacts will be included in the Supplemental document.

lt is recognized that some segments of the population would prefer to see the Valley developed in other fashions. In an effort to ascertain the Valley's potential, an agricultural teasibility study was completed and included in the 1983 EIS. The feasibility study suggested that the chances for successful farming are only marginal. For that reason, other options are being pursued by the current owners.

Available water supply ä

There is adequate ground water available on Oabu to serve the proposed project as well as additional growth. Design flows and requirements are developed and submitted to the Board of Water Supply for review. This review process ensures that the existing and future water consumption rates do not exceed the sustainable yield of the island's ground water system. Desalinization plants are not a consideration of this proposal.

Your consultation comments as well as our response will be included in the Supplemental Environmental Impact Statement.

Very truly yours,

CRAT, HONG & ASSOCIATES, INC.

Det B. De. Brian L. Gray

in merchant street, suite 607, homoluru, hamai 86813  $\,$  . Telephone acriss10306  $\,$  XI ,  $\,$  B=25  $\,$ 

JUG 22 1536 10:

Nr. Brian L. Grry Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Monolulu, Hawaii

21 August 1986 4-1,51 ; Hai Kalana would like to see the following issues included in the Supplemental Inpact Statement for Proposed Development at Heeis Ke- Villey, Oahn,

-Shoreline Management - How will this project not only comply with but also enhanse coastal zone laws?

-Bouring - What are the bousing needs in the Koncohe, Kahaluu area by income, and how will this project meet those needs?

-Whole Valley Planning - What are the plans for the rest of the property? An agricultural assessment should be done indicating the best as lands within the property. A feasibility study of potential as use should also include an assessment of the denand for as lands.

-City Flanning - How will this project conform with the General Plan and the Development Plan. Given the number of recently planned Mindward housing projects, how would this project contribute to the curmilative impacts of all the projects on traifile, water, schools and public facilities? -Pier - What will the impacts be on existing uners of the pier?

Charles Reppun

Put Kelem: Aine o Kooleu 7n7 ax-45

Mancohe

XI. A-26

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS September 2, 1986

BRIAN L. GRAY, PE DANIEL S.C. HONG, PE DAVID B. BILLS, PE MICHAEL H. MOJINA, PE SEVERTY G. ING, PE ROBERT B. JONES

> Mr. Charles Repum Bui Malmas Aina O'Koolau 47-410 Lulani Street Kaneobe, Bavaii 96744

SUBJECT: Meeia Kea Valley
Preparation Notice for Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Reppun:

Thank you for your letter dated August 21, 1936 regarding the Preparation Notice for the Supplemental EIS. The following responses are being provided to the comments in your letter.

1. Shoreline Management -

The 1983 EIS was prepared in conjunction with a Special Management Femit Application for development of the site. In conjunction with that permit application, the EIS discussed the Shoreline Management objectives which are considered essentially the same today. Additional detailed discussion of Special Management Aras objectives, including fosstal Zone objectives and policies, is not proposed for inclusion in the Supplemental EIS. Bowever, a discussion of Coastal Zone objectives provided below.

The Coastal Zone Management Program (CZMP) identifies seven areas of concern: recreational resources, historic resources, scenic and open space resources, account uses, coastal ecosystems, and coastal harards. Discussion of the project's coapliance to CZMP policies is as follows:

With respect to recreational resources, all of the project will be mauka of Eamahameha Highway and the project should have no significant direct impact on coastal recreational activities. The project will also provide a 3.5 acre park intended to be dedicated to the City for public recreation.

With respect to archaeological resources, an archaeological reconnaisaence was conducted on the site in 1983 to identify ustural, mammade, historic and prehistoric resources in the Coastal Zope Management Area.

With respect to scenic and open space resources, the project will be mauke of Komebamtha Highway and will not disrupt general public views to the ocean. A 1.7 acre landscape buffer strip is proposed along Komehamsha Highway to mitigate visual inpact of the project from the road.

II9 WERCHAMT STREET, SUTTE 607, HONOLUTU. HAWAII 96813 — TELEPHONE GOGI 521 0,306 Y 1. R.-7.6

Mr. Charles Reppum September 2, 1986 Page Ivo

J.-.

With respect to economic uses, it would be fair to state that providing suitable residential areas is important to the State's economy. The project will have an impact on coastal ecosystems as identified in the previous EIS. This statement will also be reiterated in the Supplemental EIS. Bovever, it will also be stated that the impact on coastal ecosystems is not considered to be significant. This statement is based on the fact that the project sitte represents less than 1/10 of 1% of the drainage basin entering Kantohe Bay. From a cumulative viewpoint, the amount of additional land that could be developed within this vaterabled is far less than that which has already been decided.

With respect to coastal hazards, there will be none resulting from tsunani, storm waves or atress flooding. Coastal flooding resulting from crosion will not occur.

Finally, with respect to managing development, the EIS process is one of those review processes which stimulate public participation. This particular project will also require additional public review during the Development Plan Amendment proceedings and during the Change of Zone proceedings.

2. Bousing -

The 1983 E18 provided a study regarding housing in the Windward Oaku area. This study has been updated and will be included in the Supplemental E16. It is reported that there is a strong demand to meet housing beeds.

3. Whole Walley Planning -

The Development Plan Land Dee Map contained in the Preparation Notice essentially identified whole valley planning. This map will also be included in the Supplemental EIS. With respect to agricultural feasibility, a study was prepared in conjunction with the 1983 EIS. The likelihood of sustaining agricultural operations on the site is reduced significantly by the fact that there is no economical and personnt source of water available. As indicated in the Preparation Notice, a feasibility study regarding mariculture operations will be included in the Supplemental EIS. Preliminary indications are that mariculture is not particularly feasible due to fresh water and salt water requirements.

Mr. Charles Reppun September 2, 1986 Page Three

# 4. City Planning

A section within the Supplemental EIS will reference warious sections of the General Plan and describe how the proposed project conforms to these objectives. Traffic, water, schools and public facilities were all discussed in the 1983 EIS and specific emphasis will be placed on updating traffic information within the Supplemental EIS.

## Piers -

s.

The only potential significant impact to existing uses of the Beeia Small Boat Harbor will be traffic as related to its entrance. This entrance will coincide with one of the project's two main intersections. However, the project proposes to storage lance to mitigate these traffic impacts. The use of these features has been auggested by the State of Hawaii Department of Transportation. This agency will be involved in coordination activities during the development process.

Should you have any questions please contact our office.

Very truly yours,

CRAY, BONG & ASSOCIATES, INC.

for Brian L. Gray

DB:1t 1301-1

### XII. LIST OF NECESSARY APPROVALS

#### A. Federal Government

Compliance with nation-wide General Department of the Army Permit\*

#### B. State of Hawaii

- 1. Department of Health Noise Permit, Construction Plan Approval
- Department of Land and Natural Resources -Conservation District Use Permit\*

### C. City and County of Honolulu

- 1, City Council Special Management Area Use Permit Shoreline Setback Variance
- Department of Land Utilization Subdivision Approval, Construction Plan Approval
- Department of Public Works Grading Permit, Construction Plan Approval
- 4. Department of Transportation Services Construction Plan Approval
- 5. Board of Water Supply Construction Plan Approval
- Department of Parks and Recreation Construction Plan Approval

#### D. Private

- 1. Hawaiian Electric Company Construction Plan Approval
- Hawaiian Telephone Company Construction Plan Approval

\*These approvals are listed but not anticipated as being necessary and are subject to the processing of a Drainage Report with the City and County of Honolulu. Approvals relate to the need for box-culvert improvements within Kamehameha Highway.

### XIII. ORGANIZATIONS AND PERSONS INVOLVED IN THE PUBLIC REVIEW PERIOD

Included within this section are all comments received during the thirty (30) day review period, as well as the responses to the comments. The review comments have resulted in changes to the text of the Draft Supplemental EIS as summarized below.

- 1. Board of Water Supply's Facilities Charges for source-transmission have been revised.
- Information regarding the existing water supply system currently planned to be connected to has been clarified.
- 3. The reference regarding aircraft noise has been updated.
- 4, Information regarding the number of archaeological sites identified during the 1982 survey and the action to be taken with respect to these sites has been clarified.
- 5. Information regarding the current planning objectives of the City & County of Honolulu Department of Public Works, Wastewater Management Division regarding the wastewater pump stations to be built near "long bridge" and on-site have been discussed.
- 6. With respect to traffic, it has been determined that the traffic volumes at the Haiku Road/ Lilipuna Road/ Kamehameha Highway intersection have remained relatively stable and no major peak hour volume reduction occurred between 1982 and 1983.

- 7. Projected average daily and peak sewer system flows have been revised.
- 8. Acreage of land preserved for agricultural use under the current proposal has been clarified.



United States Department of the Interior

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ES Room 6307 FISH AND WILDLIFE SERVICE

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H. 13:11 Uate Received -

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Mr. Donald A. Clegg Chief Planning Officer Department of General Planning City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Re: Supplemental EIS for Reela Rea Valley, Heela, Koolaupoko, Oahu

Dear Mr. Clegg:

The Service has reviewed the subject document and has no further comments to offer at this time. Thank you for providing this opportunity to comment.

Sincerely yours,

Ernest Kosaka Project Leader Office of Environmental Service

cc: DLU (Mr. Whalen) / Gray, Hong & Assoc., Inc.

1301-1

XIII. A-1

Save Energy and You Serve America!

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

Mr. Ernest Komeka, Project Leader Office of Environmental Services United States Department of the Interior Fish & Wildlife Service 300 Am Hoans Boulevard P. O. Box 50167 Honolulu, Hawaii 96850

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Espect Statement (EIS)

Dear Mr. Kosska:

Thank you for your letter dated September 16, 1986. Your letter will be incorporated into the Reviewd Supplemental EIS.

Should you have any questions, please contact our office.

Very truly yours,

GRAY, BONG & ASSOCIATES, INC.

Ja Brian L. Gray

is vercult sirett suite 607, honolulu, hamu 86813 - Telephone 808; 521-0308  $$\rm IMB_{\odot}$$  B - 1

BOAHD OF WATER SUPPLY CITY AND COUNTY OF HONDLUIL

October 8, 1986

JOHN P. MIALEN, DIRECTOR DEFARTMENT OF LAND UTILIZATION

**10:** 

" 4

KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER BOARD OF WATER SUPPLY FROM

SUBJECT: SUPPLEMENTAL EIS FOR HEEIA KEA VALLEY

Thank you for the opportunity to review and comment on the proposed development. We have the following comments:

- Page 65, lines 21-25: The sentence should be revised to read: "The developer will be required to pay the hoard of Water Supply's prevailing Hater System Facilities Charges for source-transmission." Information on the charges may be obtained by contacting our Customer Service Division. 1.
- page 66, lines 4-6: The 6-inch pipeline passing the property along Kamehameha Highway is part of our Waiher 265-foot system. The hook-up point for the development's water system will be determined when the Water Master Plan is submitted for our review and approval. 2.
- page 66, lines 13-15: The developer will have to pay our Mater Facilities Charges for source and transmission and install a 0.3 million gallon reservoir. For the single family residential units of this development, the present charges are \$523.00 for a 5/8-inch meter and up to \$4,184.00 for a 2-inch meter. However, the developer will be required to pay the prevailing charges when water meters are installed for the development. The charges mentioned in the report are incorrect. m,

If you have any questions, please contact Lawrence Whang at 527-6138.

Very truly yours.

KAZU HAYASHIDA Hanager and Chicf Engineer

cc: pavid Bills (Gray, Hong & Assoc., Inc.)

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

[]]

October 16, 1986

Mr. Kezu Hayashida Menger and Chief Engineer Board of Nater Supply City and County of Romolulu 630 South Beretania Street Honolulu, Hawaii 96813

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Beyamblda:

We have received a copy of your October 8, 1986 memorandum to John P. Whalen, Director, Department of Land Utilization regarding the Draft Supplemental EE. We are providing the following responses to your comments:

- The Supplemental EIS will be revised to clarify that the daveloper will be required to pay the prevailing Water System Pacifities Charges for source-transfesion. **:**
- The KIS will be revised to indicate that the Punal uu 272-foot system is currently a posable water supply source for the proposed development. We will also state that the exact book-up point for the development will be determined when the Water pan is substitted for your review and approval. Reference to connection to the existing water like along Kambascha Highway will be deleted from the EIS. 'n
- The IIS states that the project requires 0.3 million gallon atomas capacity. As comfined with your office, the decision as to whether the 0.3 million gallon storage will be provided by the developer op-mite or in conjunction with another reservoir project off-mite is still open and will be reported accordingly. m;

Mr. Kazu Hayamiida Page 2 October 16, 1986

4. Pacilities charges for source and transmission will be updated as per your coment No. 3. A statement will be included to clarify that the developer will be required to pay the prevailing charges when water meters are installed.

Should you have any questions, please contact our office.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

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119 MERCHANT STREET, SUITE 607, HONOLURU, HAMAII 96813 — TELEPHONE, BOSI 521-0308

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CITY AND COUNTY OF HONOLULU POLICE DEPARTMENT

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OUR REFERENCE CMS-MJP

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17:05/ Aplica: September 17, 1986

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. CRAY, PE
DANIE I S.C. HONG, PE
DONUB BILLS, PE
MICHAEL H NOJIMA, PE
BEVERLY G. ING, PE
ROBERT B. SONES

October 16, 1986

DONALD A. CLEGG, CHIEF PLANNING OFFICER DEPARTMENT OF GENERAL PLANNING ë

DOUGLAS G. GIBB, CHIEF OF POLICE HONOLULU POLICE DEPARTHENT FROM:

SUPPLEMENTAL EIS FOR HEEIA KEA VALLEY SUBJECT:

We have reviewed the subject document and find that we have no comment to offer at this time.

John Whalen, Director Land Utilization Department of Land Utilization City and County of Honolulu Ü

Ar. David B. Bills
Gray, Hong and Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawali 96813

Mr. Douglas G. Gibb, Chief Honolulu Police Department City and County of Honolulu 1455 South Beretania Street Honolulu, Hawaii 96814

Recis Kes Valley braft Supplemental Environmental Impact Statement (EIS) SUBJECT:

Dear Mr. Gibb:

We have received a copy of your September 17, 1986 memorandum to Donald A. Clegg, Chief Planning Officer, Department of General Planning regarding the Draft Supplemental EIS. Your memorandum will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

CRAT, HONG & ASSOCIATES, DIC.

Yery truly yours,

In Brien L. Gray

JB:1t 1301-1

119 JUERCHANT STREET, SUITE 607, HOWOLULU, HAWAN 96813 + TELEPHONE (2008) 521 0306

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DEPARTMENT OF PARKS AND RECREATION

# CITY AND COUNTY OF HONOLULU 650 SQUTH KING STREE HONGLULU HARAN MAIL

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September 25, 1986

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DOMALO A. CLEGG, CHIEF PLANNING OFFICER DEPARTMENT OF GENERAL PLANNING

<u>10:</u>

JOHN P. WHALEN, DIRECTOR DEPARTMENT OF LAND UTILIZATION

TOH T. NEKOTA FROM:

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT HEETA KEA VALLEY DEVELOPMENT TMX: 4-6-06 AND 4-6-16 SUBJECT:

We have reviewed the Draft Supplemental EIS for the Heela Kea Valley Development and make the following comments.

We have determined that the report is generally acceptable. The recreational needs of the project have been addressed by the establishment of a 3.5-acre park which will also be used to comply with the Park Dedication Ordinance

Although the park has been placed in the project's master plan, we have apprised the applicant that lands to be dedicated to the City for park purposes must meet City standards and park dedication requirements. They have also been made aware that it will be necessary to coordinate the planning of the location, configuration and suitability of the 3.5-acre park with our department as soon as possible.

The report states that a trail system will be made available to the public for recreational and educational activities to the mauka areas. There is no illustration of the trail system in the report, and we would like to know more about this proposal.

Thank you for the opportunity to review and comment on the supplemental EIS.

don d. Mehota

TOM T. MEKOTA, Director

H

cc: Gray, Hong and Associates, Inc.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

BRIAN L. GRAY, PE DANIEL S.C. MOMG, PE DANID B. BILLS, PE MICHAEL H. MOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

Mr. Tom T. Nekota, Director Department of Parks and Recreation City and County of Honolulu 650 South King Street, 9th Floor Honolulu, Hawaii 96804

SUBJECT: Heels Kes Valley
Draft Supplements1
Environments1 Impact Statement (EIS)

Dear Mr. Nebota:

We have received a copy of your September 25, 1986 semorandum to Donald A. Clegg, Chief Planning Officer, Department of General Planning and John P. Whalen, Director, Department of Land Utilization regarding the Draft Supplemental EIS. We are providing the following responses to your comments:

- The planding of the location, configuration and suitability of the proposed 3.5 acre park will be coordinated with your department.
- The proposed trail system to the mauka areas is indicated on Migure 3 of the Supplemental EIS as a "1-acre landscape essment" and on Figure 4 as a "wauka-makai asseent," The details of the trail system have not been developed as of yet. 'n

Should you have any questions, please contact our office.

Very truly yours,

ĦĊ. GRAY, HONG & ASSOCIATES,

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119 MERCHANT STREET, SUITE 607, HONOLULU HAMMI D6813 - TELEPHONE INDBIS21 0206

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U.S. ARMY ENGINEER DISTRICT, HONOLULE READS 

September 17, 1986

Arthers. ....

Hr. Donald A. Clegg, Chief
Planning Officer
Department of General Planning
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Clegg:

Thank you for the opportunity to review and comment on the Draft Supplemental EIS for Heeia Kea Valley, Reeia, Koolaupoko, Oahu, dated September 5, 1986. The following comments are offered:

a. A Corps of Engineers permit will be required for this project if drainage improvements are constructed below the Mean Higher Water Line (HHML). If such construction is to be performed, our Operations Branch (telephone 438-9258) should be contacted for permit requirements.

b. The flood hazards have been addressed on page 14 of the report covering the affected environment. The proposed development is located in Zone D, an area of undetermined, but possible flood hazards.

Sincerely,

Kisuk Cheung Chief, Engineering Division

Copies Furnished:

Whr. David B. Bills
Gray, Rong and Associates, Inc.
119 Kerchant Street, Suite 607
Honolulu, Hawaii 96813

Hr. John P. Whalen, Director Department of Land Utilization City & County of Honolulu 650 South King Street Honolulu, Hawaii 96813

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

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BRIAN I, GRAY, PE DANIEL B.C. MOMG, PE DAVID B.BILLS, PE MICHAEL H. MOJINA, PE BEVERIT B. JONES ROBERT B. JONES

October 16, 1986

Mr. Klauk Cheung Chief, Engineering Division Department of the Army U. S. Army Engineer District, Homolulu Ft. Shafter, Hewail 9658-5410

SUBJECT: Heefs Kes Valley Fraft Supplemental Environmental Impact Statement (EIS)

Dear Mr. Cheung:

Thank you for your letter dated September 17, 1986 regarding the Draft Supplemental EIS.

We do not foresee the requirement for Department of the Army permits for this project since all drainage improvements are to be constructed above the Mean Higher Mater Line (HHML).

Your letter will be incorporated into the Revised Supplemental EIS.

Yery truly yours,

Ä. GRAT, HONG & ASSOCIATES,

Je Brian L. Oray

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119 INERCHANT STREET, SUITE BOT, HONOLURU, HAMMA BEBIS . TELEPHONE, #00815210300 XIII. B-5 PC1 0 1 1986 Date Received

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

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PB 86-831

October 16, 1986

September 29, 1986

MR. DONALD A. CLEGG, CHIEF PLANNING OFFICER DEPARTMENT OF GENERAL PLANNING EHO 701

HERBERT R. MURAOKA DIRECTOR AND BUILDING SUPERINTENDENT PROH

DRAFT SUPPLEMENTARY EIS FOR HERIA KEA VALLEY SUBJECT:

We have reviewed the fraft supplementary BIG for the Heela Kea Valley and have no comments.

Thank you for the opportunity to review the document.

Director and Building Superintendent

Thijo CC: J. Marada Gray, Hong & Assoc., Inc.

Mr. Herbert K. Muracka
Director and Building Superintendent
Building Department
City and County of Honolulu
650 South King Street, 2nd Floor
Honolulu, Hewall 96813

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental japact Statement (EIS)

Dear Mr. Muraoka:

We have received a copy of your September 29, 1986 association to Douald A. Clegg, Chief Planning Officer, Department of General Planning, regarding the Draft Supplemental EIS. Your association will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Tery truly yours,

GRAY, HONG & ASSOCIATES, INC.

Le Brien L. Gray

119 JUERCHANT STREET, SUITE BOT, HONOLIALU, HANGR 96813 - TELEPHONE 18081 521 0306

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

department of housing and community develébaens-CITY AND COUNTY OF HONDLULU

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MICHAEL MM. MOON ROSEAT MIYASATO

October 16, 1986

FRANK F. FASI 24100

Mr. John P. Whalen, Director Department of Land Utilization 650 South King Street Honolulu, Hawaii 96813

September 29, 1986

Dear Mr. Whalen:

Subject: Supplemental Environmental Impact Statement - Heeia Kea Valley THK:

4-6-6: 1-3, 7-16, 22-51; 4-6-16: 32

Area: 68.5 Acres
Ornership: Bishop Estate
Proposal: To develop 310 single-family units and 50

Proposal: Tow-density apartments; Industrial land (4 low-density apartments; Industrial land (4 low-density apartments; Odustrial land (4 low-density apartments)

Thank you for the opportunity to review and comment on the proposed Heeia Kea Valley project.

The Department of Housing and Community Development is mandated to provide housing units for the low- and moderate-income families on Oahu. We are happy to note that the developer has made a commitment to provide at least 10 percent of the units for the low- and moderate-income households.

If you have any questions, please contact Mr. James Miyagi of our Housing Division at 523-4264, who will assist the developer in formulating a program to provide these units.

We will retain the EIS report for our files.



Lc: Gray Hong and Associates. Inc.

Mr. Mike Mon Department of Housing and Community Development City and County of Honolulu 650 South Ling Street Honolulu, Hawaii 96813

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Ispact Statement (EIS)

Dear Mr. Moon:

Thank you for your letter dated September 29, 1986 regarding the Braft Supplemental EIS. Your letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Yery truly yours,

GRAT, BONG & ASSOCIATES, INC.

THE MERCHANT STREET SUITE 607, HOWOLING, MANNING BG13 TELEPHONE (ROB) 521-0308  $\rm XIII$  ,  $\rm Be- 7$ 

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DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT

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D-010 DNS PURIORADO October 1, 1986 Date Received\_

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The Honorable Donald A. Clegg Chief Planning Officer Department of General Planning City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Clegg:

Subject: Draft Supplemental EIS for Heels Kes Valley, Koolsupoko, Oshu

We have reviewed the subject draft supplemental environmental impact statement (EIS) and find it has adequately discussed the probable impacts of the current proposed project.

Thank you for the opportunity to review the subject document.

Very truly yours,

Munny E. Towied

cc: Office of Environmental Quality Control Vir. David B. Bills
Gray, Hong and Associates, Inc.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

Nr. Lent M. Keith, Director State of Hawaii Department of Manning and Economic Development P. O. Box 2359 Honolulu, Hawaii 96804

SUBJECT: Reels Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Keith:

Thank you for your letter dated December 1, 1985 regarding the Draft Supplemental EIS. Your letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Very truly yours,

GRAT, BONG & ASSOCIATES, INC.

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

86:PLMG/6204

October 9, 1986

Mr. Donald A. Clegg Chief Planning Office Department of General Planning City & County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Clegg:

Thank you for the opportunity to review and comment on the Draft Supplement Environmental Impact Statement for Heela Kea Valley, Heela, Oahu.

We do not have any further comments at this time. However, we request to be kept apprised of the development of the project.

For any further questions, please contact Colette Sakoda of my staff at 848-3226.

Sincerely,

RUSSELL M. FURUMOTO Executive Director

Mr. John P. Whalen, Director Dept. of Land Utilization ö

UK. David B. Bills Gray, Hong and Associates

1301-1

Mr. Russell M. Pukusoto Executive Director State of Hawaii Department of Social Services and Housing P. O. Box 17907 Honolulu, Hawaii 96817

SUBJECT: Heats Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Pukunoto:

Thank you for your letter dated October 9, 1986 regarding the Draft Supplemental EIS. Your letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions please contact our office.

GRAY, BONG & ASSOCIATES, INC. Very truly yours,

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119 MERCHANT STREET, SURT 607, HOWOLULU, HAWAR 96613 . TELEPHONE 4008) 521-0306  $\overline{\rm MLL}$  .  $\Theta$  -  $^{\rm o}_{\rm c}$ 

GEORGE R. ARIVOSHI GOVERNUR



JACK K. SUWA CHAIRPERSON, BOARD OF AGRICULTURE

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SUZANNE D. PETERSON DEPJITY TO THE CHAIRPERSON

State of Hawaii DEPARTMENT OF AGRICULTURE 1428 So. King Street Honolulu, Hawaii 96814-2512

Malling Address: P. O. Box 22159 Handlule, Hawaii 96822-0159

To:

October 1, 1986

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A.S.W ....

HEMORANDUM

Mr. Donald A. Clegg, Chief Planning Officer Department of General Planning City and County of Honolulu

Subject:

Draft Supplemental Environmental Impact
Statement (EIS) for Heela Kea Valley
Heela, Koolaupoko, Oahu
THK: 4-6-06: 1, 2, 4, 7 through 16 and 22 through 51
Acres: 68.5

The Department of Agriculture has reviewed the Draft Supplemental Environmental Impact Statement for Heela Kea Valley and offers the following comments.

The subject document indicates on page 51 that "The current proposal preserves 25 acres of land for agricultural use." Page 5, Table 1, indicates 33.5 acres are in the "Agriculture" land use category, and Section XI page B-18 states "The currently proposed project does not intend to utilize the 33.5 acres of existing agricultural land between the proposed subdivision and the existing preservation land". These statements appear to be gomewhat contradictory and should be clarified to clearly identify anticipated agricultural uses for the subject property.

The parcel has been classified by the State as "Urban". Permissible Uses for this District (State Land Use Commission Rules of Practice and Procedure and District Regulations, page 45) state that "Any and all uses permitted by the Counties, whall be allowed within this (Urban) District..."

We also note that references to the Soil Conservation Service Soil Survey (SCS), Agricultural Lands of Importance to the State of Hawaii (ALISH) system, and the Land Study Bureau Detailed Land Classification for the Island of Oahu are essentially correct. These studies all indicate the site has only marginal value for agricultural purposes. Consequently, we

Mr. Donald A. Clegg October 1, 1986 Page -2-

feel the project will not adversely affect the agricultural resources of the area nor the plans, programs and activities of the Department of Agriculture.

Thank you the the opportunity to comment.

JACK K. SUWA Chairman, Board of Agriculture

Mr. John P. Whalen Mr. David B. Bills ij

ZH: A-10

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

Mr. Jack Swa, Chairperson Board of Agriculture State of Hawaii Department of Agriculture P. O. Box 22159 Homolulu, Hawaii 96822-0159

SUBJECT: Heels Kes Valley Draft Supplemental Environmental impact Statement (EIS)

Dear Mr. Susa:

We have received your October 1, 1986 memorandum to Douald A. Clegg, Chief Planning, regarding the braft Supplemental EIS.

The ourrent proposal preserves 33.5 sores of land for agricultural use between the proposed subdivision and the existing preservation land. The intention of the current proposal is not to utilize the 33.5 acres of agricultural land, but to preserve it for agricultural tenants. The Revised Supplemental EDS will be revised to include the correct acreage of agricultural land, 33.5 acres.

Should you have any questions, please contact our cfilte.

Str. Brian L. Gray

CRAY, RONG & ASSOCIATES, DIC.

very truly yours,

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119 MERCHANT STREET, SUTTE 607. HONOLULU HANNI 96813  $\cdot$  TELEPHONE (806) 571-0306  $\Sigma$ HD,  $\cdot$  B- $\cdot$ 10

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September 25, 1986

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

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MEMORANDUM

Mr. Donald A. Clegg, Chief Planning Office Department of General Planning, City & County of Honolulu

Deputy Director for Environmental Health From

Environmental Impact Statement (EIS) for Heels Kea Valley, Heels, Koolsupoko, Oshu

Subjects

Thank you for allowing us to review and comment on the subject EIS. On the basis that the project will comply with all applicable Administrative Rules, please be informed that we do not have any objections to this project.

We restize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

cc: Mr. David B. Bills V

Pr. Jumes Ikeds
Deputy Director
State of Hawaii
Department of Health
P. O. Box 3378
Honolulu, Hawaii 96801

SUBJECT: Beets Res Valley Draft Supplemental Environmental Impact Statement (EIS)

Dear Mr. Ibeda:

We have received a copy of your Saptember 25, 1986 semonandum to Donald A. Clegg, Chief Planning Office, Department of General Planning regarding the Draft Supplemental EIS. Your semonandum vill be incorporated into the Pinal Supplemental EIS.

Should you have any questions, please contact our office.

ORAY, BONG & ASSOCIATES, INC. Yery truly yours,

J. B. B. S. Sai.

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119 MERCHAYT STREET, SUITE 607, HOWOLUKU, HJAWAR 96813 - TELEPHONE, BOORS 271-0206

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

(P)1898.6

October 16, 1986

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Mr. Donald A. Clegg, Chief Planning Officer Department of General Planning City and County of Honolulu Honolulu, Hawaii

Mr. John P. Whalen, Director Department of Land Utilization City and County of Honolulu Honolulu, Hawaii

Dear Messrs. Clegg and Whalen:

Subject: Supplemental EIS for Heela Kea Valley

We have reviewed the subject document and have no comments to offer.

Very truly yours,

TEUANE TOMINAGA State Public Works Engineer

/jnt / cc: vMr. David B. Bills

Hr. Teuene Towlongs State Public Works Engineer Department of Accounting and General Services 1151 Punchbowl Street Bonolulu, Hawaii 96813

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Tonings:

Thank you for your letter dated September 15, 1986 regarding the Draft Supplemental EIS. Your letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Yery truly yours,

ORAY, HOND & ASSOCIATES, DIC.

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cc: Bills

SOIL CONSERVATION SERVICE UNITED STATES DEPARTMENT OF AGRICULTURE

P. O. BOX 50004 HOMOLULU, HAVAII 96850

October 7, 1986

Mr. bonald A. Clegg Chief Planning Officer Department of General Planning City & County of Homolulu 650 South King Street Homolulu, MI 96813

88:1 3 DC1 C E 1:86 ....81 \*\*\*

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Dear Mr. Clegg:

Subject: Draft Supplemental EIS - Heeia Kea Valley, Heeia, Koolaupoko, Oahu

We reviewed the subject draft environmental impact statement and have no comments to make.

Thank you for the opportunity to review the document.

Sincerely.

State Conservationist

CC:
Mr. John P. Whelen, Director
Department of Land Utilization
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Mr. David B. Bills Gray, Hong and Associates, Inc. 119 Merchant Street, Suite 607 Homolulu, HI 96813

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

Mr. Richard M. Duncan State Conservationist U.S. Department of Agricuiture Soil Conservation Service P. O. Box 5000% Honolulu, Havail 96850

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Ispact Statement (EIS)

Dear Mr. Duncan:

Thank you for your letter dated October 7, 1986 regarding the Draft Supplemental EIS. Tour letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Tery truly yours,

GRAY, BONG & ASSOCIATES, DIC. La Brian L. Gray

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119 WERCHANT STREET, SUITE 607, HOMOLULU. HAWAR 86813 . TELEPHONE BYOS; 531-0306  $\overline{\rm XIII} \cdot \, \, {\bf B} \cdot (3)$ 

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Mr. Donald A. Clegg Chief Planning Office Dept. of Planning Office City & County Of Honolulu 650 South King Street Honolulu, HI 96813

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Pr. John P. Whalen, Director Dept. of Land Utilization City & County of Homolulu 650 South King Street Homolulu, Hi 96813

Cear Mr. Clegg and Mr. Whalen::

Site Selection Study and Draft Environmental Impact Statement for the New Mauf Intermediate School Kahului, Mauf, Mawaif

Thank you for providing us the opportunity to review the above subject project.

We have no comments to offer at this time regarding this project.

Yours truly,

E) ...

Jerry M. Matsuda Pajor, Hemaii Air National Guard Contr & Engr Officer

cc: Gray, Hong and Associates, Inc. J

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

State of Hawaii Department of Defense Office of the Adjutant General 3349 Diamond Head Road Honchulu, Hawaii 96816-4495

Attn: Jerry M. Matsuda Mejor, Herati Air Mational Guard Contr & Engr Officer

SUBJECT: Heein Ken Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Major Hatsuda:

Thank you for your letter dated September 19, 1986 regarding the Draft Supplemental EIS. Your letter will be incorporated into the Revised Supplemental EIS.

Should you have any questions, please contact our office.

Yery truly yours,

GRAY, HONG & ASSOCIATES, DIC.

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## CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

Sincerely,

P. O'CONFOR Capara, U. & Mary Cland of Staff

Copy to:
Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

REPRODUCED AT GOVERNMENT LAFE

The study makes reference to MCAS Kaneohe Bay Air Installation Compatible Use Zone (AICUZ) of 1978, which is outdated. The current AICUZ for MCAS Kaneohe Bay, which is available in public libraries, is dated 1983.

Approximately 1/3 to 1/2 of the subject project site is within 60-65 Ldn AICUZ contour from HCAS Kaneohe Bay.

The MCAS Kaneohe Bay AICUZ of August 1983, Chapter E, Current Noise Zones, indicates that although an Ldn of 65 decibels is normally compatible for residential land use on the mainland, additional consideration of compatibility should be given to planned residential land use in the Ldn 60-65 decibel noise zone. This is consistent with the findings of the land use compatibility study for the Honolulu International airport, which suggests that sound insulation may be needed to be incorporated in new housing construction in areas exposed to Ldn 60-65.

a. Sound insulation/attenuation should be considered in design of new residential units within contour of Ldn 60-65.

XIII. A.IS

REPRODUCED AT GOVERNMENT EXPENSE

MARKARITA TO

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DEPARTMENT OF THE NAVY CDMALMOER HAYAL BASE PEAR, HARBOR BOX 110 PEAR, HARBOR, HAWAN 98805 9020

11010 Ser 002(09P2)/6071 0 6 OCT 1986 OCT 0 8 1986 1....

Ťe: ë Mr. Donald A. Clegg Chief Planning Officer Department of General Planning City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

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Dear Mr. Clegg:

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR HEEIA KEA VALLEY, HEEIA, KOOLAUPOKI, OAHU SEPTEMBER 5, 1986

The subject draft supplemental EIS has been provided by the State of Hawaii Office of Environmental Quality Control by transmittal of September 8, 1986 for review and comment. The U.S. Mavy is submitting comments on questions of noise compatibility, as the proposed project is located in the vicinity of Marine Corps Air Station (MCAS) Kaneohe Bay.

Recommendations are as follows:

b. Developer should notify prospective buyers of units that this project is encumbered partially by AICUZ from MCAS Kaneohe Bay with disclosure that a significant number of units will be within the 60-65 Ldn noise contour.

c. EIS should refer to current AICUZ for MCAS Kaneohe Bay

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

BRIAN L. GRAY, PE DANIEL S.C. HOWG, PE. DAVID B BILLS, PE MICHAEL IN MOJINA, PE BEVERLY G. ING, PE.

Captain P. O'Connor Chief of Staff Department of the Navy Naval Base Pearl Harbor Box 110 Pearl Harbor, Hawall 96860-5020

SUBJECT: Reeis Res Valley Draft Supplemental Environmental Impact Statement (EIS)

Dear Captain O'Connor:

Thank you for your letter dated October 6, 1986 regarding the Draft Supplemental EIS. We are providing the following responses to your compents:

- The Supplemental EIS will be revised to include reference to the most current Air Installation Compatible Use Zone (AICUZ) for Marine Corps Air Station Raceche Bay dated August 1983. We note that the noise contours for the project area resain unchanged from the 1976 AIGUZ we previously referred to. Both the 1976 and 1983 AIGUZ maps with the project limits delibeated are attached for your information.
- Tour recommendations to consider sound insulation/attenuation in the design of new residential units and to disclose to prospetive buyers that some units are within the LIM 60-65 not segons will be included in the Revised Supplemental EIS as mittigative measures to ministe impact in conjunction with HUD and FIA requirements for financing eligibility. ~

Should you have any questions, please contact our office.

CRAY, BOYC & ASSOCIATES, INC. Sparten L. Gray

very truly yours,

119 MERDHAM STREET, SUME 607, HONOLULU, HAMMI 91813 — TELEPHONE (BOB) 571-0206  $\overline{\mathbf{MIL}} \quad \mathbf{B} \cdot \mathbf{IS}$ 

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ENV 86-197

September 18, 1986

MEHORANDUR.

HR. DONALD A. CLEGG, CHIEF PLANNING OFFICER DEPARTHENT OF GENERAL PLANNING ij

Mr. JOHN P. WHALEN, DIRECTOR DEFARTKENT OF LAND UTILIZATION

RUSCELL L. SHITH, JR., DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS PROF::

:UBJECT:

SUPPLEMENTAL EIS POR HEEIN KEA VALLEY. KYXLAUPOKO, OAHU, HANNII (TAX MAP. KEY: 4-6-16: 32, 4-6-06: VAR.)

- We have reviewed the subject supplemental E1S and have the tollowing comments.
- The description of the proposed sanitary sever system improvements (pages 18-20) should be revised to reflect the current planning objectives of the Division of Mastewater Management. Currently, the City is planning to construct the matter-planned bastewater pump station (MMPS) near the Resia "long bridge." The tentative schedule is to start construction in August 1989 with completion in Pebruary 1991.
- The operation and maintenance of the subdivision (on-site) WMPS should be discussed. The WMPS should be built according to City's standards if the City is to operate and maintain the station. 2.
  - We have no drainage comments. 5

COURD. Ching

for RUSSELL L. SMITH, JR. Director and Chief Engineer

Gray, Hong and Associates, Inc.

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIEL SC HOWG, PE DANID B BILLS, PE MCHAEL H. MDIHLA, PE BEVERLY G. ING, PE ROBERT B. JONES

October 16, 1986

Mr. Russell L. Smith, Jr. Director and Chief Engineer Department of Public Works 650 South King Street Honolulu, Hewaii 96813

SUBJECT: Heels Kes Valley

Draft Supplemental

Environmentel Impact Statement (EIS)

Dear Mr. Saith:

We have received a copy of your memorandum to Donald A. Clegg and are providing the following reponses:

- The Supplemental Environmental Impact Statement will be revised to state that the City & County of Honolulu is planning to construct the Master Planned pump station near the "long bridge," The proposed Recia Ken Walley will be making connection to the City & County system at this location.
- The Supplemental Environmental Impact Statelment will be revised to state that the on-site pump station will be built to Public Works standards to allow operation and maintenance by the City & County of Homolulu. ۲.

Should you have any questions, please contact our office.

Yery truly yours,

GRAT, HONG & ASSOCIATES, DIC.

J. Brim L. Gray

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DEPARTMENT OF TRANSPORTATION SERVICES

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CITY AND COUNTY OF HONOLULU
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September 26, 1986

MEHORANDUM

JOHN P. WHALEN, DIRECTOR DEPARTMENT OF LAND UTILIZATION

FROM:

JOHN E. HIRTEH, DIRECTOR

SUPPLEMENTAL EIS FOR HEEIA KEA VALLEY SUBJECT:

This is in response to the State Office of Environmental Quality Control's request of September 8, 1986 for our review and comments on the subject EIS.

The report indicates that improvements to Kamehameha Highway at the intersection of the two proposed access points to the project will be implemented. We agree that the addition of turning, acceleration and deceleration lanes will mitigate the traffic signalization of the intersection at the Resia Small Boat Harbor will be needed. Accordingly, We recommend that traffic signal improvements.

(" JOHN E. HIRTEN

cc: VKr. David B. Bills Gray, Bong and Assoc., Inc.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIELS C. HOWG, PE DAYID B BILLE, PE WICHAEL H. MOJIUM, PE BEVERLY G. ING, PE ROBERT B. JONES

October 16, 1986

Mr. John E. Hirten
Department of Transportation Services
City & County of Honolulu
Honolulu Municipal Building
650 South King Street
Ronolulu, Hawaii 96813

SUBJECT: Heels Kes Valley Draft Supplemental Environmental Ispact Statement (EIS)

Dear Mr. Mirten:

We have received a copy of your September 26, 1986 associandum to John P. that the Revised Environmental Inpact Statement about that the Revised Environmental Inpact Statement about dreflect that algoal traffic duct lines about d be installed in conjunction with intersection important arguments adjacent to Heefa Ea Pher. The Revised Supplemental Environmental

Should you have any questions regarding this matter, please contact our

Yery truly yours,

GRAY, RONG & ASSOCIATES, INC.

XIII. A-17

119 WERCHANT STREET SIME FOR HONOLULU HAWAII BASID TELEPHONE ROBISZIOONS  $\overline{\mathbf{MU}}$  .  $\mathbf{B}$  -1  $\mathbf{T}$ 

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GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L CRAY, PE DANIELS C. HOMG, PE DANID B. BILLS, PE MICHAEL H. MOJINA, PE BEVERLY G. ING, PE FORERT B. JONES

DEFICE OF ENVIRONMENTAL QUALITY (41 SOVI) FING STATES, SOME 104 SOVIEW, NEWS SEES

October 6, 1986

STATE OF HAWAII

Mr. John P. Whalen, Director Department of Land Utilization City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Supplemental EIS for Heels Kes Valley, Heels, Koolsupoko, Oshu

We have reviewed the EIS and offer the following comments regarding traffic for consideration.

- Peak traffic on the Pali and Likelike Highways are presently near maximum capacity levels. The development of this project will further deteriorate the service of these highways. Channelized intersections within Kamehameha Highway, as proposed in the EIS, will not alleviate this problem.
  - Even with the State's H-3 project receiving congressional exemption, the traffic on Kamehameha or Kahekili Highways may not be alleviated since the H-3 on-ramp will be near the Pali Golf Course. ;

Thank you for providing us the opportunity to review this EIS.

Sincerely,

Retir M. Imphas Letitia M. Dyehara Director

cc: dray, Hong and Associates Department of General Planning

XIII. A·18

October 16, 1986

Mrs. Letitia N. Dyahara, Director Office of Environmental Quality Control 465 South King Street, Rocc 104 Honolulu, Hawaii 96813

SMBJECT: Recis Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

We thank you for your review comments dated October 6, 1986. We are providing the following responses to your comments: bear 14to. Dychara;

The purpose of channelized intersections on the Kasehaneha Highway is to accommodate turning motions without inhibiting through traffic. Channelized intersections will be a positive mitigation measure to local traffic on Kamehameha Highway.

As discussed in the supplemental document, regional traffic isprovements include improvements to the Trans-Koolau corridor, Likelike Highway/Kaheklii Highway intersection and wideming of Enbeklii Highway. All of these projects will increase highway capacities. Kamehaneha Highway will receive some of the benefits of increased traffic capacity at other areas. Specifically, Kamehaneha Highway will see a reduction in peak hour traffic if additional traffic is additional traffic is seen in the seen of the broader.

As presented in the Supplemental Environmental Impact Statement, regional traffic improvements will consist of Trans-Koolau improvements, various intersection improvements, and widening of Enhekili Highway. One specific project such as the H-3 Freeway will not mitigate the traffic congestion. However, a combination of all the various regional traffic improvements will improve traffic flow characteristics on Kasebameha Highway and Kahedili Highway. The Supplemental Environmental Impact Statement identifies all of the foregoing regional traffic improvementa. ∻

Should you have any questions regarding this satter, please contact our office.

CHAY, HONG & ASSOCIATES,

Very truly yours,

1 Brian L. Gray

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SIERRA CLUB, HAWAI'I CHAPTER

Oct o g val

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HONOLULU GROUP P.O. BOX 11070, HONOLULU, HAWAI'I 96828 (808) 946-8494

1.1 October 8, 1986 \*\*\*\*\*\*\*\*

> Gray, Hong 1 Associates, Inc. Honolulu, Hawaii 96813

Draft Supplemental Environmental Impact Statement for Heela Kea Valley, Heela, Koolaupoko, Dahu Re:

Dear Sirs:

to this project remain the same as our letter in this document outlines. some projects in which the impacts cannot be mitigated, yet developers political entities that have set up the approval process. There are The concerns of the Honolulu Group Conservation Committee in regards this isn't to criticize the document for not addressing expressed concerns. Rather it would seem to be with the process and with are encouraged to proceed at their own great expense.

out somewhat by the proposed measures. The very immediate sharp curve impact. The highway problem alone will not be solved, only smoothed Coastal zone. Cumulative impact on the Coastal Zone cannot, in our and narrow Long Bridge are not even addressed. All of the possible which will lessen but will not solve the impact on the Kaneohe Bay There is no way that this project can proceed without tremendous We do commend the developer for the proposed "green buffer zone" highway improvements are far beyond the immediate bottlenecks.

rather than at the beginning where such an important resource belongs. We have been at odds with the Board of Water Supply for a long time, philosophy that maximizes development, and water is given out not on a need priority, but on a "first-com:, first-served" basis. It is wrong that the actual water permit comes at the end of the process The impact on water resources cannot be mitigated, but our quarrel here is with the Board of Water Supply and with the political

view, be mitigated and will not be in keeping with the CZM Law.

the remaining stream systems, and of small agricultural enterbecause it seems willing to develop water at the expense of

not possible with the proposals of this project. The storm drains from increased automobile traffic and from ground treatment, is To prevent all run-off into the Bay, both silt and chemicals will carry it into Kaneohe 3ay during the heavy rains. The question that is bottom-line with this or with any other large project is: "How do we as a State value our natural resources?" Should Kaneohe Bay, with its special qualities, be one of these Should every "developeable" open-space be jeveloped quickly, or should some places be preserved for their natural value alone?

Mahalo for permitting us to comment.

Lola Mout

Conservation Committee

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIEL S.C. MONG, PE DAVID B BILLS, PE MICHAEL N MOJIMA, PE BEVERLY G. ING, PE ROBERT B. JONES

October 16, 1986

Ms. Lola Mench Conservation Constitue Sierra Club, Marai'i Chapter Honolulu Group P.O. Box 11070 Honolulu, Hamaii 96828

SUBJECT: Recia Kea Valley
Draft Supplemental
Environmental Ispact Statement (EIS)

Dear Ms. Mench:

We thank you for your review comments dated October 8, 1986. We appreciate your statement regarding the approval process but have no specific response alone the project sust comply with the current approval processes.

With respect to your comment regarding traffic, local improvements will attigute increasing mitigute traffic congestion and regional improvements will mitigute increasing traffic volumes. The sharp curve and long bridge are not on the project site and no improvements are proposed. Traffic impacts at these two sites will remain essentially identical to existing conditions.

The project site is sain of Kasabameha Highray and does not lend itself to significent coastal activities. Along the sajority of the project's Kamebameha Highray frontage, the shoreline is narrow, with the amospinon of the Heale Saell Highray frontage, the shoreline is narrow, with the damont of the Heale Saell Boat Narbor. Lands on the project mits adjacent to the harbor will be devoted as stated in your comment latter, the proposed Morean buffer some will create additional separation from the shoreline. We therefore do not concur that the sadditional separation from the shoreline. We therefore do not concur that the majority of the project is outside the Special Management first where coastal majority of the project is outside the Special Management first where coastal dependent policies of the Coastal Zone Management law have distinished relevance.

With respect to water, the Board of Water Supply has planned source development projects. Preliminary discussion with the Board indicates the source as well as transmission components of the Board's system can provide adequate water without jeopardizing the island's overall requirements. This project has no direct control over the source development.

IN MERCHANT STREEL BUTTE 607, HONOLINU HAMAII B6813 - TELEPHONE BOBI 521-0306 XIII. B-19

Ms. Lola Mench Page 2 October 16, 1986

J. ....

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The project will generate remidential type storm water rundf to Kaneche Bay. The increase in surface rundf is estimated to be approximately 15%, which is less than 0.1 percent of total storm water discharging to the Bay. This information was provided in the 1983 ELS and aumnarized in this supplement. No administrant impact to Kaneche Bay is anticipated.

The approval process will asministe and weigh the impacts of the proposed project. Completion of each approval atop will produce a determination regarding the appropriateness of development on the project site.

Should you have any questions regarding this matter, please contact our office.

very truly yours,

GRAT, BONG & ASSOCIATES,

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8 CITY AND COUNTY OF HONOLULU

KK/DGP 9/86-9493 01710 0000 00 1P-3 12/438 01 Ht COWNER DC441DA C1FCC

October 6, 1986

Mr. Brian L. Gray Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Gray:

Heela Kea Valley, Draft Supplemental Environmental Impact Statement T.M.K.: 4-6-06: 1, 2, 4, 7-16

We have reviewed the subject Draft Supplemental Environmental Impact Statement (EIS) and have the following comments:

- The section on noise impact references a 1978 Air Installation Compatible Use Zone (AICUZ) study. This study was updated in August 1983 and information from the updated study should be used in determining noise impacts. ;
- On page 6 the sever system average daily flow is higher than the water system average daily flow. Generally the opposite occurs. We recommend that you recalculate average daily flows using Board of Water Supply and Department of Public Works methodology for determining average daily flow. ;
- How much excess capacity will be designed into the temporary pump stations? Please clarify the reason for building temporary pump stations rather than proceeding with the design and construction of the Permanent stations. Who will bear the construction cost of the permanent pump stations (City or developer)? . .
- On the bottom of page 50 one or more lines appear to have been dropped. ÷

Mr. Brian L. Gray Page 2 October 6, 1986

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- S. The social impact of this project appears to be controversial and unresolved. The statement on page 23 that "No significant change in social characteristics of the area was anticipated" appears to be incorrect. On page 39 it is stated that "while much progress was made some concerns with respect to the physical and social impacts of the proposed uses remain unresolved." On page 82 it is further stated that "However, the extent of the intangible quality of life impact, namely the impact on community identity, will depend largely on how the community perceives this project relative to their needs and desires." On previous pages in the "Social Characteristics" section, the report indicated the diverse views of the affected residents on the impact of the development on the community.
- On page 59, Figure 13, and in Appendix B, Figure 5, the A.M. peak hour critical lane volumes for Kamehameha Highway contain parentheses around the existing rather than projected volumes as indicated in the note at the bottom of the page. è.
- traffic count taken on Kamehameha Highway 0.4 mile northwest of Ipuka Street (Heeia Viaduct) in March of 1985, the A.M. peak hour (6:00 a.m. to 7:00 a.m.) traffic volumes for Kamehameha Highway were 787 vehicles Kaneohe bound and 55 vehicles Kahaluu bound. The A.M. peak hour figures used in the subject Draft Supplemental EIS and the previous EIS (dated 1983) were 520 vehicles Kaneohe bound and 130 vehicles wand on Kamehameha Highway. Traffic impact and capacity calculations for Kamehameha Highway fronting the project should be recalculated using the more current traffic volume counts.
- B. At the Kamehameha Highway, Haiku Road, and Lilipuna Road intersection there has been a substantial decrease in the traffic volume and critical lane volumes from the 1982 figures used in the previous EIS to the 1983 figures in the subject Draft Supplemental EIS. Are there any changes in the surrounding area which could account for this reduction in traffic? The State Department of Transportation has traffic counts for this intersection taken in October 1984 and April 1985. These counts should be used to determine any further changes in traffic at this intersection with the most current count used to determine existing and projected critical lane volumes. 8

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Mr. Brian L. Gray Page 3 October 6, 1986

9. Support should be provided for your estimate that half of the peak hour traffic generated by the project will pass through the Kamehameha Highway, Haiku Road, and Lilipuna Road intersection. The subject Draft Supplemental EIS indicates an 80/20 split during the A.H. and P.H. peak hours while the 1985 traffic volume count indicates a 90/10 split during the A.H. peak hour with the larger volume Kaneohe bound in the A.M. and Kahaluu bound in the P.H. What happens to the other 30 or 40 percent of the traffic that does not pass through the intersection?

Although not needed for the EIS, the Department requites a more definitive phasing plan than that provided on page 24 to review your Development Plan Amendment request for this project. Please include the number of units to be completed each year, the projected completion date of the commercial area, industrial area and park site, and the phasing of roadway, water and sewage improvements.

Should you have any questions concerning our comments, please call Keith Kurahashi at \$27-6051.

Thank you for the opportunity to comment.

Sincerely,

Lowel Chap
DONALD A. CLEGG M
Chief Planning Officer

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

( ....)

October 16, 1986

BRIAN L, GRAY, PE DANIELS C, MONG, PE DAVID B, BILLS, PE MICHAEL H, MODINA, PE BEVERLYG, ING. PE

> Mr. Donald A. Clegg Chief Flanming Officer Department of General Flanming City & County of Honolulu 650 South King Streat Bonclulu, Havali 96813

SUBJECT: Heels Ken Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Clegg:

We thank you for your comments dated October 6, 1986 regarding the subject project. We are providing the following responses to your comments:

- The Supplemental Environmental Impact Statement has been revised to include the information of the 1983 Air Installation Compatible Use Zone (AICE) Study. Information provided in the 1983 update is essentially identical to that contained in the 1978 study and there are no changes to the reported impacts.
  - 2. Average daily flows for water and sever are based on Board of Mater Supply and Department of Public Works design criteria. However, there was an error in the average daily sewage flow and it has been revised to 0.14 MD. The average daily water consumption remains at 0.19 MD.
    - 3. Based on review comments received from the Department of Public Works, the Supplemental Dispect Statement will be revised with respect to sewage collection and disposal. The City has recently accepted the existing pusp station adjacent to the long bridge. The City now plans to install a persent pusp station at this atts with construction beginning in 1959. This will be the new point of connection for the Heels Res off-mite sewer. The Heels Ka project will therefore no longer be proposing to construct a temporary pump station at this location.

With respect to the on-site pump station, the City has no plans to construct a Master Plan pump station in this area. In order to allow operation by the City & County of Honolulu Department of Public Works, the sewage pump station seat be built to County standards. Therefore, the Supplemental Environmental Impact Statement will be revised to indicate that a personent pump station will be built on aits at the developers expense.

The last line of the paragraph on page 50 concerning fauna has been added to the Revised Supplemental RIS.

Mr. Donald A. Clegg Page 2 October 16, 1986

- 5. A response to your comment regarding the "controversial and unresolved" social impact of this project has been provided by Earthplan and is attached.
  - The perentheses have been revised appropriately on Figure 13 and in Appendix B as identified in your letter.
- 465 and 495 vehicles for calendar years 1982, 1983 and 1981.
  Rowever, in 1985 the count was 842 (787 Kabeche-bound and 55 been reviewed (Haiku Rosed) and no such a significant increase occurs. As master of fact the count decreases. Increase 1985 peak-bour count is not considered useful. Conversations with the State of Rewail Department of Transportation Planning Branch confirm our position.

The 1983 ELS distributed peak hour traffic on Kemehameha Highway utilizing an existing base line volume of 650 vehicles (two directions) and this is still representative today.

8. The 1982 traffic distribution has been reviewed and has been found to be erroneous. Approach volumes (all directions) are summarized balow for A.H. and P.H. peak bours:

| P.N  | 2,091<br>1,874<br>1,873<br>1,888 |
|------|----------------------------------|
| A.H. | 1,869<br>2,273<br>2,079<br>2,157 |
| Year | 1982<br>1983<br>1984<br>1985     |

From the foregoing table, the peak hour traffic entering the Lilipuns/Haiku Road intersection has been relatively stable. It is therefore believed the peak hour distribution as shown on Figures 11 and 12 are representative for any of the last four years.

9. It has been estimated that half of the Kaneche-bound peak hour traffic will enter the Kamehameha Highway, Helku Road and Lilipuna Road intersection. This is due to the fact that Heela Street intercepts traffic headed to Kahekili Highway and Leward Oahu. Heela Street intersects Kamehameha Highway and connects with Haiku Road and allows by-pass of the Lilipuna Road/Heiku Road intersection.

Should you have any questions regarding this matter, please contact our office. A Phasing Plan is being developed and forwarded to your office as soon as postible. GRAY, HONG & ASSOCIATES, DIC. Brian L. Gray Very truly yours, Hr. Dorald A. Clegg Page 3 October 16, 1986 DB:1t Attachment 1301-1 

# Garthplan

Planning and Design

81 S. Hotel Street, Suite 211 Honolulu, Hawaii 96813

(808) 524-8387

October 17, 1936

Hr. David Bills Gray, Hong and Associates, Inc. 119 Herchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Mr. Bills,

Subject: Heela Kea Supplemental EIS
Response to Comments from the City Department of
General Planning

This is in response to the October 6, 1986 letter from the City Department of General Planning. This letter specifically addresses comment #5 on page 2 of the letter. The first part of this letter addresses the overall nature of social impacts; the second, the Heela Kea Social Impact Assessment; the third, DGP's references to specific statements.

# Overall Nature of Social Impacts

The comment that "the social impact of this project appears to b controversial and unresolved" is partially true in that addressing the social impacts of any project is an ongoing and dynamic process.

Even if solutions or mitigative measures may seem mutually agreeable by both the developer and the community, this does not mean that the particular impact has been resolved.

Instead, it suggests that, at a given point in time, those who devised the solutions believed that these measures would work. Another party or group, however, may still not find such a solution satisfactory and, for them, the social impact is unresolved. Another possibility is that the execution of the proposed solutions, if monitored, may prove ineffective so that the social impact remains unresolved. Still another possibility is that some of those involved in the initial design of these solutions may, at a later date, change their minds, based on different attitudes or on other new information.

# Addressing Social Impacts of Heela Kea

As required in an EIS study, the Heela Kea Social Impact Assessment identifies the potential social impacts of this project. The Assessment further makes an effort to do so within the social and cultural context of Kahaluu and Kancohe. Rather than seek consensus or support among the community, the Social Impact Assessment presents concerns people have about the proposed development. In some instances, mitigative measures to these concerns have been suggested by individuals or by the report preparer.

This information can assist in the development of resolutions. For example, in previous proposals for Heeia Kea, some people implied that they did not want any development whatsoever on the site because they wanted to "keep the country country."

In the Assessment, however, after further discussions with community members, it was found that this feeling sometimes stemmed from a desire to maintain the valley as a buffer between Kaneohe and Kahaluu. For some people, it was not a matter of no development, but what would be there (such as housing Windward residents can afford, parks, and so on), how it was put there (such as visual considerations), and the effect of the development of one's driving time, sewerage system and other factors present in one's dally life.

This information suggests that, despite the controversy of the previous Heeia Kea proposals, specific measures can be designed to address social impacts.

A good example is the recent action taken by the Kahaluu Neighborhood Board. As stated in the Assessment, the Kahaluu e Kaneohe Neighborhood Boards have recommended denial of all previous proposals for Heela Kea.

At their September meeting of this year, however, the Kahaluu Neighborhood Board voted to support the Heeia Kea project, with amendments. Hany of their conditions are designed to maintain the buffer quality mentioned above -- the open space, the retention of large trees, and a green belt along the highway. For whatever reasons, such suggestions were not incorporated in the Board's positions on previous proposals.

This change of position implies perhaps that the community may be slowly changing its attitude, but even these changes do not imply total resolution of social impacts. It is highly likely that, some people will remain unsatisfied, as long as the area changes from what it is today. For them, the social impacts will remain unless they can personally find a positive benefit outseighing the negative impacts.

Specific Comments

The DGF letter cites three comments which need to be clarified.

The statement on page 23 applies to statements made in the initial EIS. A sentence should be added to that paragraph stating. "A Social Impacts Assessment was prepared for this supplemental EIS and is further discussed in other sections of this EIS. The full report is appended to this document."

The statement on page 39 specifically refers to lack of resolution during the meetings facilitated by the Nelghborhood Justice Center between September 1984 and June 1985. The group has not re-convened to work these differences out, nor does it seem likely that this will happen.

To portray more accurate information, this statement should be revised to read. "While much progress was made, the group could not reach consensus with some concerns relating to the physical and social impacts of the proposed uses."

The statement on page 82 was addressed previously in this letter. Please contact me if you need further information or clarification on this matter.

Sincerely yours,

Ans Coloure / Berna Cabacumgan cc: Norm Dyer, The Gentry Companies Constance Lau, Hawailan Electric Company

EARTHPLAN

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University of Hawaii at Manoa 12/10/20 Aztan: ----

Water Resources Research Center Holmes Hall 283 e 2540 Dole Street Honolulu, Hawan W622

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

14 October 1988

Mr. Donald A. Clegg Chief Planning Officer Department of General Planning City and County of Honolulu 650 South King Street Honolulu, Hawaii 96913

Dear Mr. Clegg:

Subject: Draft Supplemental Environmental Impact Statement of Heela Kes Valley, Heela, Rociaupoko, Ochu, September 1986

We have reviewed the subject DSEIS and have no comment to offer. Thank you for the opportunity to comment. This material was reviewed by WRRC personnel.

Sincerely,

Elmi Menebry Edwin T. Murebaysshi EIS Coordinator

ETH: ha

cc: D.B. Bills, Gray, Hong

SUBJECT: Reets Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS) Dear Mr. Murabayashi:

University of Hewall at Manos Water Resources Research Center Holmes Hall 283 - 2540 Dole Street Honolulu, Hawaii 96822

Mr. Edwin J. Murabayachi EIS Coordinator

We have received your letter dated October 14, 1986 regarding the subject project. We thank you for your review of the document. Your letter will be included in the Revised Supplemental Environmental Impact Statement.

Should you have any additional questions, please contact our office. Yery truly yours,

GRAT, HOND & ASSOCIATES, INC.

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119 MERCHAN STREET SUIT 603, HONOLURU, HAMMI 86413 TELEPHONE 8081 371 0308  $\overline{\rm MII}$ , B  $^{\circ}$ 2.1

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Environmental Center

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Matthew Spriggs, Anthropology FROM:

Draft EIS Heela Kea SUBJECT:

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On March 21, 1983 the Environmental Center responded to the EIS for this project outlining major concerns over the archaeological section of the EIS. In addition, Mr. Susumo Ono, the State Historic Preservation officer rasised similar serious concerns in his letter of March 7, 1983. The archaeological consultant, Joseph Kennedy, replied to both these reviews in separate letters of March 16, 1983 substantially agreeing with the criticisms and concerns raised. All of these letters were included in the revised EIS of the project.

It is, therefore, most surprising that nome of the serious concerns raised by the State and by the Environmental Center seem to be seriously addressed in the Draft Supplemental EIS for Heela Kea. Thus we read on page 33 that "During the survey, five sites were found on the property. Of these five, four were found to have no research value. The only significant site encountered during the survey will be preserved any other significant artifacts or sites encountered during development will be reported to the State Historic Preservation Office."

Actually six sites were located (as admitted by Mr. Kennedy on his Harch 16, 1983 letter). The Environmental Center pointed out that all sites found had research value contrary to the consultant's original report, as they represent the only remaining surface agricultural (and religious) features left in Heela Kea. Further investigation including excavation and dating was justified on this basis. In Mr. Susumo Ono's review, the State Historic Preservation Officer recommended that salvage excavations be conducted at all sites prior to destruction. In his March 16, 1983 response to the Environmental Center, the archaeological consultant stated he was "quite in egreement with the reviewer when he says that 'excavation of these features could provide significant archaeological information on the area!" In his response to Mr. Ono the consultant agreed that "a more complete archaeological understanding of the few remaining sites at Heela Kea should be ettempted." Thus in the opinion of the State Historic Preservation Officer, the Environmental Center and the project's own archaeological consultant, the sites do indeed have research value and should all be salvage excavated. The EIS on page 33 (and page 38) should be amended to reflect this.

On page 52 of the Supplemental EIS, it states "the sites were deemed to have little archaeological consequence and were unlikely to provide additional archaeological information." The above quoted views and further discussion in Mr. Ono's and the Environmental Center's reviews as well as in Mr. Rennedy's responses of March 1993 show that this is incorrect. Page 52 continues "It was also recommended that an archaeologist be present to monitor land clearing and grubbing." In 1993 the UH Environmental Center suggested that a program of subsurface testing prior to construction was justified given the possibility of buried remains, pointing out that it

would be most inadvisable to wait until construction begins and then merely nonitor it. The Center's review then went on to ask: "If significant remains were to be located, would the archaeologist have the power to stop construction or just watch the sites being destroyed? If the latter, then such monitoring would seen merely futile. If the former then considerable time and expensive delays in construction might result." The project's archaeological consultant in response to this review stated: "The project's archaeological consultant in response to this review stated: "The project's makes an excellent point concerning archaeological monitoring. To simply observe the destruction of subsurface features as they are uncovered would be futile and to halt construction and the land clearing and grubbing phase of development (except in an energency) would be time consuming and costly. As suggested, a program of subsurface testing prior construction would be advantageous to all parties. After this has been completed an archaeologist should be on hand to deal with any additional and unexpected features or burials." Thus the Environmental Center and the project's own consultant's are in agreement on the need for testing prior to any nonitoring activity. This was not considered on page 52 which purports to represent the consultant's position."

The comments on the lack of significance and proposed actions given on pages 13-4, 17-8 and 51-2 of the Supplemental EIS are in conflict with the mitigation measures suggested on page 90. The problem with these proposed measures is that they are extremely vague, compared to the concrete suggestions made by Hr. One and the Environmental Center in their 1981 reviews, and by the Archaeological Consultant for the project in his response to those reviews in March 1981. On page 98 of the Supplemental EIS it is stated:

"The extent of additional and appropriate archaeological work that should be undertaken remains to be determined. Some concern centers around the potential for subsurface information. Additional work is proposed in conjunction with the Department of Land and Natural Resources to address this concern. The scope of this work will be coordinated with DLNR."

Vork the In the Final EIS for the project the nature of this additional we should be clearly indicated. In reviewing the previous EIS for project, the State Historic Preservation Officer called for:

1. Salvage excavations at all sites
2. Honitoring of all ground disturbing activities
3. Shrine sites HK-IV and HK-V to be preserved

In addition, and with the concurrence of the project's archaeological consultant, the UH Environmental Center called for:

4. A program of subsurface testing to assess the possibility of significant subsurface remains

5. additional historic literature review

Since 1983 the need for subsurface testing on development sites likely to yield burled remains has been demonstrated scveral times. The Luluku agricultural terrace system in Kane'ohe directly adjacent to Heeja was found to have up to four burled agricultural levels below the surface structures dating back 1000, and in one case perhaps 1500 years. Subsurface testing at the Mext Boach resort development has revealed on an old shoreline the remains of what may be one of the earliest settlement sites in the Hawailan Islands. Even in heavily impacted areas such as the

XIII. A-22

Nualos Regional Park and in Walkiki where no surface remains are evident, significant archaeological deposits have been encountered. These examples archaeological mitigation in areas of sandy, alluvial or colluvial soils such as are found at the Heela Rea site.

Commitment to the five proposed mitigation procedures listed above should be included in the Final Supplemental EIS.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

\_\_\_\_

October 16, 1986

Mr. Matthew Spriggs,
Environmental Center
University of Hawaii at Manoa
Crawford Hall 317 - 2550 Carpus Road
Honolulu, Hawaii 96822

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Spriggs:

We have received a copy of your undated memorandum to the Environmental the comment period associated with the 1983 Environmental impact Statement. The current doctment is a suppliement to the 1983 Statement and substantial details regarding archaeological concerns were not included due to the fact that all the concerns raised are still valid to date. The Revised Supplemental Enriconmental Instead at all the recommental being prepared will be modified to concisely show Specifically, the following actions are still proposed regarding six (6) sites identified in 1983:

- 1. Salvage excavations at all mites.
- Monitoring of all ground disturbing activities. ď
  - ë,
- Preservation of two shrine attes (HI-IV and HI-V).
- Implement a program of subsurface testing to assess the Posmibility of subsurface remains.
  - Provide additional bistoric literature review. 'n,

Should you have any additional comments regarding this document, please contact our office.

GRAY, HONG & ASSOCIATES, INC.

Very truly yours,

So. Brien 1. Gray

Its werdham street suite 607, honoling hands bert) . Telephone 1806: 5710308.  $oldsymbol{B}$ :2.2.

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P.O. Box 982 Kaneohe, Hawaii 96744 6.1 . û 1885

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October 8, 1986

Hr. Donald A. Clegg Chief Planning Officer Department of General Planning 650 South Ring Street Honolulu, Hawaii 96813

Supplemental EIS for Heeia Kea Valley. Re:

Dear Mr. Clegg:

We have reviewed the Supplemental EIS submitted for the from the Bishop Estate at Heeia Kea, Oah. The EIS as submitted is deficient or inaccurate on several major issues and should be rejected. We will discuss each issue briefly.

At page 16 the EIS indicates that the project's peak states that the Board will be 582,000 gallons. The EIS also connitrent until construction plans are prepared and approved. Windward Oahu residents have been engaged in the dewatering of windward streams and the ensequent loss of water for irrigation with the Board of Hater Supply over aesthelic, and environmental needs. This developer must one-half million gallons of water per day and the impact such needs, sesthelic wall as for recreational, one-half million gallons of water per day and the impact such needs, sesthetic values, recreational and planned agricultural needs, aesthetic values, recreational opportunities, and

Not only will this project increase runoff from the proposed use, but it will also result in a reduced with the fresh water into Kaneohe Bay as a result of such development. The EIS totally fails to assess any of these impacts.

LAND USE PLANNING

At page 39 the DIS states that the project is compatible surrounding uses, at page 49 states that the site

does not support agriculture, and at page 52 states, ... there is presently no aesthetic value to the site. All of along this portion of the bast. Surrounding areas along this portion of the bay are low density residential with nostly older homes along both sides of the highway. This areas does not have the type of density or impact upon public services as will be created by this project.

Further, to say that the site does not support tenants of Heeia Rea Valley were all evicted by Hawaiian Electric Company when it lirst decided to develop this property, according to testimony from residents presented by hawaiian public hearings regarding this property.

Finally, to say that these lands in their natural state covering most of this island with concrete. Any user of Kaneohe Bay would verify the natural beauty of this area.

\*However, the discussion at pages 61 to 65 the EIS states, improvements and widening of Kahekili Highway will be issue. At present the highway improvements will be funded for construction; only planning work has been for transfer of H-3 freeway authorized. Furthermore, given the passage of the deadline extend the deadline, the prosect of allure of attempts to projects is not good.

\$75 million in matching funds to obtain the federal have to raise build the highway. Because of this tremendous burden on the states's transportation budget, it is unlikely that any funds to will be available for many years to fund these improvements. Additionally, estimates of construction vary between 10 and 20 creates and construction may not start until 1990 if the freeway impact on traffic. As residents of the immediate area surrounding the project's real inadequacy of existing roads to handle even he considered until transportation improvements are a certainty.

XIII. A-23

2 Finally, this is not the only project which would contribute to additional traffic. The EIS totally neglects assess the cumulative impact of this project combined with other proposed projects or development allowable under existing planning and zoning. Without an analysis of cumulative impacts, this analysis is of little value.

Also at page 70 the EIS states that additional county buses will be needed (subsidized by the county) or if they an unavailable, even more automobile traffic will be generated.

## EDUCATION

The ELS blithely states that Castle High School is at capacity and may require funding for additional classrooms. No analysis is presented of the cost of such improvements or the source of funds. Along with transportation needs, this project may impose tremendous burdens on government to fund improvements. Analysis of these costs is ignored by the ELS in assessing the impact of this project.

## RECREATION

The only discussion regarding impacts upon the recreational uses of Kaneohe Bay and the access to Heeia Kea pier relate to automobile traffic. However, no discussion is presented regarding additional impacts upon the bay itself and the users of the bay. By building 390 homes in the vicinity of the pier, such demands can only increase on facilities of the pier, such demands can only increase on facilities which are now used to capacity. The EIS is inadequate without analysis of the impacts on recreation in Kaneohe Bay.

Thank you for your consideration of these comments. We hope that the EIS will be rejected until these critical areas are adequately addressed.

Sincerely,

7167711 KATHRYN MOMI ALBU

RONALD A. ALBU

Mr. David B. Bills Gray, Hong and Associates, Inc.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L. GRAY, PE DANIEL S.C. HONG, PE DANDE BILLS, PE MICHAEL H. MOJHA, PE BEVERLY G. HNG, PE ROBERT B. JONES October 16, 1986

Hr. Ronald A. Albu Hrs. Kathryn Honi Albu P.O. Box 982 Eneche, Hwaii 96744

STED SECT:

Reefs Kes Valley Draft Suplemental Environmental Impact Statement (EIS)

Dear Hr. and 14rs. Albu:

We thank you for your consents dated October 8, 1936 regarding the subject project. Your connent letter reconsends that the subject document should be rejected based on deficienties or inaccuracies on certain issues. We are providing the following comments regarding your concerns:

The developers of the subject project have no control over the actual source which will allow water to be made available to the project. Source development will be totally under the jurisdiction of project. Source development will be dependent upon the actual time the Board of Water Supply and will be dependent upon the actual time development of saturation. At present, the development proposing a development plan mendment which, if successful, will be followed a Change in Zone request prior to preparation of any construction plans for improvements. Incough preliminary contact with the Board of Water Supply, it has been indicated that there are sufficient sources available to provide water for the project.

Stormwater runoff has been summarized in the current Supplemental Environmental Lapact Statement. A more detailed analysis of stormwater runoff was included in the 1983 Environmental Lapact Statement. Runoff from the project mite will increase by less than 15 percent as a result of development and this represents less than 0.1 percent of the total runoff to the Bay. The conclusions provided in percent of the total runoff to the Bay. The conclusions provided in the 1983 Environmental Lapact Statement and current supplement the 1983 Environmental Lapact Statement and current supplement

## Land Use Planning

Residential subdivisions exist within one-half mile of the project alte on the Kaneche side of the project. In addition, project alte on the Kaneche side of the project in addition, from the project alte to Kahekili Highay intersection. The typical lot sizes for single-family lots on the Kahaluu side of the property vary between 10,000 and 12,000 square feet. It is therefore believed that new residential development will be compatible with existing residential development.

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Hr. Romald A. Albu Hrs. Kathryo Momi Albu Page 2 October 16, 1986

Agricultural enterprises which currently occur on the project site are non-existent or, at best, insignificant. It is therefore believed that this statement is also valid as presented in the 1983 document and ourrently restated.

Your comment regarding aesthetic value to this mite is mightly presented out of contaxt. The 1983 Environmental Impact Statement as presented out of contaxt. The 1983 Environmental match with veel as current supplement state that the mite is choked with veed species and littered with our bodies and waste. A drive along tanahambah Highway from kaeche first reveals a substantial mass of abandoned vehicles followed by 10 to 20 mingle-family rendences which are of substandard quality. Motwithstanding the foregoing are of substandard quality. Motwithstanding the foregoing modified to make that the mesthetic value of this site is diminished in its existing condition.

## Transportation

The current Supplemental Enriromental Impact Statement reviews regions! traffic improvements which are being considered by governmental agencies. Your comment letter doubts the realization of these improvements and is also shoptical over funding. At the present these improvements and is also shoptical over funding. At the present date, the discussion of regional traffic considerations is still valid. In addition, Congress has just passed legislation moving H-3 forward.

Regarding scheduling in funding, the project is proposed to be implemented over a 6 to 9-year period which will not comence prior to the middle of 1987. The intent of this document is to demonstrate that there are currently proposed plans which recognize traffic congration on the Trans-Koolau corridors as well as within Mindward cohu. It is further the intent of this document to recognize that the proposed isprovements will accommodate Master planned growth on the island and not just this one project.

Funding for regional traffic inprovements have not been analyzed in conjunction with this document wince these considerations have been addressed during the planning process conducted by the various governmental agandes responsible for regional traffic consideration.

The Supplemental Environmental Impact Statement identifies that additional buss will be provided on a med basis. Should the med be greater in other areas, additional buss may or may not be provided in the project afte area resulting in additional automobile traffic. We believe this is an accurate description of how bus service will be handled.

Mr. Ronald A. Albu Mrs. Kathryn Horl Albu Page 3 October 16, 1986

## Education

During the consultation period, the State of Rawaii Department of Education Indicated that Castle High School is operating at capacity and asserted classroma. The Supplemental accusent will be revised to add an additional statement that the State taxes will pay for classroom space requirements created by the proposed project. It is not believed that a detailed discussion of the costs to provide classroom space for 15 to 35 additional Castle High School students is appropriate for this document.

## Recreation

The shoreline adjacent to the project mite is limited. Coastal activities are primarily related to Heeim Kea Pier and Small Boat Harbor. Therefore, it has been reported in the 1983 Environmental Harbor. Impact Statement as well as the current supplymental document that the major impact will be traffic at the Heeim Kea Small Boat Harbor entrance. Improvements to mitigate this impact are the creation of an entrance. Improvements to mitigate this impact are the creation of an intersection with turning-lane channelization. It is not anticipated that the proposed project will generate a mignificantly greater number of pier users than any other remidential area in the Heels-Abulmanu-Kahaluu areas.

Your consultation comments as well as our response will be included in the Supplemental Engineerial Impact Statement.

ဌ GRAY, HONG & ASSOCIATES, very truly yours,

L. Brian L. Gray

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CITY AND COUNTY OF HONOLULU ADSOUTH KING STREET SECOUTY WHO STREET SECOUTY, MARKET STREET SECOUTY, MARKET STREET SECOUTY, MARKET STREET SECOUTY, MARKET STREET STREET SECOUTY, MARKET STREET SECOUTY, MARKET STREET SECOUTY, MARKET STREET STREET SECOUTY, MARKET STREET STREET SECONTY.

DET | D 1975

October 8, 1986

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

October 16, 1986

HEMORANDUM

DONALD A. CLEGG, CHIEF PLANNING OFFICER DEPARTHENT OF GENERAL PLANNING

JOHN P. WHALEN, DIRECTOR

SUPPLEMENTAL EIS FOR HEEIA KEA VALLEY HEEIA, KOOLAUPOKO, OAHU SUBJECT:

We have reviewed the Draft Supplemental EIS for Heela Kea Valley, dated September 5, 1986. We have the following comment:

The relationship of the project to the Special Management Area (SMA) should be described and a map provided. SMA Permit requirements should be noted.

Thank you for the opportunity to comment.

cc: David B. Bills

Mr. John P. Whalen, Director Department of Land Utilization City & County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Recia Kom Valley Draft Supplemental Environmental Lapact Statement (EIS) SUBJECT:

Dear Mr. Whalen:

We have received a copy of your October 8, 1986 searcandum to Donald A. Clegg, Chief Planning Officer, Department of General Planning. The Revised Environmental Impact Statement for Beela Rea Subdivision was accepted by your office in 1983. For the purpose of this supplemental document, emphasia has been placed on factors which are different from the 1983 document, Due to the fact that the 1983 Els was solely in support of a Special Hanagement Permit Application, we have not attempted to duplicate this work in the current supplement. We are attending a copy of Figure 12 as contained in the 1983 document which shows the Special Hanagement Area boundaries. We further refer you to the 1983 document for a complete discussion of a Special Hanagement Area and Permit requirements.

Should you have any questions regarding this matter, please contact our

GRAY, HONG & ASSOCIATES, Yery truly yours,

Sar Brien L. Gray

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ir. Donild A. Clegs Chief Phynning Office Dept. of General Phynning

33.63 135 .... 4.r. Cotober 6, 1986

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Res Supplemental MS for Beeta Ken Valley

Dear ir. Clers,

Hul Malcan has the following comments on the EIS.

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very few coretal areas from Kaneche to Kahaluu where the public has access, Picming - This project is in a Coastal Zone Mangement area. There are end Beein Ken with its pier and the neighboring State park and the Heein fishpond is a unique and publicit valuable plane. Projects in a coartal zons are supposed to be coestal dependent, but repeated ouestions es to how this project is constal dependent have gone unanswered.

that there is a strong denand for residential and industrial lands, no pention quired. Many successful farms rely on City water. Thile the study argues Agriculture - The study says that Heels Nea lends are good for orchard is mode of the denend for agriculturel lends. The study also states that and truck crops, but there is no mention of mursery operations, and all Agriculture is considered not feasible because Gity water would be rethere are no plons to use the lands in the project, which would retain

Traffic - We have been told for years that H-3 is needed to solve increasing Mindward traffic problems. Tet this study oleins that "peak traffic flow from 1970 to 1983." That is the truth? Hill the treffic on Kemehamehn using ell trans. Modion corridors has remained relatively constant . .

On the Kansohe sids the long bridge and the large, undeveloped meadow lands Social Characteristics - Contrary to the KIS there are not "cuburben type fairly steep hill, with the upper portion of the hill soned commercation. developments on both the Kahalun and Kansohe sides of Heefn Kea." Ecses on the Kahalum side are strung out along the conset at the foot of a long, Are between Henis Kes and Kansohe housing.

to existing uses of the (pier) will be tanific as related to its entrance." Heats Pler - Repeatedly the IIS claims that the "only potential significant That is an incredible statement in light of the 160 new families acress

Charles Reppun Pres. ..

47-410 Iulani St. Kaneohe, 96744

Pr. John Whalen, Director Dept. of Land Utilization Grey, Hong and Associates Kehrluu N.B. 8

Housing - The study says, concerning the Planning Group: "Thile much progress Was made, some concerns with respect to the physical and social impacts of the

and that is not true. We remain far apart on the issues of density and afford. proposed unes remain unsolved." This implies that we were close to agreement,

ability. We believe that the greatest need for housing is for those families

that enem less than the median income, and the ZIS housing study failed to

identify and quantify housing needs by income entegories. He have repeatedly

opposed the 10% low/mod requirement for two reasons. Pirst, prices of thoss

units really mean only median income families. Second, as I have said before,

the mumber of houses required for lower income families should reflect the

percentage of families in those categories. Otherwise we are just going back-

wards as far as planning goes. More and more land has to be reconed becomse

out of every 100 housing units built, only ID are for those who really need

ing? The EIS wites the rapid sale of the Castle Hills homes. They do not men-

tion that over 80% of the buyers already owned a home, and that almost all

the buyers earned well above the median income.

costs. The deal between HZI and Mehop Estate has resulted in raw land costs

that are nearly four times higher than those in Central Oalm.

This BIS sites a First Hawailam Denk study that says that high bousing costs are directly related to high raw land costs and high site development Thank you for the opportunity to comment on an Els which we beliave has

some serious deficiencies and inconsistencies.

What we have is discrimination in housing by income level. All of the

nicest places to live are reserved for those in the upper income levels.

them. Of course there is some demand for market-rate housing, but who is huy.

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

BRIAN L, GRAY, PE DANIEL S.C. HOWG, PE DAVID B. BILLS, PE MICHAEL H. MOJINA, PE BEVERTY G. ING, PE FORERT B. JONES

October 16, 1986

Mr. Charles Reppun, Fresident Hul Malasa Aina 'o Koolau 47-410 Lulani Street Kaneche, Haraii 96744 SUBJECT: Heeta Kea Yalley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Mr. Reppun:

We have received your letter dated October 8, 1986 regarding the subject project and are providing the following responses:

## 20103:

Coastal Zone Management (CZM) law does not mandate that projects in the Coastal Zone Management Araa be coastal dependent. In fact, the relevance of coastal dependency becomes diminished outside the Special Management Area, a large majority of the project is in fact outside of the Special Management Area boundaries. The portion which is within the boundary Monludes Emmelment Rightsy which limits the coastal dependent options. Monetheless, the project proposes a green belt along Emmelment Rightsy to provide separation as well as pier related commercial and industrial activities adjacent to Beels pier. Both of these proposals complement the coastal dependent policies of the CZM law.

## Acrioulture

The project is devoting 33.5 acres to agriculture. The type of agriculture has not been specified and will be dependent on the temmis dealine. The agricultural lands are being preserved and it will be messary to find agricultural temmia. Therefore, if there is a strong demand for agricultural lands, the project will be able to fill part of it.

## Ireffio

Peak hour traffic has remained constant minos the Trans-Koolau corridors have reached their peak bour capacity. What occurs though is that the peak hour period extends and larger daily traffic volumes are created.

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Hr. Charles Reppun, Preaddent Page 2 October 16, 1986

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The project's proposed intersection isproverents wil allow turning sovements without interrupting through traffic. As regional traffic improvements are implemented, the whole Windward traffic system will improve. Based on these two facts, it is believed the traffic on Karchaschs Highway will be tolerable. Further, the 1983 Environmental impact Statement provided traffic distribution points showing tolerable traffic levels.

## Social Characteristics

Residential subdivisions begin within one-balf mile of the project alte in the kapeche direction and residential housing exters along Raschmeta in the Kahaluu direction. Tytical lot sizes along Kamehameta Highay are 10,000 - 12,000 aquare feet with nuerrous along attreets. We believe the proposed residential housing will be compatible with the surrounding development.

## Reein Pier

Recia Pier is used primarily for boating and flabing. A infrequently use the pier. It is not anticipated that the proposed readently use the pier. It is not anticipated that the proposed readently incledently frequently restently as the proposed asy Alii Bluffs Subdivision or Crown Terrace. We do believe that traffic is the major impact on the existing pier and an intersection is proposed to mitigate the impact.

## Housing

The 1983 Environmental Impact Statement provided an analysta regarding housing in the Mindward Oahu area. This analysis has been updated and is included in the Supplemental Environmental Impact Statement. It is reported that there is still a strong dezand to meet housing needs.

The Project is proposing 50 low-dennity spartment units aimed at the low/moderate income group. In addition, existing residents are being provided space at subsidized costa. This is an allowance of 17 percent for the low/moderate income group.

Site development and land costswill be more expensive on the project after than in Central Ochu. The location of the land is more valuable than Central Cahu. All these factors push up the housing costs. As a general rule, people with higher incomes will always be able to more readily find housing in nicer locations. This is atrictly reality. Seventeen (17) percent of this project is provided to offeet what you refer to as "discrimination."

Mr. Charles Reppus, President Page 3 October 16, 1986

Should you here any questions, please contact our office.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

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BBB 2 - 170

## at Manoa University of Hawaii

Eartonascatal Center Cearford 317 e 2550 Campus Roid Homolulo, Hawaii 90422 Telephone (ROS) 946-7311

October 8, 1986

RE: 00446

Mr. John P. Whalen, Director Department of Land Utilizaton City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Whalen:

Environmental Impact Statement Heela Kea Valley Heela, Oahu Supplemental

The above cited document addresses the potential environmental impacts related to the proposed Heela Kea Valley residential, industrial and connected development. The document is supplemental to an EIS previously accepted for residential development only. This review was prepared with the assistance of Matthew Spriggs, Anthropology, Jon Matsucke; Social Work and Walington Yee; Environmental Center.

Due to time constraints cur review of this document was limited to the Archaeology and Social Impact Assessment sections.

Archaeology

The comments provided by the reviewer of the Archaeological section of the EIS were of sufficient detail and complexity that it was not appropriate to attempt to synthesize their content. Hence, we have appended them to this review in their entirety.

In evaluating the Social Impact Assessment our reviewers have posed a number of questions regarding the credibility and methodology of the assessment.

Because social impact assessment involves the analysis of both qualitative and quantitative data, and requires considerable local experties in working with the community to acquire human interest related data, the qualifications of those responsible for the assessment may be more critical to the quality of the assessment than those required for a non-personal more technologically restricted study. For this reason, we suggest that greater credibility would be provided by listing the

AN EQUAL, OPPORTUNITY EMPLOYER
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Hr. John P. Whalen

October 8, 1986

individuals responsible for the Social Impact Assessment and their qualifications rather than the name of the consultant firm, "Earthplan" with no address or supporting references.

## Islandwide Priorities and Values

Data sources to assess the public opinion on the Hecia-Kea development included two surveys conducted by SHS Research and one conducted by the Hondulu Advertiser. The surveys of 1978(a), 1978(b), and 1984 are not listed in the references cited. Furthernore since they apparently applied to broad State plans, it is questionable if they were sufficiently detailed in the particular geographic area of this project to provide substantive quidance for social impact assessment at Heeia Kea. Use of newspaper poll results is also highly suspect as they may not represent an unbiased source of information.

The community survey poul (p. 17) conducted by the Kahaluu Neighborhood Board is unacceptable as a measure of community opinion regarding this project. A 15% return is insufficient and provides no significant assessment information. Purthermore, the questions, as acknowledged in the DEIS, did not include any reference to Heela Kea, hence the few comments received should not be considered relevant to this project.

# Issues and Concerns of Islandwide Organizations

The comments provided by several community organizations are cited but with the disclaimer that they should not be viewed as representing "islandwide" opinions since they have special interests. While this disclaimer may be valid, the same disclaimer should surely be applied to the use of data from statistically invalid polls, newspaper surveys, and islandwide polls with minimal if any relevance to the specific Heeia Kea area.

# Intervieus with Study Area Individuals

A major portion of the assessment is devoted to a discussion of the comments provided by a group of selected individuals on certain topics relative to the development proposal. While we appreciate the attempt to select individuals familiar with the area we also find that this selection seems to be heavily weighted toward business interests, includes individuals who may not be responding independently, and includes individuals recommended by "there people" without clarification of who the "other people" are. If these "others" for example are also Study Area Individuals, then the independence of thought of the recommended participants can be questioned.

Mr. John P. Whalen

October 8, 1986

Finally, we note that each of the Study Area Individuals were instructed to speak strictly as individuals and not as organizational representatives. However, their names (table 9) are listed with their organizational affiliation. This implies organizational concurrence when presumably none was given. We view this as a highly inappropriate representation. Furthermore, there was no effort to quantify comments of the interviewees nor to provide the questions for which responses were solicited.

In summary, the assessment suffers from some serious inadequacies. The methodology for the social impact assessment appears to be non-scientific and non-reproducible and as such does not provide an adequate document from which to evaluate the potential social environmental impacts related to this project.

The deficiencies noted either in the work itself or in the documentation of that work are sufficient to suggest that major changes will be needed in the final EIS if it is to be considered adequate.

Thank you for the opportunity to comment on this project.

poromin In Whillie Jacquelin M. Miller Acting Associate Director Yours truly,

> Dovid B. Bills
> David B. Bills
> Patrick Takahashi
> Walington Yee
> Jon Matsucka
> Hatthew Spriggs ខ្ល

GRAY, HONG & ASSOCIATES, INC. CONSULTING ENGINEERS

- ...

BRIAN L. GRAY, PE DANIEL S.C. MDMG, PE DANID B BLILS, PE MCHAEL H MOJIMA, PE BEVERLY G, ING, PL ROBERT B JONES

October 16, 1986

Ms. Jacquelin M. Miller Acting Associate Director University of Hawaii at Manoa Environmental Center Crawford Hall 317 - 2550 Campus Road Honolulu, Hawaii 96822

SUBJECT: Heels Kes Valley
Draft Supplemental
Environmental Impact Statement (EIS)

Dear Ms. Miller:

We thank you for your review comments dated October 8, 1986 regarding the Draft Supplemental EIS.

A response to your archeeological concerns was addressed directly to Mr. Matthew Spriggs. The Revised Supplemental EIS will be modified to concisely show that your recommendations that were previously identified in the 1983 EIS are still valid for the current project.

A response to your comments concerning the Heefs Kes Social Impact Assessment has been prepared by Earthplan and is attached for your use.

Should you have any questions, please contact our office.

CRAT, HONG & ASSOCIATES, INC. Tery truly yours,

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119 MERCHANT STREET SUITE FOT HONOLULU, HINNET KRITS TELEPHONE ROMISSTONS
NITA B-26

Planning and Design

81 S. Hotel Street, Suite 211 Honolulu, Hawaii 96813

(808) 524-8387

October 17, 1986

Hr. David Bills Grey, Hong and Associates, Inc. 119 Herchant Street, Suite 607 Honolulu, Hawaii 96813

Dear Hr. Bills,

Subject: Heela Kea Supplemental EIS
Reaponse to Connents from The Environmental Center

This is in response to the October 8, 1986 letter from the University of Hawaii at Manoa's Environmental Center, critiquing the Social Impact Assessment for the Heela Rea EIS. In preparing this letter, I have solicited some suggestions from Dr. John Knox (see later reference to him in this letter) on portions of this response and have incorporated his comments.

# POINTS ON WHICH WE ARE IN CONCURRENCE

1. The request for information about preparers is reasonable. Earthplan (address: 81 South Hotel Street, Suite 211, Honolulu. Earthplan (address: 81 South Hotel Street, Suite 211, Honolulu. Hawali 96813) designed the overall assessment, conducted all field work, and prepared the final substantive analysis of results. Earthplan principal is Berna Cabacungan, a member of results. Earthplan principal is Berna Cabacungan, a member of Impact Assessment. I have been conducting public involvement of Impact projects throughout Hawali for the past 8 and social impact projects throughout Hawali for the past 8 hears. I was involved in the Heela Kea project since 1983, years. I was involved in the Gommunication between Hawaiian initially as a facilitator of communication between Hawaiian Electric Company and the onsite residents.

Earthplan subcontracted Community Resources. Inc (CRI) (address: 1188 Bishop Street. Suite 909, Honolulu, Hawaii 9683) to assist in preparing background information on public policies, census in formation, and public issues and concerns not directly related information. and public issues and concerns not directly related for the project. CRI principal is John H. Knox, Ph.D., and other CRI employees working on this project include David R. Curry (who has a Haster's degree in Urban Planning) and Hartha Diaz-Colon has a Haster's degree in Urban Planning) and Hartha Diaz-Colon public opinion research and social impact consultant for six public opinion research and social impact consultant for six methods; and worked for three years with SHS Research, where he methods; and worked for three years with SHS Research, where he

page 2, Gray Hong & Associates, Heeia Kea

A list of Earthplan projects is appended to this letter (Appendix A). A description of CRI project experience is appended to this letter (Appendix B).

- 2. Several references were indeed inadvertently omitted and these are appended to this letter (Appendix C) and will be added to the final list of references.
  - 3. A note will be added to Table 9 to <u>further</u> emphasize that organizational affillation is given strictly to reflect the informant's degree of community involvement and is not intended to imply organizational concurrence.

## POINTS ON WHICH WE FAIL TO CONCUR

It is difficult to respond to some of the comments because, taken overall, they seem to indicate:

- a misunderstanding of the nature and purposes of social impact assessment, as opposed to social science research;
  - a failure to evaluate information based on the intent of the information within the overall context of the report
- a superficial understanding of public opinion research techniques; and
- the absence of any clear ideas or alternatives of what the reviewers think social impact assessment should be or should achieve.

## What is Social Impact Assessment?

The summary comment made by the reviewers is that "The methodology for the social impact assessment appears to be non-scientific and non-reproducible and as such does not provide an adequate document from which to evaluate social environmental impacts related to this project."

This confuses social impact assessment (a form of policy research) with that branch of social science research seeking to emulate the model of physical "science." As such, it is reminiscent of initial (and long-settled) debates which appeared in social impact literature 10 to 15 years ago.

It is now fairly well accepted among social impact practitioners nationwide that the purpose of social impact assessment has to do with the development and disclosure of social information relevant to (1) informing the decision-making process, and/or (2) developing management actions to deal with problemstic social

outcomes of a proposed project.

page 3, Gray Hong & Associates, Heela Kea

Social impact assessment thus is an applied process which draws sometimes from social science, but other times from organizational development, political analysis, or simple journalism. Evaluative criteria therefore have less to do with science and reproducibility than credibility and utility.

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## Models of Social Impact Assessment

There are various models of social impact assessment (SIA), which is in practice usually an eclectic process. In this instance, the underlying model is isbuc-based, and the central goal is a clarification of the nature of affected parties and their interests.

At its heart, this model focuses on public issues and concerns, which are ultimately as qualitative as, say, "visual impacts." which are ultimately as qualitative as, say, "visual impacts." public opinion messured at a moment in time by a survey, but public opinion is constantly shifting. An issue-based SIA attempts to go deeper by tentalively identifying the latent social dynamics which can be triggered by various external forces.

In this sense, issue-based SIA is analogous to the inductive theory-building phase of social science. The validations of an SIA 'theory' does not come, however, through quantitative observations or experiments, but through the test of response from involved parties and decision-makers. As of this writing, in involved party has objected to the substantive aspects of this analysis.

## Comments on the Use of Polls

Hany of the Environmental Center's critical comments about poll results in the project SiA have to do with the lack of questions about Heela Kea or the inadequate number of interviews in the particular geographic study area of this project...

The report outline, the section headings and the introductory text indicate that these poll results were part of the sections presenting <u>background social context</u> at two specified levels:
(1) islandwide and (2) Study Area. To criticize use of the polls for not including questions about Heeis Rea is analogous to objecting to the presentation of islandwide census information because these do not describe the demographic characteristics of expect project homeowners.

Sections 3.1 and 3.2 provide some indication as to how the islandwide and Study Area communities have responded to development issues.

page 4, Gray Hong & Associates, Heela Kea

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The citing of public opinion polls in Section 3.1 is intended to explore how the islandwide "community" feels about issues pertaining to development in general. Instead of presenting all of the poll results, only those results pertaining to issues relevant to Heela Kea were discussed.

In the case of the Study Area, more effort was put into exploring what issues are important to these communities. Thus, the information on the Neighborhood Board minutes and surveys is intended to provide some understanding of some of the values currently held by the Study Area residents.

The relevance of surveys and polls independent of the proposed project is that they help us understand whether or not the project is in harmony with existing values.

Regarding the islandwide poll, respondents have consistently felt that affordable housing has greater priority over the preservation of agricultural lands.

In the Kahaluu Neighborhood Board survey, however, over half of the respondents felt that the preservation of Kahaluu agricultural lands was "very important". While one cannot draw a direct correlation to the proposed project, the findings imply that taking Heela Kea out of the Agricultural designation may be an important issue for some community members of the Study Area, whereas this issue may not be as important to people outside of the Study Area.

The comment about the inadequacy of a 15 percent return on the Neighborhood Board survey is partially justified. Hall-out surveys are usually considered less meaningful precisely because the standard rate of return is 15 to 20 percent (although a low return rate does not automatically imply lack of representativeness). The return rate figures were provided to representativeness). The return rate figures were provided to that many Neighborhood Boards base their actions on results of such surveys.

The statement that the Advartiser poll results are "highly suspect as they may not represent an unbiased source of suspect as they may not represent an unbiased source of information is, we feel, deeply misinformed. There is an information here that is not adequately explicit. The Advartiser poll results on public issues represent the only long-range opinion tracking data for Hawaii. Each poll is designed by University of Michigan's prestigious Survey Research Center. Interviewing was conducted by SMS Research of Honolulu, and Dr. Knox (a former Research Director for SMS) can personally attest that neither Mr. Keir nor SMS made any effort to bias the

Page 5, Gray Hong & Associates, Heela Kea

## Comments on Special Interests

On page 40 of the report, the issues and concerns expressed by islandwide organizations on previous Heela Kea proposals were identified. The statement that "It is stressed, however, that these concerns are not intended to represent the feelings of the total islandwide population, particularly because these organizations have specific or special interests" is not a disclaimer. Instead, it reminds the reader that these organizations have specific charters and goals which are designed to address portions of the total needs and desires of the islandwide population.

To say, however, that the Kahaluu and Kaneohe Neighborhood Boards, the Hawaii Opinion Polls and the other islandwide polls also stem from specific and special interests is untrue. These polls are independent and were intended to ascertain community reactions and feelings to general issues.

# Comments on Interviews with Study Area Individuals

As explained on page 44 of the assessment, the interviews with Study Area individuals were conducted to

- explore the issues raised by Study Area organizations on previous Heela Kea proposals to see whether they still apply to the current proposal;
- to gain a better understanding of community's concerns; and
- to identify other concerns which have not been voiced.

As with the requirements of an Environmental impact Statement, the SIA also identifies issues and explores ways to mitigate potential impacts. There was no effort made to quantify those issues raised. As stated on page 47, "a systematic poil is recommended is such priority identification [of issues raised by the respondents] is desired".

Those interviewed included people who participated in previous mediation efforts, and people who did not participate in these efforts. The latter included residents of nearby areas, business operators of the Reeia Kea pier, people involved in the Reeia State Park and people involved in the secia

page 6, Gray Hong & Associates, Heela Kea

Contrary to the Environmental Center's statement that the respondents seem to be "heavily weighted toward business interests", those interviewed included

- 4 current members of the two Neighborhood Boards,
- 5 people who have key roles in community-oriented organizations or agencies,
- 4 people who live either on or near the project site,
- 2 people who are involved in business organizations, and
   2 people who operate a business directly across the street from the project site.

Further, a number of these people have direct knowledge of community concerns regarding the development of Heela Kea because they had, at one time, been involved in submitting comments on the project.

This breakdown will be added to the SIA so that the reader also has a better indication of the origin of issues discussed.

The reason the respondents were asked to speak as individuals, rather than as organizational representatives, is simple. Host of their organizations have not yet taken a position on the current proposal. It would be misleading for them to represent a position if a vote had not yet been taken. If their organization had or will take a position, then they would submit such information to the proper agencies.

The Environmental Center's inference of "organizational concurrence" is erroneous, as it was stated that their views were solicited as individuals. All respondents agreed to this criteria. In fact, a few made it clear that they do not wish to speak for the entire organization. Providing the respondents' organizational affiliation was merely some indication of the cross-section of ideas and feelings presented on this project.

The comment that the respondents included "individuals who may not be responding independently" is vague, in that it is not understood from whom they should be independent. As stated on page 44, an effort was made to select individuals who collectively represented a diversity of interests. Those that were contacted obviously have an interest -- they work or live in the area, or have been involved in previous proposals for Heela Kea.

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APPENDIX A

## EARTHPLAN

Please contact me if you need further information or clarification on this matter.

Sincerely yours,

EARTHPLAN

Berna Cabacunga Ams (Shecu

Enclosures

page 7, Gray Hong & Associates, Heeia Kea

Alexander Hanor, Qahu; Research and writing for the Business Plan of a proposed 150-bed elderly care home

Ena Marina, Increment I. Central Oahu: Social Impact Factors for rezoning application for 174.7 acres

Hanamaulu Beach Resort, Kaual: Facilitation of community dialogue for proposed resort on 33 acres

Heela Kea Development, Windward Oahu: Social Impact Factors for Development Plan amendment request and assistance in facilitation of community dialogue for the development of 102 acres

Honpa Hongwanii Pali Expansion: Design and implementation of community dialogue program

Kawaihae Master Plan, Kawaihae, Hawaii: Development Plan and Environmental Assessment for long range planning recommendations concerning 10,000 acres of the State Department of Hawaiian Home Lands

Kuilima Resort, Kahuku, Oahu: Assistance in social impact analysis for the Environmental impact Statement and assistance in facilitation of community dialogue for the proposed resort expansion and job training program

Leckard Job Study: Assistance in employment study conducted in conjunction with the proposed Final Increment of Mililani Town, Central Oshu

Mahukona Resort, North Kohala, Hawaii: Facilitation of community dialogue for proposed resort on 1,100 acres

Hakaiwa Sanitary Landilli, Ewa. Oahu: Facilitation of community dialogue

Hauli-ola, Central Oahu: Certificate of Need for the proposed comprehensive medical complex, including hospital. long-term care facility and medical office building

CURRENT AND PAST PROJECTS

Ewa Marina, Increment II. Central Oahu: Social Impact Factors Report for rezoning application for 444.6 acres

Ewa Marina Golf Course: Report on Planning, Environmental and Engineering Considerations for Ewa Marina Golf Course for use in the Petition for a Land Use Boundary Amendment

Dr. John Knox Norm Dyer, The Gentry Companies Constance Lau, Hawailan Electric Company

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implementation of community dialogue program: community interface for Social impact Assessment for the Development Plan Amendment Request and the Environmental Impact Statement; and preparation of certain sections of the Environmental Impact Statement.

Ocean Thermal Energy Conversion (OTEC), Kahe, Oahu: Social Impact Assessment for Environmental Impact Statement and community dialogue for proposed 40 Hegawatt plant in Waianae

Small Habiawa Residential Cluster. Central Oabu: Preparation of social impact, housing and public policy sections for the Development Plan Amendment for proposed 14-unit cluster

Various proposals in Walluku, Haui: Petition for District Boundary Amendment

Village Park Expansion, Central Oahu: Assistance in Social Impact Analysis for Environmental Assessment and facilitation of community dialogue for proposed 690-acre expansion

Maiola Estates, Central Oahu: Development Plan Amendment Request for 270-acre residential development proposed by Castle and Gooke

Majola Estates. Central Oshu: Demographic Impacts for planned residential development proposed by the City and County of Honolulu

Walluku Police Station Relocation: Environmental Assessment

## LIST OF CLIENTS EARTHPLAN

City and County of Honolulu Department of Housing and Community Development Alexander Manor, Inc.

Community Resources, Inc.

Environmental Communications, Inc.

Larry Fukunaga, Inc.

Finance Realty/Mahukona Properties

GACI, Inc.

GMP and Associates, Inc.

Greatwest Hospitals, Inc.

Hawaiian Dredging and Construction

Honpa Hongwanji Hawaii Betsuin Hawaiian Electric Company

Kuilima Development Company, subsidiary of Prudential Life Insurance

Ty Kusao

Halama-Gentry Joint Venture

Mokuleia Development Company, subsidiary of Northwestern Mutual Life Insurance Company

HSH and Associates, Inc.

Oahu Land Engineering Partners

Oceanic Properties, subsidiary of Castle and Cooke, Inc.

Ocean Thermal Corporation

Pacific Standard Life Insurance Company

Waitec Development, Inc.

Woolsey Miyabara and Associates, Inc.

## APPENDIX B

PROJECT EXPERIENCE:

## Community Resources; J. M. Knox

# Land Use and Other Socio-Economic Research

- Socio-economic assessment and community dialogue program for proposed Village Park subdivision expansion (1985-86).
- Analysis of future employment patterns for Central/Leeward Oahu (1985-86).
- Social impact portions of PRU application for Dole Pineapple cannery relocation (1985-86).
- Surveys on community issues such as new Mauf airport, road pricing, Walpahu residential development, unemployment benefits for strikers, Waimanalo farm lands, and numerous political polls (1979 present).

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- Social impact assessments for proposed resorts or resort expansions at Princeville (1980, 1983); Mahukona, North Kohala (1980); Maikoloa (1984-85); Kuilima (1984-86), Kuilima work included job training progrem development.
- o Survey on Out-of-State Recreational Travel by Hawaii Residents, published by Hawaii State Department of Planning and Economic Development (1980).
- o Visitor satisfaction and market research surveys for a major Hawaii hotel chain, a luxury Meighbor Island resort, a national rental car company, tourist publications, and an interisland airline. (SMS Research, 1981-83.)
- Development of shoreline access ordinance for resorts and other forms of development (County of Havaii, 1986).

## Energy/Resource Development

- Seethermal: Author and co-designer of Puna Community Survey for County and State governments (1982). Prepared preliminary socio-economic technical studies for private geothermal developer (1982-84).
- Ocean Thermal Energy Conversion (OTEC): Kahe Point OTEC project community dialogue program in Ewa-Walanae (1983-84) and social impact (1984); Ke-ahole Point Matural Energy Laboratory and high-tech park social impact (1985).
- Solid Maste Resource Recovery: Prepared community impact portion of Resource Recovery EIS for City and County of Honolulu (1983).
- Ocean Mining: Socio-economic profiles and impact (1984-85)

## COMMUNITY RESOURCES CLIENTS

A. Lono lyman, Inc.

Bechtel/Thermal Power Co.

Belt, Collins and Associates

Campbell Estate

Decision Analysts Hawaii, Inc

Finance Realty

Fred Bosselman/Honolulu City Council

Group 70

Grove Farms

Hawaii State Department of Planning and Economic Development

Hawaiian Dredging & Construction Co. Helber, Hastert, Van Horn, & Kimura

John Ryan Co. (Colorado) Kuilima Development Co.

Mattson & Co.

MCM Planning

Ocean Thermal Corp.

Oceanic Properties/Millilani Town, Inc.

Princeville Development Corp.

SHS Research

TRW Inc./U.S. Department of Energy University of Hawaii, School of Travel Industry Management Waikola Development/Hyatt/Hemmeter

Waitec Development Co.

# APPENDIX C (Note: This will be added to the report.)

## ADDITIONAL REFERENCES

SMS Research, Inc. The Hawail State Plan Survey -- December 1978. Prepared for the State of Hawaii, Department of Planning end Economic Development. Honolulu, Hawaii 1978a.

SHS Research, Inc. <u>Public Opinion Survey for the Development</u>

<u>Plan Program: Oahu Report.</u> Prepared for the City and County of Honolulu. Honolulu, Hawaii, 1978b.

SHS Research, Inc. <u>The 1984 Hawaii State Plan Survey, Appendix Report: Detailed Results</u>. Frepared for the State of Hawaii, Department of Flanning and Economic Development, Flanning Division. Honolulu, Hawaii: December 1984

## XIV. SUMMARY OF UNRESOLVED ISSUES

The following is a summary of issues which were included in the 1983 EIS and remain unresolved as of this writing:

- 1. No commitment of potable water availability has been made for the project. However, this is not unusual based on the fact that the Board of Water Supply will not issue any commitment until plans have been submitted and approved. In addition, a water master plan must be prepared and submitted to the Board of Water Supply.
- 2. The proposed sewage pump station system has been described in principle in this document. However, the specific details regarding construction have not been completed. This issue will be analyzed in greater detail during the development process. Construction plans detailing connection to the City and County system will be prepared and will require approval. In principle, connection to the City and County system will follow the City's Facilities Plan.
- 3. Protection of Kaneohe Bay during construction will be provided through use of erosion control measures. In principle, the measures proposed are the use of sediment traps, sediment berms and ponds as necessary. An erosion control plan for the project must be designed and approved by the City prior to construction.

4. There is a wide range of opinion how the project will socially impact on the area. The range is from favorable to unfavorable and is subject to change and in fact, organization positions have been modified with respect to this project. While social impacts cannot be totally resolved, it is likely that mutually satisfactory mitigation measures will bring this project closer to resolution.

APPENDIX A

MARKET STUDY - HOUSING DEMAND

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COWELL & CO., INC. REAL ESTATE CONSULTANTS 311 Hawaii Building 745 Fon Street Honolulu, Hawaii 96813-3874 (808) 531-2765 or 536-4988 Don R. Cowell, MAI, CRI Irmgard G. Patterson, MAI William J. Dornbush, MAI

## MEMORANDUM

To: Sheryl Seaman, AIA

Group 70

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From: Bill Dornbush

Cowell & Co., Inc.

Date: January 31, 1985

GROUP 70

Subject: Potential Hawaiian Electric Company Project, Heeia Kea, Koolaupoko District, Oahu

In response to your request, we are providing our suggested input with respect to the Development Plan Request for the proposed Heeia Kea project. During the last 2 years, our firm has completed the following studies for Hawaiian Electric Company, Inc.:

| any, Inc.:  | Date of Study   |
|---|-----------------|
| Title of Study  |                 |
| "Market Study Regarding Industrial and Business-<br>Zoned Land in Kaneohe and Surrounding Areas,<br>Koolaupoko District, Windward Oahu" | August 31, 1984 |
| "Analysis of Oahu General Plan Population   | April 10, 1984  |
| Ouidelines with Respect to Study Covering Demand for Housing With Respect to Proposed Heeia Kea   | January 7, 1983 |
| Residential Project"  "Preliminary Market Survey Covering Residential Projects at Windward Oahu"  | November 1984   |

The following is our input regarding the items you requested us to comment on:

I. Description of the Problem or the Need Forming the Basis for the Requested Use

It is a recognized fact that one of the major problems facing the residents and government of the City & County of Honolulu is to provide an adequate supply of new housing for its population. The demand for new single-family homes far outstrips the annual number of units now being completed on the Island of Oahu.

During recent years, production of new single-family homes on the Island of Oahu has declined significantly from the annual amount of new homes produced during typical years in the 1970's. A summary of single-family residential development on the Island of Oahu for the years 1967 through 1983, based on research by the Bank of Hawaii, is shown on the following page.

Real Estate Research 

Counseling 

Valuation 

Feasibility 

Investments

## SINGLE-FAMILY RESIDENTIAL DEVELOPMENT Island of Oahu, 1967-1983

|      | Averag<br>(Squar | e Area<br>e Feet) | Units | Average   |
|------|------------------|-------------------|-------|-----------|
| Year | House            | Lot               | Sold  | Price     |
| 1967 | 1,124            | 6,180             | 1,699 | \$ 31,392 |
| 1968 | 1,242            | 6,567             | 2,655 | 35,307    |
| 1969 | 1,269            | 6,381             | 2,482 | 42,120    |
| 1970 | 1,371            | 6,224             | 3,614 | 41,286    |
| 1971 | 1,247            | 6,252             | 3,477 | 45,673    |
| 1972 | 1,338            | 6,202             | 2,546 | 56,280    |
| 1973 | 1,348            | 5,627             | 1,771 | 63,809    |
| 1974 | 1,601            | 6,281             | 700   | 53,205    |
| 1975 | 1,341            | 6,281             | 671   | 79,046    |
| 1976 | 1,259            | 6,151             | 658   | 77,895    |
| 1977 | 1,261            | 6,167             | 1,164 | 79,266    |
| 1978 | 1,442            | 5,932             | 1,566 | 102,479   |
| 1979 | 1,493            | 4,753             | 1,696 | 114,731   |
| 1980 | 1,291            | 4,631             | 813   | 131,693   |
| 1981 | 1,389            | 5,698             | 354   | 157,026   |
| 1982 | 1,232            | 5,037             | 308   | 137,267   |
| 1983 | 1,173            | 4,380             | 772   | 135,357   |

Note: The above table involves private projects. Source: Bank of Hawaii, Construction in Hawaii, 1984.

Research indicates a strong demand for new single-family residential units in the Kaneohe area of the Koolaupoko District. The first phase of the Castle Hills residential project situated at the corner of Likelike and Kahekili Highways provides an excellent example of the strong demand for new housing. The first 63 units in this project were sold within a few days after the project was announced in August 1984. Prices of single-family leasehold homes in this tract ranged from about \$150,000 to over \$200,000.

According to "Economic Indicators", published by the Research Division of First Hawaiian Bank, December 1982, Hawaii's extremely high home prices and its shortage of housing are primarily due to the restrictive land use policies established in the State of Hawaii, and particularly on the Island of Oahu. According to the report by First Hawaiian Bank, high housing costs are directly related to high raw land costs and high site development costs primarily due to the following: "(1) developers bear the full cost of roads, curbs, sewers, etc., whereas in many mainland locations, the government provides these facilities and spreads the cost among all taxpayers, (2) the price of cement, a large cost factor in site preparation, is higher here,

Sheryl Seaman January 31, 1985 Memo - Page 3

(3) much of our residential land is hilly and difficult to develop, as most land is classified Agriculture, and (4) regulatory requirements for subdivisions are unnecessarily elaborate. Hence it is the cost of the site that accounts for a great part of Hawaii's higher housing prices."

Presently, most future growth for the Island of Oahu is planned for the Ewa and Central Oahu Districts of the island. However, it is important to recognize that major infrastructure systems are presently not available in the Ewa area and, therefore, new housing cannot be built there for several years.

As an appendix to the General Plan of the City & County of Honolulu, population guidelines have been developed with artificial population ceiling levels. These artificial ceilings may or may not have any relationship with reality with respect to the actual demand where people want to live on the island.

For the year 2005, just over 20 years hence, the State projected a resident population of 954,500 for the City & County of Honolulu (Island of Oahu). Based upon these 1984 projections, the recommended population for the Koolaupoko District in 2005 would be in the range of 118,358 (954,500 x 12.4 percent) and 129,812 (954,500 x 13.6 percent).

According to "Land Supply Review: Population Implications of the Development Plans" by the Department of General Planning, City & County of Honolulu, July 1984, the Koolaupoko Development Plan, as amended June 8, 1984, would provide for a future population of 125,600. This total includes 111,200 persons, estimated as of 1982 (plus 9,100 under the Additional category and 5,300 under the Special category). The Special category includes various design districts and/or ohana zoning.

It is noted that the Development Plans are supposed to represent a "20-year horizon". According to the Department of General Planning, the adopted 1984 Koolaupoko Development Plan provides for a total potential population of 125,600. This is below the upper population guideline of 129,812 residents in Koolaupoko in the year 2005.

Based upon the above data, the 1984 Koolaupoko Development Plan provides for a total population of 125,600, which is about 4,200 residents below Koolaupoko's upper population guideline. Assuming 3.5 residents per housing unit, this indicates that about 1,200 new residential units will be needed to provide housing for the future population of the Koolaupoko District. It is important to recognize that the "Land Supply Review" study, prepared by the Department of General Planning, assumes that all of the land designated on the 1984 Koolaupoko Development Plan would be developed. We believe this is an unrealistic assumption, as many parcels may not be developed due to lack of infrastructure, the fact that some property

Sheryl Seaman January 31, 1985 Memo - Page 4

owners do not desire to develop their property and/or other factors. In our opinion, restricting the supply of Residential-designated land in the Koolaupoko District, as well as elsewhere on the Island of Oahu, unduly restricts supply and, therefore, substantially increases the price of undeveloped land available for new housing. The end result is higher housing costs on the Island of Oahu.

In summary, we believe there is strong demand for new single-family housing in the Koolaupoko District of the Island of Oahu. The location of the Heeia Kea property provides an attractive setting for new residential development, as the site offers excellent views to Kaneohe Bay and is in convenient driving distance to shopping facilities, schools, public facilities and other establishments in the Kaneohe area.

Approximately two acres of the Heeia Kea project are planned for commercial development. According to a study prepared by Cowell & Co., Inc. in August 1984, there were approximately 114 acres of Business (B-2) zoned land in the Kaneohe and Kahaluu areas of the Koolaupoko District. The study indicated that only about 6 acres of the Business-zoned land are vacant and available for new development. The vacant land reflects about 5 percent of the total Business-zoned land in the Kaneohe to Kahaluu area and, in our opinion, is an inadequate amount of Business-zoned land to serve this area over the next 10 to 20 years.

## C. Location of the Site Vis-A-Vis the Intended Market for the Proposed Use

The State Land Use Commission has classified 102 acres of the Heeis Kea property as Urban. Although Heeia Kea Valley itself is undeveloped, except for the existing older residential units and the Hawaiian Electric Company base yard, most of the lands along Kamehameha Highway situated immediately north of Heeia Kea are improved with single-family housing units. Lands located south of Heeia Kea Valley and beyond Heeia Kea Marsh are also developed with single-family housing and are located on the periphery of Kaneohe town.

Kaneohe town is situated less than 2 miles south of the Heeia Kea property. The surrounding areas of Kahaluu and Ahuimanu also contain significant amounts of residential units. It is important to recognize that the Heeia Kea site represents one of the few remaining undeveloped land holdings that is ocean-oriented and will offer excellent views to the ocean for occupants of the future housing. In summary, we believe that the site is well located with respect to the intended market and will provide an attractive location for its future residents.

Sheryl Seaman January 31, 1985 Memo - Page 5

## H. Availability and Affordability of Housing in the Area for Local Residents

An article from the WINDWARD SUN PRESS, November 9, 1983, provides an excellent summary of the housing inventory for the Windward Oahu areas of Kahaluu, Kaneohe, Kailua and Waimanalo. The article is based upon data collected by the U.S. Census Bureau in 1980. As discussed in that article, the Kahaluu area contained 1,347 owner-occupied units with a median home value of \$139,100, the highest of any Windward Oahu area discussed in the article. The median value of the 5,655 owner-occupied units in the Kaneohe area was \$122,500. This is somewhat below the median value of \$130,400 for the 78,096 owner-occupied units on the Island of Oahu.

According to the census data, there were 9,698 occupied housing units in the Kaneohe area. The median number of persons per unit in the Kaneohe area was 3.43, somewhat lower than the median for owner-occupied units which was 3.51 in the Kaneohe area. Further details regarding the housing stock in the Kaneohe and Kahaluu areas surrounding the subject property are summarized in Exhibit 2 which is attached.

Research indicates that there is a strong demand by local residents for housing units in the Kaneohe area. We believe that the proposed residential units at Heeia Kea will find excellent market acceptance and satisfy a small portion of the demand for additional housing units in the Kaneohe area.

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Attachments

cc: Hawaiian Electric Company, Inc.

nthly Report by the Research Division

Dr. Thomas K. Hitch, Senior Vice President Shurei Hirozmia, Vice President

December, 198

## Hawaii's Unaffordable Housing

Average home prices are high all over the nation, but it is well known that they are highest of all in Hawaii. The onolulu Board of Realtors Multiple Listing Service showed an average price of \$184,559 for single-family homes sold in the first seven months of 1981, while for the me period a National Association of Realtors survey of 15 ajor metropolitan areas showed the average price of a San Francisco home, most expensive of the cities surveyed, at \$133,900-\$50,000 less than Honolulu's averagerices in the other cities ranged downward to Pittsburgh's .9,000 ود ـ

Yet Honolulu's construction costs are not much above erage, according to McGraw Hill Housing magazine sur-:ys of the labor and material costs of building the same good-quality 1,500-square-foot ranch house in 100 cities. The August 1981 survey showed that the cost of constructg this house in Honolulu, at \$80,684, was considerably wer than in Fresno at \$88,380 or San Francisco at \$86,713, \_somewhat lower than in Cleveland and San Jose, and about the same as in Los Angeles, Sacramento, Stockton, and i etroit. Materials costs to build the house in Honolulu, at -46,684, were only a couple of hundred dollars more than -in Fresno and Cleveland even though most of our building aterials must be shipped 2,000 miles. Labor costs in Hoolulu, at \$34,000, were lower than in these eight cities, hough higher than the U.S. average of \$29,790.

The Housing survey does not include land costs, site :velopment costs, developers' overhead, contractors' osit, or local taxes like Hawaii's 4 percent excise tax on \_ontracting. All of these must be added into the final sales ice. Raw land is more expensive in Hawaii than in most ainland areas. Site development costs are higher here recause (1) developers bear the full costs of roads, curbs, sewers, etc., whereas in many Mainland locations the govnment provides these facilities and spreads the cost nong all the taxpayers, (2) the price of cement, a large \_actor in site preparation, is higher here, (3) much of our residential land is hilly and difficult to develop, as most level nel is classified agricultural, and (4) regulatory requirements for subdivisions are unnecessarily elaborate. Hence it is the cost of the site that accounts for a great part of Hawaii's

gher housing prices. In 1960 Federal Housing Administration statistics howed the average market price of residential sites in Hawill at \$6,502, roughly two and a half times the U.S. average \$2,492. In 1961 Hawaii became the first state to pass a and use law, in which we seem to take great pride. By 1980 -the FHA statistics showed the average Hawaii site price at \$60,048—about five and a half times the U.S. average of \$11,009, and three times the \$20,853 average for California, the second most expensive state. Worse yet, the average lot size in Hawaii is 5,901 square feet, compared to the U.S. average of 12,807, which works out to \$10.18 per square foot for Hawaii lots-12 times the U.S. average of 86° per square foot. Here we have a classic case of market supply and demand. Demand is high because Hawaii is a desirable place to live, and supply is short because we have chosen to legislate severe restrictions on land use.

Ohana zoning (permitting construction of a second residence on a lot zoned for one) is the first easing in the last two decades of restrictive government policies that have helped to drive home prices so high. If homeowners take advantage of it, Hawaii's housing stock can be increased considerably at almost half price: just the construction cost without the lot cost. But any lot that can hold two houses will likely become even more valuable. Residential lots will continue to escalate in price unless a great deal more land is classified urban and

zoned residential. The President's Commission on Housing reported in 1982 that nationwide the cost of land as a percent of the total cost of single-family homes increased from 19 percent in 1970 to 24 percent in 1980. Hawaii's lot price is 40 percent or more of the total package. The Commission commented: "Excessive regulation raises housing costs by restricting available land, imposing unnecessary requirements in site development and construction standards, and lengthening the time needed to obtain regulatory permits. Many studies have examined the impact of governmental regulations on the costs of single-family homes, and . . . all the studies have a common finding: regulations increase costs—as much as 25 percent of the selling price in some cases.

Land use laws and zoning and building regulations protect the established homeowner, who wants his environment nice and his real estate value high. As long as we cry, "No developments in my neighborhood!" and "No building on agricultural land!" we perpetuate the residential land shortage that causes our higher home prices. Government regulations presumably reflect the will of the citizens, and the citizens have chosen (perhaps wisely, in view of Hawaii's limited land area and special beauty) to keep Hawaii green, and to let the new generation of homeowners pay the price-if they can.

There is no way to have both restrictive land use policies and affordable housing. Ohana zoning is only one small step in the right direction.



# Area homes are new and costli

Waimanalo has the highest.

That is how Windward
neighborhoods compare in Based bn's comparison of the some of the housing-related median value of owner. Census Bureau. The data; the most expensive houses of collected in 1980, is tailored for the four Windward community, following the ties from Kahaluu to Waims boundaries of the island's 33 nalo. The median value of neighborhood board districts. Kahaluu homes is \$139,100.

It shows that based on the Kailus home values are a close occupied homes, Kahaluu and value, it is the value of owner second with a \$138,200 median occupied homes, Kahaluu and value, it is the value of owner second with a \$138,200 median

Kailua leads in mortgage costs more than the median figure, because they are generally newest and most expensive more persons per Willium tesidents own, the limit the exception of solutions in the Windward area, and with the exception of occupied homes in the homes in the windward area, and with the exception of occupied homes in the windward area, and with the exception of occupied homes in the Windward area, and with the exception of occupied homes in the Windward area, and with the exception of occupied homes in the Windward area, and with the exception of occupied homes in Kaneohe and lite force 1340.

Kallua bomeowners pay the home where the most percent of the Kahaluu residents own, the homes percent of the most percent of the windward area, and with the exception of occupied homes in Kaneohe and lite facts. All the exception of occupied homes in Kaneohe are the least valuable on the late of owner. Walmanalo figure tanks 32nd is \$68,600.

## Educa Liorigages, renis

## top Windward payments

CENSUS from A-1

before 1940.

percent — were built in the last 13 years. But the community also has a higher concentration of older homes, with 10.4 percent built before 1940.

Home ownership

The 1980 census figures show that the majority of homes in all four Windward communities are owned by the persons who live in them. The neighborhoods with the highest percentages of owner-occupied homes are Kaneohe and Kailua.

Of the 12,099 housing units in Kailua, 72.3 percent are owned by the occupants. Kaneohe is right behind, with 72 percent of its 9,698 housing units lived in by the owners.

The percentages of owneroccupied homes are somewhat lower in Kahaluu and Waimanalo, but they are still considerably higher than the islandwide figure of 49.9 percent

Out of 3,360 housing units in Kahaluu, 66.2 percent are owner-occupied. The figure in Waimanalo is 63.5 percent of 2,137 homes.

Mortgages/Rents

Kailuans pay higher monthly mortgage fees and rents than their neighbors, according to the statistics.

The median mortgage payment for a Kailua homeowner is \$552, including real estate taxes, property insurance and utilities. The

median rent, also including utilities, is \$426.
These 1980 rent figures, however, date before the military rent subsidy plan took effect. Many observers say that plan has driven up civilian rents in districts with large

military populations.

The median payments in Kahaluu are \$532 for mortgages and \$390 for rents. In Kaneohe, mortgages are lower, but rents are slightly higher. The Kaneohe numbers are \$442 for mortgages and

\$393 for rents.

Homeowners in Waimanalo A substantial number of pay a median monthly homes in Waimanalo — 37 mortgage fee of \$333, and renters pay \$255.

Length of residency

Kaneohe and Kailua have high percentages of long-term residents — 41.5 percent of Kaneoheans and 32.1 percent of Kailuans have lived in their homes for 10 years or longer, the census data says.

But both communities have large populations of renters who apparently like to move around. A whopping 48.4 percent of the renters in Kailua Kahaluu renters said ane, told census takers that they relocated in the last 15 months.

had moved into their rental units in the 15 months prior to the census.

Kaneohe wasn't far behind.

A total of 43.6 percent of the renters also said they had relocated in the last 15 months. .

In Waimanalo, 33 percent of the residents had lived in their homes for 10 years or more, and 27.7 percent of the renters had moved within the 15 months

before the census.
Only 22.7 percent of Kahaluu residents said they had lived in their homes for a decade or longer. A total of 31.9 percent of Kahaluu renters said they had

|   | The   | cen  | sus                                       | sa  | ys  |   |   |   |
|---|---|--|---|---|---|---|---|---|
|   | HOME  | VALUE  |   | Oahu  | Kahaluu   | Kancohe   | Kailua Wa   | imannlo   |
|   | Less the \$10,000 \$15,000 \$20,000 \$35,000 \$35,000 \$50,00 \$510,00 \$150,00 \$50,00 | 121 \$10,000 1 to \$14,999 1 to \$19,999 1 to \$24,999 2 to \$29,999 2 to \$34,999 3 to \$39,999 3 to \$79,999 4 to \$99,999 5 to \$149,999 6 to \$149,999 7 to \$199,999 7 to \$199,999 | 99\$                                      |   | 1,347<br>0<br>3<br>2<br>3<br>2<br>9<br>9<br>14<br>86<br>127<br>535<br>384<br>173<br>\$139,100 | 5,655<br>0<br>3<br>2<br>6<br>6<br>5<br>15<br>55<br>603<br>1,014<br>2,489<br>898<br>559<br>\$122,500 | 7,611<br>8<br>7<br>7<br>3<br>4<br>9<br>15<br>45<br>421<br>760<br>3,309<br>1,947<br>1,076<br>\$136,200 | 1,079<br>19<br>14<br>12<br>25<br>39<br>61<br>59<br>113<br>321<br>154<br>148<br>41<br>73<br>\$68,500 |
|   | YEAF  | R HOUSEH   | OLDER                                     | Oahu  | Kahaluu   | Kaneohe   | Kailua W  | aimanalo  |
|   | Owr<br>unit<br>1979-N<br>1975-1<br>1970-1   | ner-occupied<br>S<br>March 1980<br>978<br>974  | housing                                   | 114,793<br>14,917<br>27,906<br>22,412<br>28,370 | 2,245<br>399<br>753<br>488<br>402   | 6,978<br>686<br>1,456<br>1,102<br>2,766<br>856<br>112   | 8,744<br>1,063<br>2,155<br>1,944<br>2,186   | -1,346<br>60<br>315<br>417<br>343<br>177  |
|   | MOR' MON' COST  | rgage st<br>Thly own<br>'s   | ATUS AN                                   | Oahu  | Kahaluu   | Kaneohe<br>5,663<br>4,716   | 7,017   | aimanalo<br>1,050<br>736  |
|   | \$150-\$<br>\$150-\$<br>\$200-\$  | 3199<br>3249   |   | 1,732<br>3,835<br>5,377                         | 1,038<br>0<br>6<br>11<br>46<br>14   | 11<br>38<br>147<br>472<br>747   | - 5<br>- 39<br>103<br>344   | 6<br>15<br>35<br>92<br>160<br>92  |
|   | \$350-8<br>\$400-8<br>\$450-8   | 399<br>349<br>3499   |   | 4,301<br>4,400<br>7,646                         | 109<br>37<br>82<br>157<br>232   | 323-<br>307<br>242<br>- 572<br>661  | 341<br>462<br>538<br>870<br>1,153   | 120<br>71<br>37<br>5  |
|   | S750 (  | or more  |   | . 12,409  | 180<br>\$532  |   | 1,738<br>\$552  | \$333   |
|   |   | SS RENT  | •   | Oahu  | Kahaluu   | Kaneohe<br>2,643  |   | aimanalo<br>759   |
|   | Rer<br>Media  |  | l units                                   | \$315   | 1,081<br>\$390  | \$393   | \$426   | \$255   |
| ١ | NO.   | OF ROOMS   | 3   | Oahu  | Kahaluu   | •   |   | /aimanalo   |
| ١ |   | ar round ho  | use units                                 | 250,866<br>4.3                                  | 3,607<br>5.1  |   | · · · · · · · · · · · · · · · · · · ·   | 2,217<br>4.7  |
|   | PEF   | SONS IN  | UNIT                                      | Oahu  | Kahaluu   | Kaneohe   | Kailua  | Waimanalo   |
|   | ٠   | ` .  | ing units                                 | . 230,214                                       | 3,360   | . <b>9,69</b> 8   |   | 2,137   |
|   | Med   | an, occupie  | d housing u<br>ccupied uni<br>ccupied uni | nite 2.84<br>ts3.18                             | 3.31<br>3.32  | 3.43<br>2 . 3.51  | 3.40  | 3.95<br>4.36<br>3.31  |

Don R. Cowell, MAI, CRE Irmgard G. Patterson, MAI William I. Dornbush, MAI

COWELL & CO., INC. REAL ESTATE CONSULTANTS 311 Hawaii Building 745 Fort Street Honolulu, Hawaii 96813-3874 (808) 531-2765 or 536-4988

### MEMORANDUM

To: Sheryl B. Seaman, AIA

Group 70

From: Bill Dornbush

-[]-[]-[]

Cowell & Co., Inc.

Date: February 7, 1985

Subject: Pohakes Point Condominium Project, Kaneohe, Oahu

In response to your request to provide additional data regarding the demand for low-density condominium apartments in the Kaneohe area, we are summarizing the Pohakea Point condominium project recently put on the market. This project is being developed by Swire Properties (Hawaii), Ltd. The project is located off Lilipuna Road, overlooking Kaneohe Bay. It is situated directly adjacent to the Puu Alii condominium project developed by a joint venture between Mike McCormack and Swire Properties.

The total project site contains about 32 acres that will be developed with 10 buildings containing a total of about 250 condominium apartment units. Based upon the proposed 250 units in the project and 32 acres of land, the land use density of the project approximates 7.8 units per acre. The project is designed with the units terraced up the hillside.

Presently, only two buildings, representing the first two increments, containing a total of 41 residential apartments are being marketed on a leasehold basis. The units consist of one-story apartments with either 2-bedrooms/2-baths or 3-bedrooms/2-baths, or two-story apartments with either 2-bedrooms/2-baths or 3-bedrooms/2-baths.

The 2-bedroom units range in size from about 1,017 square feet to 1,202 square feet of living area. The 2-bedroom units are priced in the range of \$122,500 to \$138,000 per apartment.

The 3-bedroom units range in size from about 1,154 square feet to 1,258 square feet of living area. The 3-bedroom units are priced in the range of \$135,000 to \$147,500 per apartment.

The project was recently put on the market for sale only to prospective owner-occupants. We are informed that about 25 units in the project have been committed for purchase and that there are several backup offers. We are also informed that the greatest demand was for the single-story apartments and the units with better views.

The successful marketing of these units indicate there is a strong demand for attractively designed 2 and 3-bedroom, low-density apartment units in projects that enjoy a hillside location offering views to Kaneohe Bay.

cc: Hawaiian Electric Company, Inc.

APPENDIX B
TRAFFIC IMPACT ANALYSIS, HEELA KEA PROJECT

TRAFFIC IMPACT ANALYSIS HEEIA KEA PROJECT

Gray, Hong & Associates, Inc. 119 Merchant Street, Suite 607 Honolulu, Hawaii 96813

February 11, 1985

### TRAFFIC IMPACT ANALYSIS

### HEEIA KEA PROJECT

### I. INTRODUCTION

The purpose of this Traffic Impact Analysis is to identify traffic at three locations which will be utilized by homeowners residing at the Heeia Kea project site. These locations are Kamehameha Highway fronting the project, the intersection of Kamehameha Highway/Lilipuna Road/Haiku Road and the intersection of Kahekili and Likelike Highways. For the purpose of worst case analysis, it has been assumed that 500 units will ultimately be developed at the Heeia Kea project site.

## 2. TRAFFIC ADJACENT TO THE PROJECT

Since the completion of Kahekili Highway there has been no predictable growth trend in average daily traffic on Kamehama Highway fronting the project. The average daily volume between calendar years 1972 and 1983 has varied between 4,997 vehicles and 5,594 vehicles. For the purpose of analysis, it has been assumed that the project will have two main intersections with Kamehameha Highway.

The existing peak hourly traffic as well as projected peak hourly traffic resulting from 500 additional units have been shown on Figures 1 and 2. Figure 1 represents a project intersection on the Kaneohe side of the property and Figure 2 represents an intersection on the Kahuku side of the property.

The total A.M. peak hourly vehicles will increase from 650 to 923 on Kamehameha Highway heading toward Kaneohe. There will be a definite increase in traffic on this stretch of Kamehameha Highway. For comparative purposes the

total projected peak hourly volume upon ultimate development of 500 units will produce a similar peak hourly volume to that which presently occurs on Kamehameha Highway between the Hygienic Store and Waiahole Valley Road. The use of channelized intersections as shown in Figures 1 and 2 is solely to mitigate the effects of additional traffic.

## TRAFFIC AT THE INTERSECTION OF KAMEHAMEHA HIGHWAY/HAIKU ROAD

The subject intersection has been analyzed based on data obtained December 6 and 7, 1983. For projection purposes, it has been estimated that half of the peak hour traffic generated from the project passes through the Kamehameha Highway/Haiku Road intersection. Based on 500 units at the Heeia Kea project site, the traffic passing through the subject intersection from the Heeia Kea Project is 175 vehicles. Figures 3 and 4 distribute existing as well as proposed traffic to this intersection. Figures 5 and 6 show the critical lane calculations. The projections do not exceed the limit recognized as unacceptable by normal traffic engineering standards for an urban intersection. When the critical lane projections exceed 1,500 vehicles, there is not enough green time to allow vehicles to clear the intersection and the intersection clogs.

## 4. KAHEKILI HIGHWAY AND LIKELIKE HIGHWAY INTERSECTIONS

This Traffic Impact Analysis has utilized data contained in the 1970 census, 1980 census as well as State DOT data including annual summaries and 15-minute interval counts in an attempt to quantify traffic trends at the Kahekili/Likelike Highway intersection.

Figure 7 tabulates peak hour traffic for morning and evening on Kahekili Highway. In addition, Figure 7 also tabulates hourly traffic for one hour intervals preceding and following the peak hour, tabulates the three-hour

total, and lists the 24-hour average daily traffic (ADT) by year for each direction on Kahekili Highway. Figure 8 graphically illustrates the foregoing data and, in addition, shows the population growth.

The purpose for summarizing this information was to determine:

- 1) the increased peak hour volume which has occurred with time;
- 2) the period of time the peak hour has extended; and
- 3) determine the correlation between the population growth on Windward Oahu and traffic growth on Kahekili Highway during the peak hour period.

Due to the limited data available, statistical analysis of trends is not possible. However, the following general observations can be made:

- 1) The peak hour volume on Kahekili Highway has not shown any significant increase or trend between 1975 and 1983. Therefore, the peak hourly volume has probably been met.
- 2) Both the three-hour peak period totals and 24-hour ADT totals show no increasing trends. Since these volumes are not increasing, it is not possible to forecast that the peak hour period is extending.
- Population growth on Windward Oahu utilizing Kahekili Highway has grown since 1970, yet there is no corresponding increase in either peak hourly volume, three-hour peak hourly volume or average daily traffic. Based on this data, it is not possible to predict that the total daily traffic volume (ADT) or peak hour volume will increase as a result of the creation of new units in Koolaupoko.

If there is no apparent or significant growth in the peak hourly volume or average daily traffic volume within the region, it is logical to assume that there are social factors affecting traffic patterns and habits which offset the naturally anticipated growth in traffic volumes. By researching the 1970 census and 1980 census, the data trends shown on Figure 9 were compiled.

Factors which will offset the usage of the Kahekili Highway are:

- 1) Available Jobs: Based on Figure 9, there were 11,930 people driving to jobs in the Kailua/Kaneohe area in 1970 and 20,705 in 1980. This represents a 75 percent increase, whereas population growth was only 19 percent. On a per capita basis there were significantly more people driving to jobs in Kailua/Kaneohe in 1980 as compared to 1970.
- 2) <u>Carpools</u>: Based on Figure 9, an average of 1.17<sup>1</sup> people per car were driving to work in 1970 from the Kailua/Kaneohe area. However, by 1980 an average of 1.45<sup>2</sup> persons per car were driving to work. This is a significant increase.
- Public Transportation: In 1970, only 1561 persons or 0.7 people per 100 households used public transportation to commute to work. By 1980, there were 2,1612 commuters or 6.9 persons per 100 households using public transportation to get to work. This again is a significant increase.

In 1970 there were 3.03 trips across the Koolaus per Windward household, which generated 67,319<sup>3</sup> average daily traffic. By assuming that this 1970 factor was still valid in 1980, there would have been 95,230 trips (ADT). However, the 1980 traffic count information shows 79,304<sup>4</sup> trips. The difference (15,926 trips), or a reasonable amount of the difference, should be accountable in offsetting factors.

It is possible to estimate the decreased Koolau trips based on the offsetting tends as follows:

- 1) Available Jobs: Adjusting for population growth, there was an increase of 6,556 people driving daily to work in Kailua/Kaneohe in 1980 as compared to 1970. Based on 1.45 persons per car, this represents 4,521 daily trips that it is assumed would go to Honolulu to work if the job was not available on the Windward side.
- Carpools: There are 5,882<sup>4</sup> peak hour vehicles heading to Honolulu, and it is assumed the peak hour period is approximately two hours. Therefore, in 1980 there were 11,764 commuter passenger vehicles carrying 17,058 commuters (1.45 persons/vehicle. Based on 1970 occupancy rates, this same

<sup>1. 1970</sup> Census, U.S. Department of Commerce, March 1982.

<sup>2. 1980</sup> Census, U.S. Department of Commerce, June 1983.

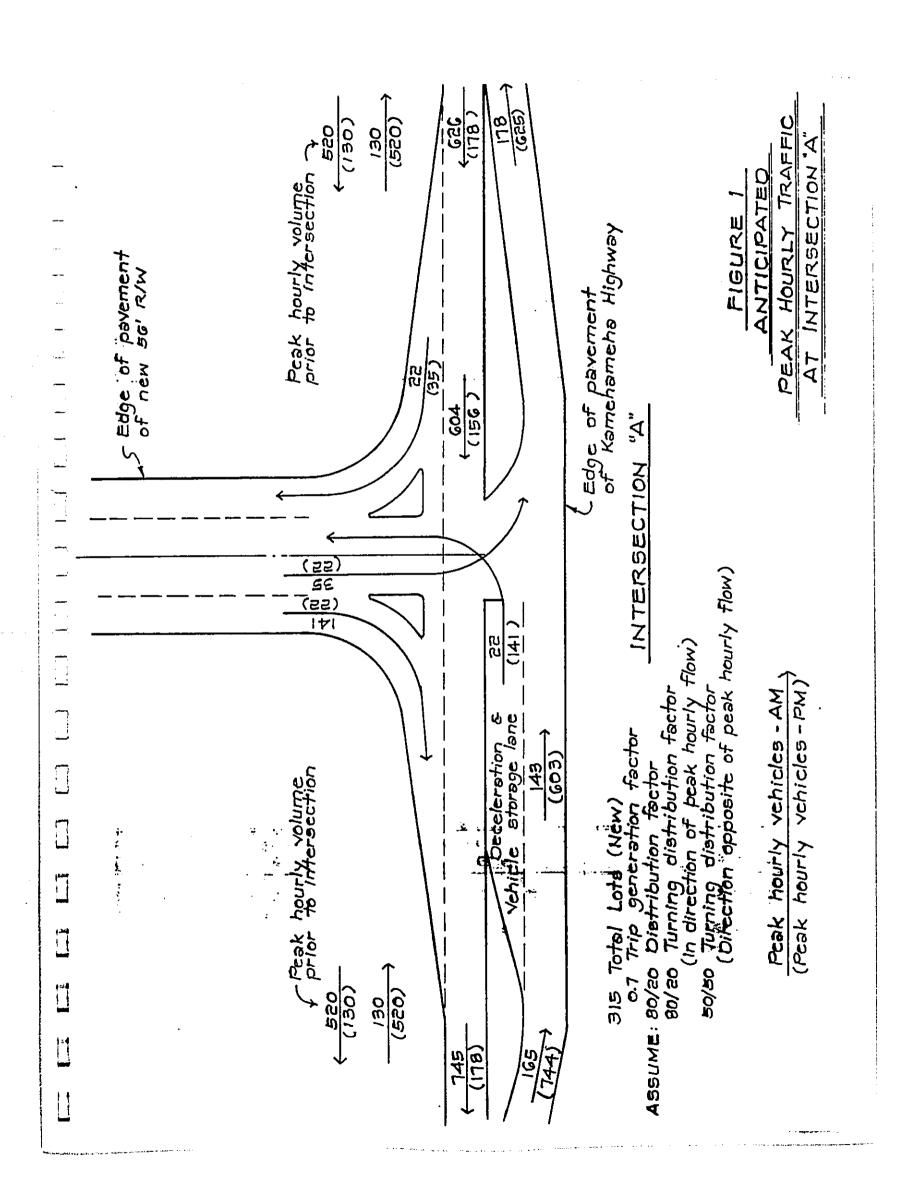
<sup>3.</sup> Traffic Summary, Island of Oahu, 1970, State of Hawaii Department of Transportation, Publication No. HP 71-1.

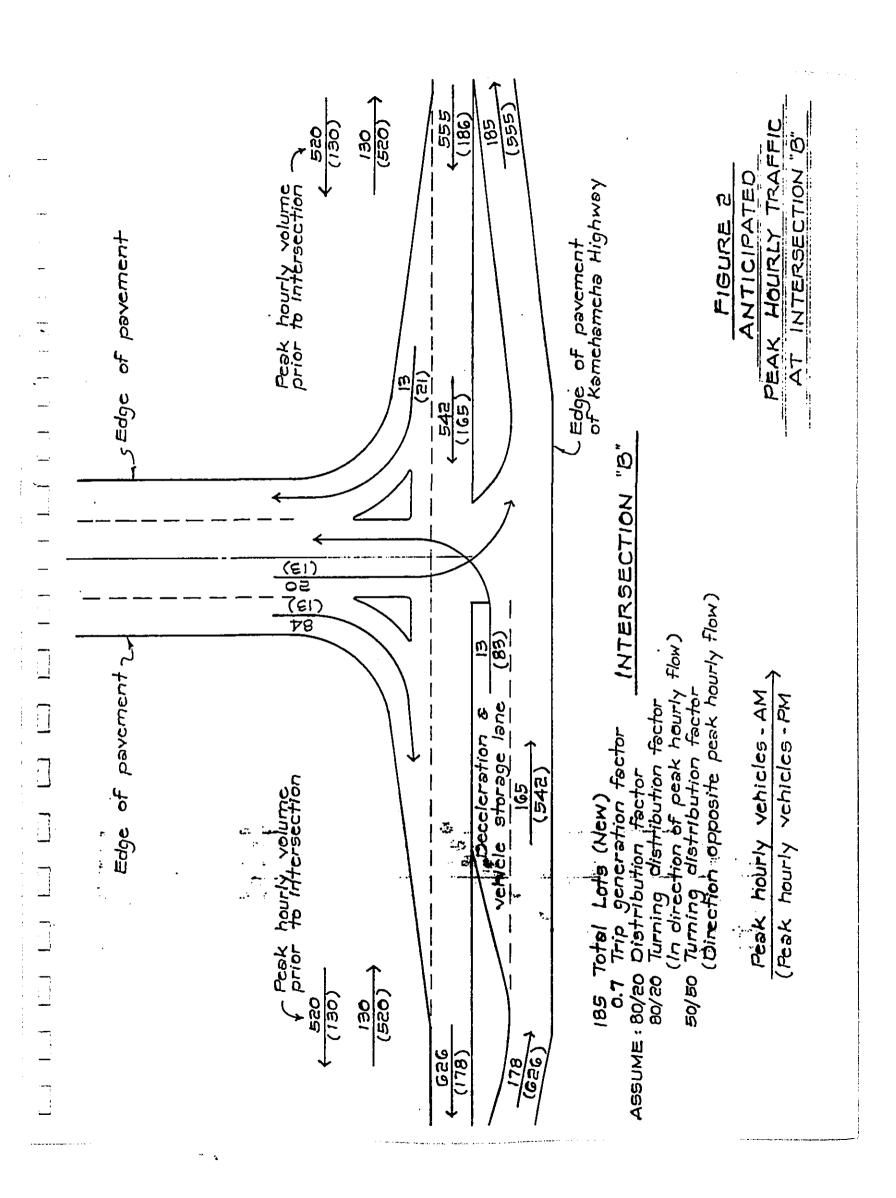
<sup>4. 1981</sup> Traffic Summary, Island of Oahu, State of Hawaii Department of Transportation.

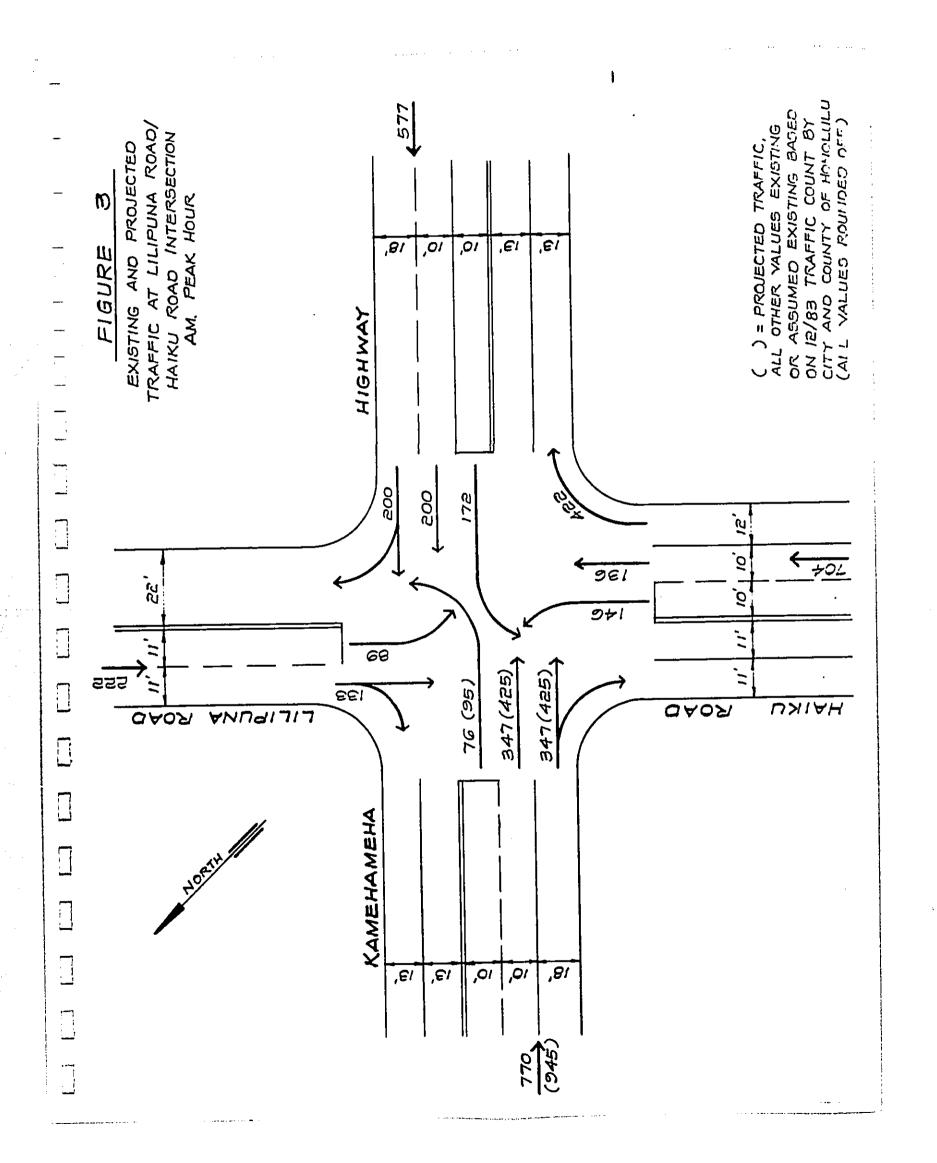
commuter population would have used 14,573 vehicles. The difference between commuter vehicles in 1980 and 1970 can be attributed to carpooling. This difference is 2,478 vehicles.

Public Transportation: In 1970 only 156 windward residents used public transportation to commute to work. However, in 1980, the total number of commuters increased to 2,161 people. It is assumed the difference, or 2,005 commuters, could use cars at an occupancy of 1.45 commuter/car and produce 1,382 trips.

The total trips not utilized by means of local jobs, carpooling and public transportation is 8,381 trips. Therefore, the amount of trips saved by commuter adjustment compares favorably with the 15,926 trips (ADT) not accounted for strictly by population extrapolation.







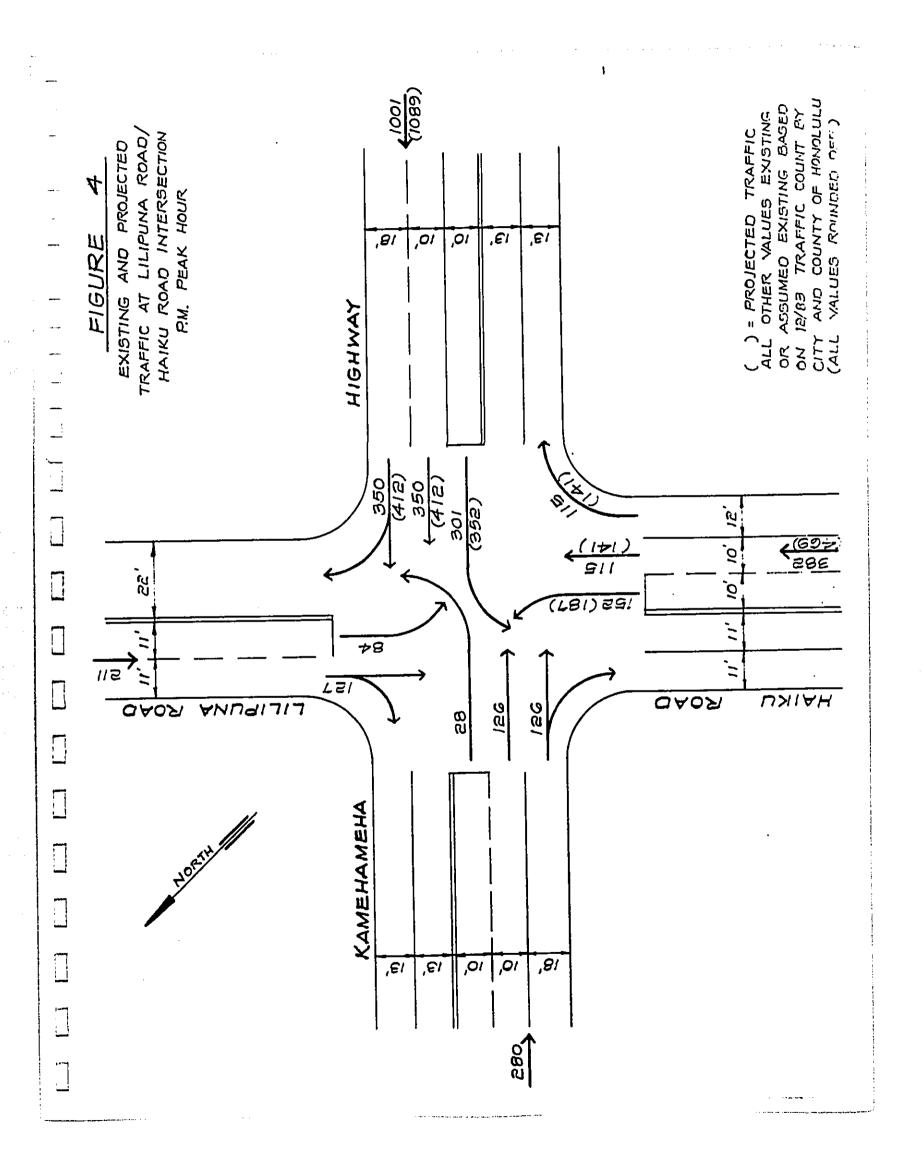
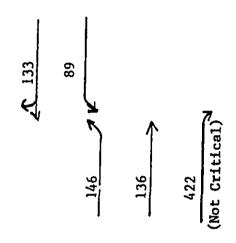


FIGURE 5

#### CRITICAL LANE MOVEMENT CALCULATIONS

#### A.M. Critical Lane Volume - Lilipuna/Haiku

2 Phase Operation



146 + 133 = 279 ... Use is greater than 136 + 89 = 225

# A.M. Critical Lane Volume - Kamehameha Highway

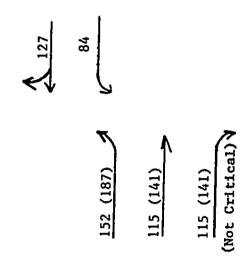
425 + 172 = 696 ... Use is greater than 200 + 95 = 295

- Projected A.M. Critical Lane Volume = 279 + 696 = 975 Vehicles
  Existing Critical Lane Volume = 279 + 519 = 798 Vehicles
  975 ∠ 1,500 Allowable ...
- ( ) = Projected Volume,
  All others existing or assumed existing conditions

#### FIGURE 6

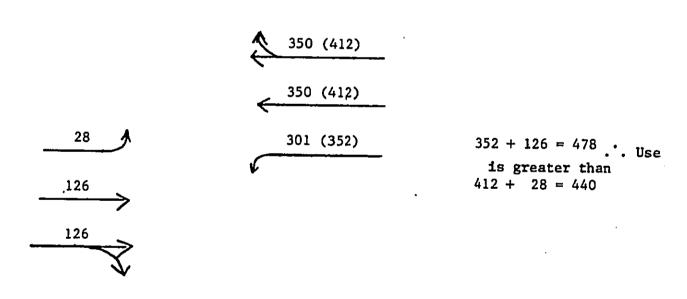
# P.M. Critical Lane Volume - Lilipuna/Haiku

2 Phase Operation



187 + 127 = 314 . . . Use is greater than 115 + 54 = 199

## P.M. Critical Lane Volume - Kamehameha Highway



- Projected P.M. Critical Lane Volume = 314 + 478 = 792 Vehicles
  Existing Critical Lane Volume = 279 + 476 = 755 Vehicles
  796 1,500 Allowable . . . Below but close to recommended maximum.
- ( ) = Projected Volume,
   All others existing or assumed existing conditions

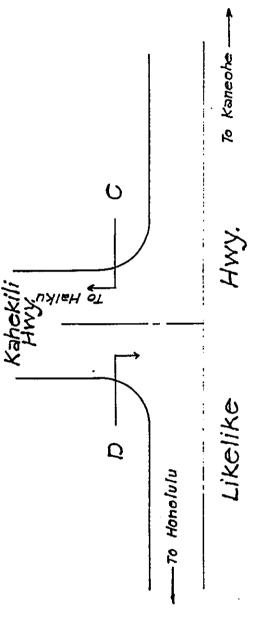
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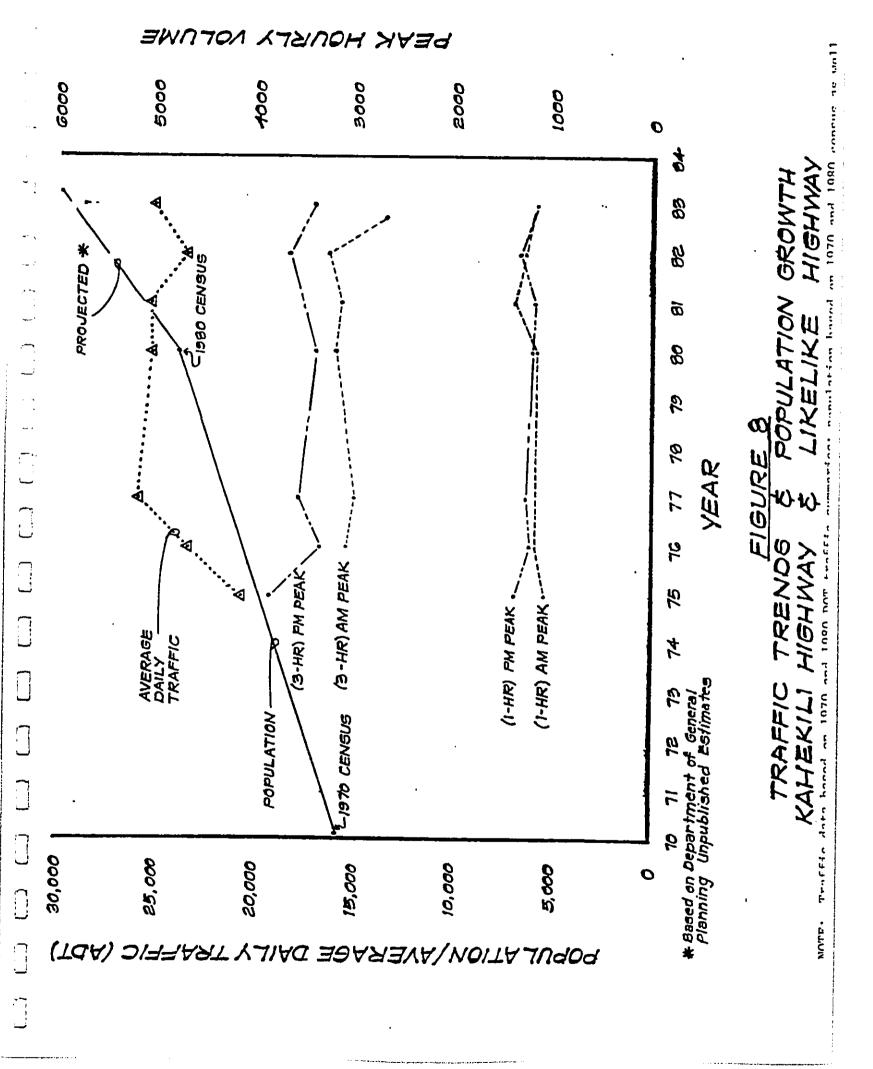
FIGURE 7

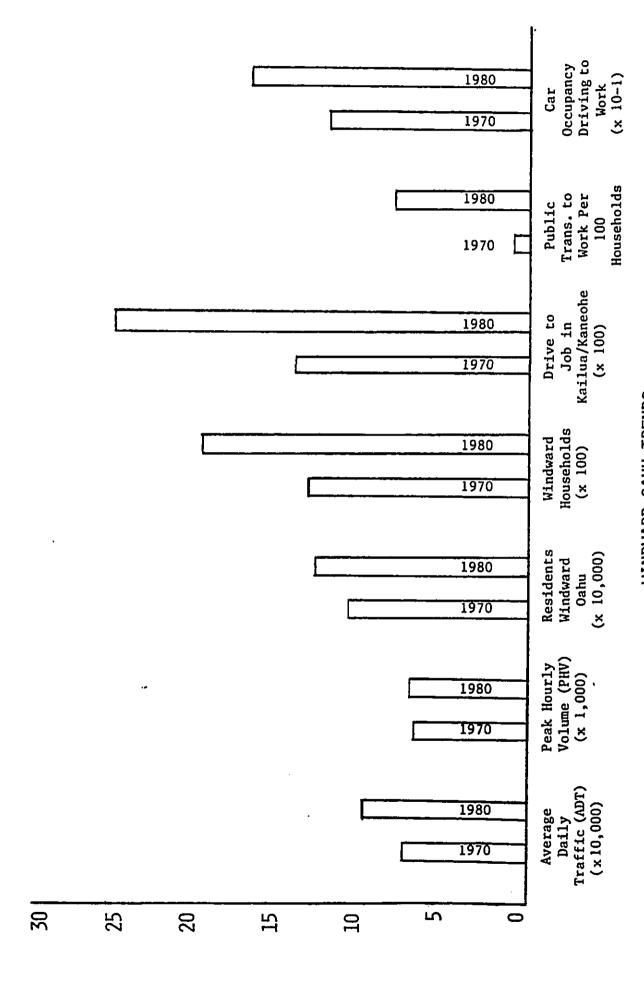
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| PRECEDING A.M. FOLLOWING 3-HOUR 24-HOUR PEAK HOUR TOTAL | FOLLOWING 3-HOUR HOUR                    | 3-HOUR<br>TOTAL | ~     | 24- | 24-HOUR TOTAL<br>ADT | YEAR | PRECEDING<br>HOUR               | P.M.<br>PEAK       | FOLLOWING          | 3-HOUR<br>TOTAL |
| ND ND ON  |  | QN.             |       |     |                      | 1975 | 1,293                           | 1,426              | 1,122              | 3,841           |
| 909 1,084 1,082 3,075<br>5:15-6:15 6:15-7:15 7:15-8:15  | 1,084 1,082<br>6:15-7:15 7:15-8:15       |                 | 3,075 |     | 23,483               | 1976 | 1,193                           | 1,214              | 945                | 3,352           |
| 818 1,151 1,020 2,989<br>5:15-6:15 6:15-7:15 7:15-8:15  | 1,020 2,989<br>7:15-8:15                 | 2,989           |       |     | 25,631               | 1977 | 1,281                           | 1,284              | 1,010              | 3,575           |
| 1,081 1,149 1,002 3,232 6:45-7:45 6:45-7:45 7:45-8:45   | 1,002 3,232<br>7:45-8:45                 | 3,232           |       |     | 25,631               | 1980 | 1,044 3:00-4:00                 | 1,215              | 1,157              | 3,410           |
| 665 1,412 1,069 3,146 2.00-6:30 6:30-7:30 7:30-8:30     | 1,069<br>7:30-8:30                       | 3,146           |       |     | 25,434               | 1861 | 1,152                           | 1,234<br>5:00-6:00 | EX.                | QN              |
| 743 1,299 1,069 3,311 2:15-6:15 6:15-7:15 7:15-8:15     | 1,299 1,069 3,311 6:15-7:15 7:15-8:15    | 3,311           |       |     | 23,646               | 1982 | 1,294                           | 1,370<br>5:00-6:00 | 1,026<br>6:00-7:00 | 3,690           |
| 575 1,149 1,016 2,740 2:00-6:00 6:00-7:00 7:00-8:00     | 1,149 1,016 2,740<br>6:00-7:00 7:00-8:00 | 2,740           |       | 2   | 25,340               | 1983 | 1,196<br>3:45-4:45<br>4:45-5:45 | 1,174              | 1,050              | 3,420           |

ND= No Data Available







WINDWARD OAHU TRENDS AFFECTING TRAFFIC, HOUSING AND JOBS FIGURE 9

# APPENDIX C AN ASSESSMENT OF SOCIAL IMPACTS OF THE PROPOSED HEEIA KEA PROJECT

An Assessment of Social Impacts of the Proposed Heeia Kea Project

Prepared for Malama-Gentry Joint Venture

By Earthplan

August, 1986 Revised October, 1986

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An Assessment of Social Impacts of the Proposed Heeia Kea Project

Summary of Findings

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#### SUMMARY OF FINDINGS

Malama-Gentry Joint Venture is currently proposing a 360 unit residential development in Heeia Kea, which includes commercial and industrial components, as well as park space. Heeia Kea is located in Windward Oahu, across from the Heeia Kea Pier.

This study examines the project's potential social impacts, particularly as related to the character and culture of Kahaluu and Kaneche. Although the project site is situated in the Kahaluu Neighborhood Board area, it abuts Kaneche's boundary. The assessment's Study Area therefore includes the communities of Ahuimanu, Kahaluu, Heeia and Kaneche.

These communities of the regional "neighborhood" share some similar characteristics. Compared to Oahu as a whole, both communities tend to have larger households, be more family-oriented and less mobile, and their median incomes are higher. Kahaluu and Kaneohe have relatively higher labor force participation and less unemployment than the islandwide community. The housing vacancy rate is very low in these communities and both experience a very high proportion of owner-occupied units.

In many cases, however, the population of these communities are different. Kaneohe has a lower educational level, and Kahaluu has proportionally more professional, administrative, and other white-collar workers. The median value of Kahaluu's owner-occupied units are much higher than those in Kaneohe and its median rent is lower than that of Kaneohe.

This information indicates that Kahaluu tends to have a more diverse population than Kaneohe, or Oahu as a whole.

While Kahaluu has more people who have attended college, it also has more people who did not attend high school. Its proportion of families below poverty level resembled the island's proportion, even though its median income exceeded the island median. Further, some of Kahaluu's residents have higher-than-average mortgage payments, and the community's renters must allocate a higher percentage of their incomes to rent, even though their median rent is lower than that of Kaneohe or Oahu.

Another major difference between these communities is their growth patterns. While Kahaluu and Kaneohe share agricultural roots, the pace of urbanization in Kaneohe was much quicker than Kahaluu. Today, Kaneohe's suburban nature, with its shopping malls and planned communities, is a sharp contrast to the slower-paced changes in Kahaluu.

Summary: Page 1

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Given these differences in histories and residential makeup, Kahaluu and Kaneohe seem to have different goals and concerns. The community polls and Neighborhood Board minutes indicate that Kahaluu wishes to retain this rural pace and enhance their agricultural activities, while improving public services to a level typical of larger population base. Kaneohe's concerns center around their ability to accommodate their already growing population.

The Study Area reactions to the development of Heeia Kea are rooted in these differences in community directions and concerns. While no Study Area organizations have yet responded to the Preparation Notice of the Supplemental EIS, some have provided comments on previous proposals and these are identified in this assessment. Most of their concerns were similar to those of Study Area people interviewed.

To further identify community feelings and concerns, interviews with seventeen Study Area residents were held. An effort was made to select individuals who collectively represented a diversity of interests. A summary of concerns raised by those interviewed is as follows:

- All those interviewed believed there is a strong need for housing in the area, and most felt that housing is appropriate for Heeia Kea. People differed, however, as to the type of housing the valley should accommodate. Some felt that Heeia Kea should have homes priced for average and higher income families. Others felt that Heeia Kea should address the need for low-priced homes.
- The project's traffic impacts on the immediately surrounding areas, as well as the regional trans-Koolau system, was raised by all those interviewed. Some indicated that they would be satisfied if the developer made necessary improvements to accommodate this particular project. While the others acknowledged that the regional problem "was not the applicant's problem", they also felt that the applicant should either participate in solving the regional problem, or that the project should not proceed until the regional problem is solved.
- All of those interviewed expressed appreciation for the site's existing beauty and a desire to retain it. Some felt that, with proper planning, the proposed project could maintain and enhance this beauty. Others felt that any change to the existing character would be a negative one, although some of these people also felt that the trade-off would be worthwhile if the project were primarily affordable housing.

- Some people felt that Heeia Kea's most important value was that it serves as a transition, or buffer area, between suburban Kaneohe and rural/agricultural Kahaluu. This concern was expressed even though the proposed density would be lower than that of the abutting community on the Kahaluu side. These people were primarily Kahaluu residents and they wanted to retain this quality, either with a very low density residential project, or by establishing agricultural activities, or by planning for both uses through "whole valley planning".
- Other concerns raised, though not as frequently, were the need to continue to stimulate the construction activities in Windward Oahu which would, in turn, provide jobs; the noise impact of KMCAS aircraft on future Heeia Kea residents; the project's compatibility with the Heeia Kea pier and Kaneohe Bay's ocean resources, particularly as related to Coastal Zone Management regulations; the future of the current residents; runoff into Kaneohe Bay; and the type of onsite industrial activities.

The bulk of concerns raised on the development of Heeia Kea center around <u>quality of life</u> issues which generally revolve around a personal and collective sense of well-being.

Such issues range from people's perception of how a project may affect an individual's daily activities and routine to how a project may ultimately impact a particular community's social fabric and goals for the future.

The social issues previously discussed generally fall into three categories of how people see this proposal affecting their quality of life: need for housing, inconveniences of inadequate public systems and infrastructure, and the creation or maintenance of a community identity.

#### Need for housing

While this need ultimately boils down to a personal need for housing, it is usually expressed by a community which feels that such a need exists in their midst.

Some people felt that more housing will allow young families to remain on the Windward side, as well as stimulate the economy, particularly the construction industry. Heeia Kea will improve this situation for those who believe that more market housing units are needed, or for those who are looking for a house at market rate.

For those that feel that the project should address the need of those who cannot afford to participate in the current housing market, most of whom are renters or are doubling up with their families, the project will allocate a portion of the proposed units for families with low and moderate incomes. These people were not satisfied with this level because they feel that Heeia Kea should house primarily families who cannot qualify for conventional housing.

# Inconveniences of Inadequate Public Systems and Infrastructure

The best example of this quality of life issue is traffic, which was the most common concern on the Heeia Kea project.

The kinds of solutions recommended by the Study Area individuals depended largely upon their "acceptance" of the traffic problems. Those who were satisfied by the applicant making improvements for this project seem to feel that traffic is and will be a perennial problem and people must learn to live with it. Those who do not want to allow any new projects until the problem is solved seem to feel that the situation will eventually change for the better.

The medium of these two extremes is the position that the applicant should make improvements as necessary, but also participate in community efforts to solve traffic problems.

The extent to which Heeia Kea will affect this quality of life issue largely depends upon the timing of the project relative to regional roadway improvements. The applicant has indicated that the project will require a couple of years to obtain approvals and permits, and a couple of years beyond that for project build out. It is believed that some of the roadway improvements will already be completed and this will minimize the impacts.

#### Maintenance or Creation of Community Identity

For some, the intangible transition quality of Heeia Kea signals the arrival at "country", even though there are suburban-type developments on both the Kahaluu and Kaneohe sides of Heeia Kea.

The question of impacting the regional identity therefore goes beyond the project's visual or residential compatibility with the surrounding area. It deals with whether or not this project will contribute to the desired direction and identities of the Kahaluu and Kaneohe communities.

Some of the Kahaluu residents interviewed reflected a two-fold desire to retain the rural and agricultural qualities of the area, and, at the same time, to have an equally strong desire to have more of the facilities, amenities and public services associated with a larger population base. These people may feel that the current proposal will "threaten" the rural identity they wish to retain.

Others, however, felt that the community need for more facilities and amenities outweighed the need to retain the area's rural nature, and they felt that more market developments will help "upgrade" Kahaluu by adding diversity. To them, the current proposal is an asset.

For the Kaneohe residents interviewed, most did not discuss the project's value as a transition area. Rather, they centered on the project's infrastructure impacts. They not seem to feel that the professal would threaten their community identity.

may feel that their rural identity would be threatened, even though the project site is abutted by single family residential development on the Kahaluu side and despite the distance between the project site and the actual agricultural activities. Other Kahaluu residents, and most Kaneohe residents, may not feel this identity impact either because they are accustomed to this type of project, or because the project is a step in the direction they wish for Kahaluu.

It is noted that the project's future residents will most likely have some consistent demographic characteristics as the existing Study Area population. Their incomes would probably be similar to those already in the Study Area, and the family-orientation characteristic would probably be consistent with existing situations.

Further, the project site itself has a mixed identity. Because of the valley's proximity to both Kaneche and Kahaluu, Heeia Kea is aligned with both communities, depending on the various boundary designations. Whereas it shares the same City Council member as Kaneche and Kahaluu, its residents vote with Kaneche residents for its State House Representative, and with Kahaluu residents for its State Senator.

Although it shares much history with Kaneohe and the overall Heeia ahupua'a, it is outside of the Heeia CDP. The project site lies in the Kahaluu CDP and is in the jurisdiction of the Kahaluu Neighborhood Board.

It is estimated that Koolaupoko's 1984 population was 113,260 persons, which is 10,931 persons less than the project 2005 population of 124,200 persons. The estimated 1,200 persons resulting from the proposed housing units (based on 3.4 persons per household) would be well within the projected target population.

The City Department of General Planning estimated that the 4,900 additional housing units would be needed to accommodate the projected 2005 Koolaupoko population and that the vacant developable and under-utilized lands have a potential to accommodate 4,400 units. This implies that, to fully accommodate the 2005 population, 500 housing units are needed, in addition to the existing and potential housing supply.

Of the proposed 360 units, 120 could be built under the existing Development Plan designations, and these units are already accounted for in the housing supply identified by DGP. The <u>net</u> increase of proposed units is 240, and these would contribute to the estimated housing deficit of 500 units.

The tangible quality of life issues, such as the need for housing and traffic inconveniences, can be partially mitigated by the proposed project. However, the extent of the intangible quality of life impact, namely the impact on community identity, will depend largely on how the community perceives this project relative to their needs and desires.

An Assessment of Social Impacts
of the Proposed
Heeia Kea Project

Section 1

Background and Purpose

#### 1. BACKGROUND AND PURPOSE

## 1.1 Description of this Report

### 1.1.1 Purpose and Contents

This assessment was prepared for the Supplemental Environmental Impact Statement (EIS) for a proposed project in Heeia Kea, located in the Koolaupoko District of Oahu, Hawaii. As explained in the Preparation Notice for the Supplemental EIS, an EIS for a proposed Heeia Kea Subdivision was accepted by the Department of Land Utilization in 1983, in conjunction with an application for a Special Management Area Permit. The document was prepared pursuant to the requirements of Chapter 343 of the Hawaii Revised Statutes under the premise that the document could be utilized in conjunction with future government approvals.

The Supplemental EIS is being prepared for a requested amendment to the Koolaupoko Development Plan.

Addressed in this assessment are potential social impacts of the proposed project. Specific areas examined include the potential changes to the level of residential population, possible changes to the character and culture of the neighborhood, resulting displacement, and other social impacts.

Note that while impacts related to economics, housing, and public facilities/services have social implications, discussions on these topics in this assessment are limited to subjective community perceptions and values, rather than a measurement of the actual impacts.

#### 1.1.2 Overall Approach

The project area lies within the boundaries designated for the Kahaluu Neighborhood Board. Because of its proximity to the area under the Kaneohe Neighborhood Board, however, the Study Area of this assessment explores potential social impacts on the communities of both Kahaluu and Kaneohe.

Quantitative and qualitative approaches are used to assess potential social impacts.

Where possible, the study examines those impacts which can be quantified, such as the growth trends experienced by Kahaluu and Kaneohe and population projections for these areas. The source of these are primarily public forecasts, policies and plans.

The study also discusses less tangible impacts of lifestyle, neighborhood character, and community values. Analysis of such speculative impacts are based on discussions with knowledgeable community members of Kahaluu and Kaneohe, as well as public opinion polls.

Note that previous proposals have been made for Heeia Kea in which the applicant undertook efforts to address community concerns. These efforts and their results are discussed in this assessment as appropriate.

#### 1.2 Project Description

This section presents the project currently being proposed by the Malama-Gentry Joint Venture and the target market population is described.

# 1.2.1 Overview of the Proposed Project

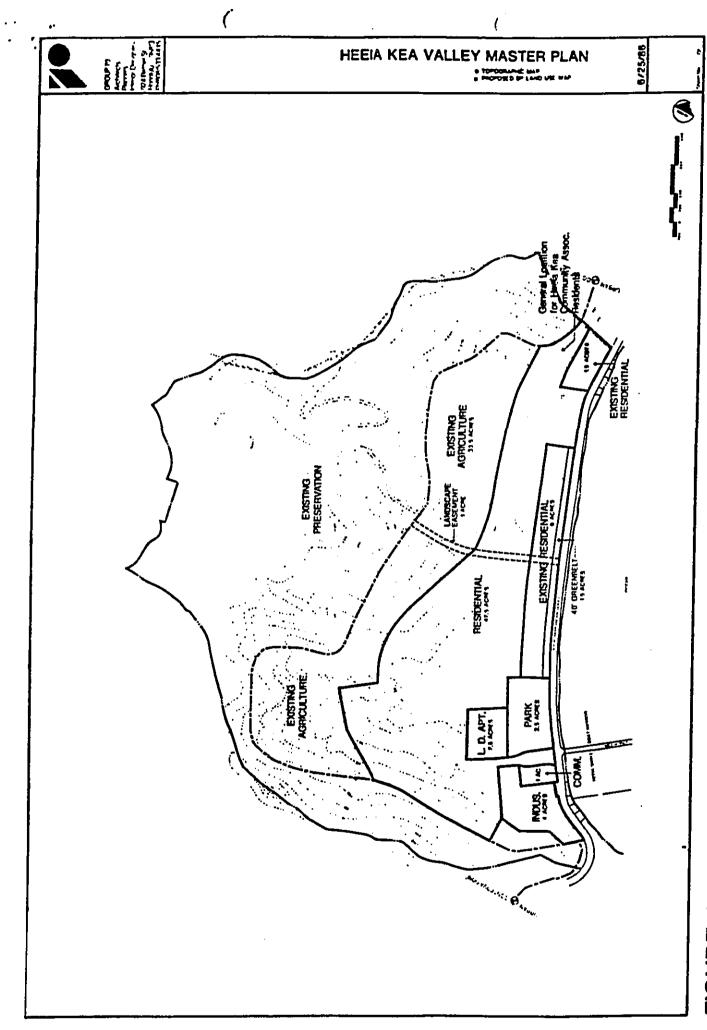
The Malama-Gentry Joint Venture, hereby referred to as the applicant, comprises Malama Pacific Corp., a subsidiary of Hawaiian Electric Company, and The Gentry Companies.

Situated on Kamehameha Highway, across from the Heeia Kea Small Boat Harbor, Heeia Kea encompasses a total of 219 acres. More than half of the property, or 117 acres, is designated Conservation on the State Land Use Map and Preservation by the City and County of Honolulu.

The remaining land, or 102 acres, lies in the Urban District on the State Land Use Map. Of this, approximately 14 acres fronting Kamehameha Highway are already designated Residential on the Koolaupoko Development Plan and are zoned R-6. The remaining Urban land is designated Agriculture and zoned Ag-1.

Figure A presents the proposed Development Plan changes and the following is a breakdown of proposed land uses:

| Land Use Category   | Number ofAcres                           | Proposed Number of Residential Units                       |
|---|--|--|
| Total Residential (includes 8 acres already under Residential designation) Low Density Apartment Commercial Industrial Park site Subtotal of Area of Proposal | 55.8<br>2.5<br>1.0<br>4.0<br>5.2<br>68.5 | 310 (5.56 units/ac) 50 (20.0 units/ac) 360 (5.26 units/ac) |



: ]

FIGURE 1 PROPOSED DP LAND USE MAP

This proposal does not include the remaining 33.5 acres of Urban-designated land (and agricultural-zoned), nor does it include the 117 acres of Preservation land.

# 1.2.2 General Characteristics of Housing Types and Housing Market

Anticipated for the residential portion of the development is a range of low density apartments, single family cluster or "zero-lot line" units on an average 3,500 square foot lot and individual single family units on an average 6,000 square foot lot.

The price range of the low density apartments is estimated at \$60,000 to \$100,000, based on 1986 constant dollars. The price range of all of the single family units is estimated at \$140,000 to \$200,000. It is noted that the applicant believes that the size of the parcel allows the developer to efficiently build a number of units which would bring the per unit cost down. Heeia Kea is one of few parcels on the Windward side which will permit this scale of efficiency. Most of the future Windward housing supply will be on relatively small lots and in-filling, which is not as cost-effective. (Personal communication with Norm Dyer, Malama-Gentry Joint Venture, August 18, 1986).

Based on this housing market, the average buyer of a Heeia Kea residential unit would probably have an income similar to or above the average median income of Oahu's families.

Table 1 presents information on housing affordability provided by the Bank of Hawaii. This information indicates that the average housing price is 1986 is \$154,448, which falls in the range of the proposed single family units. This table further shows that Hawaii's average home buyer needs to have an annual income which exceeds the median income by \$1,000.

<u>Table 1</u> Housing Affordability

|                                   | <u>1980</u> | 1983        | <u> 1985</u>            | <u>1986</u> |
|-----------------------------------|-------------|-------------|-------------------------|-------------|
| Mortgage Interest Rate <u>1</u> / | 14.02       | 14.02       | 10.02                   | ——<br>9.52  |
| Average Price <u>2</u> /          | \$131,000.0 | \$135,000.0 | \$147,093.0             | \$154,447.7 |
| Annual Median Family Income       | \$ 27,750.0 | \$ 27,726.0 | \$ 30,421.0             | \$ 31,637.8 |
| Average Down Payment (20 %)       | \$ 26,200.0 | \$ 27,700.0 | \$ 29.418.6             | \$ 30,889.5 |
| Average Loan Asount (80%)         | \$104,800.0 | \$108,000.0 | \$117,674.4             | \$123,558.1 |
| Monthly Principal and Interest 3/ | \$ 1,241.9  | \$ 1,279.8  | \$ 1 <sub>1</sub> 033.2 | \$ 1,039.1  |
| Payment as % of Income            | 65.5%       | 55.42       | 40.82                   | 39.42       |
| Monthly Income Required 4/        | \$ 4,346.6  | \$ 4,479.3  | \$ 3,616.1              | \$ 3,636.9  |
| Monthly Median Income             | \$ 1,895.8  | \$ 2,310.5  | \$ 2,525.1              | \$ 2,636.5  |
| Monthly Income Gap 5/             | \$ -2,450.7 | \$ -2,168.8 | \$ -1,081.1             | \$ -1,000.4 |
|                                   |             |             |                         | •           |

<sup>1/</sup> Hawaii average

Source: Bank of Hawaii, <u>Business Trends</u>, "Table A: Factors Determining Housing Affordability", May/June 1986

<sup>2/</sup> Bank of Hawaii Construction in Hawaii

<sup>3/</sup> For a 30-year fixed rate loan

<sup>4/</sup> Based on a 3:5:1 ratio

<sup>5/</sup> Required monthly income less monthly median income

# 1.3 Previous Proposals for Heeia Kea as they relate to Community Interaction

To provide a broader context for social impacts related to developing Heeia Kea, this section describes previous proposals for Heeia Kea and subsequent efforts to address community concerns. This information will help establish a departure point from previous proposals, as well as provide a broader context for community concerns expressed about the current proposal.

#### Prior to the Adoption of the Koolaupoko Development Plan

In the early 1970s, Hawaiian Electric Company, hereby referred to as HECo., was informed that the structures in Heeia Kea were substandard. HECo. subsequently informed the valley's residents that they must vacate their premises. Some of the people refused to move within the given time frame, citing inadequate notice of eviction.

Lawsuits were filed by both HECo. and some of the residents, and these actions received considerable media attention. Although it was ruled that HECo. had the legal right to continue its efforts in removing the remaining residents, HECo. chose not to do so, providing the remaining residents continue to pay their monthly rent.

# Efforts in the 1983-1984 Annual Review Process for Development Plans

In 1983, HECo. requested an amendment to the Koolaupoko Development Plan to allow residential development of 440 units on the valley's 102 Urban-designated acres. In the summer of 1983, HECo. began meeting with representatives of the Heeia Kea Community Association to discuss the needs of the residents and potential solutions.

There were thirteen families residing on twelve of the subdivided lots fronting Kamehameha Highway. Almost all of these families participated in the previous attempt to resist eviction. All but one of the structures in which they live are original houses on the site.

HECo. submitted its first written proposal for relocation to the Association in September 1983. In 1984, HECo. offered to sell each of the existing resident families an improved fee simple lot within a 2-acre portion of the project site for \$10.00 per lot, providing the project site is designated and zoned for residential use as set forth in the agreement. Ten of the eleven resident families accepted HECo.'s offer.

The application was denied by the City Council and the agreements with the resident families are still valid.

# Efforts in the 1984-1985 and 1985-1986 Annual Review Process for Development Plans

In 1984, HECo. submitted an application to amend the Koolaupoko Development Plan to allow development in Heeia Kea. Shortly after this application was accepted, the Conflict Management Program of the Neighborhood Justice Center offered to provide its services as an impartial third-party to assist various groups in exploring the possibilities of negotiating a joint plan for the valley (letter from the Neighborhood Justice Center dated November 16, 1984).

This mediation process was initiated in August 1984. HECo. withdrew its application and no action was taken on the Heeia Kea proposal in the 1984-1985 Annual Review Process.

The mediation group, called the ad hoc He'eia Kea Valley Planning Group, and hereby referred to as the Planning Group, met regularly from August 1984 to June 1985. The Planning Group comprised representatives from Hui Malama Aina o Koolau, HECo., the Waiahole-Waikane Community Association, the He'eia Kea Valley Community Association, and the Kaneohe and Kahaluu Neighborhood Boards. A private planning consultant was engaged by HECo. and, with the consent of all parties, assisted the group in developing alternatives based on criteria developed by the group (letter from the Neighborhood Justice Center dated November 16, 1984).

Table 2 contains summary statements signed by Planning Group participants.

HECo. submitted an application to amend the Koolaupoko Development Plan in the 1985-1986 Annual Review Process. The proposal for the 102 acres of the Urban-designated portion of Heeia Kea included 78 acres for residential use (440 units), 5 acres for commercial and industrial use, and 4 acres for park. Fifteen acres would remain in the agriculture designation. The application was denied by City Council.

It is noted that some of the participants of the Planning Group testified against the project. While there were some agreements on some of the basic points, the group did not reach a consensus on number of residential units.

# SUMMARY STATHENTS June 6, 1985 Ad Hoc HE'EIA KEA VALLEY PLANNING GROUP

- A. MEETINGS: All of the parties acknowledge that the undersigned groups have been engaged in a process aimed at resolving differences of opinion over the future of He'eia Kea Valley since August 1984.
- B. REPRESENTATION: All of the parties agree that (1) each group has been represented by two persons; (2) each group has exercised responsibility for monitoring their own observers; (c) meetings have been open to anyone wishing to attend; (d) substitutes at the table have been made in a responsible manner by individual groups.
- C. LOBBYING: All of the parites acknowledge that agreements to withhold individual lobbying effots both for or against particular plans during the process have been lived up to by everyone.
- D. PERMITS: All of the parties acknowledge HECO's right to pursue permits and permissions.
- E. WHOLE VALLEY PLANNING: All of the parties agree that planning for the future of He'eia Kea Valley should not be piecemeal and that a plan should be developed for the whole valley. Planned uses may include housing, commercial, industrial, agriculture, open space, and conservation.
- F. PHYSICAL CONFIGURATION: All planning for the valley should adapt to the natural features of the valley, including but not limited to views, drainage patterns, topography, and soils. It was agreed that specific uses should generally be located in the areas indicated on the attached map provided by Group 70. The size of each area is NOT indicated since the group does not agree on the acreage to be devoted to each use.

#### G. HOUSING:

- Residential uses: All parties agree that residential designation in addition to the existing zoning is appropriate for some portions of the valley.
- Mix of housing types: All parties agree that a mix of housing types such as single family, cluster, town houses, etc. is desirable for the valley.
- 3. Housing affordability and density: All parties agree that there is a great need for housing for families that earn less than the median income. All parties agree that any development in He'eia Kea Valley should preserve the natural beauty and open character of the valley.
- II. AGRICLUTURE: All parties agree that some portion of the valley should be used for agriculture.

- PARK: All parties agree that park/open space is an appropriate use as identified on the physical configuration map.
- J. COMMERCIAL/INDUSTRIAL: All parties agree that a pier-related commercial/light industrial area is an appropriate use as identified on the physical configuration map.
- K. REGIONAL PREFERENCES: All parties agree that it is desirable to give valley residents and regional residents preference in the purchase of housing. This policy would help minimize the impacts on traffic and on the pier and maximize the impact in satisfying the community's

for Hui Malama

for HECO

for Waiahole-Waikane

for He'eia Kea Community Association An Assessment of Social Impacts of the Proposed Heeia Kea Project

Section 2

Resident Population

### 2. RESIDENTIAL POPULATION

This section provides the islandwide and Study Area growth trends and population distribution policies.

The Study Area includes the communities of Ahuimanu, Kahaluu, Heeia, and Kaneohe, all of which fall within the Kahaluu and Kaneohe Neighborhood Boards. Although the proposed project is to be located within the Kahaluu Neighborhood area, the Kaneohe Neighborhood area is adjacent to Heeia-Kea and was therefore included as part of the Study area.

## 2.1. Islandwide

#### 2.1.1 Islandwide Growth Trends

The growth rate for Oahu had been declining steadily over the past three and half decades, while absolute population figures continue to rise. Table 3 shows U.S. Census population figure and derived rates for the City and County of Honolulu and the Study Area.

Between 1950 and 1960, Oahu's population grew at average annual rate of 3.5 percent; from 1960 to 1970, 2.3 percent; and from 1970 to 1980, 1.9 percent. The provisional estimated July 1, 1985 population for the City and County of Honolulu was 814,642 (yet unpublished advance information obtained from the Hawaii State Department of Planning and Economic Development) suggesting an average annual growth rate of just 1.2 percent for the early 1980's.

By comparison, the estimated 1985 population for the combined Neighbor Island counties would suggest a average annual growth rate of 3.2 percent for Hawaii aside from the island of Oahu.

# 2.1.2 Islandwide Growth Projections and Population Distribution Policies

The Hawaii State Department of Planning and Economic Development forecasts a further decrease in growth rates. The most recent population projections (1984) for the future population figures of the City and County of Honolulu are as follows:

Table 3

Population Growth Trends for Oahu and Study Area Communities

|  | <u>1960</u> | 1970    | <u>1980</u> | Growth<br>1970-80 | Avg. Annual<br>Growth<br>1970-80 |
|--|-------------|---------|-------------|-------------------|----------------------------------|
| City and<br>County of<br>Honolulu      | 550,409     | 630,528 | 762,565     | 20.9%             | 1.92%                            |
| Koolaupoko<br>Development<br>Plan Area | 60,238      | 92,219  | 109,373     | 18.6%             | 1.72%                            |
| Kahaluu<br>Town CDP                    | 1,123       | 1,657   | 2,925       | 76.5%             | 1.06%                            |
| Heeia<br>CDP                           | N/A         | N/A     | 5,432       | N/A               | N/A                              |
| Ahuimanu<br>CDP                        | N/A         | N/A     | 6,238       | N/A               | N/A                              |

| <u>Year</u> | Resident<br>Population | Previous 5-Yr.<br>Avg. Annual<br><u>Growth Rate</u> |
|-------------|------------------------|---|
| 1990        | 859,300                | 1.06%   |
| 1995        | 896,900                | 0.85%   |
| 2000        | 925,700                | 0.63%   |
| 2005        | 954.500                | 0.61%   |

The General Plan for the City and County of Honolulu contains percentage guidelines for the distribution of year 2000 population for the eight "Development Plan Areas" (DP Areas) which comprise the Island of Oahu. These areas are shown in Figure B.

Table 4 includes these guidelines and along with (1) estimated year 1984 population for each DP Area; (2) absolute year 2000 population range for each area based on the percentage guidelines; and (3) projection made in 1985 by the City Department of General Planning (DGP) of actual year 2005 population.

The DGP projections are based on a model which considers population capacity for residential developments which were approved as of 1985 as well as the estimated additional future housing demand (as constrained by land use policies).

#### 2.2 Study Area -- Kahaluu and Kaneohe

The proposed project is located in the Koolaupoko DP Area, shown indicated in Figure B.

Figure C provides the boundary designations of two of the four Neighborhood Board (NB) areas, which constitute the Koolaupoko DP area; Kahaluu NB and Kaneohe NB, as well as depicting separate individual communities or Census Designated Places (CDPs), the largest of which is Kaneohe City.

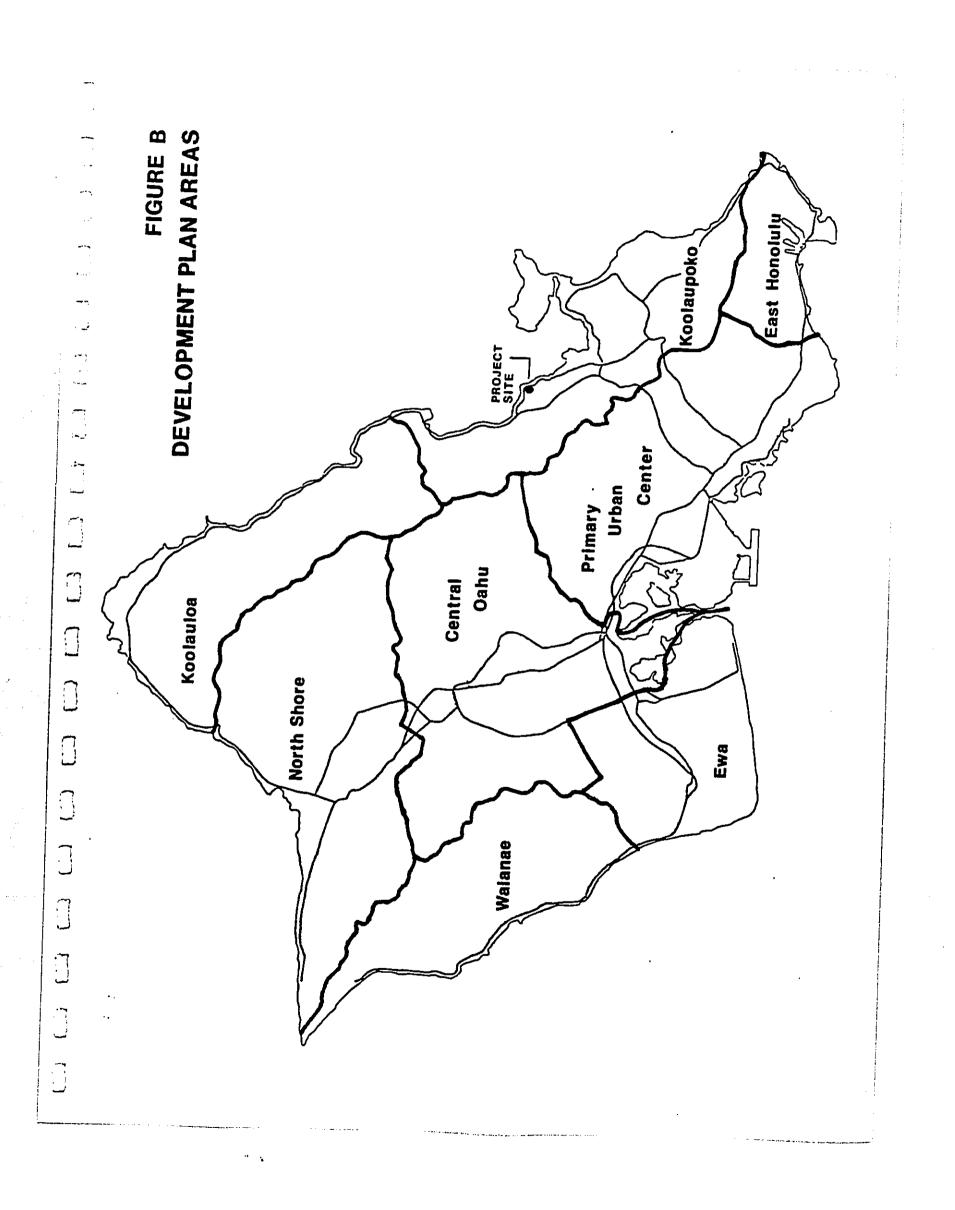
These Neighborhoods would be the most affected by the proposed project at Heeia Kea. For population analyses purposes beyond 1980 it was necessary to identify the major CDPs located within each of the areas, as statistical information for neighborhood board areas is not available prior to 1980.

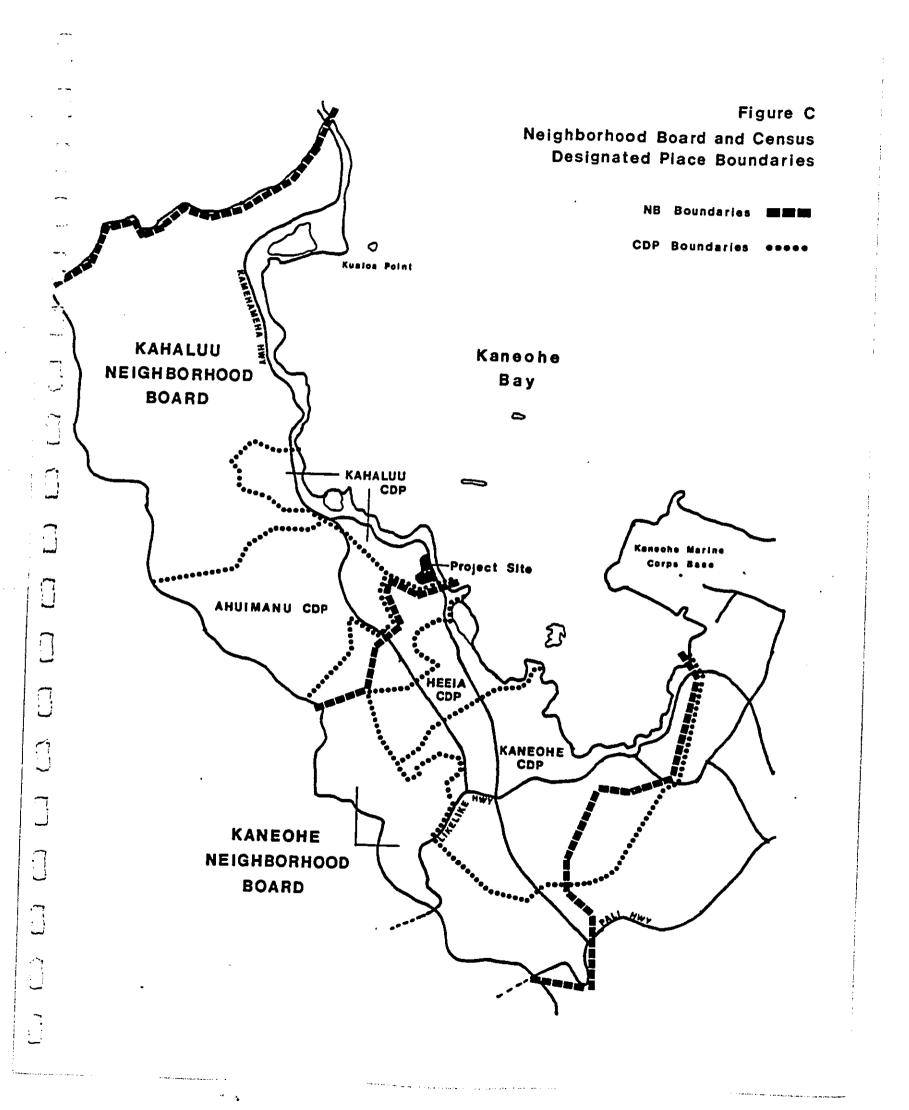
Table 4

Development Plan Area Population Guidelines

| DP Area                 | 1984 Population | Expected Year<br>2005 Population | Year 2005<br>General Plan I<br>Pop. Guidelines | Year 2005<br>Gen. Plan Actual<br>Pop. Guidelines |
|-------------------------|-----------------|----------------------------------|--|--|
| Primary Urban<br>Center | 436,400         | 480,000                          | 47.5 - 52.5                                    | 453,388 - 501,113                                |
| Ewa                     | 36,000          | 83,100                           | 9.0 - 10.0                                     | 85,905 - 95,450                                  |
| Central Dahu            | 114,400         | 139,800                          | 12.8 - 14.2                                    | 122,176 - 135,539                                |
| East Honolulu           | 45,600          | 58,500                           | 6.2 - 6.8                                      | 59,179 - 64,906                                  |
| Kool aupoko             | 113,300         | 124,200                          | 12.4 - 13.6                                    | 118,358 - 129,812                                |
| Koolauloa               | 12,100          | 13,800                           | 1.3 - 1.5                                      | 12,409 - 14,318                                  |
| North Shore             | 14,000          | 15,600                           | 1.6 - 1.8                                      | 15,272 - 17,181                                  |
| Waianae                 | . 33,400        | 39,300                           | 4.2 - 4.6                                      | 40,089 - 43,907                                  |
| Total                   | 805,300         | 954,500                          | 95.0 -105.0                                    | 906,775 - 1,002,225                              |

Source: City and County of Honolulu, Department of General Planning, "Residential Development Implications of the Development Plans", 1985.





## 2.2.1 Study Area Growth Trends

The population of the Koolaupoko Development Plan area grew by over 17,000 persons during the 1970s. This represented an 18.6 percent increase, compared to a 20.9 percent increase for the entire island of Oahu. The average annual growth for the area was 1.72 percent. The largest gross increase in population occurred between Kaneohe and Kahaluu, followed by the Kaneohe Marine Corps Base and Waimanalo.

Population growth has slowed in Koolaupoko during the 1980s. The overall increase between 1980 and 1984 was nearly 3,900 persons. The average annual rate of growth dropped to 0.88 percent. As of July 1, 1984 the total population was 113,269 (DPED, 1985). The 1984 population of selected Census Designated Places (CDPs) within the region nearest the project site include: Kahaluu 3,175, Ahuimanu 7,256, Heeia 4,876, and Kaneohe 31,750.

The General Plan for the City and County of Honolulu sets forth guidelines for future population levels in the eight Development Plan areas. Table 4 shows that the current guidelines allow for a range between 118,358 and 129,812 residents in Koolaupoko by the year 2005. Based on an average household size of 3.4 persons per unit, the City and County Department of General Planning estimates there will be approximately 124,200 residents by the 2005 target year (DGP, 1985).

The DGP estimates imply that, by 2005, Koolaupoko's population would increase by 10,900 persons. This would be a relatively low annual rate of growth of 0.44 percent, half the rate observed from 1980 to 1984. Even if the population reached the maximum set by the General Plan, the result would be a 0.65 percent rate of growth during the 21-year period.

# 2.3 Change in Level of Population

In the aforementioned DGP report, DGP estimated that 4,900 additional housing units would be needed to accommodate the projected 2005 Koolaupoko population. It was further estimated that the vacant developable and under-utilized lands have a potential to accommodate population. This implies that, to fully accommodate the 2005 and potential housing units are needed, in addition to the existing

The proposed 360 residential units would house an estimated population of 1,224, based on an average household size of 3.4 persons.

It is noted, however, that, of the 360 units, 120 could be built under the existing Development Plan designations, and these units are already accounted for in the housing supply identified by DGP (Group Persons.

The <u>net</u> increase of proposed units is 240, and these would contribute to the estimated housing deficit of 500 units. The estimated net population resulting from these units is approximately 816 persons.

It is estimated that Koolaupoko's 1984 population was 113,260 persons, which is 10,931 persons less than the project 2005 population of 124,200 persons. The population resulting from the proposed net increase of housing units would be well within the projected population.

An Assessment of Social Impacts
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Section 3

Character and Culture of the Neighborhood

## SECTION 3. CHARACTER AND CULTURE OF THE NEIGHBORHOOD

This section addresses the islandwide and Study Area issues and concerns regarding Heeia Kea.

Section 3.1 and 3.2 provide some indications of the social setting of this project. Islandwide priorities, independent of this project, are discussed in Section 3.1.

For the Study Area, the histories, census characteristics, and important community concerns and issues, again independent of the project, are presented in Section 3.2.1 (Kahaluu) and 3.2.2 (Kaneohe).

Heeia Kea's history and unique characteristics are described in Section 3.2.3.

Those concerns raised specifically about Heeia Kea are presented and discussed in Section 4.3.

#### 3.1 Islandwide priorities and values

#### 3.1.1 Public opinion polls

This section provides information on public attitudes toward planning issues as determined by various statewide and islandwide opinion surveys conducted in recent years. Particular attention will be given to those issues most relevant to the proposed Heeia Kea project: housing, agricultural land preservation, traffic, and jobs.

The most useful data sources include the following:

- three "Hawaii State Plan Surveys" commissioned by the State Department of Planning and Economic Development and conducted by the Honolulu firm SMS Research (1978a, 1981, and 1984);
- the City's Development Plan survey (SMS Research, 1978b); and
- the various "Hawaii Polls" conducted by The Honolulu Advertiser since the mid-1970s.

The most recent published Advertiser poll results (Keir, 1986a, 1986b) contain comparisons with previous results.

Although sometimes using slightly different wording, most Hawaii Polls have contained a question asking respondents to state in their own words the most important problems in Hawaii today.

In both 1986 surveys, "need for jobs" ranked first, followed by traffic problems. Crime and education, which ranked third and fourth in the most recent survey, have also been consistent public concerns in the 1980's.

. .

As for housing, "The lack of affordable housing has been a frequent source of concern to voters through the entire 12-year history of the Hawaii Poll. It generally has ranked in the Top 5 issues and does so again this year, coming in fifth" (Keir, 1986b, P. A-4).

Hawaii Polls results are highly similar to those for the Oahu sample in the 1984 State Plan Survey. Here the top issue was also jobs, followed by a virtual tie between at least four other concerns: crime, education, housing, and traffic.

An issue relevant to the Heeia Kea project is the relative importance of affordable housing versus the loss of agricultural land. A wide variety of poll results indicate that housing has been the greater public priority over the past decade.

In the Advertiser polls, preservation of agricultural land (and/or open space) was a somewhat prominent concern in the 1970s but has failed to show up at all on the list of most frequently-mentioned concerns in the 1980s.

In the City's 1978 Development Plan Survey, "affordable housing" was seen as the Number 1 community problem at that time. The need to save agricultural land was also then an important concern (ranked #3 to #5 on different lists containing 20 or more planning issues) but was not ranked as highly as housing.

The three State Plan surveys have also contained lists of planning needs and issues, asking respondents to rank the importance of each. In each survey, affordable housing emerged as the second or third most important problem and has ranked well ahead of agricultural land preservation, in terms of percentages of people saying each is "extremely important".

In the 1984 State Plan Survey, 57.6 percent of the Oahu sample said "making more reasonably priced housing available" was extremely important, while "saving agriculture and agricultural land" had a high importance rating of just 39.5 percent, somewhat surpassed by "preserving the natural beauty and open space of our islands" (45.7 percent).

Finally, the last two State Plan Surveys have also each contained a forced-choice trade-off between housing affordability and agricultural land preservation. In each case, between 50 and 60 percent of Oahu respondents said housing was more important, versus 37 percent for agricultural land.

After a period in the late 1970s and early 1980s in which it was little mentioned, traffic has recently emerged as a frequently-mentioned issue in Oahu polls, sometimes ranking slightly ahead of affordable housing and sometimes slightly behind. No survey question has yet directly forced respondents to make a trade-off choice as to which is more important.

In summary, while employment has consistently emerged as the top public concern in recent polls, both housing and traffic are also high on the list. It should be noted, however, that no survey question has yet defined "affordable" housing nor charted changes in public attitudes toward loss of agricultural land according to differing price levels for resulting housing.

Over the same time period, the Loss of agricultural land has not elicited consistent public emphasis in islandwide polls.

#### 3.2 Characteristics of the Study Area

As stated earlier, the Study Area of this report includes Kahaluu and Kaneohe, as defined by the Neighborhood Board areas.

To provide the geographical and cultural setting of the proposed project, this section discusses the history and census characteristics of these regions, as well as identifies some of the major forces for change without Heeia Kea. The history and characteristics of Heeia Kea is also presented.

Also examined are current community concerns and issues independent of this project, as provided by information in the minutes of the Neighborhood Boards and community polls.

#### 3.2.1 Kahaluu

#### History

In early Hawaiian society, a key principle governing man's relationship to the land was that everyone had the right to all the things required to live. This principle is revealed in the Hawaiian system of land division into districts (moku'aina), sub-districts (ahupua'a), and divisions within sub-districts ('ili and mo'o'aina). Through their mountain to ocean orientation, these land divisions emphasize the concept of accessibility of all the resources provided by nature.

The Koolaupoko District on Windward Oahu continues to reflect the influence of early Hawaiian land divisions. Each valley around Kaneohe Bay became individual ahupua'as. In all, there were nine ahupua'as and the names given to each of these areas are still in use today.

The ahupua'a of Kahaluu was centrally located in Pali Koolau (Koolaupoko). Kahaluu has historically been noted for its winds, because the nearby mountains give them a swirling motion causing all sides of a house to become wet during a rainstorm. Thus, Ua poai hale o Kahaluu is a well-known old saying (house-surrounding rain of Kahaluu) (Sterling and Summers).

Agriculture has been an important activity in Kahaluu throughout its known history. Surveys during the early part of this century found remnants of terraces well back into the higher parts of the valley. Estimates are that at one time there must have been terraces throughout the broad part of the valley for several miles inland and the total area under cultivation in ancient times must have been very considerable.

In early historic times, the green fertile Koolaupoko district became a favorite spot of Kamehameha I. His sons, Liholiho and Kauikeaouli (Kamehameha II and III) inherited much of the area from their father, including the entire ahupua'a of Kahaluu. A small number of commoners were still allowed to grow taro in the small number of commoners were still allowed to grow taro in the area. The earliest known census of the Kaneohe Bay region showed there were only 267 residents in Kahaluu in 1832.

Kahaluu remained in the hands of the Hawaiian monarchy after the Great Mahele in 1848. However, by 1863, Kahaluu was put up for auction to pay debts of the crown. It was purchased by James Steward for \$4,000.

As was the case throughout Hawaii after the Great Mahele, private ownership of land in Kahaluu brought about significant changes in the use of land. The commercial production of sugarcane began in the Kaneohe Bay area during the 1860s. The wife of James the Kaneohe Bay area during the Kahaluu Plantation during the Steward, Catherine, began the Kahaluu Plantation during the period. The lands of Kahaluu provided a poor yield compared to surrounding areas and the operation ceased production around 1882.

Immigrants who came to Oahu for work in sugar plantations used their knowledge of rice production to introduce the new crop on lands that had traditionally been used for taro. By 1892, an estimated 300 acres were in rice production in Kahaluu.

Around the same time, pineapple was being introduced to the area. By 1910, approximately 1,000 acres were cultivated in Kahaluu on land owned by James B. Castle. A year later, the Kahaluu on land owned by James B. Castle. A year later, the Libby, McNeil & Libby company gained control of lands in Kahaluu Libby, McNeil & Libby company gained control of lands in Kahaluu and built the first large-scale cannery on the site of the existing St. John's By-the-Sea Church in Kahaluu. By 1923 it was existing St. John's By-the-Sea Church in Kahaluu. By 1923 it was evident, however, that pineapple production in the Kaneohe Bay evident, however, that pineapple production in the Kaneohe Bay area could not keep up with that in other parts of Oahu. During area could not keep up with that in other parts of Oahu. During that year the cannery was closed and many of the pineapple lands that year the cannery was closed and many of the pineapple lands reverted to native growth and pasture lands (Devaney, et al).

Since large scale commercial agriculture ended, Kahaluu has been characterized by small farming operations and a gradual increase in single family homes and neighborhood commercial operations along Kahekili Highway. The completion of the Pali and Likelike Highways increased the rate of growth in Kahaluu, yet it has been able to retain a strong degree of its rural character.

A survey of residents taken in 1981 found that 52 percent of the respondents defined Kahaluu as an agricultural community, while 34 percent said it was suburban. Feelings are strong in the community for Kahaluu to retain its rural character.

### Census characteristics

This section will focus on Kahaluu's socio-economic characteristics, although limited comparisons will be made to Kaneohe and Oahu as a whole. Tables 5 through 8 show selected 1980 demographic, income, labor force, and housing characteristics for the City and County of Honolulu and the Neighborhood Board areas encompassing both Kahaluu and Kaneohe.

The proportion of Caucasians in Kahaluu closely matched that for both Kaneohe and the island as a whole. Census breakdowns for Neighborhood Board areas do not allow further breakdowns into Japanese, Hawaiian, and so on.

Kahaluu has smaller proportions of both working-age and senior citizens, and larger proportions of children, than do Kaneohe or the island as a whole. As of 1980, 39 percent of Kahaluu's population was under 20 years of age, compared to only 32 percent islandwide.

Among Kahaluu adults aged 25 or more, there was a slightly wider distribution of educational levels than for the islandwide population, since Kahaluu had a higher proportion of individuals both with less than high school educations (16 versus 14 percent) and more than high school educations (42 versus 40 percent).

Compared to islandwide percentage figures, Kahaluu's 1980 population was much more likely to be Hawaii-born (71 percent versus 55 percent) and to have been living in the same house five years previously (57 percent versus 48 percent). In this respect, Kahaluu resembles Kaneohe, where the population also appears less mobile than Oahu residents at large.

Information on Kahaluu's families show the following:

- Kahaluu's population is overwhelmingly family-oriented, in the sense that 99.5 percent of the population (versus 85.6 percent islandwide) were living in family households as of 1980
- Kahaluu's families were more likely than families elsewhere on Oahu to be headed by a single male or female (18.6 percent versus 17.2 percent).
- The area's families were much more likely to have children under 18 living at home (62 percent versus 55 percent).
- The proportion of families below the federal poverty level was about the same as the islandwide proportion.
- Median family income in Kahaluu (\$25,572) was greater than the islandwide median of \$23,554.

<u>Table 5</u>

Population and Demographic Characteristics:

City and County of Honolulu and Kahaluu and Kaneche Neighborhood Boards, 1980

|                           | CITY AND COUNTY OF HONOLULU 762,565 |              | KAHALUU NE<br>Board | IGHBORHDOD | KANEGHE NEIGHBORHOOD<br>BOARD |                        |  |
|---------------------------|-------------------------------------|--------------|---------------------|------------|-------------------------------|------------------------|--|
| TOTAL DODIN ATION         |                                     |              | 11,782              |            | 35,553                        |                        |  |
| TOTAL POPULATION          | No.                                 | X.           | No.                 | Z          | No.                           | 7                      |  |
| ETHNICITY                 |                                     |              |                     |            | 44 841                        | 32.1                   |  |
| Caucasian                 | 252,435                             | 33.1         | 3,9B2               | 33.0       | 11,416<br>N/A                 | N/A                    |  |
| Japanese                  | 189,828                             | 24.9         | N/A                 | N/A        | N/A                           | N/A                    |  |
| Chinese                   | 52,814                              | 6.9          | N/A                 | N/A        |                               | N/A                    |  |
| Filipino                  | 97,565                              | 12.8         | N/A                 | N/A        | N/A                           |                        |  |
| Hawaiian                  | 90,172                              | 10.5         | N/A                 | N/A        | N/A                           | N/A                    |  |
| Other                     | 89,731                              | 11.8         | 7,800               | 66.2       | 24,137                        | 67.9                   |  |
| AGE                       |                                     |              |                     |            | A (20                         | 7.4                    |  |
| Less than 5 yr.           | 59,507                              | 7 <b>.</b> B | 1,223               | 10.4       | 2,628                         | 27.7                   |  |
| 5 - 19 yr.                | 184,742                             | 24.2         | 3,250               | 27.6       | 9,834                         |                        |  |
| 20 - 64 yr.               | 463,066                             | 60.7         | 6,757               | 57.4       | 20,957                        | 59.0                   |  |
| 65 or more yr.            | 55,250                              | 7.2          | 552                 | 4.6        | 2,134                         | 6.0                    |  |
| Median age                | 28.1                                | /r           | 27.6 yr             |            | 28.6 yr                       |                        |  |
| PLACE OF BIRTH            |                                     |              |                     |            | <b>75.</b> 74.                | 70 E                   |  |
| Hawaii                    | 420,120                             | 55.1         | B,411               | 71.2       | 25,706                        | 72.5                   |  |
| Other U.S.                | 229,234                             | 30.1         | 2,840               | 24.0       | 7,766                         | 21.9                   |  |
| Foreign country           | 113,211                             | 14.8         | 563                 | 4.8        | 1,993                         | 5.6                    |  |
| RESIDENCE 5 YRS. PREVIOUS |                                     |              |                     |            |                               |                        |  |
| (people aged 5+)          |                                     |              |                     |            | 20 017                        | 63.B                   |  |
| Same house                | 339,033                             | 48.2         | 6,027               | 57.1       | 20,967                        | 22.6                   |  |
| Same island               | 179,184                             | 25.5         | 3,456               | 32.8       | 7,415                         |                        |  |
| Different island          | 9,100                               | 1.3          | 89                  | 0.8        | 351                           | 1.1                    |  |
| Different state           | 129,169                             | 18.4         | 821                 | 7.8        | 3,164                         | 9. <i>&amp;</i><br>5.6 |  |
| Different country         | 46,426                              | 6.6          | 157                 | 1.5        | 958                           | 3.0                    |  |
| EDUCATION                 |                                     |              |                     |            |                               |                        |  |
| (people aged 25+)         |                                     |              |                     | 44.0       | 7 057                         | 20.0                   |  |
| 0-8 years only            | 61,905                              | 14.4         | 1,063               | 16.0       | 3,957                         | 39.6                   |  |
| High school only          | 195,074                             | 46.0         | 2,765               | 41.7       | 7,848                         | 17.9                   |  |
| Some post High School     | 78,386                              | 18.3         | 1,277               | 19.2       | 3,559                         | 22.5                   |  |
| College, 4+ yr.           | 93,201                              | 21.7         | 1,528               | 23.0       | 4,467                         | 42.3                   |  |

Source: U.S. Bureau of the Census, 1980 Census of Population and Housing--Special Report: Neighborhood Statistics Program, Part 13--Hawaii--PHC80-SP1-13, 1983

"N/A" = Not Available

Table 6

Labor Force Size and Characteristics:

City and County of Honolulu and Kahalum and Kaneohe Neighborhood Boards, 1980

|                                  | DF HONDLULU |       | KAHALUU NETGABORHOOD<br>BOARD |            | KANEDHE NEIGHBORHOOD<br>BOARD |       |
|----------------------------------|-------------|-------|-------------------------------|------------|-------------------------------|-------|
|                                  | No.         | z     | No.                           | z          | No.                           | 1     |
| POTENTIAL LABOR FORCE (aged 16+) | 574,903     | 100.0 | 8,154                         | 100.0      | 26,102                        | 100.0 |
| not in labor force               | 177,014     | 30.8  | 2,472                         | 30.3       | 8,169                         | 31.3  |
| areed forces                     | 58,026      | 10.1  | 125                           | 2.3        | 582                           | 2.2   |
| civil. labor force               | 339,863     | 59.1  | 5,497                         | 67.4       | 17,355                        | 66.5  |
| CIVILIAN LABOR                   |             |       |                               |            |                               |       |
| FDRCE                            | 339,843     | 100.0 | 5,497                         | 100.0      | 17,355                        | 100.0 |
| unexployed                       | 15,750      | 4.6   | 179                           | 3.3        | 755                           | 4.4   |
| TOTAL EIPLOYED                   |             |       |                               |            | •                             |       |
| CIVIL. LABOR FORCE               | 324,113     | 100.0 | 5,318                         | 100.0      | 16,600                        | 100.0 |
|                                  |             |       |                               |            |                               |       |
| DCCUPATION                       | E1 070      | •7 (  | 818                           | 15.4       | 2,393                         | 14.4  |
| service                          | 56,939      | 17.6  | 1,510                         | 28.4       | 4,345                         | 26.2  |
| sanager./profes.                 | 79,934      | 24.7  | •                             | 32.6       | 5,735                         | 34.5  |
| technical, sales & adminis.      | 109,521     | 33.7  | 1,735                         | 2.5        | 217                           | 1.3   |
| farm/fish/forest                 | 5,838       | 1.8   | 134                           | 2.5        | 217                           | 1.5   |
| precision, craft,                |             |       | ***                           | 15.7       | 2 140                         | 12.9  |
| repair                           | 36,546      | 11.3  | 668                           | 12.6       | 2,149                         | 12.7  |
| operators,fabri-                 |             |       |                               |            | 4 7/0                         | 40.7  |
| cators, laborers                 | 35,335      | 10.9  | 453                           | 9.5        | 1,762                         | 10.6  |
| INDUSTRY (selected)              |             |       |                               |            |                               |       |
| agric., forest,                  |             |       |                               | <b>-</b> . | 240                           | 4 5   |
| fish, mining                     | 5,662       | 1.7   | 189                           | 3.6        | 249                           | 1.5   |
| construction                     | 21,423      | 6.6   | 379                           | 7.1        | 1,303                         | 7.8   |
| <b>m</b> anufacturing            | 24,982      | 7.7   | 362                           | 6.8        | 1,141                         | 8.5   |
| retail trade                     | 66,358      | 20.5  | 960                           | 18.1       | 2,792                         | 1B.0  |
| financial, insurance,            |             |       |                               |            |                               | •     |
| real estate                      | 26,145      | 8.1   | 517                           | 9.7        | 1,426                         | 8.6   |
| personal, entertainment,         |             |       |                               |            |                               | - 4   |
| & recreational services          | 26,252      | 8.1   | 262                           | 4.9        | 844                           | 5.1   |
| health, education, &             |             |       |                               |            |                               |       |
| professional                     | 59,927      | 18.5  | 1,093                         | 20.6       | 3,303                         | 19.9  |
| public adminis.                  | 35,407      | 10.9  | 745                           | 14.0       | 1,885                         | 11.4  |

Source: U.S. Bureau of the Census, 1980 Census of Population and Housing—Special Report: Neighborhood Statistics Program, Part 13—Hamaii—PHC80-SP1-13, 1983

Table 7

Family Characteristics and Income Levels:

City and County of Honolulu and Kahaluu and Kaneohe Neighborhood Boards, 1980

|                        |                  | ADERETA<br>PODRIETA | KAHALUU NEIGHBORHOOD<br>BOARD |       | KANEDHE NEIGHBORHOOD<br>BOARD |              |  |  |
|------------------------|------------------|---------------------|-------------------------------|-------|-------------------------------|--------------|--|--|
| POPULATION IN FAMILIES | 653 <b>,</b> 118 |                     | 11,276                        |       | 33,742                        |              |  |  |
| as percentage of       |                  | ,110                | 14                            | 1210  | 30                            | 1172         |  |  |
| total population       | 85               | 85.6%               |                               | 99.5% |                               | 94.9%        |  |  |
| NUMBER OF              |                  |                     |                               |       |                               |              |  |  |
| FAMILIES               | 178              | 516                 | 2                             | 2,922 |                               | 8,720        |  |  |
|                        | <u>No</u> .      | Ī                   | <u>No</u> .                   | Ī     | <u>No</u> .                   | <u>z</u>     |  |  |
| HEAD                   |                  |                     |                               |       |                               |              |  |  |
| Husband/wife           | 147,829          | 82.8                | 2,379                         | 81.4  | 7,399                         | 84.B         |  |  |
| Male only              | 7,992            | 4.5                 | 136                           | 4.6   | 334                           | 3.B          |  |  |
| Female only            | 22,695           | 12.7                | 407                           | 13.9  | 987                           | 11.3         |  |  |
| WITH OWN CHIL-         |                  |                     |                               |       |                               |              |  |  |
| DREN UNDER 12          | 97,982           | 54.9                | 1,825                         | 62.4  | 4,955                         | 56.4         |  |  |
| Female head            | 13,439           | 7.5                 | 280                           | 9.6   | 585                           | 6.7          |  |  |
| BELOW POVERTY          |                  |                     |                               |       |                               |              |  |  |
| LEVEL                  | 13,405           | 7.5                 | 213                           | 7.3   | 331                           | 3.8          |  |  |
| MEDIAN FAMILY          |                  |                     |                               |       |                               |              |  |  |
| INCORE                 | \$23,            | 554                 | \$25,                         | 572   | \$29                          | <b>,45</b> 3 |  |  |

Source: U.S. Bureau of the Census, 1980 Census of Population and Housing—Special Report: Neighborhood Statistics Program, Part 13—Hamaii—PHCBO-SP1-13, 1983

Table 8

Housing Stock and Characteristics:

City and County of Honolulu and Kahaluu and Kaneohe Neighborhood Boards, 1980

|                         | CITY AN OF HOM    | ID COUNTY<br>IDLULU | KAHALUU NEIGHBORHOOD<br>BOARD |           | ODD KANE | KANEOHE NEIGHBORHOOD |     |  |
|-------------------------|-------------------|---------------------|-------------------------------|-----------|----------|----------------------|-----|--|
| TOTAL YEAR-ROUND        |                   |                     |                               |           |          |                      |     |  |
| HOUSING UNITS           | 250,              | RA4                 |                               | 7 /47     |          |                      |     |  |
|                         | No. 2             |                     | <b>M</b> 1                    | 3,607     |          | 10,0                 | 49  |  |
|                         |                   | •                   | No.                           | I         | N        | J.                   | 2   |  |
| vacant (total)          | 20,652            | 8.2                 | 2                             | 47 6.B    | _        |                      |     |  |
| vacant for sale         | 1,383             | 0.5                 |                               |           |          | 551                  | 3.5 |  |
| vacant for rent         | 9,032             | 3.6                 |                               |           |          | 43                   | 0.4 |  |
| held for occas'l        | 2,331             | 0.9                 |                               | 94 2.6    |          | 12                   | 2.1 |  |
| other                   | 7,904             | 3.2                 |                               | 23 0.6    |          | 17                   | 0.2 |  |
|                         | .,                | 3.2                 | +                             | 66 1.8    |          | 79                   | 0.8 |  |
| TOTAL YEAR-ROUND        |                   |                     |                               |           |          |                      |     |  |
| OCCUPIED UNITS          | 230,              | 214                 | _                             |           |          |                      |     |  |
|                         | 200,              | 214                 | 3,                            | ,340      | 9        | 9,498                |     |  |
| TENURE                  |                   |                     |                               |           |          |                      |     |  |
| owner-occupied          | 114,793           | 40.0                |                               | •         |          |                      |     |  |
| renter-occupied         | •                 | 49.9                | 2,224                         | 66.2      | 6,987    | 72.                  | 0   |  |
|                         | 115,421           | 50.1                | 1,136                         | 33.8      | 2,711    | 28.                  |     |  |
| SELECTED CONDITIONS     |                   |                     |                               |           | ,        |                      | -   |  |
| lacking some or         |                   |                     |                               |           |          |                      |     |  |
| all plumbing            |                   |                     |                               |           |          |                      |     |  |
| 1.51 or core            | 3,664             | 1.6                 | 34                            | 1.0       | 45       | 0.5                  |     |  |
|                         |                   |                     |                               |           |          | V                    | •   |  |
| persons/room            | 16,951            | 7.4                 | 202                           | 6.0       | 500      | 5.2                  | ,   |  |
|                         |                   |                     |                               |           | 300      | 3, 2                 | •   |  |
| PERSONS PER HOUSEHOLD   | 3.1               | 5                   |                               |           |          |                      |     |  |
|                         | 3.1               |                     | 3.:                           | 31        | 3        | 3.43                 |     |  |
| MEDIAN CASH RENT        |                   |                     |                               |           |          |                      |     |  |
| (renter-occupied)       | \$27              | 6                   |                               |           |          |                      |     |  |
|                         | 421               | 7                   | \$32                          | 25        | \$       | 349                  |     |  |
| as % of median          |                   |                     |                               |           |          |                      |     |  |
| family income           | 14                | •                   |                               |           |          |                      |     |  |
|                         | 14.               | 2                   | 15.                           | 2         | 14       | 1.2                  |     |  |
| MEDIAN VALUE            |                   |                     |                               |           |          |                      |     |  |
| (owner-occupied)        | A170              | 400                 |                               |           |          |                      |     |  |
| occupies.               | ¥130 <sub>1</sub> | \$130,400           |                               | \$139,100 |          | \$122,500            |     |  |
|                         |                   |                     |                               |           |          | 1                    |     |  |
| MEDIAN MONTHLY MORTGAGE |                   |                     |                               |           |          |                      |     |  |
| (owner-occupied)        | 445               | •                   |                               |           |          |                      |     |  |
| towner occupied,        | \$494             |                     | <b>\$53</b> 3                 | 2         | \$4      | 42                   | •   |  |
| as % of median          |                   |                     |                               |           |          |                      |     |  |
| family income           |                   |                     |                               |           |          |                      |     |  |
| Learth TUCOM6           | 25.2              | !                   | 25.0                          | )         | 18       | .0                   |     |  |
|                         |                   |                     |                               |           | 10       | 1 4                  |     |  |

Source: U.S. Bureau of the Census, 1980 Census of Population and Housing--Special Report: Neighborhood Statistics Program, Part 13--Hawaii--PHC80-SP1-13, 1983

Labor force data indicate that, like Kaneohe, Kahaluu had both a higher labor force participation rate and a lower unemployment rate than the islandwide population in 1980.

Excluding those in the military, Kahaluu's civilian labor force participation rate was 69.0 percent (versus 65.8 percent islandwide), and its unemployment rate was 3.3 percent (versus 4.6 percent islandwide). Additional analysis of census data indicates the Kahaluu unemployment rate was somewhat higher for females than for males.

The occupation and industry profile for Kahaluu's civilian labor force indicates that -- in line with its slightly higher median family income -- the area houses somewhat higher percentages of professional, administrative, and other white-collar workers (and lower percentages of service and blue-collar workers) than would be expected among the Oahu population.

This pattern is also reflected in Kahaluu's housing cost data for 1980. Compared to islandwide figures, owner-occupants had higher median monthly mortgage costs (\$532 versus \$494) and the median values of their homes were higher (\$139,100 versus \$130,400).

Renters also faced greater median monthly outlays (\$325 versus \$279), although this may reflect the small percentage of housing units vacant and available for rent (2.6 percent versus 3.6 percent islandwide) as much or more than it reflects renters' ability to pay.

It should be noted, however, that only 34 percent of Kahaluu's housing units were renter-occupied (versus 50 percent islandwide), which may reflect both the somewhat greater median incomes and the less transient character of Kahaluu when compared to the Oahu population as a whole.

The average household size of 3.31 persons in Kahaluu exceeded the islandwide median of 3.15, possibly due to the large number of households with children. However, there is little direct evidence of crowded households in Kahaluu, where the proportion of units with 1.51 or more persons per room (6.0 percent) is below the islandwide figure (7.4 percent).

#### Major Forces for Change Without Heeia Kea Development

Forces shaping the future of Kahaluu are relatively limited. The two primary forces appear to be the slow but gradual growth of the population and a relatively high percentage of individual land owners.

There have been no major residential developments in the area since around 1980 and there are none being planned for the near future (other than Heeia Kea). Most new housing in the area will likely be from the in-filling of past projects, or by landowners of small parcels who seek to subdivide their land into smaller lots for perhaps five to ten single-family homes. Unless one individual or company consolidates its landholdings in Kahaluu, future developments will likely be haphazard in timing and design.

There is a limited number of acres near the Kahaluu Pond with commercial zoning. Several small businesses are currently located on the site, but mostly the land is undeveloped. This will provide some job-producing activities. Several other small parcels towards Waiahole also will provide room for more commercial activities. Overall growth of jobs in the area, however, is expected to be relatively small. Recently, the Market City development project, which would have provided a major shopping center to the Kahaluu area, was rejected by the City Council.

Kahaluu is an area of long-time residents, with only a sprinkling of newcomers. Along with the neighborhood board, various types of community organizations exist. Maintaining the overall rural character of the area appears to be a strong desire to many residents.

A major unresolved project which would probably have an impact in Kahaluu is the H-3 Freeway. Completion of the freeway, along with improved driving conditions from Windward Oahu to Honolulu, would most likely increase the demand for single-family housing. Kahaluu would feel this pressure since lands south to the Likelike Highway are largely already developed.

### 3.2.2 Kaneohe

#### <u>History</u>

To early Hawaiians, the area known today as Kaneohe consisted of two ahupua'a, Heeia and Kaneohe.

From all indications, these lands were the center of activity in the Kaneche Bay region during pre-contact times. Archaeologists have found numerous significant heiaus in the area and the eight walled fishponds along the shores of Kaneche Bay highlight the concentration of population in Kaneche and Heeia. In the first census of the area in 1832, the Kaneche ahupua'a had more than twice as many inhabitants as the next most populated ahupua'a (Heeia) in the Bay area. Together, the two areas contained 55 percent of the Bay area population at that time.

In early historic times, when Kahahana ruled Oahu, he sometimes lived in Kaneohe. After defeating Kahahana in 1783, Kahekili and most of his famous warriors lived in Koolaupoko at Kailua, Kaneohe, and Heeia. When Kamehameha I apportioned the conquered Oahu lands in 1795 to his warrior chiefs and counsellors, he retained as his personal property the ahupua'a of Kaneohe (Devaney, et al).

As throughout the entire Bay area, agriculture played an important role during much of Kaneohe's history.

Its size and diversity of resources allowed for a wide variety of agricultural operations compared to other areas. During the Great Mahele, the predominant type of land claimed was taro land. However, many other claims mentioned growing various vegetable crops and raising animals.

Sugarcane was first introduced into the Bay area in Kaneohe around 1840. The first major commercial operation, Kaneohe Sugar Plantation, began harvesting in 1865. By 1880, three sugar companies were operating in Kaneohe and another in Heeia.

At the height of production in the region, over 800 acres of sugarcane were planted in Kaneohe. In 1903 the closing of the Heeia Sugar Company marked the end of sugar production in the area.

During the last half of the 19th century, one of the characteristics of agriculture in Kaneohe was a emphasis on commercial crops and animals that were, for the most part, introduced. Rice production reached 200 acres by 1892 and around the same time the Kaneohe Ranch Company grazed some 2,000 cattle on 12,000 acres at Mokapu. A variety of new vegetables and fruits were also introduced during this period.

During the first two decades of the 20th century, over 1,000 acres of pineapple were produced from Kaneohe to Heeia.

During the 1930s and 1940s, the coastal areas of Kaneohe gradually urbanized. The Navy built a small sea plane base on the Mokapu peninsula in 1939. In 1951, the Marine Corps took over the base. The base provided a stimulus for support services that encouraged further growth of Kaneohe. With the completion of the Pali and Likelike Highways, Kaneohe became a suburban community, providing homes for a many people who worked in Honolulu.

### Census characteristics

This section will focus upon Kaneohe's socio-economic characteristics, although limited comparisons will be made to Kahaluu and Oahu as a whole. Tables 5 through 8 show selected 1980 demographic, income, labor force, and housing characteristics for both the City and County of Honolulu and the Neighborhood Board areas of Kaneohe and Kahaluu.

Kaneohe's median age of 28.6 years is slightly greater than that for Kahaluu (27.6 years) or the island as a whole (28.1 years). Since Kaneohe's population contains proportionately more senior citizens and children or young persons under age 20 than the islandwide population, this suggests a skewing of its working-age population toward persons in their forties or fifties rather than in their twenties or thirties.

The Caucasian proportion of Kaneohe's population is roughly equal to that for Oahu as a whole and Kahaluu. Again, the Neighborhood Board census statistics do not permit analysis of specific other ethnic groups such as Filipinos or Hawaiians or Japanese.

To an even greater extent than Kahaluu, the population of Kaneohe appears both more Hawaii-born and less mobile than the islandwide population. In Kaneohe, 72.5 percent of the population (versus 55.1 percent islandwide) was born in Hawaii, and 63.8 percent (versus 48.2 percent islandwide and 57.1 percent in Kahaluu) had been living in the same house five years previously.

The average educational level in Kaneohe appears lower than in Kahaluu or islandwide. The proportion of the Kaneohe adult population with a less than high school education is 20.0 percent, compared with 16.0 percent in Kahaluu and 14.4 percent islandwide.

Although not quite to the same extent as Kahaluu, Kaneohe is a family-oriented area, with 94.9 percent of its population living in family situations (versus 99.5 percent in Kahaluu and 85.6 percent islandwide). A higher percentage of its families (84.8 percent, islandwide). A higher percentage of its families (84.8 percent, versus 82.8 percent islandwide and 81.4 percent in Kahaluu) are comprised of traditional husband/wife household heads.

Some 56 percent of Kaneohe families had children under 18 at home as of 1980, somewhat lower than the Kahaluu percentage but greater than the islandwide one.

Kaneohe residents appear more affluent on average than residents islandwide or in Kahaluu. The median family income of \$29,453 clearly exceeds that for both Kahaluu (\$25,572) and Oahu as a whole (\$23,554).

Additionally, the proportion of Kaneohe families below federal poverty levels (3.8 percent) is about half the islandwide figure.

Like Kahaluu, Kaneohe residents had a higher labor force participation rate than was found islandwide, suggesting that additional household wage earners could be partly responsible for the higher incomes.

Excluding military, the civilian labor force participation rate for Kaneohe was 68.0 percent in 1980 (versus 65.8 percent islandwide). Unemployment was only slightly lower in Kaneohe than for the island as a whole (4.4 percent versus 4.6 percent islandwide and 3.3 percent in Kahaluu).

An interesting difference between Kaneohe and Kahaluu was that male unemployment rates were somewhat higher than female ones in Kaneohe, while the reverse was true for Kahaluu.

The occupation and industry profile for Kaneohe's labor force suggests less involvement in service and retail work than is the case islandwide. However, Kaneohe's work force appears slightly more engaged in better-paying blue-collar work (such as construction and manufacturing) than is Kahaluu's, which suggests that family incomes in Kaneohe may be more evenly distributed than in Kahaluu.

An extremely high proportion of Kaneohe housing units are owner-occupied (72.0 percent, versus 49.9 percent islandwide).

The median value of these owner-occupied units (\$122,500) is below that for Oahu as a whole (\$130,400) or Kahaluu (\$139,100), and the 1980 Kaneohe median monthly mortgage figure of \$442 is also below the corresponding figures for Kahaluu and the island as a whole.

The reverse situation is true for Kaneohe's relatively few renters. Their 1980 median cash rent of \$349 was seven percent higher than the Kahaluu figure and 25 percent higher than the islandwide figure. In Kaneohe, the median monthly rental was nearly 80 percent of the median monthly rental cost, whereas it was only 56 percent islandwide. Again, this may be partially accounted for by the low number of vacant units available for rent in Kaneohe as of 1980 (2.1 percent, versus 3.6 percent islandwide).

Kaneohe's average household size of 3.43 persons exceeded that for Kahaluu (3.31) and the island as a whole (3.15). As in Kahaluu, though, this does not suggest crowding or other substandard conditions, since the percentage of units with 1.51 or more persons per room was quite low, as was the percentage of units lacking some or all plumbing.

#### Major Forces for Change Without Heeia Kea Development

Major forces for change in the Kaneohe area will most likely be the natural growth in population and an in-filling of residential areas with slightly higher densities. Population during the 1970s remained remarkably stable, but as noted earlier, growth in the future is expected to increase more than some expect.

Presently, three housing developments are underway in the Kaneohe area. Two of these projects, the Hokulele and Nani Pua II, are being developed by the Hawaii Housing Authority. Castle Hills along the Likelike Highway, is the only major private development. At this time, no new major projects are being planned for Kaneohe.

This community has become the retailing and service business hub for Windward Oahu. The Windward Mall, with its 530,000 square feet of space, is now the third largest shopping center in the State.

If the H-3 Freeway is completed, it would likely increase the densities of housing throughout Windward Oahu. In Kaneohe, a potential result would be an increase in apartment projects near the main commercial center.

#### 3.2.3 Background on Heeia Kea

The sites of the Heeia sugar mill and the proposed project have an historical linkage in Hawaiian legend. As the legend goes, Heeia is the place where the souls of the dead leap into the sea. There are two distinctions in Heeia: Heeia-uli, the dark Heeia, and Heeia-kea, the white Heeia.

The Heeia sugar mill was located in Heeia-uli, which is judged to be the area extending from around the Windward Mall to the Heeia Fishpond, located on the Kaneohe side of the project site. Heeia-kea was described to be directly below Puu Maelieli, after the rise at Kealohi Point.

The legend states that, after a man died, he went to the places where dead men dwell. But before he jumped into the sea, his life was judged and his fate decreed.

Some souls were judged white and some were judged black, and at Heeia, the dividing came. The black souls leaped into the ocean south of Kealohi point, and the fortunate white souls found their haven beyond (Sterling and Summers, 1978).

Little written history was provided on Heeia Kea in the historical references used in this assessment. Much of this information is therefore from current residents of the valley, some of whom have lived there all their lives, and have ties of many generations to Heeia Kea.

It is presumed that the project site was somewhat isolated in pre-World War II days, as there is no distinct census information for Heeia Kea. The road fronting the site was not built until the visit of President Roosevelt to the islands in World War II. The site itself was used as a military training ground during the war, and there is still a bunker at the top of the mountain.

When the military left the valley, the remaining barracks began housing civilians who rented their units from sublessees.

Some people feel that around 75 to 100 units, including the houses on the existing subdivided lots, were standing in the valley. Some commercial agricultural activities occurred, but apparently most of the agricultural products were grown for personal use.

Because of the valley's proximity to both Kaneohe and Kahaluu, Heeia Kea is aligned with both communities, depending on the various boundary designations.

Whereas it shares the same City Council member as Kaneohe and Kahaluu, its residents vote with Kaneohe residents for its State House Representative, and with Kahaluu residents for its State Senator.

Although it shares much history with Kaneohe and the overall Heeia ahupua'a, it is outside of the Heeia CDP. The project site lies in the Kahaluu CDP and is in the jurisdiction of the Kahaluu Neighborhood Board.

#### 3.2.4 Regional Issues and Concerns Independent of Proposed Project

#### Minutes from Neighborhood Board Meetings

A review of the Neighborhood Board minutes during the last year (July 1985 through June 1986) was conducted to ascertain those issues or topics of current importance to the Neighborhood Boards. The following list of topics provide an overview of the issues which outline major concerns as indicated by lengthy or repeated discussion

The project area is situated within the boundaries of the Kahaluu Neighborhood Board No. 29. This assessment also looked at the minutes of the Kaneohe Neighborhood Board No. 30, however, because of the geographical proximity of the project area to Kaneohe.

During the past year both the Kahaluu and Kaneohe Neighborhood Boards dealt with general land use issues and various proposed development projects.

The Kahaluu Neighborhood Board dealt with regional planning and growth issues, water resources, infrastructure, transportation issues and the preservation of agricultural lands. Other Kahaluu concerns were related to general community safety - crime, drunk driving, and drug enforcement.

The Kaneohe Neighborhood Board dealt with site-specific proposals; in the context of cumulative impacts on regional resources - transportation, public facilities/services, and growth.

#### Kahaluu Neighborhood No. 29. Topics

- Area/Community concerns: issues relating to general community safety dealt with crime, theft of agricultural products, drug cultivation/operations and traffic safety.
- Water Resources: The Board expressed concern over what they perceived as the Board of Water Supply's lack of responsibility toward the community and their handling of the water situation. The community felt they have right to be informed of the situation in order to prepare and avoid haves in the event of a crisis.
- Water Development: The Board framed a draft resolution in support of a water use moratorium until necessary instream and streamflow levels are ascertained.
- Proposed Land Use Ordinance Amendments: Board expressed concern regarding proposed zoning changes because they would further displace agricultural land, increase housing speculation and impact water resources.
- Tri-Party Agreements: Lengthy discussion regarding proposed concept to involve community in decision-making/discussion of proposed projects. Board drafted letter stating concerns regarding equality, possible litigation, feasibility and the effect on the Board's advisory status. It was noted that no provision was made in the event that the parties do not reach an agreement.
- Public Works Projects: Board supported some projects relating to maintenance and improvement of infrastructure and/or roadways. Board expressed the desire to be informed of such projects and moved to contact the appropriate agencies of this decision.
- Correspondence received by Board: Department of Land Utilization notice was regarding a revised bill allowing agricultural product processing facilities on agricultural land of 15 acres or more. The Board discussed this notice expressing concern for the smaller farms and the possibility that slaughter houses might be allowed.

- Kualoa Ranch: This was a major topic in numerous Board meetings. Owners are interested in diversifying ranch activities because of financial pressures. Owners hope to maintain the integrity of the area, while increasing self-sufficiency through involvement in the tourist industry. The proposed activities include: horseback riding, trail rides on dune cycles, wind surfing, scuba diving, jet skiing and helicopter tours. The Board expressed concern that proposed expansion of ranch activities maintain compatibility with the surrounding environment, impact on water resources, ancient Hawaiian burial sites, and the expansion of proposed activities. Others supported this use as opposed to an alternative condominium proposal and stated that it would provide jobs.
- Development Plan Review/Amendments:
  - Board noted that the only major land use change request was HECO's Heeia Kea, which involved re-designation from agriculture to residential for affordable housing. It was noted that HECO is requesting more units than a past proposal which was opposed by the board. The Board expressed concern that this would "pave the way for the sale of land" for other uses. Board recommended denial.
  - Deletion of Heeia Biological Park: Board opposed unanimously.
  - Board expressed concern regarding the proposed development of additional water wells until the appropriate instream and streamflow levels are defined. This was due, in part, to recent water shortage problems experienced in Windward Oahu. Board denied.
  - Special Provisions: amendments for criteria defining prime agricultural land and other important lands passed unanimously, as long as they did not contravene General Plan. Board supported amendment defining rural areas.
  - Transportation Issues: Board consensus that alternative transportation solutions should be effected regardless of the H-3 decision. The Board was opposed to the 4(f) exemption, stating that it would establish a bad precedence. It was stressed that this was without regard to the Board's stand on H-3.
  - Kualoa Regional Park concerns relative to the condition of park include: beachfront erosion, improvement/maintenance of grounds and public facilities, cultural and historical value of the land, upgrading/beautification of grounds and hiking trails. Other concerns related to future significance of the park as cultural/archaeological site and the impact of the Kualoa ranch's proposed activities, particularly noise.

- Development Agreements - Board received information regarding the proposed bill for an ordinance. There was concern regarding the vague language of the bill and the possibility of increased costs of housing.

#### Kaneohe Neighborhood No. 30 Topics

- State Hokulele Housing Project: The Haiku Village
  Association asked for Board support in opposition of proposed
  project. Concerns regarding increased traffic to already heavily
  congested Kahekili Highway, increased demand for public
  facilities already at capacity, access and circulation of traffic
  into facility.
- Kokokahi YMCA Housing Project Kokokahi Community
  Association expressed concern regarding impact of the project on
  the community. Proposed easements considered to be hazardous.
- Keapuka Housing: Housing project raised concerns regarding setback and easement of lots, lack of open space, as well as the cumulative impact on public facilities/services.
- Transportation Issues: Board discussed the need for alternative solutions to transportation problems and moved to network with local organizations and with neighborhood boards to develop alternatives. A forum on transportation which was sponsored by the Department of Transportation on H-3 was attended by a Board representative. He indicated that the State's presentation of the issue was biased, while those attending the meeting were in opposition. In the discussion following this report Kaneohe residents expressed concern regarding the windward traffic situation and growing impact on community.
- Hawaii Convention Center: Board supported convention center in Waikiki for the state employment and tax benefits.
- Oahu Cellular Phone/Radio Transmitter Application: Board opposed and requested that an EIS be effected prior to granting approval.
- Educational Concerns: Efforts to gather community and school in a forum to openly discuss problems. Concerns which were discussed included student-teacher ratio, competency testing of teachers, attention to fundamentals, budget, and school maintenance/improvements.
- Nani Pua Gardens II: concerns expressed by the Board relate to proposed exemptions (requested by HHA and PMY Inc.), use of preservation lands for residential use, and waiving future park facility.

- Kalaheo Landfill: Concerns related to the impacts of the proposed landfill on adjacent residents, as well as odor, rodents, noise, dust, aesthetics and health. Of most concern was the fact that original scope of project had changed thus requiring additional studies and an amended EIS.
- Heeia Landing: proposed residential subdivision raised concern regarding the impacts on environment and ecology of fishpond, access, and loss of future planning options for the pond's use.
- Koolaupoko Development Plan Amendments: opposed by the Board as a package. This was due to the lack of a comprehensive assessment of the cumulative impacts of the individual developments in terms of the necessary public facilities, infrastructure, water and other resources which are currently strained. Board consensus was that current problems should be addressed prior to the approval of additional projects.

# Community surveys and polls

Several surveys taken in the Kahaluu area provide further indications of community values and issues.

In January 1986, the Kahaluu Neighborhood Board conducted a mail-out survey of households in its area. A total of 542 survey forms (representing a return rate of 15 percent) was received back.

None of the questions asked specifically about the proposed Heeia Kea project (or any other specific residential development). However, several questions touched on the general issue of housing versus. preservation of agricultural land, with somewhat conflicting results.

Asked first about the importance of the preservation of agricultural lands in the Kahaluu area, 51 percent said it was very important; 37 percent somewhat important; and 11 percent said not important.

The next question asked, "If some of the agricultural lands in our area had to be given up, which of the following should it be used for?" Three-quarters of the respondents checked only one response, including 48 percent for parks, 20 percent for houses, four percent for commercial, and 2 percent for industrial. However, 21 percent of respondents checked multiple categories, and these responses were not further broken down.

A subsequent key question was "Do you feel that taking lands out of agriculture to provide affordable housing is desirable?" Results were: yes, 66 percent; no, 33 percent; no response, one percent. Additionally, 71 percent thought the Neighborhood Board should "encourage and support legislation directed at providing affordable housing."

In other 1986 Neighborhood Board survey questions on area planning issues, 65 percent favored a public sewer system for the entire area; 71 percent supported construction of the H-3 freeway; 89 percent wanted Kahekili Highway widened from two to four lanes; and 65 percent favored preservation of historic sites in the Kahaluu area.

The only available previous Kahaluu survey taken during the 1980's was carried out by Rural Land & Water (1981) for another land developer. This was not technically a representative survey of public opinions, since the 212 respondents were not randomly selected. However, attempts were made to match the sample characteristics with known community demographics.

Asked to choose which phrase best characterized Kahaluu, 52 percent of these 1981 respondents said "agricultural," versus 34 percent "suburban" and ten percent "urban." More than 80 percent of those saying "agricultural" (and 72 percent of those saying "suburban") did not want any changes in the current status.

On a question about desired public facilities, the most frequent desired new facilities were recreational and educational, 37 percent; transportation improvements, 16 percent; emergency, medical, and protective facilities, 15 percent; shopping facilities, ten percent; and new or affordable housing, eight percent.

Taken together, these two survey results tend to suggest a familiar pattern of ambivalent attitudes toward population growth and development which is often encountered in rural or semi-rural Hawaii communities. On the one hand, there is a strong desire to maintain the present community character; on the other hand, there is an equally strong desire to have more of the facilities, amenities, and public services associated with a larger population base.

The Kaneohe Neighborhood Board also conducted a mail-out survey in the summer of 1985. This survey contained no questions directly about the proposed project, and only a few questions had even indirect relevance to the project.

One open-ended question did ask about "Kaneohe's most serious traffic/transportation problem." However, results as presented by the Neighborhood Commission stated only that 85 percent of the 666 respondents said "Heavy traffic." Also, an open-ended question at the survey's end asked about "other comments or concerns." Results published in the Board's newsletter indicate that some comments were received both for and against "affordable housing," but no percentage figures were published.

# 3.2.5 Summary of Existing Characteristics of Study Area

The populations of Kahaluu and Kaneohe share some similar characteristics. Compared to Oahu as a whole, both communities tend to have larger households, be more family-oriented and less mobile, and their median incomes are higher. Kahaluu and Kaneohe have relatively higher labor force participation and less unemployment than the islandwide community. The housing vacancy rate is very low in these communities and both experience a very high proportion of owner-occupied units.

In many cases, however, the population of these communities are different. Kaneohe has a lower educational level, and Kahaluu has proportionally more professional, administrative, and other white-collar workers. The median value of Kahaluu's owner-occupied units are much higher than those in Kaneohe and its median rent is lower than that of Kaneohe.

This information indicates that Kahaluu tends to have a more diverse population than Kaneohe, or Oahu as a whole.

While this community has more people who have attended college, it also has more people who did not attend high school. its proportion of families below poverty level resembled the island's proportion, even though its median income exceeded the island median. Further, while some of Kahaluu's residents have higher-than-average mortgage payments, the community's renters must allocate a higher percentage of their incomes to rent, even though their median rent is lower than that of Kaneohe or Oahu.

Another major difference between these communities is their growth patterns. While Kahaluu and Kaneohe share agricultural roots, the pace of urbanization in Kaneohe was much quicker than Kahaluu. Today, Kaneohe's suburban nature, with its shopping malls and planned communities, is a sharp contrast to the slower-paced changes in Kahaluu.

The community polls and Neighborhood Board minutes indicate that, for the most part Kahaluu wishes to retain this rural pace, but improve public services and facilities, whereas Kaneohe's concerns center around their ability to accommodate their already growing population.

It appears that, while Kaneohe will continue to grow with its residential development and subsequent increase in commercial activities, the relatively high number of small, individual parcels in Kahaluu provide little indication of major growth.

## 3.3 Social Impacts Related to Heeia Kea

This section discusses those concerns expressed by islandwide organizations and by Study Area individuals and organizations as related specifically to the development of Heeia Kea.

Section 3.3.1 presents concerns raised by islandwide organizations on previous proposals for the valley. Concerns raised by Study Area organizations and individuals are discussed in Section 3.3.2.

Section 3.3.3 summarizes and discusses the collective set of concerns on Heeia Kea.

# 3.3.1 Issues and Concerns of Islandwide Organizations (as expressed on previous proposals for Heeia Kea)

This section presents issues and concerns on development of Heeia Kea expressed by community organizations with islandwide or wider membership.

It is stressed, however, that these concerns are not intended to represent the feelings of the total islandwide population, particularly because these organizations have specific or special interests. No polls or other systematic mechanisms have measured community feelings and concerns on this project, and it is highly unlikely that such an islandwide poll would be conducted.

It is further noted that, as of this writing, no islandwide organizations have submitted comments on the Preparation Notice for the Supplemental EIS.

This section therefore presents comments received from islandwide organizations on previous proposals for Heeia Kea. While some of these comments may not be totally relevant to the current proposal, most comments generally refer to residential development of this valley, regardless of the number of units and other differences between the current and previous proposals.

# Issues and Concerns Expressed by Islandwide Organizations during the EIS Process

The EIS for Heeia Kea was prepared in 1982 and 1983. At that time, those islandwide organizations which commented on the Draft EIS are as follows and their letters are contained in the Final EIS:

Life of the Land Citizens Against Noise Oahu Metropolitan Planning Organization Sierra Club

Based on a review of their letters, the following are major concerns of these organizations:

- Noise impacts on future residents, particularly from aircraft from the Kaneohe Marine Corps Air Station
- The future of residents now living in the valley
- The effect of the project on electricity rates
- Impacts on traffic in the immediate area, as well as regional implications
- Silt runoff resulting from construction activities
- Archeological impacts

# Issues and Concerns Expressed by Islandwide Organizations in the 1985-1986 Annual Review Process of the Development Plans

As stated earlier, an application for an amendment to the Koolaupoko Development Plan was submitted in the 1985-1986 Annual Review Process.

The City Council hearing for the Koolaupoko Development Plan was held on March 20, 1986, at the Puohala Elementary School. Representatives from the following islandwide organizations presented testimony on that proposal:

Sierra Club Conservation Counsel for Hawaii Carpenter's Union Hawaii Construction Industry Legislative Organization

A summary of concerns expressed is as follows:

- Compliance of the proposal with Coastal Zone Management regulations, particularly as related to runoff into the Kaneohe Bay
  - The need to retain the open space and rural nature of this valley
  - The need to provide more housing units to allow young Windward families to remain on the Windward side
  - The need for jobs, particularly in the construction industry

# Comment on Concerns of Islandwide Organizations Received Thus Far

Two areas of concern have been addressed by the applicant since receiving the aforementioned comments. The first is the future of residents now living in the valley. As discussed in Section 1.3, the applicant has an agreement with ten of the eleven families currently residing in the valley and, if the valley is developed, the families will be executed by the applicant. Relocation assistance was also offered to the remaining family, but was again not accepted.

The second is the effect of this project on electricity rates. This question was raised during the mediation process, described in Section 1.3, and HECo. has explained that the project is being done by Malama Pacific Corp, a non-regulated sister corporation of HECo. and will not affect affect electricity rates in any way.

The other comments are similar to those raised by Study Area individuals and organizations, and these are further addressed in Section 3.3.2.

# 3.3.2 Project Issues and Concerns of the Study Area

This section discusses those concerns expressed by the Study Area individuals and organizations on the previous and the current development proposals for Heeia Kea.

# Concerns Raised by Study Area Organizations on Previous Proposals

As of the writing of this assessment, no Study Area organizations have submitted comments on the Preparation Notice for the Supplemental EIS for the current proposals.

Comments on previous Heeia Kea proposals were raised, however, by the following organizations in the Study Area:

- Kahaluu Neighborhood Board No. 29
- Kaneohe Neighborhood Board No. 30
- Heeia Kea Community Association
- Hui Malama Aina O' Koolau
- Waiahole-Waikane Community Association

Most of these organizations responded to the Draft EIS published in 1983, and their letters are contained in Final EIS. Further, all of these organizations have commented on previous Development Plan proposals in letters and testimony.

The following is a summary of concerns raised by these organizations, based on a review of EIS responses, Neighborhood Board minutes and notes on the public hearings:

- inconsistency between the proposed housing market and community need for low-income housing
- increase in population and the effects of this increase on the following:
  - traffic and transportation corridors
  - the waters of Kaneohe Bay

\_:

- the Windward water supply, particularly as it relates to agricultural activities
- impact on public services, such as police protection and sewerage
- the capacity of public facilities/infrastructure to meet the subsequent demand

- aesthetic impacts
- the need to keep this area in an agricultural designation, and the land's suitability for agricultural activities
- the inconsistency between this project and a desire to retain the regional rural character of Kahaluu

#### Comment:

Comment raised by the Study Area organizations are similar to those presented by Study Area individuals on the current proposal and are further discussed in the next section, "Interviews with Study Area Individuals".

It is noted that most of these organizations have expressed consistent concerns for all of the previous proposals for Heeia Kea. The Heeia Kea Community Association, however, has since taken a position to support the project upon reaching a relocation agreement with HECo.

#### Interviews with Study Area Individuals

Many community issues were raised on the previous proposals for developing Heeia Kea.

It is important to further explore these issues to see whether they are still apply to the current proposal, to gain a better understanding of the community's concerns, and to identify other concerns which have not been voiced.

To achieve this, one to one interviews with residents of the Study Area were held. An effort was made to select individuals who collectively represented a diversity of interests. These individuals were selected either because of their visibility in community affairs or the proximity of their residence or activity to the project area. Some of them were identified or recommended by other people.

It is noted that all of those interviewed were familiar with previous proposals to develop Heeia Kea and some of them had provided comments on these proposals. All were provided a description of the current proposal. All individuals understood that their views were being solicited as individuals, rather than as organizational representatives.

Table 9 lists those interviewed. A breakdown of their backgrounds is as follows:

- 4 current members of the two Neighborhood Boards,
- 5 people who have key roles in community-oriented organizations or agencies,

#### Table 9

#### COMMUNITY MEMBERS CONTACTED FOR

#### SOCIAL IMPACT ASSESSMENT OF HEEIA KEA

Name Organization/Affiliation Harold Aloiau Crown Terrace resident Kaneohe Lions Club Former member, Kaneohe Neighborhood Board David Daignault Chair, Kaneohe Neighborhood Board President, Owners Association of the Yacht Club Terrace Owners Association Board of Directors Lee Gomes Kahaluu Business Group, representative for Businessmen South Ronald Hales Acting Chair, Kahaluu Neighborhood Board Member, Kualoa Regional Park Commission Lehman Bud Henry Alii Bluffs resident Board member, Friends of Heeia State Park Former member, Kaneohe Neighborhood Board Charlene Ho Executive Director, Key Project Hakipuu Community Association Chester Koga Kahaluu resident Immediate past Chair of the Kahaluu Neighborhood Board Robert Mau Owner/operator of The Deli at the Heeia Kea Pier

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Kea Pier

Owner/operator of The Deli at the Heeia

Carolyn Mau

| 1              |  |  |
|----------------|--|--|
|                | Ken Ordenstein   | Immediate past president of the Kaneche<br>Business Group<br>Charter member, Kaneohe Jaycees   |
| , <del>-</del> | Bonnie Pamatigan   | Nearby resident on the Kahaluu end of<br>Heeia Kea   |
| years,         | Van Peterson   | Kaneohe Neighborhood Board, Chair of the Development and Planning Committee  |
|                | Charles Reppun   | President, Hui Malama Aina O' Koolau   |
|                | James Sanders  | President, Heeia Kea Community Association Head Coach, Kaneohe Pop Warner Association  |
|                | Edwin Tsukasa  | Chair, Windward Health Subarea Council<br>Board of Directors, Kaneohe Senior<br>Center<br>Former member, Kaneohe Neighborhood<br>Board |
|                | Martha Turner  | Windward District Coordinator, Honolulu<br>Community Action Program, Inc.  |
|                | Violet Van Epps  | Board member, Friends of Heeia State<br>Park<br>Manager, Kaneohe Satellite City Hall<br>Former member, Kahaluu Neighborhood<br>Board   |
|                | Note: Organizational af<br>the informant's degree of<br>intended to imply organi | filiation is provided strictly to reflect of community involvement and is not zational concurrence.                                    |
|                |  |  |
|                |  |  |

- 4 people who live either on or near the project site,
- 2 people who are involved in business organizations, and
- 2 people who operate a business directly across the street from the project site.

A summary of issues raised is hereby listed, followed by further discussion on each issue. Note that these are not presented in any particular order and are not intended to indicate priority. A systematic poll is recommended if such priority identification is desired.

- All those interviewed believed there is a strong need for housing in the area, and most felt that housing is appropriate for Heeia Kea. People differed, however, as to the type of housing the valley should accommodate. Some felt that Heeia Kea should have homes priced for average and higher income families. Others felt that Heeia Kea should address the need for low-priced homes.
- The project's traffic impacts on the immediately surrounding areas, as well as the regional trans-Koolau system, was raised by all those interviewed. Some indicated that they would be satisfied if the developer made necessary improvements to accommodate this particular project. While the others acknowledged that the regional problem "was not the applicant's problem", they also felt that the applicant should either participate in solving the regional problem, or that the project should not proceed until the regional problem is solved.
- All of those interviewed expressed appreciation for the site's existing beauty and a desire to retain it. Some felt that, with proper planning, the proposed project could maintain and enhance this beauty. Others felt that any change to the existing character would be a negative one, although some of these people also felt that the trade-off would be worthwhile if the project were primarily affordable housing.
- Some people felt that Heeia Kea's most important value was that it serves as a transition, or buffer area, between suburban Kaneohe and rural/agricultural Kahaluu. This concern was expressed even though the proposed density would be lower than that of the abutting community on the Kahaluu side. These people were primarily Kahaluu residents and they wanted to retain this quality, either with a very low density residential project, or by establishing agricultural activities, or by planning for both uses through "whole valley planning".

- Other concerns raised, though not as frequently, were the need to continue to stimulate the construction activities in Windward Oahu which would, in turn, provide jobs; the noise impact of KMCAS aircraft on future Heeia Kea residents; the project's compatibility with the Heeia Kea pier and Kaneohe Bay's ocean resources, particularly as related to Coastal Zone Management regulations; the future of the current residents; runoff into Kaneohe Bay; and the type of onsite industrial activities.

Each of these concerns are hereby discussed. They are first presented in the manner in which they were raised, followed by comments addressing each item.

Need for housing -- All those interviewed felt that Windward Oahu needs more housing, although the reasons for this need

Some felt that housing is needed so that young people can remain on the Windward side when they start new families. This way, the area can still continue to grow and prosper, but with people who were born and raised in the area. Other people wanted to see more houses because it would stimulate the construction industry on the Windward side.

These people included both Kahaluu and Kaneohe residents. Those that liked the suburban-type development generally tended to support the proposed development.

It is noted that the Kahaluu residents who felt this way expressed frustration at the community's predominance of low-priced homes. They felt that people believe that Kahaluu is a "second-class" community and that its residents have no stimulation for upward mobility. They felt that more middle class homes and subdivisions would help diversify the community, which would in turn create a healthier community and instill pride among Kahaluu's residents.

Others felt that more housing is needed because the prices of existing houses are prohibitive for many Kahaluu families. They cited existing situations where young families must double up with their parents, and where renters pay high rent and still cannot afford to buy a house.

These people generally opposed the proposal because they felt the project does not address this need. They expressed concern that the economic disparity between the future Heeia Kea residents and existing Kahaluu residents would lead to resentment and, ultimately, crime.

Almost everyone interviewed felt that housing would be an appropriate use for Heeia Kea.

<u>Comment</u>: While people generally agreed that Heeia Kea should be used for residential purposes, they disagreed on the type of housing.

This disagreement is largely due to a difference in what people think is "good for their community". Those that wanted to see a suburban-type development apparently are comfortable with this conventional form of addressing housing needs, or they generally wanted to see the Windward side continue to grow. It is not known, however, if all of the people who expressed this desire actually live in this type of setting.

Those that wanted to see Kahaluu "upgraded" seem to share this feeling and apparently feel that their community should have housing comparable to Kaneohe, so that eventually the upwardly mobile qualities of suburban living will be held by Kahaluu residents. This was seen as an improvement to the way things are now.

On the other hand, people who wish to see low-priced homes in Heeia Kea apparently feel that their community's housing needs will not be addressed by conventional mechanisms. To them, the proposal is not just inappropriate, but would contribute to a housing supply which discourages the accommodation of low income families.

The census information indicates that there is indeed a wider income disparity in Kahaluu than in Kaneohe and that Kahaluu's renters must put more of their income into rent. Further, Kahaluu has a relatively higher proportion of households with children over 18 years of age, which indicates some amount of doubling up.

In the mediation process on a previous proposal, the applicant did explore possibilities of predominant low-priced housing in Heeia Kea.

It is understood, however, that, to achieve this, a relatively high density of units would be needed. This would have been contrary to the desire to retain the rural character of the area with a low density development. Note that, in the current proposal, a portion of the project is intended for low and moderate income families.

Regional and Immediate Area Traffic Implications -- Everyone mentioned the existing traffic problem, characterized by bumper to bumper traffic and a one-hour commute to Honolulu.

Those interviewed generally suggested one of the following three solutions:

- 1. The applicant should concentrate on solving the problems around the site (excluding Long Bridge), since the regional solutions are beyond the applicant's control.
- 2. The applicant should solve the problems around the site, and participate in community and government planning efforts to solve traffic problems on Long Bridge and in Kaneohe.
- 3. The project will only add to the existing problem and so should not progress until the problem is solved.

<u>Comment</u>: As the islandwide polls and community surveys indicate, traffic is a growing concern for everyone and those interviewed from the Study Area were very consistent with this.

A traffic impact analysis is currently being conducted for the supplemental EIS. It is noted, however, that, the traffic concerns were translated into very personal terms -how much longer will I have to wait in bumper to bumper traffic. Many people seemed to feel that no single roadway improvement will solve the current congestion and, to the residents of the Study Area, any addition of cars will exacerbate existing problems.

<u>Heeia Kea's Visual Attractiveness</u> -- All of those interviewed expressed appreciation for the site's existing beauty and a desire to retain it.

Some felt that, with proper planning, the proposed project could maintain and enhance this beauty. Some suggested that the way to enhance this beauty is to build average- and higher-priced homes, as opposed to low-priced homes which might cause visual deterioration. These people stressed the need for attractive landscaping and buffer areas.

Others felt that any change to the existing character would be a negative one, although some of these people also felt that the trade-off would be worthwhile if the project were primarily affordable housing.

Comment: It is understood that the applicant intends to establish a planned community with appropriate elements to retain the area's beauty and complement surrounding areas. For example, a proposed 40-foot greenbelt along Kamehameha Highway would retain some of the open space quality of the area.

For those who are willing to compromise the site's status quo if the project provides substantial affordable housing, this trade-off does not seem feasible.

The affordability of housing prices is somewhat dependent on "spreading the costs" of construction and financing among a large number of units. As stated earlier, the applicant had previously looked into this and found that a relatively high number of units would be needed to bring the per housing unit price to an level acceptable by public agencies. This would be inconsistent with the community's desire to retain the area's character.

Heeia Kea's Function As An Urban-to-Rural Transition -- Some people, particularly Kahaluu residents, felt that Heeia Kea's most important value or function to the neighboring community was that it serves as a transition, or buffer area, between suburban Kaneohe and rural/agricultural Kahaluu. They explained that, as they travel towards Kahaluu on Kamehameha Highway, they feel a sense of relief from the fast-paced Kaneohe as they drive around Long Bridge and near Heeia Kea.

It was feared that, if this transition quality were greatly changed, then there would be less distinction between the urban and rural portions of Windward Oahu, and, eventually, more development would occur in Kahaluu.

Some of those interviewed pointed out that this concern is consistent with that expressed for previous proposals. They did not feel that the decrease of proposed units would decrease the project's aesthetic impacts.

With a feeling that the development of Heeia Kea is inevitable, these people wanted to retain this quality, either with a very low density project, or by establishing agricultural activities, or, through "whole valley planning", which would allow the compatible co-existence of both residential and agricultural uses.

Regarding agricultural activities, some of those interviewed pointed out that a portion of the area is suitable for agriculture based on designations of Agricultural Lands in the State of Hawaii (ALISH). They felt that, since the project area was once used for agriculture, and since it lies in a community which desires to maintain agricultural activities, Heeia Kea should therefore be put into agricultural activities. This would be in harmony with a community desire and consistent with what they believe as the site's potential.

Some people further indicated their feeling that, even if the proposal would leave 33 acres in the Agricultural designation, there is no assurance from the applicant that these lands would be used as such.

Comment: This concern is somewhat an expansion upon the previously discussed desire to maintain the area's beauty. The difference is that the former desire is purely a visual preference, whereas the desire to retain Heeia Kea as a buffer area stems from a sense of social well-being provided by all of the existing qualities of the area. For example, visually the proposed project may be less dense than the hsousing development on the Kahaluu side. Interviewees never raised this apparent conflict, however, presumably because the housing development on the Kahaluu side does not share the same transition function.

While the proposed project can retain some of the visual qualities of the area, the extent to which it addresses the overall aesthetic qualities of the site depends largely upon the community's belief that this is a "good project".

Although this judgment is highly subjective, the key element or quality of the project which will have great influence on people's final decision is whether or not these people feel that this is "their" project. The community would feel this sense of ownership if the project addressed community concerns.

Some people felt that the proposal has already made an effort to address community concerns and they were satisfied with the results. As pointed out earlier, however, others felt that the current proposal is very similar to previous proposals and, as with these previous proposals, does not address the real problem of affordable housing.

Regarding the fear that the development of Heeia Kea would set a precedence for further development along the Kahaluu coast, this decision lies in the public planning policies and plans. Currently, the plans do not call for further development and it is highly unlikely that major development will occur because of the high number of small individual parcels. Heeia Kea, on the other hand, lies in the Urban Fringe designated by the City and County of Honolulu General Plan.

An agricultural feasibility study is contained in the EIS and addresses the site's potential for agricultural activities. It is noted that in previous proposals, the applicant explored ways to establish the non-developed lands for agricultural use, although no agreements or conclusions were reached at that time.

It is noted that not all of the Kahaluu residents interviewed felt that Heeia Kea should be used for agriculture. Some of these people felt that the valley's agricultural activities would benefit only those who would actually use the valley and that the valley should be put to greater use. Further, the community polls indicate that most people felt that land could be taken out of agriculture if it were used for affordable housing.

Other concerns raised -- Though not as frequently, the following were raised:

- The need to continue to stimulate the construction activities in Windward Oahu which would, in turn, provide jobs
- The noise impact of KMCAS aircraft on future Heeia Kea residents.
- The overall adequacy of public facilities, particularly the sewerage system -- While people were pleased that the proposed sewerage improvements would also benefit neighboring communities, they were concerned that the cumulative impacts on the Aikahi treatment plant would be negative.
- The project's compatibility with the Heeia Kea pier and Kaneohe Bay's ocean resources -- One person felt that the project should be compatible with community desire to develop land fronting Kaneohe Bay around a theme emphasizing the recreational and natural resources of the Bay. He felt that, because no regional plan currently exists, the applicant should participate with regional efforts to formulate this plan. He felt that the current proposal, with its proposed industrial and commercial components, would generally complement the pier.
- The future of the current residents
- Runoff into Kaneohe Bay
- Type of onsite industrial activities -- One person felt that the industrial activities might bring in more slow traffic, i.e. cars with boat trailers.

<u>Comment</u>: The EIS contains information regarding the noise impacts, the impacts on the sewerage system, and runoff into Kaneohe Bay resulting from the project.

The desire to see increased and continued construction activity on the Windward side is related to some people's desire to encourage more growth on the Windward side. They saw this as a "healthy" alternative to very little or no growth.

Regarding the regional development of land around Kaneohe Bay, it is understood that a private individual is currently proposing such a plan to the Kaneohe community. It is recommended that the applicant explore possible participation in this effort. The future of the current residents was discussed in Section 1.3.

# 3.3.3 Analysis of Community Issues and Concerns Specific to Heeia Kea

The bulk of concerns raised on the development of Heeia Kea center around <u>quality of life</u> issues. Quality of life issues generally revolve around a personal and community sense of well-being.

Such issues range from people's perception of how a project may affect an individual's daily activities and routine to how a project may ultimately impact a particular community's social fabric and goals for the future.

The social issues previously discussed generally fall into three categories of how people see this proposal affecting their quality of life: need for housing, inconveniences of inadequate public systems and infrastructure, and the creation or maintenance of a community identity.

### Need for housing

While this need ultimately boils down to a personal need for housing, it is usually expressed by a community which feels that such a need exists in their midst. In other words, while survey respondents may not need housing themselves, they indicate that affordable housing is needed because they may know someone or a group of people in this situation.

Some people felt that more housing will allow young families to remain on the Windward side, as well as stimulate the economy, particularly the construction industry. Heeia Kea will improve this situation for those who believe that more market housing units are needed, or for those who are looking for a house at market rate.

For those that feel that the project should address the need of those who cannot afford to participate in the current housing market, most of whom are renters or are doubling up with their families, Heeia Kea is not a solution.

# Inconveniences of Inadequate Public Systems and Infrastructure

The best example of this quality of life issue is traffic. This is increasingly an islandwide and Windward area concern, mostly because people find themselves spending more time in bumper to bumper traffic.

Traffic was the most common concern on the Heeia Kea project, although people did not blame this or any other particular project.

The kinds of solutions recommended by the Study Area individuals depended largely upon their "acceptance" of the traffic problems. Those who were satisfied by the applicant making improvements for this project seem to feel that traffic is and will be a perennial problem and people must learn to live with it. Those who wanted to not pass any new projects until the problem is solved seem to feel that the situation will eventually change for the better.

The medium of these two extremes is the position that the applicant should make improvements as necessary, but also participate in community efforts to solve traffic problems.

The extent to which Heeia Kea will affect this quality of life issue largely depends upon the timing of the project relative to regional roadway improvements. If the project "suddenly" added many cars to the road, then people will indeed feel more pressure. The applicant has indicated, however, that the project will require a couple of years to obtain approvals and permits, and a couple of years beyond that for project build out. It is believed that some of the roadway improvements will already be completed and this will minimize the impacts.

## Maintenance or Creation of Community Identity

As discussed earlier, the intangible transition quality of Heeia Kea signals the arrival to "country", even though there are suburban-type developments on both the Kahaluu and Kaneohe sides of Heeia Kea.

The question of impacting the regional identity therefore goes beyond the project's compatibility with the surrounding area. It deals with whether or not this project will contribute to the desired direction of the Kahaluu community.

It is difficult to pinpoint a community goal or aspiration and this assessment relied on the community surveys and interviews with Study Area individuals to obtain a sense of how Heeia Kea "fits in" the existing and desired social fabric.

Based on the community surveys (Section 3.2.4), it appears that Kahaluu residents wish to retain the rural and agricultural qualities of the area, although they seem to have an equally strong desire to have more of the facilities, amenities and public services associated with a larger population base.

Some of the Kahaluu residents interviewed reflected this two-fold desire, and they may feel that the current proposal will "threaten" the rural identity they wish to retain.

Others, however, stressed the desire for more facilities and amenities and felt that more market developments will help "upgrade" Kahaluu by adding diversity. To them, the current proposal is an asset.

For the Kaneohe residents interviewed, most did not discuss the project's value as a transition area. Rather, they centered on the project's infrastructure impacts. They did not seem to feel presumably because the proposed project resembles existing development in Kaneohe.

It is noted that the project's future residents will most likely have consistent demographic characteristics as the existing Study Area population. Their incomes would probably be similar to those already in the Study Area, and the family-orientation characteristic would probably be consistent with existing

Further, the project site itself has a mixed identity. Because of the valley's proximity to both Kaneohe and Kahaluu, Heeia Kea is aligned with both communities, depending on the various boundary designations. Whereas it shares the same City Council member as Kaneohe and Kahaluu, its residents vote with Kaneohe residents for its State House Representative, and with Kahaluu residents for its State Senator.

Although it shares much history with Kaneohe and the overall Heeia ahupua'a, it is outside of the Heeia CDP. The project site lies in the Kahaluu CDP and is in the jurisdiction of the Kahaluu Neighborhood Board.

Thus, in terms of community identity, some Kahaluu residents may feel that their rural identity would be threatened, even though the project site is abutted by single family residential development on the Kahaluu side and despite the distance between the project site and the actual agricultural activities.

Other Kahaluu residents, and most Kaneohe residents, may not feel this identity impact either because they are accustomed to this type of project, or because the project is a step in the direction they wish for Kahaluu.

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APPENDIX D

MARICULTURE FEASIBILITY STUDY

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SEPTEMBER 3, 1986

GRAY, HONG, AND ASSOCIATES 119 MERCHANT STREET, SUITE 607 HONOLULU, HAWAII 96813

ATTENTION : MR. DAVID B. BILLS PROJECT ENGINEER

SUBJECT: AQUACULTURE/MARICULTURE FEASIBILITY FOR LAND PARCEL AT HEEIA KEA, TAX MAP KEY 4-6-16-32, KOOLAUPOKO DISTRICT, ISLAND OF OAHU, STATE OF HAWAII.

# List of Exhibits and Tables

| EXHIBIT 1 | Assessment of Lands for Aquaculture                        |
|-----------|--|
| EXHIBIT 2 | Topographical Map - Locating Subject Parcel                |
| EXHIBIT 3 | Topographical Map - Soil-Slope Suitability for Mariculture |
| EXHIBIT 4 | Proposed DP Land Use Map                                   |
| EXHIBIT 5 | Agricultural Lands of Importance to the State of Hawaii    |
| EXHIBIT 6 | Soil Classifications                                       |
| EXHIBIT 7 | Rainfall, Solar Radiation Site Data                        |
| EXHIBIT 8 | Chemical Analyses of Water-supply Sources in Windward Oahu |
|           |  |

| IABLE I | Available Mariculture Land Based on Topography             |
|---------|--|
| TABLE 2 | Suitability of Soils in Subject Parcel for Mariculture Use |
| TABLE 3 | Potential Mariculture Acreage                              |

#### SCOPE OF REPORT

This report investigates the feasibility of aquaculture/mariculture on the approximately 219 acres of land constituting the subject parcel, owned by Hawaiian Electric Company, Inc. The land investigated is situated in Heeia Kea, directly mauka of Kamehameha Highway near Heeia Kea Small Boat Harbor.

Total potential mariculture land is calculated from topographic and soils characteristics of the site. Feasibility for potential mariculture acreage follows, based upon analysis of water supply and discharge constraints for the subject parcel. The potential of the project is put into perspective in a brief analysis of the criteria for and constraints to successful mariculture given current technology. A general evaluation is made for the project given historical and current economic realities of the mariculture industry in the State of Hawaii. Finally, based upon the above analysis, conclusions are presented regarding the economic soundness of mariculture activities on the subject parcel.

#### TOPOGRAPHY

Earthen pond construction costs become unreasonably high on slopes greater than or equal to 5 per cent. The State of Hawaii Department of Economic Development has assessed State lands for aquaculture suitability. 135,000 acres have been declared primary lands for aquaculture development and over 500,000 acres were assessed as secondary lands. The subject land parcel has been assessed as secondary land (Exhibit 1).

The property topography ranges from fairly level (makai) to gently sloping to steeply sloping upper portions (mauka) as shown in Exhibit 2. A detailed analysis of suitable lands for pond construction based on topographic characteristics of the site

shows approximately 30 of the 219 total acres to be on a slope suitable for mariculture development (Exhibit 3). The remaining 189 acres are considered too steep for economically justifiable pond development (Table 1). Mariculture ponds are generally 1 meter deep with 0.5 meter freeboard, have 2:1 - 3:1 sloped dikes, and 0.5 to 2.0 acres in water area. Ponds are built with adjacent units sharing a common levee to save on construction adjacent units sharing a common levee to save on construction costs. Each pond must have a separate water inlet and outlet.

#### SOILS

The Hawaii State Department of Agriculture ratings under the ALISH System (Agricultural Lands of Importance to the State of Hawaii) classifies about 46 acres of land in the central part of the property as Other Important Agriculture Land (Exhibit 5).

While pond/mariculture soil productivity considerations differ from agricultural ones, there are some areas of correlation. Major differences between soil needs for mariculture and agriculture lie in soil structure. Soil fertility needs are more similar for the two food production systems and often prime soils for agriculture are most suitable for aquaculture.

The subject land parcel contains six subseries of soils as classified by the U.S.D.A. Soil Conservation Service (SCS) as shown in Exhibit 6. Descriptions of these soils are as follows.

Ewa Silty Clay Loam, Moderately Shallow, 0 to 2 Percent Slopes (EmA)

This subseries of the Ewa series is located in a narrow strip of land bordering Kamehameha Highway on the Kaneohe (east) side of the property. The topsoil consists of dark reddish-brown silty clay loam about 18 inches thick. The subsoil is dark reddish-brown and dark red silty clay loam, with a subangular blocky structure, moderately shallow and varying in depth. The substratum consists of coral limestone at a depth below the surface of 20 to 50 inches. Both the topsoil and subsoil have a pH of neutral.

## Mokuleia Clay Loam (Mt)

This subseries of the Mokuleia series occupies a narrow strip of land bordering the mauka side of the highway on the Kahuku (west) side of the property. The topsoil consists of a very dark grayish-brown loam about 16 inches thick. The subsoil is a dark brown to light gray single grain or loamy sand of 34 to 48 inches in depth. The topsoil is neutral and the subsoil is moderately alkaline.

# Kokokahi clay, 6 to 12 Percent slopes (KtC)

A small pocket of this subseries of the Kokokahi series is located along the highway in the extreme makai-Kahuku corner of the project. The topsoil consists of very dark gray and dark gray clay about 14 inches thick. The subsoil is a dark grayish brown clay with a subangular blocky structure and is about 12 inches thick. The substratum is a grayish-brown and light inches thick. The substratum is a grayish-brown and light brownish-gray clay, 14 to 20 inches thick. The topsoil is slightly acid to neutral and the subsoil and substratum are slightly acid to mildly alkaline. The soil has a high shrink slightly acid to mildly alkaline. The soil has a high shrink swell potential. Workability is difficult because of the sticky, plastic nature of the clay and because of the resulting narrow range of moisture content.

# Alaeloa Silty Clay, 15 to 35 Percent Slopes (AeE)

This subseries of the Alaeloa series is located mostly in the makai section of the area zoned Conservation. The topsoil consists of dark reddish-brown silty clay about 10 inches thick. The subsoil is dark red and red silty clay with a subangular blocky structure and about 48 inches thick. The substratum is soft, weathered basic igneous rock. The topsoil is medium acid and the subsoil is strongly acid.

# Alaeloa Silty Clay, 40 to 70 Percent Slopes (ALF)

This subseries is located entirely on land zoned as Conservation on the upper slopes of the project. This soil is the same as Alaeloa silty clay soil of the lesser slope, except that run-off is rapid to very rapid and the erosion hazard is severe.

### Lahaina Silty Clay, 7 to 15 Percent Slope (LaC)

This subseries of the Lahaina series occupies the area extending mauka from the highway on the Kaneohe side and from the strips of land designated EmA at the central-makai border and Mt at the makai-Kahuku border. The topsoil consists of dark reddish brown silty clay about 15 inches thick. The subsoil is a dusky red and dark reddish brown, subangular blocky silty clay and silty clay loam about 45 inches thick. The substratum is soft, weathered basic igneous rock. The topsoil is medium acid and the subsoil is slightly acid to medium acid. This subseries includes some steep areas and areas with a few stones on the surface.

The minimum soil requirements for mariculture are (1) compactibility of the topsoil to prevent undue amounts of seepage (2) topsoil depth sufficient to prevent leakage of pond water (one meter depth) into permeable subsoil and (3) workability during pond construction. Only the part on the parcel classified Lahaina Silty Clay (LaC) meets all of the above requirements (Table 2). Preferable soil pH for mariculture use would be slightly alkaline to neutral, however production is feasible in this soil type.

#### POTENTIAL MARICULTURE ACREAGE

Possible mariculture acreage for the subject parcel is limited to the 30 acres of fairly level or gently sloping land out-lined in Exhibit 3 which lies within the LaC soil classification. Table 3 outlines total land available meeting criteria for both topography and soil type.

#### **GEOLOGY**

A generalized geologic map (Geological Survey water-supply paper 1894, Plate 1) of Windward Oahu shows that the subject parcel consists of Alluvium at the lower elevations and Honolulu Volcanic Series at the higher elevations. Lava flows of the Honolulu Volcanic Series are generally not very permeable and wells there have low to moderate yields. The Alluvium is composed of silt and clay, lesser amounts of sand and gravel, and some gravel and cobbles. Young Alluvium is generally more permeable than the near-surface older Alluvium. Yields of wells in Windward Oahu in Alluvium are generally low.

#### WATER RESOURCES

The most reliable source of ground water is the high-level water in the basaltic lava flows. High level ground water maintains the base flows of streams, water development tunnels and pumped wells. Slightly more than half the total base flow enters streams as diffused ground water effluent between altitudes of 225 and 150 feet. The most favorable area for ground water development is above an altitude of 200 feet in the major stream valleys. Water above an altitude of 500 feet is diverted by tunnels. Numerous streams drain into Kaneohe Bay relatively near the subject parcel. The Kahaluu, Ahuimanu and Waihee streams are closest to the subject parcel. The total long-term average discharge of the Kahaluu stream at its confluence with the Ahuimanu stream is 5.4 million gallons per day (mgd), and a flow (Q90) of 3.3 mgd is equaled or exceeded 90 per cent of the time. Below the confluence, the combined long-term average discharge is 9.5 mgd and the Q90 is 4.2 mgd. The Waihee stream flows northeastward and joins the Kahaluu stream after losing much of its flow to the Higa ditch. The streams are short and have steep gradients. The annual maximum discharge generally occurs in the cooler months from October through April. The minimum mean weekly rainfall around the subject parcel is about 1 inch (Exhibit 7).

#### WATER QUALITY

Contamination of freshwater by underlying sea water often occurs in the coastal area of Windward Oahu. Chemical analyses of water supply sources in Windward Oahu is shown in Exhibit 8 (Geological Survey water-supply paper 1894, Table 11). The pH generally ranges from 7 to 8. Ground water temperatures ranges from 65 F to 79 F in individual wells. Water from basaltic aquifers ranges in temperature from 65 F to 73 F, depending on altitude and climate. Water from limestone aquifers ranges from in temperature from 77 to 79 F, depending on ocean temperature, climate, and the amount and temperature of irrigation water recharging the aquifer.

#### WATER SUPPPLY FOR AQUACULTURE

Water supply is one of the more important factors in the selection of a site for an aquaculture facility. The following characteristics of the water supply are desirable:

- 1. Constant flow with minimal fluctuation.
- High dissolved oxygen concentration.
- 3. No chemical or organic contamination.
- 4. Acceptable pH range.
- 5. Low siltation levels.
- 6. Does not contain predators or disease agents.
- Acceptable temperature range.

### WATER QUANTITY REQUIREMENTS

An area of less than 12 acres has been estimated to be feasible for aquaculture. Fresh water prawn is the major commercial high market value aquaculture product in Hawaii. Water requirements for freshwater prawn culture on a daily basis is about 25 gallons per minute per acre or 36,000 gallons per acre per day. A 12-acre freshwater prawn nursery and grow-out facility would require 432,000 gallons of water per day. In addition to the daily requirements, about 800 gallons per minute (gpm) should be available for filling up an acre pond with an average depth of 3.5 feet in 24 hours. The water supply for freshwater prawn culture should have a capacity of 1,100 gpm.

Shrimp is a promising aquaculture product in Hawaii. Shrimp grows well in water with salinity close to that of seawater. Freshwater is also required to prevent salinity fluctuations due to evaporation and seepage. The common water exchange rate used in intensive shrimp ponds is 20 percent of the pond volume per day. This would translate to a 160 gpm saltwater flushing rate for an acre pond or 1,920 gpm for a 12-acre farm. Evaporation

and seepage rates can be as high as 2.5 cm or 27,156 gallons per acre per day. To maintain the optimal salinity for growth, freshwater would need to be added to the ponds at a rate of 18 gpm. A 12-acre shrimp farm would thus require around 216 gpm of freshwater. In addition, about 800 gpm saltwater is required to fill up an acre pond in 24 hours. The total saltwater pumping capacity required for an intensive shrimp farm would thus be 2,720 gpm.

#### FEASIBILITY OF DEVELOPING WATER SOURCE AND WATER DISCHARGE

Alluvium has limited importance as a source of freshwater and the development of freshwater wells where ponds can be located do not appear feasible. The streams could be a source of freshwater but are not located close enough to the parcel suitable for aquaculture. Tapping the streams and conveying the water to the parcel would be costly and technically involved because of the gradients. Alternatively, the freshwater could be obtained from municipal supplies. The agricultural rates for freshwater are \$0.84 per 1,000 gallons for the first 13,000 gallons and \$0.69 per 1,000 gallons thereafter, per month. Based on the daily 12-acre freshwater prawn farm water requirements of 432,000 gallons, the average monthly cost for water would be about \$8945. This cost would be prohibitive for profitable operation.

Rock formations which contain ground water of high salinity near shore are basaltic lava flows and coralline limestone. An Oahu geologic map (Geologival Survey water-supply paper 1894, Plate 1) indicates that such rock formations are not present in the subject parcel and it is doubtful if substantial seawater wells can be developed at ail.

Even if seawater wells could be developed, disposal of pond effluents would present problems. Ocean disposal is costly because of the need for multi-stage treatment plants and ocean outfalls to meet water quality standards of the receiving waters. The success of on-site disposal using subsurface injection wells depends on the geologic and hydrologic environments. Sub-surface disposal in low-lying areas and the coastal plain will likely lead to contamination of beaches and near-shore areas. Wastes injected into ground water bodies near the coast are likely to spread laterally and eventually discharge at the coast. This is

because ground water bodies near the coast are usually of small volume and thickness. Alluvium also has disadvantageous characteristics for sub-surface injection of waste water. Alluvium has limited distribution, quickly drains after rains and presents high danger of pollution to any underlying water bodies. Stream channels have also cut into Alluvium of low permeability, allowing discharge from the underlying confined ground water. Under such hydraulic conditions, wastes injected into the sub-surface will presumably be discharged as effluent flow in nearby stream channels which eventually drains into the ocean. Waste discharged into the stream channel will not infiltrate into the sub-surface.

#### HAWAIIAN AQUACULTURE IN PERSPECTIVE

#### OPPORTUNITIES AND CONSTRAINTS

On a worldwide basis, aquaculture continues to grow annually in economic importance, particularly in the third world. Most of the production requires significant amounts of land, feed, seedstock, quality water, and labor. Within the U.S., trout and catfish farming have grown into stable industries with the assistance of decades of public and private funding and development work. Outside of these two industries, U.S. researchers and farmers have demonstrated the technical possibility of producing many other species. Yet there is a long road between early production demonstration and eventual economic success for a new species of farm animal. It is costly, time consuming, and fairly risky process that continues to spark the imagination and entrepreneurial spirit of individuals as well as the creativity of aquatic research groups. Marine shrimp is currently drawing most popular attention and probably will continue to do so for a number of years. The production requirements, especially the need for warm water, make profitable farming (shrimp in particular) possible and challenging, yet difficult.

Hawaii is in an enviable environment for aquacultural development. The islands offer the best year-round growing temperatures in the U.S. They also have unsurpassed ocean water quality, a large group of careful and capable production technicians, and a unique local seafood market. Directly marketing fresh product to ethnic groups sophisticated in seafood demand can yielā high revenues to aquafarmers.

On the other hand, there are constraints to the development of commercial aquaculture in Hawaii. High land costs, competing interests for coastal resources, and permitting obstacles make interests for coastal resources, and permitting obstacles make farm site aquisition difficult and expensive. Farm operation costs are also above those on the mainland. Most feedstuffs are imported at significant expense, and labor costs are high. Because there is little room to cut costs, financial viability Because there is little room to cut costs, financial viability will come basically through intensification of production. Will come basically through intensification of production on the cutting edge of a new industry.

# BASIC CRITERIA FOR SUCCESSFUL MARICULTURE IN HAWAII

The following criteria are based on the historical failure/success rate of aquaculture in the state and the island's economic environment. Mariculture holds potential to contribute to diversification of the state's economic base. Failure to adhere to these criteria have led to several farm closures.

- Base economic projections on existing technology, not overly optimistic levels of production.
- Work with fairly intensive systems (high yields per unit area).
- 3. Produce high market value products (like prawn and shrimp).
- Locate project in areas requiring least development costs possible.
- 5. Base site selection decisions on highly favorable ecological factors for productivity.
- Avoid management top-heavy organization, wasteful operation and research costs.

#### PROJECT ECONOMICS

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For the purpose of putting potential mariculture use of the subject land in economic perspective the following basic assumptions and costs are provided. Detailed analysis is far beyond the scope of this report. Shrimp culture would almost certainly be the species of choice for a brackishwater system on the given site. Fairly intensive levels of production would be necessary on a project of 10 acres. Only the capital costs and operating expenses of major importance are outlined. Figures are provided to be only realistic estimates of actual costs. No attempt is made to determine cost of obtaining permits or development of water supply and discharge system. The feasibility of these systems is questionable and cost determination would be a major study in itself.

#### CAPITAL COST OUTLINE

| Pond construction (ll acres) with access road, drainage, pipes @ \$10,000/acre Hatchery Building Pond equipment Hatchery equipment Truck Electrical system (for aeration system) | \$110,000<br>\$30,000<br>\$40,000<br>\$15,000<br>\$ 7,000<br>\$10,000 |
|--|---|
| Subtotal   | \$212,000   |
| Water development costs<br>Permitting costs<br>Land costs  | not determined<br>unknown<br>not determined                           |
| Operations Costs (Annual, first full production  | year)   |
| Seedstock<br>Feed<br>Utilities   | \$30,000<br>\$67,500<br>\$15,000                                      |

| Labor/management<br>Estimated depreciation | \$15,000<br>\$81,000<br>\$14,000 |
|--|----------------------------------|
| TOTAL *                                    | \$207,500                        |

\* No accounting of loan interest payments

#### PRODUCTION

Three crops per pond per year of <u>Penaeus vannamei</u> (white shrimp), harvest size of 30-35 count. The expected yield per acre per crop is 3,000\* pounds. Thus the annual yield from 10 acres of grow-out ponds would be 58,500 pounds of tails.

The break even price would be \$3.55 per pound.

\* These yields are theoretically possible. They are however, approximately twice the level that a start-up venture would probably achieve in its first operating years.

#### CONCLUSIONS

The greater part of the subject parcel is not suitable for aquaculture or mariculture based on topographic and soil criteria. Approximately 11 acres of productive water surface acres are possible within the parcel.

The greatest constraint for development of aquaculture on the ll possible acres is the lack of evidence of a freshwater supply. Freshwater aquaculture is basically eliminated as a possible option if agricultural water rates must be paid. This is even a serious constraint to mariculture development on the parcel as significant quantities of freshwater are required to avoid hypersalinity due to evaporation and seepage.

Geologic maps indicate that it would be difficult to obtain brackish ground water in the quantities required for intensive mariculture. Direct pumping from Kaneohe Bay presents costly engineering considerations due to the extensive, shallow reef area along the site.

There are serious problems with the site in regards to water discharge from the farm. Mariculture effluents are very turbid and carry high nutrient levels. It is difficult to assume permit approval for discharge into Class AA waters of Kaneohe Bay. The discharge alternative is an injection well. Based on the geology of the project parcel, an injection well does not appear feasible.

Economically, the project suffers the inability to expand to a more efficient economy of scale. A breakeven price of \$3.55 per pound was calculated at high production levels unlikely to be achieved by a start-up organization. Interest, water development and permit costs were not considered.

Intensive shrimp culture is a relatively new agricultural industry. The industry reputation has suffered from the failure of operations which were poorly situated. Many mariculture ventures have difficult times even when sited in optimal locations which do not carry high development costs.

In summary, the foregoing analysis indicates that, based on technological and economic considerations neither aquaculture nor mariculture are appropriate potential uses for land in the project area.

TABLE 1 : Available mariculture land based on topography (see Exhibits 3 and 4)

| Land Classification  | Acreage for mariculture                       | Steep acreage<br>(5 % slope or<br>greater)           |
|--|---|--|
| Preservation Proposed Existing Agriculture Proposed Residential Existing Residential Proposed Park Proposed L.D. APT. Proposed Commercial Proposed Industrial Totals | 0<br>0<br>18.5<br>7.0<br>3.5<br>0<br>1.0<br>0 | 117.0<br>33.5<br>35.0<br>0.5<br>0<br>2.0<br>0<br>1.0 |

TABLE 2 : Suitability of Soils in Subject Parcel for Mariculture Use

| Soil Class | Suitability | Reason   |
|------------|-------------|--|
| EmA        | No          | Coral limestone at 20 - 50 inches.<br>Unacceptable water loss from pond.         |
| Mt         | No          | Loamy sand at 16 inches . High per-<br>meability.                                |
| KtC        | No          | High shrink-swell, unworkability.<br>Excessive dike cracking upon pond<br>drain. |
| AeE        | No          | Slope, strongly acid at 10 inches.   |
| AeF        | No          | Entire area in 40-70 % slope.  |
| LaC        | Yes         | Meets minimum criteria.  |

# TABLE 3 : Potential Mariculture Acreage.

| Soil Type of Land meeting<br>Topographic requirements | Approximate number of Acres.* |
|---|-------------------------------|
| KtC<br>Mt<br>EmA<br>LaC                               | 1<br>2<br>10<br>17            |
| TOTAL   | 30                            |

# \* From Exhibits 3 and 6

Total acreage meeting basic mariculture requirements is 17

34 per cent of land area is required for roads, land, levees, water supply and drainage.

Total productive acreage available is 11

Approximate ratio of nursing ponds to production ponds is 1:10 Approximate total mariculture potantial:

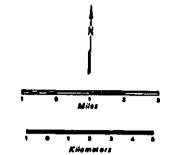
l acre nursing ponds (for rearing post-larval animals to juvenile stocking size).

10 acres of production ponds

Nursery pond size : 0.25 acre. Production pond size : 1.0 acre.

Total pond units:
4 nursery ponds @ 0.25 acre.
10 production ponds @ 1.0 acre.

# ASSESSMENT OF LANDS FOR AQUACULTURE



Broduced &

Hawaii Aquaculture Planning Program

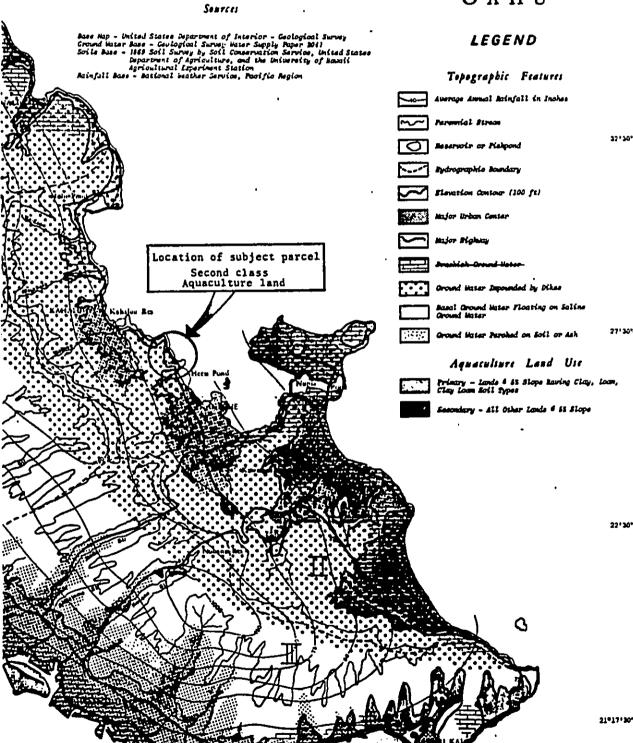
Center for Science Policy and Technology Assessment

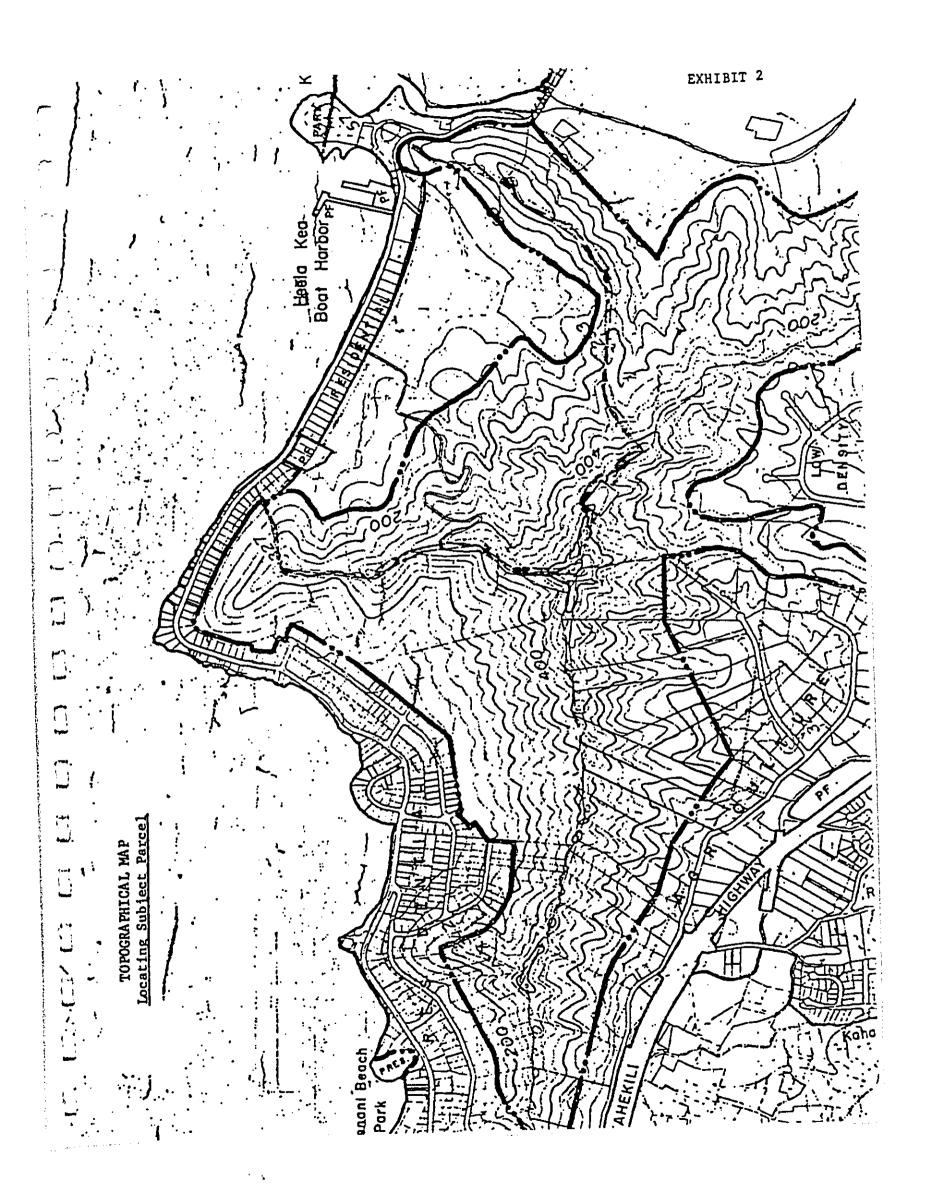
Department of Planning and Economic Development

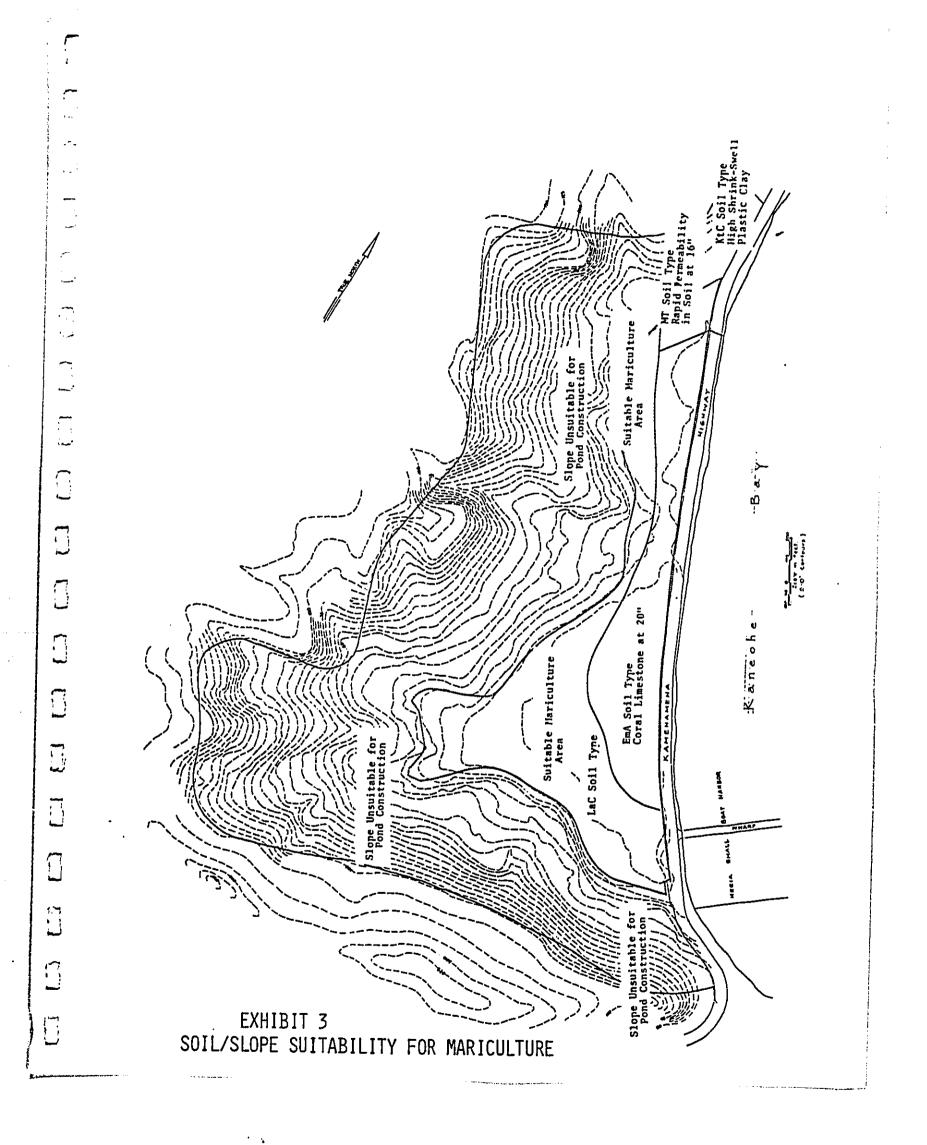
State of Hawaii 1978

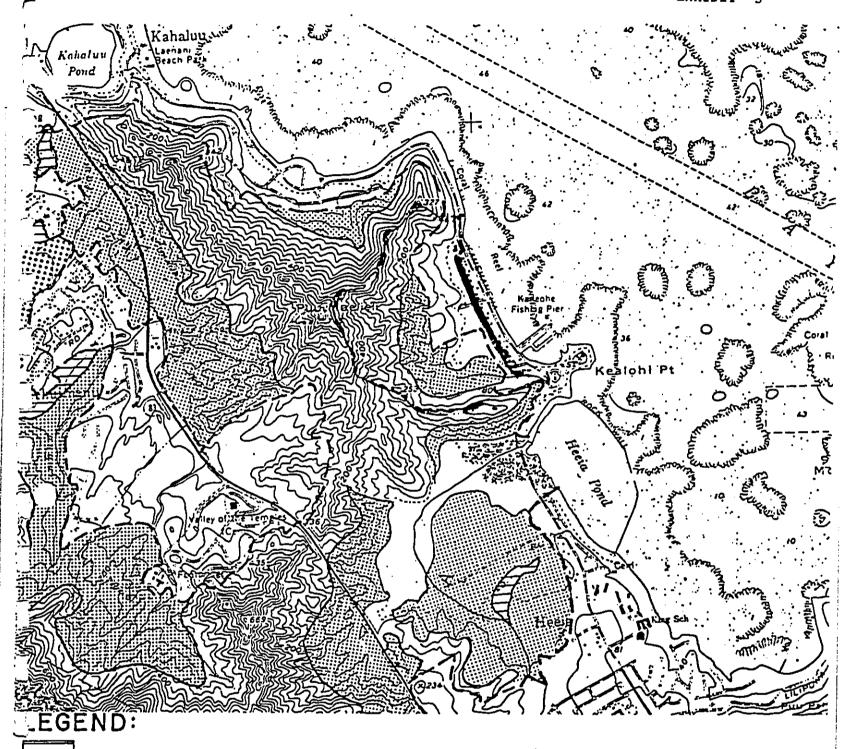
37130

OAHU









PRIME AGRICULTURAL LAND - Land which has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed according to modern forming methods.

UNIQUE AGRICULTURAL LAND - Land that has the special combination of soil quality, location, growing season, moisture supply, and is used to produce sustained high quality and or high yields of a specific crop when treated and managed according to modern farming methods.

OTHER IMPORTANT AGRICULTURAL LAND - Land other than Prime or Unique Agricultural Land that is also of state-wide or local importance for agricultural use.

EXISTING URBAN DEVELOPMENT - Land which has been developed for orban type use.

U.S. GOYERNMENT - Land which is currently under the jurisdiction of the U.S. Government.

Ratings of Lands at Heeia-Kea, Tax Map Key 4-16-16-32, Under Agricultural Lands of Importance to the State of Hawaii, Department of Agriculture, State of Hawaii, 1977.

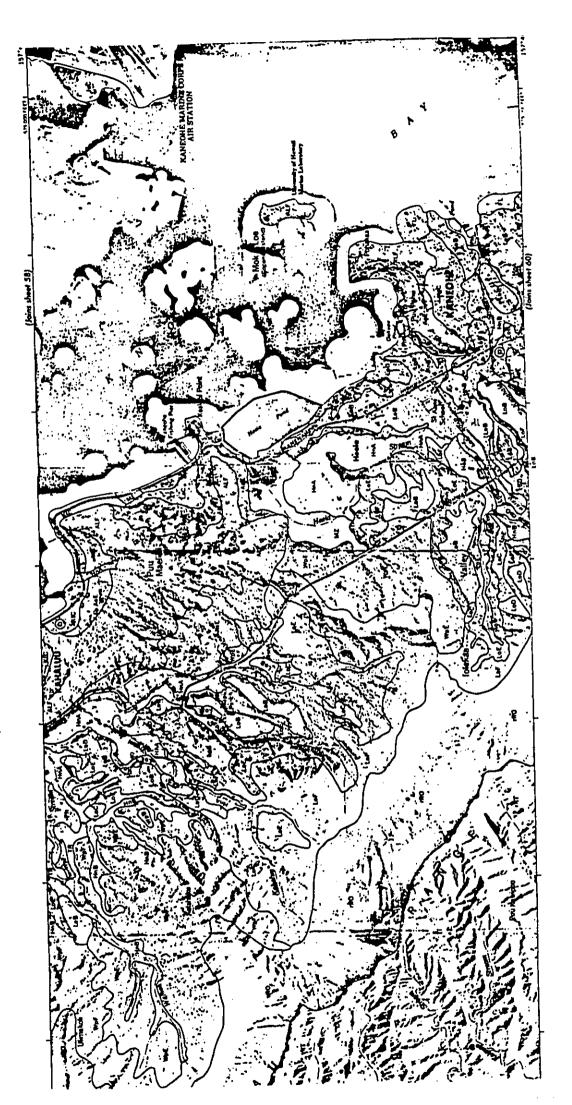
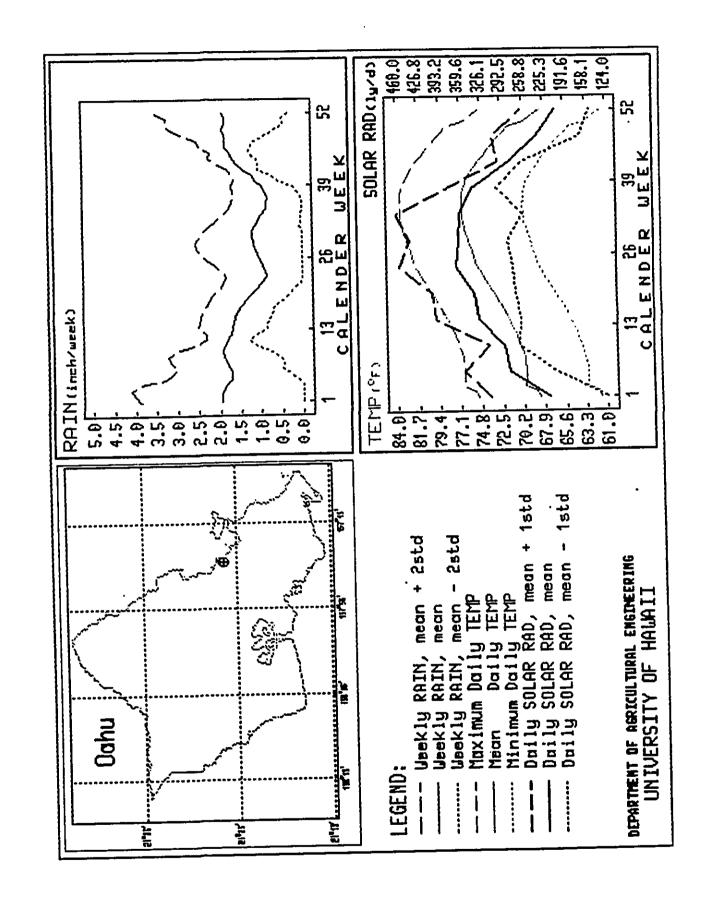


EXHIBIT 6



| -               | 52 ·  | WATER RE  | SOURCES OF WINDWARD OAHU, HAWAII  |
|-----------------|---|---|---|
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|                 |   | Hard-<br>ness as<br>CaCO <sub>3</sub>   | 74.4<br>121.1<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>125.0<br>1 |
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| 7               | TABLE 11.—Chemical analyses of water-supply sources in windward Oahu (Constituents in parts per million. Analytical data by Hawall State Dept. of Hentih except as noted) | Bodium<br>plus po-<br>tassium<br>(Na + K)   | 22.00.00  |
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|                 |   | Date  | June 1825  Oct., 1823  June 1840  Sept., 1854  June 1860  June 1860  June 1855  June 1855  Aug., 1855  Aug., 1855  Aug., 1855  Aug., 1855  June, 1855   |
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Source: Takasaki, K.J., Hirashima, G.T. and Lubke, E.R., 1969. Water Resources of Windward Oahu, Hawaii. U.S. Government Printing Office, Wa., 119pp.

# APPENDIX E SUPPLEMENTAL EIS PREPARATION NOTICE

#### PREPARATION NOTICE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR HEE IA KEA VALLEY

APPROVING AUTHORITY :

City and County of Honolulu

FOR PROPOSED ACTION

City Council

EIS ACCEPTING AGENCIES

City and County of Honolulu

Department of Land Utilization and Department of General Planning

APPLICANT

Malama-Gentry Joint Venture

EIS PREPARATION

Gray, Hong & Associates, Inc.

PROJECT LOCATION

Heeia Kea mauka of Kamehameha Highway near the Heeia Kea Small Boat Harbor, Heeia, Koolaupoko District,

Island of Oahu, State of Hawaii.

TAX MAP KEYS

4-6-06: 1, 2, 4, 7 through 16 and 22 through 51

4-6-16: 32

REQUEST

Amendment to the Koolaupoko Development Plan (DP)

Land Use Map

### DESCRIPTION OF MODIFICATIONS TO THE PROPOSED ACTION

An Environmental Impact Statement for Heeia Kea Subdivision was accepted by the Department of Land Utilization in 1983. The Environmental Impact Statement was prepared in conjunction with a Special Management Permit Application. The document was also prepared pursuant to Chapter 343, Hawaii Revised Statutes, under the premise that the document could be utilized in conjunction with future governmental approvals.

A Development Plan (DP) Land Use Map amendment has been submitted to the Department of General Planning. The proposed and existing Development Plan Land Use Maps are shown on Figures 1 and 2. The requested changes to the map are identified below:

| Existing<br>Designation  | Proposed<br>Designation  | Unchanged<br>Acreage | Acreage to<br>be Amended                                   |
|--|--|----------------------|--|
| Preservation Agricultural Agricultural Agricultural Agricultural Agricultural Agricultural Residential Residential Residential Residential Public Facility | No Change No Change Residential Low Den. Apt. Commercial Industrial Park No Change Commercial Industrial Park Residential Park | 117<br>33.5          | 45<br>2.5<br>0.2<br>2.5<br>1.3<br>0.8<br>1.5<br>3.7<br>2.8 |
| Public Facility  | Idla   | <del></del>          |  |
| TOTALS   |  | 158.5                | 60.5   |

The following table summarizes land use which will exist in Heeia Kes Valley should the proposed amendment be adopted as compared to the Land Use identified in the previous action.

TABLE 1 COMPARISON OF LAND USE

|   | Resulting From<br>Current Action        |                   | Resulting From<br>1983 Action         |                       |
|---|---|-------------------|---------------------------------------|-----------------------|
| Land<br>Use   | Acres                                   | Proposed<br>Units | Acres                                 | Proposed<br>Unit      |
| New Residential Existing Residential Low Density Apt. Commercial Industrial Park Site | 47.8<br>8.0<br>2.5<br>1.0<br>4.0<br>5.2 | 310<br>50<br><br> | 82.2<br>14.3<br><br>2.0<br><u>3.5</u> | 389<br>29<br><br><br> |
| Subtotal  | 68.5                                    | 360               | 102                                   | 418                   |
| Agricultural<br>Preservation  | 33.5<br>117                             | =                 | 116.1                                 |                       |
| TOTAL   | 219.0                                   | 360               | 218.1                                 | 418                   |

The developed areas of the proposed action includes 68.5 acres as compared to 102 acres which was proposed under the previous action. The total number of residential units currently under consideration is 360 as compared to 418 units of the previous action.

Technical characteristics of the proposed development scheme include grading, roadway improvements, drainage improvements, water system improvements, sanitary/sewer system improvements, electrical and telephone improvements and landscaping. The technical description of all on-site improvements are identical and have similar or reduced magnitude to that described in the 1983 Environmental Impact Statement. However, a Supplemental Environmental Impact Statement will discuss off-site sewer improvements and in particular, an off-site sewage pump station which will be oversized to accommodate demands in excess of that required specifically to serve the Heeia Kes project ares. It is proposed to install a pump station in the vicinity of the Long Bridge which will serve the Heeia Kea area as well as replace the existing Alii Bluffs sewage pump station.

## II. SUMMARY OF IMPACTS AND MITIGATION MEASURES

The impacts associated with the proposed action include all impacts discussed in the 1983 Environmental Impact Statement. The differences in impacts between the proposed action and that which was previously proposed are as follows:

#### Traffic 1.

The traffic patterns within Windward Oahu as well as on trans-Koolau corridor require review based on increased population and based on the possibility of improvements to the trans-Koolau system other than the H-3 freeway system.

#### 2. Social Impacts

The general public and community perception of the proposed action may differ from the previously proposed action. Therefore, it is proposed to reanalyze the social implications of the proposed project. The analysis will take into consideration the impact of the project on various segments of the community.

#### III. ALTERNATIVES

The previously accepted Environmental Impact Statement identified the alternatives of no action, agricultural development, reduced density development and alternative type housing. Alternative type housing was described as cluster-type housing as compared to conventional residential lots. The discussion of all alternatives presented in the previously accepted Environmental Impact Statement are still applicable. A Supplemental Environmental Impact Statement will include discussion of new alteratives including mariculture as well as Country Zoning as defined by the proposed Land Use Ordinance.

#### IV. DETERMINATION AND RATIONALE

A Supplemental Environmental Impact Statement is warranted when any of the following conditions prevail:

- 1. The scope of an action has been substantially increased.
- 2. The intensity of the environmental impacts will be increased.
- 3. Mitigating measures originally planned are not to be implemented.
- 4. New circumstances or evidence has brought to light different or increased impacts.

The development proposal currently under consideration has, for all practical purposes, the same or reduced scope as that discussed in the

previously accepted Environmental Impact Statement. However, the proposed project incorporates low density apartment areas and commercial space which were not a part of the previously proposed action and for that reason additional review of the site layout will be provided in a Supplemental Environmental Impact Statement.

The impacts of the originally proposed action are applicable to the action currently under consideration. However, the Supplemental Impact Statement will address traffic impacts and social impacts since the intensity of these impacts may differ from that original action.

The mitigation measures planned as a part of the original action are also applicable for the currently proposed action. However, mitigation measures with respect to traffic and in particular regional traffic, will be discussed in the Supplement Statement due to the fact that other trans-Koolau highway improvements may provide new mitigation measures.

### V. AGENCIES AND ORGANIZATIONS INVOLVED IN THE CONSULTATION PERIOD

The following list identifies agencies and organizations which will be notified during the consultation period. The list includes all parties involved in the consultation and review process for the previous action. The following listing is not intended to limit consultation and will be expanded upon notification or request.

The Draft Supplemental Environmental Impact Statement will focus on the issues stated in this preparation notice as well as on issues identified during the consultation period which meet the criteria as identified in Section IV for inclusion in a Supplemental Environmental Impact Statement.

### AGENCIES AND ORGANIZATIONS INVOLVED IN THE CONSULTATION PERIOD

#### City

**Building Department** Honolulu Fire Department Department of General Planning Department of Parks and Recreation Board of Water Supply Police Department Department of Public Works Department of Transportation Services Department of Land Utilization Department of Housing and Community Development Department of Health

#### <u>State</u>

Department of Education Department of Transportation Department of Planning and Economic Development Department of Land and Natural Resources Department of Health Office of Environmental Quality Control Department of Agriculture Department of Hawaiian Home Lands Department of Social Services and Housing, Hawaii Housing Authority State of Hawaii, State Main Library State of Hawaii, Kaneohe Regional Library Environmental Center, University of Hawaii Water Resources Research Center, University of Hawaii

#### <u>Federal</u>

Department of the Army, Corps of Engineers U. S. Department of the Interior, Fish and Wildlife Service U. S. Department of Agriculture, Soil Conservation Service

U. S. Department of Defense, U. S. Marine Corps

#### Other

Citizens Against Noise Life of the Land Kaneohe Outdoor Circle American Lung Association of Hawaii Kahaluu Neighborhood Board No. 29 Kaneohe Neighborhood Board No. 30 Kaneohe Community Council Kaneohe Business Group Kaneohe Bay Community Association Hui Malama Aina O' Koolau

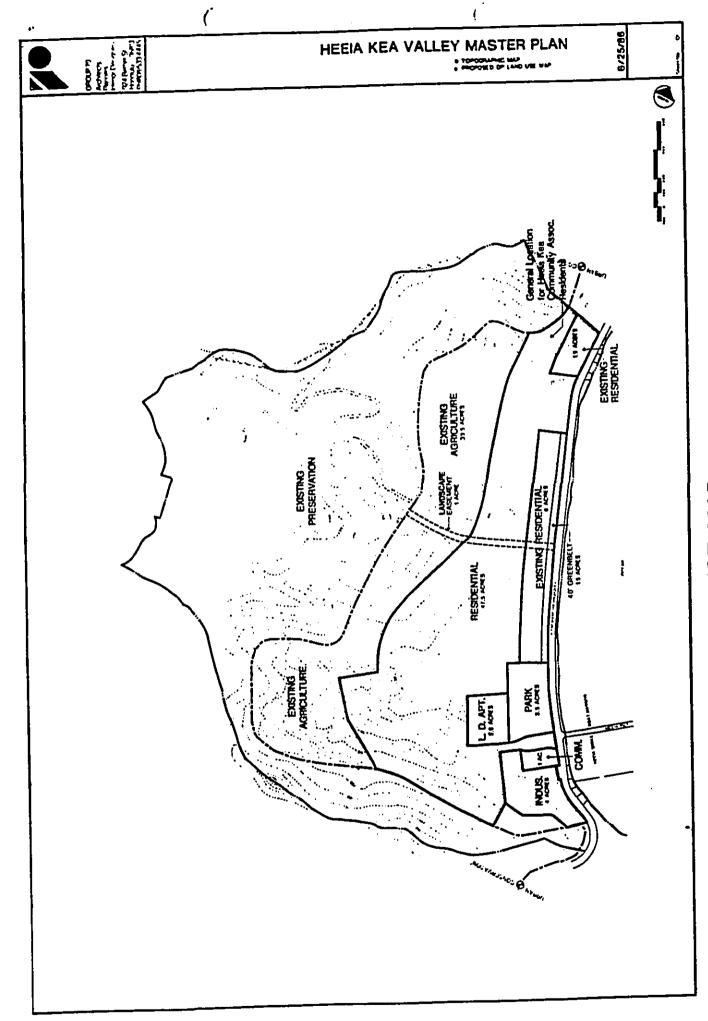


FIGURE 1 PROPOSED DP LAND USE MAP

