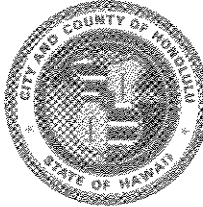


DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



RECEIVED

91 MAY 17 P3:51

BENJAMIN B. LEE
CHIEF PLANNING OFFICER
ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER

May 15, 1991

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

VW 5/91-1676

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

Dear Mr. Choy:

Acceptance Notice for the Proposed
Hale O Malia, Waialae-Kahala
Folder No. 91/EH-1
Final Environmental Impact Statement (Final EIS)

We are notifying you of our acceptance of the Final EIS for the proposed Hale O Malia project, as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes.

Pursuant to Section 11-200-23 (c), Chapter 200, Title 11 ("Environmental Impact Statement Rules") of the Administrative Rules, this acceptance notice should be published in the May 23, 1991 OEQC Bulletin.

We have attached our Acceptance Report of the Final EIS for the Hale O Malia. Should you have any questions, please contact Verne Winqvist at 527-6044.

Sincerely,

A handwritten signature in cursive script, appearing to read "Benjamin B. Lee".

BENJAMIN B. LEE
Chief Planning Officer

BBL:ft

Attachment

cc: Lacayo Planning, Inc.
Episcopal Homes of Hawaii, Inc.

1991 - Oahu - FEIS - Hale Malia

FILE COPY

**FINAL
ENVIRONMENTAL IMPACT STATEMENT**

Hale Malia

AT WAIALAE-KAHALA

A LIFECARE COMMUNITY

MAY 1991

**FINAL
ENVIRONMENTAL IMPACT STATEMENT**

Hale Malia

AT WAIALAE-KAHALA

**Submitted Pursuant to Chapter 343,
Hawaii Revised Statutes,
Environmental Impact Statement Regulations**

Prepared for Episcopal Homes of Hawaii, Inc.

by Lacayo Planning, Inc.

John P. Whalen

John P. Whalen, President

May 1991

Table of Contents

SUMMARY 1

- DEVELOPMENT PROFILE..... 1
- PURPOSE OF EIS..... 2
- NEED FOR EIS 2
- DEVELOPMENT PERSPECTIVE..... 3
- BENEFICIAL IMPACTS..... 3
- ADVERSE IMPACTS..... 4
- ALTERNATIVES CONSIDERED 5
- UNRESOLVED ISSUES..... 5
- COMPATIBILITY WITH LAND USE PLANS AND POLICIES 6
- NECESSARY PERMITS AND APPROVALS 6

1. PROJECT DESCRIPTION..... 7

- A. LOCATION AND SIZE 7
- B. EXISTING USE..... 7
- C. SURROUNDING USES 7
- D. PROJECT PROPOSAL..... 7
- E. DEVELOPMENT SCHEDULE 11
- F. ESTIMATED COSTS..... 12
- G. CHANGES IN LAND USE DESIGNATIONS REQUIRED TO IMPLEMENT THE PROJECT..... 12

2. ALTERNATIVES TO THE PROPOSED ACTION..... 13

- A. NO ACTION ALTERNATIVE 13
- B. LAND USE VARIATIONS..... 14
- C. LAND USE/ZONE CHANGES..... 14

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

3.	PHYSICAL ENVIRONMENT	16
	A. TOPOGRAPHY/SLOPE.....	16
	B. SOILS.....	16
	C. FLOOD CONDITIONS.....	17
	D. FLORA AND FAUNA	17
	E. ARCHAEOLOGICAL.....	17
	F. AIR QUALITY	17
	G. NOISE.....	18
	H. VIEW ASSESSMENT.....	19
4.	SOCIO-ECONOMIC CONDITIONS.....	23
	A. CHARACTER OR CULTURE OF THE NEIGHBORHOOD.....	23
	B. DISPLACEMENT	23
	C. EMPLOYMENT	25
	D. GOVERNMENT REVENUES	25
	E. HOUSING IMPACTS.....	25
5.	PUBLIC FACILITIES AND SERVICES.....	26
	A. TRANSPORTATION.....	26
	B. WATER.....	27
	C. WASTEWATER DISPOSAL.....	27
	D. DRAINAGE.....	27
	E. PARKS AND SCHOOLS.....	28
	F. UTILITIES.....	28
	G. POLICE.....	29
	H. FIRE SERVICES	29
6.	RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS	30
	A. Federal.....	30
	B. State.....	30

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

1.	State Land Use District	30
2.	The Hawaii State Plan and Functional Plans.....	30
C.	City and County of Honolulu	32
1.	General Plan (GP).....	32
2.	Development Plan (DP) Common Provisions and Special Provisions.....	34
3.	Zoning: Land Use Ordinance (LUO).....	39
7.	RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	40
8.	IRRETRIEVABLE AND IRREVERSIBLE COMMITMENTS OF RESOURCES.....	41
9.	CONSULTED PARTIES AND PARTICIPANTS IN THE DEIS PREPARATION PROCESS	42
A.	Consulted Parties.....	42
B.	Participants.....	43
C.	Comment Letters.....	45
10.	COMMENTS AND RESPONSES ON THE DRAFT EIS.....	56

APPENDIX A:	Archaeological Impact Assessment Archaeological Consultants of Hawaii, Inc.
APPENDIX B:	Air Quality Impact Assessment B.D. Neal & Associates
APPENDIX C:	Noise Impact Assessment Darby & Associates
APPENDIX D:	Traffic Impact Assessment Parsons, Brinckerhoff, Quade & Douglas, Inc.

LIST OF FIGURES

Figure 1. Location Map.....8

Figure 2. Existing Conditions9

Figure 3. Preliminary Site Plan.....10

Figure 4. Aerial View - Before Development20

Figure 5. Aerial View - After Development.....21

Figure 6. View Looking Ewa Along Malia Street21a

Figure 7. View Looking Ewa Along Highway Exit Road.....21b

Figure 8. Percent Population Aged 65 Years and Older.....24

Figure 9. Kahala Town Center - Land Use37

Figure 10. Kahala Town Center - Building Heights.....38

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

SUMMARY

DEVELOPMENT PROFILE

APPLICANT: Episcopal Homes of Hawaii, Inc.
c/o The Episcopal Church in Hawaii
229 Queen Emma Street
Honolulu, Hawaii 96813

LANDOWNER: The Roman Catholic Bishop of Honolulu
1184 Bishop Street
Honolulu, Hawaii 96813

ACCEPTING AUTHORITY: Department of General Planning
City and County of Honolulu
Municipal Office Building
8th Floor
650 South King Street
Honolulu, Hawaii 96813

PROPOSED ACTION: Applicant requests a change in land use designation from Public and Quasi-Public to Medium Density Apartment on the Development Plan Land Use Map for East Honolulu.

PROJECT NAME: Hale O Malia

PROJECT LOCATION: Waialae-Kahala neighborhood, East Honolulu
Development Plan area (*See Figure 1*).

TMK: 3-5-17: por. 2

PROJECT AREA: Approximately seven and one-half (7.5) acres.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

EXISTING USE: Star of the Sea's Early Learning Center and Rectory and accessory buildings.

PROPOSED USE: Construction of a "lifecare" facility for the elderly.

STATE LAND USE DISTRICT: Urban

DEVELOPMENT PLAN DESIGNATION:

Land Use Map: Public and Quasi-Public Public Facilities

Public Facilities Map: No symbol indicated on the property

ZONING: R-7.5 Residential District

PURPOSE OF EIS

The purpose of this Environmental Impact Statement (EIS) is to describe a proposal for a new "lifecare" facility, Hale O Malia, to be located on a portion of the existing Star of the Sea School site in the Waialae-Kahala community. The draft EIS identifies potential impacts of the proposed project, both beneficial and adverse, and proposed measures to either avoid or minimize adverse impacts on the environment. In addition, a discussion of alternatives to the proposed development is provided.

NEED FOR EIS

An application for a Development Plan Amendment and Environmental Assessment was submitted to the City's Department of General Planning on January 15, 1991. The proposed action was subject to the provisions of Chapter 343, HRS, Environmental Impact Statements, because the amendment to the East Honolulu Development Plan would result in a designation other than agriculture or conservation.

The Department of General Planning (accepting authority), determined that the proposed action may have a significant effect on the environment. On February 1, 1991, an Environmental Impact Statement Preparation Notice (EISPN) was filed with the Office of Environmental Quality Control (OEQC) and notice of the determination was subsequently published in the February 8, 1991, OEQC Bulletin.

A list of agencies, organizations, and individuals consulted during preparation of the draft EIS is found in *Chapter 9* of this document, along with comments received and responses to the comments.

DEVELOPMENT PERSPECTIVE

The owner had considered keeping the site in its present use and had begun work on a Master Plan for that purpose. However, the Star of the Sea's Board of Directors reluctantly decided to close the school after concluding that continued operation was no longer feasible due to a combination of declining enrollments and the high cost of capital improvements required to maintain a viable high school program. Even the continued operation of the elementary school program will be a financial challenge in view of higher operating and maintenance costs and enrollment projections.

Consideration has been given to the sale or lease of a portion of the campus for a low-income housing project, including the use of zoning and building code waivers under the provisions of Chapter 201E, HRS, or for a market housing project permitted under the existing R-7.5 zoning, or even a high-rise apartment condominium. *Chapter 2* provides a discussion on alternatives considered for the site.

After deliberation, the Board of Directors decided that Hale O Malia would: (1) prove to be a compatible neighbor with surrounding uses; (2) serve the church's mission by providing special needs housing; and (3) assist in financing the continued operation of the Star of the Sea School.

The proposed Hale O Malia site is now occupied by two major structures, the Early Learning Center and the Rectory and several small temporary structures. The Early Learning Center will be incorporated within the design of the lifecare facility, and the Rectory will be relocated.

Hale O Malia will be a licensed lifecare facility for the elderly. The development will include multi-story buildings with a total floor area of approximately 425,000 square feet at a maximum height of 60 feet. The proposed complex will be sited and designed to respect the residential character of the area on the mauka side of Malia Street and provide a transition to the commercial, institutional and high-rise residential building forms to the west and makai of the site. The site is at the western edge of the East Honolulu Development Plan area, where higher-intensity uses, such as Kahala Mall and several high-rise condominium projects (just within the Primary Urban Center boundary) have already been established. The proposed project is designed for a special segment of the population, so that the higher density is mitigated by a lower relative demand on public facilities, such as parks, schools, and highways. The proposed density, at about 40 dwellings per acre is considerably less than the 90 units per acre guideline for Medium Density Apartment use allowed in the Development Plan.

BENEFICIAL IMPACTS

Hale O Malia will provide special purpose housing opportunities for the elderly, or individuals approaching retirement age in an area that will be convenient to commercial and recreational areas. The project will create temporary jobs during the construction

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

period and permanent jobs after occupancy and operation. Hale O Malia, thus, will contribute to economic growth and diversification by creating new jobs outside of the visitor industry.

ADVERSE IMPACTS

Traffic:

Clearing, construction work and demolition will result in some traffic disruption, and temporary increased noise levels.

Traffic control measures will be taken to meet State Department of Transportation requirements. During the construction phase, noise levels will comply with appropriate State and City and County noise regulations.

There will be strict compliance with Chapter 23, Grading, Soil Erosion and Sediment Control of the revised Ordinances of Honolulu, 1978, as amended. Local grading and subdivision ordinances and regulations of the Department of Health will be complied with during the period of construction.

Residential Population:

Development of the lifecare center may increase the area's population somewhat. Hale O Malia is well-suited to serve existing residents of the East Oahu area who are presently or approaching retirement age. As residents move to the project area, single-family homes will become available in the housing market. This is an area that has chronically experienced low vacancy rates, particularly for single-family dwellings, for which vacancies represent less than one percent of the total housing stock.

Air Quality

Construction on the site will result in impacts to existing air quality.

In the short-term, direct and indirect impacts on air quality could potentially occur due to proposed demolition work, vehicle movements, soil excavation, and exhaust emissions from construction equipment. Air quality impacts have been examined and mitigative measures explored by Barry D. Neal. The results are presented in *Chapter 3, Section F*. The full report is contained in *Appendix B*.

ALTERNATIVES CONSIDERED

In *Chapter 2*, three alternatives to the proposed action were considered:

- (1) No Action
- (2) Land Use Variations
- (3) Land Use/Zone Changes

The first (no action) considered three options under the present educational facility use. The second alternative considered developing the campus into residential uses (Planned Development - Housing) permitted by the present zoning. The third alternative considered options which would entail changes to land use designations or zoning.

Evaluation of the alternatives indicated that Hale O Malia, the proposed lifecare community would: (1) offer a land use most consistent with the social mission of the Star of the Sea Church; (2) have the least amount of long-term adverse impacts to the environment; and (3) provide sensitive land use planning that would create long-term benefit to the area and income to help finance the continued operation of the Star of the Sea School.

UNRESOLVED ISSUES

Development Plan Amendment

The project will require a land use amendment to the East Oahu Development Plan. An application has been filed with the City Department of General Planning for consideration in the 1991 DP Annual Review. The City Council is expected to make its decision on the amendments by the end of 1991.

Zone Change

After approval of the Development Plan Amendment, an application will be filed with the City Department of Land Utilization for a change in zoning designation to A-2 Apartment Medium Density Apartment District.

Conditional Use Permit, Type 2

After approval of the Zone Change Application, a Conditional Use Permit Type 2 (CUP-2) will be initiated. Group living facilities (dwelling units) which serve as living accommodations and care services under a residential setting are permitted, as defined by the LUO, Article 9, for the elderly in the A-2 Medium Density Apartment District with an approved CUP-2. The process requires a public hearing and decision by the Director of Land Utilization.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

COMPATIBILITY WITH LAND USE PLANS AND POLICIES

A discussion on the relevancy and relationship of the proposed project to land use plans and policies is presented in *Chapter 6*. The proposed development is consistent with relevant public goals, objectives, policies, plans and controls, with the exception of the necessary approvals for a City and County of Honolulu Development Plan Amendment and zoning changes.

NECESSARY PERMITS AND APPROVALS

PERMIT/ APPROVAL	APPROVING AUTHORITY	STATUS
Development Plan Land Use Amendment	City Council	In process
Zone Change	City Council	Will be filed following approval of DP Amendment.
EIS	Department of General Planning	In process
Conditional Use Permit Type 2	Department of Land Utilization	Will be filed with zone change.
Building Permit	Building Department	To be submitted following zone change and CUP-2.
Certificate of Need	State Health Planning and Development Agency	Will be filed concurrently with Land Use Applications

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

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Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

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Certificate of Need	State Health Planning and Development Agency	Will be filed concurrently with Land Use Applications

1. PROJECT DESCRIPTION

A. LOCATION AND SIZE

The project site of approximately 7.5 acres is located in Waialae-Kahala, in the East Honolulu Development Plan area. It is bounded by Malia Street to the north, Waialae Nui Drainage Canal to the west, Kalaniana'ole Highway to the south, and the remainder of the existing Star of the Sea campus to the east. *Figure 1* is a *Location Map*.

B. EXISTING USE

There are two major buildings on the site: the Star of the Sea's Early Learning Center, which contains 24,700 square feet of floor area and serves approximately 135 children, from toddlers through kindergarten age, and the Rectory, with about 8,200 square feet, providing living quarters for 8 priests.

There are also some smaller accessory buildings on the site, including a Thrift Shop (which is not secured to a foundation) and 4 temporary structures used as a greenhouse, an open garage and storage sheds.

C. SURROUNDING USES

To the north of the existing church/school campus, across Malia Street, is a single family residential area. To the west, across Waialae-Nui Drainage Canal, are parcels which are designated Public/Quasi-Public on the Development Plan Land Use Map and presently used for institutional facilities, such as the Church of the Latter Day Saints and Young Men's Christian Association. The adjacent properties at the corner of Waialae and Kilauea Avenues are designated and zoned for commercial uses. The building height limit in this area is 60 feet, the same as that proposed for the subject site.

D. PROJECT PROPOSAL

The applicant proposes a new "lifecare" facility, Hale O Malia, for the elderly on a portion of the existing Star of the Sea school/church campus. Hale O Malia will be a licensed facility and be housed in a complex of multi-story buildings with a total floor area of about 425,000 square feet and a maximum height of 60 feet. *Figure 2* shows *Existing Conditions* on the site and *Figure 3* is a *Preliminary Site Plan*.

The proposed lifecare program is based generally on a model operated by the Episcopal Homes Foundation of Northern California, with adaptations appropriate for the Hawaii market. As part of the program, qualified residents (65 years of age or

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

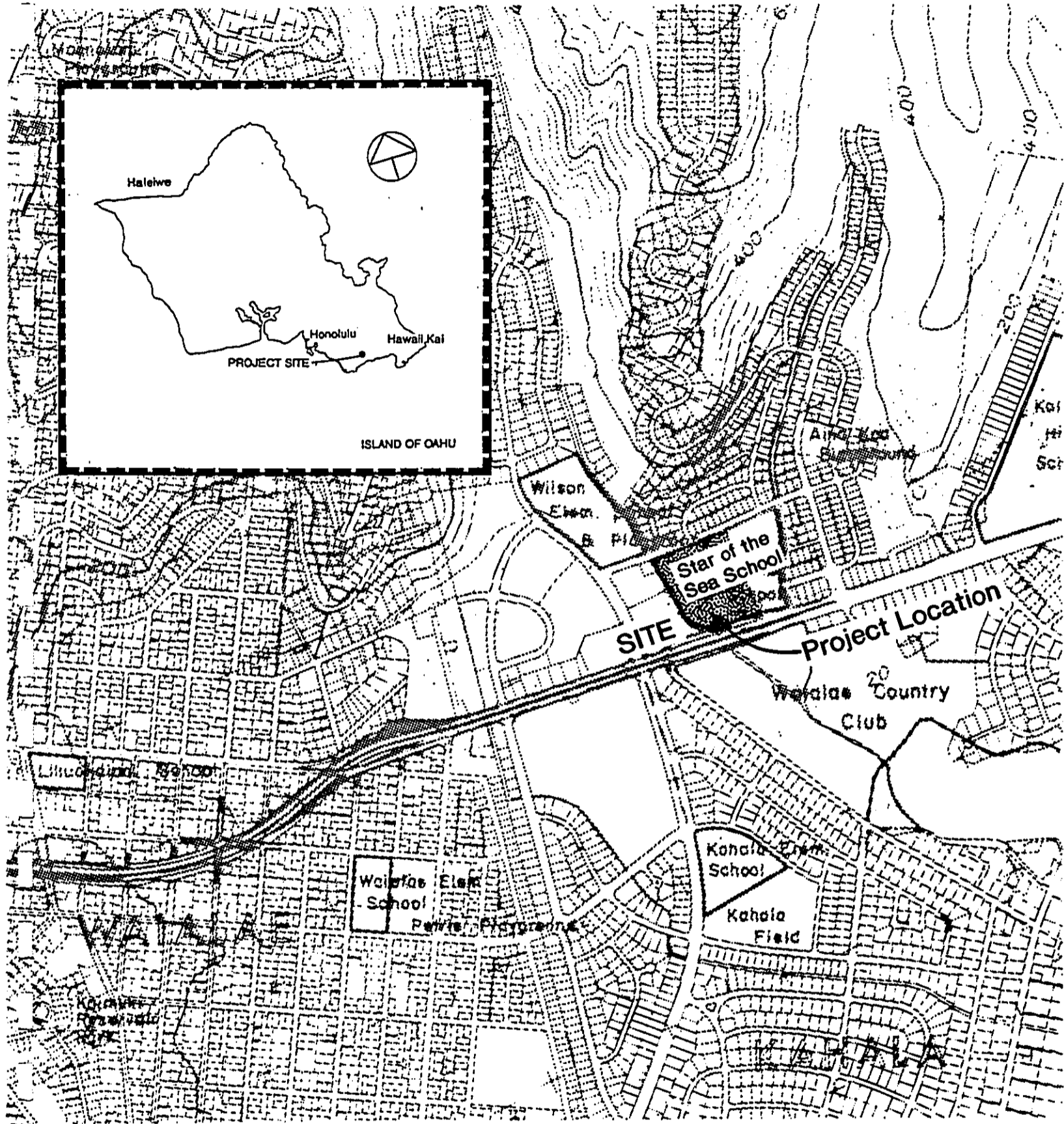


FIG.1: LOCATION MAP

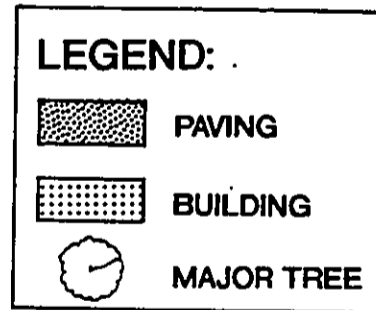
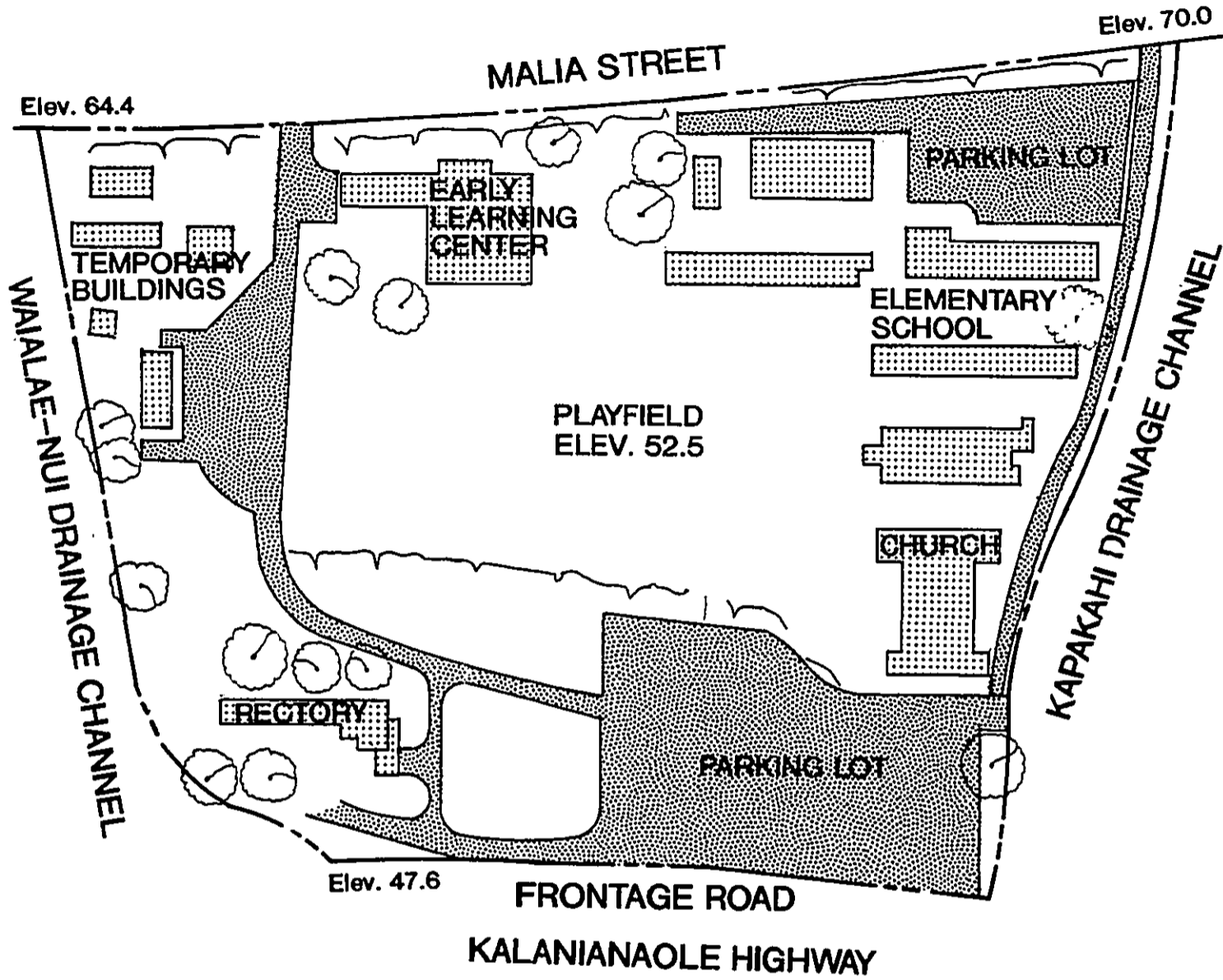


FIG. 2: EXISTING CONDITIONS

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

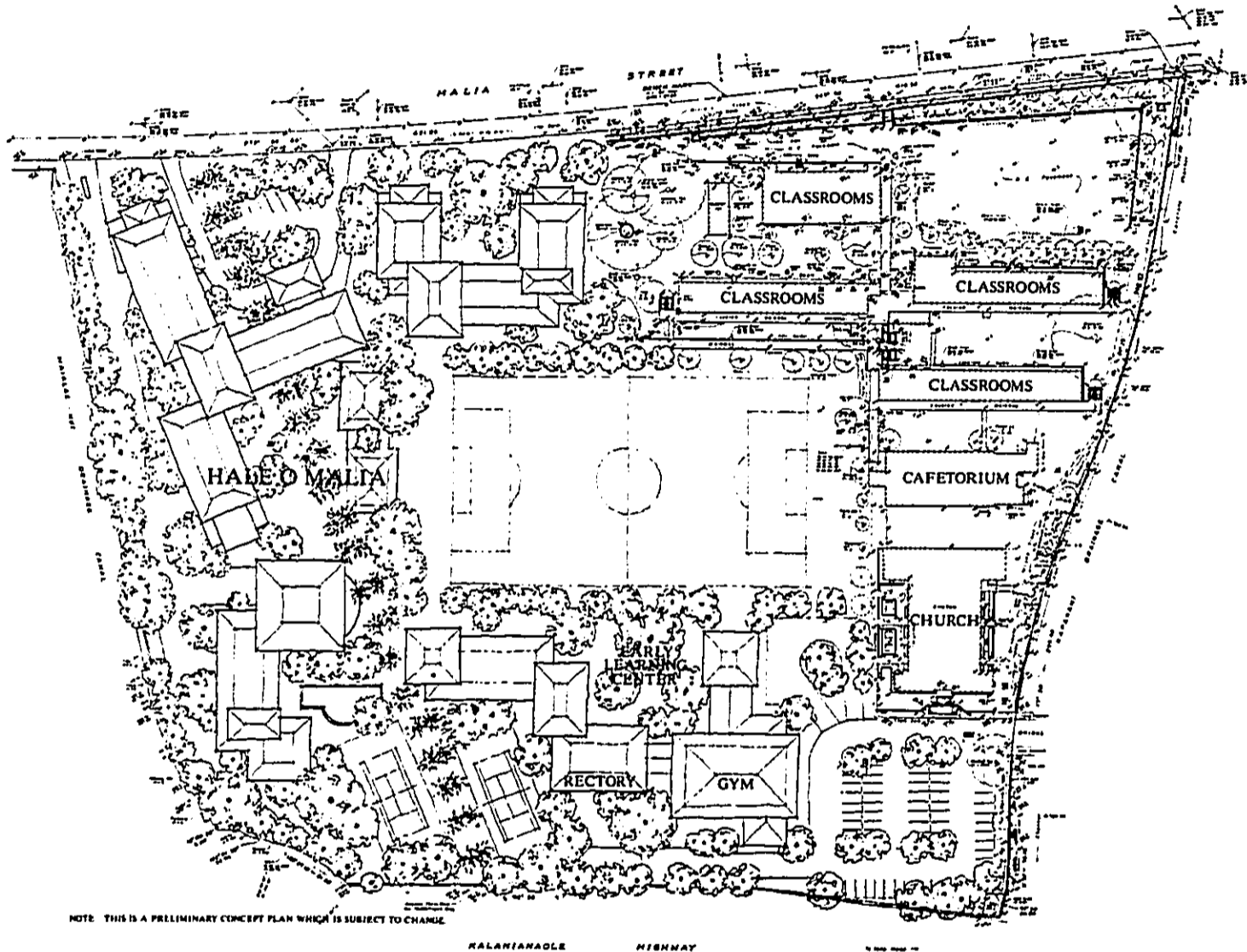


FIG.3: PRELIMINARY SITE CONCEPT

more) are guaranteed living quarters, full health care, two meals a day, housekeeping services and other amenities and services in exchange for an initial accommodation fee and monthly maintenance fees. There is a lifecare contract which extends for the life of the residents, regardless of changed conditions in their health or financial condition.

Three levels of living will be offered within the contract: residential apartments (300 units), personal care units (20-beds), and a skilled nursing facility (60 beds). Meals will be served in a main dining room. The personal care units serve residents who, either permanently or temporarily, require a moderate level of assistance with activities of daily living, but do not require continuous nursing supervision. The skilled nursing facility serves residents who require permanent or temporary 24-hour nursing care. The entire lifecare facility will be licensed by the State of Hawaii Department of Health.

The eligibility of prospective residents is established through a screening process, starting with the marketing staff and reviewed by the Admissions Committee, a sub-committee of the Board of Directors of the Episcopal Homes of Hawaii. Admission is open to individuals age 65 or older, and to couples of whom one partner is at least 65, without regard to race, religion, sex, or national origins, but limited to Social Security recipients.

A financial review of the prospective resident will be conducted prior to acceptance, using an actuarial screening model designed to ensure residents have adequate funds for personal expenditure and the reasonable ability to absorb future rate increases. Medical screening is predicated on the expectation that applicants will be ambulatory and capable of independent living at the time of admission.

Hale O Malia is expected to be the first of several future projects of the Episcopal Homes of Hawaii. Using the model of the Northern California program, Episcopal Homes also plans to build housing for the low-income elderly in Hawaii as the result of the income and staff resources which will be developed from the Hale O Malia project.

E. DEVELOPMENT SCHEDULE

Construction is projected to begin in 1993, after approval of the required Development Plan amendment, a zone change to the A-2 Medium Density Apartment District, a Conditional Use Permit, Type 2, a Certificate of Need, and building and other construction permits are obtained. Construction is expected to last about 18 months, so that the facility could be in operation by mid-1994.

F. ESTIMATED COSTS

Costs are estimated at \$80 million (1990 dollars) for construction; \$150 million including furnishings, equipment and start-up costs.

G. CHANGES IN LAND USE DESIGNATIONS REQUIRED TO IMPLEMENT THE PROJECT

Amendments to the Development Plan and Zoning will be required.

Development Plan

Existing: Public/Quasi Public Facility

Proposed: Medium Density Apartment

Zoning

Existing: R-7.5, Residential District

Proposed: A-2 Medium Density Apartment District

2. ALTERNATIVES TO THE PROPOSED ACTION

A. NO ACTION ALTERNATIVE

The following alternatives are options that could be pursued without any change in Development Plan designation or zoning.

1. Maintain The Status Quo, With No Physical Expansion.

This alternative may seem initially attractive because it involves no immediate outward change. However, in light of the present and projected financial condition of the school, it is very likely to lead to a decline in the school's physical plant and the quality of its educational program as the administration attempts to compete with other schools that offer equal or better programs at similar or less cost, because of advantages of size and substantial endowments or other supplemental income. If this decline is permitted to persist, it could eventually lead to a request for a change in land use that does not have the attractive social and environmental benefits that the lifecare facility has.

2. Reopen The High School And Pursue The Previous Master Plan For Campus Development.

This is an alternative the school board has already rejected as economically infeasible. The decision to close the high school was a painful one for the board and the parish, but it was done so because enrollments were declining in the face of changing demographic profiles in the region and, perhaps, competition from other types of educational institutions. A significant rise in tuition could not offset operational losses and the demand for new and improved facilities, because this would probably have led to a further decline in enrollment, exacerbating the problem.

3. Sell The Campus In Its Entirety To Another Educational Institution Which Could Expand Enrollment By At Least Another 600 Students.

The campus has the physical and zoning capacity to accommodate nearly four times its present total building floor area while still retaining the central playing field. This is sufficient to at least double the present enrollment and add significant new campus buildings, such as a new cafeteria, gymnasium, auditorium and library. For purposes of analyzing potential environmental impacts, a conservative enrollment increase of 600 students was assumed. Even at this level, school expansion would have a much more significant impact on peak hour traffic conditions than the proposed lifecare facility would. This alternative would therefore

have adverse consequences on commuter traffic to and from the entire East Honolulu region along a transportation corridor that is already congested at peak hours.

B. LAND USE VARIATIONS

The following land use variation could be pursued without any change in the zoning designation.

Develop the campus in residential uses permitted by the present zoning. Under the Planned Development - Housing (PD-H) procedure, the entire 14.6 acre campus could accommodate an 85- to 90-unit residential project with typical floor areas averaging about 1,800 square feet each. With an occupancy level of about 3.5 persons per unit, which is average for this neighborhood, the total population would be approximately 298 to 315 residents. This would be slightly lower than the population of the lifecare community. However, the effect on peak hour traffic conditions would be more significant, even with the retention of the school, because conventional residential development would generate a higher volume of commuter traffic. If Star of the Sea elected to develop only 7.5 acres of the site for residential use, the size would be reduced to about 45 to 50 units; this would still have greater impact on peak hour traffic conditions than the lifecare facility. In addition, the school board felt that the proposed lifecare community, as a church-related, non-profit project serving the elderly, was more consistent with the social mission of the Star of Sea Church than a profit-making housing development would be. Also, since the lifecare facility does not entail the sale of real estate, the future possibility of mandatory leasehold conversion is not raised.

C. LAND USE/ZONE CHANGES

The following options would entail changes to land use designations or zoning.

1. Entertain proposals for the development of market-oriented condominium apartments on the property.

This could include developments in either Low Density Apartment or Medium Density apartment configurations. This option raises the same issues discussed in *Section B.*, above, but in more intense form. Also, it is not clear whether the parish would receive attractive and feasible development proposals. In the latter part of 1990 it was publicly announced that the parish was willing to consider any and all development proposals for a portion of the campus; some developers were approached directly. Some members of the parish did, in fact, suggest the development of a high-rise residential condominium on the site. However, the school board and parish received no proposals that were

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

deemed both likely to succeed and consistent with the objectives of Star of the Sea.

2. Develop the lifecare project in a Low Density Apartment rather than Medium Density Apartment configuration.

This is a possible alternative as the total combined floor area of the school, church and lifecare facility could be accommodated within the density limitations of the A-1 Low Density Apartment zoning district. However, because there is a mandatory height limit of 30 feet in this district, this would produce a far less desirable site plan. The building coverage would be greater, resulting in a more congested layout and significant loss of open space amenities, including a portion of the central playing field and almost all of the mature trees. The buildings would be perceived as bulkier from outside the property, because there would be fewer opportunities for effective landscape screening and articulation of architectural form. Also, the roof form of the buildings would have to be flat rather than pitched, as proposed, to reflect the residential building style of the neighborhood mauka and east of the site. The Medium Density Apartment designation will allow for greater flexibility in building siting and design in order to preserve a greater amount of open space, retain the mature trees, and provide a roof form and building orientation designed to make the project visually harmonious with nearby residential areas. Due to the unique topographic conditions on the site, which place the proposed building site at lower elevations than the streets on both the mauka and makai sides of the property, the effect of the higher building height will not be as important a visual consideration as will be the design and lot coverage issues discussed above.

3. PHYSICAL ENVIRONMENT

A. TOPOGRAPHY/SLOPE

The elevation of the site ranges from 64 feet to 40 feet above mean sea level, dropping approximately 6 to 7 feet below the grade of Malia Street on the mauka boundary, then gradually sloping downward in the makai direction, toward Kalaniana'ole Highway. The site is directly adjacent to the point where the H-1 Interstate Freeway viaduct descends and transitions into the grade-level Kalaniana'ole Highway, so that the elevation of the makai boundary of the site is about 17 feet below that of the highway at the ewa (west) end and about 6 feet below at the Kokohead (east) end. The site elevation, thus, is below that of the public rights-of-way on both the mauka and makai boundaries.

Except for a small portion of the site near Malia Street in the building setback areas, slopes are less than 20 percent, generally in the 2 to 6 percent range.

IMPACTS AND MITIGATIVE MEASURES

Grading on the project site will be limited to the areas of redevelopment. Dust generation and soil erosion will be minimized by compliance with the City's grading ordinance (Chapter 23, Revised Ordinances of Honolulu). All requirements of Title 11, Chapter 26, Paragraph 35 (Rodents; demolishing of structure and clearing of vacant sites and vacant lots) will be strictly adhered to, and standard measures to mitigate fugitive dust will be employed.

B. SOILS

The U.S. Department of Agriculture, Soil Conservation Service, (SCS) classifies soils found on the site in the Kawaihapai Series. The soil type is Kawaihapai stony clay loam (KlaB), which is characterized as suitable for topsoil, road fill and building foundations. Its stoniness limits its suitability for agricultural use.

IMPACT AND MITIGATIVE MEASURES

During construction, soil erosion may occur due to grading, removal of vegetation, and excavation.

Due to the soil type, topography, and degree of slope, impacts are expected to be minimal. The developer will, however, landscape exposed soils soon after construction to avoid the possibility of soil runoff or erosion.

C. FLOOD CONDITIONS

The site is entirely outside of the 100-year floodplain (AE Zone), but, according to the Flood Insurance Rate Map (FIRM), is contained within the 500-year floodplain (X Zone). The site is at minimal risk of inundation.

IMPACT AND MITIGATIVE MEASURES

No adverse impacts requiring mitigation against flooding are anticipated.

D. FLORA AND FAUNA

There are no rare or endangered species of plants or animals on or near the site; virtually all of the plant material consists of introduced species.

IMPACT AND MITIGATIVE MEASURES

There will be no impact to rare or endangered species, as none exist on the site. There are several mature canopy trees, primarily Royal Poinciana, Rubber and Monkeypod, which will either be preserved or relocated on site. Much of the site is currently an open, grassed area used for playing fields.

E. ARCHAEOLOGICAL

An archaeological assessment was prepared by Archaeological Consultants of Hawaii. The full report can be found in *Appendix A*.

A systematic surface examination of the entire project site failed to produce any cultural properties and there were clear indications that the property had been subjected to disturbances in the 1950's. This area may have been a candidate for the production of taro at one time; however, the potential for any subsurface recovery is considered remote at this location and it has been demonstrated that surface indications are nil.

IMPACT AND MITIGATIVE MEASURES

No adverse impacts are anticipated and no further archaeological work is considered necessary.

F. AIR QUALITY

A report on the potential impacts on air quality caused by the lifecare project has been prepared by B.D. Neal & Associates. The results are summarized below. The full report can be found in *Appendix B*.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

IMPACTS

Two potential short-term air pollution emissions could result during project construction: (1) fugitive dust from demolition work and from vehicle movement and soil excavation; and (2) exhaust emissions from on-site construction equipment. In addition, slow-moving construction equipment traveling to and from the project site and commuting construction workers could indirectly impact air quality.

The U.S. EPA has provided a rough estimate for uncontrolled fugitive dust emission from construction activity of 1.2 ton per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50. Project conditions would likely be near this level. State of Hawaii Air Pollution regulations prohibit visible emissions of fugitive dust from construction activities at the property line.

The proposed project will have no measurable long-term impact on air quality in the area. Traffic projections indicate that the project will generate a net increase of only 6 vehicles at the Kilauea Avenue/Malia Street intersection during the morning peak hour, and one vehicle less during the afternoon peak.

Impacts on the project area air quality will result from traffic transiting nearby Kalaniana'ole Highway, thus the predicted net change caused by the project is inconsequential and will have no measurable long-term impact on air quality in the area.

MITIGATIVE MEASURES

An effective dust control plan will be employed to include frequent watering of bare-dirt surfaces, the use of wind screens, and mulching of inactive areas. Open-bodied trucks will be covered at all times to prevent airborne dust and landscaping and paving will be done as appropriate.

For the long-term the project is not expected to impact air quality in the area.

G. NOISE

An Environmental Noise Assessment was performed by Darby & Associates and is included as *Appendix C*. The findings of this assessment are summarized as follows:

The predominant traffic noise sources affecting the project site are the H-1 freeway and Malia Street. Noise levels measured between 10:30 a.m. and 11:30 a.m. February 25, 1991, varied from 55 to 62 dBA, depending on shielding by buildings, vegetation and attenuation with distance. The additional vehicular traffic due to the completed project will not increase the traffic noise in the community, because of the marginal increase in volume.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

IMPACT AND MITIGATIVE MEASURES

For the short-term, construction noise may cause some annoyance to occupants of neighboring residential areas; however, since no pile driving is planned, this impact should be minimal. In cases where construction noise exceeds, or is expected to exceed, the Department of Health's property line limits, a permit must be obtained from the Department. Required permit conditions include restrictions on permissible operating hours.

Units which have line-of-sight to the H-1 will require mitigating measures, such as air-conditioning and double strength glass to conform to the HUD interior guideline of 45 Ldn, since the predicted exterior levels are 65 to 67 Ldn.

Units which have line-of-sight to Malia Street will receive noise from this street, but less than 65 Ldn. Mitigative measures should include avoiding jalousies and providing air-conditioning.

Units which do not have line-of-sight to H-1 or Malia Street, because of shielding by buildings, will typically have sufficiently low exterior levels, and natural ventilation could be used; however, air-conditioning may be offered as an alternative.

Mitigative measures for other, non-residential structures include avoiding jalousies on certain sides, air-conditioning and fixed glazing.

H. VIEW ASSESSMENT

Presently, Malia Street forms a visual boundary separating the low-rise, single-family residential area mauka of the street from the institutional uses such as Star of the Sea School, with larger building forms, on the makai side. The building height limit in the Commercial-designated areas adjacent to the site is 60 feet. Several buildings in the vicinity, however, are in excess of 60 feet. For example, the Kahala Towers buildings a block to the ewa side are 113 feet and 224 feet high, and the Kahala Office Building is 65 feet in height. An oblique aerial view of the site and its surroundings is shown in *Figure 4*. *Figure 5* shows the same view after the proposed development.

IMPACT AND MITIGATIVE MEASURES

The proposed Hale O Malia project will create a visual transition between lowrise residential buildings mauka of the site and the larger structures on the makai and ewa sides by establishing an intermediate building height and incorporating residential building design elements, such as a sloped roof and exterior finishes such as plaster.

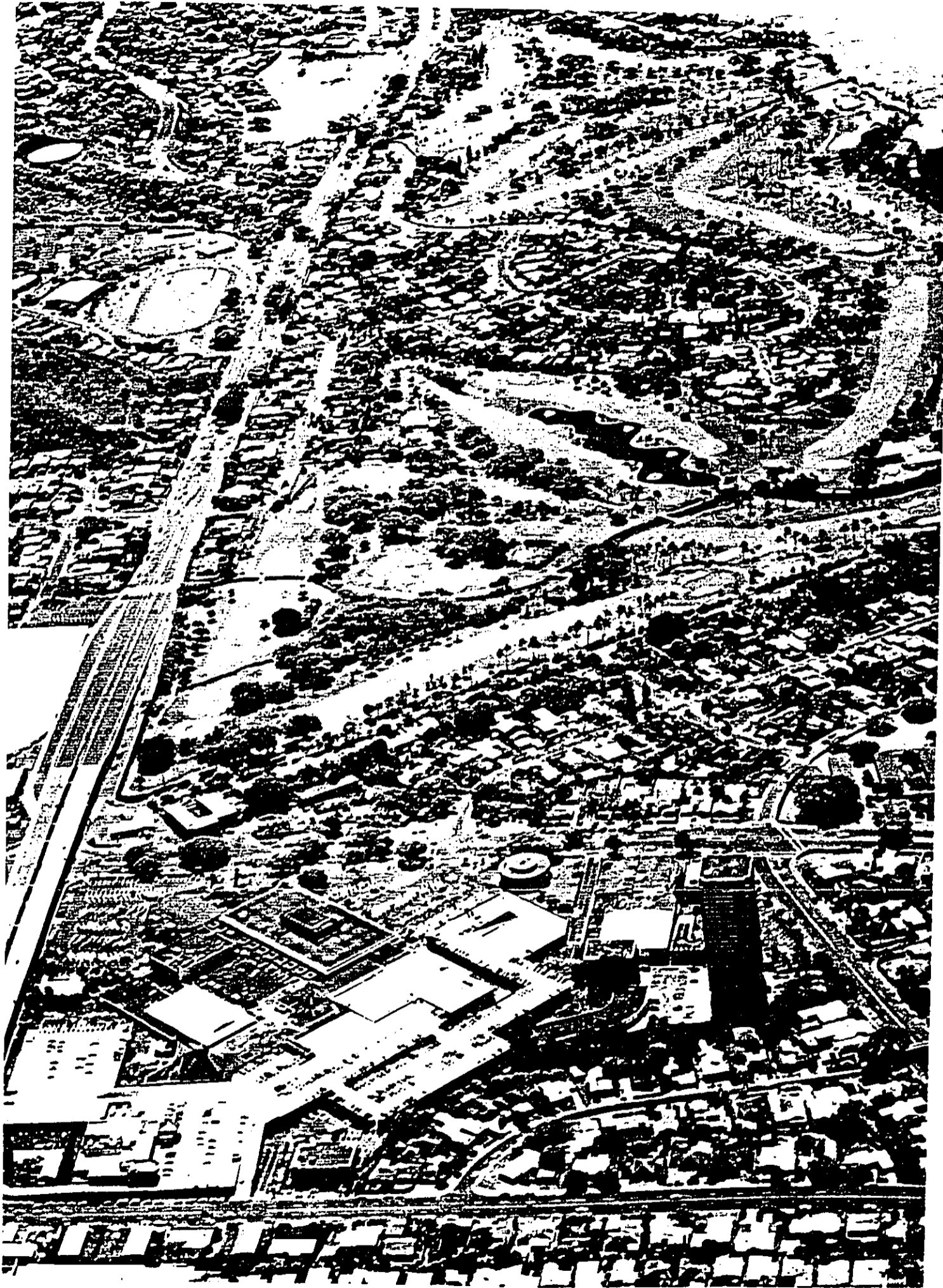
The most frequent view of the site will be from Kalaniana'ole Highway. It is intended that siting and configuration of the buildings, combined with generous

RECEIVED AS FOLLOWS



FIG.4: AERIAL VIEW - BEFORE DEV

RECEIVED AS FOLLOWS



BEFORE DEVELOPMENT

RECEIVED AS FOLLOWS

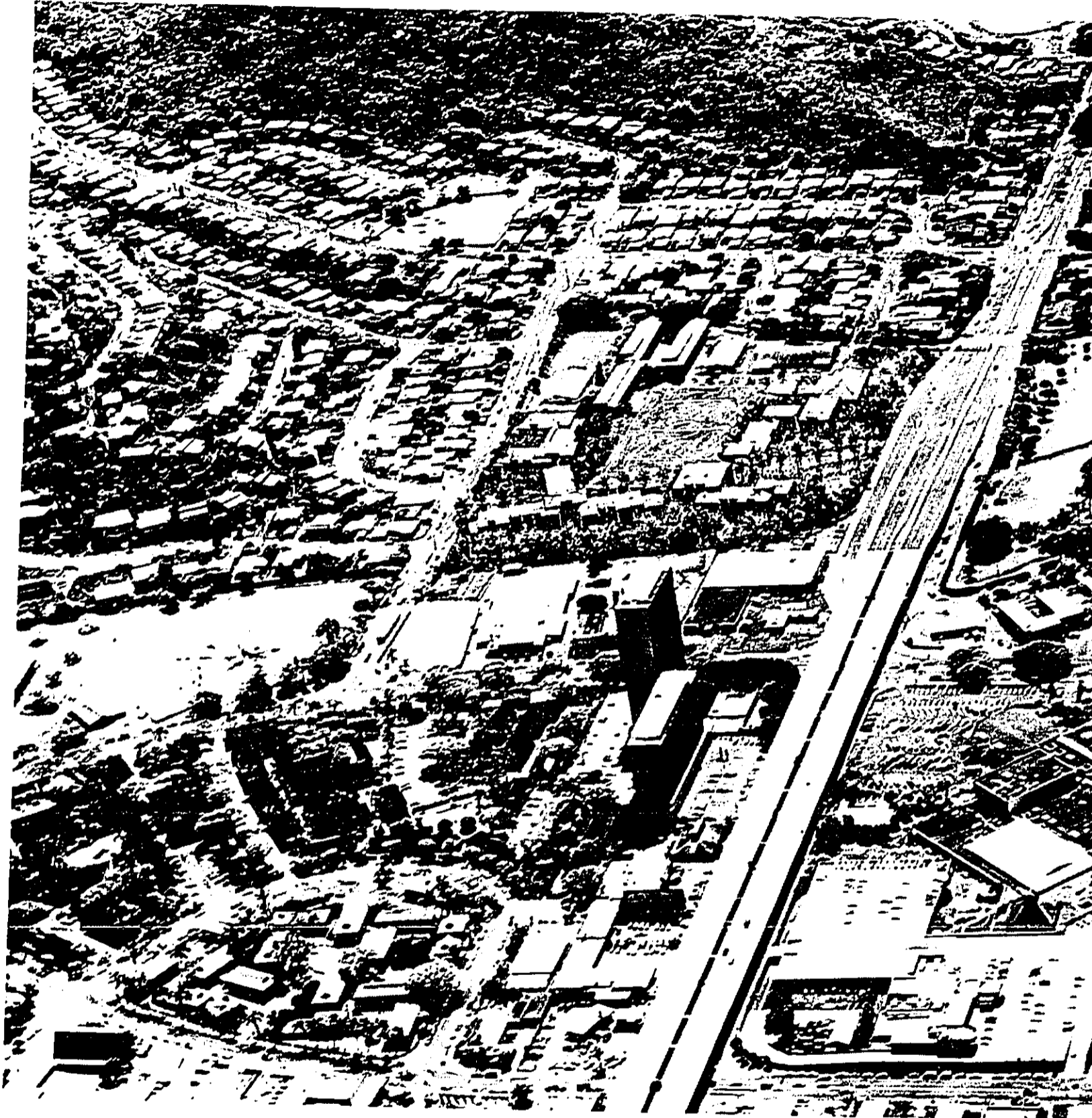
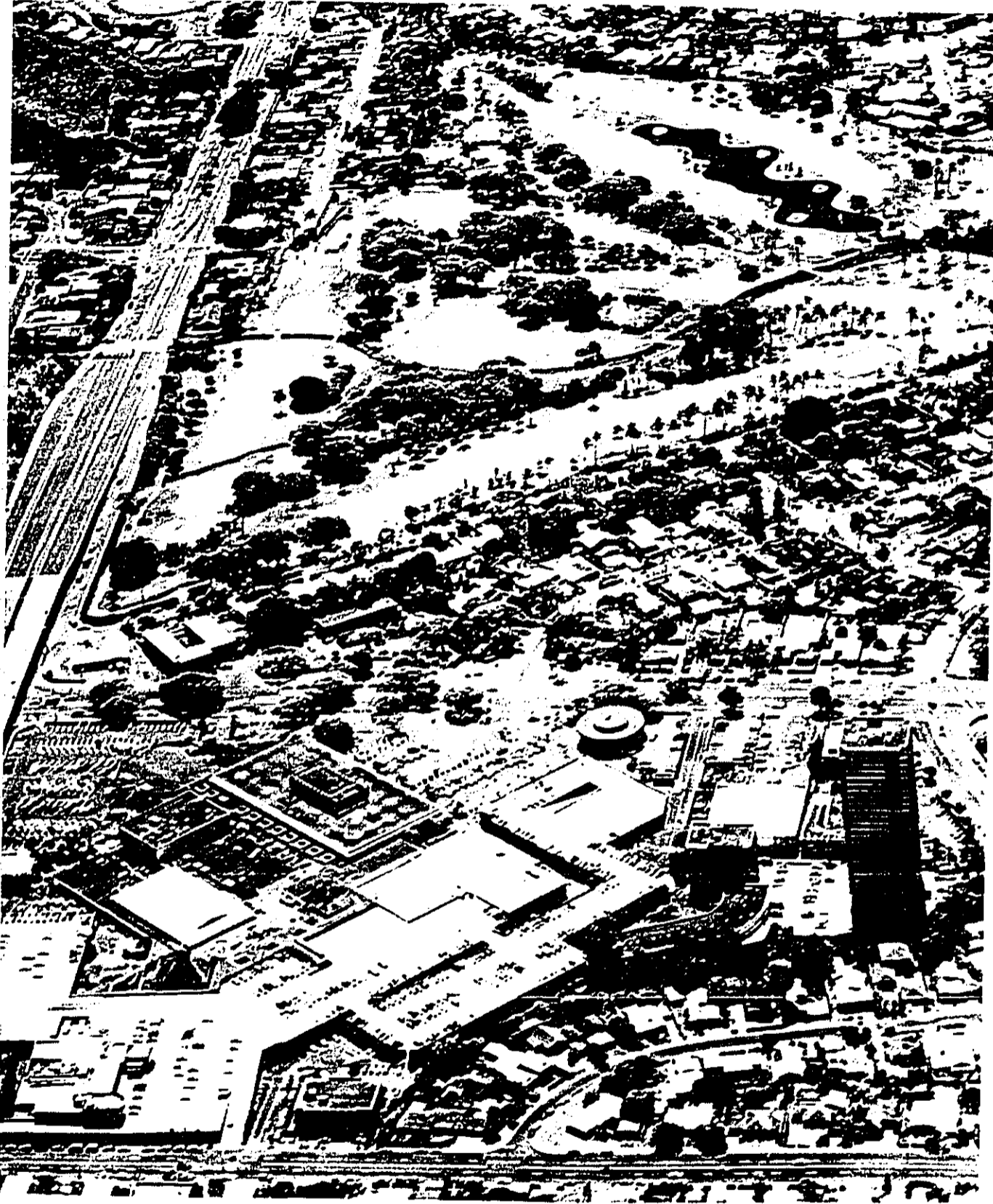


FIG.5: AERIAL VIEW - AFTER DEVELOPMENT

RECEIVED AS FOLLOWS



AFTER DEVELOPMENT

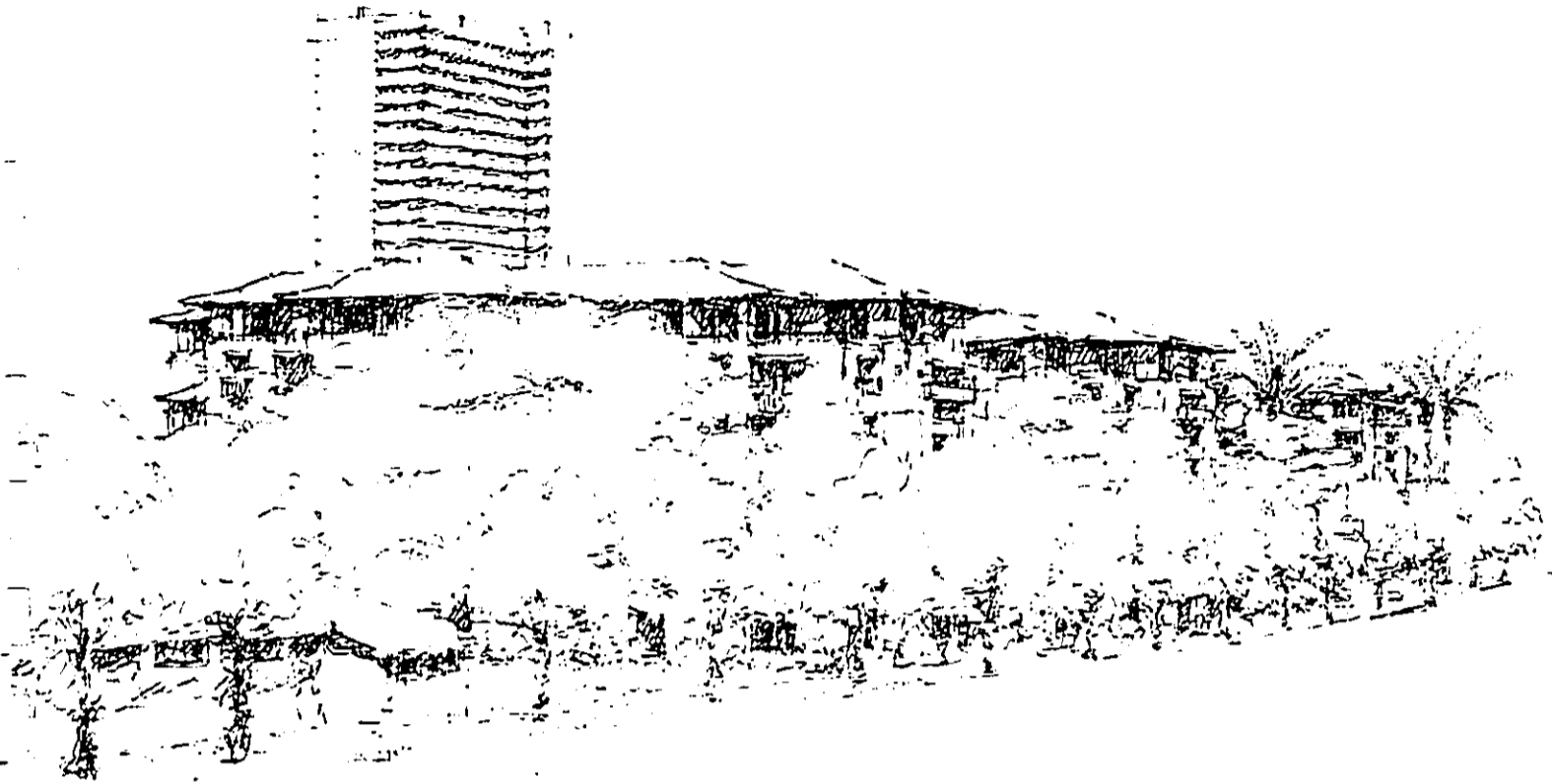
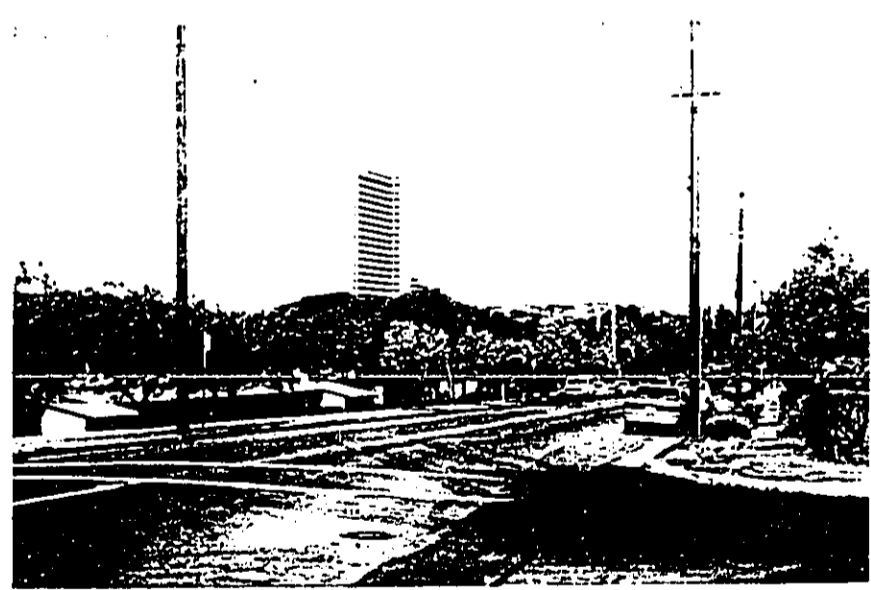


FIG.6: VIEW LOOKING EWA ALONG MALIA STREET



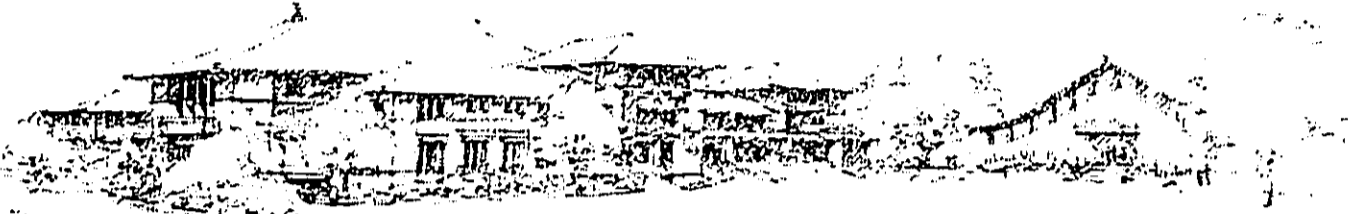
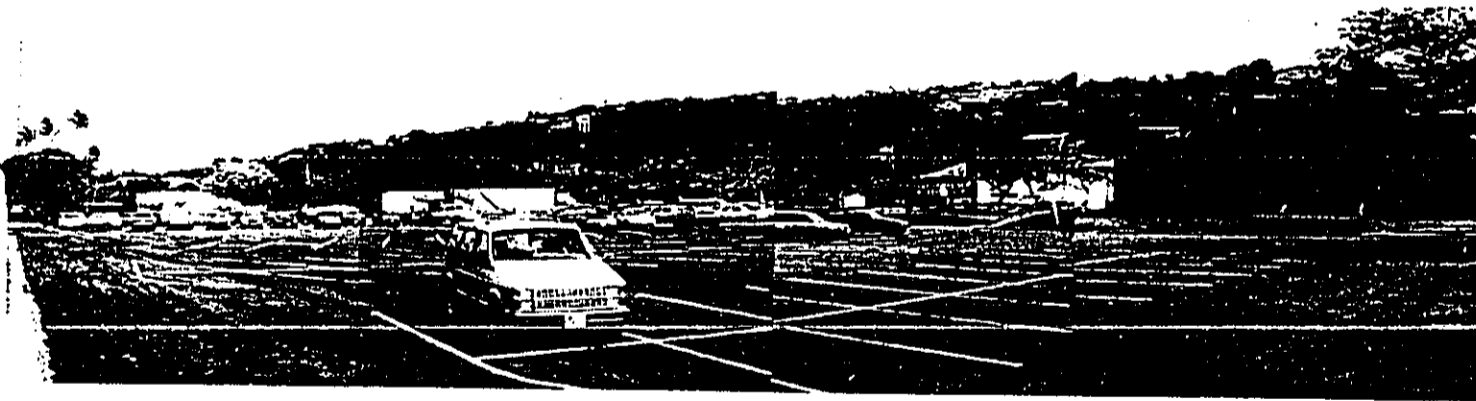


FIG.7: VIEW LOOKING EWA ALONG HIGHWAY EXIT ROAD



Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

landscaping, will minimize the visual mass of buildings seen from public rights-of-way and the adjacent residential neighborhood. The project site is already well screened from the mauka residential area by the street trees lining the frontage along Malia Street.

Figure 6 shows a perspective rendering of the project from Malia Street looking ewa. Parts of the residential structures located on this portion of the site will be 60 feet high, but their impact on Malia Street will be mitigated by (1) additional setback from the street; (2) the ground level of the building being 10 feet lower than the level of the street; (3) sloping roof forms; and (4) extensive landscaping with large trees, both existing and proposed.

Figure 7 shows a perspective rendering of the project from the highway exit road looking ewa. In the foreground is the proposed Star of the Sea gymnasium and other parish elements to be constructed as part of the project. Approximately 60 feet high, the gymnasium structure will also have a sloping roof, additional setback from the street, and landscaping with trees along the road frontage. Across the exit road, Kalaniana'ole Highway transitions to the elevated viaduct of H-1 Freeway. This area is already significantly affected by the massive viaduct structure.

To address concerns that the project would affect views from residential area of Waialae Nui Ridge, a viewplane study was prepared looking makai across the site from Halekoa Street. The study was prepared using a three-dimensional computer-assisted drawing program and was based on three sets of data: a photograph taken from a known location and elevation; topographic and elevation data taken from City and County orthographic aerial photographs, a ground survey of the site, and plans for H-1 Freeway. The study demonstrated that the project will not interfere with ocean views and that roof peaks will fall well below the horizon.

4. SOCIO-ECONOMIC CONDITIONS

A. CHARACTER OR CULTURE OF THE NEIGHBORHOOD

The proposed Hale O Malia is more similar to the surrounding residential neighborhood than the existing institutional use. At present, the western side of the Star of the Sea campus is relatively open and undeveloped, although zoning allows significantly more building coverage than what now exists. The proposed land use and zone change will actually decrease the maximum potential lot coverage from 50 percent to 40 percent.

The proposed buildings to be developed will be larger and taller than the single-family dwellings mauka of Malia Road; however, they will be lower in height than what is now permitted on adjacent commercial-zoned parcels. Furthermore, Hale O Malia will incorporate design elements, such as modified hip-form roofs, that will help create a visual transition between the mauka residential neighborhood and the higher-intensity commercial and institutional uses and the Kalaniana'ole Highway viaduct to the west and makai.

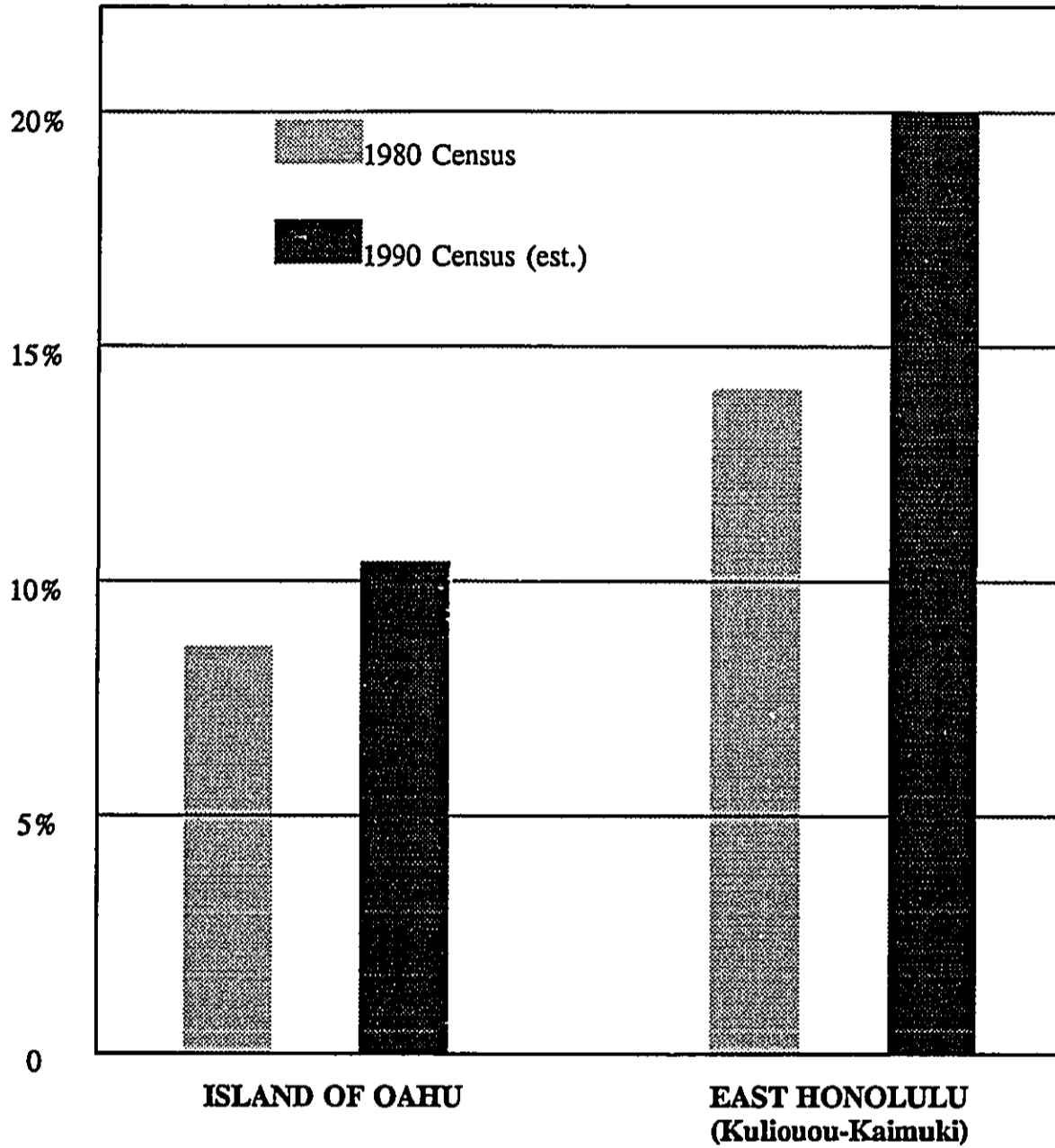
According to information from the 1980 census and provided in a communication from the Department of Human Resources (See *Chapter 9*), Neighborhood Board Area 2 (Kuliouou/Kalani Iki), 3 (Waialae-Kahala), 4 (Kaimuki), 5 Diamond Head/Kapahulu/St. Louis Heights), and 6 (Palolo) had a total of 10,219 residents over the age of 65, accounting for approximately 12% of the area population (twice the 7% average for Oahu). It is estimated that the 1990 census will show an even greater percentage growth of East Honolulu's over 65 population. This relationship is depicted in *Figure 6*. The City's current Three Year Area Plan on Aging prepared by the Elderly Affairs Division of the Department of Human Resources identifies East Honolulu as a high need area for the development of elderly care services.

It is anticipated that about 90 percent of the approximately 400 residents of Hale O Malia will be people who are presently residents of Hawaii, primarily from the East Oahu neighborhoods mentioned in the preceding paragraph.

B. DISPLACEMENT

No residential households or businesses will be displaced. On-site buildings and functions related to the Star of the Sea Church and School will be relocated to the remainder of the campus or incorporated within the Hale O Malia buildings.

*Final Environmental Impact Statement for
HALE O MALIA COMMUNITY*



Source: Department of Business and Economic Development, *The State of Hawaii Data Book, 1990*. Estimates for 1990 are from Department of Human Resources, City and County of Honolulu, Division of Elderly Affairs.

FIG. 8: PERCENT POPULATION AGED 65 YEARS AND OLDER

C. EMPLOYMENT

Hale O Malia is expected to contribute to economic growth and diversification by creating new jobs outside of the visitor industry.

The project will create short-term, temporary jobs during the construction phase. It is estimated that after occupancy, approximately 144 employment positions will be created. Approximately 47 staff will be employed in the medical center; 56 staff in food services; 20 in custodial services; 14 in security and maintenance; and 7 in administration. Many of these jobs will be assigned to various shifts, so that no more than 100 employees will be on the premises at any one time.

D. GOVERNMENT REVENUES

The project is expected to generate excise tax revenues. However, there will be no net change in property tax revenues since both the Star of the Sea School and Church and the proposed Hale O Malia project are exempt, eleemosynary organizations.

E. HOUSING IMPACTS

The project will add approximately 300 units to the supply of housing for the elderly. As many as 250 to 270 dwellings in the East Oahu area could become available as a result of individuals moving into Hale O Malia. East Oahu is an area that has chronically experienced very low vacancy rates, particularly for single-family dwellings, for which vacancies represent less than one percent of the total housing stock. Hale O Malia is not conceived as "affordable housing", per se, although it will fill the needs of special purpose housing for the elderly and provide them with the security of lifelong care and accommodations at far less than the actual cost. The housing component of the program will receive no direct government subsidy or special exemptions.

Hale O Malia is to be a non-profit facility which will be built with tax-exempt special purpose revenue bonds authorized by the State of Hawaii. Moreover, the project will rely on the application of payments from Social Security, Medicare and other health insurance programs to help support the operational costs of the lifecare concept. The program would not be feasible without this support, since the health and personal care costs for the infirm elderly can be high.

5. PUBLIC FACILITIES AND SERVICES

A. TRANSPORTATION

An assessment of potential impacts on traffic in the area was performed by Parsons, Brinckerhoff, Quade & Douglas, Inc. and is included as *Appendix D*. In summary, findings were as follows:

IMPACTS AND MITIGATIVE MEASURES

The lifecare facility is projected to generate only six more vehicle trips during the a.m. peak hour than the recently closed high school. During the p.m. peak hour, the facility would generate one fewer vehicle trip than the high school. The 348 additional vehicle trips that would be produced by the lifecare facility daily represent only a 5-1/2 percent increase in daily traffic volumes on Malia Street.

Furthermore, by committing nearly half of the campus to the lifecare facility, the alternative of a major expansion in school enrollment, which would have a much greater impact on peak hour and average daily traffic volumes, is foreclosed.

Construction of the facility on the western portion of the Star of the Sea School site will change internal traffic circulation patterns. The proposed facility will preclude through traffic from using the internal road to access Aliikoa Street. The western campus entrance from Malia Street will, therefore, serve the lifecare facility exclusively. The construction of the lifecare facility will also include the relocation of the early learning center adjacent to the proposed gymnasium.

The construction of a lifecare facility will not dramatically affect weekday Star of the Sea traffic circulation patterns during morning and afternoon peak hours. The majority of the school-generated traffic occurs and will continue to occur along Malia Street. Some minor volumes of traffic will divert onto Aliikoa Street to access the early learning center. The impacts of this diverted traffic on Aliikoa Street can be minimized by requiring traffic exiting the southeastern portion of the site to use the second internal roadway that exits onto Malia Street.

The second Malia Street driveway currently acts as a one-way drop-off and pick-up route through the school site. Cars enter the campus from Aliikoa Street and exit Malia Street. Since limited roadway widths prohibit simultaneous northern and southern traffic flow, the driveway could operate in alternating directions during the morning and afternoon peak periods. This improvement would accommodate increased traffic volumes minimizing traffic impacts on Aliikoa Street.

The existing church is the primary attractor of weekend traffic to the site. Approximately 60 percent of the traffic (259 vehicles) which is currently attracted to the church on Sunday, use Aliikoa Street to access the site. The proposed lifecare

facility will preclude the remaining 40 percent of the traffic (175 vehicles) from using the internal roadway that connects to the western driveway onto Malia Street.

The second Malia Street driveway could be used as an alternative route to and from the church on Sundays. As previously discussed, this internal roadway could be operated in alternating directions, before and after church services, serving the peak direction of traffic flow. This would aid in mitigating any potential negative traffic impacts on Aliikoa Street.

B. WATER

Water service is presently available via a 12-inch main on Malia Street. Communications received from the Board of Water Supply indicate water services are adequate to serve the development.

IMPACTS/MITIGATIVE MEASURES

Pending further investigation of water pressure and more detailed project design, the 12-inch main appears adequate to accommodate the requirements of Hale O Malia; thus no mitigative measures are being recommended.

C. WASTEWATER DISPOSAL

A 30-inch sewer line bisects the site and connects to the Kahala Sewer Interceptor line to the west. According to communications received from the Department of Public Works (see *Chapter 9*), the existing line is adequate for the proposed development.

IMPACTS AND MITIGATIVE MEASURES

The project is not expected to cause adverse impacts to the area's existing sewer lines, thus no mitigative measures are being presented. The siting of structures will ensure that physical access to this easement will not be impaired.

D. DRAINAGE

The Waialae-Nui Drainage Canal, which has been channelized with concrete masonry walls, forms the western boundary of the site; otherwise there are no water resources on or near the site.

The site presently has an underground system consisting of 18-inch and 12-inch drainage pipes which empties into the Waialae Nui Drainage Canal.

IMPACTS AND MITIGATIVE MEASURES

The system is expected to be adequate for the proposed site plan; however, more detailed drainage studies will be conducted later to determine whether design modifications and improvements are necessary.

E. PARKS AND SCHOOLS

Wilson School Playground and Aina Koa Playground are located nearby. Ample recreational facilities will be designed on-site for the elderly population, including gardens and walkways. Some of the Hale O Malia residents are likely to be members of the nearby Waialae Country Club, which features a golf course and other recreational amenities.

IMPACTS AND MITIGATIVE MEASURES

It is unlikely that there will be any need for the residents of the project to use City and County park facilities and the project will not affect area schools. Hale O Malia will cause no adverse impacts to parks or schools, thus no mitigative measures are being recommended.

F. UTILITIES

Electric

Electric service can be provided to the Hale O Malia site by connecting to distribution lines along Malia Street. Hawaiian Electric Company maintains a substation and a 46 kV transmission line adjacent to the site. The substation is located across the Waialae-Nui Drainage Channel, ewa of the project site.

Gas

Gas service is available via a 1-inch high pressure line at Malia Street. It is anticipated that this will be adequate to serve Hale O Malia.

Telephone

Telephone and cable service connections are available along Malia Street.

IMPACTS AND MITIGATIVE MEASURES

No adverse impacts to utility services are expected to be caused by the project.

G. POLICE

The project site is serviced by a police beat headquartered at the main station at Pawa'a. Hale O Malia will have its own security staff and there will be careful consideration to security needs in the design of the project, which will help minimize demands on police services.

IMPACTS AND MITIGATIVE MEASURES

The project is not expected to cause any adverse impacts on area police services. No mitigative measures are required.

H. FIRE SERVICES

The project site is approximately an equal distant between the Wailupe and Kaimuki fire stations, both of which are within approximately 5 minutes response time.

IMPACT AND MITIGATIVE MEASURES

The project is not expected to cause adverse impacts to area Fire Department services. Hydrant spacing and fire flow requirements will meet Board of Water Supply standards. Construction plans will be submitted to the Building and Fire Departments for review and approval prior to commencement of the project.

6. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS

A. Federal

The only Federal program involved is the use of the residents' Medicare benefits as part of the health care component of the lifecare program. Otherwise, no Federal funds will be used for construction or operation of the project, and no Federal plans, policies or controls are affected.

B. State

1. State Land Use District

The project site is within a State-designated Urban District, and the proposed use is permitted within this district.

2. The Hawaii State Plan and Functional Plans

The Hawaii State Plan (Chapter 226, Hawaii Revised Statutes, as amended) serves as a guide for the future long-range development of the State. The plan identifies goals, objectives, policies, and priorities and provides a basis for allocating limited resources, such as public funds, services, human resources, land, and energy. Sections of the Plan which are relevant to the proposed project are discussed below:

Section 226-6 Objectives and policies for the economy -- in general.

- (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.
- (2) A steadily growing and diversified economic base that is not overly dependent on a few industries.

Comment: As noted previously, the project will create temporary employment opportunities during construction and permanent jobs afterward in the proposed medical center, in food and custodian services, security and maintenance and in administration.

Section 226-18, HRS, establishes objectives relating to energy-efficient systems to be integrated with site planning and design of the project to the maximum extent feasible.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

Promote the prudent use of power and fuel supplies through conservation measures including education and energy efficient practices and technologies.

Comment: Although design of the project is conceptual at this time and specific energy-efficient systems have not been determined, the project will be designed to incorporate the most recent energy-efficient electrical and mechanical technology available. For example, although individual opportunities will be provided for air-conditioning some of the living units (principally for acoustical reasons), natural ventilation will be given priority in the majority of the project. Other energy-saving technologies, such as the use of heat pumps, energy-efficient lighting systems, and building orientation to minimize air-conditioning requirements will also be incorporated within the project's site plan and design.

Section 226-19 Objectives and policies for socio-cultural advancement -- housing.

- (1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, livable homes located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals.
- (2) The orderly development of residential areas sensitive to community needs and other land uses.

Comment: The project will provide attractive housing and lifecare services to a growing segment of the population with special shelter and care needs. It will be situated where other conveniences, such as shopping and transportation, are nearby and will be designed for compatibility with the surrounding area and adjacent land uses.

Section 226-20 Objectives and policies of socio-cultural advancement -- health.

- (1) Fulfillment of basic individual health needs of the general public.
- (2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.

Comment: The project will provide a wide range of health and other care services to accommodate the needs of the elderly residents, including personal care units (20 beds) and a licensed 60-bed skilled nursing facility for those who require permanent or temporary 24-hour nursing care.

The principal implementing tools for the Hawaii State Plan are the State Functional Plans. The project supports the following Functional Plans:

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

Health.

3A Policy: Improve Access to Health Care for Special Populations

3A2 Implementing Action: Develop and implement programs to improve the health status of people who are elderly.

Human Services. (Elderly)

Objective B To increase cost-effective, high quality home and community based services.

Comment: The lifecare facility will provide a full complement of health care and personal services for elderly residents in an attractive and convenient residential setting, and it will also offer an important alternative to institutionalization.

C. City and County of Honolulu

1. General Plan (GP)

The City's General Plan sets forth long-range social, economic, environmental, and design objectives and policies for the general welfare and prosperity of the people of Oahu in nine areas of concern. The following is a discussion of the project's relationship to relevant GP objectives and policies:

Population.

Objective C. To establish a pattern of population distribution that will allow the people of Oahu to live and work in harmony.

Policy 1. Facilitate the full development of the primary urban center.

Comment: The project site is a relatively underutilized parcel located just on the fringe of the primary urban center and ideally situated for the intended market, existing residents of the East Oahu area who are of retirement age or approaching that age. Proximity to the services of Kahala Mall and business district, as well as major bus lines, is an added convenience to the future elderly residents of Hale O Malia. The project is expected to add an estimated 400 people to East Oahu's resident population; however, many of these people are likely to be presently residing in the area. As many as 250-270 existing dwellings in the area may be sold to new households or turned over to the children of the future Hale O Malia residents.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

Economic Activity.

Objective A. To promote employment opportunities that will enable all the people of Oahu to attain a decent standard of living.

Policy 1. Encourage the growth and diversification of Oahu's economic base.

Policy 2. Encourage the development of industries which will contribute to the economic and social well-being of Oahu residents.

Comment: The project will contribute to economic growth and diversification by creating new jobs outside of the visitor industry. It will create temporary jobs during the construction period and an estimated 144 permanent jobs after occupancy and operation. Approximately 47 staff will be employed in the medical center; 56 in food services; 20 in custodial services; 14 in security and maintenance; and 7 in administration. In addition to new job opportunities, the project is also expected to generate excise tax revenues.

Housing.

Objective A. To provide decent housing for all the people of Oahu at prices they can afford.

Policy 8. Encourage the provision of housing designed for the elderly and the handicapped.

Objective C. 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.

Policy 1. Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes.

Policy 5. Discourage residential development where roads, utilities, and community facilities cannot be provided at a reasonable cost.

Comment: As noted previously, the project will add approximately 300 units to the supply of housing available specifically to the elderly, and since approximately 90 percent of its residents are expected to be drawn from the local population, an estimated 250 to 270 dwellings in the East Oahu area will be available in the housing market. While the focus of the project will be on the elderly, and not on a wide range of household sizes and incomes, it will fulfill a critical need for this special purpose housing. As discussed in detail in *Chapter 5* of this document, the project will not result in a significant increased demand on public services and facilities, nor require an unreasonable investment in public improvements.

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

Physical Development and Urban Design.

Objective D. To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.

Policy 3. Encourage distinctive community identities for both new and existing districts and neighborhoods.

Policy 4. Require the consideration of urban-design principles in all development projects.

Comment: Hale O Malia is designed to be an attractive living environment and one clearly distinctive in its lifetime care concept for the rapidly growing elderly segment of our population. Design elements will be incorporated within the site plan, such as modified hip-form roofs, to help create a visual transition between the mauka residential neighborhood and the higher-intensity commercial and institutional uses and the Kalaniana'ole Highway viaduct to the west and makai of the project site.

Health and Education.

Objective A. To protect the health of the people of Oahu.

Policy 1. Encourage the provision of health-care facilities that are accessible to both employment and residential centers.

Comment: Hale O Malia will provide "lifecare" services on a long-term basis to its elderly residents in a setting where other necessary services and conveniences are also readily available, such as shopping and transportation. As noted above, the project directly supports State policies for the promotion of alternatives to institutional care for the elderly and disabled, and fulfills critical housing needs as well.

2. Development Plan (DP) Common Provisions and Special Provisions

While it is possible to view the proposed project as a "health care facility", and therefore a permitted use within the present Public Facility land use designation for the site, the predominate use pattern will be residential, at a density comparable to Medium Density Apartment use; therefore, as noted previously, a DP Land Use Map amendment to that designation is being sought.

In addition, the DP Common Provisions contain objectives for identifying a range of potential social impacts of a project (reference Section 32-1.10). These potential impacts are described in *Chapter 4*. Their relationship to DP Common Provisions are summarized as follows:

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

The project will have minimal effects on demographics, resulting in a relatively small increase in residential population and no expected increase in visitor population. It will be designed for compatibility with the existing apartment, commercial, and institutional uses within the neighborhood.

The project will provide new opportunities for employment in a variety of fields and additional general excise tax revenues.

It will increase the range of housing choices, both directly, by addressing housing for a special needs group, and indirectly by freeing up other dwellings for sale or rent.

The project will provide new medical facilities for the elderly and will not adversely affect other existing public services and facilities, such as schools, parks, police and fire protection or other services.

Finally, it would not adversely affect any existing natural landmarks or unique resources and will be designed to enhance the physical attractiveness and open space of the immediate neighborhood environment.

DP Special Provisions, Section 32-4.2, establish certain urban design principles and controls for the East Honolulu area. The project will conform with all open space, public view, height control and density controls for the Medium Density Apartment designation being sought.

The following policy statement also appears in the Special Provisions:

"Suburban residential development is to remain on the lower ridges, inner valley floors, and along Kalaniana'ole Highway. Some low and medium-density apartment uses will be permitted in Hawaii Kai, as designated on the land use map."

The Waialae-Nui Drainage Canal, on the western edge of the site, forms the boundary separating the East Honolulu Development Plan area from the Primary Urban Center Development Plan area. However, the ridge to the east of the site (see *Figure 4*) forms what seems to be a more meaningful separation of these two Development Plan areas, and the site should be seen as more a part of the Primary Urban Center area than the East Honolulu area for the following reasons:

1. The ridge is a visual and physiographic barrier along the Kalaniana'ole Highway corridor as one approaches the site from either direction. The site is, from a visual and physical geographic standpoint, much more a part of the area to the west (Primary Urban Center) than the area to the east (East Honolulu). For example, Kapakahi Stream and Waialae Nui Stream are in the same drainage

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

basin and, in fact, merge within Waialae Country Club's golf course. The next valley to the east, where Kalani High School and the Kalani Iki neighborhood are located, are more separated, visually and geographically, from the Star of the Sea campus than the areas to the west are.

2. The ridge is the point at which the transition of Kalaniana'ole Highway from a limited-access, elevated viaduct to an on-grade, divided roadway with signalized intersections is complete. This transition has a major influence on the character of development in the surrounding areas, creating a clear distinction between the urban environment in the vicinity of Kahala Mall and the suburban residential environment of East Honolulu.
3. From a land use standpoint, the Star of the Sea site is part of a cluster of uses which form what might be termed the "Kahala Town Center", as depicted in *Figure 7*. The uses are comprised of a mix of commercial, apartment and institutional uses. The present Star of the Sea campus represents a portion of the institutional uses, along with the Wilson Elementary School, the YMCA and the Church of Latter Day Saints. The contiguous apartment and commercial uses are compatible elements of this "Town Center", supported in part by the proximity to major transportation facilities and reinforced by their proximity to one another. Since most of this "Town Center" lies within the Primary Urban Center, it is appropriate to view the Star of the Sea site in the same light. Therefore the requested Medium Density Apartment designation is a continuation of the "Kahala Town Center" concept and not in conflict with established Development Plan policies.
4. The building forms on the Star of the Sea campus are also related to the "Kahala Town Center" described above. The buildings in this area are generally larger and taller than those in the single-family residential areas on the periphery and to the east. Several buildings are considerably taller than what present Development Plan height limits permit. The request for Medium Density Apartment designation would permit a maximum building height of 60 feet, which is the same as the height limit on adjacent Commercial-designated properties. Under the present Public/Quasi-Public designation for the campus, there is no specific height limit. (See *Figure 8*.) In such cases, the height limit is determined by the underlying zoning. Since the Star of the Sea campus is zoned R-7.5, it carries the height limit that applies to residential zoning districts. However, the zoning could just as well have been taken from adjacent commercial properties which carry a 60-foot high limit in the B-2 District. Thus, it

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

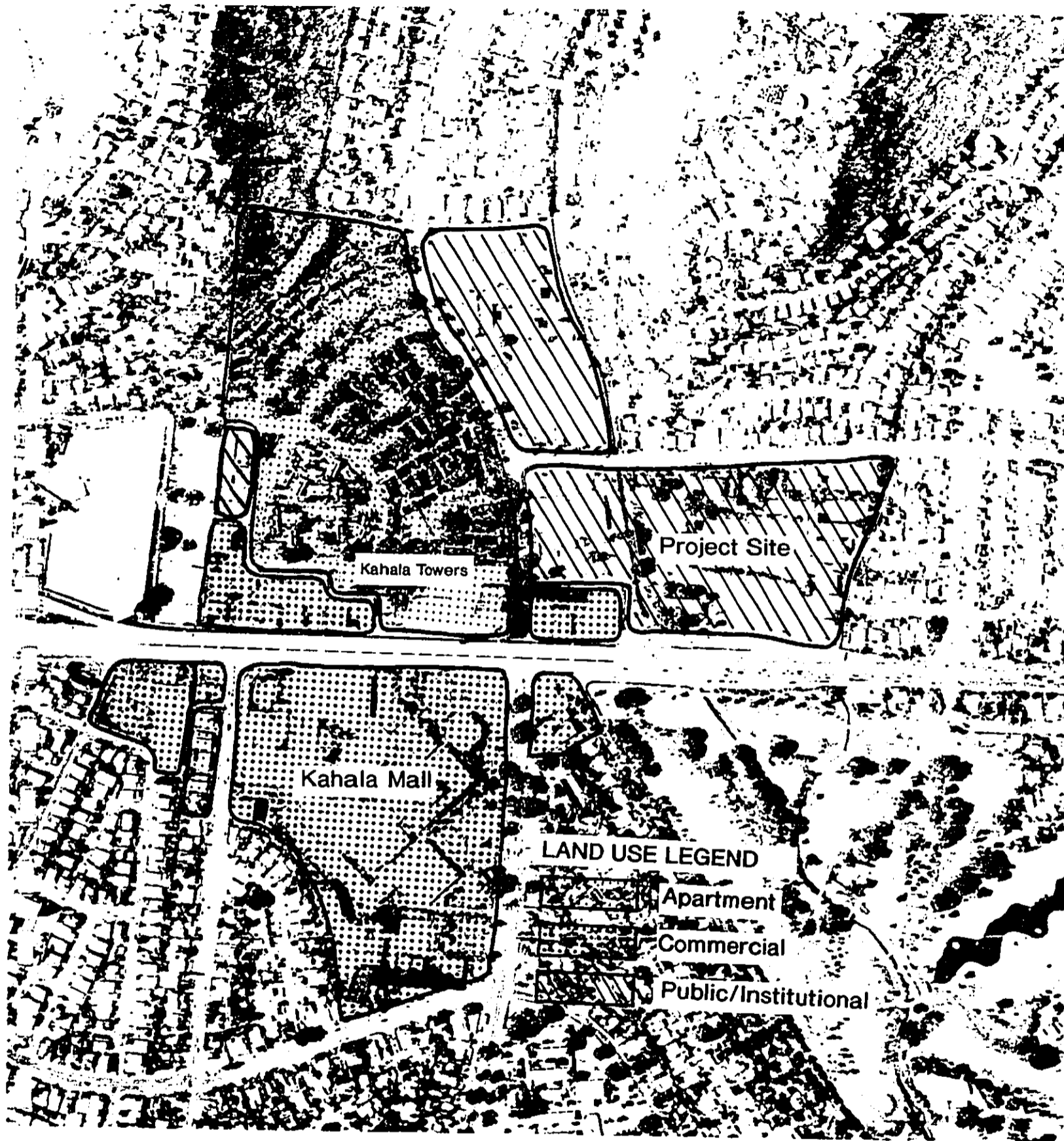


FIG. 9 : KAHALA TOWN CENTER - LAND USE

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY



FIG.10: KAHALA TOWN CENTER - BUILDING HEIGHTS

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

is reasonable to conclude that the requested height limit of 60 feet is consistent with established Development Plan policies.

3. Zoning: Land Use Ordinance (LUO)

The property is now zoned R-7.5 Residential District, but as noted previously, on approval of the DP amendment to Medium Density Apartment, a change in zoning to A-2 Apartment District will be sought. The project will conform to all relevant development standards within this District, including lot coverage, required yards, height limits, density, and parking.

7. RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Long-term productivity of the project site will be enhanced by the proposed lifecare facility, since the proposed use will support and complement uses in the surrounding community and provide lasting, positive benefits to elderly residents in need of special housing and health care needs. Long-term socio-economic benefits to be realized from the project, as previously described, are considered to clearly outweigh short-term, temporary physical impacts on the environment.

No reasonable land use options are foreclosed, since other alternative uses, such as expanding institutional uses or developing market housing, would result in potentially more adverse effects, would not support important social objectives and would not meet the documented need for housing and health care for a significant and growing segment of the community.

8. IRRETRIEVABLE AND IRREVERSIBLE COMMITMENTS OF RESOURCES

Hale O Malia will result in an irreversible and irretrievable commitment of capital, labor, land and energy for the design and development of the project. Construction materials and human resources (labor) will be committed and land, when fully developed, will be irretrievably committed to the proposed permanent uses of the land.

The proposed project will not adversely curtail potential use of the land since, among the alternative uses considered for the project site, the lifecare facility is considered the most appropriate in terms of community needs, public policies, and long-term effects on the surrounding environment.

No natural resources on the project site will be committed, and no socio-cultural resources in surrounding environs will be adversely affected by the development of the project.

9. CONSULTED PARTIES AND PARTICIPANTS IN THE DEIS PREPARATION PROCESS

A. Consulted Parties

The following organizations and agencies were sent a written request for comments during the preparation phase for the DEIS. The ones submitting written comments are listed with an asterisk, and a copy of their letter follows.

Federal

U.S. Department of Housing and Urban Development

- * U.S. Army Corps of Engineers

State

Housing Finance and Development Corporation

- * Office of State Planning

Department of Business and Economic Development and Tourism

- * Department of Land and Natural Resources

Department of Health

- * Department of Transportation

- * Department of Education

- * Office of Environmental Quality Control

- * U. of H. Environmental Center

City

Department of General Planning

Department of Land Utilization

- * Department of Transportation Services

- * Department of Public Works

- * Building Department

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

- * Board of Water Supply
- * Fire Department
- * Police Department
- * Office of Human Resources
- * Department of Parks and Recreation
- Department of Finance
- * Department of Housing and Community Development

Individuals and Organizations

- * Hawaiian Electric Company
- Outdoor Circle
- Hawaiian Telephone
- Ainakoa Community Association
- Waialae Nui Ridge line Community Association
- Kahala Community Association
- Twenty-Second Avenue Community Association
- Waialae/Kahala Neighborhood Board No. 3

B. Participants

EIS Preparer: Lacayo Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

Traffic Impact: Parsons, Brinckerhoff, Quade & Douglas, Inc.
Two Waterfront Plaza
Suite 220
Honolulu, Hawaii 96813

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

Air Quality: B. D. Neal & Associates
P.O. Box 6552
Captain Cook, Hawaii 96704

Noise Impact: Darby & Associates
970 No. Kalaheo Avenue
Suite A-311
Kailua, Hawaii 96743

Archaeological: Archaeological Consultants of Hawaii
59-624 Pupukea Road
Haleiwa, Hawaii 96712

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

810 SOUTH KING STREET, 8TH FLOOR
HONOLULU, HAWAII 96813
PHONE 933-4457 • FAX 937-8498



FRANK P. FASE
DIRECTOR

MIKEEN SCARFONE
DIRECTOR
GAIL M. BRITO
DEPUTY DIRECTOR

February 14, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice (EISPN)
Hale O Malia Life Care Community

We have reviewed the subject EISPN and have no comments to offer at this time. However, we would appreciate being able to review a copy of the EIS.

Thank you for the opportunity to comment.

Sincerely,

MICHAEL H. SCARFONE
Director

DEPARTMENT OF HUMAN RESOURCES
CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING, 6TH FLOOR
630 SOUTH KING STREET
HONOLULU, HAWAII 96813 • PHONE 933-4541



FRANK P. FASE
DIRECTOR

MARIA VICTORIA R. BUNYE
DIRECTOR
Acting
VICTOR O. GUILLEMO, JR.
DEPUTY DIRECTOR
Acting

February 19, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear John:

Subject: Comments on EISPN for Hale O Malia Life Care Community

The proposed development of a life care facility project for elders 65 years and older on a portion of the existing Star of the Sea church/school campus is an excellent use of valuable property in the East Honolulu area.

We strongly support any development of services and facilities in East Honolulu for older residents because of the large and growing number of older people living in this region. According to the 1980 census, Neighborhood Board areas 2 (Kuliouou/Kalani Iki), 3 (Maialae-Kahala), 4 (Kaimuki), 5 (Diamond Head/Kapahulu/St. Louis Heights), and 6 (Palolo) have a total of 10,219 residents over the age of 65. This comprises 12% of the total population of the area which is almost twice the 7% average for Oahu. We estimate that the 1990 census will reveal that East Honolulu's current 65+ population has grown by 55% with counts exceeding 16,000 older persons.

Despite this high number of older residents, there is a serious lack of housing and service options in this area. In the City's current Three Year Area Plan on Aging prepared by the Elderly Affairs Division of this department, the East Honolulu area is identified as a high need area for the development of supportive eldercare services such as adult day care. The proposed life care facility coincides with this need by offering residents three levels of living and supportive service options: residential apartments, personal care units, and skilled nursing home care.

A comprehensive life care program such as proposed for Hale O Malia does not currently exist in Hawaii. Arcadia Retirement Residence

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
530 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FARI
02-100

HERBERT K. MURAKAWA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 91-133

JOHN WAIKAI
DIRECTOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2289
HONOLULU, HAWAII 96814

OFFICE OF THE SUPERINTENDENT

February 14, 1991

February 13, 1991

Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Gentlemen:

Subject: Hale O Malia Life Care Community
Tax Map Key 3-5-17IPOR. 2

We have reviewed the Environmental Impact Statement Preparation Notice (EISP#) for the subject project and have no comments to offer.

Thank you for the opportunity to review the EISP#.

Very truly yours,

James Harada
FOR HERBERT K. MURAKAWA
Director and Building Superintendent

cc: J. Harada

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

SUBJECT: Environmental Impact Statement Preparation Notice (EISP#)
Hale O Malia Life Care Community,
Tax Map Key: 3-5-17: POK. 2

Our review of the subject project indicates that it will have no impact on the public schools in the area.

Thank you for the opportunity to comment.

Sincerely,

Charles T. Toyouchi
Charles T. Toyouchi
Superintendent

CTT:jl

cc: T. Nakai
J. Kim

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER


Mr. John P. Whalen
Page 2
February 19, 1991

would be the closest approximation although it does not cover the same range of services offered by the proposal. Arcadia has a long waitlist of up to ten years. Hale O Malia would be a progressive direction and a welcomed addition to needed supportive housing options on Oahu.

In addition, we endorse the location of this project within an established community as it maximizes the older residents' access to shopping, banks, doctor's offices, recreation and other programs and facilities. Our experience has been that nearby access to community and supportive services is more critical to older, less mobile residents.

We appreciate this opportunity to comment on this project. If there are any questions, please contact Mrs. Lynette Kurren at 523-4361. We look forward to the project's approval and completion.

Very truly yours,


MARIA VICTORIA R. BUNYE
Acting Director
Department of Human Resources



February 22, 1991

Maria Victoria R. Bunye
Acting Director
Department of Human Resources
650 South King Street, 6th Floor
Honolulu, Hawaii 96813

RE: Hale O Malia Lifecare Community

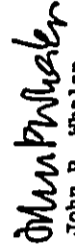
Dear Ms. Bunye:

Thank you for your February 19, 1991, response to our request for comments on the Environmental Impact Statement Preparation Notice (EISPN) for the above project.

Your comments in support of the Hale O Malia proposal are greatly appreciated. We are especially appreciative of the additional data you provided on the critical need for eldercare programs and services in the Oahu neighborhoods which this facility is intended to serve. This information will be incorporated within the Draft EIS now being prepared, with a copy of the full text of your response letter.

Again, thank you for your interest and support. If you should have questions or wish additional information on the proposal, please feel free to contact me.

Sincerely,
LACAYO PLANNING, INC.


John P. Whalen
President



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT. SHAFTER, HAWAII 96824-5440

REPLY TO
ATTENTION OF:

February 22, 1991

Planning Division

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Thank you for the opportunity to review the Environmental Impact Statement Preparation Notice (EISP) for the Proposed Hale O Malia Life Care Community, Waialae-Kahala, Honolulu. The following comments are offered:

- a. A Department of the Army permit will not be required for this project.
- b. As indicated on page 12 (paragraph 5.b) of the EISP, the project site is in zone X (shaded), an area within the 500-year flood plain.

Sincerely,

C. Fujii
Clarence Fujii
Acting Director of Engineering

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
450 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FARI
MAYOR

February 22, 1991

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement
Preparation Notice (EISP)
Hale O Malia Life Care Community
TMK: 3-5-17: Portion of 2

We have reviewed the subject EISP and have the following comments:

1. The existing 30-inch sewer running through the property is adequate for the proposed development.
2. The developer should be informed that no structure will be allowed over the existing easement.
3. To our knowledge, no future road widening for Malia Street is depicted on the Development Plan Public Facility Map.

Very truly yours,

C. Michael Street
SAM CALLEJO
Director and Chief Engineer

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DIRECTOR AND CHIEF ENGINEER
In reply refer to:
ENV 91-45(449)

CITY AND COUNTY OF HONOLULU

POLICE DEPARTMENT

1415 SOUTH BERTHOUD STREET
HONOLULU, HAWAII 96813-0878 COOL (808) 933-3111



FRANK F. FARI
MAYOR

OUR REFERENCE ES-1K

March 4, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

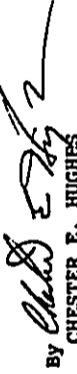
Dear Mr. Whalen:

In response to your request of February 6, 1991, we have reviewed the environmental impact statement preparation notice for the Hale O Malia Lifecare Community. The notice adequately addresses the concerns we would normally have, and we have no comments to add.

Thank you for the opportunity to review this proposal.

Sincerely,

MICHAEL S. NAKAMURA
Chief of Police

By 
CHESTER E. HUGHES
Assistant Chief of Police
Support Services Bureau

JOHN WILHEE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
808 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097
March 5, 1991

EDWARD Y. HIRATA
DIRECTOR
DEPUTY DIRECTORS
AL PALMO
JOYCE T. OMBRE
JEANNE K. SCHWARTZ
CALVIN M. TSUDA
WH REPLY REFER TO
HWY-PS
2.5859

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Environmental Impact Statement Preparation Notice (EISP/N)
Hale O Malia Life Care Community, Tax Map Key 3-5-17; por. 2
Thank you for your letter of February 6, 1991, requesting our review of the subject proposed facility.

No direct access will be permitted onto Kalaniana'ole Highway.

The Traffic Impact Analysis (TIAR) prepared for the proposed facility should be submitted for our review. We will reserve further comments until we have evaluated the TIAR.

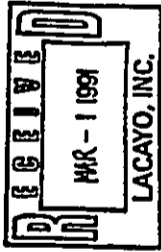
Very truly yours,



Edward Y. Hirata
Director of Transportation

Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001

ENV 2-1
JA/G



William A. Borred
Manager
Environmental Department

February 26, 1991

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

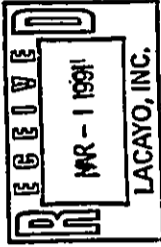
Subject: Environmental Impact Statement Preparation Notice
(EISP) Hale O Malia Life Care Community, Tax Map Key
3-5-17: por.2

We have reviewed the subject EIS, and found two 44kv lines and a substation located adjacent to the proposed site as marked in red on the attached Location Map (fig 1). We have no other comments at this time on the proposed project. HECO shall reserve comment pertaining to the protection of existing power lines bordering the development area until construction plans are finalized.

Sincerely,

An HEI Company

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
830 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK P. LAI
DIRECTOR

WALTER M. OZANA
DIRECTOR
ALTHEA C. AU
DEPUTY DIRECTOR

February 26, 1991

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice
Hale O Malia Life Care Community
Tax Map Key 3-5-17: 02 (Portion)

We have reviewed the proposed project and offer the following comments.

We have no objection to the project. Since residential units are being proposed, the project will be required to comply with Park Dedication Ordinance No. 4621 as specified in the City's Park Dedication Rules and Regulations.

Should you have any questions, please contact Lester Lai of the Advance Planning Branch at extension 4696.

Sincerely,

WMO:s1

[RECEIVED] [MAR 1 1991] [LACAYO, INC.]

**FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU**

1438 SOUTH BERETANIA STREET, ROOM 302
HONOLULU, HAWAII 96814



FD-36 (Rev. 5-22-64)

LOUELE CAMERA
FIRE CHIEF
DONALD S. M. CHANG
DEPUTY FIRE CHIEF

John P. Whalen
March 6, 1991
Page 2

Should additional information or assistance be required, you may contact
Captain Michael Chung or Fire Inspector Michael Aki of our Fire Prevention
Bureau at 523-4186.

March 6, 1991

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

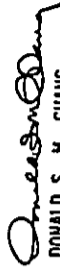
Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice (EISPN)
Hale O Malia Life Care Community
Tax Map Key 3-5-17; por. 2

We have reviewed the application of the above subject request, and have no
objections to the proposal providing the following conditions are complied
with prior to approval. Compliance with Article 10 of the Uniform Fire Code
should also be made, but not limited to the following:

1. Provide a private water system where all appurtenances, hydrant
spacing and fire flow requirements meet Board of Water Supply
standards.
2. Provide a fire access road to within 150 feet of the first floor
of the most remote structure. Such access shall have a minimum
vertical clearance of 13 feet 6 inches, be constructed of an
all-weather driving surface of not less than 20 feet in
unobstructed width shoulder to shoulder capable of supporting
the minimum 60,000 pound weight of our fire apparatus and with a
gradient not to exceed 20%. All dead-end fire apparatus access
roads in excess of 150 feet in length shall be provided with an
approved turnaround having a radius of not less than 35 feet.
3. Submit construction plans to the building and fire departments
for permit review and approval prior to commencement of the
project.

Very truly yours,


DONALD S. M. CHANG
Fire Deputy Chief

MC:mc



LACAYO PLANNING, INC.
12 March 1991

Donald S. M. Chang, Deputy Chief
Fire Department
City and County of Honolulu
1455 South Beretania Street, Room 305
Honolulu, Hawaii 96814

RE: Hale O Malia Lifecare Community

Dear Deputy Chief Chang:

Thank you for the comments in your March 6, 1991 letter concerning fire protection issues related to the proposed Hale O Malia project.

We will be contacting your department at a later time, during design development for this project, to ensure that fire protection needs and Uniform Fire Code standards are met.

Sincerely,
LACAYO PLANNING, INC.

John P. Whalen
John P. Whalen, AICP



OFFICE OF STATE PLANNING
Office of the Governor
STATE CAPITOL, HONOLULU, HAWAII 96813 TELEPHONE 808/546-1800

March 6, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice (EISP/N)
Hale O Malia Life Care Community (TRK: 3-5-17: par. 2)
Maialae-Kahala, Hawaii

The applicant, Episcopal Homes Foundation of Hawaii, Inc., is proposing a lifecare facility (Hale O Malia) for the elderly on a portion of the existing Star of the Sea school/church campus. According to the subject document, the proposed project will consist of a complex of multi-story buildings with a total floor area of about 425,000 square feet and a maximum height of 60 feet. Three levels of living are offered: residential apartments (300 units), personal care units (20 beds), and a skilled nursing facility (60 beds).

We have reviewed the subject project and have no objections if impacts to public services and facilities, such as traffic generation, can be resolved.

Thank you for the opportunity to comment.

Sincerely,

Harold S. Masumoto
Harold S. Masumoto
Director

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
880 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FISH
DIRECTOR

JOHN WHALEN
DIRECTOR

JOSEPH M. MAGALDI, JR.
DIRECTOR

March 8, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation
Notice (EISP/N) Hale O Malia Life Care
Community. Tax Map Key: 3-5-17: POR. 2

In response to your letter dated February 6, 1991 regarding the
subject project, the following are our comments:

1. Electric utility lines must be underground
2. According to the Development Plan Public Facilities Map,
there are no plans for future road widening on Malia
Street.
3. The location of proposed driveways should be specified
and shown on the project plans.
4. Construction plans for off-site work within the City's
right-of-way should be reviewed by our department.

If you have any questions, please contact Roy Kaneko at 527-6019.

Sincerely,

JOSEPH M. MAGALDI, JR.
Director



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

720 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813

March 7, 1991

Mr. John P. Whalen, AICP
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice
(EISP/N) for Hale O Malia Life Care Community,
THK: 3-5-17: por. 2

Thank you for providing the opportunity to review and comment on
the above subject. We do not have any comments to offer on the
subject at this time.

Sincerely,

BRIAN J. J. CHOY
Acting Director, OEQC

BRIAN J. J. CHOY
Acting Director

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
530 SOUTH BERETANIA STREET
HONOLULU HAWAII 96813



March 11, 1991

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:


Subject: Your Letter of February 6, 1991 Regarding the Environmental Impact Statement Preparation Notice (EISPN) for the Proposed Hale O Malia Life Care Community. TMK: 3-5-17: Por. 2, Malia Street

Thank you for the opportunity to comment on the EISPN. We have the following comments on the proposed Life Care Community development:

1. The existing water system is presently adequate to accommodate the proposed development. There is one existing service to the property.
2. The availability of additional water will be confirmed when the building permit is submitted for our review and approval. If additional water is made available, the applicant will be required to pay our Water System Facilities Charges for source-transmission and daily storage.
3. If a meter larger than 2 inches is required to accommodate the proposed development, the construction drawings showing the installation of the meter should be submitted for our review and approval.
4. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Bert Kuloa at 527-5235.

Very truly yours,


KAZU HAYASHIDA
Manager and Chief Engineer

FRANK F. EASY, Mayor
DCIARA B. GOYEN, Chairman
SISTER M. DAVYNIAH, CHICK O'SF
Vice Chairman
SAM CALLEJO
EDMUNDY HRATA
WALTER O. WATSON, JR.
MAURICE H. YAMASATO
KAZU HAYASHIDA
Manager and Chief Engineer

LACAYO PLANNING, INC.

14 March 1991

Mr. Kazu Hayashida, Manager
and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

RE: Hale O Malia Lifecare Community

Dear Mr. Hayashida:

Thank you for the comments in your March 11, 1991 letter concerning water supply for the proposed Hale O Malia project.

We are coordinating fire protection requirements with the Fire Department.

Sincerely,
LACAYO PLANNING, INC.


John P. Whalen, AICP



University of Hawaii at Manoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2150 Campus Road
Hosohulu, Hawaii 96822
Telephone (808) 956-7361

Mr. John P. Whalen
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

March 11, 1991
PW:0079


Preparation Notice
Environmental Impact Statement (EIS)
Hale O Malia Life Care Community
Waiialea-Kahala, Oahu

This project proposes to construct a 425,000 square foot residential and health care facility for the elderly on approximately 7.5 acres in the Waiialea-Kahala neighborhood of Honolulu.

Many impacts identified in the preparation notice are said to be mitigated by design elements of the site plan. It is, therefore, important for the Draft EIS to contain a detailed site plan which includes the landscaping plan, pedestrian circulation system, the location of the onsite parking facilities, and the access/egress plan for vehicular traffic, particularly emergency vehicles.

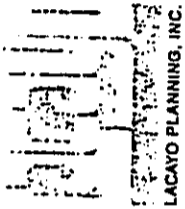
Given the nature of this project, the Draft EIS should also discuss the accessibility of hospitals and emergency care facilities in the area, and the distances to convenience shopping for a population of this type.

Thank you for the opportunity to comment on this document.

Yours truly,

John T. Harrison, Ph.D.
Environmental Coordinator

cc: CEQC
Roger Fujjoka
Lee Lyttle

AN EQUAL OPPORTUNITY EMPLOYER



14 March 1991

Mr. John T. Harrison, Ph.D.,
Environmental Coordinator
University of Hawaii Environmental Center
Crawford Hall, Room 317
2550 Campus Road
Honolulu, Hawaii 96822

RE: Hale O Malia Lifecare Community
Environmental Impact Statement Preparation Notice

Dear Mr. Harrison:


Thank you for the comments in your March 11, 1991 letter concerning the Proposed Hale O Malia project.

The Draft EIS will contain a preliminary site plan, showing the general location of buildings, parking, and vehicular access. A more detailed site plan is not required for a Development Plan amendment, but will be provided in conjunction with the application for a Conditional Use Permit.

The project site is directly adjacent to the H-1 Freeway and thus has good access to hospitals and emergency care facilities. In addition, Hale O Malia will have a skilled nursing facility, 24-hour nursing service, a 24-hour emergency on-call physician, and a staff physician with regular office hours.

Since the project is located near Kahala Mall, access to shopping and other services is excellent.

Sincerely,
LACAYO PLANNING, INC.


John P. Whalen, AICP

JOHN M. BAKER
DIRECTOR OF PLANNING



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 971
HONOLULU, HAWAII 96813

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

MEMBERS

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ADMINISTRATIVE DEVELOPMENT
PROGRAMS

ANTHONY A. KANE
CONSTRUCTION AND AFFAIRS

DAVID L. HARRIS
RECORDS (SUPERVISOR)

JOHN M. BAKER
DIRECTOR OF PLANNING

WILLIAM W. PATY
CHAIRPERSON

DEAN T. KOCHI
MEMBER

DAVID L. HARRIS
MEMBER

ANTHONY A. KANE
MEMBER

JOHN M. BAKER
MEMBER

WILLIAM W. PATY
MEMBER

REF: OCEA: JN

MAR 13 1971

File No.: 91-325
Doc. No.: 9948E

Mr. John P. Whalen
Lacaya Planning, Inc.
737 Bishop Street
Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Environmental Impact Statement Preparation Notice -
Hale O Halia Life Care Community TRK: 3-3-17; por. 2

Thank you for giving our Department the opportunity to comment on
this matter. We have reviewed the materials you submitted and have
the following comments.

Our Department's Historic Preservation Division comments that a
review of our records shows that the project parcel has not
undergone archaeological testing to determine if significant
sub-surface historic sites are present, so the fact that no
historic sites are known at the project parcel does not mean that
significant sites are absent. Little archaeological work has been
completed in this area. Several human burials have been unearthed
during construction activities makai of Kalaniana'ole Highway. A
brief review of mid-1800s Land Commission Awards shows that the
area between the base of the hills and the beach was used for
irrigated taro agriculture in the early historic period. Thus, it
might be expected that human burials or evidence for agriculture
are buried at the project parcel.

Land alteration in this century may have considerably altered the
ground and could have destroyed any such sites. However, there is
no supportive evidence for this claim at this time. The applicant
would need to document likely depths of the former historic sites
in the area and indicate that land disturbance has equalled or
exceeded these depths.

Mr. John P. Whalen

-2-

Doc. No.: 9948E

Alternatively, if extensive fill has occurred, this needs to be
mentioned and considered in relation to construction plans.

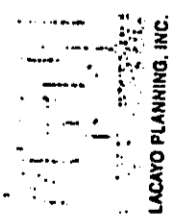
At this point, we would recommend that either (1) the applicant
submit evidence that land disturbance makes it unlikely that sites
are present or (2) the applicant have archaeological subsurface
testing take place at representative places across the project area
to determine if significant historic sites are present or not. We
recommend that this be done as soon as possible in the planning
process.

If significant historic sites are present and will be disturbed,
then acceptable mitigation measures would have to be worked out,
and be executed, prior to construction.

Thank you for your cooperation in this matter. Please feel free to
call me or Roy Schaefer at our Office of Conservation and
Environmental Affairs, at 548-7837, if you have questions.

Very truly yours,

William W. Paty



LACAYO PLANNING, INC.

14 March 1991

Mr. William W. Pety, Chairperson
Board of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

RE: Hale O Malia Lifecare Community
Dear Mr. Pety:

Thank you for the comments in your March 13, 1991 letter concerning the potential for discovering archaeological resources at the Hale O Malia site.

We have contracted with Archaeological Consultants of Hawaii, Inc., to prepare an archaeological inventory report on the project site. The report will be included in the Draft EIS.

Sincerely,
LACAYO PLANNING, INC.

John P. Whalen, AICP

10. COMMENTS AND RESPONSES ON THE DRAFT EIS

The following organizations and agencies were sent a copy of the Draft EIS for review. Notice of the publication of the DEIS was published in the *OEQC Bulletin* issues of March 23, April 8 and April 23, 1991. The 45-day public comment period ended May 7, 1991. Those who submitted comments within the comment period are listed with an asterisk. Copies of their comment letters follow, together with the applicant's responses to all substantive comments.

Federal

- Regional Division USEPA Region IX
- Army-DAFE (Facilities Eng. USASCH)
- * Navy
- * Soil Conservation Service
- * U.S. Army Corps of Engineers
- U.S. Coast Guard
- * U.S. Fish and Wildlife Service

State

- * OEQC Director
- Department of Agriculture
- * Department of Accounting and General Services
- * Department of Defense
- * Department of Land & Natural Resources
- DLNR State Historic Preservation Officer
- * Department of Business & Economic Development
- DBED Library
- * Housing Finance & Development Corporation
- Department of Transportation

Final Environmental Impact Statement for
HALE O MALIA COMMUNITY

State Archives

State Energy Office

* Office of State Planning

* U.H. Environmental Center

Water Resources Research Center

City and County of Honolulu

* Board of Water Supply

* Building Department

Department of Housing and Community Development

* Department of General Planning

* Department of Land Utilization

* Department of Parks and Recreation

* Department of Public Works

* Department of Transportation Services

* Fire Department

* Police Department

Non-Governmental Agencies

American Lung Association

* Hawaiian Electric Company

Office of Hawaiian Affairs



DEPARTMENT OF THE NAVY
 COMUSCANTON
 NAVAL BASE PEARL HARBOR
 BOX 119
 PEARL HARBOR, HAWAII 96822-1199

11000
 Ser 00F2/0800
 22 MAR 1991

UNITED STATES
 DEPARTMENT OF
 AGRICULTURE

SOIL
 CONSERVATION
 SERVICE

P. O. BOX 50004
 HONOLULU, HAWAII
 96850

April 1, 1991

City and County of Honolulu
 Department of General Planning
 Honolulu Municipal Building
 650 South King Street, 8th Floor
 Honolulu, HI 96813

Gentlemen:

Mr. Benjamin B. Lee, Chief Planning Officer
 Department of General Planning
 City & County of Honolulu
 Municipal Office Building
 650 South King Street, 8th Floor
 Honolulu, Hawaii 96813

HALE O MALIA AT WAIALAE-KAHALA

We reviewed the subject DEIS and have no comments to offer. Since we have no further use for the DEIS, it is being returned to the Office of Environmental Quality Control.

Thank you for the opportunity to review the draft.

Sincerely,

W. S. UJ

W. S. UJ
 Assistant State Civil Engineer
 in direction of
 the Commander

Copy to:
 Episcopal Homes Foundation
 of Hawaii, Inc.
 Lacayo Planning Inc.
 OEQC (w/DEIS)

Dear Mr. Lee:

Subject: Draft Environmental Impact Statement (DEIS) - Hale O Malie
 at Waialea-Kahala - A Lifecare Community, Honolulu, Hawaii

We have reviewed the above-mentioned document and have no comments to offer at this time. We would appreciate the opportunity to review the final EIS.

Sincerely,

Warren M. Lee

WARREN M. LEE
 State Conservationist

cc:
 Episcopal Homes Foundation of Hawaii, Inc. c/o the Episcopal Church of
 Hawaii, 229 Queen Emma Street, Honolulu, Hawaii 96813
 Lacayo Planning Inc., 737 Bishop Street, Suite 1550, Honolulu, HI 96813
 Mr. Bruce Anderson, Acting Director, Office of Environmental Quality
 Control, 220 South King Street, Fourth Floor, Honolulu, Hawaii 96813



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 320
FT SHAFTER HAWAII 96813

REPLY TO
ATTENTION OF

May 1, 1991


Planning Division

Mr. Benjamin B. Lee
Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

Dear Mr. Lee:

We have reviewed the Draft Environmental Impact Statement for Hale O Malia at Waialeale-Kahala, Honolulu. Our previous comments in response to the preparation notice (letter dated February 22, 1991) have been incorporated into the document. We have no additional comments.

Sincerely,


Kieuk Cheung
Director of Engineering

Copies Furnished:

Episcopal Homes Foundation of Hawaii, Inc.
c/o The Episcopal Church of Hawaii
229 Queen Emma Street
Honolulu, Hawaii 96813

✓ Lacey Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Office of Environmental Quality Control
State of Hawaii
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813



United States Department of the Interior
FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS OFFICE
P.O. BOX 50187
HONOLULU, HAWAII 96813

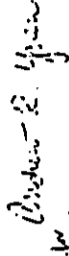
MAR 12 1991

Department of General Planning
City and County of Honolulu
Municipal Office Building
8th Floor-650 South King Street
Honolulu, Hawaii 96813

Re: Hale O Malia at Waialeale-Kahala-A Lifecare Community

Due to current staff limitations, the Pacific Islands Office, Fish and Wildlife Enhancement cannot devote the time to adequately evaluate potential impacts to important fish and wildlife resources from the proposed project. Please understand that this notification does not represent the Fish and Wildlife Service's approval of the proposed activity. We may review future actions related to this project should workload constraints be alleviated, or if significant adverse impacts to trustee fish and wildlife resources are identified.

Sincerely,


Robert P. Smith
Field Supervisor
Pacific Islands Office

cc: Episcopal Homes Foundation of Hawaii
✓ Lacey Planning Inc.
OECC

1119
4/6/91



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
229 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
March 27, 1991

BRIAN J. CHOY
Acting Director

JOHN W. HARRIS
Acting Director



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 113, HONOLULU, HAWAII 96813

4/6/91
RUSSEL S. WILSON
COMPTROLLER
ROBERT S. TAYLOR
DIRECTOR
LETTER # (P)1311.1

Mr. Verve Winquist
Department of General Planning
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Winquist:

SUBJECT: Hale O Malia Lifecare Community
Draft Environmental Impact Statement

We have reviewed the document listed above and have no comments to offer at this time.

Thank you for the opportunity to submit comments on this project.

Sincerely,

Brian J. Choy
Brian J. J. Choy

cc: Lacayo Planning

City and County of Honolulu
Department of General Planning
650 South King Street
Honolulu, Hawaii 96813

Gentlemen:

Subject: Hale O Malia at Waialae Kahala
East Honolulu Plan Amendment
Draft EIS

Thank you for the opportunity to review the subject document. We have no comments to offer.

Should there be any questions, please contact Mr. Ralph Yukomoto of the Planning Branch at 548-7192.

Very truly yours,

Teuane Tohinaga
TEUANE TOHINAGA
State Public Works Engineer

RY:bk
cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning, Inc.
QEQC

RECEIVED
APR 11 1991

JOHN WAKET
GOVERNOR
MERRYL E. TOWELL
COMMISSIONER
SARAJA KAMATA
DEPUTY COMMISSIONER
DEPUTY DIRECTOR



DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM

ENERGY DIVISION, 333 KUMUHOA ST., 8TH FLOOR, HONOLULU, HAWAII 96813
PHONE: (808) 544-2000 FAX: (808) 531-3243

4/9/91 12:33

EDWARD V. MCCLANDISON
PRESIDENT
MILES M. MALKER
VICE PRESIDENT



STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL

3100 DULANEY WAYS ROAD, HONOLULU, HAWAII 96813

April 5, 1991

JOHN WAKET
GOVERNOR

Engineering Office

Department of General Planning
City & County of Honolulu
Municipal Office Building
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

Gentlemen:

Hale O Malia at Maialae-Kahala
A Lifecare Community

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.

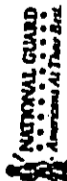
Sincerely,

Jerry M. Matsuda
Lieutenant Colonel
Hawaii Air National Guard
Contracting & Engineering Officer

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning Inc.
OEQC

RECEIVED

APR 10 1991 2:13



Department of General Planning
City & County of Honolulu
Municipal Office Building, 8th Floor
650 South King Street
Honolulu, Hawaii 96813

Dear Sir:

Subject: Hale O Malia @ Maialae-Kahala-A Lifecare Community
TRK: 3-5-17: por. 2

We wish to inform you that we have no comments to offer on the subject environmental impact statement.

Thank you for the opportunity to review the document.

Sincerely,

Maurice H. Kaya
Energy Program Administrator

MHK:hkels28

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning Inc.
Office of Environmental Quality Control

JOHN HANKE
DIRECTOR



STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
HOUSING FINANCE AND DEVELOPMENT CORPORATION
SEVEN WATERBURY PLAZA, SUITE 200
100 ALA MOANA BOULEVARD
HONOLULU, HAWAII 96813
FAX: (808) 524-4441

JOHN E. CONANT
EXECUTIVE DIRECTOR

BY REPLY REFER TO:

91:PLNG/1885jt

April 23, 1991

TO: Department of General Planning
City & County of Honolulu
FROM: *[Signature]*
John E. Conant
Executive Director

SUBJECT: Draft EIS for the Proposed Hale O Makia at Waialea-
Kahala Lifecare Community

Thank you for the opportunity to review the subject draft EIS.
We have no comments to offer.

JT:eks

c: Episcopal Homes Foundation of Hawaii, Inc.
Lacey Planning, Inc.
Office of Environmental Quality Control

JOHN BAKER
DIRECTOR OF LAND

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



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 51
HONOLULU, HAWAII 96813

Honorable Benjamin Lee -2- Doc. No.: 0612E

Nowhere in the report is there documentation of the likely depths of former historic sites or indication that land clearing has equalled or exceeded those depths. Thus, we cannot agree with the conclusion that "the potential for subsurface recovery seems remote at this location."

This missing information should be provided, with a conclusion that disturbance has been deeper than the likely depth of former sites. Alternatively, a small series of test excavations with a shovel would yield the information necessary for us to proceed with the historic preservation review process.

Thank you for your cooperation in this matter. Please feel free to call Roy Schaefer of our Office of Conservation and Environmental Affairs, at 548-7837, if you have questions.

Very truly yours,
William W. Paty
William W. Paty

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning Inc.
OECC

REF:OCEA:JN

MAY 1 1991

File No.: 91-396
Doc. No.: 0612E

The Honorable Benjamin B. Lee
Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Draft E.I.S. - Hale O Malia at Waiatae-Kahala,
Honolulu, Oahu, Hawaii; THK; 3-5-17 ; por. 2

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the materials you submitted and have the following comments.

Our Department's Historic Preservation Division comments that since the archaeological inventory survey report for this project is not acceptable, we can not concur with its conclusions.

In our response to the Environmental Impact Statement Preparation Notice for this project we noted that land alteration in this century may have considerably altered the ground and could have destroyed any sites at the project parcel, but that there is no supportive evidence for this claim at this time. We asked that the applicant document likely depths of the former historic sites in the area and indicate that land disturbance has equalled or exceeded these depths.

The archaeological inventory report included as Appendix A of the Draft Environmental Impact Statement presents testimony from Father Steik that large machinery was used to excavate and remove large boulders from the property prior to construction of a Church between 1948 and 1950. The author of the report also reports seeing a 1950 aerial photograph that shows extensive clearing and excavation, and concludes that this activity would have obliterated evidence for historic sites at the project parcel.





LACAYO PLANNING, INC.

14 May 1991

Mr. William W. Paty, Chairman
Board of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

RE: DEIS for Hale O Malia Community

Dear Mr. Paty:

Thank you for the comments in your May 1, 1991 letter.

As Archaeological Consultants of Hawaii, Inc., has stated in their report, the potential for subsurface recovery of historic resources is extremely unlikely due to previous excavation of the site. To document the previous excavation, they have modified the report (Appendix A) and added a photograph showing the excavation.

Your letter and this response will be included in the Final EIS.

Sincerely,

LACAYO PLANNING, INC.

Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii
Wimberly Allison Tong & Goo



OFFICE OF STATE PLANNING

Office of the Governor

STATE CAPITAL, HONOLULU, HAWAII 96813 TELEPHONE: 808/548-1001

May 1, 1991

The Honorable Benjamin B. Lee
Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Draft Environmental Impact Statement
Hale O Malia Lifecare Community (TRK: 3-5-17: por. 2)
Maialae-Kahala

The applicant, Episcopal Homes Foundation of Hawaii, Inc., is proposing a lifecare facility (Hale O Malia) for the elderly on a portion of the existing Star of the Sea school/church campus. According to the subject document, the proposed project will consist of a complex of multi-story buildings with a total floor area of about 425,000 square feet and a maximum height of 60 feet. Three levels of living are offered: residential apartments (300 units), personal care units (20 beds), and a skilled nursing facility (60 beds).

We have reviewed the subject document and have no comments to offer at this time.

Thank you for the opportunity to comment.

Sincerely,

Harold S. Masumoto
Director

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning Inc.
ORQC



University of Hawaii at Manoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2550 Campus Road • Honolulu, Hawaii 96822
Telephone: (808) 956-7361

May 7, 1991
RE:0579

Mr. Verne Winquist
Department of General Planning
City and County of Honolulu
Municipal Office Building
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

Dear Mr. Winquist:

Draft Environmental Impact Statement (DEIS)
Hale O Halia Lifecare Community
Halalae-Kahala, Oahu

The above referenced document proposes construction of a state licensed "lifecare" facility for the elderly on part of the existing Star of the Sea School/Church campus, consisting of multi-story buildings with a total floor area of approximately 425,000 square feet at a maximum height of 60 feet. Three levels of living areas are offered: residential apartments (300 units), personal care units (20 beds), and a skilled nursing facility (60 beds). The personal care units serve residents who permanently or temporarily require a moderate level of assistance with daily living, but do not require continuous nursing supervision. The skilled nursing facility serves residents who require permanent or temporary 24-hour nursing care. The entire facility will provide qualified residents (age 65 and older) full health care, living quarters, housekeeping services and other amenities and services in exchange for monthly maintenance fees and an initial accommodation fee.

The review and subsequent comments on the aforementioned Draft EIS were prepared with the assistance of Colette Brown, School of Social Work; Harlan Washimoto, Public Health; and Alex Bittaro of the Environmental Center.

Archaeological Resources

The document does not adequately address the subsurface archaeological testing recommendations of the Department of Land and Natural Resources (DLNR), Historic Preservation Division, described in their Preparation Notice comments (Section 9C). The Draft EIS fails to document likely depths of the former historic sites in the area. The testimony and aerial

Department of General Planning
May 7, 1991
Page 2

photograph to which the consultant's report refers (copies of which should have been included to substantiate the findings), fail to indicate whether or not land disturbance has equalled or exceeded these depths. We strongly recommend implementation of the DLNR's Historic Preservation Division's recommendations prior to any construction activities.

Housing Costs and Accommodation of Hawaii Residents

Our reviewers expressed some concern that the cost to the consumer will not enable an adequate percentage of local families to take advantage of the facility.

Section 4.A (page 23) states, "It is anticipated that about 90 percent of the approximately 400 residents of Hale O Halia will be people who are presently residents of Hawaii, primarily from the East Oahu neighborhoods." On what basis is 90 percent of Hale O Halia's occupancy anticipated to be filled with Hawaii residents? Does the developer consider this desirable figure to strive for, and will any measures be taken to achieve this percentage? This is an important point, since the project's positive impacts seem to stem largely from the well documented need for senior housing on Oahu and in the Kahala area in particular.

General Comments

We support this development in light of the well-documented need for senior housing. The location appears highly conducive to the accommodation of the elderly due to its easy access to shopping, banks, parks, and doctor's offices.

However, the archaeological and Hawaii-resident housing issues should be adequately addressed in the Final EIS.

Thank you for the opportunity to comment on this document and we hope you will find our comments helpful.

Sincerely,

John T. Harrison, Ph.D.
Environmental Center

cc: ODPC
Episcopal Kames Foundation of HI
Lacayo Planning Inc.
Roger Fujioke
Harlan Washimoto
Colette Brown
Alex Bittaro



LACAYO PLANNING, INC.

14 May 1991

Mr. John T. Harrison, PhD.
Environmental Center
University of Hawaii
Crawford 317 - 2550 Campus Road
Honolulu, Hawaii 96822

RE: DEIS for Hale O Malia Community

Dear Mr. Harrison:

In response to the comments in your letter of May 7, 1991, we offer the following:

Archaeological Resources

Archaeological Consultants of Hawaii has added documentation to its report to substantiate the small likelihood of subsurface recovery at the site.

Accommodation of Hawaii Residents

To date, Episcopal Homes of Hawaii has received reservations (including deposits) for 180 units. Of those couples and individuals who have reserved units, 99 percent currently reside in Hawaii, and 94 percent currently reside in East Oahu (Nuuanu to Hawaii Kai). The extraordinarily strong response demonstrates the need for a lifecare facility in this region.

Thank you for your comments. Your letter and this response will be included in the Final EIS.

Sincerely,

LACAYO PLANNING, INC.

Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii

4/9/91-1396

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERTAWA STREET
HONOLULU HAWAII 96813



FRANK E. FAS, M.D.
DONALD B. GOTH, C.E.P.
SAU CANEJO
EDUARDO Y. MARATA
WALTER C. WALSON, JR.
WILFRED H. KAUSASIO
KAZU HAYASHIDA
VIRABHU RAO, C.E.P., Engineer

April 22, 1991

TO: BENJAMIN B. LEE, DIRECTOR
DEPARTMENT OF GENERAL PLANNING

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

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR
THE PROPOSED HALE O MALIA LIFE CARE COMMUNITY,
TMK: 3-5-17: POR. 2, MALIA STREET

We have no objections to the proposed life care community development. Our comments of March 11, 1991 on the Environmental Impact Statement Preparation Notice, which are included in the DEIS, are still applicable.

If you have any questions, please contact Bert Kuioka at 527-5235.

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacsyo Planning, Inc.
Office of Environmental Quality Control

RECEIVED
MAY 22 1991 1:52

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
150 SOUTH BERTAWA STREET
HONOLULU HAWAII 96813



HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT
PB 91-414

March 28, 1991

MEMO TO: BENJAMIN LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
HALE O MALIA AT WAIALAE-KAHALA
A LIFECARE COMMUNITY

We have reviewed the DEIS for the subject project and have no comments to offer.

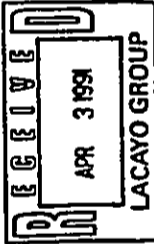
Herbert K. Muraoka
HERBERT K. MURAOKA
Director and Building Superintendent

cc: J. Harada
Episcopal Homes Foundation of Hawaii, Inc.
Lacsyo Planning, Inc.
Office of Environmental Quality Control

RECEIVED
MAY 28 1991 4:01

150 SOUTH BERTAWA STREET

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
1435 SOUTH MERITANA STREET, ROOM 301
HONOLULU, HAWAII 96814



LIONEL E. CAMARA
FIRE CHIEF
DONALD B. MC CALLUM
DEPUTY FIRE CHIEF

FRANK P. FLEM
100-100

April 1, 1991

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: LIONEL E. CAMARA, FIRE CHIEF

SUBJECT: HALE O MALIA AT WATAIAE-KAHALA-A LIFECARE COMMUNITY
HONOLULU - TMK: 3-5-17: por. 2

We have reviewed the application for the above subject. Fire protection services provided from Kaimuki and Haliupe engine companies with ladder service from Waikiki are adequate. A ladder company is being planned for the Kaimuki Fire Station within two years.

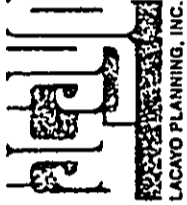
Access for fire apparatus, water supply and building construction shall be in conformance to existing codes and standards.

Thank you for the opportunity to comment on the project.

Lionel E. Camara
LIONEL E. CAMARA
Fire Chief

AKL:bn

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning, Inc.
Environmental Quality Control (with report)



14 May 1991

Mr. Lionel E. Camara, Chief
Fire Department
City and County of Honolulu
1455 S. Beretania Street
Honolulu, Hawaii 96814

RE: DEIS for Hale O Malia Community

Dear Chief Camara:

Thank you for the comments in your letter of April 1, 1991. The design team will consult with your department to insure that the lifecare facility fulfills all fire safety requirements.

Sincerely,

LACAYO PLANNING, INC.

Robin Foster

Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii
Wimberly Allison Tong & Goo
Attn: Gordon Bradley

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU

890 SOUTH KING STREET
HONOLULU, HAWAII 96813



GENERAL PLAN
DIVISION

BENJAMIN B. LEE
CHIEF PLANNING OFFICER
ROLAND D. LEE, JR.
DEPUTY CHIEF PLANNING OFFICER

VH 3/91-893

May 8, 1991

Mr. John Whalen
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Draft Environmental Impact Statement (DEIS)
for the Hale O Malla,
Waialae-Kahala, Oahu
Episcopal Homes Foundation of Hawaii, Inc.

We have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Hale O Malla Lifecare Community. Our review of this document included an analysis and comparison of: (1) all referenced letters commenting on the Environmental Impact Statement Preparation Notice (EISP/N); (2) all responses to these letters by Lacayo Planning, Inc.; (3) all letters received to date by the Department of General Planning commenting upon this DEIS; and (4) the contents of the DEIS.

We find that you have responded adequately to all comments with the exception of the following items.

1. The Department of Public Works states that a drainage report should be submitted to the Drainage Section, Division of Engineering, for review and approval. The drainage report should be submitted with the DEIS.
2. The Hawaiian Electric Co., Inc. (HECO) requests that its "substation and 46 kv transmission line facility adjacent to the project area be mentioned in the Final Environmental Impact Statement." HECO will comment further when your construction plans are finalized.

Mr. John Whalen
Lacayo Planning, Inc.
May 8, 1991
Page 2

3. The State Department of Land and Natural Resources states that it cannot concur with the conclusions of the DEIS since the archaeological inventory report for this project is not acceptable. This concern should be addressed in the DEIS.

We also request a more detailed assessment of impacts on mauka and makai view planes seen from public areas.

Should you have any questions, please call Verne Winqvist of our staff at 527-6044.

Sincerely,


BENJAMIN B. LEE
Chief Planning Officer

BBL:lh

cc: Episcopal Homes Foundation of Hawaii, Inc.



LACAYO PLANNING, INC.

14 May 1991

Mr. Benjamin B. Lee, Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 S. King Street
Honolulu, Hawaii 96813

RE: DEIS for Hale O Malia Community

Dear Mr. Lee:

In response to the comments in your letter of May 8, 1991, we offer the following:

Drainage

As noted in our response to the Department of Public Works, the project is currently in conceptual design. A drainage plan will be prepared in a later, more detailed design phase. We do not anticipate any problems accommodating drainage requirements because the area receives relatively low rainfall, and the site is bounded on two sides by existing drainage channels.

Electric Utility

The Final EIS text has been modified to indicate the presence of the Hawaiian Electric Company's facilities.

Archaeological Resources

The archaeological inventory report has been modified to address the concerns of the Department of Land and Natural Resources.

Viewplane Impacts

The Final EIS contains two new exhibits depicting the visual impacts of the project. It will not significantly affect views from adjacent public roads, nor will it significantly affect existing ocean views enjoyed by Waialae Nui residents.

Your comments are appreciated and will be included with this letter in the Final EIS.

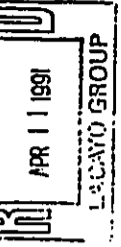
Sincerely,

LACAYO PLANNING, INC.

Robin Foster
Senior Planner

cc Episcopal Homes of Hawaii
Wimberly Allison Tong & Goo

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
 850 SOUTH KING STREET
 HONOLULU HAWAII 96813



WALTER M. OZAWA
 DIRECTOR
 ALYNE C. AU
 DEPUTY DIRECTOR

April 4, 1991

4/91-1250

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
 850 SOUTH KING STREET
 HONOLULU HAWAII 96813 • PHONE 533-4133



DONALD A. CLEGG
 DIRECTOR
 LORETTA C. CHIEE
 DEPUTY DIRECTOR

LU 03/91-1789(AC)

April 10, 1991

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
 DEPARTMENT OF GENERAL PLANNING

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT
 HALE O MALIA LIFECARE COMMUNITY
 LOCATION : MAIALAE-KAHALA, OAHU
 TAX MAP KEY : 3-3-17: PORTION 2

We have reviewed the Draft Environmental Impact Statement for the proposed Hale O Malia Lifecare Community project and have no comment to offer. Should you have any questions, please contact Lester Lai of the Advance Planning Branch at extension 4696.

Walter M. Ozawa
 WALTER M. OZAWA, Director

cc: Episcopal Homes Foundation
 of Hawaii, Inc.
 Lacayo Planning Inc.
 Office of Environmental
 Quality Control

MEMORANDUM

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
 DEPARTMENT OF GENERAL PLANNING

FROM: DONALD A. CLEGG, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
 FOR HALE O MALIA LIFECARE COMMUNITY, KAHALA, OAHU
 TAX MAP KEY: 3-3-17: POR. 2

We have reviewed the DEIS for the above referenced project and have no comments to offer.

Thank you for the opportunity to review this project.

Donald A. Clegg

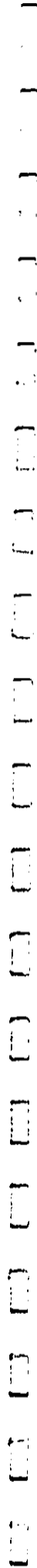
DONALD A. CLEGG
 Director of Land Utilization

DAC:lg

RECEIVED

APR 10 1991

DEPARTMENT OF LAND UTILIZATION



POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
1415 SOUTH KEELE STREET, 15TH FLOOR
HONOLULU, HAWAII 96813



FRANK P. FAH
SEVER

MICHAEL E. HUGHES
CHIEF
CHESTER E. HUGHES
DEPUTY CHIEF

FRANK P. FAH
SEVER



DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
640 SOUTH KING STREET
HONOLULU, HAWAII 96813

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER
C. MICHAEL STREET
HONOLULU, HAWAII 96813
In Reply Refer to
ENV 91-78(449)

REFERENCE
ES-1X

April 30, 1991

April 12, 1991

MEMORANDUM

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: MICHAEL S. NAKAMURA, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: HALE O MALIA AT WAIALAE-KAHALA--A LIFECARE COMMUNITY

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
HALE O MALIA AT WAIALAE-KAHALA - A LIFECARE COMMUNITY
TMK: 3-5-17: POB. 2

We have reviewed the environmental impact statement for the Hale O Malia project and found nothing in it that requires comment. We have no objection to the proposal.

MICHAEL S. NAKAMURA
Chief of Police

BY *Chester E. Hughes*
CHESTER E. HUGHES
Assistant Chief of Police
Support Services Bureau

cc: Episcopal Homes Foundation
Lacayo Planning,
Office of Environmental
Quality Control

We have reviewed the subject DEIS and have the following comment:

1. A drainage report should be submitted to the Drainage Section, Division of Engineering, for review and approval.

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning, Inc.
OEQC

Sam Callejo
SAM CALLEJO
Director and Chief Engineer



14 May 1991

Mr. Sam Callejo, Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 S. King Street
Honolulu, Hawaii 96813

RE: DEIS for Hale O Malia Community
Dear Mr. Callejo:

Thank you for the comment in your letter of April 12, 1991, concerning a drainage report for the project. The project is currently in conceptual design. A drainage plan will be prepared in a later, more detailed design phase.

Your letter and this response will be included in the Final EIS. Sincerely,

LACAYO PLANNING, INC.

Robin Foster
Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii
Winberly Allison Tong & Goo

737 BISHOP ST. SUITE 1550 / HONOLULU HAWAII 96813 / (808) 531-6824 / FAX (808) 536-8309

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
330 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK FARR
MAYOR

JOSEPH H. MAGALDI, JR.
DIRECTOR
ANAS SAPPAL
DEPUTY DIRECTOR

TE-1944
PL91-1.114

May 9, 1991

MEMORANDUM

TO: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: JOSEPH H. MAGALDI, JR., DIRECTOR

SUBJECT: HALE O MALIA LIFE CARE COMMUNITY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
TAX MAP KEY: 3-5-17: PORTION 2

This is in response to the DEIS submitted to us for review on April 2, 1991 by the Office of Environmental Quality Control.

Our concerns are as follows:

1. The location and widths of driveways should be specified and shown on the project plans. An internal traffic circulation plan should also be included.
2. Adequate off-street parking for residents of the facility should be provided according to the Land Use Ordinance.
3. Construction plans for off-site work within the City's right-of-way should be reviewed by our department.

Should you have any questions, please contact Lance Watanabe of my staff at local 4199.

Joseph H. Magaldi, Jr.

JOSEPH H. MAGALDI, JR.

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning, Inc.
Office of Environmental Quality Control





LACAYO PLANNING, INC.

14 May 1991

Mr. Joseph M. Magaldi, Jr., Director
Department of Transportation Services
City and County of Honolulu
650 S. King Street
Honolulu, Hawaii 96813

RE: DEIS for Hale O Malia Community

Dear Mr. Magaldi:

In response to the comments in your letter of May 9, 1991, we offer the following:

Driveways and Internal Circulation

As stated in the EIS and shown in Figure 3, "Preliminary Site Plan", access to the Hale O Malia lifecare facility will be provided from Malia Street, at the northwestern corner of the site. A two-way service road will provide access to underground parking and to service facilities on the western side of the complex. In addition, a loop driveway serving the porte cochere will allow for off-street pick-up and drop-off of passengers. Additional detail about driveway widths and traffic circulation will be developed as project design proceeds beyond the conceptual phase and will be presented in conjunction with the zone change and conditional use permit applications.

Off-Street Parking

In order to meet the parking requirements of the residents and staff of the lifecare facility, current plans call for constructing over 450 stalls in an underground parking structure sited on the southern portion of the site.

Construction Plans

Construction plans for any off-site work within the City's rights-of-way will be submitted for your review.

Your comments are appreciated and will be included with this response in the Final EIS.

Sincerely,

LACAYO PLANNING, INC.

Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii
Wimberly Allison Tong & Goo

ENV 2-1
EIS
JA/G



William A. Bonnet
Manager
Environmental Department

April 19, 1991

Mr. Melvin Muraakami
Department of General Planning
City & County of Honolulu
Municipal Office Building, 8th Floor
650 S King Street
Honolulu, Hawaii 96813

Dear Mr. Muraakami:

Subject: Draft Environmental Impact Statement (DEIS) for
Hale O Malia at Waialae-Kahala-A Lifecare Community

We have reviewed the subject DEIS, and request that HECO's substation and 46 kV transmission line facility adjacent to the project area be mentioned in the Final Environmental Impact Statement. HECO shall reserve comments pertaining to the protection of other existing power lines bordering the project area until construction plans are finalized.

Sincerely,

cc: Episcopal Homes Foundation of Hawaii, Inc.
Lacayo Planning, Inc.

An HEI Company

737 BISHOP ST / SUITE 1550 / HONOLULU HAWAII 96813 / (808) 531-6822 / FAX (808) 536-8309

14 May 1991

Mr. William A. Bonnet, Manager
Environmental Department
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

RE: DEIS for Hale O Malia Community

Dear Mr. Bonnet:

In response to the comment in your letter of April 19, 1991, the Final EIS has been amended to include reference to Hawaiian Electric's 46kV transmission line and substation located adjacent to the subject site.

Thank you for your comment. Your letter and this response will be included in the Final EIS.

Sincerely,

LACAYO PLANNING, INC.

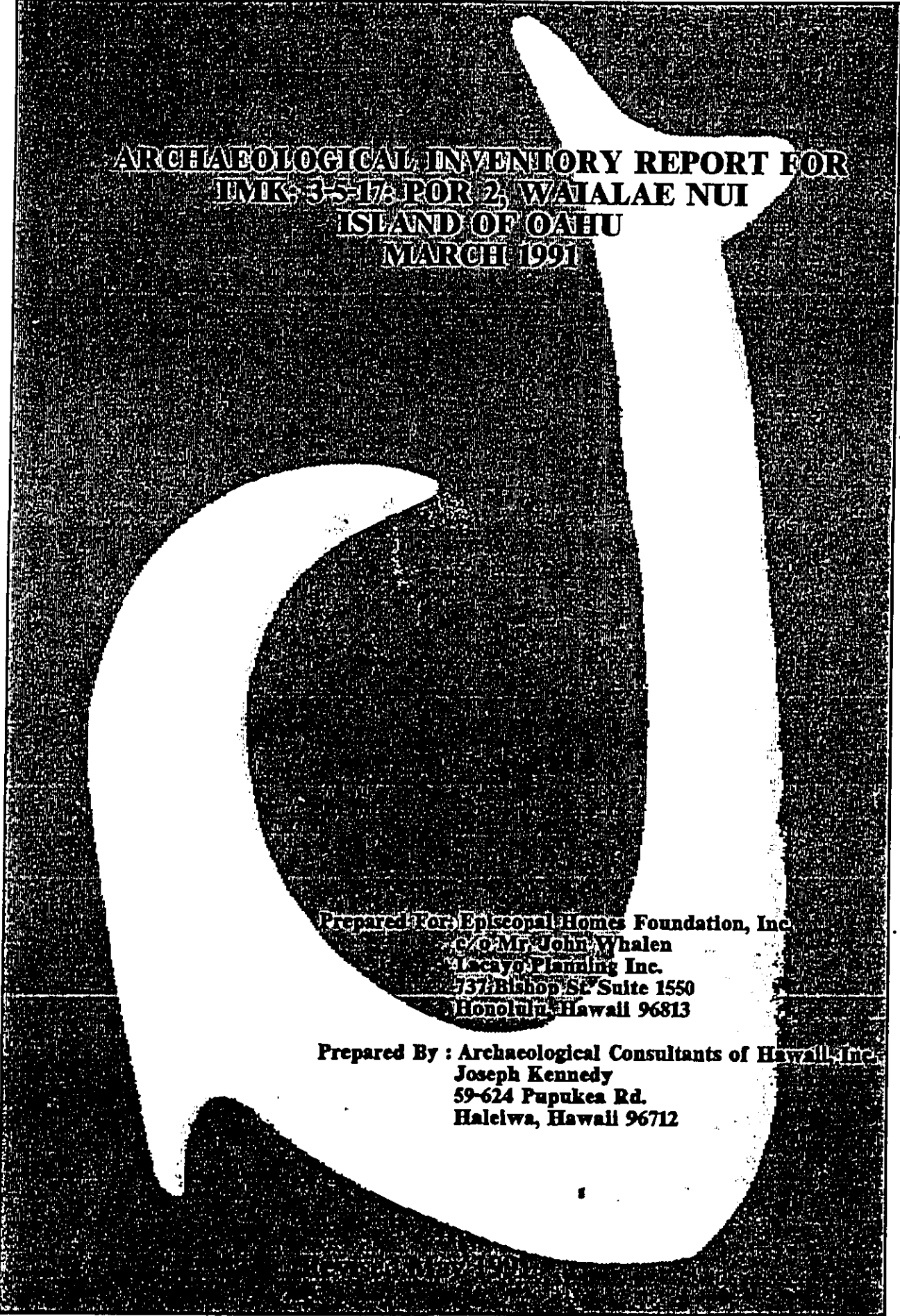
Robin Foster
Senior Planner

cc Department of General Planning
Episcopal Homes of Hawaii
Wimberly Allison Tong & Goo



APPENDIX A

RECEIVED AS FOLLOWS



**ARCHAEOLOGICAL INVENTORY REPORT FOR
TMK 3-5-17 POR 2, WAIALAE NUI
ISLAND OF OAHU
MARCH 1991**

Prepared For: Episcopal Homes Foundation, Inc.
c/o Mr. John Whalen
Alcayo Planning Inc.
737 Bishop St Suite 1550
Honolulu, Hawaii 96813

Prepared By : Archaeological Consultants of Hawaii, Inc.
Joseph Kennedy
59-624 Pupukea Rd.
Halciwa, Hawaii 96712

TABLE OF CONTENTS

INTRODUCTION AND EXECUTIVE SUMMARY.....	Page	1
PHYSICAL SETTING.....	Page	1
METHODOLOGY.....	Page	1
VICINITY MAP.....	Page	2
TOPOGRAPHIC SURVEY MAP.....	Page	3
INFORMANT TESTIMONY.....	Page	4
LAND USE HISTORY.....	Page	4
PREVIOUS ARCHAEOLOGICAL STUDIES.....	Page	6
MAP - LAND USE CIRCA 1850.....	Page	7
MAP - LAND USE 1905.....	Page	8
DISCUSSIONS AND RECOMMENDATIONS.....	Page	9
MAP - PREVIOUS ARCHAEOLOGICAL STUDIES.....	Page	10
TABLE OF PREVIOUS ARCHAEOLOGICAL WORK.....	Page	11
BIBLIOGRAPHY		
APPENDIX "A" - AGRICULTURE OF WAIALAE (Based on ICA testimonies)		

ARCHAEOLOGICAL INVENTORY SURVEY OF TMK: 3-5-17: POR.2
LOCATED AT ISLAND OF OAHU, AHUPUA'A OF WAIALAE NUI

INTRODUCTION AND EXECUTIVE SUMMARY

On February 20, 1991, Archaeological Consultants of Hawaii, Inc. conducted an inventory survey at the location described above.

The subject property is currently occupied by a number of modern facilities which comprise the Star of the Sea Church\School complex. Field observations, informant testimony and archival materials strongly suggest that the property has been previously modified by heavy equipment. No cultural properties were identified in our survey.

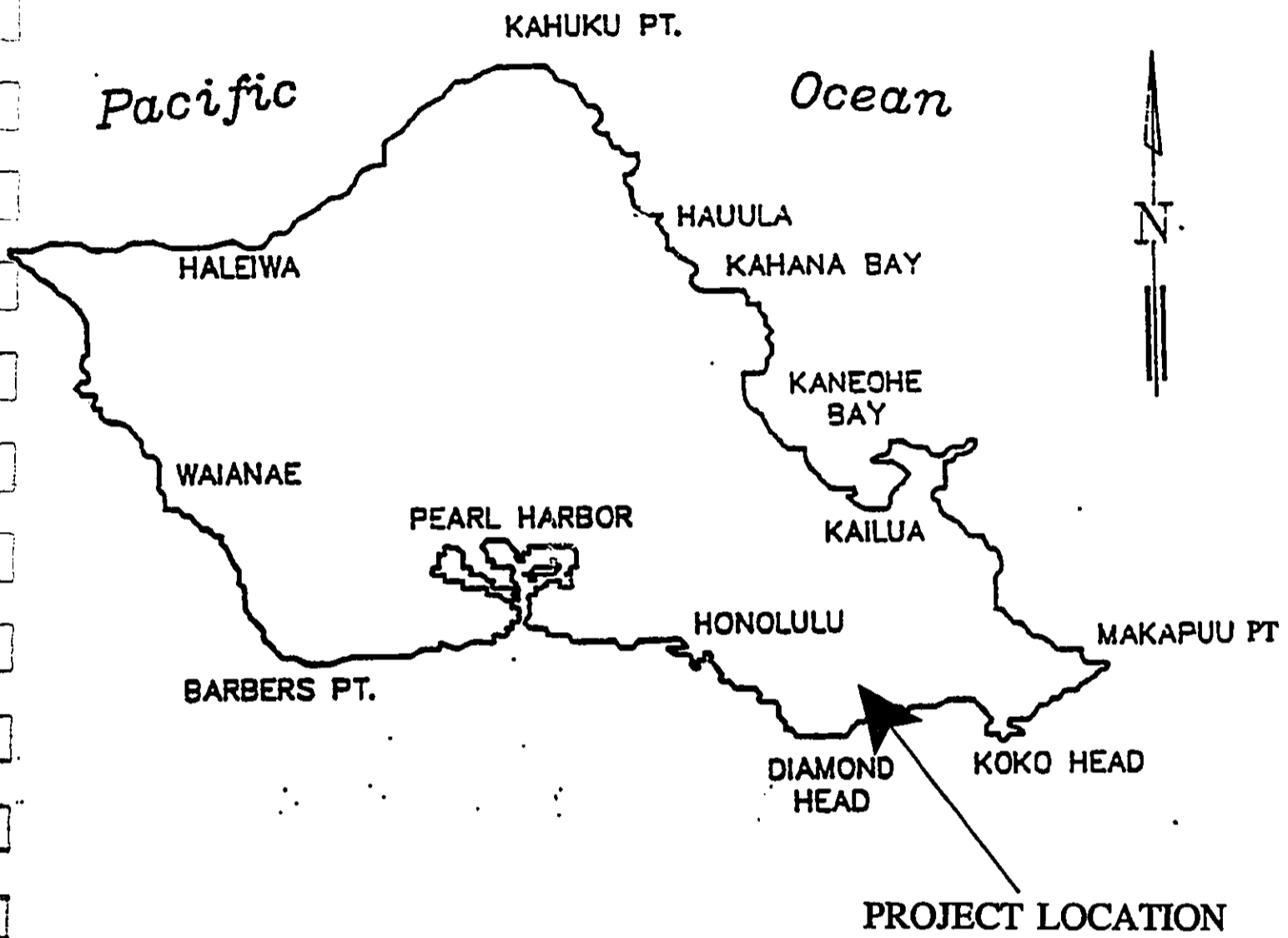
PHYSICAL SETTING

The subject property consists of 7.5 acres situated on the south shore of the island of Oahu in the ahupua'a of Waialae Nui located approximately 1 km from the sea (see Vicinity Map, Page #2). Soil on the subject property has been described by Foote et.al. (1972:30) as Ewa stony silty clay (EWC). They mention that surface stones interfere with tillage but do not make intertilled crops impracticable. Rainfall in this area is relatively low averaging less than 5 inches a month. (See Topographic Survey Map, Page #3)

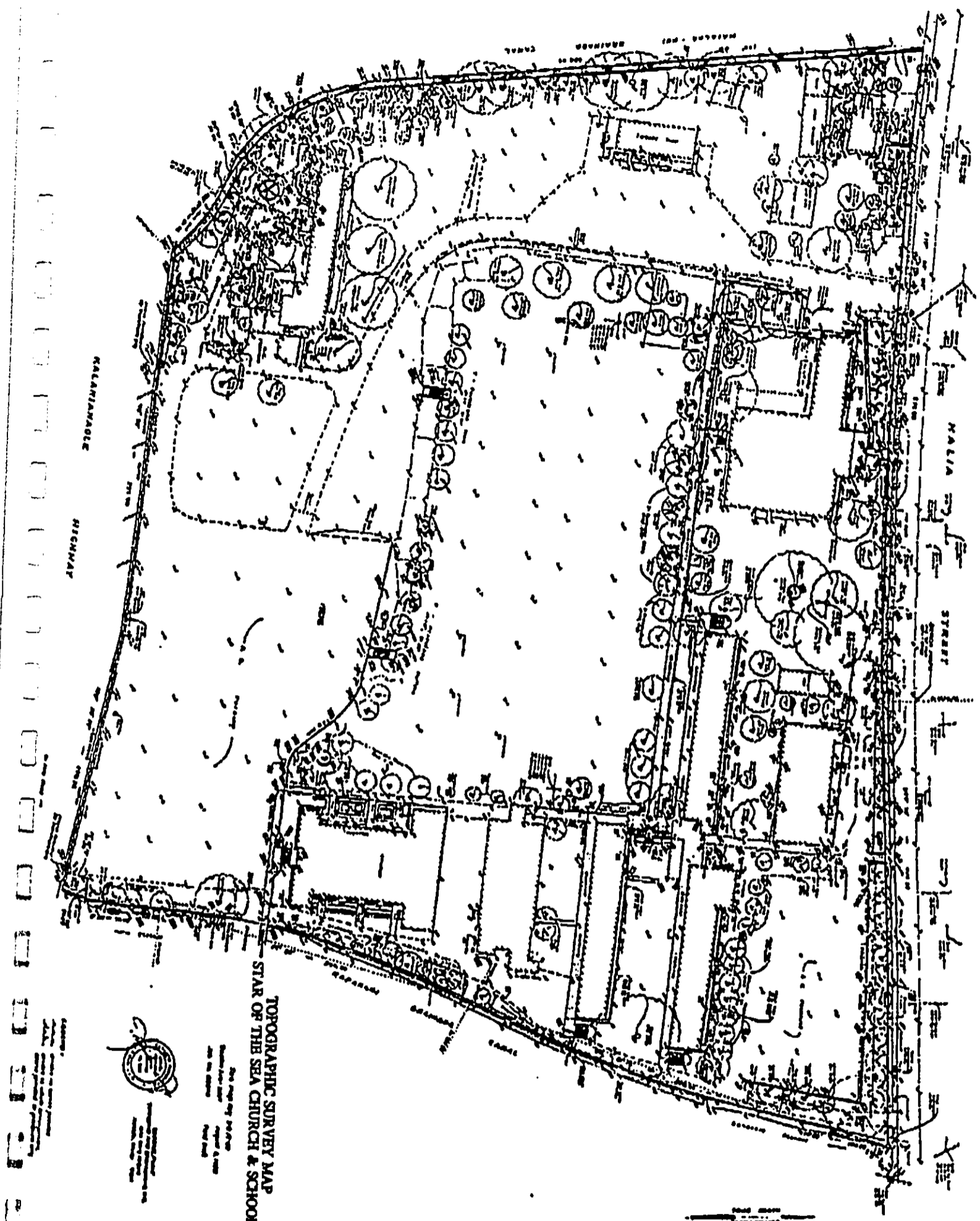
A number of modern facilities (schools, church, rectory, etc.) surround a large sports field. The property is bordered on two sides (east and west) by large concrete drainage canals which are not part of the survey area. Vegetation on the subject property consists of lawn grass and a number of cultivated shrubs and trees. All the vegetation has been imported. An aerial photograph taken in July of 1950 shows a landscape that has been cleared of all vegetation in preparation for the construction of church\school facilities.

METHODOLOGY

The field work was conducted in a single day (February 20, 1991) by Joseph Kennedy M.A. the Principal Investigator and an assistant, James Powell B.A.. One hundred percent of the property was examined by conducting a series of controlled (compass) sweeps; team members were spaced ten meters apart. Visibility was excellent and it is highly unlikely that any cultural properties were overlooked.



VICINITY MAP
Not To Scale



TOPOGRAPHIC SURVEY MAP
 STAR OF THE SEA CHURCH & SCHOOL.

INFORMANT TESTIMONY

An interview was conducted with Father Dennis Steik of the Star of the Sea Church. He has indicated that the property was formerly used as pig farm prior to its acquisition by the Roman Catholic Church in 1948. Father Steik recalls heavy machinery being used to excavate and remove soil and a great many large boulders in order to prepare the land for construction. These boulders formed the blue rock base of this property and their removal -sometimes by blasting- would preclude the survival of any sites that may have once existed here. The property was also extensively graded. As mentioned earlier in this report, I was shown an aerial photograph of the subject property which was taken in July of 1950. This photo indicates that extensive clearing and excavation had taken place and tends to substantiate Fr. Steik's recollections.

Fr. Steik also mentioned that the many buildings on the property were constructed in the 1950's. There is no graveyard associated with the church.

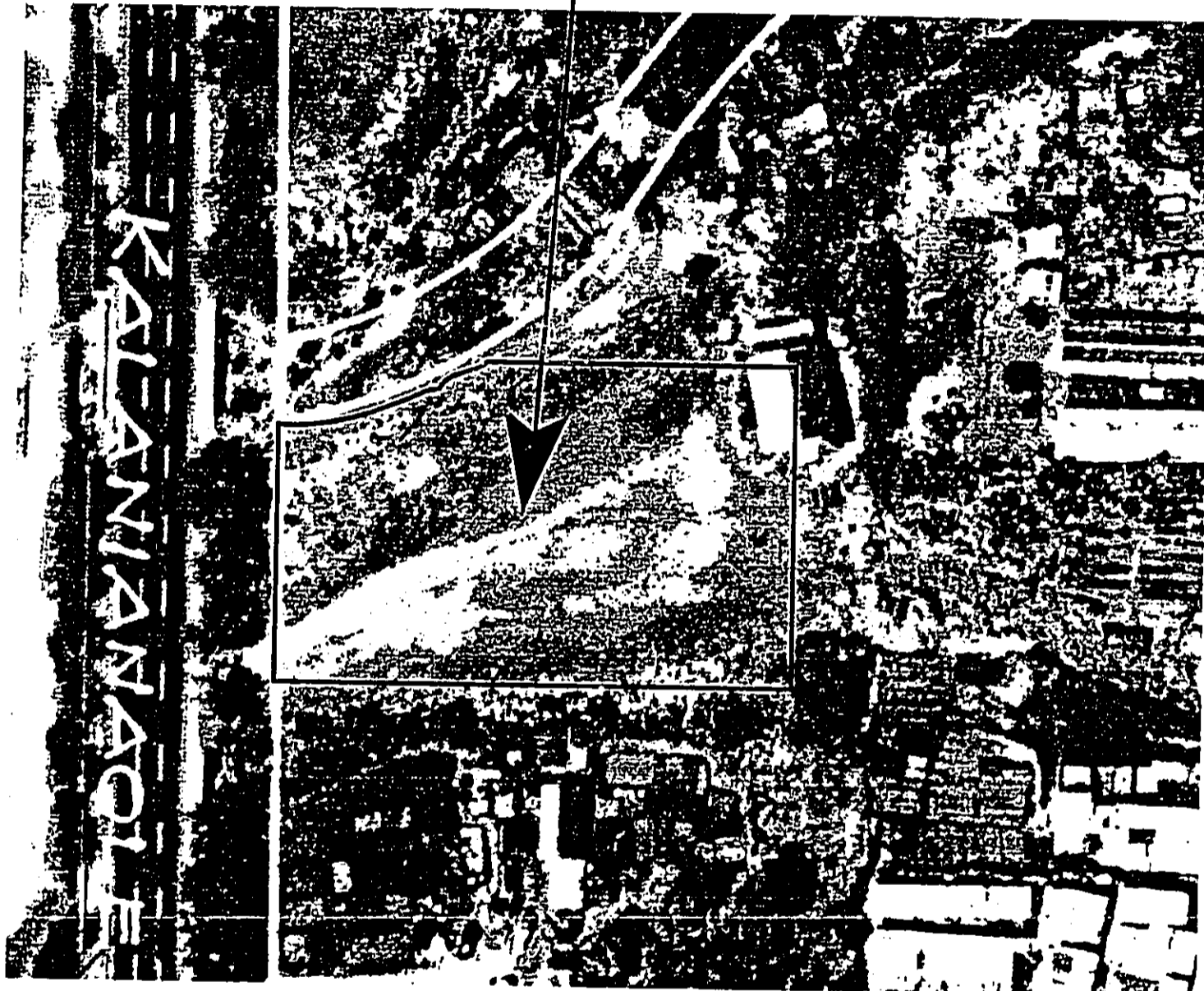
LAND USE HISTORY

Waiialae is the name of a spring just above the present day Kalaniana'ole Highway. In pre-mahele times, Waiialae Nui was within the large ahupua'a of Waikiki which included all of the area from Manoa to Kuliouou, from the ridge of the Ko'olau range to the sea. This was the easternmost ahupua'a within the old district of Kona.

Early references to this area can be found in Vancouver and Menzies. Vancouver landed in the village of Waikiki in 1792 and took a walk a mile across the plains to a fresh water source. He noted that the villages on the shores appeared numerous, large, and in good repair; and that the surrounding country was interspersed with deep valleys which, along with the plains near the seaside, presented a high degree of cultivation. (Vancouver 1984:453-4). Menzies, the surgeon and naturalist on that voyage, noted that the shore was planted with coconut palms, and that the plains were planted with taro, yams, sweet potatoes, sugar cane, and the cloth plant. This flat lowland area was extensively irrigated in what he refers to as "an ingeneous manner, by dividing the stream into little aqueducts leading in various directions." (Menzies 1920:23-4). Although neither of them seem to have walked more than a mile inland, of the intermediate valleys it was said that they were all inhabited and produced some large trees (Vancouver 1984:455).

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Episcopal Homes
Life Care Site



from arial photograph c.1950

A series of fishponds were also in use in the Waikiki area, documented in the earliest literature. In 1789 Meares described the plantations and ponds: "He (captain Douglas) was received very cordially by Tieteeree (Kahekili) who took him round the village, showed him several plantations, and conducted him to some large ponds, which appeared to be full of fish. He mentioned also some others where he had a quantity of turtle." (Meares 1916:20)

Bloxam, a naturalist on the H.M.S. Blonde in 1825 also described a series of fresh-water fishponds in use in the area of Waikiki (Handy and Handy 1972:482). As late as 1901 there were fifteen ponds in use at Kalia and Waikiki. "The ponds at Waikiki were mostly fresh-water ponds. The number must formerly have been greater. Many had already been filled in." (Cobb:1905:748 as quoted in Handy and Handy 1972:482). In all of these early references, no specific mention of Waialae could be found.

In the library of the Historic Preservation Office, a paper was found in which the agricultural use of Palolo, Waialae, and Wailupe valleys at the time of the Great Mahele had been researched. Lisa Nagaoka wrote this paper for the anthropology department at U.H. In it, she notes that as one moves eastward from valley to valley, there was a shifting away from extensive terracing and lo'i cultivation to a reliance upon sweet potatoes as a staple for the populations living in the valleys. She suggests that the reason for this is the increasing dryness and also increased porousness of the soil. This is supported in Handy and Handy.

In Waialae, there is documentation in the land claims of habitation, wet and dryland taro, "watercourses," and kula lands. There were three streams which drained the area (U.S.G.S. map of Oahu, 1917 as quoted in Handy 1940:74), as well as the previously mentioned spring which could be diverted for the cultivation of taro. These are the "watercourses" referred to in the land claims. The LCA testimony also includes a number of claims for fish ponds, hala, kou, and breadfruit trees; coconut, orange, and coffee. (see Appendix "A") The land use pattern in Waialae can be interpreted from these land claims. The dry kula lands where sweet potato and dryland taro were planted are found higher back in the valley towards the mountains. The Lo'i are found in areas fed either directly by the spring, or on land which was fed from a watercourse from this spring. According to Handy (1940:74) this spring watered only a small number of terraces. The location of fish ponds in Waialae is uncertain. Although Nagaoka suggests that the fish might have been kept in the lo'i, a map of the land of Waialae Nui which showed the property of Victoria Kamamalu in 1851, has fish ponds marked in two places.

There are some fishponds on the shore, just Ewa of Kupikipikio Point, and another one at the mouth of the valley near the spring in Waialae Iki. This area of land near the spring is designated on the map as taro land. (See Map of Land Use Circa 1850, Page #7)

The ahupua'a of Waialae Nui was awarded almost entirely to Victoria Kamamalu (3329 acres). Because of her ali'i status, there is very little LCA information available for the land use in this specific area. Of the 5 other awards granted in Waialae Nui, there are claims for "some trees," 3 salt beds, a salt pond, 23 coconut trees, and 2 breadfruit trees. The salt ponds and coconut trees are near the coast.

General settlement patterns can be interpreted, however, from the information summarized above. Based upon all the claims for house sites in the LCA testimony for Waialae, it appears that Waialae Nui, Kapakahi, and Waialae Iki Gulches were inhabited by the Hawaiians prehistorically. It is possible that the land of Waialae Nui was later used only for agriculture and not for habitation. (In the sparse testimony for Waialae Nui there are only 2 house claims and one is a claim made by Kahoowaha FOR Mahuka.) Nagaoka noted that in Palolo valley, many people "commuted" there to work their fields, while residing somewhere else. Because of the lack of detailed LCA testimony for the ahupua'a of Waialae Nui, residential patterns for the area at the time of the Great Mahele cannot be determined with certainty.

According to a 1904 map entitled Owners of Kuleanas in Waialae, the coastal area of Waialae Nui (from what is now Farmers Rd.) to the sea was swamp and grass pasturage. Just mauka of this area alfalfa and sorghum were grown. South of what is now Kalaniana'ole Highway to the edge of the alfalfa and sorghum the area was rocky and covered with algeroba. Mud flats, Konohiki rice land and milking sheds are found on the Waialae Iki section of the coastal area, suggesting cattle farming and grazing on the grass pasturage. (see Map of Land Use in 1905, Page #8)

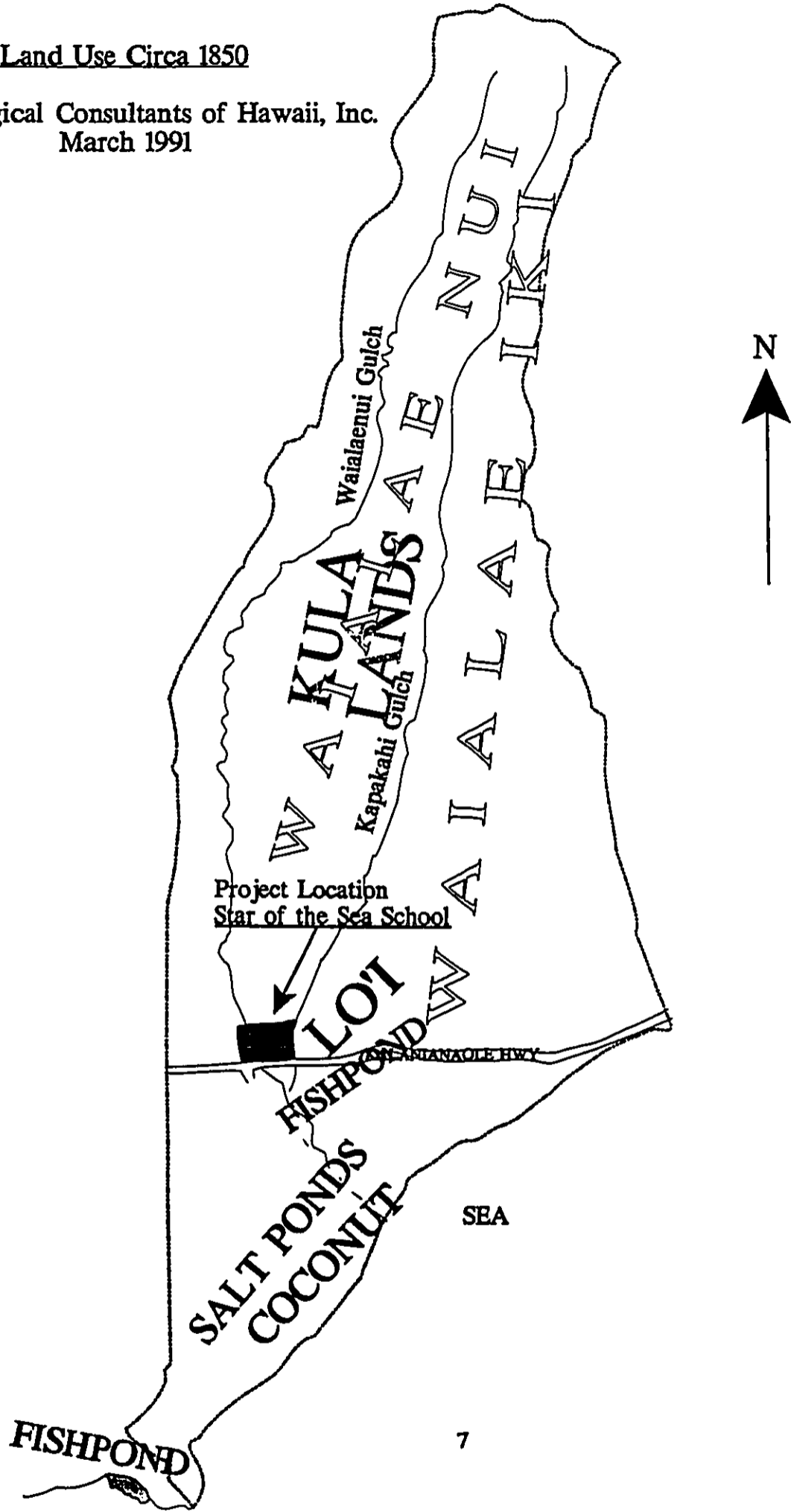
As mentioned earlier, the project area was used agriculturally in the 1940s. It was the site of an Okinawan pig farm.

Previous Archaeological Studies

There has been little formal archaeological study in the ahupua'a of Waialae Nui. Although McAllister describes fishponds at Niu and Wailupe, both in the former ahupua'a of Waikiki, there are no sites in Waialae itself.

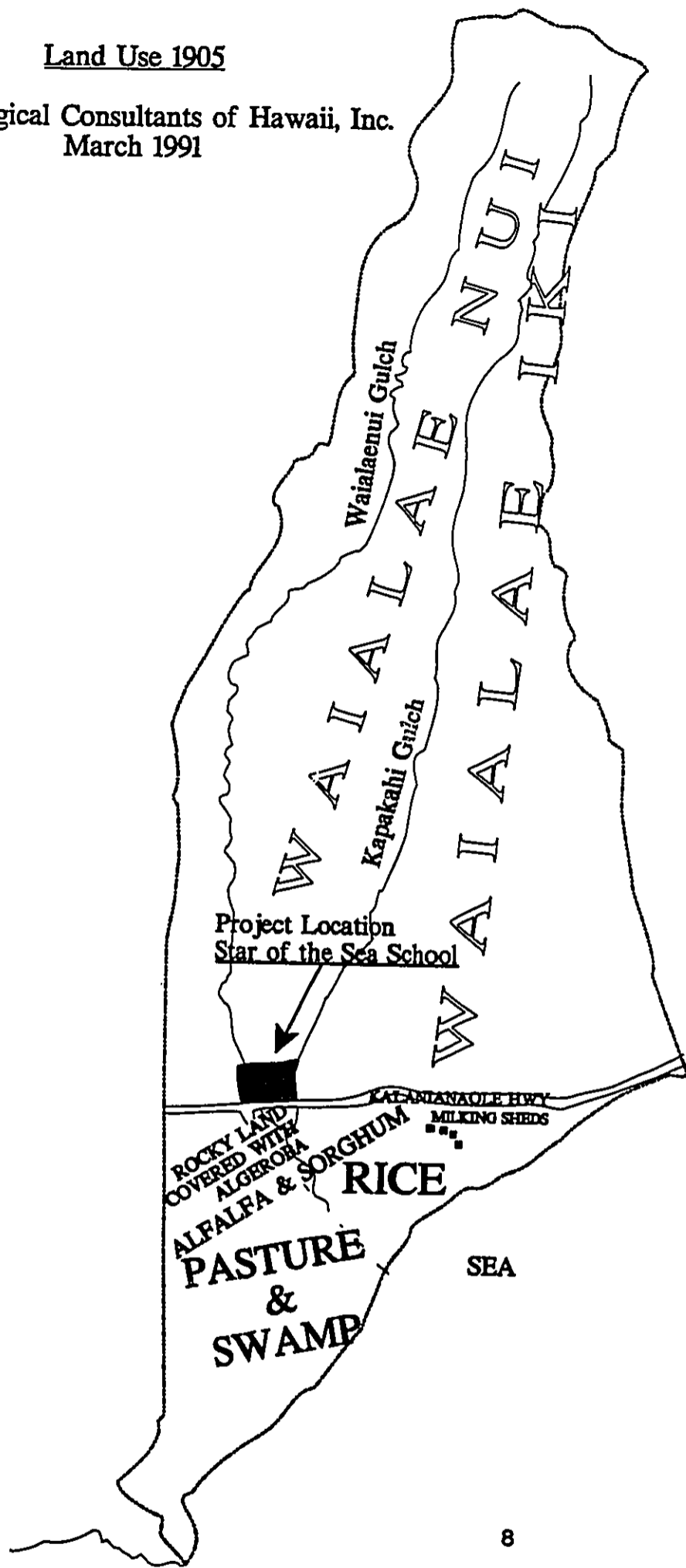
Land Use Circa 1850

Archaeological Consultants of Hawaii, Inc.
March 1991



Land Use 1905

Archaeological Consultants of Hawaii, Inc.
March 1991



A review of the files on record at the State Historic Preservation Division revealed a series of burials along the coast as well as one shelter cave. Skeletal remains of 3 female and 2 males were uncovered during construction in four different residences in the Kahala area. (see Map of Previous Archaeological Studies, Page #10 and Table of Previous Archaeological Work, Page #11.) Some of these bones were determined to be "ancient."

Site 2503 is called the Waialae shelter cave. It was tested by Lloyd Soehren in August of 1967. In the cave, he found shell midden and a number of traditional artifacts; a fish hook, an octopus lure, and a coral file. Historic artifacts included bottle glass dating to 1880-1920 and some copper tubing. Its Bishop Museum site number, formerly O-19, is now 50-0A-11.

DISCUSSIONS AND RECOMMENDATIONS

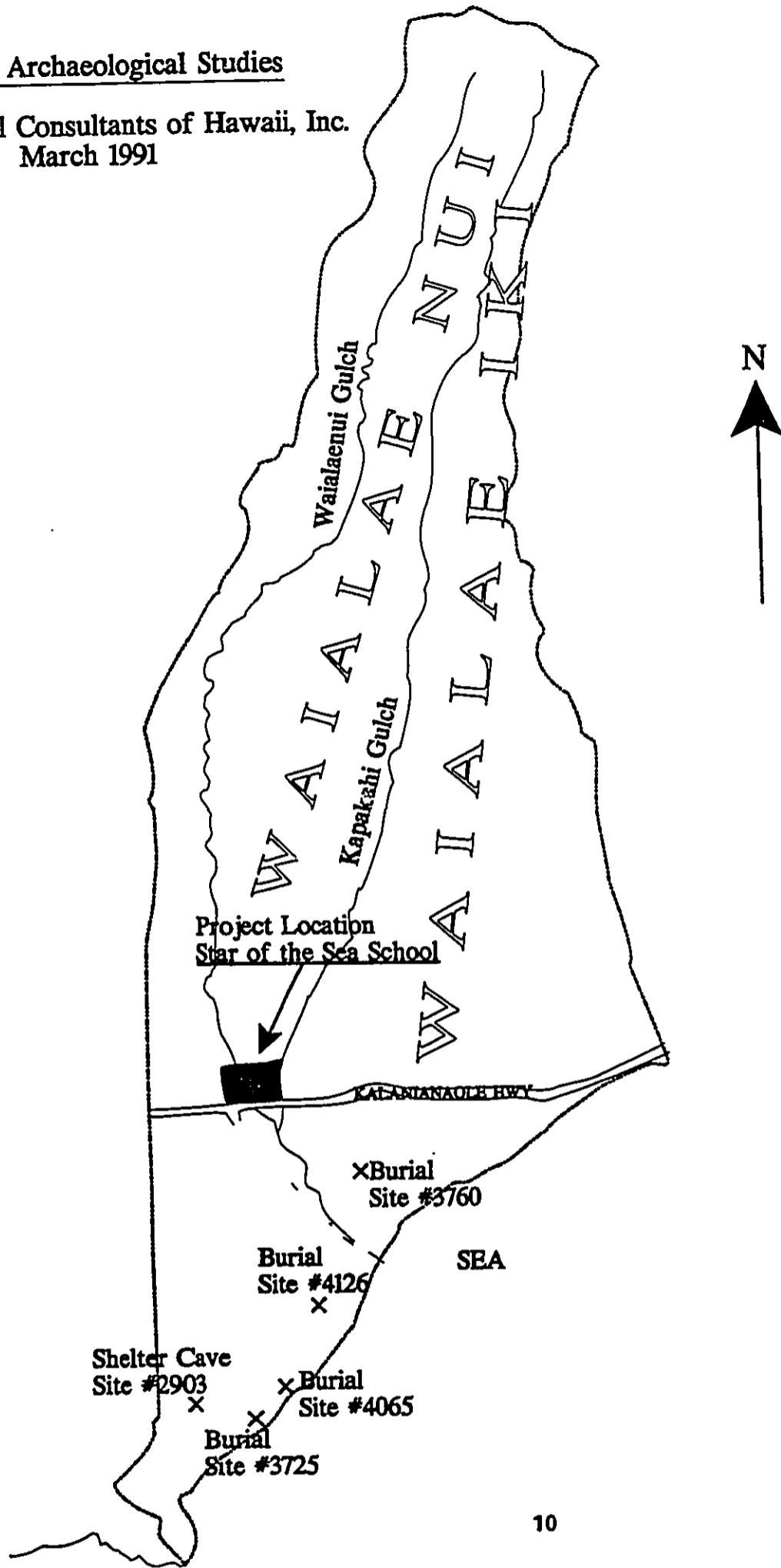
As mentioned earlier in the text, a systematic surface examination of 100% of this property failed to produce a single cultural property. This is not surprising given the clear indications that the property had been subjected to massive disturbances in the 1950's.

In a letter from the Department of Land and Natural Resources, Historic Preservation Program dated February 27, 1991 it was stated that the lands between the hills and the beach were used for irrigated taro in the early historic period. We suspect that before the construction of the concrete drainage canals that border the property on the east and west (and other subsequent improvements), this area would most likely be a candidate for the production of taro. It is questionable as to whether lo'i existed here as marshy conditions may have precluded the need for terracing. There is also enough annual rainfall for the production of dryland taro at this location.

In any case, the potential for any subsurface recovery seems remote. Informant testimony and archival photographs indicate that blasting and bulldozing of the blue rock base of this property in 1950 has precluded possible subsurface indications of any cultural materials that may have once existed at this location. We have already demonstrated that surface indications are nil. Therefore it is our opinion that no further archaeological work is necessary on the subject property.

Previous Archaeological Studies

Archaeological Consultants of Hawaii, Inc.
March 1991



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CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

BIBLIOGRAPHY

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2	1987	Griffin, Annie	Preliminary Report on a Burial Found in a Construction Site at 4505 Kahala Ave., Honolulu	Historic Sites Section	O-423
3	1989	Kawachi, Carol	Burial Investigation At 4585 Kahala Ave., Kahala, Honolulu.	Historic Sites Archaeologist	O-524
4	1989	Bath, Joyce	Aukai-Kahala Burial	Historic Preservation Division	O-564
5	1985	Nagaoka, Lisa	The Agriculture of Palolo. Waialae Na Wailupe	Dept. of Anthropology	O-367
6	1987	Rosendahl, Paul H.	Archaeological Reconnaissance Survey Waahila Reservoirs Project Area Waahila Ridge, Manoa, Honolulu, Oahu.		O-560
7	1990	Kawachi, Carol	Non-Human Skeletal Remains at 102 Royal Place, Black Point, Honolulu	Historic Preservation Program	O-606

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APPENDIX A

Agriculture of Waialae (based on LCA Testimonies)

Awardee	Area in Acres	# of Lots	Lo'i	Water Courses	Dryland Mtn. Taro	Kula	Houses	
Kaaikalo	0.51	4	6	2		2		a grave
Kehea	0.55	4	3	1.5	2	2	1	a hala tree
Luka	0.70	2	7			2	1	
Kupahihi	0.46	2	4	2		3	1	coconut & hau tree
Ohia	0.38	2	2		2	1	1	
Lohiau	0.47	1	4	2	1			
Kailiuli	0.92	2	5		2	1		orange & coffee trees
Kaina	2.24	2	3		1	1	1	
Pakiai	0.66	3	5	1	1	1		coconut tree
Ahuai	0.50	2	4	1	2	1	1	fishery
Maulu	0.29	1	2		1	1		
Kamonohiwa	0.24	1	4	1	3	1	1	
Kuaha	0.50	2	3	1	1	1	1	coffee, orange trees; fish pond
Kuilei	0.20	1	3		1	1	1	a pond
Kahanu	0.20	1	5	2		1	1	kou tree
Kaiwi	0.33	1	3			1		
Waikui	1.44	3	9			2	2	
Koahou	0.21	1	3		2	1		3 fish ponds
Apolehua	0.71	3	7	2		1	1	2 hala trees
Kahoowaha	0.51	1	1	1	1	1	1	salt pond
Paaoa	0.97	2	6	2	1	1	1	hala tee
Opunui	0.30	2	4			1	1	
Kuapuu	0.53	2	10		1	1		some trees
Makaneli	0.42	1	6			1		3 saltbeds
Kauwahikaua	0.19	2	5	1	1		1	23 coconut trees, 2 breadfruit

(from Lisa Nagaoka, 1985)

APPENDIX B



B. D. NEAL & ASSOCIATES
Applied Meteorology • Air Quality • Computer Science

February 9, 1991

Mr. John Whalen
Lacayo Planning, Inc.
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Subject: Hale Malia Lifecare Project
Potential Impacts on Air Quality

Dear Mr. Whalen:

In accordance with your request, we have examined the potential impacts on air quality from the construction and use of the proposed facilities. The results of our examination are summarized below.

Short-Term Impacts

Short-term direct and indirect impacts on air quality could potentially occur due to project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from demolition work and from vehicle movement and soil excavation; and (2) exhaust emissions from on-site construction equipment. Indirectly, there also could be short-term impacts from slow-moving construction equipment traveling to and from the project site and from a temporary increase in local traffic caused by commuting construction workers.

Fugitive dust emissions may arise from the demolition and removal of existing structures on the site and from the grading and dirt-moving activities associated with site preparation once the area is cleared. The emission rate for fugitive dust emissions from construction activities is difficult to estimate accurately because of its elusive nature of emission and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The U.S. EPA has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content

(30%), and precipitation/evaporation (P/E) index of 50. Uncontrolled fugitive dust emissions in the project area would likely be somewhere near this level. In any case, State of Hawaii Air Pollution Control Regulations prohibit visible emissions of fugitive dust from construction activities at the property line. Thus, an effective dust control plan for the project construction phase is essential.

Adequate fugitive dust control can usually be accomplished by the establishment of a frequent watering program to keep demolition areas and bare-dirt surfaces in active construction areas from becoming significant dust generators. Using wind screens may also be required. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting materials likely to give rise to airborne dust. Haul trucks tracking dirt onto paved streets from unpaved areas is oftentimes a significant source of dust in construction areas. Some means to alleviate this problem, such as tire washing, may be appropriate. Mulching of inactive areas may be necessary to control wind erosion. Paving of parking areas and/or establishment of landscaping as early in the construction process as possible can also lower the potential for fugitive dust emissions.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the standard for nitrogen dioxide is set on an annual basis and is not likely to be violated by short-term construction equipment emissions. Carbon monoxide emissions from diesel engines, on the other hand, are low and should be relatively insignificant compared to vehicular emissions on nearby roadways.

Indirectly, slow-moving construction vehicles on roadways leading to and from the project site could obstruct the normal flow of traffic to such an extent that overall vehicular emissions are increased, but this impact can be mitigated by moving heavy construction equipment during periods of low traffic volume. Likewise, the schedules of commuting construction workers can be adjusted to avoid peak hours in the project vicinity. Thus, most potential short-term air quality impacts from project construction can be mitigated.

Mr. John Whalen
Hale Malia Lifecare Project

February 9, 1991
Page 3

Long-Term Impacts

After construction, long-term impacts on air quality from automotive exhausts can potentially occur at or near any facility that attracts large volumes of vehicular traffic as a result of day-to-day operations and use. Traffic projections indicate that this project will generate a net increase of only six vehicles at the Kilauea Avenue/Malia Street intersection during the morning peak hour, while during the afternoon peak hour one vehicle less can be expected at this intersection. Existing approach volumes peak at about 2500 vehicles per hour during the morning and at about 1500 vehicles per hour during the afternoon. Thus, the percentage change in traffic on Kilauea Avenue and on Malia Street will be very small. When compared to the volume of traffic on nearby Kalaniana'ole Highway, the predicted net change is inconsequential.

The highest air pollution concentrations in the project vicinity occur without doubt along Kalaniana'ole Highway due to the high volume of traffic this roadway carries. Based on our experience in assessing traffic-related air quality impacts, it is quite probable that carbon monoxide levels along this arterial roadway may occasionally exceed the state ambient air quality standards. The state standards are considerably more stringent than the national standards set by the U.S. EPA. In any case, based on the small predicted net change in traffic volumes, the proposed project will have no measurable long-term impact on air quality in the area.

Please call me if you have any questions.

Very truly yours,

Barry D. Neal

Barry D. Neal, CCM
(Certified Consulting
Meteorologist)

APPENDIX C

D.L. ADAMS ASSOCIATES, LTD.



#91-05
March 11, 1991

Lacayo Architects
737 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Attention: Mr. John Whalen

Re: Environmental Noise Impact Assessment for
Hale O Malia Lifecare Project

Dear Mr. Whalen:

This presents our findings on environmental noise aspects of the referenced project.

1. SUMMARY OF FINDINGS

- 1.1 The additional vehicular traffic due to the completed project will not increase the traffic noise in the community because of the marginal increase in volume.

- 1.2 Construction noise could cause some short-term annoyance to occupants of neighboring residential areas. In cases where construction noise exceeds, or is expected to exceed, the Department of Health's (DOH's) property line limits, a permit must be obtained. Required permit conditions include restrictions on permissible operating hours.

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- 1.3 The predominant traffic noise sources effecting the project are Freeway H-1, which effects buildings 1 through 7, and Malia Street, which effects Buildings 8 through 12.
- 1.4 Leq values measured between 10:30 a.m. and 11:30 a.m. February 25, 1991 varied from 55 to 62 dBA depending on shielding by buildings, vegetation and attenuation with distance.
- 1.5 Units which have line-of-sight to H-1 will require mitigating measures. These include air conditioning and double strength glass to conform to the HUD interior guideline of 45 Ldn, since the predicted exterior levels (65 to 67 Ldn) are close to being "Unacceptable." Because of these high noise levels, it is unlikely occupants of these units would use their lanai if provided with one.
- 1.6 Units which have line-of-sight to Malia Street will receive significant noise levels from this street, but less than 65 Ldn. Thus, it is recommended that jalousies not be used and that air conditioning be provided. Lanais will probably be used by the occupants except during peak traffic hours.
- 1.7 Units that do not have line-of-sight to H-1 or Malia Street, because of shielding by buildings, will typically have sufficiently low

exterior levels such that natural ventilation could be used. However, it is recommended that the occupants be provided with air conditioning as an alternative. The lanais may be used throughout the day with minimal impact due to traffic noise.

- 1.8 The Early Learning Center, being a school, may be considered to be subject to Department of Education criteria which recommends a 55 dBA interior maximum. Due to its proximity to H-1, it should be air conditioned and jalousies should not be used on either the makai or east sides.
- 1.9 The Gymnasium, if it is to be used for any type of announcements or meetings, should have fixed glazing on the makai, east and west sides with ventilation provided by air conditioning or a mechanical ventilation system with silencers.

2. **PROJECT DESCRIPTION**

The proposed Hale O Malia project is a "lifecare" facility for the elderly and is proposed to be located at the existing Star of the Sea school and church campus. The residents will be 65 years of age or older, living in condominium-type units where full health care and catered meals are available.

There are three levels of housing/care offered to the tenants:
Residential apartments (300 units); personal care units (20 beds); and
an extended nursing facility (60 beds).

The apartments will be either one or two bedrooms and will be contained
in several multi-story buildings which have a maximum height limitation
of 60 feet. The existing rectory, early learning center will be
replaced by new buildings and a gymnasium will be added. The project
site plan is illustrated in Figure 1.

3. EXISTING ACOUSTICAL ENVIRONMENT

An environmental noise monitoring station located at the existing
rectory's makai side fence provided measured Leq values each half hour
during a three-day period, 10:00 am on February 25, 1991 to 10:00
am on February 28, 1991. These measured sound levels are shown
graphically as hourly Leq's in Figure 2. An average Ldn of 62.5 dBA
was calculated from this data (Reference 1). Shorter duration
measurements were made at six other locations on the site. These, when
used in conjunction with the three-day measurements, allow for an
estimate of the Ldn. The estimated Ldn values are listed below and
range from 55 to 64 dBA.

<u>Location</u>	<u>Elevation From Ground</u>	<u>Distance From Makai Property Line</u>	<u>Ldn (dBA)</u>
A Existing Rectory	9'	75'	62 - 63
B West Edge of Existing Parking Lot	21'	150'	62 - 64
C Center of Existing Parking Lot	4'	75'	61 - 62
D Center of Existing Playing Field	4'	373'	55 - 57
E West Property Line	4'	256'	56 - 58
F Roof of Existing Thrift Shop	15'	385'	56 - 58
G Mauka Property Line	4'	N/A	62 - 64

4. APPLICABLE REGULATIONS AND CRITERIA

The Department of Housing and Urban Development (HUD) provides minimum national standards (Reference 1) to protect citizens against excessive noise in and about their place of residence. The standards are expressed in terms of Ldn (Day Night Level), which is the 24-hour energy mean, "A"-weighted sound level, obtained after a 10-decibel penalty is applied to the sound levels occurring during the nighttime hours from 10:00 pm to 7:00 am.

The standards applicable for the Hale O Malia project are:

- a. Residential and other noise sensitive developments can normally be

constructed in areas subject to levels up to and including Ldn 65, with no special noise control measures required in buildings of conventional construction.

- b. Sites exposed to Ldn's in the range above 65 dB, but not exceeding 75 dB are considered normally unacceptable for residential development, with building approval subject to additional noise control measures.

For residential developments located within an Ldn 65 to 70 zone, HUD's site acceptability standards require the construction to provide a minimum of 5 dBA attenuation in addition to "attenuation provided by buildings as commonly constructed in the area, and requiring open windows for ventilation." A minimum of 10 dB additional attenuation is required for residential projects exposed to an Ldn of 70 to 75 dBA. HUD also has a design goal of Ldn 45 or less for the interior spaces of dwelling units.

On Oahu, State and County noise regulations (Reference 2) may be enforced whenever noise emissions exceed specified levels and cause complaints from occupants of neighboring properties. However, the State Department of Health (DOH) and City and County of Honolulu Land Use Ordinance (LUO) noise regulations (Reference 3) are expressed in

terms of maximum allowable noise levels rather than a 24-hour noise exposure level, such as Ldn.

The DOH regulations use A-weighted sound levels and state that the allowable noise levels shall not be exceeded for more than 10% of the time during any 20-minute period. The LUO regulations differ from those of the DOH in that they use octave band sound pressure levels instead of A-weighted sound levels and no temporal factor is involved

5. POTENTIAL NOISE IMPACTS OF THE PROJECT AND DESCRIPTION OF CONTROLS

5.1 Traffic Noise Impact Caused by the Project - Based on traffic flow projections for the project (Reference 4), the additional traffic due to the completed project will only minimally increase traffic volumes. This small increase in vehicular traffic after project completion will have an insignificant effect on traffic-generated noise levels experienced at and around the site. Thus, the additional traffic on the Freeway, H-1, Malia, Kilauea and other city streets due to the project will not have a significant environmental noise impact.

5.2 Project Operational Noise - The noise from mechanical and electrical equipment associated with the proposed development, including air conditioning equipment, exhaust fans, will be reduced to acceptable levels at the property lines (i.e., in compliance with the appropriate

DOH and LUO limits) and within the development itself, provided the appropriate noise control measures are incorporated in the design. The required noise control measures may include the following:

- 1) Sound attenuators on building and garage exhaust fans.
- 2) Inlet and discharge silencers on cooling towers.
- 3) Acoustical louvers or silencers at mechanical and electrical equipment room air intake and discharge openings.
- 4) Appropriate selection of vibration isolation mounts; mechanical and electrical equipment room wall, floor and ceiling constructions; acoustical linings, etc.

5.3 Potential Construction Noise Impacts - Development of the project site will involve demolition, excavation, grading and the construction of infrastructure and buildings. The various construction phases of the development project may produce significant, albeit short-term, noise impacts on the surrounding community. The actual impacts are dependent upon the methods employed during each stage of the construction process. Typical ranges of construction equipment noise levels are shown in Figure 3.

In cases where construction noise exceeds or is expected to exceed, the DOH's "allowable" property line limits, a permit must be obtained from the DOH to allow the operation of vehicles, construction equipment, power tools, etc. which emit noise levels in excess of the "allowable" limits. Required permit conditions for construction activities are:

"No permit shall allow construction activities creating excessive noise...before 7:00 am and after 6:00 pm of the same day."

"No permit shall allow construction activities which emit noise in excess of ninety-five db(A)...except between 9:00 am and 5:30 pm of the same day."

"No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on... [certain] holidays. Activities exceeding ninety-five dB(A) shall [also] be prohibited on Saturdays."

In addition, construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must be equipped with mufflers. Also, construction vehicles using traffic-ways must satisfy the DOH's vehicular noise requirements (Reference 5).

Construction noise could cause annoyance to occupants of the closest, existing, noise-sensitive buildings (i.e., the existing school and the residential properties which flank the site). It would be beneficial to perform any construction phase involving noisy equipment, during

the school's summer holidays. If this is not feasible, it may be necessary to temporarily board the windows of the school which face the site and install temporary air conditioning as the school will be exposed to estimated peak exterior noise levels of up to 80 dBA.

Blasting, if required, could also have noise impacts. However, blasting at construction sites near populated areas is usually accomplished by using numerous small charges detonated with small time delays. Blast mats can also be used to assist in directing the explosive energy into the rock, control flying debris and muffle the noise. Thus, with the appropriate blast design techniques, the noise from blasting can usually be controlled within acceptable limits at the closest noise-sensitive areas.

Should it be necessary for additional heavy vehicles, bringing construction materials or removing excavated material, to use community streets (Malia, Ainakoa, Halekoa, Kilauea) it will substantially increase the traffic noise levels at the residences along the roads. The noise impact of these trucks traveling on H-1 will be very small.

5.4 Traffic Noise Impact on the Project - Various facades of the residential buildings with double-loaded corridors will be exposed to different degrees of traffic noise impact. Some of the considerations are: (a) approaching, or meeting, HUD's goal of 45 Ldn interior noise level; (b) the noise levels on the lanais which will determine if the lanai will most likely be limited to only providing light, space for potted plants, and a view from an air conditioned room, or if the lanai may be used as a sitting area where conversations may reasonably exist; and (c) the desire of residents to not use their air conditioning and to naturally ventilate their units during the many days of pleasant weather. Based on measured data and the calibrated FHWA Traffic Noise Prediction Model (Reference 6), there are four Categories of traffic noise exposed facades shown in Figure 1:

- I. 65 - 67 dBA caused by direct sound propagation from H-1.
- II. 57 - 62 dBA caused by direct sound propagation from Malia Street.
- III. 55 - 60 dBA caused by partially shielded traffic noise from H-1 and/or Malia Street.
- IV. Less than 57 dBA where high levels of shielding from buildings exist.

The following noise control measures are required for fenestration in categories I through IV in order to have acceptable interior noise levels:

1. Avoid jalousie windows, or restrict their use to the less noise-sensitive areas (bathrooms, laundries, etc.). Use sliding windows and doors with minimum double strength glass and frames that seal well in the closed position.
2. Air condition or mechanically ventilate these areas so that windows and doors can be kept closed.

In Category IV, glass jalousies and lesser quality sliding doors should adequately reduce traffic noise when they are closed.

It is predictable that residents will probably never, or rarely, sit on the lanais in Category I, while it is likely that during off peak traffic hours the lanais in Categories II and III may be enjoyed by many residents. It is believed that many people would enjoy the lanais in Category IV during any time of the day.

Central air conditioning units are preferable since they tend to be much quieter when designed correctly. Furthermore, a central system

when installed in all buildings will mitigate air conditioner noise propagation from one apartment to the next adjacent one via open windows if they are designed with non-fixed glazing.

The Early Learning Center (Building 2), being a school, is subject to different noise considerations. The Department of Education (DOE) recommends a 55 dBA upper limit for interior noise which is not to be exceeded more than 10% of the time within a 20-minute period. This is considerably higher than that recommended by ASHRAE in their handbook where it is suggested that school classrooms have a level between 35-45 dBA. Since, the measured traffic noise in the vicinity of the proposed school was between 61 and 64 dBA during school hours, natural ventilation using jalousies will not meet the DOE standard. Mitigating measures might include either: (a) double strength fixed glazing with air conditioning; or (b) natural ventilation employing duct silencers and mechanical extraction.

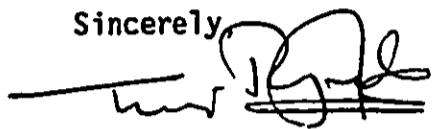
The gymnasium (Building 1), which is the closest to H-1 should be centrally air conditioned with all fixed glazing, especially, if it is to be used a meeting place for school announcements or special events like band concerts or theatrical productions. Should constraints force natural ventilation to be chosen, the air intakes should be as close to the ground as possible to minimize traffic noise intrusion if located

Lacayo Architects
March 11, 1991

#91-05
Page 14

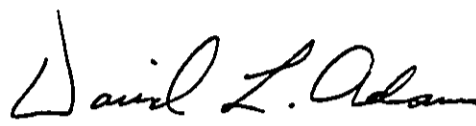
on the makai side, or if located on the mauka side to minimize breakout sound from noisy activities in the gym. The exhausts should be fan assisted and located on the roof and should have ducts with acoustical treatment to minimize noise intrusion from the elevated H-1.

Sincerely,


Trevor R. Nightingale, Ph.D.

TRN/DLA/ld

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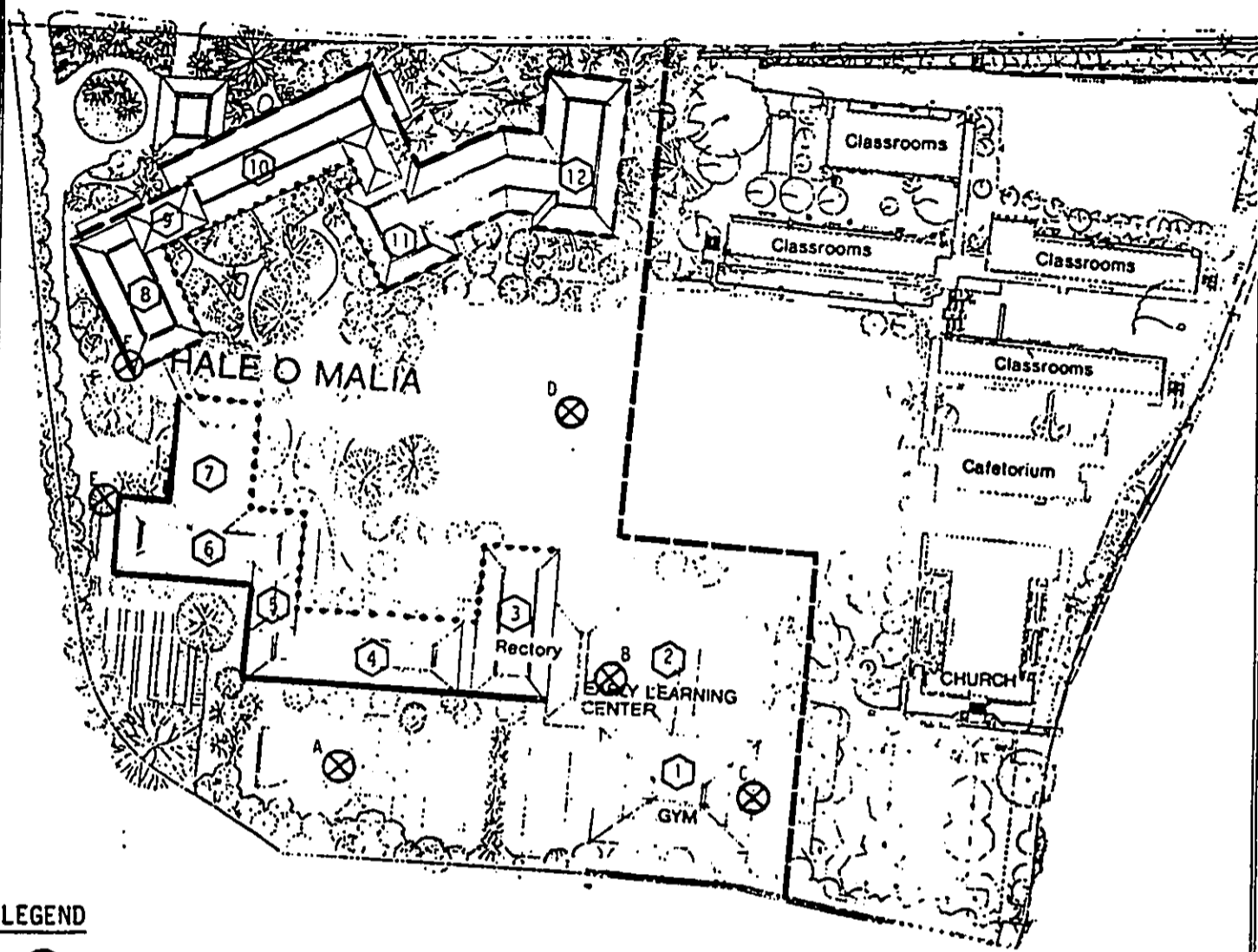

David L. Adams, P.E.

Lacayo Architects
March 11, 1991

#91-05
Page 15

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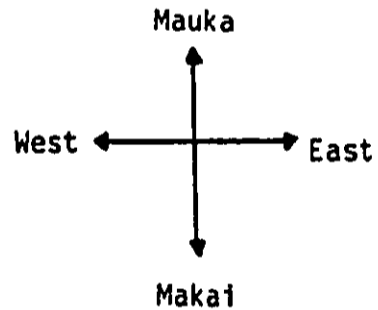
1. HUD Environmental Criteria and Standards, 24 CFR 51, Federal Register, Volume 44, No. 135, July 12, 1979; Amended 49 FR 800, January 6, 1984.
2. Community Noise Control for Oahu, Department of Health, Chapter 43, State of Hawaii, Administrative Rules, Title II, November 6, 1981.
3. Section 3.11, Noise Regulations, Land Use Ordinance, City and County of Honolulu, October 22, 1986.
4. Traffic Assessment Proposal Hale O Malia Lifecare Project, Parsons Brinkerhoff Quade & Douglas, Inc., December 4, 1990.
5. Chapter 4 - Vehicular Noise Control for Oahu, Department of health, State of Hawaii, Administrative Rules, Title II, November 6, 1981.
6. FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108; U.S. Department of Transportation, December 1978.



LEGEND

- A ⊗ Sound Level Measurement Location
- ① Building Number
- Category I Facades
- - - Category II Facades
- · · · · Category III Facades
- · · · · Category IV Facades

NOT TO SCALE



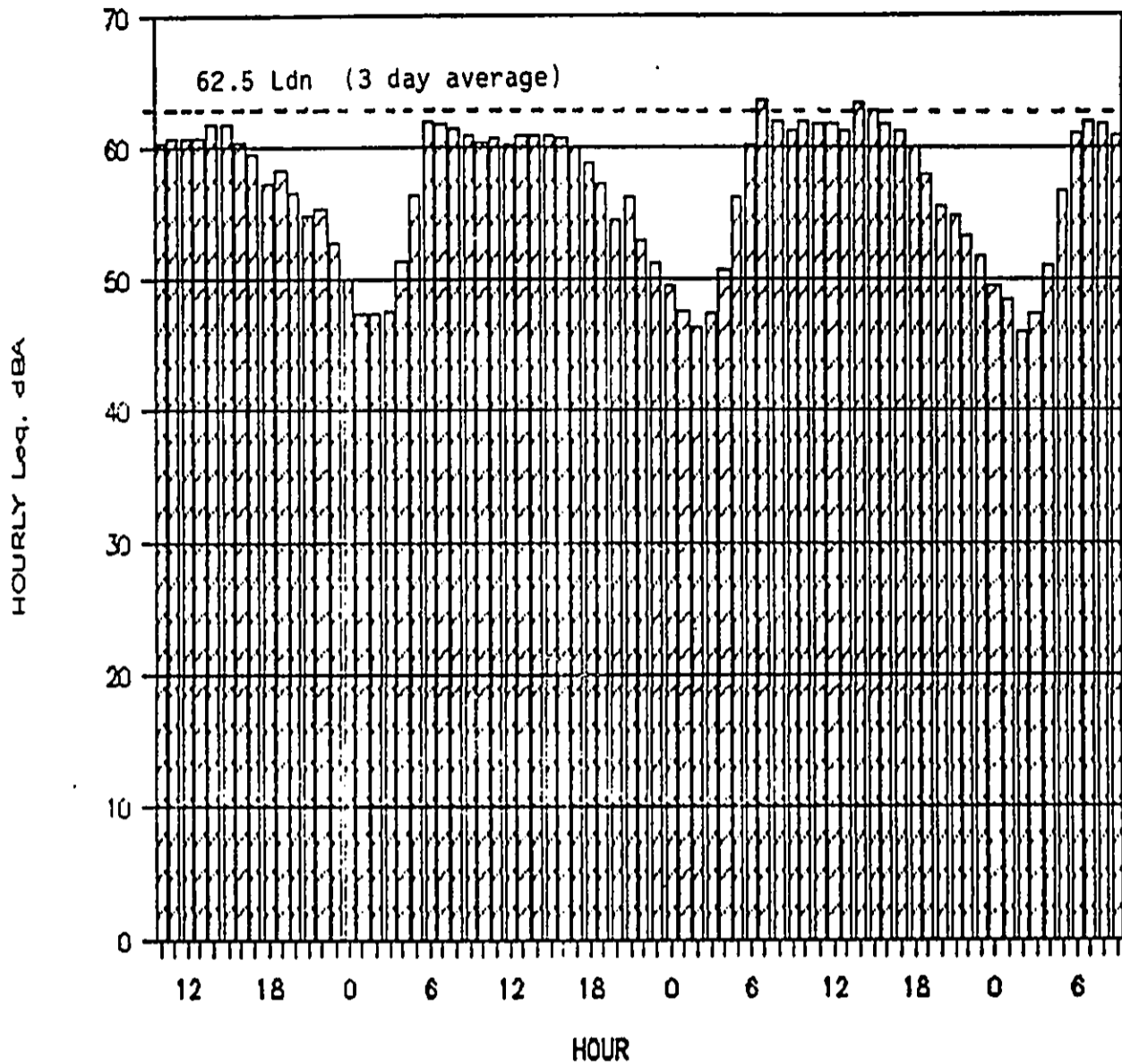
D.L. ADAMS ASSOCIATES, LTD.



FIGURE 1 Site Plan and Measurement Positions with Facade Identification

HOURLY Leq vs TIME

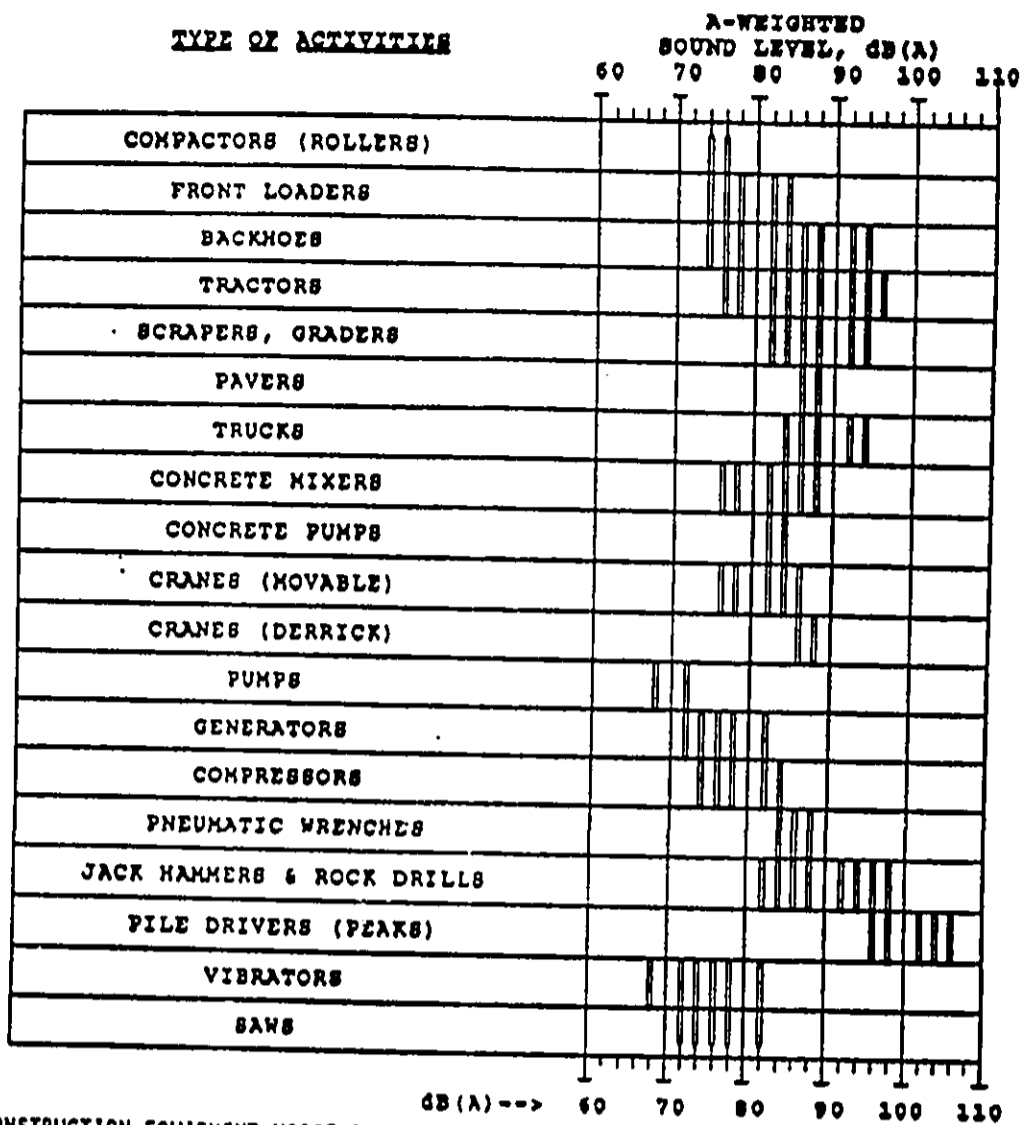
⊕ WOODEN FENCE IN THE EXISTING RECTORY



D.L. ADAMS ASSOCIATES, LTD.

dba
DARBY & ASSOCIATES
ACOUSTICAL CONSULTANTS

Figure 2 Measured Leq at the existing rectory
10:00 am, February 25th to 10:00 am,
February 28th



CONSTRUCTION EQUIPMENT NOISE RANGES @ 50 FEET
NOTE: BASED ON LIMITED AVAILABLE DATA SAMPLES

D.L. ADAMS ASSOCIATES, LTD.
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**DARBY
& ASSOCIATES**
ACOUSTICAL CONSULTANTS

FIGURE 3 TYPICAL CONSTRUCTION NOISE
LEVELS @ 50' DISTANCE

APPENDIX D

HALE O MALIA

TRAFFIC ASSESSMENT

May 1991

Prepared for:

Lacayo Planning, Inc.

Prepared by:

Parsons Brinckerhoff Quade & Douglas, Inc.

HALE O MALIA TRAFFIC ASSESSMENT

This traffic assessment was prepared to address the potential traffic related impacts of various alternative development scenarios on the Star of the Sea School site. The high school portion of the Star of the Sea School has been closed since the end of the 1989-1990 academic year. The school maintains the necessary zoning and lot area capacity to expand its existing enrollment to at least 1,100 students. The expanded enrollment would not require a Development Plan amendment or zone change approval. An administrative permit to use additional buildings is all that would be required.

Approximately six of the 14-acre Star of the Sea School site, located near Kahala Mall, is largely undeveloped. The first alternative considers construction of a lifecare center for senior citizens on the six undeveloped acres and the defunct high school portion of the site. This development alternative includes relocating the early learning center to the southern portion of the site, near the existing church and limiting access onto the site from the 4469 Malia Street driveway entrance.

The second alternative evaluates re-opening the high school portion of the campus with a student enrollment of 300 and the third alternative evaluates the expansion of the existing school to include 600 additional students to a total enrollment of 1,100 students.

The following summarizes an assessment of the traffic related impacts generated by the three alternatives.

EXISTING TRAFFIC CONDITIONS

The Star of the Sea School campus is bounded by Malia Street to the north, Kalaianaoale Highway to the south, Kilauea Avenue to the west, and Alinakoa Avenue to the east. Access to the school is provided through two driveways on Malia Street and through Alilikoa Street. One driveway on Malia Street is located east of Kilauea Avenue and west of the existing early learning center site. This driveway connects to an interior roadway on which access is restricted to one-way traffic circulation from Malia Street to Alilikoa Street between the hours of 7:00 a.m. and 5:00 p.m. After these hours this interior roadway provides two-way access on site.

The second inner-campus driveway is located further east, between the church and a drainage canal. This driveway also connects to an interior roadway that provides one-way traffic circulation from the church entrance at Alilikoa Street to Malia Street; on Sundays, a locked gate prohibits through-traffic on this interior roadway.

Malia Street is a two-lane roadway that intersects Kilauea Avenue forming the stop controlled stem of a T-intersection. Malia Street is 40-foot wide and provides direct access to the Star of the Sea School site through two driveways.

Kilauea Avenue is a major circulation route connecting Kapahulu to Kahala. Makai of Malia Street, this 64-foot wide, 4-lane roadway has a raised center median. Mauka of Hunakoi Street, Kilauea Avenue narrows to a two-lane roadway. This road has a posted speed limit of 25 miles per hour.

The John Wilson Elementary School is located on the eastern side of Kilauea Avenue, on the northeast corner of the Kilauea Avenue/Malia Street intersection. Traffic cones and other school crossing provisions (pedestrian crosswalk and guard) reduce this roadway to one-lane northbound on Kilauea Avenue during John Wilson Elementary morning peak hours.

Alakoa Avenue is a two-lane collector road that intersects Kalaniana'ole Highway, forming a signal controlled cross intersection. Alakoa Avenue is striped for a shared left-thru lane and right-turn lane in both the northbound and the southbound directions. During peak hours, traffic cones restrict movements to right-turns only onto Kalaniana'ole Highway.

Alilikoa Street is a two-lane residential roadway that intersects Alakoa Avenue where it is stop controlled. Parking is allowed along both sides of this residential roadway. Alilikoa Street provides direct access to the Church located on the Star of the Sea site.

Existing traffic volumes on Kilauea Avenue, Malia Street, Kalaniana'ole Highway, and Alakoa Avenue were collected from the City and County of Honolulu Department of Transportation Service's *1988 Traffic Survey Data*. This information is summarized in Table 1.

**TABLE 1
1988 TRAFFIC VOLUMES**

		SOUTHBOUND	NORTHBOUND
Kilauea Avenue	ADT =	1,982	5,312
	AM =	1,676	540
	PM =	175	677
		EASTBOUND	WESTBOUND
Malia Street	ADT =	4,292	2,150
	AM =	450	490
	PM =	624	130
		NORTHBOUND	SOUTHBOUND
Alakoa Avenue	ADT =	2,212	3,548
		EASTBOUND	WESTBOUND
Kalaniana'ole Highway	ADT =	41,590	38,018

Church Site

Approximately 2,200 parishioners attend mass at the Star of the Sea Church each Sunday. Worship services are held six times daily at 6:00 a.m., 7:00 a.m., 8:15 a.m., 10:15 a.m., 11:45 a.m., and 5:30 p.m. According to church officials, the 8:15 and 10:15 a.m. services are the most well-attended masses. The Confraternity of Christian Development (CCD) also conducts Sunday school classes directly following the 8:15 a.m. service.

Mass is also held in the morning at 6:00 and 7:15 a.m. and in the evening at 5:30 p.m. every Monday through Friday. However, attendance at these services are minimal and are not expected to significantly affect a.m. or p.m. peak hour volumes.

On Sundays, access to the site is provided through two entrances, Aliikoa Street and the western driveway on Malla Street. The driveway that is located parallel to the drainage canal is not available for use. On Sunday February 24, 1991; a four-hour traffic count was conducted between 7:30 and 11:30 a.m. to assess the number of trips generated by Sunday morning mass. Traffic was counted at two locations: Aliikoa Street at Ainakoa Avenue and Malla Street at the western driveway entrance.

The heaviest flow of vehicles onto the Star of the Sea site corresponded with the 8:00 - 8:15 a.m. and 10:00 - 10:15 a.m. worship services. The majority of vehicles entered the site from Aliikoa Street. The 8:15 a.m. worship service generated 84 vehicular trips, or 32 percent of the total number of cars entering the campus. At the beginning of the 10:15 a.m. service, 63 cars, or 24 percent entered.

Forty percent fewer vehicles entered the campus by Malla Street than Aliikoa Street. By 11:30 a.m., a total of 175 cars had entered from Malla Street. Thirty-one vehicles, or 18 percent of the trips were generated at the beginning of the 8:15 a.m. service, while 50 cars, or 29 percent entered for the 10:15 a.m. mass. Overflow from the church's parking lot resulted in parishioners parking along Aliikoa Street.

School Site

The Star of the Sea School has a current enrollment of 135 children and 30 staff in its early learning center and 369 students and 35 staff in its elementary school. Teachers and other staff members are park in the church parking lot during school hours. Traffic generated by both schools is estimated to be 1,455 daily trips: 290 trips during the a.m. peak hour and 191 trips during the afternoon peak hour. Trip generation rates promulgated by the Institute of Transportation Engineers in the *Trip Generation Manual, Fourth Edition*, shown on Tables 2 and 3, were used to estimate the number of trips generated by the existing Star of the School facilities.

**TABLE 2
DAY CARE CENTER
(30 staff)**

	RATE (trips/employee)	TRIPS
ADT	33.196	996
AM PEAK HOUR	6.232	187
ENTER	56%	105
EXIT	44%	82
PM PEAK HOUR	6.036	181
ENTER	48%	87
EXIT	52%	94

**TABLE 3
ELEMENTARY SCHOOL
(35 staff)**

	RATE (trips/employee)	TRIPS
ADT	13.099	459
AM PEAK HOUR	2.94	103
ENTER	NA	NA
EXIT	NA	NA
PM PEAK HOUR	0.278	10
ENTER	NA	NA
EXIT	NA	NA

PROPOSED ALTERNATIVES

Alternative 1: Lifecare Facility

The first alternative includes a comprehensive lifecare facility consisting of congregate living units (300 independent apartments) and a nursing section with a 20-bed personal care unit and a 60-bed skilled nursing unit. The Episcopal Homes Foundation and Lifecare Associates of Hawaii propose to construct a facility for adults over the age of 65 on a portion of the Star of the Sea school and church campus. Assuming 100% occupancy, the lifecare center is projected to generate more than 850 trips per day. The lifecare center is projected to generate 24 vehicular trips during the morning peak hours and 69 vehicular trips during the afternoon peak hours. Tables 4 and 5 present a more detailed description of this trip generation.

**TABLE 4
CONGREGATE LIVING
(300 living units)**

	RATE (trips/dwelling unit)	TRIPS
ADT	2.145	644
AM PEAK HOUR	0.063	19
ENTER	60%	11
EXIT	40%	8
PM PEAK HOUR	0.173	52
ENTER	55%	29
EXIT	45%	23

**TABLE 5
NURSING SECTION
(80 beds)**

	RATE (trips/bed)	TRIPS
ADT	2.597	208
*AM PEAK HOUR	0.064	5
ENTER	69%	3
EXIT	31%	2
PM PEAK HOUR	0.208	17
ENTER	25%	5
EXIT	75%	12

* Peak hours of generator

Alternative 2: High School Reopening

Enrollment at the Star of the Sea School has diminished to 504 student and 65 staff members in its early learning center and elementary school. Although the high school portion of the Star of the Sea has been closed, it could reopen increasing the total school enrollment to 800 students and 95 staff members. The high school site, therefore, has a trip generation potential equivalent to approximately 300 students and 30 employees. Table 6 shows the estimated traffic that would be generated by the high school should it reopen.

**TABLE 6
HIGH SCHOOL
(30 staff)**

	RATE (trips/employee)	TRIPS
ADT	16.793	504
AM PEAK HOUR	2.11	63
ENTER	NA	NA
EXIT	NA	NA
PM PEAK HOUR	0.826	25
ENTER	NA	NA
EXIT	NA	NA

Alternative 3: Expanded School Enrollment

Under its current designated land use, the Star of the Sea School could increase its enrollment by 600 students at the discretion of administrative officials. The existing campus can accommodate at least 1,100 students without a Development Plan amendment or zone change approval from the City and County of Honolulu. The decision to increase enrollment would, therefore, be accomplished by the addition of buildings via administrative permit approvals.

Traffic generated by 600 additional students are summarized in Tables 7 and 8. These traffic projections are based on the proportion of existing students and staff members.

**TABLE 7
DAY CARE CENTER
(79 staff)**

	RATE (trips/employee)	TRIPS
ADT	33.196	2,607
AM PEAK HOUR	5.232	492
ENTER	56%	276
EXIT	44%	216
PM PEAK HOUR	6.036	477
ENTER	48%	229
EXIT	52%	248

**TABLE 8
ELEMENTARY SCHOOL
(71 staff)**

	RATE (trips/employee)	TRIPS
ADT	13.099	928
AM PEAK HOUR	2.94	209
ENTER	NA	NA
EXIT	NA	NA
PM PEAK HOUR	0.278	20
ENTER	NA	NA
EXIT	NA	NA

PROJECTED IMPACTS

The trip generation potential of the three alternative development scenarios were compared to the existing school enrollment of 504 students and 65 employees. A comparative assessment of the trip generation potential of the various alternatives is compared to the existing school scenario and summarized in Table 9.

**TABLE 9
SCENARIO COMPARISONS**

	Alternative 1 Lifecare Facility	Alternative 2 Re-opened High School	Alternative 3 Expanded Enrollment
ADT	+852	+504	+2,683
AM	+69	+63	+ 342
PM	+24	+25	+ 282

Alternative 1: Lifecare Facility

The lifecare center is projected to generate 852 average daily trips with approximately 69 vehicle trips generated during the a.m. peak hour and 24 vehicle trips generated during the p.m. peak hour. When compared to the trip generation potential of the site with a re-opened high school, the lifecare facility would generate 348 more vehicle trips on a daily basis. During the a.m. and p.m. peak hour, the lifecare center is projected to generate an equivalent number of vehicle trips as the re-opened high school.

Senior citizens housed in the proposed lifecare center would tend to have lower vehicle ownerships and generally avoid the traditional commuter peak hour periods. The main contributors to the peak hour traffic would instead likely be the staff employed at the lifecare facility. The extent to which the peak hour volumes would be affected would largely be determined by the timing of the shifts during which the employees would work. The proposed lifecare facility would, therefore, generate more daily vehicle trips than the high school but would only nominally affect peak hour traffic volumes in the surround area.

Alternative 2: High School Reopening

In earlier years, the high school had an enrolled as high as 400 students. Changing demographics of the area, as well as other factors, contributed to a decline in enrollment which ultimately led to the closing of the high school in 1990. Reopening the high school would require minimal construction and maintenance work with no presently-identified additional governmental permits or zoning changes. Reopening the now defunct high school is expected to generate 504 additional daily trips to the project site. Sixty-three of those trips will be made during the morning peak hour, while 25 will be made during the evening.

While reopening high school would result in 348 fewer average daily trips than the lifecare center, the high school is expected to generate a total of only five fewer cars during peak hour periods.

Alternative 3: Expanded School Enrollment

Alternative 3 is expected to generate the greatest vehicular traffic volumes to the project site. An increased enrollment of 600 students is expected to generate 2,683 more vehicles per day than the proposed lifecare facility. Morning and evening peak periods are projected to increase as well. The expanded school enrollment alternative is projected to generate an additional 342 vehicle trips during the a.m. peak hour and 282 vehicle trips during the p.m. peak hour.

SUMMARY AND CONCLUSIONS

The lifecare center is projected to generate only six more vehicle trips during the a.m. peak hour than the recently closed high school. During the p.m. peak hour, the lifecare facility would generate one fewer vehicle trip than the high school. The 348 additional vehicle trips that would be produced by the lifecare facility daily, represent only a five and a half (5 1/2) percent increase in daily traffic volumes on Malia Street.

By committing nearly half of the campus to the lifecare facility, the alternative of a major expansion in school enrollment, which would have a much greater impact on peak hour and average daily traffic volumes, is foreclosed.

Since car idling emits the greatest quantities of pollutants during delays, peak hour travel is the primary focus of this air quality summary. The City and County of Honolulu are in attainment with the National Ambient Air Quality Standards (NAAQS). Some of the pollutants caused by vehicular traffic include Total Suspended Particulate Matter (TSP), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Carbon Monoxide (CO), and Lead (Pb).

Based on existing and projected traffic conditions within the project area, the worst-case scenario involves the construction of the proposed lifecare facility. As summarized in the previous table, the six additional cars generated by the lifecare facility during peak hours will minimally increase traffic volumes. Such a small percentage increase is not expected to negatively effect existing air quality around the study area.

Construction of a lifecare facility on the western portion of the Star of the Sea School site will change internal traffic circulation patterns. The proposed lifecare development will preclude through traffic from using this internal road to access Alikoa Street. The western campus entrance from Malia Street will, therefore, serve the lifecare facility exclusively. The construction of the lifecare facility will also include the relocation of the early learning center adjacent to the proposed gymnasium.

The construction of a lifecare center will not dramatically effect weekday Star of the Sea traffic circulation patterns during morning and afternoon peak hours. The majority of the school generated traffic occurs and will continue to occur along Malia Street. Some minor volumes of traffic will divert onto Alikoa Street to access the early learning center. The impacts of this diverted traffic on Alikoa Street can be minimized by requiring traffic exiting the southeastern portion of the site to use the second internal roadway that exits onto Malia Street.

The second Malia Street driveway currently acts as a one-way drop-off and pick-up route through the school site. Cars enter the campus from Alikoa Street and exit Malia Street. Since limited roadway widths prohibit simultaneous northern and southern traffic flow, the driveway could operate in alternating directions during the morning and afternoon peak periods. This improvement would accommodate increased traffic volumes minimizing traffic impacts on Alikoa Street.

The existing church is the primary attractor of weekend traffic to the site. Approximately 60 percent of the traffic (259 vehicles) that is currently attracted to the church on Sunday, use Alikoa Street to access the site. The proposed lifecare center will preclude the remaining 40 percent of the traffic (175 vehicles) from using the internal roadway that connects to the western driveway onto Malia Street.

The second Malia Street driveway could be used as an alternative route to and from the church on Sundays. As previously discussed, this internal roadway could be operated in alternating directions, before and after church services, serving the peak direction of traffic flow. This would aid in mitigating any potential negative traffic impacts on Alikoa Street.