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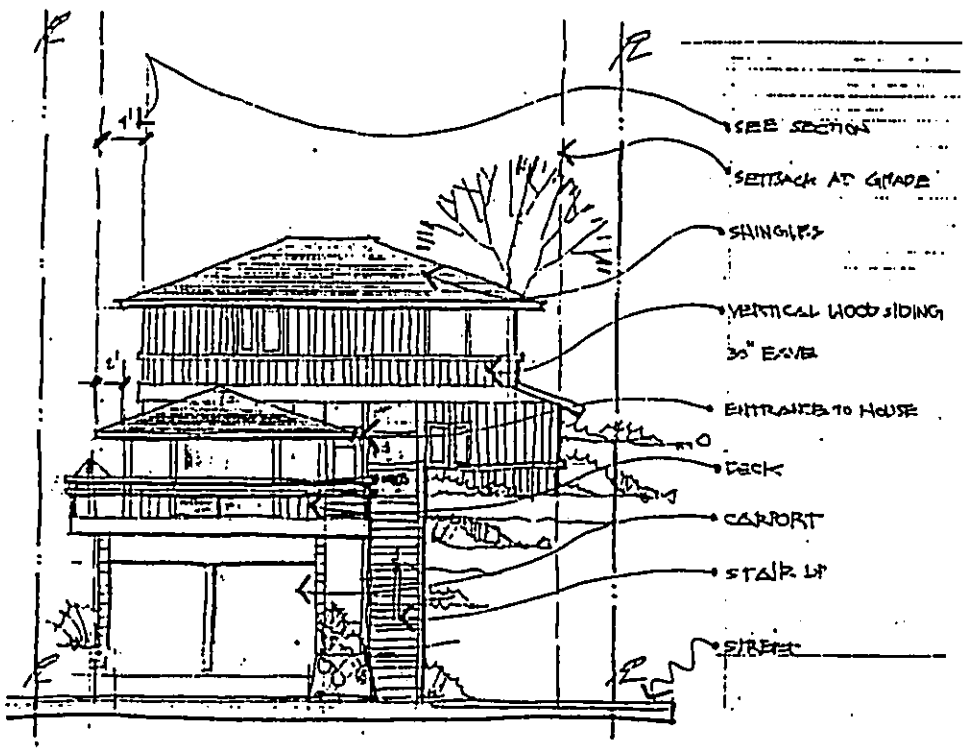
Final Environmental Impact Statement (FEIS)

Chapter 343, Hawaii Revised Statutes (HRS)

For

1993 - Oahu - FEIS - Luinakoa



NOT TO SCALE

LUINAKOA PARTNERS

RESIDENTIAL SUBDIVISION

JANUARY, 1993

FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

CHAPTER 343, HAWAII REVISED STATUTES (HRS)

FOR

LUINAKOA PARTNERS

RESIDENTIAL SUBDIVISION

PREPARED FOR THE

LAND USE COMMISSION

STATE OF HAWAII

PREPARED BY

PARAMETRIX, INC.

CHAPTER I. INTRODUCTION AND SUMMARY

1.1 INTENDED USES OF THIS DOCUMENT

This environmental impact statement (EIS) has been prepared to examine the environmental acceptability of the proposed residential subdivision at the mauka dead end of Luinakoa Street. An environmental assessment/ preparation notice was prepared and filed with The Office of Environmental Quality Control for publication in the Bulletin dated August 23, 1992. At the same time, a direct mailing was made to over 20 agencies, community groups, and private individuals requesting their comments if any on the proposed project. Their comments and the County's responses are contained in Chapter X.

The Draft EIS was prepared and filed with the State Land Use Commission (Docket A92-678/William Crowder) as the accepting authority on October 13, 1992. Copies of the DEIS were also filed with OEQC for the October 23, 1992 Bulletin and mailed to the same list of consulted parties identified in Chapter X. The 45 day review period for the DEIS ended on December 7, 1992. 21 comments were received from agencies and private community groups. All comments and responses are in Section X.

This DEIS is intended to comply with Chapter 343, Hawaii Revised Statutes and the EIS regulations promulgated by Chapter 200 of Title 11, Department of Health. The purpose of this document is to provide information to public agencies and members of the affected communities about the nature of the subject action; to assess the potential social and environmental impacts of the proposed action, and to evaluate these potential impacts of the proposed action on the affected communities, and to consider alternatives to the proposed action.

1.2 DESCRIPTION OF THE PROPOSED ACTION

The petitioner proposes to design and construct a 50-52 fee simple lots only residential subdivision on 8.74 acres that will be consistent with the adjacent zoned lands. This project will be designed and constructed to applicable City & County building code standards for the proposed improvements. These would include:

the design and construction of the Luinakoa Street extension to City & County dedicable standards in a mauka direction for a distance of approximately 1300 feet;

the design and construction of the Kapakahi Drainage Channel extension to dedicable City & County standards;

the design and construction to dedicable City & County standards for Sewers, Water, and Drainage systems that will connect to the existing systems on Luinakoa Street. The completed project will be sold as finished fee simple lots of approximately 5000 square feet each.

1.3 RATIONALE FOR ACTION

The Petitioner is proposing this residential project to use existing undeveloped lands within the Metropolitan Honolulu District. Previous projects that have been designed, built and sold by the Petitioner include a townhouse project on Booth Road in the Pacific Heights area and a fee simple residential project in Kalihi Valley. The ability to develop smaller and often irregular sized parcels as "in-filling" can provide housing to all segments of the consumer market. At the present time, government is attempting to meet the broad base demand of housing in the affordable and gap group market segments; this smaller project can provide market units to the community who wish to relocate to the Ainakoa area, and can meet the current market prices for fee simple residential lots.

1.4 SUMMARY OF PROBABLE IMPACTS

Land Use The proposed site is presently vacant and fallow; development of the parcel will result in perceptible change to existing terrain conditions, with temporary impacts from air and noise, the most noticeable variants to the ambient environment. The land use designation to the site is presently **Conservation** on the State Land Use Boundary maps, and **Preservation** on the City Development Plan and Zoning maps.

Flora and Fauna No endangered flora or fauna species are present in the proposed development site.. Certain exotic avifauna species may be disrupted during the construction phase in the immediate and adjacent areas, but these disruptions are not of a permanent duration.

Historic/Archaeological Resources The technical study conducted for this project did not indicate the presence of any significant historic or archaeological sites in the proposed alignment (See Exhibit A). A project monitoring plan will be designed for use by the general contractor so that if sites are discovered in the construction phase, appropriate action can be taken. The State Historic Preservation Division, DLNR will be called to evaluate any finds on the project site.

Agricultural Potential There will be no major or significant economic impacts to the agricultural economy of the State due to this project's implementation. The long term usage of the parcel is historic in that grazing for dairy and beef cattle was once in existence, but this use has been discontinued for decades.

Noise - Ambient noise levels will be exceeded during the construction phase. After completion of the offsite improvements, the noise levels will not be significant since the temporary construction noise levels will cease.

There will be a continued construction noise pattern as the individual lot purchaser commence construction on their respective lots, but these will be also of short duration and not permanent. Concerns over the possible use of explosives for blasting basaltic rock has been expressed by the Ainakoa Community Association. These concerns have been expressed based on their personal experience with the soil conditions on the Luinakoa Street portion of Kapakahi Gulch. A preliminary **Soils report** has been completed and the findings are provided in **Exhibit B.**

Transportation Facilities - Traffic will be temporarily impacted during the construction phase, particularly for the tenants on existing Luinakoa Street. The adjacent streets should not experience significantly adverse impacts since the construction work commences at 7:00 a.m. and ends at 3:30 p.m.. All contractors will be responsible for traffic control management during construction. A **Traffic Analysis** was conducted specifically for the Luinakoa Street residents' area and the adjacent streets . The findings are in **Exhibit C.**

Air Quality - Ambient air quality standards may be temporarily exceeded during the construction phase, particularly with fugitive dust from trenching and materials hauling. Contractors will be responsible for dust abatement measures if considered necessary by the State Department of Health.

1. 5 SUMMARY OF MITIGATING MEASURES

Construction related impacts such as soil erosion, fugitive dust, and noise level violations due to construction equipment, will be minimized by recognized construction techniques such as dust control sprinkling of the project alignment, noise abatement equipment on construction vehicles and machinery, and use of more current construction technology for heavy construction activities involved in clearing, grading, and excavation work. Blasting will not be a technique used in the project development. All plans for site improvements and those portions of the project that would be dedicated to the City & County, will meet City & County building code standards and requirements.

1. 6 SUMMARY OF UNRESOLVED ISSUES

The major unresolved issue continues to be the adverse impact on the quality of life currently being enjoyed by the residents on Luinakoa Street. Their personal statements reflect their concern as to how severe each of them will be impacted by this proposed project. These issues range from **economic hardship** which will result from the proposed project increasing their respective real property taxes, to being shaken from their homes due to the **shifting soil conditions**, and **adverse traffic impacts** due to the

project's implementation, and the subsequent increase in traffic, since the majority of the residents currently park on both sides of Luinakoa Street. A Social Impact Study has been done which includes meetings, and interviews with existing residents on Luinakoa Street and adjacent areas. This is attached as Exhibit D.

1.7 RELATIONSHIP TO LAND USE PLANS AND POLICIES

Chapter III contains a detailed discussion of the relationship between government plans and policies and the proposed project. At the present time, the proposed project is not in compliance with existing State and County land use plans and policies.

1.8 ALTERNATIVES CONSIDERED

The alternatives considered for this proposed project were to leave the site as is, with no development; take additional acreage and expand the project further mauka into the valley, or develop the parcel into a flood control basin for major storm events.

1.9 LIST OF NECESSARY PERMITS AND APPROVALS

Authority	Approval Required
State of Hawaii	
Land Use Commission	Boundary Amendment (Conservation to Urban)
Dept. of Health	Building Permit approval for wastewater connection
City & County of Honolulu	
Department of General Planning	Community Development Plan Land Use Map Amendment (Preservation to Residential)
Dept. of Land Utilization	County Zoning Map Amendment (Preservation to R-5)
Department of Public Works	Offsite Wastewater Management Drainage Channel expansion Grading Plan
Board of Water Supply	Water Connection approval

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Exhibit B	Soils - Surface Reconnaissance
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CHAPTER II. PROJECT DESCRIPTION

Description of Proposed Action

This Chapter presents descriptive information on the proposed project. The project site is first located and then briefly described. A brief background summary of the purpose is presented, followed by an overview of the main features of the proposed development. A discussion of the project objectives and the development schedule is then provided.

2.1 Location

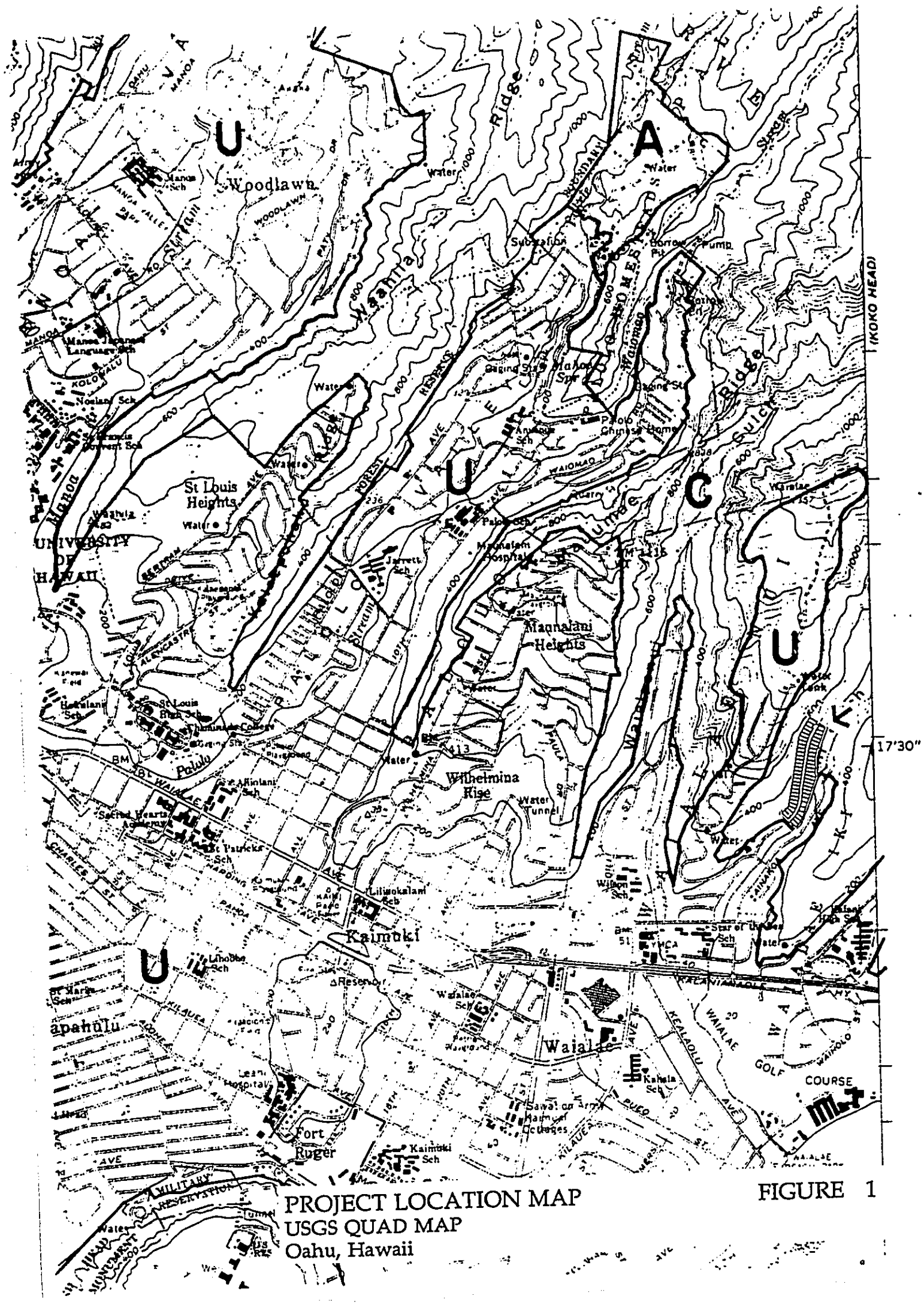
The Luinakoa Residential Subdivision will involve the design and construction of approximately 8.74 acres of Bishop Estate lands in East Honolulu in the Kapakahi Gulch. **(See Figure 1)**

2.2 Project Development Plan

The project is on a development schedule to provide approximately 50-52 fee simple residential lots of approximately 5000 square feet each. This plan involves the building of an extension to the existing Luinakoa Street for approximately 1300 feet in a mauka direction, and the necessary utility lines extensions for Drainage, Sewer, and Water. Utility lines from the street to each lot will be placed underground. The improvements will maintain the existing Luinakoa Street widths, sidewalks, curbs, and gutters. Also, the Kapakahi Drainage Channel will be extended to the necessary additional length together with the boulder catchment basin which functions as an energy dissipater for heavy surface runoff. Finally, the existing City & County drainage swale behind the existing Luinakoa Street residences will also be extended to continue the drainage protection initially provided for the early settlers. **(See Figure 2, Site Plan)**

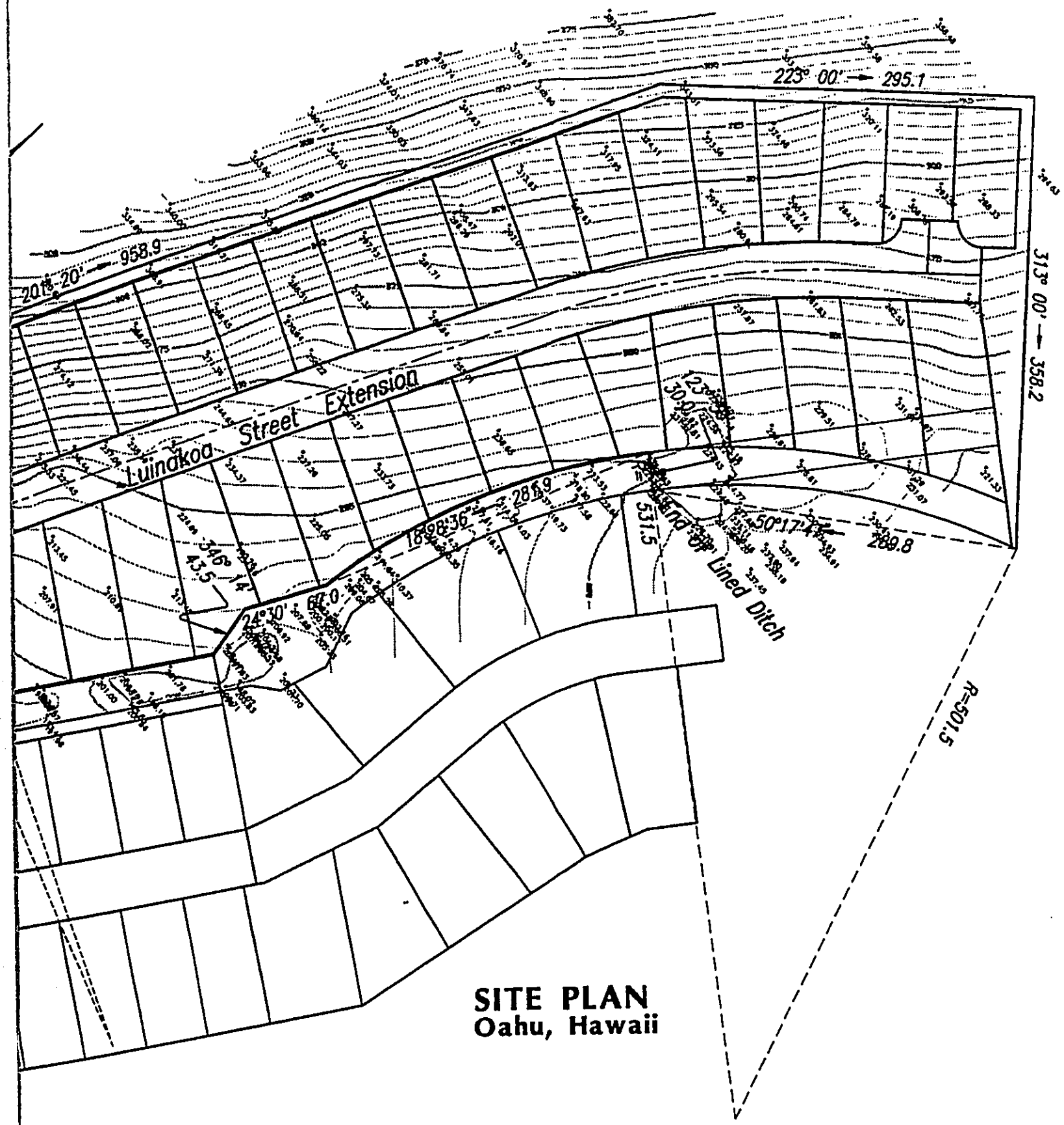
2.3 Project Phasing Schedule

The Project will be built in one continuous phase after the completion of the various land use policy amendments, i.e. State Land Use Commission, City Development Plan Land Use Map amendment, and City Zoning Map amendment. All processes will require a minimum of one with possible three public hearings before Boards, Commissions, or City Council for final approval. Actual estimated construction time to design and build the offsite improvements will be twelve months and will cost approximately $3.0 million dollars.



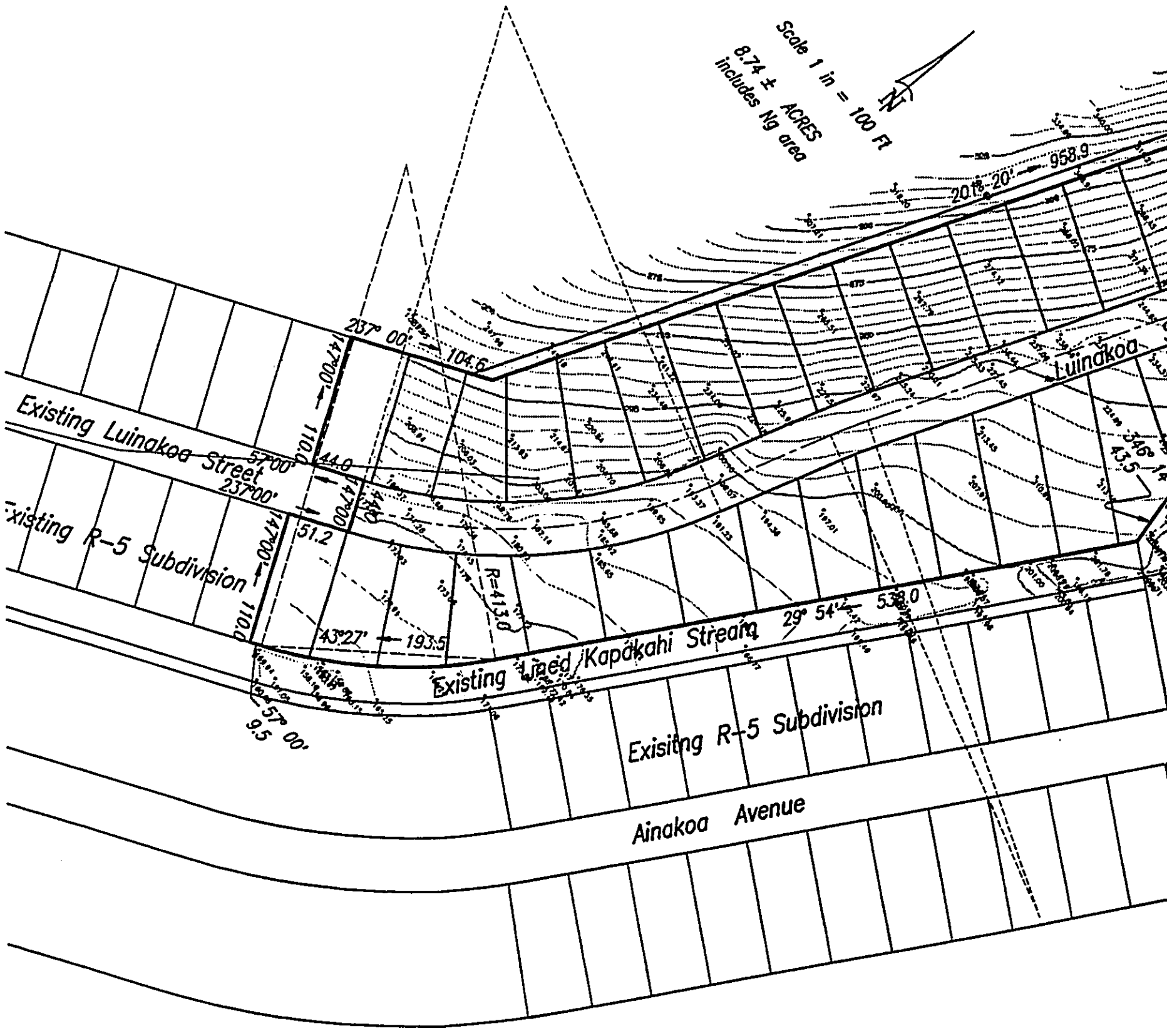
PROJECT LOCATION MAP
USGS QUAD MAP
Oahu, Hawaii

FIGURE 1

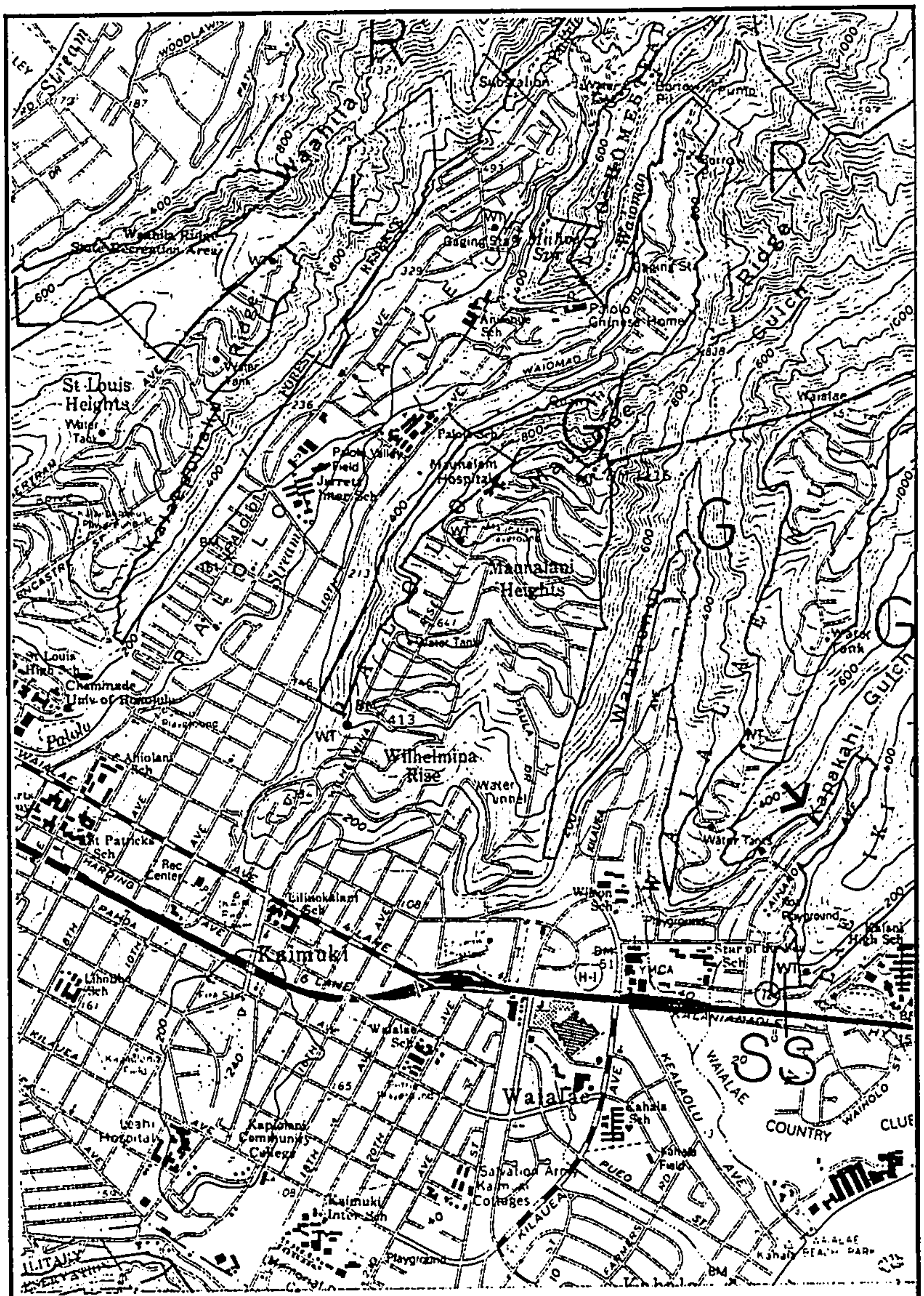


SITE PLAN
Oahu, Hawaii

FIGURE 2

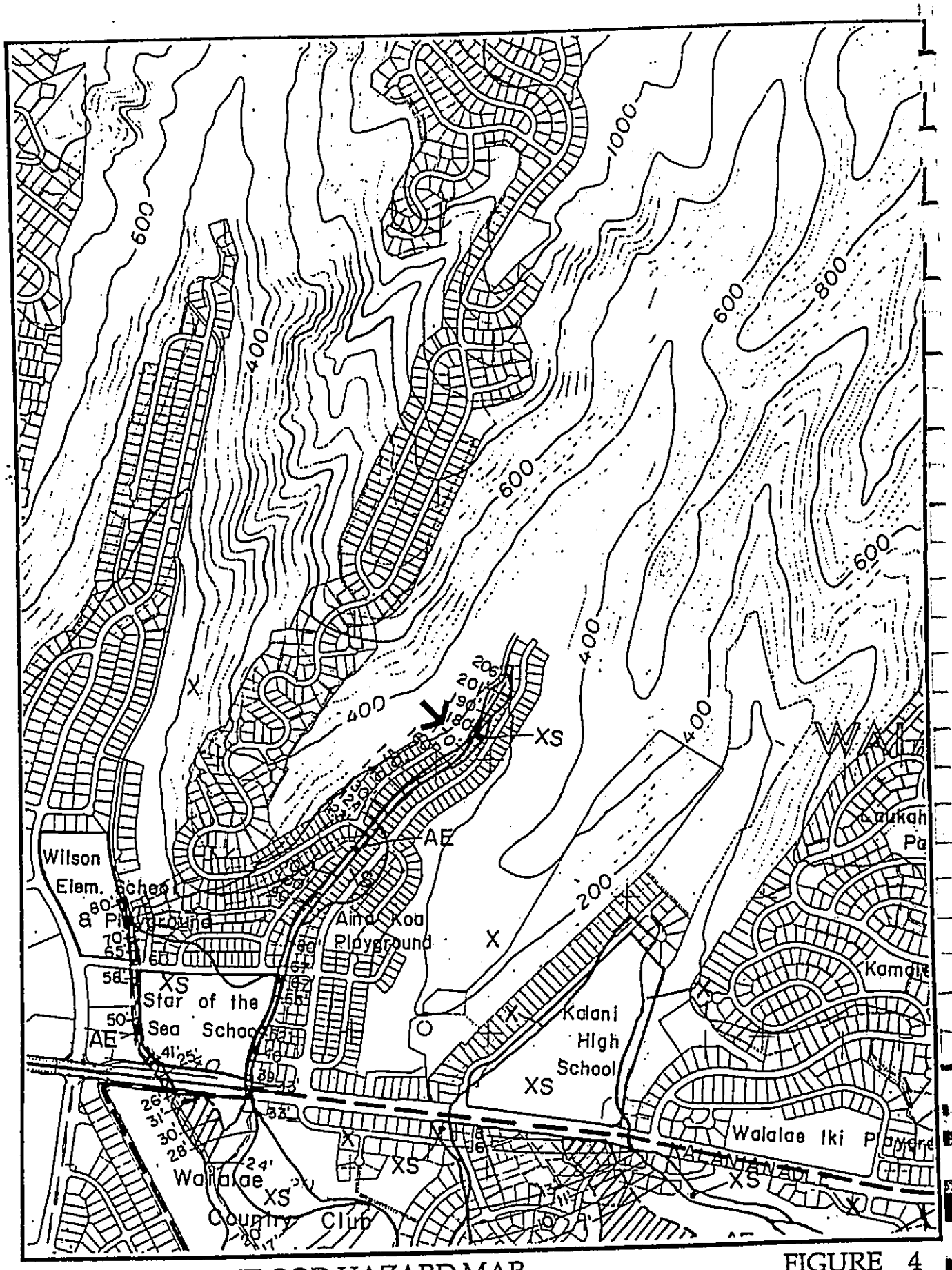


Scale 1 in = 100 Ft
8.74 ± ACRES
includes Ng area
N
201° 20' 958.9
237° 00' 104.6
147°00' 110.0
57°00' 44.0
237°00'
51.2
R=413.0
43°27' 193.5
29° 54' 538.0
57° 00'
9.5
Luinakoa
Existing Luinakoa Street
Existing R-5 Subdivision
Existing Lined Kapakahi Stream
Exisitng R-5 Subdivision
Ainakoa Avenue



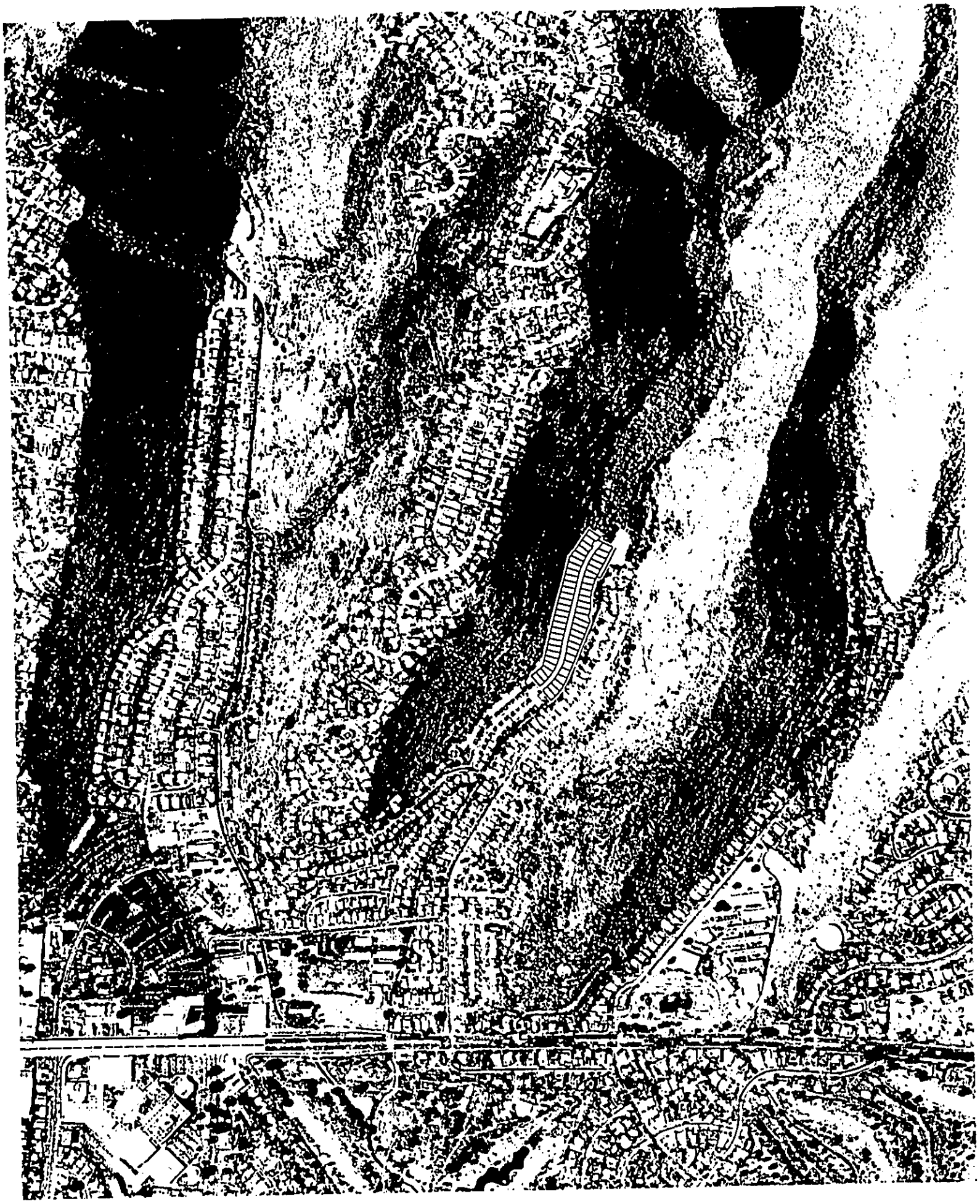
CONSERVATION DISTRICT
BOUNDARY MAP
Oahu, Hawaii

FIGURE 3



FLOOD HAZARD MAP

FIGURE 4



AERIAL SITE PHOTO

FIGURE 5

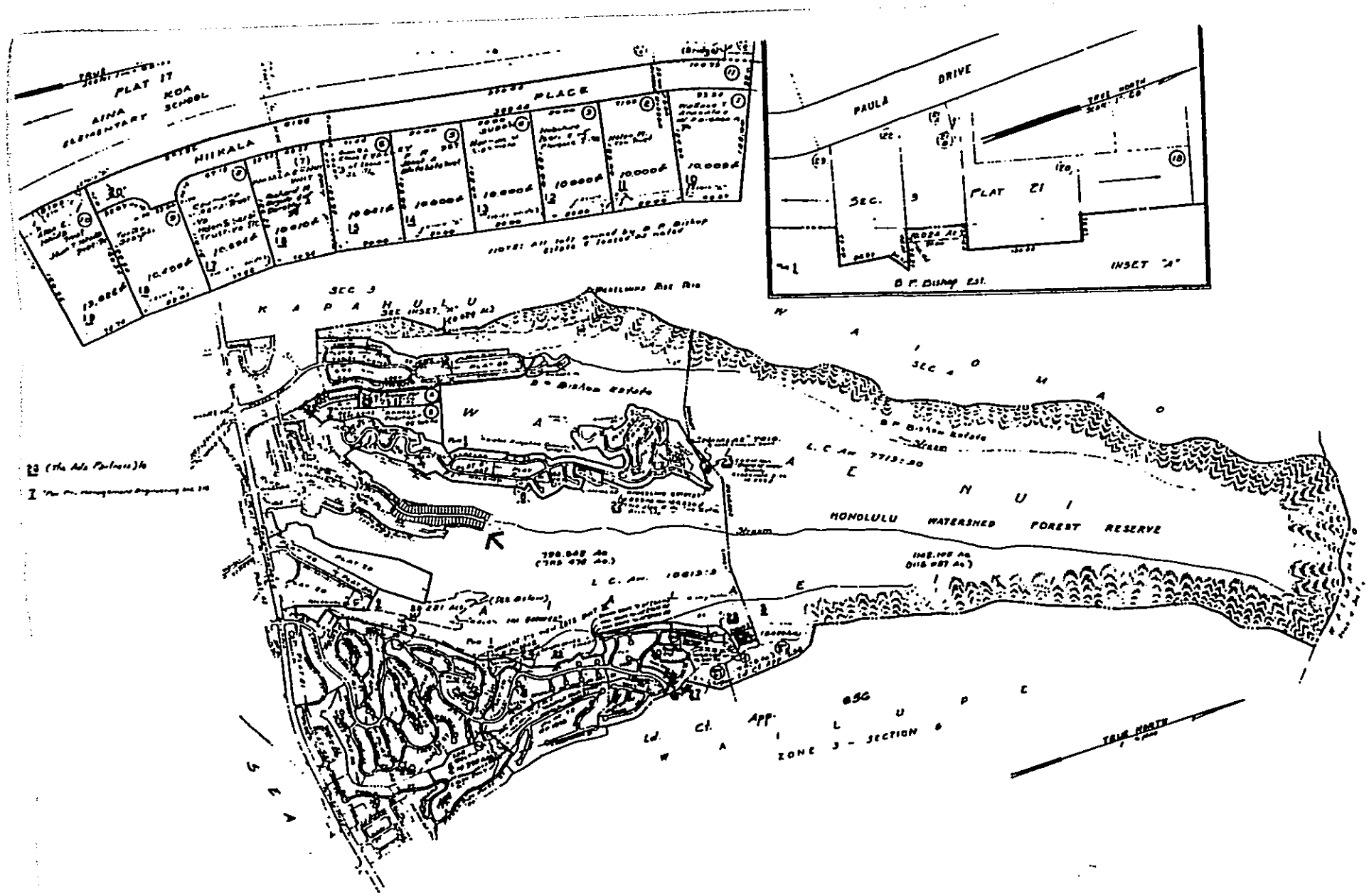


Figure 6 Tax Map Key: 3-5-24: 1

FIRST	
ZONE	SEC
3	5
CONTAINING	
SCALE	

WAIALAE NUI & WAIALAE IKI, HONOLULU OAHU

CHAPTER III

RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING PUBLIC PLANS, POLICIES AND CONTROLS

This Chapter presents a discussion on relevant State and County Plans, policies and controls which affect the proposed project. No Federal controls were found to be relevant to the proposed action. Objectives and policies of the Hawaii State Plan are discussed first, followed by discussion of relevant State Functional Plans. This is then followed by a review of applicable provisions of the State Land Use Law. The relevant sections of the City & County Development Plan are then discussed. Finally, the applicability of the Coastal Zone Management Act and Chapter 343, HRS are examined.

3.1 HAWAII STATE PLAN

The Hawaii State Plan serves as a guide for the future long term development of the State. It includes goals, objectives, policies, and priorities for the State, a basis for determining priorities, and allocating limited resources, and a process of coordination of State and County Plans. In addition to the State Plan, twelve functional plans (Sec.3.2) have been developed which set forth the policies, statewide guidelines, and priorities within specific fields of activities. In this section (Sec. 3.1) State Plan objectives and policies relevant to the proposed project are presented and discussed. Policies that are also included in the functional plans are discussed under the appropriate headings.

State Plan item: (226-5) Objectives and Policies for Population

(b) (3) *"Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State."*

Comment: The availability of public support services and facilities are available to the proposed project. The costs for the installation of these facilities and subsequent services to support increased population associated with the planned community growth will be at the developer's expense. There will be no government funds involved in the development of this project.

State Plan item : (226-6) Objectives and Policies for the Economy in General

(b) (6) *"Strive to achieve a sustained level of construction activity responsive to and consistent with, State growth objectives."*

Comment: At the present time, the construction industry has leveled off in construction volume, and this is due to the world economy in general, and more specifically, the local economy. Present and future construction planning is intended to insure that the local construction industry will not decline from lack of projects. Despite the relative minor nature of this project, it is still a valuable contribution to the local construction industry.

State Plan item: (226-13) Objectives and policies for the Physical Environment (Land,Air, and Water Quality)

(b) (7) *"Encourage urban development in close proximity to existing services and facilities."*

Comment: The proposed project will utilize currently under developed lands by in-filling approximately 50-52 residential lots for single family homes. Adjacent residential , commercial, educational, and recreational facilities will complement the project.

State Plan item: (226-24) Objectives and Policies for Facility Systems in General

(b) (1) *"Accommodate the needs of Hawaii's people through improvement priorities established through the planning process."*

Comment: A cost effective means of satisfying immediate housing needs is by expanding existing capacities for City services, i.e. Sewer, Water, Drainage, etc. , rather than constructing new facilities where none exist at the present time.

State Plan item: (226-104) Population Growth and Distribution Priority Guidelines.

(a) (4) *" Seek to provide for adequate housing to meet the needs of Hawaii's people without encouraging an additional influx of people."*

Comment: This project will not be the causal factor in future growth patterns. The project would comply with the needs and requirements of a market segment that is seeking a residential home in the Aina Koa area.

Comment: The proposed project is subject to the availability of water , sewer, drainage, police, fire protection, education, and recreational facilities. Most if not all of these public services are in existence at the project site. The developer will pay the appropriate connection fees for the sewer and water connections.

3.2 STATE FUNCTIONAL PLANS

Twelve Functional Plans have been established to help implement the Hawaii State Plan in coordination with the County General Plan and Community Development Plans. The Functional Plans work as the primary guide posts for implementation of the Hawaii State Plan. The Functional Plans pertinent to this project are: the Housing Plan, and Conservation Lands. Some times, competing policy interests are found among the Functional Plans. For example, areas designated for Conservation use may also be considered as prime housing development areas.

3.2.1 State Housing Plan

Hawaii State Plan item 226 -19 (a) (1)

Objective A: *" 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."*

Comment: The County has endeavored to work with the State as well as private sector residential developers to fulfill this vital component of the State Housing Plan. The Community Development Plans for East Honolulu population do not project large increases in the population figures for the year 2000. There is however, the opportunity to develop and provide housing in smaller numbers by in-filling to take advantage of existing services and facilities.

3.2.2 State Conservation Lands Plan

" The State Conservation Lands Functional Plan shares a close relationship with other state functional plans concerned with the use of natural resources and/or environmental protection including the Energy, Health, Historic Preservation, Recreation, and Water Resources Development Functional Plans. These plans include many complementary as well as potentially competing interests". This is quotation from the 1991 State Functional Plan dealing with Conservation Lands and is provided to demonstrate that the proposed project is competing with the Conservation designated lands in the Kapakahi Gulch area. The Plan goes on to say " For example, development of parks is necessary to provide areas of public recreation and enjoyment. However, it is equally necessary to balance this development with the view of conserving natural resources. Therefore, efforts should be made to develop parks only in areas which have been disturbed. In those few areas where a wilderness park is established, mitigating measures must betaken to insure that the park's development

potentially competing interests". This is quotation from the 1991 State Functional Plan dealing with Conservation Lands and is provided to demonstrate that the proposed project is competing with the Conservation designated lands in the Kapakahi Gulch area. The Plan goes on to say " For example, development of parks is necessary to provide areas of public recreation and enjoyment. However, it is equally necessary to balance this development with the view of conserving natural resources. Therefore, efforts should be made to develop parks only in areas which have been disturbed. In those few areas where a wilderness park is established, mitigating measures must betaken to insure that the park's development does not degrade the existing environment." This analogy is used to support the premise that the proposed project on the site under consideration, can be developed with the proper degree of mitigation. Further, the historical background of the valley mauka of the site was used for cattle grazing lands before being fallowed.

3.3 STATE LAND USE LAW

Under the provisions of the State Land Use Commission Rules, a boundary amendment application is necessary for uses that are non--conforming to the land use designation. The Commission's rules adopted in October, 1986, require that an application for a boundary amendment show that it is " reasonable, not violative of Section 205-2 (HRS) and consistent with the policies and criteria established pursuant to Sections 205-16, 205-17, and 205A-2, HRS". This requirement is being met with the petition presently filed with the Land Use Commission. In their review of petitions for reclassification of district boundaries, the Commission must specifically consider four criteria. The criteria are presented in italics, followed by a brief discussion of each criterion.

(1) *The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawaii State Plan and relates to the applicable priority guidelines of the Hawaii State Plan and the adopted functional plans; "*

As discussed in section 3.2, the proposed project complies with the State Housing Plan and does not comply with the stated objectives of the State Conservation Land functional plan. However, with mitigative measures, the project can reduce or control the significant adverse impacts to the Conservation Plan policies and objectives.

(2) *The extent to which the proposed reclassification conforms to the applicable district standards."*

A. Proximity to centers of trading and employment facilities except where the development would generate new centers of trading and employment;

B. Substantiation of economic feasibility by the petitioner;

C. Proximity to basic services such as sewers, water, transportation systems, sanitation, schools, parks, police and fire protection; and

D. Sufficient reserve areas for urban growth in appropriate locations based on a ten year projection;

(3) It may include lands with satisfactory topography and drainage and reasonably free from the danger of floods, tsunami, and unstable soil conditions and other adverse environmental effects;

(4) In determining urban growth for the next ten years, or in amending the boundary, lands contiguous with existing urban areas shall be given more consideration than non-contiguous lands, and particularly when indicated for future urban use on State or County General Plans;

(5) It shall include lands on appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the State or County General Plans;

(6) It shall include lands which do not conform to the standards in paragraphs (1) to (5):
A. When surrounded or adjacent to existing urban development;
and B. Only when such lands represent a minor portion of this District;

(7) It shall not include lands, the urbanization of which will contribute towards scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services;

(8) It may include lands with a general slope of twenty percent or more which do not provide open space amenities or scenic values if the Commission finds that such lands are desirable and suitable to urban purposes and that official design and construction controls are adequate to protect the public's health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

(3) *"Impact on Areas of Statewide Concern"*

A."Preservation or maintenance of important natural systems or habitats."

Commission finds that such lands are desirable and suitable to urban purposes and that official design and construction controls are adequate to protect the public's health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

(3) *"Impact on Areas of Statewide Concern"*

A."Preservation or maintenance of important natural systems or habitats."

There are no native or endangered species habitats within the vicinity of the proposed project site.

B. "Maintenance of valued cultural, historical, or natural resources."

There are no valued cultural, historical, or scenic resources within the project site.

C. "Maintenance of other natural resources relevant to Hawaii's economy, including but not limited to agricultural or conservation resources."

The project site does not warrant significant consideration on the basis of the 8.74 acre size and the lack of land usage in the past 60 years.

D. "Commitment of state funds and resources"

The applicant/petitioner will bear all costs of the development. No federal, state, or county funds are being sought. Major infrastructure improvements, i.e. sewerage, drainage, roads, water, park dedication, and other utilities are all to be built to County dedicable standards.

E. "Provision for employment opportunities and economic development"

The proposed project will not significantly generate or contribute significantly to the direct employment growth with the exception that during the construction phases, the construction employment will be affected. It will contribute to the State and County tax bases, which in turn may be reinvested in regional serving infrastructure to assure that those needs are met.

F. "Provision for housing opportunities for all income groups."

The project is not geared towards providing housing for the low, low to moderate and gap groups. The improved lots will be for market priced homes that will be built by each individual lot purchaser.

(4) *"In establishing the boundaries of the districts in each county, the Commission shall give consideration to the General Plan of the County in which the land is located."*

The development of this proposed project is not expected to significantly affect the East Honolulu development plan area in terms of population distribution guidelines. With a proposed subdivision of 52 lots at approximately four persons per lot, the 208 people will not create an undue burden on the East Honolulu development plan population policy.

3.4 COUNTY GENERAL PLAN

The subject petition implements the objectives and policies of the County General Plan document in the following areas: **Population,, Housing, Transportation and Utilities, Physical development and Urban design.** This section will quote the applicable General Plan objective or policy, and then discuss its applicability to the proposed projects.

General Plan Item: Policies: Population, Objective B - "To plan for future population growth."
Policy 1 states "Allocate efficiently the money and resources of the City & County in order to meet the needs of Oahu's anticipated future population."
Objective C - "To establish a pattern of population distribution that will allow the people of Oahu to live and work in harmony."
Policy 4 states " Seek a year 2010 distribution of Oahu's residential population (for East Honolulu) which would be in accord with the following table:

General Plan Distribution of Residential Population	2010 Population Range Based on Series M-K Projections
5.3% - 5.8%	52,974 - 57, 971

Comment: The proposed Luinakoa project will provide a small segment of housing availability to the market priced purchasers seeking housing in this East Honolulu area. By infilling in selected metropolitan Honolulu locations, the impacts on public services are minimized. The applicant/petitioner will install the required project infrastructure with no cost to the City.

General Plan Item: Policies: Housing, Objective C - "To provide the people of Oahu with a choice of living environments which are reasonably close to employment, recreation, religious, and commercial centers and which are adequately served by public utilities."

Policy 1 states "Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes."
Policy 3 states " Encourage residential development near employment centers."
Policy 4 states " Encourage residential developments in areas where existing roads, utilities, and other community facilities are being used to capacity."

Comment: The Luinakoa project will be compatible with the adjacent residential communities in terms of density and lot size; however, the disparity will continue to exist in terms of housing age/condition, existing resident population age, and current use patterns for existing streets and roads.

General Plan Item: Policies Transportation and Utilities , Objective C "To maintain a high level of services for all utilities".
Policy 2 states " Provide improvements to utilities in existing neighborhoods to reduce substandard conditions."

Comment: The Kapakahi Drainage Channel will be extended to provide the necessary drainage for the area; further, the existing street widths on Luinakoa Street are adequate in terms of City standards; the turning widths requested by City DTS for service and emergency vehicle access will be provided; sewerage and water will be made available to the applicant/petitioner for the proposed 52 lots.

General Plan Item: Policies Physical development and urban design, Objective A "To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well designed, and appropriate for the areas in which they will be located."

Policy 2 states " Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities."

Objective D "To create and maintain attractive, meaningful, and stimulating environments throughout Oahu."
Policy 3 states " Encourage distinctive community identities for both new and existing districts and neighborhoods."

Policy 5 states "Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas."
Objective E " To promote and enhance the social and physical character of Oahu's older towns and neighborhoods."

Policy 3 states " Provide and maintain roads, public facilities, and utilities without damaging the character of older communities."

Comment: The Luinakoa Project will provide 52 residential lots that will be in compliance with today's more stringent building code requirements. This will be enforced particularly in regards to the site preparation for the offsite and the utilities which will dedicated to the City & County.

3.5 COASTAL ZONE MANAGEMENT ACT (CHAPTER 205-A, HRS)

The Luinakoa Residential Subdivision is not located within the Special Management Area or coastal zone management areas and therefore a permit application submittal is not required.

3.6 ENVIRONMENTAL IMPACT STATEMENTS (CHAPTER 343, HRS)

All projects involving State or County lands designated as Conservation are required to prepare an Environmental Impact Statement under the provisions of Chapter 343, HRS as administered by The Office of Environmental Quality Control. The applicant/petitioner has voluntarily determined that this project due to its' sensitivity, would require a full EIS.

3.7 EAST HONOLULU DEVELOPMENT PLAN

An amendment to the City & County Development Land Use Map was prepared and filed with the Department of General Planning earlier in 1992. This application to amend the Land Use Map from Preservation to Residential was accompanied with a nearly concurrent application to the Department of land Utilization for a zoning change of Preservation to R-5. Both applications have been placed on hold by the respective City agencies in deference to this EIS being processed by the State Land Use Commission. This section of the EIS presents a brief overview of the DP process and summarizes the cogent points being made by the project in their attempt to meet and comply with the East Honolulu Development Plan.

Development Plans, according to the City Charter, are relatively detailed guidelines for the physical development of the island. They must implement and accomplish the objectives of the General Plan. The East **Honolulu Development Plan** (adopted by the City Council in 1983, (Ordinance No.83-6) and amended further by Ordinances Nos. 84-58, 85-47, 87-124, 89-70, 89-140, and 90-5), is one of eight development plans covering the City & County of Honolulu. The development plans are comprised of two basic parts: text and maps. The text portion is also comprised of two parts: Common Provisions and Special Provisions. The Common Provisions contain provisions which are common to the eight

development plan areas. The second text portion is specific to each of the development planning areas (Special Provisions) and is comprised of three parts: an area description, specific urban design principles and controls for the particular planning area; and development priorities.
There are two map elements in the Development Plan: the land use map and the public facilities map. Like the special provisions discussed above, each DP area has a unique set of maps. The land use map defines the DP area and distributes the various DP land uses in a manner which implements the objectives and policies of the General Plan. The public facilities map identifies planned public and private facilities and infrastructure.

3.7.1 Special Provisions

The Special Provisions for the East Honolulu DP describe the "overall pattern of development within East Honolulu to continue to be linear, running parallel with the shoreline and bounded by the mountainous conservation lands and the sea. Suburban residential development is to remain on the lower ridges, inner valley floors, and along Kalanianaole Highway. Some low and medium density apartment uses will be permitted in Hawaii Kai, as designated on the land use map."

3.7.2 Urban Design Principles and Controls for East Honolulu

The Luinakoa Residential Subdivision does not conflict with the Urban Design Principles and Controls for East Honolulu. Open space, public views, height controls, and density controls are to maintained or will be of a lesser magnitude, i.e. 52 lots in 8.74 acres = 5.94 units/acre, well below the 12 dwelling units per net acre permitted.

3.7.3 Land Use Map

The proposed mapping change to the East Honolulu DP Land Use Map is not anticipated to be of major or significant impact. This is due to the fact that the relative size of the land use change request is 52 residential lots and the impacts on public services, and traffic are not considered significant by City & County building code standards.

3.7.4 Public Facilities Map

The East Honolulu Public Facilities map will not be affected or require a change if this proposed project is implemented. The existing Kapakahi Drainage Channel will be extended in a mauka direction for a distance of 300 feet to parallel and maintain the City drainage capacity that exists at the present time. Existing Luinakoa Street will also be extended a distance of approximately 1300 feet.

3.8 Zoning

The 8.74 acre parcel is presently zoned P-1 and as stated earlier, the zoning application will commence after the Land Use Commission has made its determination of the petition to re-designate the parcel from Conservation to Urban. At the appropriate time, both the DP amendment and Zoning change can proceed.

CHAPTER IV

IMPACTS ON THE PHYSICAL ENVIRONMENT

This chapter describes elements of the physical environment in which the proposed project will be situated. After a brief description, each element is analyzed in terms of probable impact as: 1) *Short-term impacts*, confined primarily to the construction period; and 2) *Long-term impacts*, that occur after the development is completed.

4.1 CLIMATE

Average annual rainfall varies from 15 inches to 60 inches per year along the Waialae Nui and Waialae Iki ridges. "The natural vegetation at the lower elevations of the valley which is closer to the project site consists mainly of kiawe, klu, piligrass, Japanese tea, and koa haole." U.S. Dept. of Agriculture, Soil Conservation Service, "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai. Aug.1972. Approximately two thirds of the rainfall accumulates between November and March of a typical year. Northeast tradewinds occur more than 8 months out of the year, but are the most consistent between April and October. Average daily wind speeds range from 10-20 miles per hour. Kona winds from the south, south-east, are experienced about three months as year, mostly during the winter months. As elevation increase, temperature levels and solar radiation decrease.

4.2 SURROUNDING / ADJACENT LAND USES

Existing land uses on the proposed project site are vacant and fallow lands. The existing Luinakoa Street residential community extends in a mauka direction from Halekoa Drive. **Figure 1** shows a view of the project site area. Below Halekoa Drive is Kalanianaole Highway which is the principal traffic arterial for the East Honolulu District. There are established residential, commercial, and educational/recreational facilities in close proximity to the site.

4.3 EXISTING IMPROVEMENTS

There are no existing improvements on the parcel since the vacant status of the site has not changed for over the past fifty years.

4.3.1 Existing Condition

The project site is located in the Kapakahi Gulch with Luinakoa Street branching off Halekoa Drive. The proposed site is at a mean sea level elevation of +165' to + 325'. The existing dead end of Luinakoa Street is at

+ 275'. The proposed extension of existing Luinakoa Street will move inland approximately 1300' to the approximate elevation of +325'.

4.3.2 Probable Impacts

As previously stated, the project involves the offsite improvements for the development of 52 fee simple residential lots of approximately 5000 square feet each. These offsite improvements will require basic clearing and grubbing of the project street alignment and extension; trenching and excavation for the utilities/infrastructure installation; excavation and grading for the extension of the lined Kapakahi Drainage Channel together with the debris/boulder catchment basin and energy dissipater. For these basic and routine construction practices, the heavy equipment to be used will create abnormal noise conditions and higher than normal levels of fugitive dust. Traffic on existing Luinakoa Street will change from a dead-end residential street to a heavily traveled construction site. The movement and attendant impacts due to the construction will create discomfort to the residents during the term of the construction. The current practice of parking on both sides of Luinakoa Street may be temporarily discontinued during the working hours of 7:00 a.m. to 3:30 p.m. to permit improved access for the construction equipment and material supply trucks. There will be no blasting of the rock outcropping and on the basis of the preliminary Soils report, the offsite work can be accomplished with a minimum of disturbance to the residents.

4.3.3 Mitigating Measures

The general contractor can mitigate adverse impacts due to construction traffic congestion by: providing traffic control personnel to keep the traffic flowing during the interior road traffic movements. Construction taking place in the vacant and fallow lands will need to take particular care so as to avoid "gunning" their motors when they are moving in close proximity to existing residential units on Luinakoa Street. Periodic and frequent watering of cleared areas so as to minimize the fugitive dust levels will also be of measurable value. Several of the residents are elderly and some suffer from breathing disorders which could be aggravated due to the impending construction. Construction at the Kapiolani Community College site included burlap lined "dust catchers" along the project perimeter to abate the fugitive dust from the adjacent Leahi Hospital.

4.4 Physical Hazards

Soil conditions have been a subject of serious concern and extensive discussion. Residents have cited their personal experiences with slipping and falling rocks due to construction above their homes on Halekoa Drive; there has also been specific instances where sticky and plastic soils (Adobe

clay) has resulted in their home foundations, garages, stairs, and house interiors slipping and sliding when the area soils have become saturated due to heavy and continuous rains. It is apparent on close inspection and examination that several of the homes have already visible evidence of concrete cracks in walls, stairwells, and foundation works. It is indeterminable at the present time whether these concrete cracks are due to the Building permit quality controls of the 1950s were less stringent than those of the 1990s. Soils testing required for site improvements in the period immediately after World War II were not as demanding as today's standards. As an example, if onsite soils are not compactible to 95% or found to have high shrink-swell potential, these pockets of clay material must be removed and replaced with engineered fill and compacted to current City grading standards.

4.5 Topography

The site is located in the Kapakahi Gulch at the mauka end of Luinakoa Street. Halekoa Drive moves upward in a winding direction, with Luinakoa Street a mauka street off Halekoa Drive. As Luinakoa Street moves mauka into the valley, the slope is a gradual slope, beginning at +165' and ending at +275'. The project site is at a mean sea level elevation of +165' to + 325'. (See **Figure 2**, Site/ Topo Plan)

4.5.1 Existing Conditions

The site is presently vacant and unused with several large rock outcroppings mixed in with the exotic and weedy plant species. The site will need to be extensively graded to meet City standards for roads, utilities, and drainage improvements. Individual lots that will be sold as improved lots, will also be graded extensively with structural improvements designed to take advantage of the topography.

4.5.2 Probable Impacts

The site improvements will be constructed in accordance with the City & County of Honolulu, Department of Public Works building code standards. Also, <u>a complete Soils Report with subsurface borings is a requirement that must be provided with the final Grading Plan.</u>

4.6 Soils

4.6.1 Existing Conditions

The soil type found on the project site consist primarily of Rock Land, rRK. " *Rock Land is made up of areas where exposed rock covers 25 to 90% of the surface. It occurs on all five islands. The rock outcrops and very shallow soils are the main characteristics. The rock outcrops are mainly basalt and andesite. This*

land type is nearly level to very steep. Elevations range from level to more than 6000'. Annual rainfall amounts to 15 to 60 inches. The natural vegetation at the lower elevations consists mainly of kiawe, klu, piligrass, Japanese tea, and koa haole. This land type is also used for urban development. In many areas, especially on Oahu, the soil material associated with the rock outcrops is very sticky and very plastic. It also has high shrink-swell potential. Buildings on the steep slopes are susceptible to sliding when the soil is saturated. Foundations and retaining walls are susceptible to cracking." Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service, August, 1972.

4.6.2 Probable Impacts

The loss or withdrawal of the project site lands for use in the Luinakoa project is estimated to be approximately 8.74 acres. In terms of economic loss, the acreage in question is not expected to be of major significance to the economy of the County or the State. Potential economic loss due to soil conditions are difficult to assess without a detailed soils report. **Fewell Geotechnical Engineering, Ltd. in Exhibit B, states on page four of their report,** " *The construction on the site should not produce any potential for damage to existing structures due to the excavation or hauling operations. Again, all of these items are controlled by ordinances and the contractor is normally required to provide insurance coverage for any damage that might occur.*"

4.7 Hydrology

The proposed development site is dry and arid, with the only moisture source in the adjacent Kapakahi Drainage Channel which is intermittent and flows only when there is sufficient rainfall in the upper reaches of the valley. The City & County has improved the Kapakahi Gulch with the lined drainage channel to mitigate erosion and property damage from surface runoff during heavy seasonal rains.

4.7.1 Existing Conditions

At the present time, the water sources in the Kapakahi Gulch area consist primarily of surface runoff from the upper reaches of the Kapakahi Stream which is the eastern branch of the Waialaenui Stream. Kapakahi Stream is considered an intermittent stream with an interrupted flow during the heavy seasonal rainy season. This flow dries up or disappears during the drier months, retreating below the dry stream bed, feeding small pools along the stream alignment.

4.7.2 Proposed Development

The proposed development will also include the extension of the lined drainage channel to a corresponding length of 300 feet to City & County Drainage standards.

4.7.3 Probable Impacts

The Luinakoa development should not adversely impact the hydrology of the Kapakahi Gulch as the project site is located in the drier, more arid sector of the Gulch. To comply with the City drainage standards, the lined channel will also be extended in a mauka direction to mitigate runoff damage to property owners in the Aina-Koa and Luinakoa areas.

4.8 Flora and Fauna

4.8.1 Existing Conditions : Flora

Aecos, Inc. conducted a biological reconnaisance of the Kapakahi Gulch area in April, 1992. (See Exhibit F).
The major part of the 8.74 acre parcel contains exotic species of flora that are not endangered or threatened varieties. There are representations of these native species throughout the Hawaiian Islands in similar types of habitat. Endemic species prevail at the higher elevations where the moisture content is greater and the ability to sustain riparian stream biota as well as varieties of flora is more pronounced.

4.8..2 Fauna

The introduced vegetation which has established itself on the proposed development site and the close proximity of residential development do not provide adequate habitat suitable for any of the endemic species of birds or mammals. There may be more opportunities for endemic species of avifauna such as the Hawaiian Hawk and Hawaiian Owl further mauka in the valley. The daily patterns of the Hawaiian Hawk or Hawaiian Owl would be to pass through the semi-forested area of the gulch in search of food, companionship, or on their way to a different sector of the upland mountains. The introduced species of avifauna and mammals are typical of urban-conservation areas that have been vacant or fallow for many years. These would include the Indian Mynah; common gray dove; the barred or spotted dove; Kentucky cardinal; English sparrow, and the most recently introduced bird species, the red vented bulbul. The rodents seen or most likely to exist would be the roof rat, and Indian mongoose. No endangered bird or mammal species were observed on the project parcel. It is highly unlikely that they would occur as the habitat is not considered suitable in terms of vegetation type, moisture content, and availability of forage and food source. The upper reaches of the Gulch offered improved opportunities for observing or hearing the Shama thrush and the Elepaio.

4.9 Noise

4.9.1 Existing Conditions

Existing noise levels are well below the noise standards for urban - residential communities. This is due to the fact that Luinakoa Street is a dead-end street, and as such, there is no through traffic. Traffic noise is generated by existing residents and is minimal.

4.9.1.1 Non-Traffic Noise

The proposed project will have during the construction phase, the short-term construction related noise of the equipment used for the site preparation; the material carriers bringing equipment and construction materials to the site; and the equipment used to build and complete the necessary offsite construction. The construction related noise will be extensive and a drastic change from the current noise levels, but all these construction related noise sources will cease upon construction completion.

4.9.2 Traffic related Noise

A predictable increase in traffic related noise levels can be anticipated, particularly during the phases of construction work. These will be of predictable duration and under the State Department of Health Community Noise Regulations, the general contractors will have to comply with noise abatement devices on their construction equipment, i.e. mufflers on exhausts, avoid "gunning" machinery, and other measures to minimize noise impacts in areas of close proximity to urban-residential sectors. Traffic related noise will not be significant consequence to the current noise levels since the proposed project is not of major scope in terms of project size. The development of single family residential lots will continue an existing land use which will not alter the ambient noise levels after the project is totally built out.

4.10 Air Quality

4.10.1 Existing Conditions

Present air quality in the Aina Koa Kapakahi Gulch area is considered to be very good. Long term monitoring stations are maintained by the State Department of Health at their Kinau Hale office building at Beretania and Punchbowl streets. This is a distance too far to effectively calculate airborne emission levels to determine violation of the State's Air Quality Standards (AQS). The Pollution Investigation Branch of the State Department of Health, Environmental Resource Division did not express

concern over the proposed project development and it's impact on the ambient standards.

4.10.2 Probable Impact

Due to the size of the proposed project, and the present ambient air quality, the State DOH did not feel that an air quality study was warranted. Construction related noise and air pollution would be experienced, but it would be temporary and mitigative measures would be provided by the contractor. Direct impacts will result during the temporary construction phase for this proposed project. The principal generator of fugitive dust will be the construction equipment that is involved in the site preparation and final construction phase for the offsite work. This can be abated or mitigated by proper construction pollution control methods, i.e. watering the parcel being graded or under construction, and also keeping the work schedule within the normal working hours of 7:00 a.m. to 3:30 p.m.

4.11 Scenic and Visual Resources

4.11.1 Existing Conditions

The proposed development at Luinakoa Street will not significantly alter the existing scenic vistas or aesthetic values of the Kapakahi Gulch area. Construction activity will be extremely localized and there are no major landscaping alterations, i.e. Freeways, major dredging, massive earth movement, planned for the site. The principal construction activity will be clearing, grubbing, grading to final elevation, and placement of utilities. Final construction activities will be to pave the street extension and install the street lights, fire protection devices, and drainage ways.

4.12 HISTORICAL AND ARCHAEOLOGICAL SITES

4.12.1 Existing Conditions

Paul Cleghorn Consulting, conducted a surface reconnaissance of the 8.74 acres in April and May, 1992. The initial survey was conducted for 6.4 acres in April and the additional acreage was surveyed in May, 1992. The conclusions are found in **Exhibit A**. Cleghorn's conclusions state, *"While no archaeological sites, and particularly burial caves, were found, there is always the possibility that human burials or other cultural resources may be inadvertently discovered in lava tubes or small caves during the process of construction on the property. In the advent that any cultural resources are discovered, the State Historic Preservation Division should be contacted immediately, so that appropriate treatments can be followed."*

CHAPTER V.

SOCIO-ECONOMIC IMPACTS

This Chapter discusses the socio-economic impact of the proposed project with respect to the economy, employment, population, land uses, and the quality of life for the affected residents in the adjacent communities.

5.1 PRESENT LAND USE

The 8.74 acre project site is presently vacant and fallow. It is adjacent to an existing residential community of long standing on Luinakoa Street. This community is composed of elderly retired people who purchased their homes from the fee owner, (The Estate of Bernice Pauahi Bishop) in the period after World War II, and the Korean Conflict. The purchase prices were for house and lot and the ability to purchase the fee from the Bishop Estate was not a typical land transaction for the Estate.

5.2 ECONOMY

The economy of the County as a whole will not experience significant change due to the implementation of this proposed project. Property tax increases that may be attributed to the change in Land Use Boundary amendments, County Development and Zoning changes should not significantly affect the current real property tax rates for Luinakoa Street. The increase in real property taxes will result from the anticipated improvements to the adjacent project which will be appraised on the basis of their initial development costs, the comparables in the neighborhood, and other factors for tax evaluation purposes. An analysis on the real property tax assessment process is provided by Locations, Inc. who identifies the tax appraisal methodology employed to determine real property tax valuations. This is contained in **Exhibit G.**

5.3 EMPLOYMENT

The project will provide a contribution to the construction industry which is experiencing a downward trend in activity at the present time. There will be anticipated benefits to the State and County tax revenues from the projected construction. Based on the full development of the parcel gross construction costs are estimated at $3.0 million dollars, which will boost the local economy.

5.3.1 PROBABLE IMPACTS

The proposed project is not considered a major development in and of itself. As a residential subdivision of 52 fee simple lots built to City & County building code standards, the project is physically not a significant project. However, the Petitioner needs to respond to the many concerns expressed by the residents of Luinakoa Street. These concerns dwell primarily on the possible disruption of the "Quality of Life" they have enjoyed for nearly four decades. These concerns essentially fall in the following categories:

1. **Soil conditions** - plastic, adobe like material with high shrink-swell capabilities, leading to foundation and retaining wall damage;

2. **Traffic** - increased traffic volume from the proposed development that could result in potential loss of on-street parking spaces currently used by the residents and adjacent communities;

3. **Increased Real Property Taxes** - elderly fixed income residents are agitated that their real property taxes will increase as a result of the proposed development.

4. **Construction related impacts** - such as Noise, Fugitive dust, Vibrations from blasting of rock , and other inconveniences to their inherent quality of life , uninterrupted for these past four decades.

A social impact study was prepared by EarthPlan in August,1992 to explore in depth the concerns of the residents. Their findings and conclusions are contained in **Exhibit D**. In summary, the EarthPlan findings indicate the following: " *The neighborhood in which the Luinakoa Residential Subdivision is being proposed is a stable, quiet area,where people are familiar with each other and many share social ties which go back for more than 35 years. People have long enjoyed neighborhood stability and are comfortable with the few changes which have occurred over the years. This is a community where change is strongly resisted, and the proposed project is no exception. The project will bring social and physical change to the area, and the community opposes the change the Luinakoa Residential Subdivision represents. This does not mean however, that the residents are unable to adapt to change. Change is neither inherently good or bad, and people are able to adapt to change, whether it is welcomed or not. Most Oahu communities have had to undergo major transformation and many continue to be desirable places to live.* "

CHAPTER VI.

IMPACTS ON PUBLIC FACILITIES AND SERVICES

This Chapter describes the existing conditions of public facilities, utilities and services in the East Honolulu District. Public facilities are those systems which are provided , staffed, and maintained by government to serve the public health, safety, and welfare. They include roadways, fire and police protection, refuse collection and disposal, parks and recreation, and water supply. Public utilities are distributed services, such as electricity, wastewater treatment and disposal, and communications. These services are provided either by a public agency directly, or by a publicly regulated utility. In the implementation of the Luinakoa development, the public facilities will be designed and constructed to applicable City & County standards for dedication to the City. Prior correspondence has been received from the appropriate agencies during the project review process for Development Plan amendment and concurrent zoning. These pieces of correspondence have been attached as **Exhibit E**. Review during the processing of the EISPN, and the subsequent Environmental Impact Statements, Draft and Final, will also afford theses agencies to review and provide their comments once again.

6.1 PROBABLE IMPACTS - LOCAL IMPLICATIONS

The Luinakoa Street extension will be made in accordance with City & County standards for street widths, shoulder areas, curbs, gutters, and sidewalks. Adequate turning radii for service and emergency vehicles will also be provided at the new dead end extension. The implementation of the proposed 52 lot subdivision will not result in significant adverse impacts at the outset. The physical implications of extending existing Luinakoa Street and the Kapakahi Drainage Channel an additional 1300 lineal feet are not considered significant activities in terms of impacts to ambient Air and Noise standards. In addition, the activities will be taking place in locations that are already urbanized with residential development both on Luinakoa Street and the adjacent residential communities on Aina Koa, Malia, and Halekoa Drive. Offsite construction work will have more significantly adverse impacts to the Air and Noise standards since the activity will be taking place adjacent to established residential communities. Traffic patterns will be affected as construction activities may require possible elimination of current on-street parking practices (both sides of the street), and the temporary discomfort due to the construction related Noise and Air pollution impacts will create significant impacts for the residents.
The regional implications that the proposed development will have on County transportation facilities are remote. The scope of the total project is at best a minimum project in terms of pure physical impact. This is due to the fact that it is a standard single family residential subdivision in an established urban setting.

CHAPTER VII

ALTERNATIVES TO THE PROPOSED ACTION

Chapter 200 of Title 11, Environmental Impact Statement Rules (11-200-17 (f)) requires a discussion of " any known alternatives . . . which could feasibly attain the objectives of the action." The rules further specify that the alternatives be explored and evaluated in light of enhancement to environmental quality or the avoidance of adverse environmental effects.

Variations of two alternatives are examined in this section: (1) the alternative of no action or of postponing action pending further study; and (2) alternatives related to different designs, sources, or methodologies of the proposed action which would present different environmental impacts.

7.1 NO ACTION ALTERNATIVE

The No Action alternative, or its' variant, postponement of action, would preserve the site in its' present undisturbed state. A discussion on the advantages and disadvantages of the No Action alternative is provided in the following:

Advantages

* No further planning or design work time and charges would be required to continue the effort.

* All current or existing practices by the Luinakoa Street residents would continue without potential loss or interruption due to the abandonment of the proposed development.

* Residents of the adjacent Aina Koa Community would also be relieved at the termination of planning and design work for the project.

* No Action or further postponement of the project would maintain the status quo as it exists today.

* Potential vehicular congestion on the State and/or County roadway alignment would be relieved of the short-term traffic tie-ups due to the proposed construction activity.

Disadvantages

* The ability to develop and provide fee simple residential lots for market priced houses would be denied those potential buyers who have expressed interest in returning to the East Honolulu district where they either lived earlier, or where their family lives today.

* Economic growth as planned by the County Administration and approved by the County Council would experience a potential setback in terms of housing availability, construction related employment, trickle down impacts to suppliers, vendors, and support services.

Exhibit H, "Architectural Treatment - Slope Analysis" provides an additional review and narrative explanation of building or construction related alternatives that are mandatory today to comply with current building code standards. In summary, the emphasis is on the updated and more stringent building code standards which were not in force at the time of the original Luinakoa Residences. By employing today's building methods and technology, the codes can be satisfied and stable, well built homes can be built on the proposedproject site.

7.2 ANALYSIS AND CONCLUSIONS

The EIS rules concerning " rigorous exploration and objective evaluation" of feasible alternatives have been applied in this chapter. The " No Action" or postponement alternative would preserve the existing conditions . This alternative will not resolve the demand for housing of all varieties. In conclusion, the Petitioner has evaluated the alternatives available and finds that the proposed project will utilize the subject parcel if housing is to be developed within the Metropolitan center without significant negative or adverse impacts to the physical capacities of infrastructure and utilities. The residents on Luinakoa Street would prefer and be delighted with the "No Action" alternative since their "Quality of Life" would remain uninterrupted. The benefits to the Community at large or to the Luinakoa Street residents would weigh in the decision of approval or denial.

CHAPTER VIII

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Chapter 200 of Title 11, Environmental Impact Statement Rules (11-200-17 (k)) requires the " identification of unavoidable impacts and the extent to which the action makes use of non-renewable resources during the phases of the action, or irreversibly curtails the range of potential uses of the environment. . . ."

The plan for the development at Luinakoa Street will permanently commit money, time, labor and physical resources. The other unavoidable impacts include the temporary traffic congestion that may result due to construction related activities ; and to the existing residents at Luinakoa Street, who are perhaps the most sensitive in terms of experiencing the impacts towards their current quality of life.

CHAPTER IX

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

Chapter 200 of Title 11, Environmental Impact Statement Rules (11-200-17(j)) requires a brief discussion of the "extent to which the proposed action involves trade-off between short-term losses and long term losses or vice versa, and a discussion of the extent to which the proposed action forecloses future options, narrows the range of beneficial uses of the environment, or poses long term risks to health or safety. . . "

As discussed in previous chapters, the proposed action will not result in short-term exploitation of physical resources that will have long term consequences. There are no known long-term risks to public health and safety which would occur as a result of this project's implementation. In the unlikely event that conclusive evidence was presented or discovered during the construction program, the Petitioner would have the right and obligation to terminate or temporarily cease development until the long term risk had been resolved or eliminated. The established checks and balances that are available to State and County government have been established to provide protection to the community at large, as well as to the specific locations adjacent to the proposed project.

CHAPTER X CONSULTED PARTIES AND COMMENTS RECEIVED

10.1 The Environmental Impact Statement Preparation Notice (EISPN) for the proposed Luinakoa Residential Subdivision was published in the OEQC Bulletin on August 23, 1992. The thirty day review period ended on September 22, 1992. In addition, the EISPN was mailed directly to the agencies and organizations listed below.

State Agencies	Date Comment Received
Department of Land and Natural Resources	
Department of Health Environmental Management Div.	
Dept. of Transportation *Highways Division*	
Office of State Planning	
Univ. of Hawaii, Environmental Center	
City & County of Honolulu	
Department of General Planning	August 26, 1992
Department of Land Utilization	September 22,1992
Department of Public Works	September 2, 1992
Department of Transportation Services	September 8, 1992
Department of Parks & Recreation	September 9, 1992
Department of Housing & Community Development	
Honolulu Police Department	
Honolulu Fire Department	
Board of Water Supply	
Private Sector/ Community Groups	
AINAKOA COMMUNITY ASSOCIATION c/o 1450 Luinakoa Street Honolulu, HI 96821 Rep. Barbara Marumoto House of Representatives	9-20-92 and 10-7-92

Mr. John Henry Felix
City Council

Waialae-Kahala Neighborhood Board # 3
Mr. Richard Turbin, Chair

10.2 CONSULTED PARTIES AND COMMENTS RECEIVED (DEIS)

The Draft Environmental Impact Statement (DEIS) for the proposed Luinakoa Residential Subdivision was published in the OEQC Bulletin on October 23, 1992. The forty five day review period ended on December 7, 1992. In addition, the DEIS was mailed directly to the agencies and organizations listed below.

Federal Agencies	Date Comment Received
Department of the Navy	10-26-92
Department of the Army U.S.Army Engineer District	11-3-92
U.S.Dept. of Agriculture Soil Conservation Service	11-9-92
State Agencies	
Dept. of Accounting & General Services	10-30-92
Department of Defense	12-1-92
Department of Land and Natural Resources	
Department of Health Environmental Management Div.	12-9-92
Office of Environmental Quality Control	10-23-92
Dept. of Transportation Highways Division	11-2-92
Office of State Planning	11-9-92
Univ. of Hawaii, Environmental Center	12-8-92
Dept, of Business, Economic Development & Tourism - Energy Division	10-23-92
Dept. of Housing Finance and Development Corp.	12-10-92
State Land Use Commission	12-3-92

City & County of Honolulu

Department of General Planning		
Department of Land Utilization	12-21-92	
Department of Public Works		
Department of Transportation Services		
Department of Parks & Recreation	10-29-92	
Department of Housing & Community Development	11-6-92	
Honolulu Police Department	11-16-92	
Honolulu Fire Department	10-30-92	
Board of Water Supply		

Private Sector/ Community Groups

AINAKOA COMMUNITY ASSOCIATION c/o 1450 Luinakoa Street Honolulu, HI 96821	12-7-92	
Rep. Barbara Marumoto House of Representatives		
Mr. John Henry Felix City Council		
Waialae-Kahala Neighborhood Board # 3 Mr. Richard Turbin, Chair		
Hawaiian Electric Company, Inc.	10-23-92	11-24-92

10.3 Participants in the DEIS Preparation Process

The DEIS was prepared for the State land Use Commission as a requirement for a boundary amendment to the Land Use Boundary maps.The following list identifies individuals who were involved in the preparation of the DEIS and their respective contributions.

Parametrix, Inc. - Environmental Impact Statement
*Paul Cleghorn Consulting - Historical /Archaeological
*Aecos, Inc. - Biological Reconnaisance
*Traffic Management Consultant - Traffic Impact Analysis
* EarthPlan - Socio-Economic Impact Analysis
*Engineers Surveyors Hawaii, Inc. - Civil Engineering
*Fewell Geotechnical Engineering, Ltd. - Soils Report
*Locations, Inc. Marketing Division - Real Property Tax Analysis
* Joseph Lancour, A.I.A. - Slope Analysis - Architectural Treatment
*** Subconsultant in document preparation**

10.4 Participants in the FEIS Preparation Process

The FEIS was prepared for the State land Use Commission as a requirement for a boundary amendment to the Land Use Boundary maps.The following list identifies individuals who were involved in the preparation of the DEIS and their respective contributions.

Parametrix, Inc. - Environmental Impact Statement
*Paul Cleghorn Consulting - Historical /Archaeological
*Aecos, Inc. - Biological Reconnaisance
*Traffic Management Consultant - Traffic Impact Analysis
* EarthPlan - Socio-Economic Impact Analysis
*Engineers Surveyors Hawaii, Inc. - Civil Engineering
*Fewell Geotechnical Engineering, Ltd. - Soils Report
*Locations, Inc. Marketing Division - Real Property Tax Analysis
* Joseph Lancour, A.I.A. - Slope Analysis - Architectural Treatment
*** Subconsultant in document preparation**

DEPARTMENT OF GENERAL PLANNING

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

BENJAMIN B. LEE
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER

TH 8/92-2416

August 26, 1992

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, 16th Floor
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

Environmental Impact Statement for the
Luinakoa Residential Subdivision, TMK: 3-5-24: 1

Attached for your direct response is a letter dated July 28, 1992 from the Ainakoa Community Association sent to us by the State Office of Environmental Quality Control.

Sincerely,

BENJAMIN B. LEE
Chief Planning Officer

BBL:js

Attachment

cc: Mr. Minoru Yoneshige,
Ainakoa Community Association

RECEIVED
SEP 01 1992
PARAMETRIX, INC.
HONOLULU

AINAKOA COMMUNITY ASSOCIATION
1450 LUINAKOA STREET
HONOLULU, HAWAII 96821
Telephone 737-1592

#11

cml. to appropriate parties

08/92-2416

RECEIVED
'92 AUG -7 A10:01
OFC. OF ENVIRONMENTAL QUALITY CONTROL

July 28, 1992

Director Brian J. J. Choy
Office of Environmental Quality Control
220 South King Street
Central Pacific Plaza
Fourth Floor
Honolulu, HI 96813

Dear Mr. Choy:

RE: Luinakoa Residential Subdivision

On behalf of the Ainakoa Community Association, we respectfully request to be a part of the consultant party for the Environmental Impact Statement for the proposed Luinakoa Residental Subdivision.

We request that copies of all documents pertaining to this project be sent to us at the above address.

Sincerely,

Minoru Yoneshige
Ainakoa Community Association President

DEPARTMENT OF PARKS AND RECREATION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

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SEP 14 1992
PARAMETRIX, INC.
HONOLULU

WALTER M. OZAWA
DIRECTOR

ALVIN K. C. AU
DEPUTY DIRECTOR

September 9, 1992

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

Subject: Environmental Assessment (EA) and Environmental Impact Statement Preparation Notice (EISPN)
Luinakoa Residential Subdivision
Tax Map Key 3-5-24: Por. 1

We have reviewed the EA and EISPN for the Luinakoa Residential subdivision and offer the following comments.

The proposed development of 52 lots would have minimal impact on our public park in the subject area as three parks are located nearby and available to serve the project's recreational needs. These parks are Aina Koa Neighborhood Park, Wilson Community Park and Waialae Iki Neighborhood Park.

The project will be required to compliance with Park Dedication Ordinance No. 4621. Standards and requirements to comply with the Ordinance are specified in the City's Park Dedication Rules and Regulations.

Should you have any questions, please contact Jason Yuen of our Advance Planning Branch at 527-6315.

Sincerely,

For WALTER M. OZAWA, Director

WMO:ei

Attachment

Parametrix, Inc.

Consultants in Engineering and Environmental Science

1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

September 22, 1992

Mr. Walter M. Ozawa, Director
Department of Parks and Recreation
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Ozawa,

We have received your department's comments dated September 9, 1992 on the EISPN prepared for the Luinakoa Residential Subdivision. In response to your comments we respond in the following:

1. The Petitioner will comply with the requirements of Park Dedication Ordinance No. 4621 as identified in your letter. We will be in contact with the Advance Planning Branch at the appropriate time when we are nearly complete with the remaining land use policy changes, i. e. Development Plan land Use Map amendment, and Zoning.

2. Your identification of the available parks in the immediate area for the project are duly noted.

Thank you for your timely response and we will remain in touch on this project with your office.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

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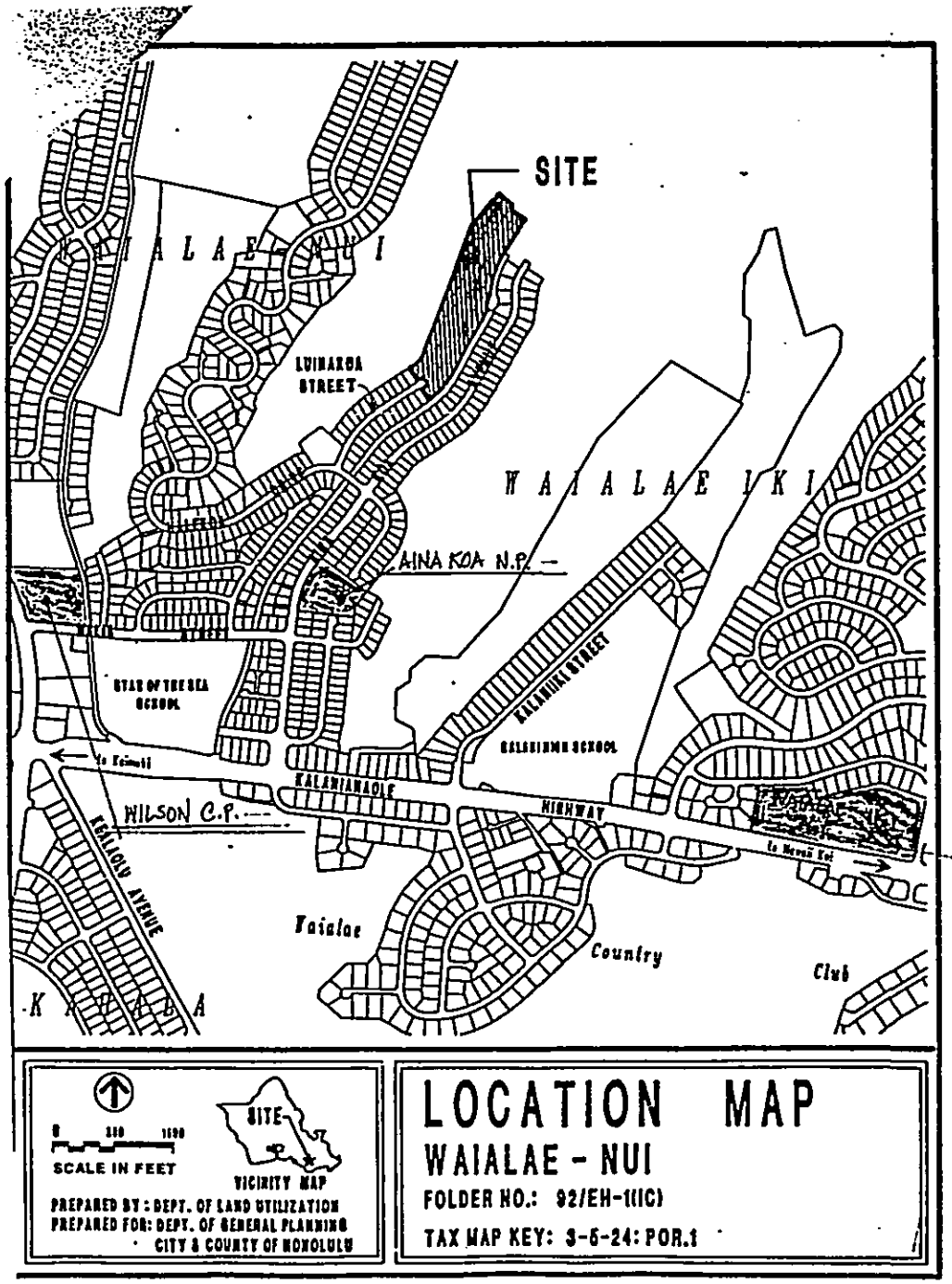
SITE
WAIALAE-NUI
LUINAKOA STREET
WAIALAE IKI
AINA KOA N.P.
STAR OF THE SEA SCHOOL
KALANIANAOLE HIGHWAY
WILSON C.P.
KEALIOLU AVENUE
Waialae
Country
Club
KAHALA
SCALE IN FEET
SITE
VICINITY MAP
PREPARED BY: DEPT. OF LAND UTILIZATION
PREPARED FOR: DEPT. OF GENERAL PLANNING
CITY & COUNTY OF HONOLULU
LOCATION MAP
WAIALAE - NUI
FOLDER NO.: 92/EH-1(IIC)
TAX MAP KEY: 3-5-24: POR.1
DATE PREPARED: May 1992

Parametrix, Inc.
Consultants in Engineering and Environmental Science
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

September 22, 1992

Mr. Joseph M. Magaldi, Jr.
Department of Transportation Services
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Magaldi,

We have received your department's comments dated September 8, 1992 on the EISPN prepared for the Luinakoa Residential Subdivision. We respond in the following:

We have retained your original comments on this proposed project and include them in the Draft EIS as collective comments made on the project during the Development Plan and Zoning review process.

Thank you for your continuing interest and cooperation on this project and we will continue to work with your staff as this project moves ahead.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

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

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SEP 16 1992
PARAMETRIX, INC.
HONOLULU

FRANK F. FASI
MAYOR

JOSEPH M. MAGALDI, JR.
DIRECTOR

AMAR SAPPAL
DEPUTY DIRECTOR

TE-3567
PL92.1.295

September 8, 1992

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

Subject: Luinakoa Residential Subdivision
Environmental Assessment and
Environmental Impact Statement
Preparation Notice
TMK: 3-5-24: 1

This is in response to the environmental assessment submitted to us for review on August 17, 1992.

Our prior comments in the April 24, 1992 letter on the draft environmental assessment are still applicable. We have no additional comments to offer at this time.

Should you have any questions, please contact Lance Watanabe of my staff at 523-4199.

Sincerely,

JOSEPH M. MAGALDI, JR.
Director

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

September 22, 1992

Mr. C. Michael Street, Director & Chief Engineer
Department of Public Works
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Street,

We have received your department's comments dated September 2, 1992 on the EISPN prepared for the Luinakoa Residential Subdivision. In response to your comments we respond in the following:

1. Engineers Surveyors Hawaii, Inc. will be the civil engineering consultant of record for this project and they will be preparing and forwarding the drainage report to your department for review and approval.
2. A preliminary soils reconnaissance is being prepared by Ernest Hirata & Associates for use in the land use policy changes. This preliminary report will be expanded and completed in accordance with the grading ordinance requirements prior to submitting it to your department for review and approval.
3. All proposed street improvements will be designed and built to City standards for dedication purposes.
4. A new application for sewer connection approval is being prepared by ESH, Inc. for submittal to your DWWM for their review and approval.
5. The Wastewater System Facility Charge will be included with the building permit application for payment.

Thank you for your continuing cooperation on this project and also for your timely response.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners
Engineers Surveyors Hawaii, Inc.

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

RECEIVED
SEP 08 1992
PARAMETRIX, INC.
HONOLULU

FRANK F. FASI
MAYOR

C. MICHAEL STREET
DIRECTOR AND CHIEF ENGINEER

FELIX B. LIMTIACO
DEPUTY DIRECTOR

ENV 92-217

September 2, 1992

Mr. F.J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

Subject: Environmental Impact Statement Preparation Notice (EISPN) - Luinakoa Residential Subdivision
TMK:3-5-24:1

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

1. A portion of the proposed project site is located in a flood zone. Accordingly, a drainage report should be submitted to the Drainage Section, Division of Engineering, for review and approval.

2. As stated in your EISPN, the on-site soil material is very plastic and has high shrink-swell potential. Buildings on the steep slopes are susceptible to sliding when the soil is saturated. Therefore, we recommend a soils report be prepared to assess the existing soil conditions.

3. All street improvements shall be designed and constructed in accordance with City standards.

4. Sewer connection approval was granted on March 27, 1992 by the Division of Wastewater Management (DWWM) for 40 to 42 single family units (see attached form). However, if 50 to 52 units are being proposed now, a new application must be submitted to DWWM to determine whether the existing municipal sewer system is adequate to support the proposed development.

Mr. F.J. Rodriguez
Page 2
September 2, 1992

5. Also, a Wastewater System Facility charge is still applicable to the proposed project and will be determined and payable at the time of the building permit application.

Very truly yours,

for C. MICHAEL STREET
Director and Chief Engineer

Attach.

164/14

DIVISION OF WASTEWATER MANAGEMENT
City and County of Honolulu

APPLICATION FOR SEWER CONNECTION
(Allow at least three weeks for processing of application)

RECEIVED
MAR 25 2 20 PM '92

PART A - TO BE FILLED BY APPLICANT

1. Project Name: Luinakoa Extension (to be final later)
2. Address or Location: end of Luinakoa Street
3. Tax Map Key: 3-5-24 : portion 1 Surrounding subdivisions Zoned R-5
4. Type Development: PD-H ___ Cluster ___ Subdiv. XX
   Apt. ___ Other: ___
5. Total No. of Units 40-42 (Give breakdown below)
   Studio ___ 1 Bdrm. ___ 2 Bdrm. ___ 3 Bdrm. XXX
   4 Bdrm. ___ Other: ___
6. Sewer Connection Work Desired: (Give length, size, depth, etc.)
   8" main to be extended and connected to existing 8" main within Luinakoa Street.
   8" main to be extended and connected to existing 8" main below lots and above Kapakahi stream. Depth of the main will comply with DWWM Standards
7. Approximate Date Connection is Required: Early to Middle 1993
8. Number and Type of Existing Structures on Property: vacant
   (Check One: Structures to Remain ___ To be Demolished ___)
9. Remarks: ___
10. Information provided By:
    Name: Kendall Hee Date: March 24, 1992
    Firm: Engineers Surveyors Hawaii, INC. Phone: 531-3116
    Address: 1020 Auahi Street (Street) Honolulu (City) 96814 (Zip Code)

PART B - TO BE FILLED BY DIVISION OF WASTEWATER MANAGEMENT

1. Present Zoning: R-7.5 General Plan: ___
2. Sewers: Adequate ✓ Inadequate ___ Not Available ___
   Other: ___
3. Charges: Yes* ✓ No ___
   a. Sewer Assessment ___ (Rate) X ___ (Area) sq. ft.... $ ___
   b. Sewer Connection ..... $ ___
   c. Total Estimated Charge ..... $ ___
4. Remarks: *Wastewater system facility charge shall apply. To be determined and paid at time of approval of the building permit application.
5. Application:
   Approved: A. Doucha Jr. Date 3/27/92
   (Valid for ~~One~~ Two Year After Date of Approval)
   Not Approved: ___ Date ___

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

September 30, 1992

Mr. Donald A. Clegg, Director
Department of Land Utilization
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Clegg,

Re: EISPN comments dated September 22, 1992 on proposed Luinakoa Project

We have received your department's comments on the proposed Luinakoa Residential Subdivision and we respond in the following:

In accordance with current City grading and excavation building code standards, the Petitioner will have to provide the to the City, a detailed Soils report that will determine the parcel's ability to construct both the offsite and subsequent structural improvements. If it is determined that there are quantities of sub-standard soil conditions, this unsatisfactory material will be removed and replaced with engineered fill that will meet Building Department compaction tests suitable for streets, placement of utilities, and the individual homes that would be built. A licensed soils engineer will conduct these tests at the time of zoning application, and submit them as a certified Soil Report to the City for review and approval. It is not the Petitioner's intent to design and build offsite improvements that will not meet dedicable standards. Further, liability to future users or purchasers of improvements in the proposed subdivision would also be governed by the soils report, and structural improvements would be required to meet the City building code ordinance for grading and excavation, prior to construction of the individual home.

Regarding the existing homes and their physical condition, every reasonable measure to protect them from construction related damage will be taken. With the cooperation of the existing residents, an inspection of the existing conditions of those homes will be taken by a qualified construction management representative in conjunction with an insurance/liability firm. This inspection measure will be taken both for the residents and the Petitioner so that protection will be afforded to both the existing homeowner, and the future resident from liability due to development of the 52 lot subdivision. A videotape record will be made of the existing homes and copies made available for both parties. The Petitioner does not wish to incur long term liability from existing residents or government, and will take all reasonable measures to eliminate these potential long term liabilities. It should be kept in mind that these inspections are to determine current conditions so that in the event that damage does occur from the proposed project, there will be legal and financial recourse available to the injured parties. A bond to cover these potential liabilities will be obtained from an insurance underwriter and will be in force until the Petitioner's responsibilities for offsite improvements have been completed and accepted by the City & County of Honolulu. We trust that these protective measures will suffice.

Thank you for the opportunity to respond to your concerns and we look forward to your detailed review of the DEIS.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

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DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

FRANK F. FASI
MAYOR

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

RECEIVED
SEP 23 1992
PARAMETRIX, INC.
HONOLULU

92-02169(RY)

September 22, 1992

Ms. Esther Ueda, Executive Officer
State Land Use Commission
Room 104, Old Federal Building
Honolulu, Hawaii 96813

RECEIVED
LAND USE COMMISSION
STATE OF HAWAII
SEP 22 PM 3:12

Dear Ms. Ueda:

Environmental Assessment and Environmental Impact Statement (EIS) Preparation Notice for Luinakoa Partners
Tax Map Key: 3-5-24: Portion 1, Waialae Nui, Honolulu

We have reviewed the above document and have the following comments for your consideration:

On page 4, with respect to "Soils," the document states:

"In many areas, especially on the Island of Oahu, the soil material associated with the rock outcrops is very sticky and very plastic. It also has high shrink-swell potential. Buildings on the steep slopes are susceptible to sliding when the soil is saturated. Foundations and retaining walls are susceptible to cracking."

Concerns were raised by area residents that vibration due to construction activity by the developer and future homebuilders will exacerbate the current sliding condition of existing homes. The applicant should discuss what mitigation studies or measures will be required to address the potential for sliding, cracking and property damage to future homes on the site and surrounding residences. The Draft EIS should also address how any liability to government agencies, if any, for property damages incurred by the new and existing homeowners due to the project, will be resolved.

If you have any questions, please contact Raymond Young of my staff at 527-6278.

Very truly yours,

Donald Clegg

DONALD A. CLEGG
Director of Land Utilization

DAC:ry
a:ueda1.ry

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

October 7, 1992

Mr. Quentin W. Doar, President
Ainakoa Community Association
1458 Luinakoa Street
Honolulu, HI 96821

Dear Mr. Doar,

We have received your Association's comments dated September 20, 1992 which also included a request for additional time. By this time, you are aware that the State Land Use Commission has advised you that an extension of two additional weeks from September 23, 1992 to October 7, 1992 has been granted to your Association to secure the technical assistance you will need for the more detailed comments on soils and engineering.

Please be assured that we will make all reasonable efforts to respond to your Association's concerns on all of the subjects specified in your initial submittal. However, please bear in mind that in the spirit of Chapter 343, HRS, the intent is to provide disclosure to best practicable means. To our understanding, this means simply that where the specificity of questions being asked exceeds the reasonable boundaries of concerns, or where the information is not available to us, or where governmental regulatory authority will be determining the project's ability to meet applicable code or ordinance, we will not respond. By not responding we do not mean to offend, but we do not feel it is appropriate to respond to specific questions that are not within our province or jurisdiction.

We will attempt to respond to your specific questions in the categories that you have provided, and again, where it is not within our ability to respond, or where we feel it is beyond the realm of this EIS to cover, we will so advise. The acceptability of our EIS will be determined by the Land Use Commission and if deemed acceptable, it will then be used as an exhibit for the Development Plan Land Use map Amendment and Zoning process.

I. STATE ENVIRONMENTAL POLICY

1. The intent of the proposed project will be to expand the housing availability within the metropolitan Honolulu district by infilling small undeveloped parcels that are within reach of existing City services. To replicate

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the existing Luinakoa Street community is unrealistic; in today's real estate market, the ability to purchase house and lot at $20,000 in the Ainakoa Valley is unrealistic and to do so at age 65 or older would be incredible.

2. The proposed project will develop an expansion of the Luinakoa Street community and infuse this elderly enclave with younger local residents. Some of these residents may be related to existing residents, or may have lived in Ainakoa previously. In short, a new community will evolve from this proposed project, and when the current residents turn over their homes to their heirs, or sell and move elsewhere, the change in the existing community will accelerate. It is inevitable, the community as it is structured today, will change.

3. Mountain to ocean vistas are established, determined, and protected by zoning ordinances that establish building height limits. If approved, the proposed project will maintain the existing R-5 zoning code limitations on building height, setbacks, parking requirements, and other applicable conditions. The proposed project will not promote or detract to any extent

4. Establishing *optimum* population levels for a given location is initially contingent on the physical carrying capacity of the affected parcel and also on the ability of government to provide necessary support services, i.e. sewer, water, drainage, police, fire protection, schools, parks, etc. In a land use policy amendment process such as the Land Use Commission and subsequent Development Plan and Zoning designation changes, the land use review process permits future or projected uses for a parcel to be evaluated by government so that if the proposed change is approved from a land planning perspective, there is an examination of the capacity of existing services, or government has ample opportunity to develop and provide the necessary additional services. The Ainakoa Community Association would want to assume the position that their valley is developed to the maximum; the landowner or future developers would want to believe that given the opportunity, there is room for further urban/residential development. These are planning policy decisions that government is better able to review and decide.

5. The petitioner has not gone door to door to conduct a de facto census of Ainakoa Valley. Instead, the socio-economic consultants, EarthPlan, determined that the Ainakoa Valley community is part of Census Tract 4.97 which includes the Halekoa Drive/Waialae Nui Ridge residents, as well as those residents up to Kalanianaole Highway. This total is 2771 people. The proposed project would be readily absorbed in this total. Census tract 9.01 encompasses the valley towards town and includes Kilauea Avenue; this total is 2334 people.

6-9. We have combined these items from 6 to 9 since they do not apply to the subject parcel. No single project conserves all natural resources; (#6) The

watershed area for the Kapakahi Gulch is further mauka and is not the subject of the petition; (#7) The proposed project is not remotely involved in forest or open space other than the fact that it is vacant and fallow; (#8) The proposed project is seeking Urban reclassification, and ultimately residential land use which will be contrary to natural area reserves, wildlife reserves, forest reserves, and there are no unique ecological features on the subject parcel. (#9).

10. We refer you to Chapter III of the Draft Environmental Impact Statement.

11. Exhibit F, Biological Reconnaissance in the Draft EIS was prepared to respond to concerns on the presence of endangered plant or animal species on the proposed project site. There are none on the subject parcel.

12. The request before the State Land Use Commission is to amend the District Boundary from Conservation to Urban. Upon completion of the Development Plan amendment and the Zoning request, the site will have residences built and occupied.

13. Mr. Minoru Yoneshige made the initial request and was subsequently followed by Mr. Quentin Doar as president of the Ainakoa Community Association.

14. No single individual in the State of Hawaii is excluded from citizen participation for reviewing environmental documents. A request to be a consulted party can be made to The Office of Environmental Quality Control; public libraries have copies of the documents available for review; State and County offices that are part of the permitting or regulatory authority also have copies of the documents, and finally, the Neighborhood Boards have copies. It is not mandatory to mail to each resident in a census tract, a copy of the environmental documents prepared for review.

II. ENVIRONMENTAL IMPACT

15. The definition of "natural or cultural resource" is not provided in your comment #15, so I must assume it refers to historical/archeological resources. If this is so, I refer you to Exhibit A, Historical-Archaeological Study.

16. At the present time, the project site is vacant and fallow with little beneficial value to the community at large, but no doubt of tremendous value to the existing community in the Ainakoa Valley. With a change in the District Boundary designation to Urban, the beneficial uses will expand to the community at large in terms of housing availability.

17. Chapter 344, Hawaii Revised Statutes (HRS) is a broad brush environmental policy document that as stated in the Purpose, espouses "*a state policy that which will encourage productive and enjoyable harmony between man and his environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaii.*" In the context of Chapter 344, one could take the spirit and intent of the policy statement as a zero development policy statement, with the total protection of the Ainakoa Valley against any and all future development. Or, one could examine the policy statement carefully, and consider the development of housing built in compliance with applicable land use policies, zoning ordinances, and building code standards as stimulating the health and welfare of man. Housing of a comparable size, density, and style as existing Luinakoa Street could not be considered destructive of the environment as postulated by Chapter 344, HRS.

18. The economic and social welfare of the Luinakoa-Ainakoa Community is apparently more in jeopardy than the economic and social welfare of the State. We are proposing a 52 lot subdivision as opposed to a master planned community in the magnitude of Mililani or Waikele.

19. Public health is not an issue in this proposed project since the development will have to adhere to existing laws, ordinances, building code standards for wastewater management, solid waste collection and disposal, vector control, drainage, ambient air and noise quality.

20. Again, the size and scope of the proposed project will not result in significant secondary impacts to the population or on public facilities. Correspondence from City agencies such as Department of Public Works, Board of Water Supply, Department of Transportation Services, Parks & Recreation, and State agencies such as Department of Transportation, Department of Education, and Department of Health respond in support of the proposal by their ability to provide public services to the project.

21. The substantial degradation of environmental quality will not be a result of this project. It is a project that is consistent with the existing residential community on Luinakoa Street and is proposed to be an extension of the existing community, not affordable housing, not multi-million dollar Waialae-Iki ridge line estates, but comparably priced housing to the homes on Luinakoa Street.

22. There is no commitment for a larger project beyond the proposed project by the petitioner. The request before the State Land Use Commission is for 8.74 acres and in this petition, is limited to that acreage.

23. In Exhibit F, there is a technical study that explains that on the subject parcel, there are no rare, threatened, or endangered species of plants or animals.

24. Beyond the short-term construction phase when the ambient air and noise standards may be exceeded, the nature of the application is for a residential subdivision which will not be permitted to exceed established Community Public Health regulations for air emissions, loud noise, and other non-residential abuses.

25. The project will not affect an environmentally sensitive area since the Luinakoa Street Conservation designated lands do not constitute an environmentally sensitive area. The Kilauea Rain Forest, Kealakekua Bay, and Alakai Swamp are considered environmentally sensitive areas.

III. STATE FUNCTIONAL PLANS

The EIS does not address all of the twelve State Functional Plans but limited itself to those Plans which were considered appropriate and applicable. For items 26-50, you are refered to Chapter III of the DEIS which relates to "RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING PUBLIC PLANS, POLICIES, AND CONTROLS."

IV. COMMUNITY

Items 51-54 have been responded to Exhibit D, "Socio-Economic Impact Study" which was prepared by Earthplan. Items 55-56 are discussed in Exhibit G, "Real Property Tax Analysis". It should be pointed out at this point, that initial investments made in the middle 1950s, are worth more than $400,000 today at current market value!

V. HOUSING NEEDS

Items 57-62 were discussed with the City Department of General Planning, Community Development Planning Division, who provided the acreage in question. The acreage did not include the Kakaako district since this is under the jurisdiction of the State (Hawaii Community Development Authority). The acreage for the Urban District in the Primary Urban Center (PUC) is 524 acres, and for the East Honolulu Development Plan Area is 536 acres. Items 63 -65 were unavailable since the Estate felt it was not germane to the Petition.

66. Affordable housing is not planned for the proposed project since a) it would not have met with any significant degree of approval from the Ainakoa Community than the subject proposal, and b) affordable housing is not economically feasible, with the offsite development costs for the subject parcel.

The developable lots could not be developed in compliance with today's more stringent building code requirements for sloping lots, and uncertain soil conditions.

67. The City Department of Parks & Recreation have responded in comments on the EISPN that there are adequate recreational facilities in close proximity to the proposed project.

VI. TRAFFIC PROBLEMS

Exhibit C, Traffic Impact Study, was prepared initially by The Traffic Management Consultant, and revised for the purposes of the DEIS. Items 68-83 are covered in the study. The current City ordinance covering parking on City streets (Section 15-16.8 is discussed in a recent Star Bulletin Kokua Line column). The ultimate outcome on the current practice of parking on both sides of Luinakoa Street will be a decision made by the City & County of Honolulu after examination of current traffic conditions and the ability of service and emergency vehicles to traverse that street in an efficient and safe manner.

VII. SOILS

Items 84-101 are covered to the best extent practicable in Exhibit B, "Soils Surface Reconnaissance". The need or request for an accurate topographic map will be met at the appropriate time, which will be at the Zoning request review process. No information in the initial Environmental Assessment was omitted deliberately to deceive or mislead document reviewers. If the Ainakoa Community Association is of that opinion, the preparer apologizes for the oversight.

VIII. NOISE

A Noise study for the proposed project was not prepared by the Petitioner. At the present time, the ambient noise levels in the Ainakoa Valley area and more specifically, the subject parcel would be in the below 55 dba range. This is consistent with urban residential neighborhoods, particularly in a "dead end" street situation. The construction noise levels which are permitted to operate during normal working hours (0700-1530 hours) will exceed the 55 dba levels considerably. Construction noise levels are regulated by the State Department of Health in Title 11, Administrative Rules Chapter 43, Community Noise Control for Oahu. There will be impact on the existing residents on Luinakoa Street and also the adjacent streets as construction related activities commence on the subject parcel. The temporary disturbances from heavy truck traffic, heavy equipment involved in the clearing and grading will be noticed by the residents who are at home during the day time hours of operation. These

activities will have to comply with both Chapter 43 and also the provisions of Title 11, Administrative Rules Chapter 42, Vehicular Noise Control for Oahu. The petitioner will require the contractor on the project to take all practicable means to mitigate and reduce construction related noise to the lowest means available with today's technology. Practical methods such as avoiding the "gunning" of equipment nearest existing homes will also be required, and mufflers to abate noise on construction graders and haulers will also be encouraged.

IX. DAMAGE RESULTING FROM THE PROPOSED PROJECT

Items 113-126 are partially answered in the Soils Analysis that is contained in Exhibit B. The Petitioner is also preparing a plan that will include an insurance liability underwriter, construction inspection expert, and the soils consultant. The purpose of this combined package of expertise is to conduct an inspection of existing conditions of residences within a pre-determined area of potential impact. This inspection will consist of videotaping the residences, with particular attention to existing foundations, construction methodology used for the homes under inspection, and soils conditions at the existing home sites. After these inspections are completed, the Petitioner will provide a bond that will be used to repair damages that may be the result of project construction. This will not relieve the lot purchaser from his own liability exposure for construction methodology, but only for the requirement for a soils report on the subject lot purchased. All improvements to the subject parcel will be required to meet applicable building code standards for site improvements and structural improvements.

X. DEVELOPERS

127. Mr. William R. Crowder - 92-112 Oloa Street, Ewa Beach, HI 96707 is a career insurance executive with real estate development experience limited to small residential projects. He is and has been a Limited Partner in the Kaola Way Project, an 11 unit townhouse project in lower Pacific Heights Road; Waokele, a 17 lot cluster subidivison in Kalihi Valley Road; and this Luinakoa Street proposal.

128. Mr. D.G. Anderson has been in limited real estate development which commenced with the design, construction, and management of the John Dominis Restaurant; the two previously mentioned projects with Willima R. Crowder, and the present Luinakoa Street expansion. Kaola Way is estimated at $6.5 million dollars in development costs; Waokele is estimated at $2.5 million dollars in develoepment costs. The John Dominis Restaurant was designed and built for $3.0 million dollars and the NewPort Beach John Dominis Restaurant was designed and built for $18.0 million dollars. all projects were built to applicable

building code, zoning ordinances, and other regulatory agency requirments. No variances were requested.

129. This question is premature in that the definitive land use policy changes have not been acomplished to date.

130. If approved through the zoning process, the Partners will obtain conventional financing from local lenders.

XI. WATER QUALITY

131. Impacts on the coastal zone due to the implementation from this project are not expected to be significant in nature. This is due to the relative minor size of the project and the dry and normally arid conditions of the site. The Kapakahi Drainage channel is designed to provide drainage to the receiving waters and the channel winds through the Waialae golf course which is unlined with a natural vegetation bottom.

132. Impacts from the individual residential construction would be of lesser impact than the initial development for offsite improvements. This is due to grading for final elevation and structural construction on a 5000 square foot lot being less impacting than clearing and grading 8.74 acres.

133. Impacts on the coastal zone after all improvements are in and occupied will be of the type currently seen, i.e. urban trash from back yards that find the Kapakahi Drainage channel a convenient disposal area for their yard trimmings, old tires, broken lawn furniture, etc.

134. State Department of Health sanitarians periodically sample the Kahala Beach park for fecal coliform. It is their findings that fecal coliform counts at the stream outlet are within standards and do not pose a public health threat.

135. As is the case with the existing residential communities in the Ainakoa Valley, all drainage and sewerage is connected to City systems for collection and disposal. Impacts on ground water resources would be remote at best.

136. There will be no impacts on existing water resources due to this project; if approved by the reviewing agencies and considered appropriate for development, the Board of Water Supply will provide water.

137. The Board of Water Supply.

XIII. SOCIOLOGICAL AND HEALTH RELATED EFFECTS

Items 140-151 deal with subject matter that are not required for response when the proposed project is consistent with the existing or adjacent land uses.

As an example, the subject petition is for Conservation to Urban, and subsequently to Residential and then to R-5 zoning. The line questions in section XIII would apply if the petition were for a non-conforming use such as Industrial uses ; i.e. refinery, steel mill, nuclear power plant, etc. where there are defined and established point sources of noise, air emissions, and other pollutant sources not consistent with urban/residential land uses. The petitioner can sympathize with the residents of the Ainakoa Valley, but in view of the existing land use laws, building code standards, and public health rules and regulations in force, the enforcement capabilities of government to maintain the levels of permitted temporary construction activity anticipated are deemed adequate.

XIV. FLOODING

Items 152 - 167 are at this premature stage of project design, not answerable to the extent specified in the comments. The retained civil engineer will design all improvements including the extension of the Kapakahi Drainage channel to applicable City & County standards for dedication. Final determination of whether Federal or State permits will be required is under review and discussion at the present time. A determination of whether Kapakahi stream is an intermittent or perennial stream is not yet clearly defined.

XV. CONSTRUCTION PHASES

Items 168-173 are answerable only to the extent that traditional projects of similar size and type can be used as comparables. For this project, it is unlikely that those comparables can be used since the comparable projects did not experience the degree of concern being expressed by the Ainakoa Community.

168. Not available at this early stage, but construction for the offsite is estimated to take twelve months after all land use review processing is completed. Total time anticipated: 18 months

169. Not available or quantifiable at this early stage of land use review.

170. As fast as they can be sold, but realistically 6-9 months.

171. The petitioner cannot speak for the individual lot purchaser since the individual taste and pocketbook dictates the type and size of home to be built. No time limit will be set as a condition of sale.

172. After the lots are sold and the lot purchasers complete their house design, site engineering, and obtain financing.

173. 12 to 36 months is a best estimate of total time to complete this project.

XVI. LAND VALUES

174. Land value for the fee simple lots is not finalized at this early stage in terms of establishing sales price per lot. Development costs, purchase price due to the current fee owner, and other as yet undetermined costs make it impossible to establish a definite sales price per square foot. Current market value may be one criteria to be used.

175. Final sales prices are not final at this time.

176. With no firm information as to size or style of home to be built, this is not answerable at this time. A safe guess might be 50%.

177. Again, without the knowledge of the size and style of house to be built individually, construction costs for each house is unknown. Each individual purchaser will meet the financial requirements of his respective lending institution for the package of house and lot. Individual income is not germane to this EIS.

178. The basis for a $35-40/sq. ft price for the fee was based on a sale recorded in February, 1992 for a residence at 1453 Luinakoa Street. The City tax assessor had set the fee value at $182,400 in the 1990-91 tax appraisal year. At that established tax appraised value, the per square foot value was $33.16/ sq. ft. in that year. Today's appraised value for residential fee on Luinakoa Street is now at $364,000 average per 5500 sq. ft lot, a value of $66.00/ sq. ft at appraised value.

179. No lots have been sold in advance, reserved, or set aside by the petitioner. This is in fact illegal under the laws of the State of Hawaii and to do so willfully or in ignorance is still illegal. Calls have been received from interested parties, together with correspondence expressing interest in purchasing a lot when they become available for public sale. This will be done in the normal legal way by a licensed real estate firm.

180. None.

181. None.

182. This is discussed in general terms in Exhibit G. Simply stated, the existing homeowners in Ainakoa Valley will be affected only to the extent that the fee portion of their residences is affected. The real property tax assessor appraises fee land in areas, seldom by individual parcels. The structural improvements are seldom changed in appraisal unless there are additional improvements made, or

a new house is built on an existing lot. Comparable lots would generally speaking, experience the same value per square foot, but not the same value for the structural improvements.

XVII. THREATENED OR ENDANGERED SPECIES

Exhibit F, "Biological Reconnaissance" discusses the project site and the flora and fauna aspects of the parcel. The study discusses the project site as well as the Kapakahi Gulch up to the mauka most elevations where certain "exotic" botanicals (Pakalolo) are being cultivated.

XVIII. CULTURAL SITES

Exhibit A, " Historical-Archaeological" study was conducted by Dr. Paul Cleghorn, Ph.D. and Lisa Anderson in April, 1992. The original work covered only 6+ acres at that time since the identification of the site was not clearly defined. Subsequently, Dr. Cleghorn went back and reviewed two additional acres so that the entire 8.74 acres has been surveyed. His results indicate that there are no likely sites of historical or archaeological significance on the subject parcel. His work is limited to the 8.74 acres, and not the entire Ainakoa Valley.

Conclusions: We trust that we have responded adequately to your lengthy and detailed comments. We understand the concerns of the Association and how the resistance to development is based on a position of zero change. The petitioner is sincere in his desire to work with the Community, and particularly with the existing residents on Luinakoa Street, to achieve a win-win situation for all affected parties. Thank you for your time spent on this comment list.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

AINAKOA COMMUNITY ASSOCIATION
1458 LUINAKOA STREET
HONOLULU, HAWAII 96821
Telephone 732-5248

RECEIVED
SEP 21 1992
PARAMETRIX, INC.
HONOLULU

September 20, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

Engineers-Surveyors, Hawaii, Inc.
1020 Auahi Street, Building 6
Honolulu, Hawaii 96814

Dear Sirs:

Re: EIS Comments and Request for Additional Time to Submit Comments, Petition of William Crowder, Docket No. A92-678, State Land Use Commission.

The Ainakoa Community Association submits these comments for inclusion in the draft Environmental Impact Statement being prepared for Luinakoa Partners on Docket No. A92-678, State Land Use Commission.

The Ainakoa Community Association requests an additional 30 days to present additional comments for the preparation of the draft EIS. The additional time is necessary to obtain soil and engineering experts to help the Association prepare technical comments.

Please note our changed address and telephone number.

Sincerely,

Quentin W. Doar
President

Enclosure

cc: State Land Use Commission

COMMENTS OF THE AINAKOA COMMUNITY ASSOCIATION

For each of the following questions, it is requested that reference be made to the source of the information relied upon in each answer, including assumptions and other data relied upon, and the location of the source of the information.

I. STATE ENVIRONMENTAL POLICY:

1. Explain how the proposed project preserves the existing lifestyles through the design and maintenance of neighborhoods which reflect the culture and mores of the community. Explain how it may not preserve existing lifestyles.

2. Explain how the proposed project will develop a community with a sense of identity and social satisfaction. Explain how it may not do so.

3. Explain how the proposed project will promote mountain-to-ocean vistas. Explain how it may not do so.

4. State the optimum population level for Ainakoa Valley based upon a fair and realistic evaluation of existing roads, population levels, schools, public facilities, water and energy resources, and other relevant factors.

5. State the present population level for Ainakoa Valley. How would the proposed project affect the population level for Ainakoa Valley?

6. Explain how the proposed project will encourage management practices which conserve all natural resources. Explain how it may not do so.

7. Explain how the proposed project will encourage management practices which conserve and protect watersheds and water sources. Explain how it may not do so.

8. Explain how the proposed project will encourage management practices which conserve and protect forest and open space areas. Explain how it may not do so.

9. Explain how the proposed project will establish and maintain natural area preserves, wildlife preserves, forest preserves, and unique ecological preserves. Explain how it may not do so.

10. Explain how the proposed project will coordinate state and county general plans. Explain how it may not do so.

11. Explain how the proposed project will protect endangered species of indigenous plants and animals. Explain how it may not do so.

12. Explain how the proposed project will promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for the people. Explain how it may not do so.

13. Identify the persons in Ainakoa Valley who received the Environmental Assessment and Notice of Preparation of EIS.

14. Explain how the distribution of the Environmental Assessment and Notice of Preparation of EIS to exclude certain residents of Ainakoa Valley provided for expanded citizen participation in the decision making process. Explain how it may not do so.

II. ENVIRONMENTAL IMPACT

15. Explain whether the proposed project will involve an irrevocable commitment to loss or destruction of any natural or cultural resource. Explain how it may not do so.

16. Explain whether the proposed project will curtail the range of beneficial uses of the environment. Explain how it may not do so.

17. Explain whether the proposed project conflicts with the policies, goals, and guidelines of Chapter 344. Explain how it may not do so.

18. Explain whether the proposed project will substantially affect the economic or social welfare of the community and State. Explain how it may not do so.

19. Explain whether the proposed project will substantially affect public health. Explain how it may not do so.

20. Explain whether the proposed project will involve substantial secondary impacts, such as but not limited to population changes or effects on public facilities. Explain how it may not do so.

21. Explain whether the proposed project will involve a substantial degradation of environmental quality. Explain how it may not do so.

22. Explain whether the proposed project is individually limited but cumulatively may have a considerable effect upon the environment or involves a commitment for larger actions. Explain how it may not do so.

23. Explain whether the proposed project substantially affects a rare, threatened or endangered species, or its habitat. Explain how it may not do so.

24. Explain whether the proposed project will detrimentally affect air or water quality or ambient noise levels. Explain how it may

not do so.

25. Explain whether the proposed project will affect an environmentally sensitive area. Explain how it may not do so.

III. STATE FUNCTIONAL PLANS:

26. For each of the State Functional Plans, explain how the proposed project will carry out the goals of the plans.

27. For each of the State Functional Plans, explain how the proposed project may not carry out the goals of the plans.

28. Explain how the proposed development promotes the objectives and policies for the physical environment--scenic, natural beauty, and historic resources, H.R.S. § 226-12(b)(3), preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains,... scenic landscapes, and other natural features. And how it may not promote them.

29. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(2), proper management of land and water resources. And how it may not promote them.

30. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(3), achievement of desired quality of surface, ground, and coastal waters. And how it may not promote them.

31. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(4), maintain or improve aural and air quality levels to enhance health and well-being of people. And how it may not promote them.

32. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(5), reduce the threat to life and property from erosion, flooding, unstable soils, and other natural and induced hazards and disasters. And how it may not promote them.

33. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(6), encourage design and construction practices that enhance physical qualities of communities. And how it may not promote them.

34. Explain how the proposed development promotes the objectives and policies for facility systems--water, H.R.S. § 226-16(b)(1),

relate land use activities to existing and potential water supply. And how it may not promote them.

35. Explain how the proposed development promotes the objective for socio-cultural advancement--housing, H.R.S. § 226-19(a)(1), greater opportunities to secure reasonably priced homes. And how it may not promote it.

36. Explain how the proposed development promotes the objective for socio-cultural advancement--housing, H.R.S. § 226-19(a)(2), orderly development of residential areas sensitive to community needs. And how it may not promote it.

37. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(2), stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households. And how it may not promote them.

38. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(5), promote the design and location of housing developments taking into account the physical setting, concerns of existing communities and surrounding areas. And how it may not promote them.

39. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(7), foster a variety of traditional lifestyles through the design and maintenance of neighborhoods that reflect the culture and values of the community. And how it may not promote them.

40. Explain how the proposed development promotes the objective for socio-cultural advancement--health, H.R.S. § 226-19(a)(1), fulfill basic health needs of the community as well as the general public. And how it may not promote it due to the impact of the development upon the residents.

41. Explain how the proposed development promotes the objective for socio-cultural advancement--health, H.R.S. § 226-19(a)(2), maintain environmentally healthful conditions. And how it may not promote it.

42. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(1), encourage urban growth to primarily existing urban areas. And how it may not promote them.

43. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(4), restrict new urban development in areas where water is insufficient. And how it may not promote

JOHN WAIHEE
GOVERNOR

BRIAN J. J. CHOY
Director

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185

Dear Participant:

Attached for your information is a Final Environmental Impact Statement which was prepared pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

TITLE OF PROJECT: Luinakoa Residential Subdivision

LOCATION: *ISLAND* Oahu *DISTRICT* Honolulu

TAX MAP KEY NUMBERS: 3-5-24: 1

AGENCY ACTION: _____ *APPLICANT ACTION:* X

ACCEPTING AUTHORITY: State Land Use Commision

ADDRESS: Old Federal Building
335 Merchant Street, Room 104
Honolulu, HI 96813

CONTACT: Ms. Esther Ueda, Executive Officer *PHONE:* 587-3822

PROPOSING AGENCY OR APPLICANT: Luinakoa Partners

ADDRESS: 43 Ahui Street
Honolulu, HI 96813

CONTACT: D.G. Anderson *PHONE:* 523-0955

CONSULTANT: Parametrix, Inc.

ADDRESS: 1164 Bishop, Suite 1600
Honolulu, HI 96813

CONTACT: F. J. Rodriguez *PHONE:* 524-0955

If you no longer need this EIS, please return it to OEQC (please do not recycle document). Thank you for your participation in the Environmental Impact Statement process!

Final EIS Cover Letter - Revision 8/92

them.

44. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(9), direct future urban development from critical environmental areas. And how it may not promote them.

45. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(10), identification of critical environmental areas. And how it may not promote them.

46. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(12), protection of environment and the availability of conservation lands for future generations. And how it may not promote them.

47. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(13), protect and enhance open spaces and scenic resources. And how it may not promote them.

48. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(1), use marginal land to meet housing needs of low- and moderate-income and gap-group households. And how it may not promote them.

49. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(4), create incentives to develop housing for low- and moderate-income and gap-group households. And how it may not promote them.

50. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(8), give higher priority to providing affordable housing to residents. And how it may not promote them.

IV. COMMUNITY:

51. Identify the demographic composition of the residents on Luinakoa Street including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed income, children, grandchildren, and cars (including cars parked on-street).

52. Identify the demographic composition of the residents in Ainakoa Valley who may reasonably be affected by the proposed project, including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed income, children, grandchildren, and cars (including cars parked

on-street). Explain the basis for determining which residents would be affected by the proposed project.

53. Identify the number of persons on Luinakoa Street and Ainakoa Valley who are reasonably expected to be at home during the construction of the project.

54. Identify the number of persons living on Halekoa Drive and its side streets who may reasonably be affected by the proposed project. Provide demographic information including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed income, children, grandchildren, and cars (including cars parked on-street).

55. If the proposed development causes tax assessments to increase, identify the impact upon the residents in Ainakoa Valley who are living on fixed incomes and who are working.

56. If the proposed development may cause tax assessments to increase, identify the impact upon residents in Ainakoa Valley who have children and grandchildren.

V. HOUSING NEEDS:

57. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary which is available for residential development, yet not developed.

58. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary which may be made available for residential development with City Development Plan and zoning changes.

59. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary and City Development Plan for residential use which is available for residential development, yet not developed.

60. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary which is available for residential development, yet not developed.

61. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary which may be made available for residential development with City Development Plan and zoning changes.

62. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary and City Development Plan for residential use which is available for residential development, yet not developed.

rock formations present in those areas and the slope of the land.

88. Provide a grading plan for the proposed project site. Explain every phase of the plan, including but not limited to, equipment to be used, number of workers, where material will be removed to, plans for on-site storage, amount of dust and noise to be generated, and time frames.

89. Based upon the grading plan, state the amount of material that will be removed from the project site, including soil, rocks, trees, vegetation, and other materials on the site.

90. Indicate the number of truckloads of material that will have to be removed from the project site.

91. State the average number of trucks that will be removing materials on a daily basis during the grading phase of the project. State the amount of noise that will be generated by such trucks.

92. Do the possible methods for grading or site preparation include use of explosives? If so, explain the type of explosives, safety measures, potential for damage to homes of residents, and other safety and health (including noise and dust) matters.

93. Identify the possible methods that are reasonably expected to be used for grading or site preparation. For each method, explain the safety measures, potential for damage to homes of residents, and other safety and health (including noise and dust) matters.

94. State whether the purchasers of lots would reasonably be expected to engage in further grading or site preparation for the construction of their homes.

95. Estimate the amount of grading or site preparation that lot purchasers would reasonably be expected to engage in for the construction of their homes.

96. Estimate the amount of material that will be removed from these lots because of grading or site preparation by purchasers.

97. Explain why the description of soils in the Environmental Impact Statement Notice of Preparation differs from the description in the Environmental Assessment.

98. Why did the Environmental Assessment fail to include information about the soil movement problems associated with the soils in the project area?

99. Was the omission of information about the soil movement problems in the Environmental Assessment a material omission for the purposes of determining significant environmental effects? If not, why not?

100. Explain whether the soils and land slope in the proposed project area would affect the availability of mortgages from the FHA, HUD, FmHA, Veterans Administration, HHA, or other governmental entity.

101. Explain whether the soils and land slope in the proposed project area would affect the availability of conventional mortgages.

VIII. NOISE:

102. State the ambient noise level of Ainakoa Valley. Compare the ambient noise levels of other valleys on Oahu with Ainakoa Valley.

103. Do the possible methods for grading or site preparation include devices which generate a substantial amount of noise?

104. Indicate the amount of noise that such devices will generate.

105. Indicate the maximum number of each device that will be used at any one time on the proposed project.

106. State the average decibel levels that will be generated by the work on the project.

107. State the highest decibel levels that will be generated by the project and its anticipated duration (days and times of day).

108. Based upon the topography of Ainakoa Valley, state the potential for sounds generated within the valley to be carried and heard in nearby areas, including Halekoa ridge. State the amount of echo that can be heard in various parts of the valley.

109. State whether the clearing of vegetation would affect the noise levels and echo. Indicate the amount of additional noise which will result from the clearing of vegetation.

110. Identify the potential amount of echo resulting from construction noise due to the narrowness of the valley and its impact upon residents within the valley and upon Halekoa ridge.

111. State the potential for the noise to be carried up and down the valley because of echo resulting from the narrowness of the valley.

112. Identify methods that will be used to mitigate the noise that will be generated by the devices and the resulting reduction in noise.

IX. DAMAGE RESULTING FROM THE PROPOSED PROJECT:

113. Identify the potential for rocks and boulders to fall from the

137. Identify the potential water sources that will be used to provide water for the additional residents.

XII. OPEN SPACE:

138. Identify the effects upon open space resulting from the project.

139. Identify the possible methods that can be used to mitigate the effects upon open space.

XIII. SOCIOLOGICAL AND HEALTH-RELATED EFFECTS:

140. Based upon the demographic information about the community, identify the possible sociological and health-related effects that the proposed development will have on the community.

141. Identify the possible sociological and health-related effects that the noise will have on the community.

142. Identify the possible sociological and health-related effects that the construction work will have on the community.

143. State the dust and air quality levels in Ainakoa Valley and on Halekoa Ridge.

144. Identify the possible sociological and health-related effects that the dust and air quality resulting from the construction work will have on the community.

145. Identify the possible sociological and health-related effects that the proposed development will have on persons who will be at home during the construction.

146. Identify the possible sociological and health-related effects that the proposed development will have on persons who are retired.

147. Identify the possible sociological and health-related effects that the proposed development will have on children.

148. Identify the possible sociological and health-related effects that the proposed development will have on persons who work.

149. Identify the possible sociological and health-related effects that the proposed development will have on persons who work on shifts.

150. Identify the possible sociological and health-related effects that the proposed development will have on persons who have serious health problems, including those problems revealed in the demographic survey of the community.

151. Identify the possible sociological and health-related effects related to crime resulting from the proposed development due to influx of workers in the area, more expensive homes being built, and increase in traffic.

XIV. FLOODING:

152. Identify the potential flood danger resulting from the construction of the proposed project.

153. State the amount of additional runoff which will result from the proposed project. Including additional runoff resulting from the removal of the vegetation cover.

154. State the erosion control measures that will be utilized during the construction.

155. State the age of the drainage channel and the potential necessity of repairs resulting from its age.

156. State whether the drainage channel is sufficient to handle the potential runoff resulting from the proposed project.

157. Identify the potential for the drainage channel to be damaged by the proposed construction.

158. Identify the potential for the drainage channel to sustain damage which causes the floor of the channel to give way or disintegrate.

159. Identify the potential for flooding or other damage to homes if the channel is damaged during a heavy and prolonged rain in the valley.

160. In the event of a heavy and prolonged rainfall in the valley during the construction of the proposed project, identify the potential flood danger to the existing homes.

161. Identify the measures that will be undertaken to prevent flooding in the event of a heavy and prolonged rainfall in the valley.

162. Explain how the drainage channel will be extended to accommodate the proposed project.

163. Explain the necessity of obtaining approvals from the Army Corps of Engineers or state agencies to extend the drainage channel.

164. In the event of a heavy and prolonged rainfall in the valley, identify the potential flood danger to the existing homes while the drainage channel is being extended.

165. Identify the measures that will be undertaken to prevent flooding while the drainage channel is being extended.

166. In the event of a heavy and prolonged rainfall in the valley during the construction of the proposed project, identify the potential flood danger to the homes along the drainage channel.

167. In the event of a heavy and prolonged rainfall in the valley, identify the flood potential to the new homes being built in the proposed project, including effects resulting from the non-sequential construction of homes.

XV. CONSTRUCTION PHASES:

168. Provide a timetable for each aspect or phase of the proposed project.

169. For each phase, identify the average noise and dust levels, the frequency of truck traffic, and flooding and water runoff potential.

170. After the proposed project is completed, provide information on the timetable for the sale of the lots.

171. After the proposed project is completed, provide information on the timetable for the construction of homes by lot purchasers. Will the contracts contain a time limit for the buyers to finish construction of their homes?

172. Identify when most of the home construction is expected to take place.

173. Estimate the length of time from the initial construction to the final completion of all the homes in the proposed project.

XVI. LAND VALUES:

174. Will the lots be sold at the current market value for land in the area? Explain how the land value will be determined for the lots.

175. The current tax assessment for land in the area is approximately $69/sq.ft. Will the land be sold for approximately $69/sq.ft. or the current land values when the lots go on the market?

176. Based upon a market rate purchase price for the lots, what would be the average construction costs of a home be as a percentage of the lot price?

177. Assuming a market rate purchase price of $69/sq.ft. for a lot, what would be the average construction costs of a home be? Based

upon this amount, state the income that will be necessary to obtain a mortgage to purchase a lot and build a home in the proposed development.

178. The Environmental Assessment stated that the land would be sold for $35/sq.ft. or $40/sq.ft. Why was this amount given when the current land values are well above these amounts?

179. Have any of the lots been sold or reserved by prospective buyers? State whether the developer or any agents have offered the lots to prospective purchasers, regardless of whether any money has exchanged hands. Identify the prospective purchasers who have either purchased or otherwise reserved any of the lots and the consideration provided. Identify the location of the lots which have been purchased or otherwise reserved.

180. Identify any financial institutions or mortgage companies which the developer or its agents have contacted regarding financing for the lot purchasers.

181. Explain if the developer has made any arrangements with any financial institutions or mortgage companies to extend credit to the lot purchasers.

182. Based upon the answers to the estimated land and building costs, identify the potential impact upon existing land values if the proposed development is completed and homes built. Explain how the tax assessments of homeowners in Ainakoa Valley may be affect.

XVII. THREATENED OR ENDANGERED SPECIES:

183. Explain the possibility that the proposed project area contains any native species of plants or animals.

184. Explain the possibility that the proposed project area contains any rare, endangered or threatened species of plants or animals.

185. Explain whether the project area contains native owls or other native birds. State whether the project area contains habitat which is frequented by native owls or other native birds. Explain the likelihood that the proposed project will adversely affect the owl and native bird habitat.

186. Explain whether the project area contains o'opu or other native fish species. State whether the project area contains habitat of o'opu or other native fish species. Explain the likelihood that the proposed project will adversely affect the o'opu and native fish habitat.

187. Explain whether the project area contains native bats or other native mammals. State whether the project area contains habitat of

native bats or other native mammal species. Explain the likelihood that the proposed project will adversely affect the bat and native mammal habitat.

XVIII. CULTURAL SITES:

188. Explain the possibility that native burial caves exist in the project area.

189. State whether there are any records or information at the Bishop Museum, State Archives or other informational repositories about native artifacts discovered in Ainakoa Valley. Provide information on the records or information.

190. Explain the possibility that there are sites of cultural importance, such as but not limited to heiaus, house sites, or villages in the project area or in Ainakoa Valley.

RECEIVED
OCT 0 8 1992
PARAMETRIX, INC.

AINAKOA COMMUNITY ASSOCIATION
1458 LUINAKOA STREET
HONOLULU, HAWAII 96821
Telephone 732-5348

October 7, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Engineers-Surveyors, Hawaii, Inc.
1020 Auahi Street, Building 6
Honolulu, Hawaii 96814

Dear Sirs:

Re: Supplemental EIS Comments, Petition of William Crowder, Docket No. A92-678, State Land Use Commission.

The Ainakoa Community Association submits these additional comments for inclusion in the draft Environmental Impact Statement being prepared for Luinakoa Partners on Docket No. A92-678, State Land Use Commission.

Sincerely,

Quentin V. Doar
President

Enclosure

cc: State Land Use Commission

SUPPLEMENTAL COMMENTS OF THE AINAKOA COMMUNITY ASSOCIATION

For each of the following questions, it is requested that reference be made to the source of the information relied upon in each answer, including assumptions and other data relied upon, and the location of the source of the information.

I. Soil Conditions:

1. Estimate the porosity of the soil in the project site.

2. Estimate the permeability of the soil in the project site.

3. Estimate the capacity of the soil in the project site to hold and percolate water.

4. What is the workability of the soil in the project site?

5. Estimate the percentage the surface of the project site which is made up of exposed rock.

6. Estimate the percentage of the area above the project site along the ridge which is made up of exposed rock.

7. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site.

8. In the area above the project site along the ridge, estimate the size and weight of the rocks and boulders which may fall onto the site.

9. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons.

10. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site and have the potential for causing damage to homes or machinery.

11. Estimate the increased potential for rocks and boulders to fall upon the project as the result of hard and prolonged rainfall.

12. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons before site preparation is undertaken?

13. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons before home construction is undertaken?

14. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing damage to homes or machinery?

15. Estimate the amount of rainfall that will cause the soil in the project site to become saturated.

16. Estimate the amount of rainfall that will cause the soil in the project site to become plastic.

17. State the possible effects upon site preparation if the soil becomes plastic.

18. State the possible effects upon home construction if the soil becomes plastic.

19. Estimate the shrink-swell potential of the soil in the project site.

20. State the possible effects upon site preparation if the shrink-swell potential of the soil is at its maximum.

21. State the possible effects upon home construction if the shrink-swell potential of the soil is at its maximum.

22. Estimate the rate of talus growth that may result from site preparation work.

23. Estimate the rate of talus growth that may result from home construction by lot purchasers.

24. Estimate the rate of talus growth that may result from the modification of the slope in the project site.

25. Estimate the rate of talus growth that may result from the site preparation work if there is heavy and prolonged rainfall in the project site.

26. Estimate the mass wasting potential in the project site due to the site preparation work.

27. Estimate the mass wasting potential in the project site due to home construction by lot purchasers.

28. Estimate the mass wasting potential in the project site due to site preparation work if there is heavy and prolonged rainfall.

29. Estimate the mass wasting potential in the project site due to home construction by lot purchasers if there is heavy and prolonged rainfall.

30. Estimate the effect of earthquakes in the vicinity of Oahu on the rate of talus growth in the project site.

31. Estimate the potential effect of earthquakes in the vicinity of Oahu on the mass wasting potential in the project site.

II. Soil Stabilization:

32. Describe in detail the off-site improvements, if any, necessary for the project.

33. Describe in detail the on-site improvements for the project.

34. Will soil or other natural materials be brought onto the project site? If so, state the amount, including number of truckloads, and the purpose of such materials.

35. Describe in detail the excavation work that will be necessary to prepare the site.

36. Based upon the shrink-swell potential of the soil, state the likelihood and extent of soil instability in the project area.

37. Based upon other factors related to the soils, state the likelihood and extent of soil instability in the project area.

38. Explain the various soil stabilization methods that reasonably may be used during either site preparation or home construction.

39. Explain the soil stabilization procedures that are expected to be used for the project.

40. Explain the possibility that pile driving may be necessary during site preparation or home construction.

41. For each of the soil stabilization methods that may reasonably be used, including pile driving, state the potential effects upon noise levels, air quality, water runoff, soil erosion, flooding, and any other possible environmental effects.

III. Erosion:

42. Describe in detail the potential for erosion resulting from the removal of rocks, vegetation, and other materials from the site.

43. Describe in detail the potential for erosion resulting from the removal of rocks, vegetation, and other materials from the site if there is heavy and prolonged rainfall.

44. Describe in detail all the possible impacts that may result from erosion, if measures are not undertaken to prevent erosion.

45. State the measures that will be used to prevent erosion during site preparation.

46. State the measures that will be used to prevent erosion during home construction. Will the developer be responsible for preventing erosion during home construction?

IV. Water Runoff:

47. Describe in detail the surface water runoff potential during site preparation.

48. Describe in detail the surface water runoff potential during home construction.

49. Describe in detail the surface water runoff potential during site preparation if there is heavy and prolonged rainfall.

50. Describe in detail the surface water runoff potential during home construction if there is heavy and prolonged rainfall.

51. Describe in detail the rain runoff potential during site preparation.

52. Describe in detail the rain runoff potential during home construction.

53. Describe in detail the rain runoff potential during site preparation if there is heavy and prolonged rainfall.

54. Describe in detail the rain runoff potential during home construction if there is heavy and prolonged rainfall.

55. Describe in detail the impacts resulting from surface water and rain water runoff if there is heavy and prolonged rainfall and no measures are taken to prevent runoff.

56. State the measures that will be used to deal with the increased runoff of surface and rain water during site preparation.

57. State the measures that will used to deal with the increased runoff of surface and rain water during home construction. Will the developer be responsible for measures to deal with increased runoff during home construction?

58. Estimate the potential impacts upon the drainage channel from increased runoff of surface and rain water during site preparation and home construction.

V. Resident Notification:

59. Identify all persons in Ainakoa Valley who were sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement.

60. Explain whether the residents of Ainakoa Avenue who live in homes which parallel the project site would experience significant impacts (i.e. noise, dust, air quality, traffic, water runoff, flooding, etc.) resulting from the project.

61. Explain why residents of Ainakoa Avenue who live in homes which parallel the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

62. Explain whether residents of Halekoa Drive who live in homes above the project would experience significant impacts (i.e. noise, dust, air quality, traffic, etc.) resulting from the project.

63. Explain why residents of Halekoa Drive who live in homes above the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

64. Explain whether residents of lower Ainakoa Valley who live below the project would experience significant impacts (i.e. noise, dust, air quality, traffic, run off, flooding, etc.) resulting from the project.

65. Explain why residents of lower Ainakoa Valley who live below the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

VI. Cultural Information:

66. What efforts were utilized to develop oral history information about the valley?

67. What efforts were made to develop oral history information from residents of the valley?

68. State whether previous developers of Ainakoa Valley had considered extending Luinakoa Street. State the reasons why there was no development of Luinakoa Street prior to the present project proposal.

69. Explain how the developers were informed about the availability of the project for development. Did the developers initially contact the landowner or did the landowner contact the developers? Describe the negotiations that ensued between the developers and landowner. Were there any discussions or agreements to develop other lands held by the landowner? If so, describe those discussions or agreements and any other matters related to agreements or discussions over projects between the developers and landowner. Identify all the parties and individuals involved in the discussions, negotiations, developments, or projects.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

October 13, 1992

Mr. Quentin W. Doar, President
Ainakoa Community Association
1458 Luinakoa Street
Honolulu, HI 96821

Dear Mr. Doar,

We have received the additional comments dated October 7, 1992 from your organization and respond to them in the following:

I. Soil Conditions: Items 1-46 were forwarded to Mr. Dick Fewell of Fewell Geotechnical Engineering, Ltd. Mr. Fewell is retained as Soils consultant for the project and he has reviewed the comments relative to Soils and Erosion. The response prepared by Mr. Fewell reflects the current compliance with applicable building standards, codes, ordinances, rules and regulations. The requested information to the extent practicable, will be provided for purposes of obtaining a building permit at the appropriate time.

II. Water Runoff: Engineers Surveyors Hawaii are the civil engineering consultant for the project and they have reviewed comments 47-58. Their response to the comments are also of a general nature since the final design for construction drawings is not complete at this time.

V. Resident Notification: Items 59-65 are responded to by Parametrix, Inc.

59. The Environmental Assessment for the initial land use policy change processing, i.e. Development Plan Land Use Map Amendment and Zoning Change was distributed to all residents on Luinakoa Street. The Environmental Impact Statement Preparation Notice (EISPN) was distributed only to the Ainakoa Community Association; the Waialae-Kahala Neighborhood Board No. 3; Office of Environmental Quality Control; and applicable government agencies. Individual residents do not receive private copies of the EISPN.

60. The operative word in the comment is "Significant"; there may be impacts to the residents of Ainakoa Avenue, and then there may be no significant impacts.

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61. See item No. 59.
62. See item No. 60.
63. See item No. 59.
64. See item No. 60.
65. See item No. 59.

VI. Cultural Information: Resource for the responses to items 66 and 67 are EarthPlan, who prepared the Social Impact Study.

66. The cultural background of the Ainakoa Valley was essentially provided in the archaeological study prepared for the EIS. Oral information as to the actual happenings in the Valley were not done.

67. The gathering of oral history information is normally a function of a cultural anthropology analysis. In the case of the residents on Luinakoa Street, the common bond that linked the community was determined and substantiated through interviews and reviewing of correspondence. As the first military veteran housing enclave made available by the Bishop Estate, the common denominator is the military experience that bonds the 28 households. If a study of military veterans' housing on a dead-end street was a subject for review, the gathering of oral history information could be considered vital and necessary. Beyond the efforts of EarthPlan in their study development, the oral history information aspect of Luinakoa Street was not a consideration.

68. This information is not available to the Petitioner.

69. The Petitioner inquired as to the availability of the 8.74 acre parcel from the landowner. The balance of item No. 69 is not germane to the Petition.

We trust that we have responded adequately to the added comments put forward by your Association.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

Encl: Fewell Geotechnical Engineering,Ltd.
Engineers Surveyors Hawaii, Inc.

ESH
ENGINEERS SURVEYORS HAWAII, INC.

WILLIAM B C HEE, P E
PRESIDENT
JERRY S NAKAGAWA, L S
EXECUTIVE VICE PRESIDENT

SUITE NO 1
BUILDING NO. 6
1020 ALAHI STREET
HONOLULU, HAWAII 96814
(808) 531-3116 (HONOLULU)
(808) 885-4590 (KAMUELA)
FAX NO. 522-1818

October 9, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

ATTENTION: Fred Rodriguez

Gentlemen:

SUBJECT: LUINAKOA RESIDENTIAL SUBDIVISION

Pursuant to the concern with regard to "Water Runoff" in the proposed subdivision, we offer the following:

The total development area is approximately 9 acres, of which less than 5 acres is expected to be disturbed during construction. Typical construction impacts will result due to construction activities; however these will be short term and will be mitigated to the extent required by government codes and ordinances.

All sitework construction for the proposed development will be required to conform to the current Grading, Soil Erosion and Sedimentation Control Standards and Guidelines (Chapter 23, Revised Ordinances of Honolulu, 1969, as amended.) Measures to control erosion and sedimentation arising from construction activities will be specified in the construction documents.

On-site drainage facilities to handle storm water runoff will be designed using criteria set forth by the Drainage Standards, Department of Public Works, City and County of Honolulu.

As indicated in earlier correspondence, the proposed development will not increase storm water tributary area affecting the existing Kapakahi Major Drain. Runoff above the proposed lots will be intercepted by open ditches designed with enough capacity to intercept and carry projected storm water runoff via underground drainage pipe systems to the Kapakahi Lined Channel.

The total Drainage Tributary Area for Kapakahi Drainage Basin is approximately 700 acres, which is expected to generate approximately 3,200 cubic feet per second (cfs) of runoff during a major storm (City and County peak discharge).

Although there will be no increase in drainage tributary area, the storm water runoff from on-site improvements is expected to increase by approximately 9 cfs (using a 100-year storm for comparison between existing and improved conditions). This amounts to approximately 0.3% increase in total storm water runoff to the Kapakahi Drainage Channel, which is considered negligible.

If you have any questions regarding the above please feel free to call.

Very truly yours,

ENGINEERS SURVEYORS HAWAII, INC.

Robert T. Watari

Robert T. Watari, P.E.
Its Vice President

91-69

FEWELL
GEOTECHNICAL
ENGINEERING, LTD.

Oahu Office
98-1416 Waihona Place
Pearl City, Hawaii 96782-1973
Telephone (808) 455-6569 • Facsimile 456-7062

Maui Office
P.O. Box 1073
Puunene, Maui, Hawaii 96784
Telephone (808) 572-2672 • Facsimile 572-2672

File 1196-1
October 9, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attention: Mr. Fred Rodriguez

Subject: **Response to Ainakoa Community Association's Supplemental Comments**
Luinakoa Residential Subdivision
Honolulu, Oahu, Hawaii
Tax Map Key: 1-5-24:1

In accordance with your request, we have reviewed the 46 Supplemental Comments submitted by the Ainakoa Community Association. This letter summarizes our comments.

The Supplemental Comments presents many detailed questions regarding the design and construction of the proposed subdivision. While most of these items relate to the proposed construction, some of the items include evaluations of adjoining properties and areas outside the scope of the proposed subdivision. In general, a great deal of additional work must be completed before these questions can be answered. The additional studies are not normally required for the Land Use Commission review.

As a minimum, a definitive design and a detailed subsurface investigation and analysis would have to be completed to answer the questions. While many of the questions are legitimate concerns, they are not normally addressed until the building permit stage. Almost all of the concerns must be addressed in securing a building permit from the City and County of Honolulu Public Works Department since they relate to the proposed grading, slope stability conditions and future use of the property. The concerns related to noise, traffic, blasting, dust, etc. are all covered by existing ordinances which should be more than adequate to protect the existing residences from greater than normal construction conditions.

The proposed development would also be subjected to much more stringent requirements than the standards used for most of the present homes which were built under the less stringent standards of the 50's and 60's.

We have investigated numerous sites in East Oahu with similar talus deposits. Almost all of the sites can be adequately developed with proper engineering solutions to handle the expansive soils, the low slope stability, and any of the other problems that may be associated with developments in these valleys. The actual selection of the construction

methods would not be made until a more detailed design has been developed and the subsurface investigation and analyses have been completed. Solutions are available for all of the potential problems outlined by the Supplemental Comments. These solutions will depend upon the degree of the condition that may appear on the site, and the funds that are available to economically develop the subdivision.

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

FEWELL GEOTECHNICAL ENGINEERING, LTD.

Richard B. Fewell, P.E.

RBF/slf

Copy to: Luinakoa Partners
(Attention: Mr. Andy Anderson)

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

Mr. W. K. Liu
Assistant Base Civil Engineer
Naval Base Pearl Harbor
P.O. Box 110
Pearl Harbor, HI 968660-5020

Dear Mr. Liu,

We are in receipt of your agency's advice of "no Comment" dated October 26, 1992 on the proposed Residential Subdivision at Luinakoa. Thank you for your continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

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DEPARTMENT OF THE NAVY
COMMANDER
NAVAL BASE PEARL HARBOR
BOX 110
PEARL HARBOR HAWAII 96860-5020

RECEIVED
OCT 26 1992
PARAMETRIX, INC.
HONOLULU

11010
Ser N42/3532
26 OCT 1992

Ms. Esther Ueda
Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street, #104
Honolulu, HI 96813

Dear Ms. Ueda:

LUINAKOA RESIDENTIAL SUBDIVISION

We have reviewed the Draft Environmental Impact Statement (DEIS) and have no further comments to offer. Since we have no further use for the DEIS, it is being returned to the Office of Environmental Quality Control (OEQC). Thank you for the opportunity to review the DEIS.

Sincerely,

W. K. Liu
Assistant Base Civil Engineer
By direction of
the Commander

Copy to:
F.J. Rodriguez
Parametrix Inc.
1164 Bishop St., Suite 1600
Honolulu, HI 96813

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax. 808-523-2995

November 6, 1992

Mr. Kisuk Cheung, P.E.
Department of the Army
U.S. Army Engineer District Honolulu
Building 230
Ft. Shafter, HI 96858-5440

Dear Mr. Cheung,

We are in receipt of your office's comments dated November 3, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. We note the two comments and respond as follows:

1. The retained civil engineering consultant will be advised by copy of this letter to consult with the Operations Division during the design phase for Drainage to insure compliance with applicable Corps requirements.

2. The advice that the proposed project is located in Flood Zone AE and Zone X is duly noted. This information will be incorporated into the Final EIS by inclusion of this comment.

Thank you for your timely response and continued interest and cooperation. We look forward to your review of the Final EIS.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State land Use Commission
Luinakoa Partners
Engineers Surveyors Hawaii

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DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT. SHAFTER, HAWAII 96858-5440

RECEIVED
NOV 05 1992
PARAMETRIX, INC.
HONOLULU

REPLY TO ATTENTION OF:

November 3, 1992

Planning Division

Ms. Esther Ueda, Executive Officer
State Land Use Commission
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement for the Luinakoa Residential Subdivision, Oahu, Hawaii (TMK 3-5-24: 1). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. A Department of the Army (DA) permit is not required as long as no work is performed in Kapakahi Stream. The applicant should consult with the Operations Division (438-8555) during the design phase of the project.

b. According to the enclosed Federal Emergency Management Agency's Flood Insurance Rate Map, panel 150001-0120-C, dated September 4, 1987, the proposed project is located in Zone AE (areas inundated by the 100-year flood with a base flood elevation of 150 to 206 feet above mean sea level) and Zone X (unshaded) (areas determined to be outside of the 500-year floodplain). The majority of the site is in Zone X with a small portion in Zone AE.

Sincerely,

Kisuk Cheung, P.E.
Director of Engineering

Enclosure

Copy Furnished:

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 12, 1992

Mr. Warren M. Lee
U.S. Dept. of Agriculture
Soil Conservation Service
P.O. Box 50004
Honolulu, HI 96850

Dear Mr. Lee,

We have received your office's comments dated November 9, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. Your "No further comments" position is duly noted.
Thank you for your timely response and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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UNITED STATES
DEPARTMENT OF
AGRICULTURE

SOIL
CONSERVATION
SERVICE

P. O. BOX 50004
HONOLULU, HAWAII
96850

November 9, 1992

RECEIVED
NOV 12 1992
PARAMETRIX, INC.
HONOLULU

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

Dear Mr. Choy:

Subject: Draft Environmental Impact Statement (DEIS) - Luinakoa Residential Subdivision, Honolulu, Hawaii

We have reviewed the subject DEIS for the Luinakoa Residential Subdivision and have no comments to offer at this time.

Thank you for the opportunity to review this DEIS and we would appreciate it if we could review the Final EIS.

Sincerely,

Warren M Lee

WARREN M. LEE
State Conservationist

cc:
Ms. Esther Ueda, Executive Officer, State Land Use Commission, Old Federal Building, 335 Merchant Street, Room 104, Honolulu, Hawaii 96813
F.J. Rodriguez, Parametrix, Inc., 1164 Bishop Street, Suite 1600, Honolulu, Hawaii 96813

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

Mr. Gordon Matsuoka
Department of Accounting & General Services
1151 Punchbowl Street, Room 412
Honolulu, HI 96813

Dear Mr. Matsuoka,

We are in receipt of your department's advice of "No Comment" on the Draft Environmental Impact Statement prepared for the proposed Luinakoa Residential Subdivision. Thank you for your timely response and continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

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NOV 2 1992
PARAMETRIX, INC.
HONOLULU

(P)1895.2

OCT 30 1992

State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Attention: Ms. Esther Ueda

Gentlemen:

Subject: Luinakoa Residential Subdivision
Honolulu, Hawaii
Draft EIS

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

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Very truly yours,

GORDON MATSUOKA
State Public Works Engineer

RY:jk
cc: Parametrix, Inc.

Parametrix, Inc.
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995
Consultants in Engineering and Environmental Sciences

December 9, 1992

Dr. John Lewin, MD.
Department of Health
P.O. Box 3378
Honolulu, HI 96801

Dear Dr. Lewin,

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
Luinakoa Partners Residential Subdivision
TMK: 3-5-24: 1
Honolulu, HI

We are in receipt of your agency comments on the subject DEIS and it is noted that the comments were postmarked beyond the 45 day DEIS review period which ended on December 7, 1992.

We respond to your comments as follows:

1. Wastewater - Advice has been received from the City & County of Honolulu, Division of Wastewater Management that there will be capacity for the proposed 52 lot residential subdivision. Final acceptance will be made by the DWWM at the time of application for Building permit.

2. Water Pollution - Drainage for the proposed improvements will be made to the existing lined Kapakahi Drainage Channel. Extensions to this drainage facility will be made in accordance with applicable dedicable City & County standards. Determination for a permit will be made at the time of final construction drawing review by the City & County Building Department and the Health Department. If required, the permits will be prepared and processed.

3. Solid Waste - The request for a more thorough review of the issue of solid waste generation, collection, and disposal has been discussed with Ms. Caroline McCabe of your Office of Solid Waste Management. we have reached consensus on the applicability of this project to the goals of OSWM; she will be providing us with a copy of the State Integrated Solid Waste Management Plan for our review and use in Chapter III of the FEIS.

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In conclusion, we would like to mention that OEQC staff has been most helpful in our efforts to respond adequately to comments received during this project processing. Both Jeyan and Karen have gone out of their way to help and cite appropriate sections of the chapter 200 and Chapter 343.

Thank you for your continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc; Luinakoa Partners

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

RECEIVED
DEC 09 1992
PARAMETRIX, INC.
HONOLULU

December 7, 1992

In reply, please refer to:
92-392/epo

TO: Esther Ueda, Executive Director
State Land Use Commission

FROM: FOR John C. Lewin, M.D.
Director of Health

SUBJECT: Draft Environmental Impact Statement (DEIS)
Luinakoa Partners Residential Subdivision
Honolulu, Oahu
TMK: 3-5-24: 1

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

Wastewater

It has been determined that the subject project is located within the County sewer service system. As the area is sewered, we have no objections to the proposed residential subdivision at the mauka dead end of Luinakoa Street provided that the project is connected to the public sewers.

The developer should work closely with the County to assure the availability of additional treatment capacity and adequacy for the project. Non-availability of treatment capacity will not be an acceptable justification for use of any private treatment works.

If you should have any questions on this matter, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4290.

Water Pollution

A National Pollutant Discharge Elimination System (NPDES) permit is required for any discharge to waters of the State including the following:

1. Storm water discharges relating to construction activities for projects greater than five acres in total size;
2. Storm water discharges from industrial activities;
3. Construction dewatering activities;

4. Cooling water discharges less than one million gallons;
5. Ground water remediation activities; and
6. Hydrotesting water.

Any person wishing to be covered by the NPDES general permit for any of the above activities should file a Notice of Intent with the Department's Clean Water Branch at least 90 days prior to commencement of discharge to waters of the State.

If you should have any questions on this matter, please contact Mr. Denis Lau of the Clean Water Branch at 586-4309.

Solid Waste

The discussion of solid waste in this Draft Environmental Impact Statement (EIS) only mentions that refuse collection is a system provided, staffed, and maintained by government to serve public health, safety and welfare. The Office of Solid Waste Management requests that the issue of solid waste generation, collection and disposal be given a more thorough review in the Final EIS. The State of Hawaii is currently taking aggressive steps to divert waste from landfill and incinerators through recycling and bioconversion efforts. This residential development must also include measures which will assist the residents and the community to meet the State mandated diversion rates of twenty five percent by 1995 and fifty percent by the year 2000. These measures should be explained in the Final EIS.

Chapter III of the DEIS discusses the relationship of the proposed project to existing public plans, policies and controls. The State Integrated Solid Waste Management Plan should be included in this chapter, and the development should incorporate waste minimization strategies discussed in the Plan, as well as inclusion of secondary resources (crushed glass in asphalt and compost as soil amendment) whenever practicable.

If you should have any questions on this matter, please contact Ms. Caroline McCabe at the Office of Solid Waste Management at 586-4243.

c: Wastewater Branch
Clean Water Branch
Office of Environmental Quality Control
ParaMetrix, Inc.

JOHN WAIHEE
GOVERNOR

RECEIVED
OCT 26 1992
PARAMETRIX, INC.
HONOLULU

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185

BRIAN J. J. CHOY
Director

October 23, 1992

Ms. Esther Ueda
Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda,

Subject: Draft Environmental Impact Statement for the Luinakoa Partners Residential Subdivision

Thank you for the opportunity to review the above document. We have the following comments.

Chapter 200 of the Hawaii Administrative Rules §11-200-17(n) states that:

"The draft EIS shall contain a summary of unresolved issues and either a discussion of how such issues will be resolved prior to commencement of the action, or what overriding reasons there are for proceeding without resolving the problems."

The final environmental impact statement should contain a discussion of the community's concerns regarding the project, and specifically if and how these issues will be resolved. The status of the interaction between developer and community, and whether steps will be taken to resolve any differences to the satisfaction of both parties involved, is not made clear in the draft environmental impact statement.

If you have any questions, please call Karen Mau at 586-4185. Thank you for your cooperation.

Sincerely,

Brian J. J. Choy
Director

BC:km

cc: Luinakoa Partners - Mr. D. G. Anderson
Parametrix, Inc. - Mr. F. J. Rodriquez

Parametrix, Inc.

Consultants in Engineering and Environmental Sciences

1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

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

Dear Mr. Choy,

We are in receipt of your office's comments dated October 23, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision and we respond in the following:

1. Page 3 lists section 1.6 "Summary of Unresolved Issues" which discusses the concerns of the Ainakoa Community Association. Also, on page 38 of the Social Impact Study, Exhibit D, the last sentence of section 5.5, number 4 reads, "As such, it is believed that the only solution which will be acceptable to the residents is to move the project to another community, or as one person put it, ' to someone else's backyard.' "

2. As this proposed project continues through the land use review process at the Development Plan and Zoning stages, there will be opportunities for the Association to voice their objections, and if stated objections are founded on fact, there will be specific conditions tied to the approval process. The applicant will then make his own determination if these conditions will be cost effective and will resolve the Community Association's objectives. At this early state of the Land Use District Boundary amendment review, it is premature to state what if any steps will be taken to resolve the existing conflicts.

We trust that we have responded to your office's comments. Thank you for your continuing interest and concern.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission

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CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY

SEE FRAME(S) IMMEDIATELY FOLLOWING

Parametrix, Inc.
1164 Bishop Street, Suite 1500 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995
Consultants in Engineering and Environmental Sciences

November 3, 1992

Mr. Gordon Matsuoka
Department of Accounting & General Services
1151 Punchbowl Street, Room 412
Honolulu, HI 96813

Dear Mr. Matsuoka,

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Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

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PARAMETRIX, INC.
HONOLULU

(P)1895.2

OCT 30 1992

State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Attention: Ms. Esther Ueda

Gentlemen:

Subject: Luinakoa Residential Subdivision
Honolulu, Hawaii
Draft EIS

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

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Very truly yours,

GORDON MATSUOKA
State Public Works Engineer

RY:jk
cc: Parametrix, Inc.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

December 9, 1992

Dr. John Lewin, MD..
Department of Health
P.O. Box 3378
Honolulu, HI 96801

Dear Dr. Lewin,

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
Luinakoa Partners Residential Subdivision
TMK: 3-5-24: 1
Honolulu, HI

We are in receipt of your agency comments on the subject DEIS and it is noted that the comments were postmarked beyond the 45 day DEIS review period which ended on December 7, 1992.

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Printed on Recycled Paper

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Thank you for your continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc; Luinakoa Partners

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

RECEIVED
DEC 09 1992
PARAMETRIX, INC.
HONOLULU

December 7, 1992

In reply, please refer to:
92-392/epo

TO: Esther Ueda, Executive Director
State Land Use Commission

FROM: FOR John C. Lewin, M.D.
Director of Health

SUBJECT: Draft Environmental Impact Statement (DEIS)
Luinakoa Partners Residential Subdivision
Honolulu, Oahu
TMK: 3-5-24: 1

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

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3. Construction dewatering activities;

4. Cooling water discharges less than one million gallons;

5. Ground water remediation activities; and

6. Hydrotesting water.

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c: Wastewater Branch
Clean Water Branch
Office of Environmental Quality Control
ParaMetrix, Inc.

JOHN WAIHEE
GOVERNOR

RECEIVED
OCT 26 1992
PARAMETRIX, INC.
HONOLULU

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185

BRIAN J. J. CHOY
Director

October 23, 1992

Ms. Esther Ueda
Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda,

Subject: Draft Environmental Impact Statement for the Luinakoa Partners Residential Subdivision

Thank you for the opportunity to review the above document. We have the following comments.

Chapter 200 of the Hawaii Administrative Rules §11-200-17(n) states that:

> "The draft EIS shall contain a summary of unresolved issues and either a discussion of how such issues will be resolved prior to commencement of the action, or what overriding reasons there are for proceeding without resolving the problems."

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If you have any questions, please call Karen Mau at 586-4185. Thank you for your cooperation.

Sincerely,

Brian J. J. Choy
Director

BC:km

cc: Luinakoa Partners - Mr. D. G. Anderson
Parametrix, Inc. - Mr. F. J. Rodriquez

Parametrix, Inc.

Consultants in Engineering and Environmental Sciences

1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

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

Dear Mr. Choy,

We are in receipt of your office's comments dated October 23, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision and we respond in the following:

1. Page 3 lists section 1.6 "Summary of Unresolved Issues" which discusses the concerns of the Ainakoa Community Association. Also, on page 38 of the Social Impact Study, Exhibit D, the last sentence of section 5.5, number 4 reads, "As such, it is believed that the only solution which will be acceptable to the residents is to move the project to another community, or as one person put it, ' to someone else's backyard.' "

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We trust that we have responded to your office's comments. Thank you for your continuing interest and concern.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission

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Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808 524-0594 • Fax: 808-523-2995

November 3, 1992

Mr. Rex D. Johnson, Director
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Johnson,

We are in receipt of your department's comments on the Draft Environmental Impact Statement (DEIS) prepared for the Luinakoa Residential Subdivision. Your advice that your previous review position has not changed is acknowledged and will be included in the Final EIS.

Thank you for your timely response and continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

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JOHN WAIHEE
GOVERNOR

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NOV 03 1992
PARAMETRIX, INC.
HONOLULU

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

REX D. JOHNSON
DIRECTOR

DEPUTY DIRECTORS
JOYCE T. OMINE
AL PANG
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

HWY-PS
2.4421

November 2, 1992

TO: Esther Ueda, Executive Officer
Land Use Commission

FROM: for Rex D. Johnson, Director
Department of Transportation

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
LUINAKOA RESIDENTIAL SUBDIVISION
TMK: 3-5-24: 1, OAHU

Thank you for transmitting the subject document for our review and comment.

We have previously reviewed the proposal and do not anticipate any significant impact on our State highway facilities.

c: ✓ Fred J. Rodriguez
Parametrix, Inc.
1164 Bishop Street
Honolulu, Hawaii 96813

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

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 9, 1992

Ms. Norma Wong
Office of State Planning
P.O. Box 3540
Honolulu, HI 96811-3540

Dear Ms. Wong,

We are in receipt of your agency comments dated November 2, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. We have reviewed these comments and respond in the following:

1. The identification of the project site as not being within the coastal zone management area will be corrected on page 9, section 3.5. It was intended to identify the site as not being within the Special Management Area, and not the coastal zone management area as well.
2. In evaluating the impacts that this proposed project will have on the seven objectives of the Hawaii Coastal Zone Management Program, the size and scope of Luinakoa Residential Subdivision do not project impacts that would be considered significant in terms of adverse impacts. All utility systems, particularly with reference to drainage and surface runoff, must be designed to applicable County ordinances for grading, soil erosion, and sedimentation control. I am enclosing a memo that covers this subject from the civil engineering firm who will be designing the infrastructure system to meet County codes.
3. Design and construction plans for the individual residences will adhere to prescribed zoning height limits that will be imposed under R-5 single family detached homes, i.e. 25 feet maximum height for 5000 square feet sized lots. Further, the soils engineering firm has indicated in their analysis listed as Exhibit B, that further and more detailed soils reconnaissance will be required. This will include sub-surface investigations as well as engineering design to accommodate severe slope situations.

Thank you for your timely response and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

Encl.: ESH memo 10-9/92
cc: Land Use Commission

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ESH
ENGINEERS SURVEYORS HAWAII, INC.
WILLIAM B. C. IFF, P.E.
PRESIDENT
JERRY S. NAKAGAWA, L.S.
EXECUTIVE VICE PRESIDENT
SUITE NO. 1
BUILDING NO. 6
1020 ALAKEA STREET
HONOLULU HAWAII 96813
(808) 531-3118 (HONOLULU)
(808) 885-4390 (KAILUA)
FAX NO 572 1618

October 9, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

ATTENTION: Fred Rodriguez

Gentlemen:

SUBJECT: LUINAKOA RESIDENTIAL SUBDIVISION

Pursuant to the concern with regard to "Water Runoff" in the proposed subdivision, we offer the following:

The total development area is approximately 9 acres, of which less than 5 acres is expected to be disturbed during construction. Typical construction impacts will result due to construction activities; however these will be short term and will be mitigated to the extent required by government codes and ordinances.

All sitework construction for the proposed development will be required to conform to the current Grading, Soil Erosion and Sedimentation Control Standards and Guidelines (Chapter 23, Revised Ordinances of Honolulu, 1969, as amended.) Measures to control erosion and sedimentation arising from construction activities will be specified in the construction documents.

On-site drainage facilities to handle storm water runoff will be designed using criteria set forth by the Drainage Standards, Department of Public Works, City and County of Honolulu.

As indicated in earlier correspondence, the proposed development will not increase storm water tributary area affecting the existing Kapakahi Major Drain. Runoff above the proposed lots will be intercepted by open ditches designed with enough capacity to intercept and carry projected storm water runoff via underground drainage pipe systems to the Kapakahi Lined Channel.

OFFICE OF STATE PLANNING
Office of the Governor
MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96807-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808) 587-2846, 587-2800
FAX: Director's Office 587-2848
Planning Division 587-2824

Ref. No. P-3729

November 2, 1992

RECEIVED
NOV 0 6 1992
PARAMETRIX, INC.

MEMORANDUM

TO: Ms. Esther Ueda, Executive Officer
Land Use Commission

SUBJECT: Review of Draft Environmental Impact Statement, Luinakoa Partners Residential Subdivision

We have reviewed the referenced document and have the following comments.

The statement on page 9, section 3.5, stating that the project site is not within the coastal zone management area is incorrect. Although the project site is not within the Special Management Area, the State's CZM law, Chapter 205A, HRS, is applicable to "all land areas excluding those lands designated as state forest reserves." The Final Environmental Impact Statement should assess the impacts relative to the seven objectives of the Hawaii Coastal Zone Management Program: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, and managing development. Primary coastal management concerns for this project relate to the impact on coastal ecosystems, scenic and open space resources, and coastal hazards (flooding, erosion, and subsidence in particular).

The impacts of residential development on stormwater runoff and the possibility of downstream flooding to properties adjacent to the Kapakahi Lined Channel need to be more fully disclosed. To what flood hazard level (e.g., 100-year storm) will the channel capacity be after full development of the 52 residential sites with housing and the extension of the channel? Although design of individual houses on lots may vary, the applicant should estimate a probable range for runoff based upon likely lot coverage scenarios, such as plans prepared and analyzed by Joseph Lancor, AIA, shown in Exhibit H. A sensitivity analysis may be warranted.

Of particular concern is erosion on land with 20 percent slope or greater which will be graded and developed for housing. Final development plans should indicate what mitigative measures will be implemented to minimize runoff and sediment during and after development of these subdivision lots with houses so that disruption or degradation of coastal water systems will be minimized.

The eventual design and construction plans should demonstrate how the alteration of landforms will be minimized, and that the new development in general is compatible with its visual environment. The proposed project will also need to be reviewed in greater detail regarding soil stability and subsurface impact of construction on neighboring residences.

If you have any questions, please contact Terry Hildebrand of our Coastal Zone Management Program at 587-2881.

Norma Wong

Norma Wong
Acting Director

cc: √Parametrix, Inc.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

Mr. Mufi Hanneman, Director
Department of Business, Economic
Development & Tourism, Energy Division
335 Merchant Street, Room 110
Honolulu, HI 96813

Dear Mr. Hanneman,

We are in receipt of your Energy Division's advice of "No Comment" dated October 23, 1992 on the proposed Luinakoa Residential Subdivision. Thank you for your continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM
ENERGY DIVISION, 335 MERCHANT ST., RM. 110, HONOLULU, HAWAII 96813 PHONE: (808) 587-3800 FAX: (808) 587-3820

JOHN WAIHEE
Governor
MUFI HANNEMANN
Director
BARBARA KIM STANTON
Deputy Director
RICK EGGED
Deputy Director
TAKESHI YOSHIHARA
Deputy Director

October 23, 1992

Mrs. Esther Ueda
Executive Officer
State Land Use Commission
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Mrs. Ueda:

Subject: Luinakoa Residential Subdivision
Island of Oahu, District of Honolulu
Tax Map Key Numbers: 3-5-24: 1

We wish to inform you that we have no comments to offer on the subject Draft Environmental Impact Statement (DEIS). We are returning the DEIS with no comments.

Thank you for the opportunity to review the document.

Sincerely,

Mufi Hannemann

MHK:hkeis54

cc: Office of Environmental Quality Control
Parametrix, Inc.

RECEIVED
OCT 29 1992
PARAMETRIX, INC.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax 808-523-2695

December 10, 1992

John T. Harrison, Ph.D.
Environmental Center
University of Hawaii - Manoa
2550 Campus Road Crawford 317
Honolulu, HI 96822

Dear Dr. Harrison,

We are in receipt of your Center's comments dated December 7, 1992 on the Draft Environmental Impact Statement (DEIS) prepared for the Luinakoa Residential Subdivision. We respond as follows:

1. Page Numbering

The best answer I have is because I made the mistake!

2. Paper Conservation

We will print on two sides of the sheet and try not to confuse the readers of the FEIS.

3. Soils

1. We have revised this page V-4, section 4.6.1, citing the Soils Engineer consultant in his Exhibit B.

2. & 3. The construction of the off site and structural improvements on the subject parcel should not produce any potential for damage to the existing structures on Luinakoa Street due to the excavation or hauling operations. Again, all of these items are controlled by ordinances and the contractor is normally required to provide insurance coverage for any damage that might occur.

4. At the time of Grading Plan and Building Permit application, a detailed soils analysis will be prepared and filed with the above permits.

5. No. All loose rock in the subject parcel will be gathered and stockpiled for further re-use in the drainage channel, or taken off the site.

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6, 7, 8, 9. Responses to these comments will be more definitively made after a detailed Soils Analysis is conducted with soil borings, compaction testing, and determination of quantities of low strength soils that will need to be replaced with engineering fill prior to any construction taking place on the subject parcel. Costs to conduct these soil analyses range from $5000.00 to over $50,000.00 . With the remaining land use policy amendment process for Development Plan and Zoning, the reports will be prepared and processed at the appropriate time of Building Permit application. The techniques that are cited are valid recommendations and can be examined by the Soils engineering consultant at the time of the soils analysis.

4. Socio-Economic Impacts

1. The omission of the issues raised in the EarthPlan study were not omitted intentionally, but were left in the report for perusal by those specifically interested in this aspect of the DEIS. The findings of the report indicated that the Luinakoa residents were for the most part, concerned about experiencing change from their current lifestyle of a quiet, almost anonymous daily living pattern . This was particularly true in terms of the physical changes that they felt would take place with the advent of this proposed project. They expressed concerns over traffic increases, additional noise, potential damage to their individual homes due to suspected shifting in the soils; in other words, a disruption of the status quo. This attitude and resistance to physical change is symptomatic of elderly established neighborhoods that have not been intruded on for many years. It reaches the point of self preservation against the inevitability of change. In short, the lifestyles of 27 long term residents is at stake versus a potential increase of 52 new residents on Luinakoa Street, some of whom are former residents, relatives, and in most cases, local existing residents of Honolulu.

2. The recommended mitigation measures have been the subject of serious review and consideration by the applicant, Luinakoa Partners. In some instances, the positive aspects of these recommendations are possible as solutions in resolving the existing differences. Their omission was not intentional but instead, it was felt that leaving the EarthPlan report as an appendix was a more neutral position.

5. Scenic and Visual Resources Section 4.11.1

1. Yes. To the extent that the residents of Luinakoa Street drive away from their homes, and look mauka, the street extension, the newly

constructed homes will be visible. The subdivision is proposed as R-5 residential, 5000 square foot lots with building height limits of 25 feet, consistent with the existing homes in the Aina'Koa Valley.

2. It is difficult to say what type of homes will be built on the fee simple lots. This will not be a master planned community like Waialae-Iki V or Hawaii Loa Ridge. Each lot purchaser will design and build his own residence complying with City Zoning Ordinances on R-5 lots.

3. The answers were not "No."

Summary It is regrettable that the UH/EC reviewers felt that insufficient data on Soils enjoyed such a prominent role in their unanimous disapproval of the DEIS. We would hope that the reviewers will follow this project to it's conclusion, because the applicant has expressed his concerns over the recommendations at the end of the Summary. We wonder over the repeated enumeration of the slipping soils of Aina Haina, Manoa, Kuliouou, but do not see mention of Halekoa Drive, Waialae Iki V, Sierra Drive, and other steep, sloping residential districts built in years gone by.

Thank you for your review and comments.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners
Land Use Commission

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

RECEIVED
DEC 0 8 1992
PARAMETRIX, INC.
HONOLULU

December 7, 1992
RE:0611

Ms. Esther Ueda
State Land Use Commision
335 Merchant Street, Room 104
Honolulu, Hawai'i 96813

Dear Ms. Ueda:

Draft Environmental Impact Statement (DEIS)
Luinakoa Partners Residential Subdivision
Honolulu, Hawai'i

Luinakoa Partners is planning to design and build 50-52 fee simple residential lots. The project is located in East Honolulu mauka of existing Luinakoa Street. The proposed residential lots will be approximately 5000 square feet in size to be consistent with the existing residential subdivision.

The Environmental Center has reviewed this document with the asstance of Paul Ekern (Emeritus), Water Resources Research Center; Jon Matsuoka, School of Social Work; Scott Anderson, Civil Engineering; Fred Creager, School of Architecture; and Alex Buttaro of the Environmental Center.

Page Numbering

Although the Table of Contents refers to page numbers in terms of Roman and Arabic numbers, only Arabic numbers and section demarcations are provided on the pages of the text. The numeric system used throughout this document may make it difficult for the reader to reference different sections vis a vis the Table of Contents. Why are different numbering conventions used for the Table of Contents and text?

Paper Conservation

Significantly less paper would have been needed had the text been printed on both sides of each page. Incorporating this format would reduce bulk and EIS production costs.

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Soils

While the description of the existing environment warns that the soils on the project site have a high shrink-swell potential and "buildings on the steep slopes are susceptible to sliding when the soil is saturated... foundations and retaining walls are susceptable to cracking" (section 4.6.1, page V-4), the section describing the impacts (section 4.6.2, page V-4) is limited to a statement on total acreage of the project site, and a vague statement on economics.

1) Given the potential for sliding and shifting (section 4.6.1, page V-4), why did the section on probable impacts (section 4.6.2, page V-4) fail to discuss the potential environmental implications of the existing soils environment upon the proposed development?

2) Could construction of this project affect slipping and shifting of foundations of the adjacent residents?

3) In what ways might slipping and shifting affect adjacent properties?

4) Given that the project site's soil type is known to cause slipping and shifting of foundations, and that no site-specific data are discussed, why was it determined that testing of soil properties was not necessary prior to preparation of this EIS?

One of our reviewers visited the project site and found the soils to vary greatly from one area of the site to another. While approximately half of the site is on extremely rocky sloped terrain as described in the DEIS, the other half to two-thirds of the project area consists of large piles of stones on the flat drainage basin of Kapakahi Gulch.

5) Does the developer plan to build on top of the rock piles located in the flat area?

6) What are the construction related soil characteristics of the lower flat area?

7) Does the flat area have different characteristics than the more sloped area?

8) Given that the lower portion of the project area constitutes the drainage flats of Kapakahi Gulch, to what extent is it believed to be composed of talus and sediment from natural processes of crumbling and erosion?

9) If slipping and shifting of foundations were to occur to the proposed or adjacent properties, what mitigation measures would be undertaken, and who would be liable for structural damages incurred?

Our reviewers note that slides have occured on Lualualei soils in Aina Hina, and that a 9/22/92 letter from City and County Department of Land

Utilization irector Donald Clegg cites danger and current sliding of adjacent homes. Techniques such as ground penetrating radar (reviewed in Hubbard, et al, 1990. Journal of Soil and Water Conservation 45(3): 399-405) and seismic "thumpers" may used for identifying soil and geology characteristics of this type of site.

This site's potential for sliding and cracking of foundations and retaining walls (section 4.6.1 & 4.6.2, page 4) necessitates adequate data collection and discussion of the potential impacts and mitigative measures pursuant to EIS Rules 11-200-14, 11-200-16, and 11-200-17. Section 11-200-14 states that "the EIS involves more than the preparation of a document; it involves the entire process of research, discussion, preparation of a statement, and review." Appropriate soil tests should have been conducted prior to this DEIS to enable adequate preparation and review.

Socioeconomic Impacts

The discussion of the social impacts of tax increases caused by this proposed development should not be limited to the statement that "elderly fixed income residents are agitated that their real property taxes will increase as a result to the proposed development" (page V-2).

Although the text of this DEIS does state that there will be a change in the quality of life for the existing residents, it does not disclose many of the particular aspects of "quality of life" that are discussed in the Socioeconomic Impact Study (Appendix D).

1) Why were the issues raised in the social impact assessment omitted from the text of the DEIS?

Our reviewers noted that discussion of the social impacts was limited to brief and incomplete discussions in the Unresolved Issues, Property Tax, and Employment sections.

This DEIS does not provide quantitative and qualitative assessments of the impacts likely to occur, nor does it describe the particular elements that will contribute to changes in the quality of life.

2) Why were the mitigative measures recommended in the social impact assessment (Appendix D) not discussed in the text?

Scenic and Visual Resources Section 4.11.1

1) Will this development be visible to existing residents of the area.

2) Are the proposed homes assumed to be of comparable aesthetic value to the existing natural landscape?

3) If the answers to questions to (1) and (2) are no, on what basis is the determination made that "the proposed development at Luinakoa Street will not significantly alter the existing scenic vistas or aesthetic values of the Kapakahi Gulch area" (Section 4.11.1, page V-7)?

Summmary

We commend the preparers of this document for the prefacing many sections with introductory paragraphs that explain the statutory requirements of the sections in terms of their respective HRS Section 343 and Chapter 200 of Title 11 EIS Rules. However, this DEIS inadequately addresses many of the significant and potentially significant impacts that may occur as a result of the proposed development and therefore does not meet all the requirements of EIS Rules Sections 11-200-14, 11-200-16, and 11-200-17, which require that relevant data be obtained, necessary studies be conducted, and all relevant and feasible consequences and implications af an action be disclosed and evaluated. Our reviewers were particularly concerned about the lack of information on soil stability and engineering characteristics, and the implications of such a deficiency in light of the instability problems encountered with similar soil types in the Aina Hina region. Based on the scope and depth of the aforementioned inadequacies, we strongly recommend that this EIS be withdrawn, rewritten, and reissued again as a DEIS.

Thank you for the opportunity to review this document and we hope our comments are helpful.

Sincerely,

S. Alex Buttaro for

John T. Harrison, Ph. D.
Environmental Coordinator

cc: OEQC
F.J. Rodriguez, Paramatrix
Roger Fujioka
Jon Matsuoka
Paul Ekern
Scott Anderson
Fred Creager
Alex Buttaro

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

December 10, 1992

Mr. Joseph K. Conant, Director
Housing Finance and Development Corporation
677 Queen Street, Suite 300
Honolulu, HI 96813

Dear Mr. Conant,

We have received your agency comments dated December 7, 1992 on the Draft Environmental Impact Statement (DEIS) prepared for the Luinakoa Partners. We respond to your comments as follows:

1. The Luinakoa Partners are William Crowder and D.G. Anderson.

2. The proposed residential lots will be market priced lots.

3. Site preparation will be in accordance with current City & County standards for soil conditions and slope factors. The lots will be graded and prepared for home construction.

Thank you for your comments and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission
Luinakoa Partners

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RECEIVED
DEC 10 1992
JOHN WAINEE
PARAMETRIX, INC.

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
HOUSING FINANCE AND DEVELOPMENT CORPORATION
677 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813
FAX (808) 587-0600

JOSEPH K. CONANT
EXECUTIVE DIRECTOR

IN REPLY REFER TO:
92:PPE/5821jt

December 7, 1992

Ms. Esther Ueda
Executive Officer
State Land Use Commission
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Re: Draft Environmental Impact Statement for the Proposed Luinakoa Residential Subdivision

We have reviewed the subject dEIS and offer the following comments.

1. Who is the developer/petitioner?

2. Approximately 50-52 fee simple lots only are proposed for sale. What are the estimated sales prices? Will any lots be affordable?

3. Due to the adobe soil conditions and topography of the area, we are concerned about the impact of the proposed project on existing homeowners residing downslope of the proposed project. Additionally, we are concerned with the ability of lot purchasers to build on the relatively steep slope.

Thank you for the opportunity to comment.

Sincerely,

JOSEPH K. CONANT
Executive Director

c: OEQC
Parametrix, Inc.

Parametrix, Inc.
Consultants in Engineering and Environmental Services
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

December 2, 1992

Mr. Roy C. Price, Sr.
Vice Director of Civil Defense
Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816-4495

Dear Mr. Price,

We are in receipt of your agency comments dated November 30, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision, TMK: 3-5-24: 1.

By this letter, the Petitioner is advised of your agency's planning to provide an emergency siren in the Kapakahi Gulch area. Also, since the preliminary planning between your department and the fee owner is under way, the Petitioner is grateful for your advance planning in consideration for existing and future residents of Kapakahi Gulch.

Thank you for your timely comment and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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MAJOR GENERAL EDWARD V. RICHARDSON
DIRECTOR OF CIVIL DEFENSE
ROY C. PRICE, SR.
VICE DIRECTOR OF CIVIL DEFENSE

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

PHONE (808) 734-2161

November 30, 1992

TO: Ms. Ester Ueda, Executive Officer
State Land Use Commission

FROM: Roy C. Price, Sr.
Vice Director of Civil Defense

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT, LUINAKOA RESIDENTIAL SUBDIVISION

We appreciate this opportunity to comment on Luinakoa Residential Subdivision, Honolulu, Oahu, Hawaii, project area TMK: 3-5-24: por. 1.

We do not have negative comments specifically directed at this draft environmental impact statement. However, the proposed subdivision is located in an area not covered by an existing warning device (siren). As such, we do have a proposal that an electronic solar powered siren be installed to help alert residents of an impending or actual event that threatens the subdivision. This siren must have a minimum output of 115dB and be compatible with the existing civil defense siren system. The proposed siren requires a 100-foot radius buffer zone in which there is no residential building. There are two suggested locations adjacent to the project which meet this criteria:

The State and Bishop Estate are developing a water source in located Kapakahi Gulch (Ainakoa) at the end of Ainakoa Avenue. If this location is developed as a water source, it could serve as the primary siren site. An alternate location is the existing water tank compound located at Luinakoa and Halekoa Drive.

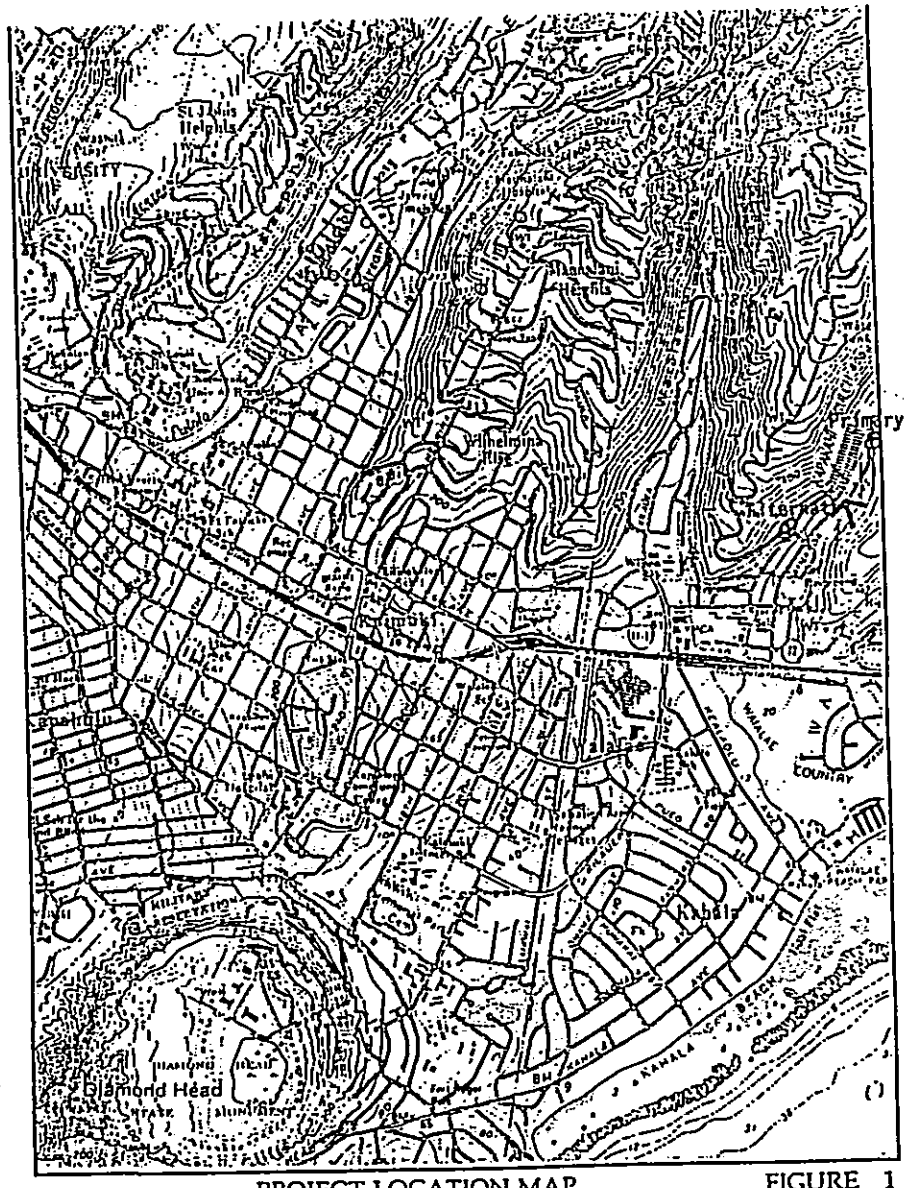
The suggested locations for the siren are annotated in red on the enclosed section of the USGS QUAD MAP, Oahu, Hawaii.

Ms. Ester Ueda
November 30, 1992
Page 2

Our SCD planners and technicians are available to discuss this further if there is a requirement. Please have your staff call Mr. Mel Nishihara of my staff at 734-2161.

Enc.

c: Office of Environmental Quality Control
✓Parametrix Inc.



PROJECT LOCATION MAP
USGS QUAD MAP
Oahu, Hawaii

FIGURE 1

JOHN WAIHEE
GOVERNOR

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

ESTHER UEDA
EXECUTIVE OFFICER

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DEC 03 1992
PARAMETRIX, INC.
HONOLULU

December 2, 1992

Mr. Fred J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

Subject: Draft Environmental Impact Statement for LUC Docket No. A92-678/William Crowder

We have reviewed the subject Draft Environmental Impact Statement (DEIS) received by our office on October 16, 1992, and wish to make the following comments:

1) In Section 1.1, the relation between the EIS and the subject LUC Docket should be indicated.

2) The last sentence of paragraph 1 of Section 1.1 should be corrected to state that comments and County's responses are contained in Chapter X, and not Chapter XI as stated.

3) The passages in Section 3.1, regarding the relationship of the proposed project to the Hawaii State Plan (Chapter 226, Hawaii Revised Statutes) should be checked for accuracy, as some of the objectives and policies and guidelines quoted have been amended.

   It appears that a previous version of the Hawaii State Plan was quoted and because of amendments made to Chapter 226, HRS, the responses may not address correct passages in the current (1991) version of the State Plan.

4) In regards to Section 3.2.1, the objective quoted does not come from the State Housing Functional Plan but is actually an objective listed as §226-19(a)(1) of the Hawaii State Plan.

5) Page 5 of Chapter 3, passage (2) C., should read as follows: "C. Proximity to basic services such as sewers, water, transportation systems, sanitation, schools, parks, and police and fire protection; and"

6) Additionally, passage (5) should read as follows: "(5) It shall include lands on appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the State or County General Plans."

7) Probable impacts listed in section 4.6.2 do not seem to address possible impacts to soils in the area. Clarifying language should be provided if economic loss is related to soils impact.

8) Chapter VII of the Draft EIS, states that two alternatives are examined in the section. Section 7.1 examines the "No Action" alternative. However, there is no section listing other alternatives related to different design, sources, or methodologies of the proposed action and discussion of advantages/disadvantages of these alternatives.

   A section on advantages and disadvantages of the other alternatives should be added.

9) The proposed project site should also be depicted on a copy of the State Land Use District Boundary Map for the area. We suggest that Figure 1 be amended to show current district boundaries.

10) The proposed project site should also be depicted on a reproduction of the tax map for the area and included as a figure in the Final EIS.

We have no further comments to offer at this time.

Thank you for the opportunity to provide comments on this matter. If you should have any questions, please feel free to contact me or Leo Asuncion of my staff at 587-3826.

Sincerely,

ESTHER UEDA
Executive Officer

EU:th

cc: OEQC
Luinakoa Partners

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

December 8, 1992

Ms. Esther Ueda, Executive Officer
State Land Use Commission
Room 104, Old Federal Building
335 Merchant Street
Honolulu, HI 96813

Dear Ms. Ueda,

SUBJECT: Draft Environmental Impact Statement for LUC Docket No. A92-678/William Crowder

We are in receipt of your agency comments dated December 2, 1992 on the above described project and we respond in the following:

1. This section 1.1 has been amended to reflect the relationship between the EIS and the subject LUC Docket.

2. The correct titling for Chapter X has been corrected in the Table of Contents as well as Section 1.1.

3. We have made the appropriate changes to Section III regarding the Hawaii State Plan. We have revised the titling and references to the current versions of the Plan documents.

4. The correct State Housing Functional Plan title has been made.

5. Passage (2) C. has been amended to provide the correct language.

6. Passage (5) has also been amended to reflect correct language.

7. Section 4.6.2 relating to impacts to soils in the area has been amended to reflect more accurately the statements of the Soils Engineering consultant in his attached Exhibit B.

8. We are amending Chapter VII to reflect the alternatives of design for both the individual home site lots as well as the structural design of each individual home. The consultant architect has selected the more difficult sites in terms of

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slope to demonstrate his design methodology on the subject parcel. Advantages and disadvantages will be cited from his Exhibit H.

9 & 10. Both requested mappings will be included in the Final EIS.

Thank you for your cooperation and continuing interest.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Luinakoa Partners

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

FRANK F. FASI
MAYOR

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

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DEC 21 1992
PARAMETRIX, INC.
HONOLULU

92/Z-10(RY)

December 17, 1992

Ms. Esther Ueda, Executive Officer
State Land Use Commission
Old Federal Building, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Draft Environmental Impact Statement for Luinakoa Residential Subdivision, Waialae-Nui, Honolulu, Oahu
Tax Map Key 3-5-24: Portion 1

We have reveiwed the Draft Environmental Impact Statement and have no comments to add at this time.

Thank you for the opportunity to comment.

Very truly yours,

DONALD A. CLEGG
Director of Land Utilization

DAC:ry
cc: OEQC
Parametrix
a:92z10eis.ryb

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 3, 1992

Mr. Walter M. Ozawa, Director
Department of Parks & Recreation
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Ozawa,

Subject: Draft Environmental Impact Statement (DEIS) Luinakoa Residential Subdivision - Waialae-Nui TMK: 3-5-24: Por. 1

We are in receipt of your department comments dated October 29, 1992 indicating that your agency's concerns have been adequately addressed.

Thank you for your timely response and continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Land Use Commission

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NOV 2 1992
PARAMETRIX, INC.
HONOLULU

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

FRANK F. FASI
MAYOR

WALTER M. OZAWA
DIRECTOR

ALVIN K. C. AU
DEPUTY DIRECTOR

October 29, 1992

Ms. Esther Ueda, Executive Officer
Land Use Commission
Department of Business
and Economic Development
State of Hawaii
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Subject: Draft Environmental Impact Statement (DEIS)
Luinakoa Residential Subdivision - Waialae Nui
Tax Map Key 3-5-24: Por. 1

We have reviewed the DEIS for the Luinakoa Residential Subdivision and offer the following comments.

The recreational impacts and requirements for the proposed 50 to 52-lot project have been adequately addressed in the report.

Should you have any questions, please contact Jason Yuen of our Advance Planning Branch at extension 6315.

Sincerely,

For WALTER M. OZAWA, Director

WMO:ei

cc: Office of Environmental Quality Control
Parametrix, Inc. (F. J. Rodriguez)

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 19, 1992

Chief Michael S. Nakamura
Honolulu Police Department
810 S. Beretania Street
Honolulu, HI 96813

Dear Chief Nakamura,

We are in receipt of your department comments dated November 16, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. We note that your review concurs with the document's statement on minimal impact for Police services.

Thank you for your timely response and continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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NOV 16 1992
PARAMETRIX, INC.

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111

FRANK F. FASI
MAYOR

MICHAEL S. NAKAMURA
CHIEF

HAROLD M. KAWASAKI
DEPUTY CHIEF

OUR REFERENCE CS-LE

November 16, 1992

Ms. Esther Ueda, Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Subject: Luinakoa Residential Subdivision

We have reviewed the Draft Environmental Impact Statement for the subject development. Based on the developer's impact studies included in the document, we concur that the proposed subdivision should have minimal impact on police services that are already in place for the area.

We will, however, monitor the area while it is being developed and after completion. If we observe any problems, we will make recommendations to the appropriate agencies.

Thank you for the opportunity to comment.

Sincerely,

MICHAEL S. NAKAMURA
Chief of Police

by CHESTER E. HUGHES, Assistant Chief
Support Services Bureau

cc: Office of Environmental Quality Control
Mr. F. J. Rodriguez, Parametrix, Inc.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 6, 1992

Mr. Lionel E. Camara, Chief
Honolulu Fire Department
City & County of Honolulu
3375 Koapaka Street Suite H425
Honolulu, HI 96819-1869

Dear Chief Camara,

We are in receipt of your department comments dated October 30, 1992 on the Draft Environmental Impact Statement prepared for the proposed Luinakoa Residential Subdivision. Your no additional comments statement is duly noted.

Thank you for your timely response and continuing interest and cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State land Use Commission
Luinakoa Partners

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NOV 05 1992
PARAMETRIX, INC.
HONOLULU

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425
HONOLULU, HAWAII 96819-1869

FRANK F. FASI
MAYOR

LIONEL E. CAMARA
FIRE CHIEF

DONALD S. M. CHANG
DEPUTY FIRE CHIEF

October 30, 1992

State Land Use Commission
Old Federal Building
335 Merchant Street, room 104
Honolulu, Hawaii 96813

Attention: Ms. Esther Ueda, Executive Officer

Gentlemen:

SUBJECT: LUINAKOA RESIDENTIAL SUBDIVISION

We have reviewed the subject material provided and have no additional comments.

Should you have any questions, please call Assistant Chief Attilio Leonardi of our Administrative Services Bureau at 831-7775.

Very truly yours,

DONALD S. M. CHANG
Fire Deputy Chief

AKL:ny

Copy to: Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813
Attn: F. J. Rodriguez

Office of Environmental Quality Control w/Report

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

November 12, 1992

Mr. E. James Turse, Director
Department of Housing and
Community Development
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Dear Mr. Turse,

Subject: Environmental Impact Statement for the Luinakoa Residential Subdivision TMK: 3-5-24: 1

We are in receipt of your agency comments dated November 6, 1992 on the above project and we respond as follows:

The department recommendation of providing 30% of the total fee simple lots for affordable housing units will be reviewed by the applicant and compliance will be provided either with lots or in-lieu cash payments to your agency. Final determination can be reached during the zoning application process.

Thank you for your timely response and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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RECEIVED
NOV 12 1992
PARAMETRIX, INC.
HONOLULU

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 8TH FLOOR
HONOLULU HAWAII 96813
PHONE (808) 523-4427 • FAX (808) 527-5486

FRANK F. FASI
MAYOR

E. JAMES TURSE
DIRECTOR

GAIL M. KAITO
DEPUTY DIRECTOR

November 6, 1992

State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Attention: Ms. Esther Ueda, Executive Officer

Gentlemen:

Subject: Environmental Impact Statement
Luinakoa Residential Subdivision

The Department has reviewed the subject Environmental Impact Statement and has no comments to offer at this time.

The Department's general policy is to recommend that 30 percent of the units in the proposed development be set aside for affordable housing. This was stated in the Development Plan Land Use Map Amendment process and will be recommended when the zone change application is submitted.

Thank you for the opportunity to comment.

Sincerely,

E. JAMES TURSE
Director

cc: OEQC
Parametrix, Inc.

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax: 808-523-2995

December 3, 1992

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

Dear Mr. Bonnet,

The State Land Use Commission has forwarded your comments dated November 24, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. We note for the record the HEI position of reserving further comment until construction drawings are available in final form. As this project continues through the land use policy review process, we will keep your office apprised of any significant changes or revisions.

Thank you for your timely response and continuing cooperation.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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PARAMETRIX, INC.
HONOLULU

William A. Bonnet
Manager
Environmental Department

November 24, 1992

Ms. Esther Ueda
Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street
Honolulu, HI 96813

Dear Ms. Ueda:

Subject: Draft Environmental Impact Statement (DEIS)
Luinakoa Partners Residential Subdivision
Honolulu, Oahu, Hawaii

We have reviewed the subject DEIS, and have no comments on the proposed development. HECO shall reserve comment pertaining to the protection of existing power lines bordering the development area until construction plans are finalized.

Sincerely,

William A. Bonnet

An HEI Company

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PARAMETRIX, INC.
HONOLULU

November 20, 1992

Ms. Esther Ueda
Executive Director
State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Subject: Draft Environmental Impact Statement (DEIS) Dated October 1992 for the Proposed Luinakoa Residential Subdivision Project, TMK: 3-5-24: 1, Luinakoa Street

Thank you for allowing us to comment on the DEIS for the 52-unit single-family residential subdivision project.

Our April 28, 1992 comments on the Environmental Assessment for the proposed development are still applicable with the inclusion of a correction. The service limit for the area is the 305-foot elevation and not the 405-foot elevation as was previously stated. The Department of General Planning and the consultant were informed of the correction.

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

Very truly yours,

KAZU HAYASHIDA
Manager and Chief Engineer

cc: Office of Environmental Quality Control
Mr. F. J. Rodriguez (Parametrix, Inc.)

Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-524-0594 • Fax. 808-523-2995

November 24, 1992

Mr. Kazu Hayashida
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, HI 96843

Dear Mr. Hayashida,

We are in receipt of your agency comments dated November 20, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision and we note the following items:

1. Your agency comments dated April 28, 1992 are still applicable with the correction of the service limit for the area is the 305 foot elevation and not the 405 foot elevation.

Thank you for your timely response and continuing cooperation.

Very truly yours,

F. J. Rodriguez

cc: Luinakoa Partners
State Land Use Commission

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Parametrix, Inc.
Consultants in Engineering and Environmental Sciences
1164 Bishop Street, Suite 1600 Honolulu, Hawaii 96813
808-521-0591 • Fax: 808-523-2995

November 25, 1992

Mr. Joseph M. Magaldi, Jr., Director
Department of Transportation Services
City & County of Honolulu
650 S. Beretania Street
Honolulu, HI 96813

Dear Mr. Magaldi,

We have your department comments dated November 23, 1992 on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. Your agency position of :no comments or objections to the proposed subdivision at this time" is duly noted. Also, we will be providing the construction drawings to your agency for their review at the time of building permit application.

Thank you for your continuing cooperation and also the timely response.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: State Land Use Commission
Luinakoa Partners

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CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

JOSEPH M. MAGALDI, JR.
DIRECTOR

AMAR SAPPAL
DEPUTY DIRECTOR

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PARAMETRIX, INC.
HONOLULU

November 23, 1992

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Ms. Esther Ueda, Executive Officer
State Land Use Commission
Old Federal Building
335 Merchant Street, Room 104
Honolulu, Hawaii 96813

Dear Ms. Ueda:

Subject: Luinakoa Residential Subdivision
Draft Environmental Impact Statement (DEIS)
TMK: 3-5-24: 1

This is in response to the DEIS submitted to us for review on October 21, 1992 by the Office of Environmental Quality Control.

Based on our review, we have no comments or objections to the proposed subdivision at this time.

Construction plans for all work within the proposed City right-of-way should be submitted for our review and approval prior to the processing of building permit applications.

Should you have any questions, please contact Lance Watanabe of my staff at 523-4199.

Sincerely,

JOSEPH M. MAGALDI, JR.
Director

cc: Office of Environmental Quality Control
Parametrix, Inc.

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DEC 07 1992
PARAMETRIX, INC.
HONOLULU

AINAKOA COMMUNITY ASSOCIATION
1458 LUINAKOA STREET
HONOLULU, HAWAII 96821
Telephone 732-5348

December 7, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96821

Re: Comments to Draft Environmental Impact Statement, Petition of William Crowder, Docket No. A92-678, State Land Use Commission

Dear Sirs:

Enclosed are the comments of the Ainakoa Community Association to the DEIS.

The Association is concerned that the Final EIS will be inadequate because of the failure to specifically respond to the comments submitted. The Association submitted detailed comments after receiving the EIS Preparation Notice. The DEIS utterly failed to provide specific responses and in many cases totally ignored the comment. Simply referring to a section of the DEIS in response to a lengthy series of comments is contrary to the intent of the Environmental Disclosure Law. Each comment should be specifically answered. Furthermore, the preparer should not judge the relevance of the comment and refuse to answer if determined to be irrelevant.

The comments which were not answered are being resubmitted for response in the Final EIS. Additional comments are being submitted to explore the information contained in the DEIS.

Sincerely,

Quentin Doar
President

cc: State Land Use Commission

COMMENTS OF THE AINAKOA COMMUNITY ASSOCIATION
IN RESPONSE TO DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Ainakoa Community Association requests that each comment be answered individually. The practice of merely referring to a section of the EIS in answer to a set of comments is non-responsive because the comments seek more detail and very often the section does not contain any responsive information. Such non-responses are not in keeping with the requirements and spirit of the Environmental Review Process.

For each of the following comments, it is requested that reference be made to the source of the information relied upon in each answer, including assumptions and other data relied upon, and the location of the source of the information.

LUINAKOA PARTNERS:

1. The DEIS in the text (Ch. 3, p. 9) and Social Impact Assessment (Exhibit D, p.1) misstates the record by asserting that Luinakoa Partners "decided to prepare an Environmental Impact Statement." The LUC ordered that an EIS be prepared. At the LUC meeting, Luinakoa Partners stated that the LUC could issue a negative declaration based upon the negative declaration issued by the City and County. Thus, Luinakoa Partners' offer to "voluntarily" prepare an EIS was misleading. Please correct the record or explain why such a statement was made.

2. Identify all the partners of Luinakoa Partners. Please attach a copy of the partnership agreement.

3. For each partner, provide details of their prior experience in land development or housing construction, including, other investors or partners, location, size, number of lots, homes or buildings, LUC applications, project cost, and completion date.

4. For each partner, state their residence, occupation, business/employer's name and address.

5. For each partner, state whether he/she has been involved in a previous development project which involved the preparation of house lots or the construction of houses in land conditions similar to the proposed project. Provide information about the previous project including, other investors or partners, location, size, number of lots, homes or buildings, LUC applications, county permits, project cost, and completion date.

6. For each partner, state whether he/she has been cited for violations of any state or county building, construction, zoning, land use, or related statutes, ordinances, codes or rules. State the facts and disposition of each citation.

7. For each partner, state whether he/she is or was involved within the past 10 years in politics or government in any way, including, but not limited to, as a lobbyist, campaign contributor

(list contributions, amount and to whom), party official, elected official, appointed government official, or government employee.

8. State the amount of capital that each partner will contribute to the proposed project.

9. Assuming that the proposed project receives all necessary approvals, state the costs of the project and the potential profit for the partners.

10. Describe the involvement of the Bishop Estate. Is the Estate a partner in the project? State the amount of funds contributed by the Estate. Describe the amount of assistance, advice, planning, or other assistance provided by the Estate to the project or the partnership.

WATER RUNOFF:

11. Explain how the estimate of 9 cfs in the DEIS was made for the additional runoff resulting from the open ditches that will be built above the homes in the proposed project.

12. State all the assumptions that were used in making the estimate. State the basis for each assumption. Describe the effects of a major storm and 100 year storm. What would be the rainfall amounts of a major storm and 100 year storm.

13. Identify all models and mathematical formulas that were used in making the estimate. State the basis for each model or formula used.

14. When rainwater is cascading down the mountain side above the proposed project so that waterfalls appear in various places, describe the amount of rainfall that would be expected to cause such waterfalls.

15. Describe the open ditch system that will be constructed above the proposed project. State the location of the system, the size of the open ditches, construction methods and materials, length and depth, and location of outflow into the drainage channel. State the maximum amount of rainwater that the open ditches can safely carry. Is it possible for the open ditches to overflow? If, so state the circumstances when such may occur.

16. State the amount of rainwater that will run off the mountain in the area above the proposed project in a major storm and 100 year storm.

17. State the amount of water that will be collected by the open ditches from mountain water runoff above the proposed project in a major storm and 100 year storm.

18. State the maximum amount of water that the Kapakahi Drainage Channel can safely carry.

19. State the amount of water that will raise the water level in the Channel by one inch.

20. Estimate the maximum holding capacity for runoff water in the boulder catchment basin of the Kapakahi Drainage Channel.

21. When the water level for the boulder catchment basin is at the top of the concrete barriers, estimate the amount of water flowing into the Kapakahi Drainage Channel.

22. For each inch of water above the concrete barriers, estimate the additional amount of water flowing into the Kapakahi Drainage Channel.

23. Based upon a 100 year storm, state the amount of water that will be draining into Kapakahi Drainage Channel.

24. Based upon a 100 year storm, state the level of water at the concrete barriers in the boulder catchment basin.

25. Based upon a 100 year storm, state the potential for the water level in the Kapakahi Drainage Channel to overflow its banks. Indicate the likelihood of such an occurrence at all points along the Channel.

26. Based upon a 100 year storm, state the potential for the water in the boulder catchment basin to overflow into Ainakoa Avenue.

27. Based upon a major storm, state the amount of water that will be draining into Kapakahi Drainage Channel.

28. Based upon a major storm, state the level of water at the concrete barriers in the boulder catchment basin.

29. Based upon a major storm, state the potential for the water level in the Kapakahi Drainage Channel to overflow its banks. Indicate the likelihood of such an occurrence at all points along the Channel.

30. Based upon a major storm, state the potential for the water in the boulder catchment basin to overflow into Ainakoa Avenue.

31. Estimate the amount of water in the boulder catchment basin that will result in water overflowing its banks on to Ainakoa Avenue.

32. If the runoff water exceeds the maximum holding capacity of the boulder catchment basin, describe where the excess water will flow and the possible effects upon the homes on Ainakoa Avenue.

33. What measures will be taken to prevent flooding during the construction of the extension of the Kapakahi Drainage Channel? Explain how the extension will be constructed to avoid creating additional water runoff.

34. Do any permits have to be obtained from the Corps of Engineers to extend the Channel? Has the Corp been contacted about the proposed development regardless of whether their approval is needed? If so, when. If not, why not?

SOIL CONDITIONS:

35. The DEIS (Ch. 6, p. 1) refers to off site work. Explain the nature of the off site work. Where will it be conducted?

36. The DEIS soils report (Exh. B) is superficial. It fails to consider loose boulders above the project. It fails to assess the potential for rock fall due to the construction work. It fails to explain the construction methods that will be used to prepare the soil.

37. Identify the additional subsurface investigation and analysis that will have to be made, as referred to Parametrix in the letter of Fewell Soil Engineers dated October 9, 1992.

38. For each component in the investigation and analysis, state the purpose or reason for the component, information to be obtained, amount of time to conduct the component, approximate cost, importance of the component for the purposes of determining whether the project should proceed.

39. If the concerns stated by the residents will have to be addressed at the building permit stage (Fewell letter, October 9, 1992) and a complete soils report prepared, state why these concerns and the information relating to them are not being disclosed at the Land Use Commission stage when conservation land is being changed to urban use.

40. If the cost of preparing a soils report will have to be incurred at some stage in the process, why shouldn't the developer have it done at the LUC stage?

41. The DEIS states that one of the possible measures to prevent soil slippage will be to replace the existing clay soil. Estimate the amount of clay soil that will have to be replaced in order to stabilize the ground?

42. Are there any sites where there are pockets of clay soil that will not be removed? Explain what will be done to the clay soil under the rocks that are not removed.

43. The hillside homes will be built on a slope of approximately 40%, according to Exhibit H (Slope Analysis). Why was information about the slope not provided in the text of the DEIS in the topography section (Ch. 4, p.3)?

44. Based upon a 40% slope, explain how the project can be justified in light of LUC regulations which normally classify lands with slopes above 20% within the conservation boundary.

45. Based upon a 40% slope, explain how the project can be justified in light of City and County Development guidelines which provide that development should be limited to slopes of 20% or less?

46. The DEIS (Ch. 3, p. 4-6) fails to address the LUC rules for urban designation. The rules are merely listed but not discussed. Why was no analysis done?

47. In particular, the DEIS fails to substantiate the financial feasibility of the proposed project. The DEIS fails to address the requirement that urban lands be reasonably free from the danger of floods and unstable soil conditions and other adverse environmental effects. The DEIS fails to consider areas of urban growth as shown on the County General Plans. The DEIS fails to address the 20% slope requirement. Please provide justifications to these concerns.

48. The Social Impact Assessment (Exhibit D, p. 23) refers to certain mitigative measures that will be taken by the developer but the text of the DEIS makes no reference to them. What mitigative measures will be taken? What will residents have to do if their homes are damaged by the construction work to claim their losses?

49. One mitigative measure is to collect all boulders on-site. This fails to address the problem of boulders above the existing homes and the project area which may be loosened by the construction work. Does the developer intend to remove loose boulders and rocks from the hillside above the project area and existing homes?

EAST HONOLULU DEVELOPMENT:

50. Given there is approximately 585 acres of developable land in the E. Honolulu (Exhibit D, p.15) already in the urban boundary, there is existing land available for the 52 homes. What is the justification for amending the land use boundary in light of the existing stock of urban lands available?

51. Has the developer reviewed the existing 585 acres of developable land to determine if there are sites which can be used instead of Luinakoa Street?

52. There are approximately 21 acres on Halekoa Drive which are developable in that they are within the urban boundary. Has the developer considered these lands for development? If not, why not?

FUTURE DEVELOPMENT PLANS:

53. Does the Bishop Estate have any plans to develop the land beyond the end of Ainakoa Avenue.

54. Does the Bishop Estate have any proposals, studies, feasibility reviews, or any such documents which consider the

possible future uses of the undeveloped land in Ainakoa Valley or Kapakahi Gulch? If, so please identify the documents and state the possible uses of the land. Attach a copy of the documents.

55. Does the Bishop Estate have any plans to develop the land beyond the end of the proposed development, assuming the project is approved and completed.

56. Does the Bishop Estate have any plans to propose construction to a bridge to connect Luinakoa Street and Ainakoa Avenue? If so, please identify the documents and provide any information about such plans. Attach a copy of the documents.

REAL PROPERTY TAX ANALYSIS:

57. State all the assumptions used in the study.

58. If the lots in the proposed development are sold for more than the current assessed land values of approximately $69/sq.ft., will the sales prices be used to raise the tax assessed rates of the surrounding properties? If not, why not.

59. Using the sales comparison approach, if the lots sell for more that $69/sq.ft., is it permissible for the City to use the sales prices to raise the assessed land values of the surrounding homes on Luinakoa Street and Ainakoa Avenue?

60. The Hawaii Loa Ridge comparison uses Aina Haina and Nui Valley as immediate area neighborhoods. Is it fair and ethically permissible to compare these neighborhoods when Hawaii Loa Ridge is separated from these neighborhoods? The situation on Luinakoa Street and Ainakoa Avenue differs from these neighborhoods because the proposed development is essentially in the same neighborhood?

61. Similarly, are the comparisons of Royal Summit, Queen's Gate, and Nohono Kahala with their surrounding neighborhoods fair and ethically permissible because unlike the proposed development, these three projects were built outside the neighborhood rather that within the neighborhood?

62. The selection of these neighborhoods to prove the conclusion that land values will not rise in surrounding neighborhoods does not establish that Ainakoa Valley and Luinakoa Street will not experience increases because the neighborhoods were "selected" by the Expert. Can the expert categorically state that new development within an established neighborhood will not cause land values to rise?

63. Is the expert aware of any data which conflicts with the conclusion of no rise in land values? In the course of developing the conclusion, did the expert find any instances where development caused a rise in land values? If so, please provide the information.

64. The conclusion that there will be no significant property

value or property tax increases goes against conventional wisdom. Has the expert ever done any studies which have concluded that land values in surrounding neighborhoods rose because of a new development? Is the expert aware of any studies by others which have so concluded? If so, please provide copies of the information.

SOCIAL IMPACT SURVEY:

65. The survey states that meetings were held with residents. Please explain what kinds of meetings were held. Were these meetings with several people or individual meetings? Was a notice provide for people to attend? How were people selected to be interviewed to provide their views?

66. The Probable Impact section (Ch. 5, p.2) contains a gratuitous statement from the Survey that "change is neither inherently good or bad, and people adapt to change, whether it is welcomed or not." This begs the question. The statement is quite arrogant because it is basically saying that if a project is forced upon a community, the community will adapt to it. What was the purpose of making and using such a statement because it does not reflect the views of the community?

MISCELLANEOUS CONCERNS:

67. The DEIS (Ch. 3, p.3) fails to address the State Housing Plan concern for "reasonably priced ... homes."

68. The DEIS (Ch. 3, p.4) uses a misleading analogy in the State Conservation Lands Plan regarding development of a wilderness park and the need to take mitigating measures to justify the proposed development with mitigating measures. The analogy is inappropriate because a park would be a permitted use within a conservation area but the development would not.

69. The DEIS fails to address the fact that the proposed development is not in conformity with the County General Plan and East Honolulu Development Plan and its land use maps.

70. The DEIS (Ch. 4, p.6) is incorrect in stating that "traffic related noise will not be [sic] significant consequence." It is also incorrect in stating that ambient noise levels will not be altered.

71. The DEIS (Ch. 4, p.7) is incorrect in stating that the project will not alter existing scenic vistas or aesthetic values.

72. The DEIS Chapters 5 through 9 are superficial and non-responsive to the issues contained within them.

73. The Alternatives (Ch. 7) fails to discuss the second listed alternative. It also fails to consider other possible alternatives.

74. The DEIS (Ch.6, p.1) fails to adequately discuss the passing reference to no parking on both sides. Explain what is meant by this reference. Explain what will be done for residents who do not have sufficient off street parking.

RESUBMISSION OF COMMENTS SUBMITTED WHICH WERE NOT ADEQUATELY OR SPECIFICALLY RESPONDED TO IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

FIRST SET OF COMMENTS (USING ORIGINAL NUMBERS)

III. STATE FUNCTIONAL PLANS:

* * *

26. For each of the State Functional Plans, explain how the proposed project will carry out the goals of the plans.

27. For each of the State Functional Plans, explain how the proposed project may not carry out the goals of the plans.

28. Explain how the proposed development promotes the objectives and policies for the physical environment--scenic, natural beauty, and historic resources, H.R.S. § 226-12(b)(3), preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains,... scenic landscapes, and other natural features. And how it may not promote them.

29. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(2), proper management of land and water resources. And how it may not promote them.

30. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(3), achievement of desired quality of surface, ground, and coastal waters. And how it may not promote them.

31. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(4), maintain or improve aural and air quality levels to enhance health and well-being of people. And how it may not promote them.

32. Explain how the proposed development promotes the objectives and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(5), reduce the threat to life and property from erosion, flooding, unstable soils, and other natural and induced hazards and disasters. And how it may not promote them.

33. Explain how the proposed development promotes the objectives

and policies for the physical environment--land, air, and water quality, H.R.S. § 226-13(b)(6), encourage design and construction practices that enhance physical qualities of communities. And how it may not promote them.

34. Explain how the proposed development promotes the objectives and policies for facility systems--water, H.R.S. § 226-16(b)(1), relate land use activities to existing and potential water supply. And how it may not promote them.

35. Explain how the proposed development promotes the objective for socio-cultural advancement--housing, H.R.S. § 226-19(a)(1), greater opportunities to secure reasonably priced homes. And how it may not promote it.

36. Explain how the proposed development promotes the objective for socio-cultural advancement--housing, H.R.S. § 226-19(a)(2), orderly development of residential areas sensitive to community needs. And how it may not promote it.

37. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(2), stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households. And how it may not promote them.

38. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(5), promote the design and location of housing developments taking into account the physical setting, concerns of existing communities and surrounding areas. And how it may not promote them.

39. Explain how the proposed development promotes the objectives and goals for socio-cultural advancement--housing, H.R.S. § 226-19(b)(7), foster a variety of traditional lifestyles through the design and maintenance of neighborhoods that reflect the culture and values of the community. And how it may not promote them.

40. Explain how the proposed development promotes the objective for socio-cultural advancement--health, H.R.S. § 226-19(a)(1), fulfill basic health needs of the community as well as the general public. And how it may not promote it due to the impact of the development upon the residents.

41. Explain how the proposed development promotes the objective for socio-cultural advancement--health, H.R.S. § 226-19(a)(2), maintain environmentally healthful conditions. And how it may not promote it.

42. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(1), encourage urban growth to primarily existing urban areas. And how it may not promote them.

43. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(4), restrict new urban development in areas where water is insufficient. And how it may not promote them.

44. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(9), direct future urban development from critical environmental areas. And how it may not promote them.

45. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(10), identification of critical environmental areas. And how it may not promote them.

46. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(12), protection of environment and the availability of conservation lands for future generations. And how it may not promote them.

47. Explain how the proposed development promotes the objectives and goals for regional growth distribution and land resource utilization, H.R.S. § 226-104(b)(13), protect and enhance open spaces and scenic resources. And how it may not promote them.

48. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(1), use marginal land to meet housing needs of low- and moderate-income and gap-group households. And how it may not promote them.

49. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(4), create incentives to develop housing for low- and moderate-income and gap-group households. And how it may not promote them.

50. Explain how the proposed development promotes the objectives and goals for provision of affordable housing, H.R.S. § 226-106(8), give higher priority to providing affordable housing to residents. And how it may not promote them.

IV. <u>COMMUNITY:</u>

51. Identify the demographic composition of the residents on Luinakoa Street including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed income, children, grandchildren, and cars (including cars parked on-street).

52. Identify the demographic composition of the residents in Ainakoa Valley who may reasonably be affected by the proposed project, including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed

income, children, grandchildren, and cars (including cars parked on-street). Explain the basis for determining which residents would be affected by the proposed project.

53. Identify the number of persons on Luinakoa Street and Ainakoa Valley who are reasonably expected to be at home during the construction of the project.

54. Identify the number of persons living on Halekoa Drive and its side streets who may reasonably be affected by the proposed project. Provide demographic information including number of persons, age, sex, retirement status, health status, employment status (including shift-work), fixed income, children, grandchildren, and cars (including cars parked on-street).

55. If the proposed development causes tax assessments to increase, identify the impact upon the residents in Ainakoa Valley who are living on fixed incomes and who are working.

56. If the proposed development may cause tax assessments to increase, identify the impact upon residents in Ainakoa Valley who have children and grandchildren.

V. <u>HOUSING NEEDS:</u>

57. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary which is available for residential development, yet not developed.

58. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary which may be made available for residential development with City Development Plan and zoning changes.

59. In the East Honolulu area, identify the areas and acreage currently within the urban land use boundary and City Development Plan for residential use which is available for residential development, yet not developed.

60. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary which is available for residential development, yet not developed.

61. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary which may be made available for residential development with City Development Plan and zoning changes.

62. In the Urban Honolulu area, identify the areas and acreage currently within the urban land use boundary and City Development Plan for residential use which is available for residential development, yet not developed.

63. In the East Honolulu area, identify the areas and acreage which the Bishop Estate has plans to convert or have converted from

the conservation land use boundary to urban land use within the next ten years.

64. In the Urban Honolulu area, identify the areas and acreage which the Bishop Estate has plans to convert or have converted from conservation land use boundary to urban land use within the next ten years.

65. If the proposed project is approved, evaluate the potential for development of the remaining land within Ainakoa valley, regardless of current state land use designation or similar city restrictions.

66. Explain the affordable housing needs that will be met by the proposed project.

* * *

VI. TRAFFIC PROBLEMS:

68. State the anticipated number of cars that will result if the proposed project is approved.

69. State the number of cars which are regularly parked on Luinakoa Street.

70. Explain the potential impact of the proposed development on the present Luinakoa residents and the Ainakoa community resulting from the fact that the building codes at the time most of the residences were constructed did not require two car garages. Comment upon the current need for on-street parking because of the lack of two car garages.

71. Explain the potential impact upon traffic and the sufficiency of parking on Luinakoa Street if the proposed project is approved. Include the additional parking needs on weekends and holidays when resident's children and grandchildren come to visit.

72. Explain the potential traffic problems resulting from proposed development due to the narrow width of the roadway on Luinakoa Street.

73. Explain the potential impact on emergency vehicles which may result from the narrow roadway width, on-street parking, and additional cars using Luinakoa Street if the proposed project is approved.

74. Explain the potential impact upon traffic on Halekoa Drive if the proposed project is approved.

75. Explain the potential impact upon traffic on Halekoa Drive resulting from the clustering of several cars driving up Halekoa because of the stoplight on Kalanianaole Highway, including the potential for delays due to the narrow entrance of Luinakoa, if the proposed project is approved.

76. Explain the potential impact upon traffic on Ainakoa Avenue below Halekoa Drive if the proposed project is approved.

77. Explain the potential impact upon traffic on Ainakoa Avenue above Halekoa Drive if the proposed project is approved.

78. Explain the potential impact upon traffic on Malia Street if the proposed project is approved taking into account the proposed development of Hale O Malia and the school traffic from Star of the Sea and Wilson Elementary School.

79. Explain the potential impact upon morning traffic going onto H-1 from Ainakoa Avenue if the proposed project is approved taking into account the proposed development of Hale O Malia and the school traffic from Star of the Sea.

80. Explain the potential impact on residents of Halekoa, Ainakoa, and Malia, who have to back out of their garages, from the additional traffic resulting from the proposed project.

81. Identify the possible solutions for the mitigation of potential traffic problems due to the proposed development and the impact of these solutions upon the community.

82. If one of the possible solutions is to ban parking on one side of Luinakoa Street, explain the impact upon the community.

83. If one of the possible solutions to the traffic problems is the construction of a bridge to connect Luinakoa with Ainakoa, explain the potential building costs and the impact of the additional traffic on upper Ainakoa Avenue.

VII. SOILS:

84. Provide an accurate topographical map of the proposed project site.

85. Indicate the type of soil and rock formations within the proposed project site.

86. Identify the slope of the land within the proposed project site.

87. In the Urban and East Honolulu Areas where there have been problems with soil movement, including but not limited to Aina Haina, Kuliouou, Kaimuki, and Manoa, identify the type of soil and rock formations present in those areas and the slope of the land.

88. Provide a grading plan for the proposed project site. Explain every phase of the plan, including but not limited to, equipment to be used, number of workers, where material will be removed to, plans for on-site storage, amount of dust and noise to be generated, and time frames.

89. Based upon the grading plan, state the amount of material that

will be removed from the project site, including soil, rocks, trees, vegetation, and other materials on the site.

90. Indicate the number of truckloads of material that will have to be removed from the project site.

91. State the average number of trucks that will be removing materials on a daily basis during the grading phase of the project. State the amount of noise that will be generated by such trucks.

92. Do the possible methods for grading or site preparation include use of explosives? If so, explain the type of explosives, safety measures, potential for damage to homes of residents, and other safety and health (including noise and dust) matters.

93. Identify the possible methods that are reasonably expected to be used for grading or site preparation. For each method, explain the safety measures, potential for damage to homes of residents, and other safety and health (including noise and dust) matters.

94. State whether the purchasers of lots would reasonably be expected to engage in further grading or site preparation for the construction of their homes.

95. Estimate the amount of grading or site preparation that lot purchasers would reasonably be expected to engage in for the construction of their homes.

96. Estimate the amount of material that will be removed from these lots because of grading or site preparation by purchasers.

97. Explain why the description of soils in the Environmental Impact Statement Notice of Preparation differs from the description in the Environmental Assessment.

98. Why did the Environmental Assessment fail to include information about the soil movement problems associated with the soils in the project area?

99. Was the omission of information about the soil movement problems in the Environmental Assessment a material omission for the purposes of determining significant environmental effects? If not, why not?

100. Explain whether the soils and land slope in the proposed project area would affect the availability of mortgages from the FHA, HUD, FmHA, Veterans Administration, HHA, or other governmental entity.

101. Explain whether the soils and land slope in the proposed project area would affect the availability of conventional mortgages.

VIII. NOISE:

102. State the ambient noise level of Ainakoa Valley. Compare the ambient noise levels of other valleys on Oahu with Ainakoa Valley.

103. Do the possible methods for grading or site preparation include devices which generate a substantial amount of noise?

104. Indicate the amount of noise that such devices will generate.

105. Indicate the maximum number of each device that will be used at any one time on the proposed project.

106. State the average decibel levels that will be generated by the work on the project.

107. State the highest decibel levels that will be generated by the project and its anticipated duration (days and times of day).

108. Based upon the topography of Ainakoa Valley, state the potential for sounds generated within the valley to be carried and heard in nearby areas, including Halekoa ridge. State the amount of echo that can be heard in various parts of the valley.

109. State whether the clearing of vegetation would affect the noise levels and echo. Indicate the amount of additional noise which will result from the clearing of vegetation.

110. Identify the potential amount of echo resulting from construction noise due to the narrowness of the valley and its impact upon residents within the valley and upon Halekoa ridge.

111. State the potential for the noise to be carried up and down the valley because of echo resulting from the narrowness of the valley.

112. Identify methods that will be used to mitigate the noise that will be generated by the devices and the resulting reduction in noise.

IX. DAMAGE RESULTING FROM THE PROPOSED PROJECT:

113. Identify the potential for rocks and boulders to fall from the hillside on the proposed project area due to the proposed construction.

114. Identify the potential for rocks and boulders to fall from the hillside on the property of current residents of Luinakoa Street due to the proposed construction.

115. Identify the potential for rocks and boulders to fall from the hillside on property of current residents of Ainakoa Avenue due to the construction.

116. Explain the measures which will be taken to minimize or eliminate the potential for damage from rocks and boulders falling as a result of the proposed construction.

117. Identify the potential for rocks and boulders to be loosened from the ridges above Luinakoa Street and Ainakoa Avenue because of the proposed construction.

118. Identify the potential for soil movement for homes on Luinakoa Street which may result from construction of the proposed project.

119. Identify the potential for soil movement for homes on Luinakoa Street which may result from the truck traffic.

120. Identify the potential for soil movement for homes on Ainakoa Avenue which may result from construction of the proposed project.

121. Identify the potential for soil movement for homes on Ainakoa Avenue which may result from the truck traffic.

122. Identify the potential damage to homes on Luinakoa Street resulting from the truck traffic and related construction activities.

123. Identify the potential problems that may affect residents' water, sewage, telephone, cable, and electrical service because of the construction of the proposed project.

124. State the developer's plans for compensating or correcting the damage to homes from soil movement or other causes resulting from construction or truck traffic. What kind of evidence will be necessary to establish that the damage was caused by the construction? How will the plan compensate for damage resulting from the construction as opposed to pre-existing damage? Will there be a presumption that any damage was caused by the construction unless it can be shown by the developer that it was pre-existing? Will the plan cover damage resulting from construction of the homes by the lot purchasers?

125. State the developer's plans for compensating lot purchasers if the land proves to be impossible or extremely difficult to build upon.

126. If lot purchasers experience soil movement after building their homes, state the developer's plans to provide compensation to them or to indemnify the City or State if purchasers sue.

X. DEVELOPERS:

127. Provide information about William Crowder, including but not limited to ... age, ... and any other relevant information regarding his involvement in ... politics, and government.

128. Identify other development projects which are being pursued, individually or with others, by the developers, including William Crowder, D.G. Andy Anderson, and any other partners. Summarize the purpose of each development project, including but not limited to information about the location, landowner, State and County land use and development plan classification, changes or permits that

are required, EIS preparation, financial feasibility, and other relevant information. Identify the estimated costs for the development of these projects.

129. Assuming necessary approvals, [s]ubstantiate the economic feasibility of the proposed project. State the anticipated profit to be realized from the proposed project with a breakdown in income and expenses.

130. Explain how the developer will obtain the necessary financing for the proposed project and the sources of funds that have been contacted or are anticipated to be contacted.

* * *

XIII. SOCIOLOGICAL AND HEALTH-RELATED EFFECTS:

140. Based upon the demographic information about the community, identify the possible sociological and health-related effects that the proposed development will have on the community.

141. Identify the possible sociological and health-related effects that the noise will have on the community.

142. Identify the possible sociological and health-related effects that the construction work will have on the community.

143. State the dust and air quality levels in Ainakoa Valley and on Halekoa Ridge.

144. Identify the possible sociological and health-related effects that the dust and air quality resulting from the construction work will have on the community.

145. Identify the possible sociological and health-related effects that the proposed development will have on persons who will be at home during the construction.

146. Identify the possible sociological and health-related effects that the proposed development will have on persons who are retired.

147. Identify the possible sociological and health-related effects that the proposed development will have on children.

148. Identify the possible sociological and health-related effects that the proposed development will have on persons who work.

149. Identify the possible sociological and health-related effects that the proposed development will have on persons who work on shifts.

150. Identify the possible sociological and health-related effects that the proposed development will have on persons who have serious health problems, including those problems revealed in the demographic survey of the community.

151. Identify the possible sociological and health-related effects related to crime resulting from the proposed development due to influx of workers in the area, more expensive homes being built, and increase in traffic.

XIV. FLOODING:

152. Identify the potential flood danger resulting from the construction of the proposed project.

153. State the amount of additional runoff which will result from the proposed project. Including additional runoff resulting from the removal of the vegetation cover.

154. State the erosion control measures that will be utilized during the construction.

155. State the age of the drainage channel and the potential necessity of repairs resulting from its age.

156. State whether the drainage channel is sufficient to handle the potential runoff resulting from the proposed project.

157. Identify the potential for the drainage channel to be damaged by the proposed construction.

158. Identify the potential for the drainage channel to sustain damage which causes the floor of the channel to give way or disintegrate.

159. Identify the potential for flooding or other damage to homes if the channel is damaged during a heavy and prolonged rain in the valley.

160. In the event of a heavy and prolonged rainfall in the valley during the construction of the proposed project, identify the potential flood danger to the existing homes.

161. Identify the measures that will be undertaken to prevent flooding in the event of a heavy and prolonged rainfall in the valley.

162. Explain how the drainage channel will be extended to accommodate the proposed project.

163. Explain the necessity of obtaining approvals from the Army Corps of Engineers or state agencies to extend the drainage channel.

164. In the event of a heavy and prolonged rainfall in the valley, identify the potential flood danger to the existing homes while the drainage channel is being extended.

165. Identify the measures that will be undertaken to prevent flooding while the drainage channel is being extended.

166. In the event of a heavy and prolonged rainfall in the valley during the construction of the proposed project, identify the potential flood danger to the homes along the drainage channel.

167. In the event of a heavy and prolonged rainfall in the valley, identify the flood potential to the new homes being built in the proposed project, including effects resulting from the non-sequential construction of homes.

XV. CONSTRUCTION PHASES:

168. Provide a timetable for each aspect or phase of the proposed project.

169. For each phase, identify the average noise and dust levels, the frequency of truck traffic, and flooding and water runoff potential.

* * *

XVI. LAND VALUES:

174. Will the lots be sold at the current market value for land in the area? Explain how the land value will be determined for the lots.

175. The current tax assessment for land in the area is approximately $69/sq.ft. Will the land be sold for approximately $69/sq.ft. or the current land values when the lots go on the market?

* * *

177. Assuming a market rate purchase price of $69/sq.ft. for a lot, what would be the average construction costs of a home be? Based upon this amount, state the income that will be necessary to obtain a mortgage to purchase a lot and build a home in the proposed development.

178. The Environmental Assessment stated that the land would be sold for $35/sq.ft. or $40/sq.ft. Why was this amount given when the current land values are well above these amounts?

* * *

SUPPLEMENTAL COMMENTS OF THE AINAKOA COMMUNITY ASSOCIATION WHICH WERE NOT ADEQUATELY OR SPECIFICALLY ANSWERED IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (WITH ORIGINAL NUMBERS)

I. Soil Conditions:

1. Estimate the porosity of the soil in the project site.

2. Estimate the permeability of the soil in the project site.

3. Estimate the capacity of the soil in the project site to hold and percolate water.

4. What is the workability of the soil in the project site?

5. Estimate the percentage the surface of the project site which is made up of exposed rock.

6. Estimate the percentage of the area above the project site along the ridge which is made up of exposed rock.

7. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site.

8. In the area above the project site along the ridge, estimate the size and weight of the rocks and boulders which may fall onto the site.

9. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons.

10. In the area above the project site along the ridge, estimate the number of rocks and boulders which may fall onto the site and have the potential for causing damage to homes or machinery.

11. Estimate the increased potential for rocks and boulders to fall upon the project as the result of hard and prolonged rainfall.

12. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons before site preparation is undertaken?

13. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing serious injury to persons before home construction is undertaken?

14. What will be done to minimize the hazard from rocks and boulders which may fall onto the site and have the potential for causing damage to homes or machinery?

15. Estimate the amount of rainfall that will cause the soil in the project site to become saturated.

16. Estimate the amount of rainfall that will cause the soil in the project site to become plastic.

17. State the possible effects upon site preparation if the soil becomes plastic.

18. State the possible effects upon home construction if the soil becomes plastic.

19. Estimate the shrink-swell potential of the soil in the project site.

20. State the possible effects upon site preparation if the shrink-swell potential of the soil is at its maximum.

21. State the possible effects upon home construction if the shrink-swell potential of the soil is at its maximum.

22. Estimate the rate of talus growth that may result from site preparation work.

23. Estimate the rate of talus growth that may result from home construction by lot purchasers.

24. Estimate the rate of talus growth that may result from the modification of the slope in the project site.

25. Estimate the rate of talus growth that may result from the site preparation work if there is heavy and prolonged rainfall in the project site.

26. Estimate the mass wasting potential in the project site due to the site preparation work.

27. Estimate the mass wasting potential in the project site due to home construction by lot purchasers.

28. Estimate the mass wasting potential in the project site due to site preparation work if there is heavy and prolonged rainfall.

29. Estimate the mass wasting potential in the project site due to home construction by lot purchasers if there is heavy and prolonged rainfall.

30. Estimate the effect of earthquakes in the vicinity of Oahu on the rate of talus growth in the project site.

31. Estimate the potential effect of earthquakes in the vicinity of Oahu on the mass wasting potential in the project site.

II. <u>Soil Stabilization</u>:

32. Describe in detail the off-site improvements, if any, necessary for the project.

33. Describe in detail the on-site improvements for the project.

34. Will soil or other natural materials be brought onto the project site? If so, state the amount, including number of truckloads, and the purpose of such materials.

35. Describe in detail the excavation work that will be necessary

to prepare the site.

36. Based upon the shrink-swell potential of the soil, state the likelihood and extent of soil instability in the project area.

37. Based upon other factors related to the soils, state the likelihood and extent of soil instability in the project area.

38. Explain the various soil stabilization methods that reasonably may be used during either site preparation or home construction.

39. Explain the soil stabilization procedures that are expected to be used for the project.

40. Explain the possibility that pile driving may be necessary during site preparation or home construction.

41. For each of the soil stabilization methods that may reasonably be used, including pile driving, state the potential effects upon noise levels, air quality, water runoff, soil erosion, flooding, and any other possible environmental effects.

III. Erosion:

42. Describe in detail the potential for erosion resulting from the removal of rocks, vegetation, and other materials from the site.

43. Describe in detail the potential for erosion resulting from the removal of rocks, vegetation, and other materials from the site if there is heavy and prolonged rainfall.

44. Describe in detail all the possible impacts that may result from erosion, if measures are not undertaken to prevent erosion.

45. State the measures that will be used to prevent erosion during site preparation.

46. State the measures that will be used to prevent erosion during home construction. Will the developer be responsible for preventing erosion during home construction?

IV. Water Runoff:

47. Describe in detail the surface water runoff potential during site preparation.

48. Describe in detail the surface water runoff potential during home construction.

49. Describe in detail the surface water runoff potential during site preparation if there is heavy and prolonged rainfall.

50. Describe in detail the surface water runoff potential during

home construction if there is heavy and prolonged rainfall.

51. Describe in detail the rain runoff potential during site preparation.

52. Describe in detail the rain runoff potential during home construction.

53. Describe in detail the rain runoff potential during site preparation if there is heavy and prolonged rainfall.

54. Describe in detail the rain runoff potential during home construction if there is heavy and prolonged rainfall.

55. Describe in detail the impacts resulting from surface water and rain water runoff if there is heavy and prolonged rainfall and no measures are taken to prevent runoff.

56. State the measures that will be used to deal with the increased runoff of surface and rain water during site preparation.

57. State the measures that will used to deal with the increased runoff of surface and rain water during home construction. Will the developer be responsible for measures to deal with increased runoff during home construction?

58. Estimate the potential impacts upon the drainage channel from increased runoff of surface and rain water during site preparation and home construction.

V. Resident Notification:

59. Identify all persons in Ainakoa Valley who were sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement.

60. Explain whether the residents of Ainakoa Avenue who live in homes which parallel the project site would experience significant impacts (i.e. noise, dust, air quality, traffic, water runoff, flooding, etc.) resulting from the project.

61. Explain why residents of Ainakoa Avenue who live in homes which parallel the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

62. Explain whether residents of Halekoa Drive who live in homes above the project would experience significant impacts (i.e. noise, dust, air quality, traffic, etc.) resulting from the project.

63. Explain why residents of Halekoa Drive who live in homes above the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

64. Explain whether residents of lower Ainakoa Valley who live below the project would experience significant impacts (i.e. noise, dust, air quality, traffic, run off, flooding, etc.) resulting from the project.

65. Explain why residents of lower Ainakoa Valley who live below the project were not sent copies of the Environmental Assessment and Notice of Preparation of Environmental Impact Statement?

VI. Cultural Information:

66. What efforts were utilized to develop oral history information about the valley?

67. What efforts were made to develop oral history information from residents of the valley?

68. State whether previous developers of Ainakoa Valley had considered extending Luinakoa Street. State the reasons why there was no development of Luinakoa Street prior to the present project proposal.

69. Explain how the developers were informed about the availability of the project for development. Did the developers initially contact the landowner or did the landowner contact the developers? Describe the negotiations that ensued between the developers and landowner. Were there any discussions or agreements to develop other lands held by the landowner? If so, describe those discussions or agreements and any other matters related to agreements or discussions over projects between the developers and landowner. Identify all the parties and individuals involved in the discussions, negotiations, developments, or projects.

Parametrix, Inc.
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December 23, 1992

Mr. Quentin Doar, President
Aina Koa Community Association
1458 Luinakoa Street
Honolulu, HI 96821

Dear Mr. Doar,

We have received the comments dated December 7, 1992 which express the Aina Koa Community Association's position on the Draft Environmental Impact Statement prepared for the Luinakoa Residential Subdivision. Before we attempted to respond to your extensive comments, we met with the Office of Environmental Quality Control (December 8, 1992) to determine the best available means that we can respond to your 24 pages of comments. I realize that many of the comments were recycled comments that your organization felt we did not respond to adequately in the DEIS; it was on this basis that I met with OEQC staff to see what it would take to respond adequately to your previous and now additional comments.

There is an awareness on our part to respond to your organization's comments to the best of our collective abilities (technical sub consultants included) . However, there is a limit as to what can be answered. We will respond to the best of our ability, and in compliance with :

1. Chapter 343, Hawaii revised Statutes, 343-1: " Findings and Purpose. *The Legislature finds that the quality of humanity's environment is critical to humanity's well being, that humanity's activities have broad, and profound effects upon the interrelations of all components of the environment, and that an environmental review process will integrate the review of environmental concerns with existing planning processes of the State and counties and alert decision makers to significant environmental effects which may result from the implementation of certain actions. The legislature further finds that the process of reviewing environmental effects is desirable because environmental consciousness is enhanced, cooperation and coordination are encouraged, and public participation during the review process benefits all parties involved and society as a whole. It is the purpose of this chapter to establish a system of environmental review which will ensure that environmental concerns are given*

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appropriate consideration in decision making along with economic and technical considerations."

In short, the responses that we will attempt to provide to your 24 pages of comments will be to the best of our collective abilities. In the spirit and intent of Chapter 343, HRS, the disclosure aspects are the paramount and driving forces behind the basic Statute.

It is apparent from your Organization's reaction to the responses prepared to comments originally submitted for the DEIS that the feeling of unacceptability was to the style and content of the response. We will attempt once again to respond wherever we can to the best of our ability, but we can respond only to the extent that we have data and within the scope of the subject petition (8.74 acres). We cannot respond to concerns expressed over portions of land that are not the subject of the petition; further, the responses prepared by the technical consultants will be based on their professional expertise that was utilized to develop the technical studies attached to the DEIS.

For those comments that we cannot provide adequate responses, they will be collected and summarized in Chapter XI, SUMMARY OF UNRESOLVED ISSUES. "These unresolved issues will be or must be resolved prior to commencement of the action". Title 11-Chapter 200 Department of Health Environmental Impact Statement Rules, section-17 (n). Finally, we will respond to each comment, one by one, providing a response that is based on our available data; in the absence of this data, we will so state that the data is at this point in time, not available, or not developed. 11-200-22 (c) (1) (2).

Mr. Doar, we do not mean to avoid responding, but we cannot provide your organization with information not available to us.

LUINAKOA PARTNERS:

1. The statement that Luinakoa Partners decided voluntarily to prepare an Environmental Impact Statement is supported by a memorandum dated July 20, 1992 to Mr. Renton Nip, Chairman of the Land Use Commission (copy attached).

2. At the present time, Luinakoa Partners consists of William R. Crowder and D. G. Anderson. However, Mr. Crowder is the senior partner and maintains the right to expand this group if he so desires. The partnership agreement is not available to the Aina Koa Community Association via this EIS.

3. This information on the previous development records for Messrs. Crowder and Anderson has been provided in our response to your comments of October 7, 1992. Nothing has changed since that date.

4. This information was provided in the response dated October 7, 1992 and nothing has changed since that date.

5. The most comparable project to the Luinakoa project in terms of difficult site conditions would be the Kaola Way project in lower Pacific Heights Road. In some instances, that project was more challenging in terms of soil conditions, site preparation, and structural improvements. The Association should make an effort to view that project so that they can see visible proof of a project that was difficult, but buildable. The project permit process was normal and proceeded without undue community concern or agitation.

6. Mr. D.G. Anderson was cited in 1984 with misdemeanor charges for remodeling without a building permit.

7. Mr. D.G. Anderson was a previous Senator of the State of Hawaii, representing the Windward Oahu District. He is also a member of the State Republican Party, and has served as the Managing Director for Mayor Frank F. Fasi in 1986-87 for a period of eighteen months.

8. No capital has been contributed to date; the partnership is operating out of both Mr. Crowder and Mr. Anderson's personal checkbooks.

9. It is impossible to determine firm construction and other development costs since the project and inevitable conditions that no doubt will be attached have not been established. As an example, there will be a City & County Park dedication fee that will be established on density, appraised property values, and or unit count. Also, there will be an affordable housing exactment to be calculated by the City Department of Housing & Community Development and the City Council. The Board of Water Supply will also require a water source development fee for water to beprovided.Altogether, it is impossible to determine costs or profits.

10. The Bishop Estate is the fee owner of the 3-5-24:1 parcel and Luinakoa Partners has a development option on only 8.74 acres. Nothing more, nothing less.

WATER RUNOFF The responses to comments 11-34 have been prepared by Engineers Surveyors Hawaii, Inc. are providedas an attachment to this response.

SOIL CONDITIONS The responses to comments 35-49 have been prepared by Fewell Geotechnical Engineering, Ltd. and are provided in their entirety as an attachment.

EAST HONOLULU DEVELOPMENT:

50. Existence of approximately 585 acres of developable land in the Urban District does not permit the Luinakoa Partners the option to develop these Urban classified lands. The opportunity to develop lands requires ownership first.

51. In actuality, Luinakoa Partners has not explored the possible development potential of these 585 acres.

52. The parcel described herein also belongs to the Bishop Estate and as we understand, it has been evaluated by many developers. At the present time,there appears to be little interest in that parcel due to its one acre plus size lots and the related development costs.

FUTURE DEVELOPMENT PLANS: Comments 53-56 are Association concerns better directed to the fee owner mentioned, the Bishop Estate. They have not included Luinakoa Partners in their long range future development planning. However item 56 which discusses a bridge has certain positive aspects.

REAL PROPERTY TAX ANALYSIS: Comments 57-64 have been responded to by LOCATIONS REAL ESTATE SALES & RESEARCH and are provided in their entirety as an attachment.

SOCIAL IMPACT SURVEY: The responses to comments 65-66 have been prepared by EarthPlan and are provided in their entirety as an attachment.

MISCELLANEOUS CONCERNS:

67. The most recent sale on Luinakoa Street took place in February, 1992 and sold for $400,000 +! Today's median priced single family dwelling on Oahu is in the middle to high $300 thousand dollar range, hardly reasonably priced housing. Luinakoa Residential would be in a comparably priced neighborhood. They would be *"safe, sanitary, and livable homes located in suitable environments . . . . . ."*.

68. It is unfortunate that the analogy was misleading to the Association and we apologize for any misunderstanding. The analogy was used not to question the appropriateness of park use in a Conservation District as a permitted use, but to demonstrate that the mitigative measures that would be used today as a mandatory requirement under the County Building Code ordinance would require mitigative measures that make residential development possible.

69. Section 1.4 Summary of Probable Impacts, page 2 identifies the subject parcel as Preservation lands on the City's Development Plan and Zoning maps. Further discussion on these subjects are found on page 9, Section 3.7 EAST HONOLULU DEVELOPMENT PLAN.

70. Traffic noise will not be of significant consequence if present traffic patterns are typical. Additional traffic generated by 52 new residences should not result in significant noise increase; the key word here is significant. We do not state that there will be no increase in traffic noise; only that the increase will not be of significant consequence.

71. Again, the statement made in 4.11.1 does not state that the project will not alter existing scenic vistas or aesthetic values. Rather, the statement says " The proposed development at Luinakoa Street will not significantly alter the existing scenic vistas or aesthetic values of the Kapakahi Gulch area."

72. There may be some who will agree with your assessment of these section 5-9; they are however mandatory requirements under the provisions of Title 11, Chapter 200, Department of Health Regulations for Environmental Impact Statements. Also, we have corrected section 7.2 and discussed alternative construction techniques.

73. See above.

74. The "passing reference" to no parking on both sides of the street is a possibility if after examination by the City Department of Transportation Services, the existing street is considered eligible for parking on one side only designation. The Luinakoa project will be required to comply with current Land Use Ordinance requirements for two car garages. This would make available more on street parking in the mauka street extension. This could make existing residences with only one car garages, or two car garage homes with five cars, hard pressed to find parking. Weekend visitations by family or friends would also become cumbersome, but not impossible. Many communities on Oahu suffer but somehow manage to cope with this problem of convenient parking. With or without this project, at one point in time, the non-conforming uses presently in existence on Luinakoa Street will need to provide parking in comformance with the Land Use Ordinance. This will happen one day.

RESUBMISSION OF COMMENTS WHICH WERE NOT ADEQUATELY OR SPECIFICALLY RESPONDED TO IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT - FIRST SET OF COMMENTS USING ORIGINAL NUMBERS

III. STATE FUNCTIONAL PLANS

26.& 27. a. Agriculture - N/A

b. Conservation Lands - Chapter II, ("Long -Term Philosophy Statement"), 1) *"Direct future Urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized."* Our interpretation is that Luinakoa Street is not a critical environmental area and there will be mitigating measures imposed by adequate governmental controls on site improvements.

c. Health - N/A

d. Energy - N/A

e. Historic Preservation - The proposed 8.74 acres has been examined by Paul Cleghorn Consulting and his report filed with the Historic Sites Division, Department of Land and Natural Resources. No significant sites were discovered on the subject parcel requiring further investigation. In the event that there will be archeological or cultural finds on the site, all work is to stop until a determination is made by the DLNR/SHPO.

f. Recreation - The subject parcel does not qualify for any of the identified "ISSUE AREA II, MAUKA , URBAN , AND OTHER RECREATION OPPORTUNITIES."

g. Tourism - N/A

h. Transportation - N/A

i. Human Services - N/A

j. Employment - Beyond the temporary short term constructed related activities, the proposed project is not intended as a catalyst for permanent employment or as a center for employment.

k. The school age children that will be generated by the proposed project will and can be accommodated by existing educational facilities.

28. As a residential subdivision, the proposed project runs counter to the objectives and policies of HRS 226-12(b)(3). This is the purpose of petitioning for a District Land Use Boundary amendment.

29. Similar to # 28, a residential subdivision does not meet the objectives and policies for the physical environment HRS 226-13(b)(3).

30. The proposed project will drain into the Kapakahi Drainage Channel which is a City & County owned and operated facility. As such, it is subject to the objectives and policies of HRS 226-13(b)(3). We would assume that the drainage runoff generated from the 52 lots would not be radically different from the existing runoff from residential/urban land uses in Aina Koa-Luinakoa.

31. The proposed residential subdivision is not to be confused with toxic Industrial strength activities which are not compatible with Urban/Residential land uses. There will be temporary interruptions of the ambient conditions which

will no doubt annoy and interfere with the existing residents' health and well being. In this sense, the objectives and policies of HRS 226-13 (b)(4) will be violated.

32. The objectives and policies of HRS 226-13 (b)(5) will, be violated, if not monitored and administered by the appropriate governmental agencies .

33. The policies and objectives of HRS 226-13 (b) (6) will be enhanced by this residential subdivision since today's more stringent building code standards demand that stricter controls on site preparation and structural construction be employed to prevent damage to property and loss of life, and health.

34. The proposed residential subdivision will not be drilling a private well for potable water source, or percolating chemicals of agricultural strength into the basal aquifer. This will presrve the objectives and policies of HRS 226-16-(b) (1).

35. The objectives and policies of HRS 226-19 (a) (2) will not be served if the definition of "reasonably priced" is beyond the market price for homes sold in the Aina Koa - Luinakoa area.

36. The objectives and policies of HRS 226-19 (a)(2) are clearly violated in this proposed project if one is take the Aina Koa Community Association's objections at face value.

37. See # 35.

38. See # 36.

39. The objectives and policies of HRS 226-19(b)(5) will not be fostered since the proposed project will not provide a continuation of a community traditions and values. It is difficult to replicate WW II/Korean veterans purchasing house and lot for $20,000 in today' market.

40. The objectives and policies of HRS 226-19(a)(1) will impact the basic health environment of the elderly residents of Luinakoa Street, but in terms of basic health needs for the general public, there will be little if any adverse impacts.

41. The objectives and policies of HRS 226-19 (a) (2) i.e. the maintenance of environmentally healthful conditions will be temporarily impacted during the construction periods for offsite and house construction. At the completion of the 52 lots, life in the style presently enjoyed, will resume.

42. The objectives and goals of HRS 226-104(b)(1) considers urban/residential projects of a greater magnitude when discussions dwell on regional growth and

distribution. Impacts on infrastructure facilities are considered in subdivisions and projects like Mililani Mauka; Waikele; and Kapolei. Not 8.74 acres of fee simple lots.

43. HRS 226-104(b)(4) has been satisfied by the City Board of Water Supply who has advised the applicant that there is sufficient potable water for the 52 lots.

44. The policies and objectives of HRS 226-104(b)(9) would be violated if the extension of Luinakoa Street was considered and verified as a critical environmental area. Since it is not, then the regional growth distribution and land resource utilization is not a significant impact.

45. See # 44.

46. The objectives and goals of HRS 226-104(b)(12) will not be critically affected with the conversion of the subject parcel. Future generations will enjoy the residential land uses beyond the loss of 8.74 acres of Conservation lands.

47. The objectives and goals of HRS 226-104(b)(13) will be violated with the project that will convert open space into urban residential land use. This will be done to the project's anticipated impact resulting from 8.74 acres loss.

48. The goals and objectives of HRS 226-106-(1) will not meet housing demands of low and moderate income and gap group housing. The project will be directed at market priced lot sales.

49. See # 48.

50. See # 48.

COMMUNITY:

51- 56. No demographic examination of the limited Luinakoa Street and Aina Koa Street community was conducted. Exhibit D, the Social Impact Study contains the extent of demographic material prepared. No slight was intended when the dearth of material was prepared, but in retrospect, the impacts of 52 lots on 8.74 acres did not seem significant in size and scope.

HOUSING NEEDS:

57-62. Beyond the acreage figures provided in the DEIS, the figures have not changed from October, 1992. We cannot and have not examined other Urban designated lands, but have limited our analysis to these 8.74 acres.

63-64. We are not privy to the long term planning of the fee owner, the Bishop Estate. Your inquiry is best addressed to their planning staff.

65. Given the opportunity to develop the mauka portion of 3-5-24:1, the fee owner would require serious planning and investment of time/money to develop the balance of the mauka valley. How much time and money would be spent is known only to the Bishop Estate.

66. At the present time, the applicant is considering in-lieu cash payment. The percentage of cash to be paid has been established on a formula calculating as 30% of the project's development costs. This is in correspondence from the City Department of Housing & Community Development commenting on the DEIS.

TRAFFIC PROBLEMS: The Traffic report prepared for this project and appended as Exhibit C provides responses on pages 4-7. A summary on pages 17-18 indicate that the added vehicles from the proposed project will not add significantly to the existing cars on Luinakoa Street. Traffic analysis also included the Hale O Malia traffic loading on Malia Street. The responses to comments 68-83 are provided by The Traffic Management Consultant in their entirety as an attachment.

SOILS:
The Soils consultant, Fewell Geotechnical Engineering, Ltd. has once again, reviewed comments 84-101 and his responses are provided as an attachment.

NOISE: No Noise analysis was conducted for the proposed project and this decision was made on the basis of the project size and scope. Further, the noise that will be generated will be limited to the temporary construction related noise that is regulated by the State Department of Health Regulations on Community Noise on Oahu, in Title 11, Administrative Rules Chapter 43. At the present time, the ambient noise levels in Aina Koa Valley and more specifically on Luinkoa Street would be in the 55 dba range, which would be typical for a residential subdivision. Construction related noise will be the responsibility of the contractor and violations of the noise standards are enforceable by the Police Dept. Finally, the normal operating hours for construction project is 0700 and 1530 hours, five days a week, and to exceed these time periods or the noise standards requires a permit from the Dept. of Health.

DAMAGE RESULTING FROM THE PROPOSED PROJECT: The applicant intends (with the residents' permission) an inspection of the existing homes to acertain the current physical conditions of each residence on Luinakoa Street. This inspection would be conducted by an insurance underwriter who will maintain a file of all current homes. Also, a bond will be posted by the developer

to be used as needed for repairs attributed to the proposed construction. The ability to control rock/boulders above the project site and across on Aina Koa Street will be difficult if not impossible. All loose rocks and boulders on the subject parcel will be collected and removed prior to grading. The removal of rocks beyond the 8.74 acres is not under consideration. Fewell Geotechnical Engineering, Ltd. has addressed the rock/boulders issue to the best of their abilities. We regret your dissatisfaction with their responses. NO USE OF EXPLOSIVES!!

DEVELOPERS : Comments 127-128 have been addressed in an earlier section. Comments 129 -130 are premature to respond to since final construction engineering has not been ccompleted on which firm construction building estimates can be made. Financing cannot be calculated for the same reasons. On the subject of lots that are sold but not developed, it will remain as is the practice today, the purchaser's responsibility.

SOCIOLOGICAL AND HEALTH RELATED EFFECTS:

140. Once completed, the proposed project should not have health related effects on the community. As a single family residential project, the 52 lots will comprise equivalent sized homes.

141-149. The construction related activities will have initially, a disrupting health related effect on the existing community. These activities will be temporary in nature and will be mitigated by prevailing regulations on ambient noise levels, fugitive dust control, and minor traffic disruptions during the movement of construction equipment and supplies for the project. For elderly retired residents who will be at home during the working day, there will be annoyances, and even irritating periods of discomfort. For shift workers who will be affected during their efforts to sleep during the day, there could be health related effects. For children, the annoyance levels may not be as severe since children are able to adapt more readily than seniors, used to an idyllic life of non-interruption.

150. For severe health related problems, (people on respirators, heart control equipment, and other defined health support systems) these residents will be analyzed on a case by case basis in consultation with their physicians.

151. The Honolulu Police Department has indicated that the additional 52 lots will not require additional staffing for their current coverage of the area. Projects of the size and scope of Waikele, Kapolei, and Mililani Mauka will require specific police staffing since their size dictates more coverage. Crime in the area will take place with or without this project.

FLOODING : Engineers Surveyors Hawaii, Inc. has addressed the potential impacts from flooding and drainage controls. All drainage impacts will be mitigated in accordance with applicable County standards on runoff and drainage. Drainage improvements to the Kapakahi Drainage Channel will be in accordance with the State Department of Land and Natural Resources when a determination for a Stream Alteration permit has been made. The Corps of Engineers have not indicated that extension of the channel will require a Corps permit. Please refer to their responses prepared and included earlier.

CONSTRUCTION PHASES : There are no construction schedules determined at this early stage. The project will be built in one phase of 12 months. A more definitive phasing schedule will be available after all land use policy amendments are completed.

LAND VALUES :

174. Sales prices will be determined at the time of construction when more accurate costs have been determined. It is unknown if the sale price will be at current market price levels or how the prices will be determined.

175. The ultimate selling prices are unknown.

176. Depending on the size of the home to be built, the style of house, and site improvements dependent on the individual home design, the average construction costs for the houses are unknown to the developer. To build a tract style house today can cost between $80-100/sq.ft. with today's material and labor costs. Individual homes to be built on the proposed project are not known .

177. They were assumptions andwere based on Multiple Listings data. Actual sales prices will be established at time of project completion.

Comments 1-58 have been addresssed previously by Fewell Geotechnical Engineering ,Ltd. and Engineers Surveyors Hawaii, Inc. in previous sections to the best of their ability. Certain comments are not answerable. without the benefit of further more specific analysis. This analysis will be performed in order to comply with applicable building code requirements.

RESIDENT NOTIFICATION :

59. No one other than residents on Luinakoa Street were sent copies of the original Environmental Assessment during the earlier period when the Development Plan and Zoning review was being conducted. For the Land Use Commission boundary amendment, the Community Association was recognized as a clearing house for all residents of Aina Koa.

60. It is highly unlikely that residents of Ainakoa Avenue would experience significant impacts, (i.e. noise, dust, air quality, traffic, water runoff, flooding, etc.) resulting from this project. There may be impacts, but hardly significant.

61. For purposes of the Environmental Assessment, only those adjacent property owners are to be provided copies of documents. It was felt that a courtesy was being extended by including all residents on Luinakoa Street. Access to copies of all environmental documents are available with a little effort by the population at large. The developer is not required to provide EIS documents to each and every resident in Ainakoa Valley.

62. See # 60 and change Ainakoa to Halekoa.

63. See # 61.

64. See # 62.

65. See # 63.

CULTURAL INFORMATION:

66. None.

67. What efforts were made are contained in Exhibit D.

68. More appropriately, this comment should be addressed to the landowner.

69. See item # 68.

This concludes our response section to your comments and concerns that have been examined to the best of our collective abilities at this point in time. Please try to understand that the information will be forthcoming and will be provided to the regulatory agencies that will need to review and accept the planned developments, offsite and for the portions to be dedicated to the City. The time as to when this information is appropriate is what seems to be at odds; please continue to monitor the project as we know you will, but also bear in mind that these are fee simple lots in size that is consistent with the existing area.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

Encl: Soils; Social Impact; Traffic; Engineering; Real Estate

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FEWELL GEOTECHNICAL ENGINEERING, LTD.

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File 1196-1
December 17, 1992

Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attention: Mr. F. J. Rodrigues

Subject: Answers to Soil Questions
Luinakoa Partners Residential Subdivision
Honolulu, Oahu, Hawaii
Tax Map Key: 1-5-24:1

In accordance with your request, we have reviewed the soil-related questions from the December 7, 1992 letter from Mr. John T. Harrison of the Environmental Center of the University of Hawaii at Manoa, and the additional questions from the Aina Koa Community Association of December 7, 1992. This letter summarizes our comments.

University of Hawaii Environmental Center - Questions 1, 5, 6, 7, and 8 all request information that will not be available until a subsurface investigation, laboratory testing, analysis, and report have been completed. These questions must be answered during the design phase when more information is available.

Questions 2 and 3 relate to how this project may affect slipping and shifting of foundations of the adjacent residence. There will be no effect on the adjacent parcels. One of the basic requirements of any design submitted to the Department of Public Works for approval of the grading permit is that there be no effect on any of the adjoining parcels.

Question 4 relates to the timing of the detailed subsurface investigation. In our experience, a detailed subsurface investigation is normally not performed until most of the basic permits and authorizations have been obtained to permit the project to proceed, if the soil conditions and problems can be economically addressed. It is not economically practical to undertake these investigations until after it is determined that the project could proceed if the soil conditions permit economic development.

Question 9 is a legal question regarding liability. It is not a technical question to be answered by FGE, Ltd. We can say that many of the adjoining properties are already showing indications of pre-existent site movements due to the soil conditions and design details used for their construction. This is a pre-existing condition which is not related to the future construction. The owners would have available full legal recourse if they can demonstrate that there was damage to their property due to any activity related to the proposed new construction.

We do not agree with Mr. Harrison's conclusion that appropriate soil tests should have been conducted prior to the DEIS to enable adequate preparation and review. This is not the normal practice of the industry. The detailed subsurface investigations are not normally conducted until the initial approvals have been obtained.

Aina Koa Community Association Questions - The association produced a long list of questions related to soil conditions, soils, and damage resulting from the proposed project. Questions numbered 36, 37, 38, 39, 41, 42, 84, 85, 88, 89, 90, 91, 92, 95 and 96 are questions which will depend on the findings of the subsurface investigation and the actual design of the site grading. The information to answer these questions is not presently available and would not be available until much later in the design process. The following are a few comments that can be provided at this time.

The additional subsurface investigation program will be established based upon the preliminary site grading plans. Borings will be placed at locations to establish the general subsurface conditions, to obtain samples for characterization of the soil strengths, and to investigate areas of particular concern, such as large cuts or embankments. Questions relating to the soils conditions can only be addressed in a general matter at the Land Use Commission stage since a detailed design and investigations are not normally undertaken until the initial approvals have been obtained. The soils investigation for a project of this nature is rather extensive and therefore expensive. It is not economically prudent to undertake a detailed investigation prior to the Land Use Commission's approval.

The proposed grading and site construction methods normally do not include the use of any explosive in areas of close proximity to existing residential areas or improvements. This would not preclude the use of explosives to a limited degree in accordance with the prevailing ordinances in areas sufficiently removed from the existing residences so as not to cause harm. Seismic or blasting monitoring would normally be performed if explosives are used to verify that the ground acceleration and motion do not exceed acceptable limits.

Questions 43, 44, 45, 46, 48, 97, 98, 99, 100 and 101 are not technical questions related to the geotechnical conditions.

Question 47 states the requirement that urban lands be reasonably free from danger of floods and unstable soil conditions and questions why the DEIS fails to address the 20 percent slope requirements. These concerns must be addressed by the design and construction of the site. The engineers have a professional responsibility to protect the public which includes assuring that the proposed design is reasonably free from the danger from floods and unstable soil conditions. This is one of the minimum requirements for acceptance of the proposed design by the City and County of Honolulu.

Questions 49, 113, 114, 115, 116, and 117 all relate to the potential for rocks and boulders to fall from the hillside onto property of the current residents or the proposed project. All homes built at the base of steep slopes in Hawaii are exposed to the risk of falling boulders. It is a natural process of weathering of the slopes. In purchasing the homes at the base of the slopes, the owners in effect are agreeing to assume this risk. Periodically, boulders will dislodged from the slope due to natural forces and may damage homes or even injure some of the occupants. This risk cannot be completely eliminated by any practical solution.

The assumption of risk could be related to that of driving a car to work. There is always the risk of injury and damage from a automobile accident, but the risk is sufficiently small that the drivers feels that the benefits outweigh the risk. The developer and contractor will be required by existing regulations to conduct their operations so that there is no increase in this risk due to their operations. It appears that the only adverse action which could affect the boulders above the surrounding residents would be vibrations and due to the distance involved, it is quite feasible to control the excavation operations so that no excessive

vibrations are created outside the site. It would not be practical for the contractor to move on the property other than his own to stabilize any existing loose boulders.

Question 87 inquires as to the types of soils where previous movements have occurred. Based upon our general experience, we believe that the same soil types that are present at this site are also present at the identified areas were previous slides have occurred. It should also be noted that the locations where the slides occurred represent probably less than 1 percent of the residential sites that are underlain by the same soil type. The other 99 percent generally have not experienced any earth mass movements. The presence of the soil in itself does not make the site unsuitable for development. With the present engineering techniques and construction methods, the site can be adequately developed to support the proposed dwelling. The extent of the action necessary to create a stable site and in turn the cost of doing so will be partially established by the subsurface investigation.

Questions 94, 95 and 96 relate to the construction activities by the purchaser of the lots. While this cannot be determined at this time since the basic design has not been established, and the design of the proposed dwellings on the lots is not known. It has been our general experience that the site grading would be limited to minor excavations for partial basements and low retaining walls. All of this work is also controlled by building permits and is reviewed by the Building Department. It would not be expected that the grading for the new dwellings would be any more than performed for the existing dwellings in the same area.

Questions 100 and 101 relate to mortgage availability and are not technical questions to be answered by FGE, Ltd.

Questions 118, 119, 120, 121, 122, and 123 are questions relating to the potential for soil movements to damage existing dwellings or utilities. One of the primary requirements of an acceptable design is that the proposed development would not damage any of the adjoining homes or utilities. It should again be noted that many of the existing dwellings already have distresses due to soil problems on their sites.

Question 124 relates to compensation for correcting damages to homes. This again is a legal question not related to the geotechnical aspects of the project, but it should be noted that the courts provide many avenues of recourse if any of the homes are damaged by the construction or truck traffic.

Question 125---all of the lots will be suitable for development using normal construction methods. Each purchaser will have to evaluate the cost of developing the site for their particular design. This is an evaluation to be made by the buyer prior to completion of the purchase. No lots will be sold that are impossible or extremely difficult to build upon.

Question 126 is a legal question and not a technical question to be answered by FGE, Ltd.

Summary - Many of the questions raised relate to the detailed design and cannot be answered until a preliminary grading plan and a detailed subsurface investigation has been completed. Many of the questions also relate to the minimal requirements that are already covered by the existing ordinances, such as vibration damage, noise, dust, and damage to adjacent parcels. Provisions for legal recourse for any damage are already established and available to any damaged parties. It is not normal practice for the developer to supplement this system or to provide additional guarantees beyond the legal requirements. All of the

concerns raised by the parties are covered by existing laws and regulations and must be answered prior to the final acceptance of the project. The permit cannot be approved unless these regulations are fully addressed.

If you have any further questions, please do not hesitate to contact me.

Respectfully submitted,

FEWELL GEOTECHNICAL ENGINEERING, LTD.

By Richard B. Fewell, P.E.

RBF/slf

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PARAMETRIX, INC.
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LOCATIONS
Real Estate Sales & Research

December 15, 1992

Luinakoa Partners
43 Ahui Street
Honolulu, HI 96813

Dear Luinakoa Partners:

SUBJECT: Response to Property Tax and Property Value Impact Questions by Area Residents

57) There are no inherent assumptions in the analysis. There are statements of facts and comparisons of sales prices of existing neighborhoods with time references to new developments. The only assumption would be the applicability of these cases to Luinakoa.

58) Probably not, unless the new lots and subsequent homes are judged to be comparable existing Luinakoa area homes.

59) Can not speak for the City & County of Honolulu, but the answer to 58 applies.

60) Unfortunately, an ideal and exact case does not exist to our knowledge so the best and most comparable cases must be used for analysis purposes.

61) The same answer as 60 applies.

62) No.

63) Yes, Kaka'ako is an example of how new development can result in increased land values. However, the situation in Kaka'ako is completely different. The land use of that entire area was changed from industrial to residential and commercial.

64) No, we have not done studies which have concluded that land values in surrounding neighborhoods rose because of a new development. We are not aware of any other studies, but it may be appropriate to check with city and state agencies that would handle such matters.

Sincerely,

Michael A. Sklarz
Director of Research

Locations Inc.: Seven Waterfront, Suite 210, 500 Ala Moana Blvd., Honolulu, Hawaii 96813 Telephone (808) 545-8800 FAX (808) 545-8850

ESH
ENGINEERS SURVEYORS HAWAII, INC.

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December 9, 1992

Parametrix, Inc
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

ATTENTION: Mr. Fred Rodriguez

GENTLEMEN:

SUBJECT: LUINAKOA RESIDENTIAL SUBDIVISION

Pursuant to the additional comments with regard to "Water Runoff", we offer the following:

Items 11, 12 & 13 - As explained in our previous correspondence, the ± 9 cfs increase in storm water runoff due to improvements is a result of comparing runoff conditions before and after improvements on the ± 5 acres that is expected to be disturbed. A 100-year storm condition was used for this rough comparison. The Rational Method and the criteria setforth in the City & County Drainage Standards were used to determined the quantity of flow rate.

Item 14 - Whenever there is rainfall, some water will flow downstream; flows will be visible at varying degrees depending on intensity of the rain. We do not understand the purpose of this question.

Item 15 - The proposed diversion ditch will probably be reinforced concrete channels (either trapezoidal or rectangular) and will be constructed along and adjacent to the upper perimeter of the upper lots, in order to intercept storm water runoff from above. Size, length and depth will be determined during the design stages of this project and will be designed to handle all anticipated runoff as required by the City's Drainage Standards.

Item 16 & 17 - As stated in an earlier correspondence, the total tributary area for the area above and including the project site is approximately 700

acres which is expected to generate approximately 3,200 cfs of storm water (City & County peak discharge). A more detailed map showing runoff from each sub-areas will be made during the design of the drainage improvements for the project.

Item 18 - Analyses of the entire stretch of the Kapakahi Drainage channel has not been made at this time. Data for downstream restrictions and capacity should be extensively collected before a backwater stream analyses is made. A rough analyses of the exciting channel adjacent to, and immediately downstream of the project reveal that the channel can carry a maximum of approximately 4,500 cfs of storm water (to top of lined barrier).

Item 20 & 21 - The boulder encatchment is an existing condition that will be either eliminated or incorporated into the final design of the extended channel. The Condition therefore will change after design & construction. The new construction will be designed to meet flood control requirements as required by the Department of Public Work.

Item 22 - See item 19.
Item 23 - See item 16.
Item 24 - See item 20.
Item 25 - See item 18.
Item 26 - See item 20.
Item 27 - See item 16.
Item 28 - See item 20.
Item 29 - See item 18.
Item 30 - See item 20.
Item 31 - See item 20.
Item 32 - See item 20.

Item 33 - Details of actual construction method and phasing will be done during the design stages; however, it is anticipated that a waterway capable of handling the total runoff from above will be temporarily constructed to divert the water from the new channel construction area. Temporary detention ponds and flood routing techniques can be incorporated into the construction process. If rerouting is selected the contractor will be required to provide an adequate sized drainage way to carry the upstream water to the existing channel below without flooding downstream facilities. If necessary, construction only during only the dry season can also be scheduled.

ENGINEERS SURVEYORS HAWAII, INC.

Parametrix, Inc
December 9, 1992
Page 3

Item 34 All applicable permits required by the Federal, State, & City will be applied for and acquired by the owner before construction.

If there are any questions regarding the above, please feel free to call me.

Very truly yours,

ENGINEERS SURVEYORS HAWAII INC

Robert T. Watari

Robert T. Watari
its Vice President

Earthplan
Planning and Design
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Memo

To: Fred Rodriguez
From: Berna Cabacungan
Date: December 16, 1992
Re: Luinakoa SIA
Responses to Comments

This memo responds to comments submitted by the Ainakoa Community Association in a letter dated 7 December 1992. In general, the comments on the social impact assessment suggest that the reviewer did not read our report. A comment was taken out of context and misrepresented, our interview process was ignored, and request for certain information was repeated, even though we discuss the rationale for not including such information in our report.

Page 5, #48

The mitigation measures which I provided on page 23 of our report was provided by you. We have no follow-up to provide on this.

Page 7, Social Impact Survey, #65

We did not hold "meetings" with residents. As discussed on pages 26 and 27 of our report, we conducted interviews and information on the interview process is provided.

In terms of selection of those interviewed, we used a three-step process. First, we reviewed correspondence and testimony to identify key individuals. Second, we asked interviewees for referrals, and randomly selected among that group. Third, we randomly selected people based on the street addresses.

Page 7, Social Impact Survey, #66

The reviewer criticizes our statement about change, as presented on pages 23 and 24 of our report. The reviewer's criticism of this statement suggests that (1) the reviewer has not made a distinction between social impact and community issues and that (2) the statement has been taken out of context. I will hereby address both factors.

Difference between social impacts and community issues.

The reviewer asserts that our finding that the community can adapt to change is "arrogant" especially because it "does not reflect the views of the community." We suggest, however, that the reviewer is comparing apples to oranges. He is questioning the validity of a potential impact based on current community issues on the project.

In a social impact assessment, social impact and community issues are two different factors. Social impacts are changes to the community, social interactions, and lifestyle which may occur with the proposed change. Identification of these impacts is mostly an objective process; it is based on specific components which may contribute to social impact. In the case of Luinakoa the components which were studied are discussed on pages 19 through 23 and included:

- effects of a new development project in the area, including consistency with existing uses, differences in architecture, further development interest, change in the natural environment and impact on property value;
- the types of new residents; and
- physical effects.

We analyzed each component and discussed the extent to which each component will affect the community. We found that some of the impacts are definitely negative, and these include noise and dust from construction. We further found that some impacts are difficult to determine at this time, such as the potential for further development. Also, we identified impacts which could have positive outcomes, even though the community suspects the worst. Thus, from a social *impact* perspective, we identified both positive and negitive potential outcomes of the project.

In our discussion of community issues, however, it was a totally different matter; our representations were clearly negative. Issues are reactions, opinions. Issues change over time, as people's priorities and values change. We accurately reported that, at the time of the interviews, the "existing neighboring community has clearly stated its position opposing the Luinakoa Residential Subdivision." On pages 33 through 38, we identified all issues raised by those interviewed, and provided an analysis of these issues. Essentially, we stated our finding that "the only solution which will be acceptable to the residents is to move the project to another community, or as one person put it, 'to someone else's backyard.' "

We stress that community issues do not dictate social impacts. In other words, an impact will not necessarily occur simply because the community feels that it will. For example, belief that property values will increase will not cause the increase; expectation for more crime will not increase the crime rate.

Thus, in the case of Luinakoa, even though the community objects to the project, this does not mean that the project is automatically bad. Each type of impact, social or otherwise, needs to be identified and analyzed; decision makers will ultimately decide if the project benefits outweigh the benefits.

Full Context of the Statement About Change.

The reviewer rewords the statement to say that "if the project is forced on the community, the community will adapt to it." We strongly take issue with interpretation of our statement; we believe that this interpretation is erroneous and totally out of context.

The reviewer singled out the one statement and criticized it without the benefit of the previous five pages of analysis which led to our statement on change in this community. On pages 19 through 23, we pointed out that there will be both positive and negative changes. We also note that this community has a history of opposing development because it brings changes. A recent example is the position of the Association on Hale o Malia. The opposition to the care home is vehement and consistent regardless of project modifications.

We have written our assessment to disclose impacts to decision makers. As we point out on page 23, ultimately the decision makers will decide on whether this community is spared change because they do not want it. We never suggested that the project be "forced upon" the community, nor do we advocate implementation or denial of the project.

Page 10, Community, #51 through #54

On page 4 of our report, we explain why we did not include this information. Briefly, Census Tract 4.97 only has one block group, which is the smallest distinguishable group in census reporting. Second, the detailed information which was requested is only found in Summary Tape File 3-A, which was not available in October. (*The information has since been released, but we do not have the budget to revise our report*). Third, the information would be interesting, but would not substantially affect the findings regarding social impacts of the project.

Page 11, #55 and #56

According to the Locations study, there will be no impact on property values.

Page 17, #140 through #150

On #140, the question is vague. I'm unclear as to the specific project component to which the reviewer is referring.

On page 19, in Section 4.2.2, we discuss the possible short term impacts of construction on neighbors, particularly on elderly people with health problems. The impacts have been disclosed and I believe that the more detailed information requested by the reviewer is beyond the scope of the EIS.

Page 18, #151

We conferred with the Police Department during our study. It was felt that the project would not increase the crime situation in the area.

Page 24, #66 and #67

An oral history program may be appropriate in an effort to document the history of the area for future generations. A veterans group, for example, may want to record past events to ensure that their children and grandchildren know about people's origin, historic social interaction, chronological events, and so on. A UH department may have similar interests.

Within the context of an EIS, the social impact study assesses project impacts on the present day and future community of this area. An oral history program would not indicate how the project may affect these residents today or in the future and such a program would be unnecessary and irrelevant to our study.

RECEIVED
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PARAMETRIX, INC.
HONOLULU

TMC
THE TRAFFIC MANAGEMENT CONSULTANT
Randall S. Okaneku, P. E., Principal • 1188 Bishop Street • Suite 1907 • Honolulu, Hawaii 96813
Telephone: (808) 536-0223 • Facsimile: (808) 537-2985

December 14, 1992
Job No. 9209

Parametrix, Inc.
1164 Bishop Street, Suite 1600
Honolulu, Hawaii 96813
Attention: Mr. Fred Rodriguez

Gentlemen:

Subject: Luinakoa Street Subdivision

Per your request, I have reviewed the letter from the Ainakoa Community Association, dated December 7, 1992, regarding their traffic concerns on the subject project. My responses correspond to the comments under Section VI. Traffic Problems, beginning on Page 12 of the December 7, 1992 letter:

1. Comment No. 68

   The subject project is expected to generate 12 vehicles per hour (vph) entering and 34 vph exiting the subdivision during the AM peak hour of adjacent street traffic. During the PM peak hour, the proposed project is expected to generate 38 vph entering and 22 vph exiting the subdivision.

2. Comment No. 69

   Seventeen (17) vehicles were observed parked on Luinakoa Street after the AM peak period of traffic. Nineteen (19) vehicles were observed parked on Luinakoa Street before the PM peak period of traffic.

3. Comment Nos. 70 & 71

   The proposed project is not expected to adversely impact the existing on street parking on Luinakoa Street. The proposed project will meet current building code for two car garages, therefore additional on street parking should be available along the extension of Luinakoa Street.

4. Comment No. 72

   The existing Luinakoa Street and the proposed extension conform to current City & County of Honolulu road standards. According to City & County of Honolulu traffic engineers, a roadway, designed to these standards, should be able to accommodate a subdivision totaling 79 dwelling units (existing 27 dwelling units plus the proposed 52 dwelling units).

5. Comment No. 73

   The existing 28 foot wide roadway should accommodate any emergency vehicles, even with vehicles parked on both sides of the road.

6. Comment No. 74

   Traffic on Halekoa Drive would increase by 34 vph and 38 vph in peak directions of traffic during the AM and PM peak hours, respectively. Halekoa Drive at Ainakoa Avenue is expected to continue to operate at Level of Service "A", if the project is approved.

7. Comment No. 75

   The left turn movement mauka bound Ainakoa Avenue to Halekoa Drive is expected to continue to operate at Level of Service "A", if the project is approved. Similarly, Luinakoa Street at Halekoa Drive is also expected to continue to operate at Level of Service "A".

8. Comment No. 76

   Traffic on Ainakoa Avenue, makai of Halekoa Drive, would increase by 34 vph and 38 vph in peak directions of traffic during the AM and PM peak hours, respectively. By generally accepted traffic engineering standards, these volumes are not considered significant from a traffic impact standpoint.

9. Comment No. 77

   The proposed project traffic is not expected to impact Ainakoa Street, mauka of Halekoa Drive.

10. Comment No. 78

    Malia Street at Ainakoa Avenue is expected to continue to operate at satisfactory Levels of Service during the peak hours of traffic. The traffic analysis assumes that the proposed Hale O Malia is approved and developed. The analysis also accounts for school traffic.

11. Comment No. 79

Mauka bound traffic on Ainakoa Avenue at Kalanianaole Highway would increase by 14 vph during the AM peak hour, as a result of the proposed project.

12. Comment No. 80

As indicated above, the increases in traffic resulting from the proposed project are not considered significant.

13. Comment No. 81

The proposed project is not expected to result in any significant traffic impacts, therefore no recommendations are made at this time.

14. Comment No. 82

Banning parking on Luinakoa Street is not recommended at this time.

15. Comment No. 83

Building a bridge between Luinakoa Street extension and Ainakoa Avenue is not recommended at this time.

The basis for the above responses are documented in the "Traffic Impact Analysis Report for the Proposed Luinakoa Street Subdivision", dated October 5, 1992. If you require clarification on the above material or have any other questions, please do not hesitate to call me.

Very Truly Yours,
The Traffic Management Consultant

By Randall S. Okaneku

Randall S. Okaneku, P. E.
Principal

92-1217

ENVIRONMENTAL COMMUNICATIONS INC.

F. J. RODRIGUEZ, PRESIDENT

Memorandum:

'92 JUL 21 PM 1 50

To: Mr. Renton Nip, Chairman

State Land Use Commission

From: F. J. Rodriguez F. J. Rodriguez

Date: July 20, 1992

Subject: A-92-678, William Crowder, (Oahu)

Luinakoa Partners has decided voluntarily to prepare a full Environmental Impact Statement (EIS) for the proposed residential subdivision project at Luinakoa Street. This decision is based on the participation at a Neighborhood Board forum on July 16, 1992 where the residents of Luinakoa Street presented their concerns in open discussion. While there is no agreement on their stated position, the decision to prepare a full EIS is felt to be a positive step in providing the residents with the additional information they believe to be important. Furthermore, this process will also provide them with a better insight into the actual process, particularly in the discussions that deal with the physical and social impact concerns relevant to the project.

The applicant does not wish to disrupt in any way, the residents' lifestyle socially or economically, with the development of the proposed project. Instead, the Partners seek a common ground of acceptance that will be satisfactory to both groups. The proposed project is a small project and not considered significant as defined by Chapter 343, HRS. The City Department of General Planning made a determination of Negative Declaration on June 2, 1992. The petitioner's attorney advises that the subject Negative Declaration by the City was issued prior to Act 241 (June 17, 1992), and in effect, this would permit the LUC to accept the Negative Declaration as in previous applications.

The Partners are requesting the Commission to place our petition pending before you on hold, and do so until the preparation, processing, and determination on a full EIS has been completed. This is to resolve all community concerns within the process of Chapter 343; we intend to make all efforts to work with the community to reach an amicable solution.

Thank you for your favorable consideration of this request.

cc: Rep. Barbara Marumoto
Waialae-Kahala N.B. # 3
Mr. Donald A. Clegg, DLU

1146 FORT STREET MALL, SUITE 200 • P.O. BOX 536 • HONOLULU, HAWAII 96809 • TELEPHONE (808) 521-8981

CHAPTER XI.

SUMMARY OF UNRESOLVED ISSUES

11.1 - Title 11, Chapter 200, Appendix C Environmental Impact Statement Rules, section (17), (n) states that the EIS" *shall contain a summary of unresolved issues and either a discussion of how such issues will be resolved prior to commencement of the action, or what overriding reasons there are for proceeding without resolving the problems."*

The Aina Koa Community Association has been singular in their repeated and express concerns over **Soils; Construction related impacts, i.e. Noise, Fugitive Dust; Traffic, and Real Property Tax increases.** With the exception of the Soils issue, the applicant has provided specific consultant studies that have addressed the concerns of the Aina Koa Community Association to the best of their abilities. Notwithstanding our responses, the resolution of the Unresolved Issues will remain throughout the land use policy amendment process. This will be through the Land Use Commission district Boundary amendment from Conservation to Urban; the City & County Development Plan Land Use Map amendment from Preservation to Residential; and the Land Use Zoning designation from Preservation to R-5.

It has been stated that Soils investigation, which will include the sub-surface investigations, must be done when a grading plan and building permit is prepared and filed with the City Building Department for the offsite improvements. Also, since the improvements will be dedicated to the City for operations and maintenance, all applicable building code standards will be strictly enforced to insure against future problems of :
soil slippage;
inadequate drainage;
inferior traffic ingress and egress patterns for refuse service , police and fire protection;
and compliance with appropriate DOH environmental controls on ambient noise and fugitive dust control.

The applicant/petitioner will be required to comply with all rules, ordinances, regulations, and statutes that govern land use changes. These will be provided in the sequence as the land use policy amendments are prepared, filed, and processed. As they are approved, each step requires that compliance with statutory requirements are completed before the next phase is begun. The procedural steps are established by each regulatory agency and compliance is not an optional choice; it is mandatory where specific performance is indicated. The Association is requesting information and data that is for the most part, not available at this time; it will be provided at the required time for performance and regulatory approval.

EXHIBIT A

HISTORICAL-ARCHAEOLOGICAL

ARCHAEOLOGICAL INVENTORY SURVEY IN KAPAKAHI GULCH, WAIALAE, O'AHU
TMK: 3-5-24:1

by

Paul L. Cleghorn, Ph.D.

and

Lisa Anderson, M.A.

Prepared for:

Environmental Communications, Inc.
1146 Fort Street Mall, Suite 200
Honolulu, HI 96813

Prepared by:

Paul Cleghorn Consulting
1081 Lunaai Street
Kailua, HI 96734

April 1992

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ABSTRACT

An archaeological inventory level survey was conducted on a 8.74 acre parcel in Kapakahi Gulch, Waialae, O'ahu. Historical research suggested that inland Waialae areas, such as the subject parcel, may have been used for dryland agricultural pursuits. However, the extremely rocky nature of the soil in the project area appears to have precluded such agricultural activities. No archaeological sites were found in the project area.

INTRODUCTION

Under contract to Environmental Communications, the firm of Paul Cleghorn Consulting conducted an Archaeological Inventory Level Survey on an approximately 8.74 acre parcel in Kapakahi Gulch, Waialae O'ahu (TMK 3-5-24:1) (Fig. 1).

The purpose of this survey was to determine the presence or absence, and general nature of archaeological resources on the subject parcel, through archival research and field investigations. The aim of these investigations is to inventory the archaeological resources that exist on the property and to recover enough information on the archaeological resources, so that their historical significance can be evaluated. The information generated by this level of work is important for future planning purposes.

The fieldwork for this project was carried out by the senior author on 8 April 1992.

ENVIRONMENTAL SETTING

Kapakahi Gulch is located between the ridges of Waialae Nui and Waialae Iki, and is part of the pre-Mahele ahupua'a, or native land division, of Kona on the leeward side of the Koolau Mountain Range (Hawaiian Studies Institute Map 1987). The Kona ahupua'a extends from Honolulu on the west to Kulio'o Valley on the East. The project area is located in the lower portion of the gulch and receives less than 30 inches of rainfall annually (Armstrong 1983:62). The relatively low rainfall supports xerophytic vegetation in the area. Vegetation observed in the project area consisted of recently introduced exotic species, including kiawe (Prosopis pallida), klu (Acacia farnesiana), haole koa (Leucaena glauca), christmas berry (Schinus terebinthifolius), lantana (Lantana camara), the autograph tree or scotch attorney (Clusia rosea), and various grasses. The only native vegetation observed was ilima (Sida fallax).

The soils in the project area are classified as Lualualei extremely rocky clay (LPE) and Rock land (rRK) (Foote et. al. 1972:85, 119; Map 63). The Lualualei extremely rocky clay is found on the relatively flat land adjacent to Kapakahi Stream channel. According to the soil classification (Foote et al. 1972:85) this soil occurs on talus slopes with many stones on the surface and in profile. It is impractical to cultivate. Runoff is medium to rapid and the erosion hazard is moderate to severe. During fieldwork it was confirmed that this area is indeed extremely rocky, making walking difficult and sometimes dangerous. The Rock land makes up the gulch side and is defined as areas where exposed bedrock covers 25-90% of the surface, and where rock outcrops and shallow soils dominate (Foote et al. 1972:119). During fieldwork, I observed the gulch side to be characterized primarily as a series of pahoehoe lava ledges ranging from 0.5 to over 2.0 meters with most being 0.5 m high.

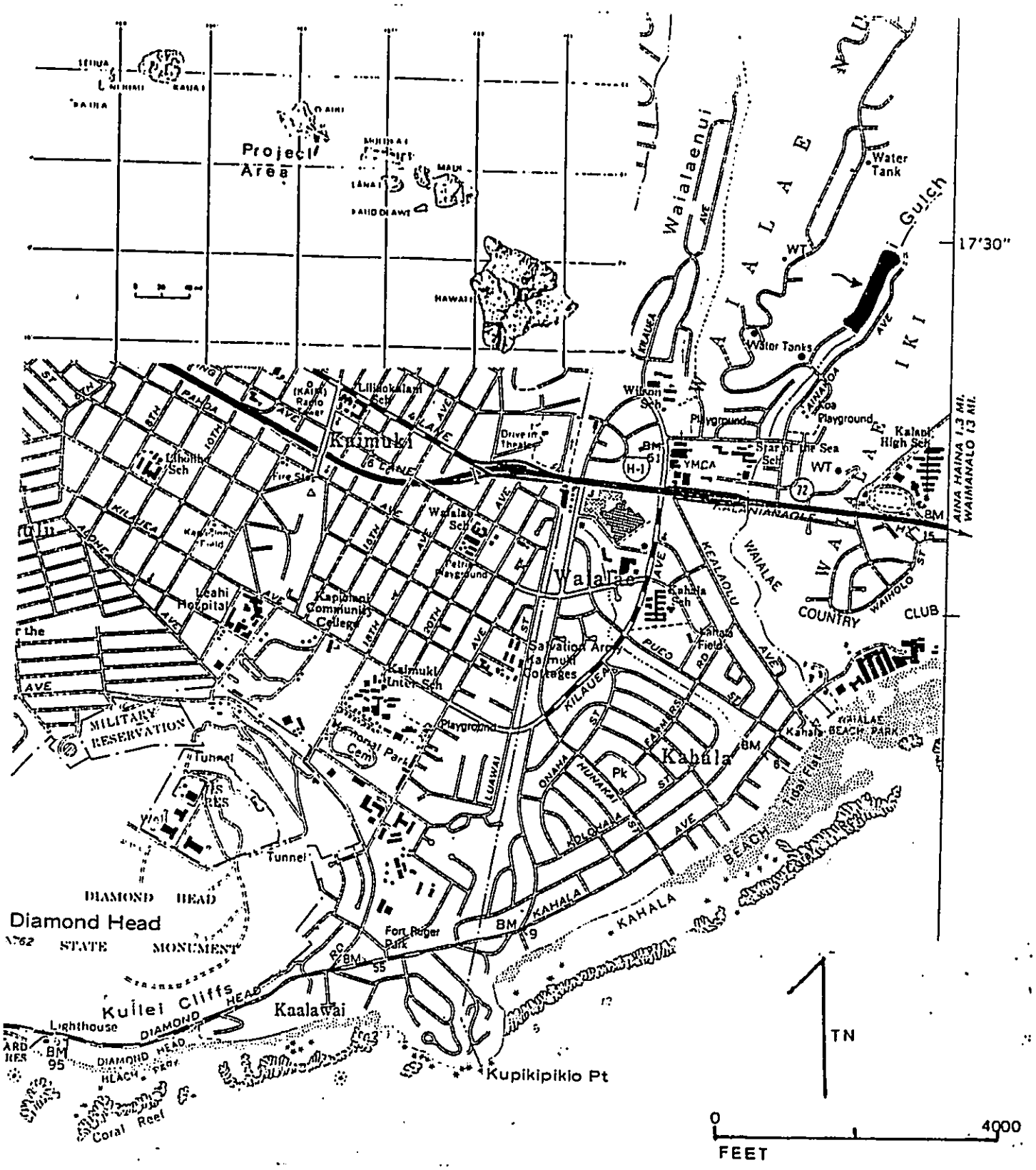

Figure 1. Location of Project Area.

HISTORICAL BACKGROUND

by

Lisa Anderson

LEGENDARY HISTORY

The legendary history of Waialae consists mainly of brief locality references in the legendary accounts of individuals. Some of these references include; the legend of Kawelo, Palila, Kaiana, Aiai, and Keaomelemele or the maid of the golden cloud. Waialae is also briefly mentioned in the legends of the battle of Nuuanu.

The name Waialae was derived from the Waialae Springs which according to legend, supplied water for chiefs.

> The location had been lost for many years. During a tour of the island by Kamehameha III, the King became thirsty and inquired of an old couple who were living at Waialae where he could get some water to drink. It happened that the ancestors of these old people were the keepers of this water hole, and the duty descended to them. They said that the only reason they stayed there was so that when the King stopped there they might carry out their duty and reveal the location to him. This hole was covered with pohuehue (sic) and under the pohuehue (sic) was large slab of stone covering the water (Sterling and Summers 1972:275).

HISTORIC LAND USE

The inland portions of Waialae have been utilized in the past for cultivation, livestock pastures, and dairy activities.

> From the spring runs a stream which watered terraces that are now largely covered with grass raised for dairying and by the golf links. Three moderate-sized gulches having streams of constant flow are included in this ahupua'a. In the lower portion of one of these gulches which was examined no terraces were seen. According to Mr. A. F. Judd, some seaward holdings in Waialae had inland plots (lele) located in Palolo (Handy 1940:74).

Waialae Iki was leased in the late 1800's as pasture lands. In 1868, the land was leased to Joseph Tesia for a sum of $300. The lease included all pasture and kula land, fishing and coconut rights, wood timber rights, and rights over fruit tre produces including orange and avocado. The land could be used to pasture horses, cattle, or mules (Bureau of Conveyances, Liber 34:113).

In 1883, the land was leased by W. C. Akana for a sum of $500. This lease included similar rights but directed Mr. Akana to only cut guava and kukui trees on the property that were to be found behind the line of koa (Bureau of Conveyances, Liber 77:415).

Similar leases followed. In 1922, a portion of Waialae Iki (620 acres) was leased to the Waialae Ranch company for the sole purposes of livestock pastures (Bureau of Conveyances, Liber 668:1-19).

The coastal lands of Waialae were popular for fishing and cultivation as well. "Many people lived along the shores and they worked at farming and fishing. Plants grew. There were taro patches, tobacco, sweet potatoes, bananas and sugar cane" (Mokumanu 1920 as cited in Sterling and Summers 1971:275).

HISTORIC LAND OWNERSHIP

After the conquest of Oahu in 1795, Oahu's lands were divided and distributed by Kamehameha.

> ...According to Kamanawa's counsel, Kamehameha had divided the large ahupua'a tracts and the smaller 'ili'aina tracts of land all over Oahu among his chiefs...Other ahupua'a all over the island of Oahu, which Kamehameha had won after the battle of Nuuanu, were also divided...Waialae together with all the large 'ili kupono within the lands of the king to Kaahumanu (Ii 1959:69-70).

Much of the land of Waialae was granted in the form of Land Commission Awards to chiefs Kamamalu and Paki.

> There were many konohikis in former days. Paki was Waialae-nui's konohiki of fishing; Kamamalu was Waialae-iki's konohiki of fishing. There were ever so many people on the shores when these chiefs came to spend a while with the common people.
>
> There was the pool that Kamamalu used to bathe in. I went see its beauty for myself.
>
> There are two springs, one is on the summit of Waialae-nui, is on Waialae-iki. These appear to be good sites, there is much water, but it's beauty of the time of the konohikis is gone. Now the kapu is freed and the kapu places are trodden underfoot (Mokumaia 1920 as cited in Sterling and Summers 1978:275-276).

There is some confusion as to the regions in which Kamamalu and Paki were the konohiki. Mokumaia above associates Paki with Waialae Nui and Kamamalu with Waialae Iki. The Land Commission Award information reverse these roles.

Thirty-five Land Commission Awards were granted in Waialae Iki and six in Wailae Nui (Table 1). Of the 35 Land Commission

Awards in Waialae Iki, 34 comprise a total of 13.38 acres, and one single award (10613) granted a total of 1,608.20 acres. This award was granted to A. Paki, father of Bernice Pauahi. It is within this Land Commission Award that the project area is located. Bernice Pauahi, the only heir of A. Paki inherited the Waialae Iki land which became a part of the Bishop Estate after her death.

Of the six Land Commission awards in Waialae Nui, five comprise a total of 2.01 acres, and one single award (7713) granted a total of 3329 acres to V. Kamamalu. Victoria Kamamalu was the daughter of Kinau and Kekuanaoa, but was raised by John Papa Ii. Kamamalu died in 1866 at the age of 27 (Ii 1959:161-175). The lands of Waialae Nui also became a part of the Bishop Estate.

Table 1.

LAND COMMISSION AWARDS

Location	Awardee	LCA	RP	Area
WAIALAE IKI				
Aipako	Kaaikalo	2285	2284	0.11 Ac
Aloalo	Lulea	1989	2276	0.70 Ac
Kahupilau	Apolehua	6749	2638	0.33 Ac
Kaiwikea	Apolehua	6749	2638	0.12 Ac
Kaiwipona	Kehea	2355	5473	0.55 Ac
Kaiwipona	Kupanihi	3100	2377	0.16 Ac
Kapalipuha	Kaheana	3437B	2608	0.20 Ac
Kauhapakue	Ohia	3262	2609	0.38 Ac
Kaulekola	Lohiau	3562	2274	0.47 Ac
Kaulekola	Kailiuli	2365	2273	0.65 Ac
Kaulu	Kaina	1790	2607	2.24 Ac
Kaulu	Koahou	1792	2084	0.21 Ac
Kaulu	Kuaha	1791	2639	0.34 Ac
Keahia	Kaina	1790	2607	0.25 Ac
Keahua	Pakiai	1787	2280	0.25 Ac
Keokea	Ahuai	3216	2279	0.24 Ac
Keokea	Maula	2516	2292	0.29 Ac
Kuaihee	Pakiai	1787	2280	0.41 Ac
Kaluamoo	Kehea	2355	5473	0.55 Ac
Kaluamoo	Kupanihi	3100	2377	0.30 Ac
Leholewalewa	Kaheana	3437B	2608	0.18 Ac
Makalii	Kahanu	2366	2278	0.10 Ac
Makalii	Kauwahikaua	5625	----	0.19 Ac
Manua	Kailiuli	2365	2273	0.27 Ac
Mooiki 3	Kamonohiwa	2389	2285	0.24 Ac
Naioliilii	Kuaha	1791	2639	0.50 Ac
Oio	Kuilei	2387	2844	0.20 Ac
Paeole	Kaaikalo	2285	2294	0.40 Ac
Palipuha	Apolehua	6749	2638	0.27 Ac
Peleleu	Kauwahikaua	5625	----	0.09 Ac
Pukoaki	Ahuai	3216	2279	0.25 Ac
Ponoiwi	Kahanu	2366	2278	0.20 Ac
Waialaeiki	Paki, A.	10613	3578 8188	1608.20 Ac
Waialaeiki	Waikui	2550	2283	1.41 Ac
WAIALAE NUI				
Aikauwa	Kuapuu	2391	2149	0.53 Ac
Kaiki	Kahoonana	7589	----	0.25 Ac
Kauhikolea	Makaweli	3012	2645	0.42 Ac
Namauuakapuaa	Kahoowaha	3579	4710	0.51 Ac
Panipani	Opunui	3228	4903	0.30 Ac
Waialae	Kamamalu V.	7713	4475	3329.00 Ac

PREVIOUS ARCHAEOLOGICAL RESEARCH

McAllister, who conducted an island-wide survey of O'ahu (1933) recorded the remains of Kaunua Kahekili Heiau in the Waialae area.

> Punahoa of Keahia says that Kaunua Kahekili was a very large heiau. It was located on the top of the ridge which divides Wailupe and Waialae, on the highest and most pronounced knoll. The site was formerly planted in pineapples, but now the heiau is overgrown with high grass and weeds and the pineapples are on the sloping ground which surrounds it. Many large rocks embedded in the earth are all that remain of the structure (McAllister 1933:71).

In 1967, Loyd Soehren of the Bishop Museum conducted excavations in the "Waialae Shelter Cave" (Site O-19, State Site No. 2503). Soehren recovered shell midden and a variety of traditional (fishhook, octopus lure, and coral file) and historic (bottle glass and copper tubing) artifacts (see Kennedy 1991).

In 1985, Lisa Nagaoka wrote a graduate paper on the agriculture of Palolo, Waialae, and Wailupe (Nagaoka 1985). Her data base for this paper was the Land Commission Award testimonies. She found that Waialae had irrigated taro cultivation, or lo'i, and dryland taro and kula lands. The lo'i were irrigated with water originating from Waialae Spring. The lo'i were generally quite small, less than one tenth of an acre, but covered the whole area of Waialae. Many of the awardees claimed land for dryland taro "up in the mountains". Fishponds and salt pans were also claimed.

In 1991, Joseph Kennedy conducted an inventory level survey on the property of Star of the Sea School. The land area has been extensively modified in recent times and no surface archaeological features were found. No subsurface testing was done, so it is unknown if there are buried cultural deposits on this property.

ARCHAEOLOGICAL SURVEY

METHODS

The entire parcel was thoroughly traversed on foot, resulting in 100% coverage of the parcel. The relatively steep gulch sides were closely examined for lava tubes, caves, and overhang shelters, because the geology of the area indicated that these types of features may be present that could have been used for either shelters or human burial facilities.

RESULTS

No archaeological sites were located on the subject parcel. Two lava tubes and six shallow caves were found on the gulch side; these were carefully inspected. None contained cultural material or cultural modifications. The relatively flat land between Kapakahi Stream Channel and the steep gulch side was found to be so extremely rocky that it is unlikely that any Hawaiian sites exist in this area.

At the south (makai) end of the property is the remnant of a 100+ meter long cleared roadway, that extends from the end of Luinakoa Street. The roadway was unpaved and appears to have functioned for the transportation of large boulders that have been dumped in a linear pile parallel to the stream channel. These boulders were either stockpiled here from land clearing of the adjacent housing areas, or purposely placed here to divert flood waters that may sometimes flow in Kapakahi Stream.

DISCUSSION

Historical research conducted for this project coupled with that of Nagaoka (1985) indicates that the inland Waialae area may have been used for the cultivation of dryland taro and other kula crops, while the flatlands below were used for irrigated taro cultivation, fish husbandry, and habitation. The survey results in the project area showed that the sides of Kapakahi stream were much too rocky for agricultural pursuits. It seems that the only type of traditional use Kapakahi Gulch may have had was human burial facilities or temporary shelters in small caves and lava tubes.

William Barrera conducted archaeological investigation in Kulio'o Valley to the east of Kapakahi Gulch (Barrera 1979). Excavations here revealed subsurface deposits that were probably associated with dryland agricultural activities beginning in the thirteenth century A.D. While it is tempting to postulate that there may be similar buried deposits in Kapakahi gulch, it appears unlikely for two reasons: (1) geological -- Kapakahi Gulch is much more rocky that Kulio'o; and (2) climatological -- Kapakahi Gulch is much drier (receiving less than 30 inches of rain per year) than Kulio'o (receiving over 40 inches of rain per year). It seems extremely unlikely that any buried cultural deposits will be found in the project area.

While no archaeological sites, and particularly burial caves, were found, there is always the possibility that human burials or other cultural resources may be inadvertently discovered in lava tubes or small caves during the process of construction on the property. In the advent that any cultural resources are discovered, the State Historic Preservation Division should be contacted immediately, so that appropriate treatments can be followed.

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EXHIBIT B

SOILS SURFACE RECONNAISSANCE

FEWELL
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File 1196-1
October 5, 1992

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Subject: **Soil Reconnaissance Report**
Luinakoa Residential Subdivision
Luinakoa Street
Honolulu, Oahu, Hawaii
TMK: 1-5-24:1

This letter presents the findings and conclusions from a soil reconnaissance of the site of the proposed Luinakoa Residential Subdivision. The report is based upon a visual reconnaissance of the site and its vicinity, a review of the available soils information from the Soils Conservation Service and U.S.G.S. geologic maps, and our previous experience in this general locale. The investigation did not include any soil borings, test pits, or laboratory testing. An additional, more detailed soils investigation should be performed after the initial approvals have been obtained.

This report assesses the feasibility of developing the site as proposed, and evaluates the general soil conditions and their effect upon the proposed construction.

Project Description - The project is in East Oahu and will be an extension of Luinakoa Street, which is a dead-end street off Halekoa Drive in a mauka direction. The parcel is within Kapakahi Gulch which is the next valley west of Waialae Nui Ridge.

The project site is a narrow strip of land between the base of the eastern slope from Waialae Nui Ridge and Kapakahi Stream. The proposed subdivision will consist of a 1,300-foot extension of Luinakoa Street for the construction of approximately 50 to 52 finished fee simple residential lots on 8.74 acres of land.

The site improvements will consist of the preliminary site grading for the building areas and the construction of the roads and utilities to the City and County Standards. It is anticipated that the site grading will be limited to that necessary for the construction of the roadway extension and building pads on each side of the street. The presently proposed construction does not include the actual construction of the dwellings.

Geologic Conditions - According to the U.S.G.S. Geologic and Topographic Map of the Island of Oahu (1938), two geologic formations are present at the site. It appears that the proposed street alignment will be at or near the interface between the two geologic formations. On the uphill side of the street, the steep rocky slopes are part of the Koolau Volcanic Series which

consists of thin-bedded Aa and Pahoehoe basalt. The Aa beds and their accompanying cinder/clinker deposits generally make up approximately 60 percent of the formation. These deposits are the steep rocky slopes on both sides of the valley.

The lower slopes and bottom of the valley is blanketed by Unconsolidated, Non-calcareous Deposits (Ra) consisting of either younger alluvium composed of black sticky clay and boulders or talus deposits of angular basalt blocks with interstitial brown soil which forms aprons at the base of steep slopes. The site deposits appear to be the talus deposits instead of the black plastic clay. The talus deposits are more stable than the black clay.

Soil Survey Maps - The Soil Survey Maps for the Island of Oahu prepared by the United States Department of Agriculture, Soil Conservation Service also show the same two basic soil formations but classifies them by a different system. The soils on the upper side of the proposed street are classified as Rock Land (rRK) which is "land made up of areas where exposed rock covers 25 to 90 percent of the surface. This land type is nearly level to very steep with elevations ranging from sea level to more than 6,000 feet."

The lower side of the proposed street shows a soil formation of Lualualei Extremely Stony Clay (LPE) with slopes of up to 35 percent. These soils occur on talus slopes of Oahu and have developed primarily in alluvial (water-deposited) and colluvial (gravity-deposited) formations. They are very plastic clays with high shrink/swell potentials and low shear strengths.

Existing Subdivisions - Almost all of the subdivisions in Ainakoa Valley mauka of Halekoa Drive have been constructed on the Lualualei Series soils. The same is true for most of the subdivisions in Aina Haina and other nearby valleys. From our site visit, it appears that the lower side of the existing Luinakoa Street and the lower side of Ainakoa Avenue have been constructed on the same deposits as the site of the proposed Luinakoa Subdivision. Most of these subdivisions show some indications of soil creep or expansive soil movements which are indicated by cracks in the concrete slabs-on-grade, tilting retaining walls, or settlements beneath the building foundations. The demarcation line between the Lualualei soils and the rocky slopes is evident in the streets leading to the site as pavement tension cracks. These cracks are from movements of the soils on the lower side of the street and develop between the portion of the soil that has moved and the rocky portion which has not.

The soils deposits present at the site have been extensively used for building sites in eastern Oahu for many years. Some of these sites, in particular, Aina Haina Valley, have been the locations of major earth mass movements. The determining factors between a site that has minor creep movements and a site which has a major earth movement is the thickness of the soil mantle and the design of the site improvements such as the retaining walls, utilities, and buildings. Much of this construction was done prior to 1960, and the same foundation designs and grading would most likely not be permitted at the present time. Many of the retaining walls which are moving had no design or were inadequately designed for the larger-than-normal lateral soil pressures which developed where the low shear strength soils are retained.

Currently available construction methods which minimizes or eliminates these problems were not generally available at the time of the construction of the older subdivisions. The design of these subdivisions did not have the current level of soils engineering available for their construction.

Discussion - The soil reconnaissance indicates that the site is suitable for the proposed development, but may require special design and construction methods to accommodate the expansive, low strength soils where they are present. The lots on the upper side of the street will need no special considerations and can utilize normal methods for construction on sites with stable rock at or near the surface.

The lots on the lower side of the street will most probably encounter a plastic soil with low shear strengths and high shrink/swell potentials. This, however, is the same deposits that many of the subdivisions in eastern Oahu are constructed. If these soils are relatively thin, only minor changes from normal construction methods would be required. These changes generally consist of deeper foundations, removal and replacement of the expansive soils beneath slabs-on-grade, and backfilling the retaining walls with granular material instead of the on-site soils.

Where the soil mantle is thick, it may be necessary to regrade the site to reduce the thickness of the natural soils or remove and replace them with a compacted fill which has been keyed into a lower stable formation. In either case, engineering solutions are available to assure that the soil slopes are stable and will adequately support the proposed dwellings.

The extent of the remedial measures would be determined after a detailed subsurface investigation has been undertaken. The required site treatments would also determine the extent of the site grading required to develop the site. Based on the preliminary design, it appears that most of the improvements would occur near the interface between the rocky slopes and the plastic soil deposits where the thickness of the soil deposits would be minimal. It therefore appears that the site could be developed with minimal grading.

Miscellaneous - In accordance with your request, we have also reviewed some of the questions from the Ainakoa Community Association and have the following comments.

Two soil types are present at the site, a rocky slope and plastic low shear strength soils.

The low shear strength soils are classified by the Soil Conservation Service as the Lualualei Series which is the same series that is present at several East Oahu areas that had problems with soil movements. The same deposits are beneath most of the residential subdivisions the valleys of East Oahu. The potential for soil movement problems is related to the thickness of the soil deposit at each site, the slope of the site, and the design of the structures and streets in each area.

Most of the problem areas were constructed with little or no input from a geotechnical engineer. Current methods are available with adequate investigations to define the soil conditions and to minimize or eliminate the potential for any soil problems.

The questions related to the amount of materials that will be removed from the site, the type of grading that will be done, and the type of equipment that will be used will not be determined until after the preliminary permits have been obtained, and the project design has proceeded with a more detailed soils investigation and the development of a site grading plan. It should be noted that extensive regulations are in place at the County and State level to control the grading operations including the generation of dust, noise, and erosion, and for the periods at which construction can occur. The site grading cannot proceed without complying with these ordinances.

The construction on the site should not produce any potential for damage to the existing structures due to the excavation or hauling operations. Again, all of these items are controlled by ordinances and the contractor is normally required to provide insurance coverage for any damage that might occur.

The amount of grading required for the purchasers to construct their dwellings will depend on the dwelling design. This construction would also be regulated by the grading ordinance but should be minimal due to the size of the lot and the area available for construction.

The lot grading and soil conditions would be in conformance with the City Grading Ordinance and should provide no general limitations on the availability of conventional mortgages. Normally, additional inspections at specific times are required to obtain FHA or other similar government mortgages. In our experiences, very few subdivisions are developed in accordance with FHA requirements due to the high additional costs of the government's paperwork requirements. This does not mean that the subdivisions are constructed to a lower standard. It just means that the property can be provided to the purchasers at a lower cost if the government requirements are not included.

Conclusions - Our evaluation indicates that the site can be developed as a residential subdivision based on the preliminary plans. An additional subsurface investigation should be undertaken to develop recommendations for the design and construction of the roadway and building areas. The actual scope of the site grading will depend upon the findings of this soils investigation. The recommendations may vary from slightly deeper than normal foundations to the removal and replacement of the low strength soils with compacted engineering fill. The actual scope will be determined by the findings of the subsurface investigation.

If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

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EXHIBIT C

TRAFFIC IMPACT STUDY

TRAFFIC IMPACT ANALYSIS REPORT FOR THE PROPOSED

LUINAKOA STREET SUBDIVISION

PREPARED FOR

LUINAKOA PARTNERS

OCTOBER 5, 1992

PREPARED BY

THE TRAFFIC MANAGEMENT CONSULTANT

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TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
LUINAKOA STREET SUBDIVISION

I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to analyze the traffic impacts resulting from the proposed Luinakoa Street Subdivision in Honolulu, Oahu. This report presents the findings and recommendations of the study.

B. Scope of Study

The scope of this study includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic conditions.
3. Analysis of future roadway and projected traffic conditions without the proposed project.
4. Development of trip generation characteristics for the proposed project.
5. Superimposing the site-generated traffic over projected traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendation of improvements, if appropriate, that would mitigate the traffic impacts resulting from the development of the proposed project.

II. PROJECT DESCRIPTION

A. Location

The project site is located at the end of Luinakoa Street in Honolulu, Oahu. The 8.74 acre project site is identified as Tax Map Key: 3-5-24: 1. The location map is shown in Figure 1.

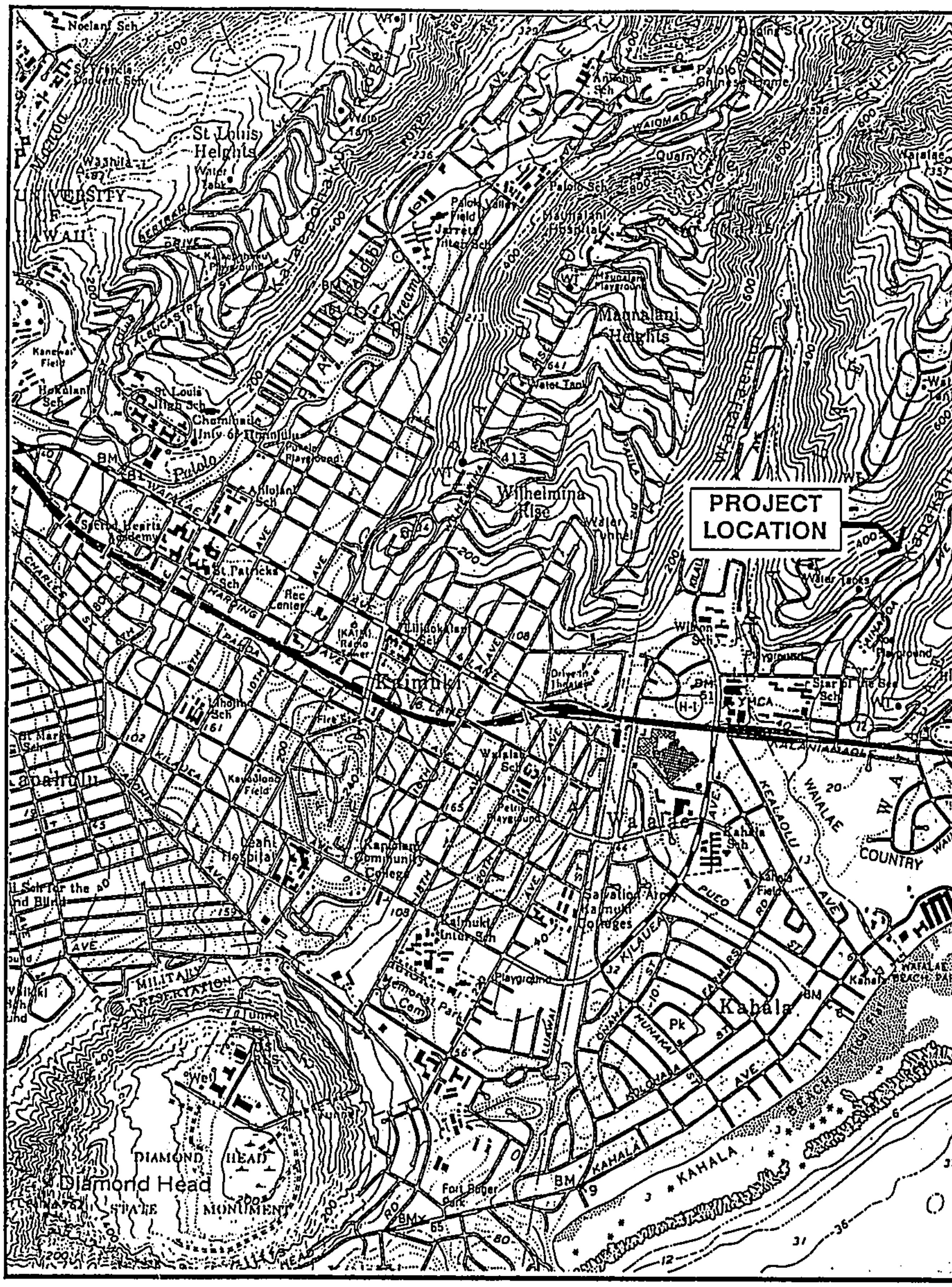

FIGURE 1 - LOCATION MAP

B. Site Characteristics

The proposed residential project would consist of fifty-two (52) residential lots. There are a total of twenty-seven (27) existing residential dwelling units on Luinakoa Street. The proposed residential lots will be approximately 5,000 square feet (SF), consistent with the existing residential lots on Luinakoa Street. Project site access would be provided by the extension of Luinakoa Street by approximately 1,300 feet. The site plan is shown in Figure 2.

C. Other Projects in the Area

A proposed life care center for the elderly, named Hale O Malia, would be located on the former Star of the Sea School site on Malia Street. The facility would consist of 300 dwelling units with a total floor area of approximately 425,000 square feet. The project is expected to be in operation by 1994. This study assumes that Hale O Malia is completed and occupied by the completion of the Luinakoa Street Subdivision. Vehicle trips generated by Hale O Malia are included in the traffic forecast.

III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

Kalanianaole Highway is a two way, major arterial highway. It is generally oriented in the east-west directions and connects with Interstate H-1 to provide access to Downtown Honolulu and other areas west of the project site.

Ainakoa Avenue is a two way, two lane roadway oriented in the north-south (mauka-makai) directions. Ainakoa Avenue intersects Kalanianaole Highway to form a signalized intersection. The road width of Ainakoa Avenue is approximately 40 feet. The eastbound left turn movement at the intersection of Kalanianaole Highway and Ainakoa Avenue is prohibited during the AM peak hour of traffic to accommodate the westbound contraflow traffic lane on Kalanianaole Highway.

Halekoa Drive is a two way, two lane roadway that intersects with Ainakoa Avenue to form an unsignalized intersection. Halekoa Drive is generally oriented in the mauka-makai directions and leads to residential lots in the Waialae Nui area.

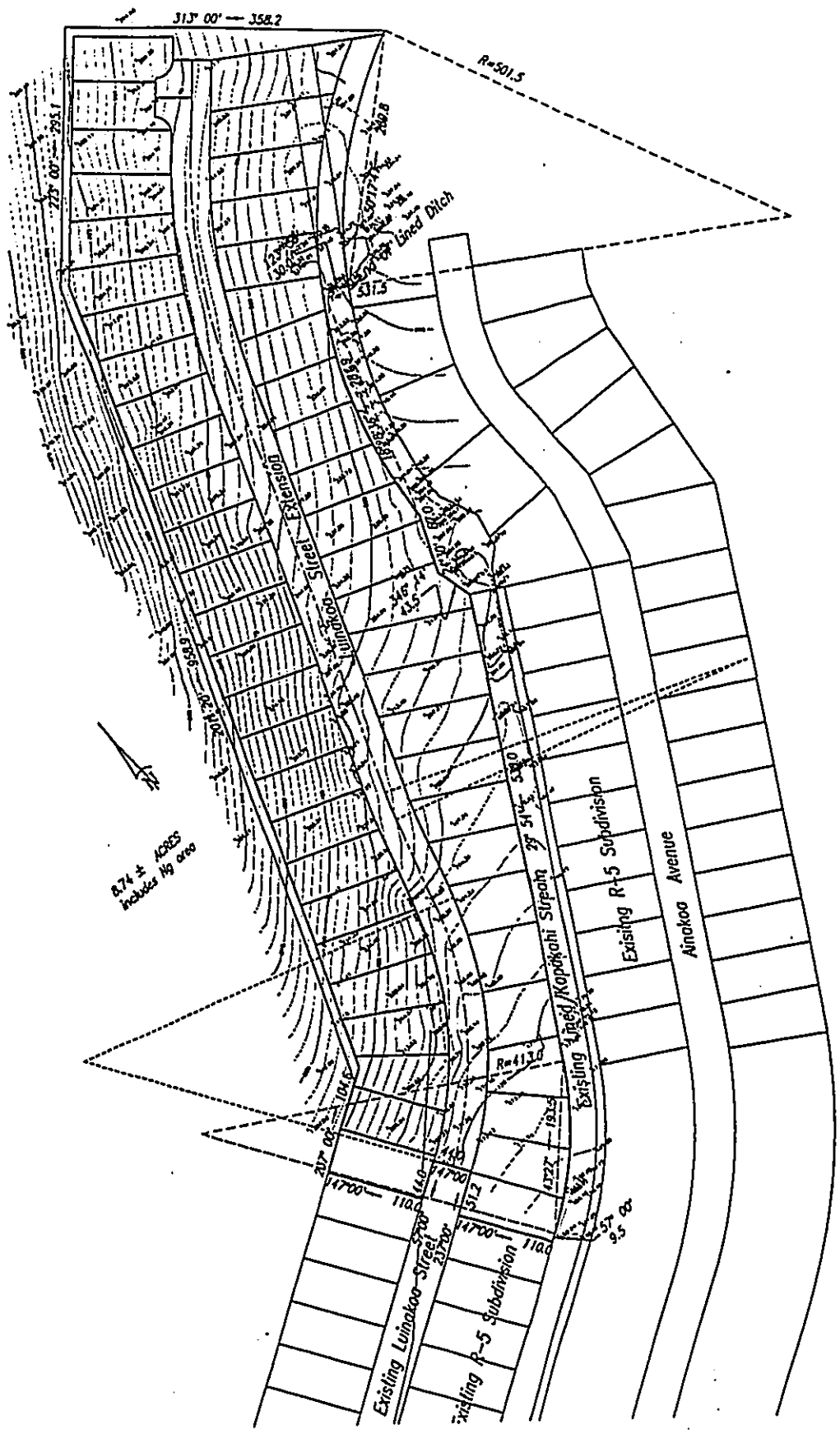

FIGURE 2 - DEVELOPMENT SITE PLAN

Luinakoa Street is a two way, two lane roadway that is oriented in the mauka-makai directions. Luinakoa Street connects to Ainakoa Avenue via Halekoa Drive. The length of Luinakoa Street is approximately 850 feet with a road width of approximately 28 feet. The intersection of Halekoa Drive and Luinakoa Street is unsignalized. The sight distance to the right of the Luinakoa Street approach is more than 250 feet. The sight distance to the left of the Luinakoa Street approach is approximately 250 feet. The posted speed on Halekoa Drive near Luinakoa Street is 25 miles per hour (mph).

Malia Street is also a two way, two lane roadway. It is oriented in the east-west directions and intersects Ainakoa Avenue between Kalanianaole Highway and Halekoa Drive. Malia Street extends in the westerly direction to Kilauea Avenue. Malia Street would provide access to the proposed life care facility.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

The field investigation was conducted in September, 1992. The field investigation comprised of a site inspection of the road and traffic conditions, and a traffic count survey. The traffic survey was conducted between 6:30 AM and 8:30 AM, and between 4:00 PM and 6:00 PM at the intersections of Ainakoa Avenue at Malia Street and at Halekoa Drive, and at the intersection of Halekoa Drive at Luinakoa Street. The traffic survey includes manual traffic counts of all vehicles entering the study intersections, and a count of parked vehicles on Luinakoa Street before and after the survey period.

b. Capacity Analysis Methodology

The highway capacity analysis performed for this study is based upon procedures presented in the "Highway Capacity Manual", Special Report 209, Transportation Research Board, 1985 and the "Highway Capacity Software", Federal Highways Administration.

Level of Service (LOS) is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F", LOS "A" being the best operating condition and LOS "F" the worst operating condition. The capacity analysis calculations are included in the Appendix.

2. **Existing AM Peak Hour Traffic Analysis**

The AM peak hour of traffic in the study area occurs between 6:45 AM and 7:45 AM. The existing AM peak hour traffic volumes and results of the capacity analysis are shown in Figure 3.

At the intersection of Ainakoa Avenue and Malia Street, the westbound and eastbound approaches on Malia Street both operate at LOS "B" during the AM peak hour of traffic. At the intersection of Ainakoa Avenue and Halekoa Drive, the westbound approach on Halekoa Drive operates at LOS "C" during the AM peak hour of traffic. The eastbound approach operates at LOS "A". Luinakoa Street at Halekoa Drive operates at LOS "A" during the AM peak hour of traffic.

Thirty-two (32) vehicles were observed parked on Luinakoa Street before the AM survey period. Seventeen (17) vehicles were observed parked on Luinakoa Street after the AM survey period.

3. **Existing PM Peak Hour Traffic Analysis**

The PM peak hour of traffic in the study area occurs between 5:00 PM and 6:00 PM. The existing PM peak hour traffic volumes and results of the capacity analysis are shown in Figure 4.

All traffic movements at the intersection of Ainakoa Avenue and Malia Street operate at LOS "A" during the existing PM peak hour of traffic. At the intersection of Ainakoa Avenue and Halekoa Drive, the westbound approach on Halekoa Drive operates at LOS "B" during the PM peak hour of traffic. The eastbound approach operates at LOS "A". Luinakoa Street at Halekoa Drive operates at LOS "A" during the PM peak hour of traffic.

Nineteen (19) vehicles were observed parked on Luinakoa Street before the PM survey period. Twenty-three (23) vehicles were observed parked on Luinakoa Street after the PM survey period.

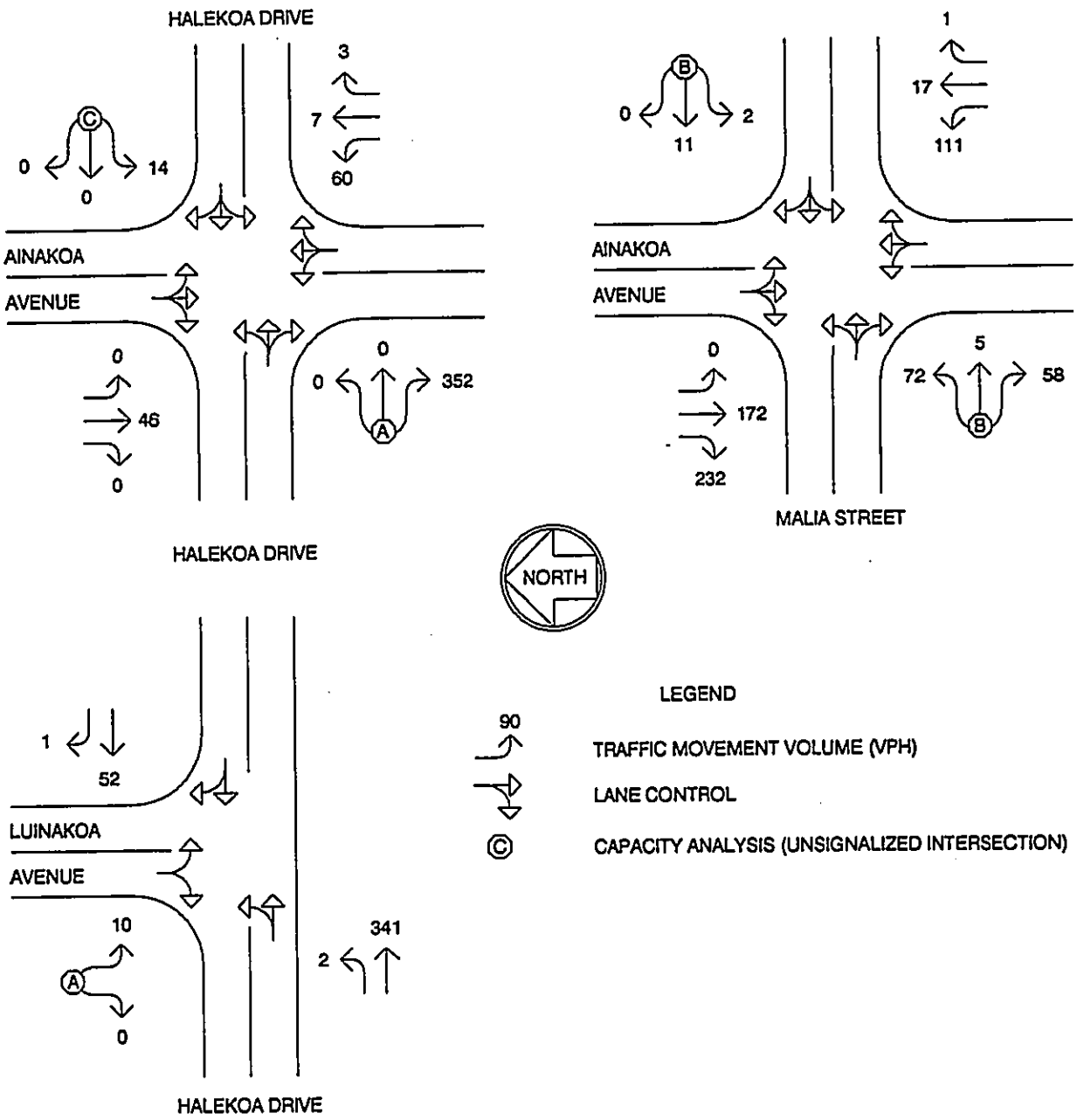

FIGURE 3 - EXISTING AM PEAK HOUR TRAFFIC

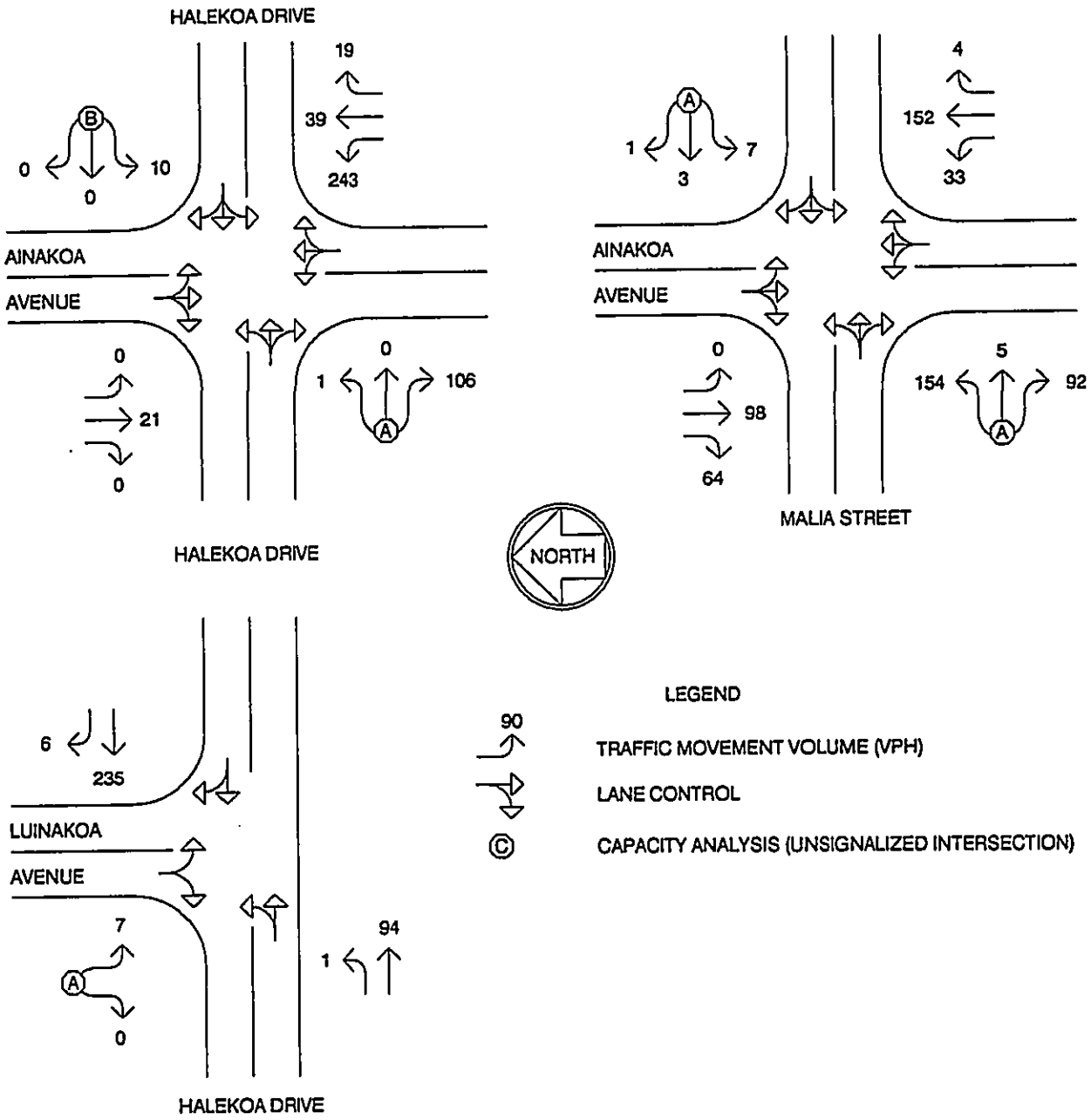

FIGURE 4 - EXISTING PM PEAK HOUR TRAFFIC

IV. PROJECTED TRAFFIC

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 5th Edition", 1991. The ITE trip rates are developed empirically, by correlating the vehicle trip generation data with various land use characteristics, such as vehicle trips per residential dwelling unit. For the purpose of this analysis, it is assumed that one single-family detached dwelling unit would be built on each lot. Therefore the trip generation characteristics is based upon 52 dwelling units. The trip generation characteristics are shown on Table 1.

Table 1. Trip Generation Characteristics (vph)

Luinakoa Street Subdivision 52 Dwelling Units			ITE Trip Rate	Vehicle Trips
Peak Hour of Adjacent Street Traffic	AM Peak Hour	Enter	0.23	12
		Exit	0.65	34
		Total	0.88	46
	PM Peak Hour	Enter	0.74	38
		Exit	0.41	22
		Total	1.15	60

2. Trip Generation Characteristics

The proposed project would consist of 52 single-family residential dwelling units and is expected to generate 46 vph during the AM peak hour, 12 vph entering and 34 vph exiting the project site. During the PM peak hour, the proposed project is expected to generate 60 vph, 38 vph entering and 22 vph exiting the project site.

3. **Trip Distribution**

The trips generated by the proposed project during the peak hours of traffic are distributed to the surrounding street system based upon existing travel patterns.

4. **Other Projects in the Area**

The Hale O Malia life care center for the elderly is expected to consist of 300 dwelling units. The proposed project will be located on Malia Street, just west of Ainakoa Avenue, and is expected to generate 19 vph during the AM peak hour of traffic, 11 vph entering and 8 vph exiting. During the PM peak hour of traffic, the proposed project is expected to generate 52 vph, 29 vph entering and 23 vph exiting. These figures were obtained from a traffic assessment, prepared by Parsons Brinckerhoff Quade and Douglas, Inc., dated May 1991, *contained in the Final Environmental Impact Statement for Hale O Malia.*

B. Total Traffic Volumes Without Project

1. **General**

The capacity analysis contained in this section is based on existing roadway conditions at the intersections of Ainakoa Avenue at Malia Street, Ainakoa Avenue at Halekoa Drive, and Halekoa Drive at Luinakoa Street. The vehicle trips generated by the proposed Hale O Malia are assigned to the road system. Of the intersections in the study area, the trips generated by Hale O Malia are expected to impact only the intersection of Ainakoa Avenue and Malia Street. The projected AM and PM peak hour traffic volumes and results of the capacity analysis are shown in Figures 5 and 6.

2. **AM Peak Hour Traffic Analysis**

At the intersection of Ainakoa Avenue and Malia Street, the eastbound and westbound approaches on Malia Street would both operate at LOS "B" during the project AM peak hour of traffic without the project. The other intersections in the study area would operate at similar LOS to existing traffic conditions. The proposed Hale O Malia is expected to add 19 vehicles on Malia Street, west of Ainakoa Avenue, to the existing AM peak hour traffic

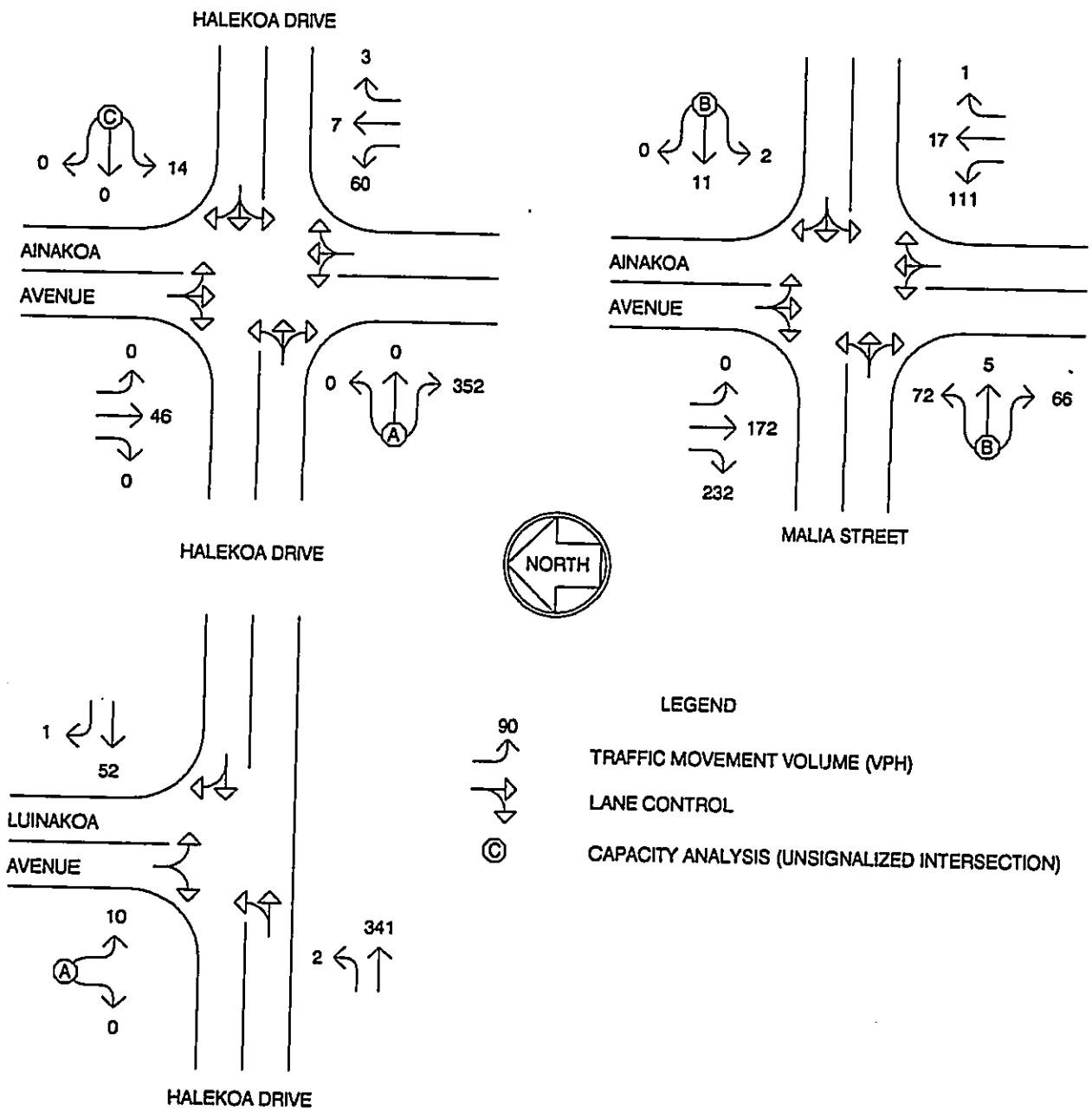

FIGURE 5 - PROJECTED AM PEAK HOUR TRAFFIC WITHOUT PROJECT

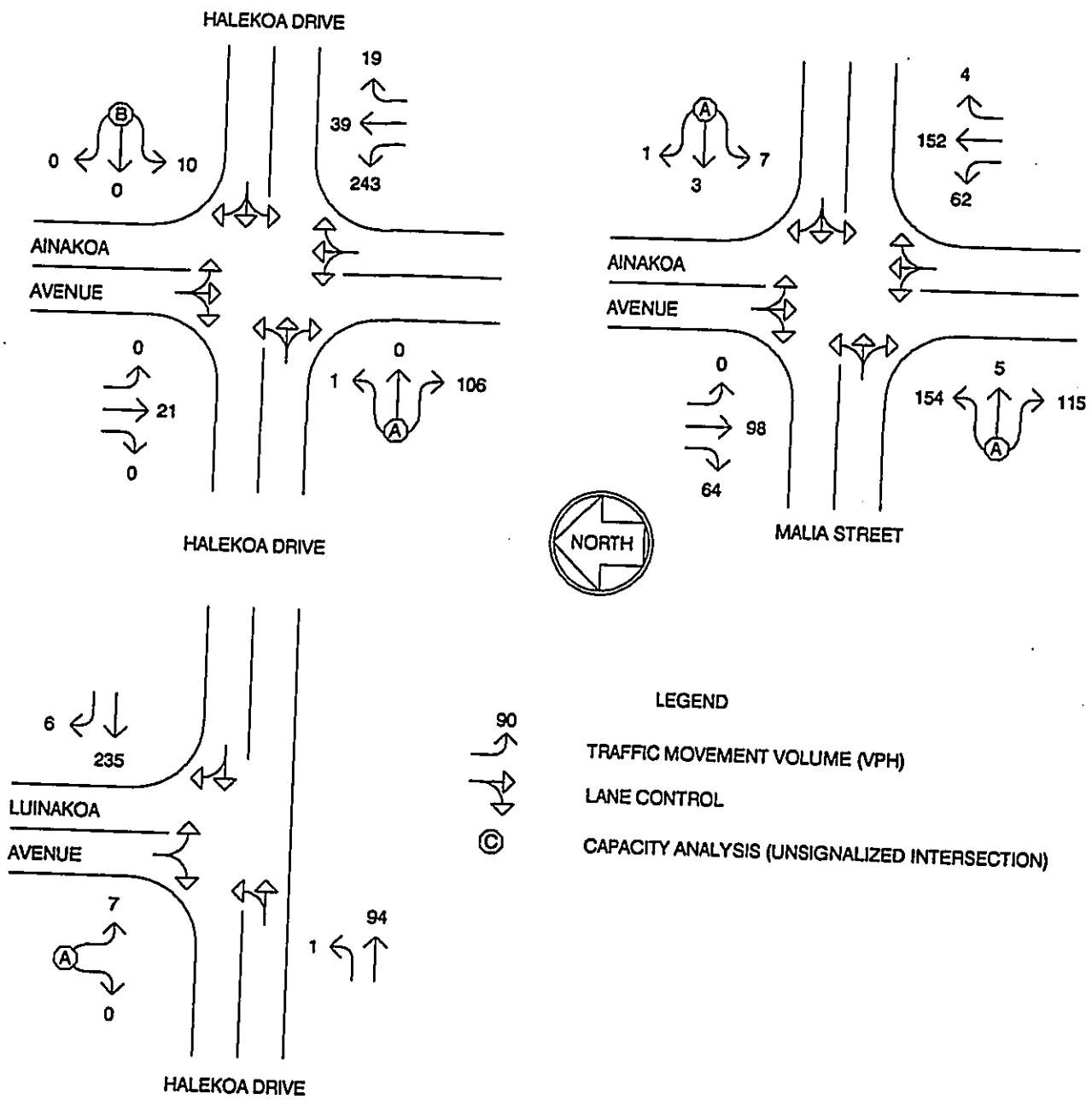

FIGURE 6 - PROJECTED PM PEAK HOUR TRAFFIC WITHOUT PROJECT

volumes. On Ainakoa Avenue, makai of Malia Street, the proposed Hale O Malia also is expected to add 8 vehicles to the existing AM peak hour of traffic.

3. **PM Peak Hour Traffic Analysis**

The eastbound and westbound approaches on Malia Street at the intersection with Ainakoa Avenue both would operate at LOS "A" during the projected PM peak hour of traffic. The other intersections in the study area would operate at similar LOS to existing traffic conditions. The proposed Hale O Malia is expected to add 52 vehicles to the existing traffic volumes on Malia Street, west of Ainakoa Avenue. On Ainakoa Avenue, makai of Malia Street, the proposed Hale O Malia also is expected to add 52 vehicles to the existing PM peak hour of traffic.

C. Total Traffic With Project

The capacity analysis contained in this section of the report is based on existing roadway conditions at the intersections of Ainakoa Avenue at Malia Street and Halekoa Drive, and the intersection of Halekoa Drive at Luinakoa Street.

The vehicle trips generated by the proposed Luinakoa Street Subdivision are superimposed over projected traffic conditions. Projected traffic conditions include the trips generated by the proposed Hale O Malia facility. Figures 7 and 8 show the cumulative AM and PM peak hours of traffic under existing roadway conditions. The traffic impact analysis of the site-generated traffic is discussed in the next section.

V. TRAFFIC IMPACT ANALYSIS

A. General

The cumulative traffic volumes consist of projected traffic conditions plus the site-generated traffic. Projected traffic conditions include the trips generated by the proposed Hale O Malia care facility. The analysis is based on existing intersection and roadway conditions.

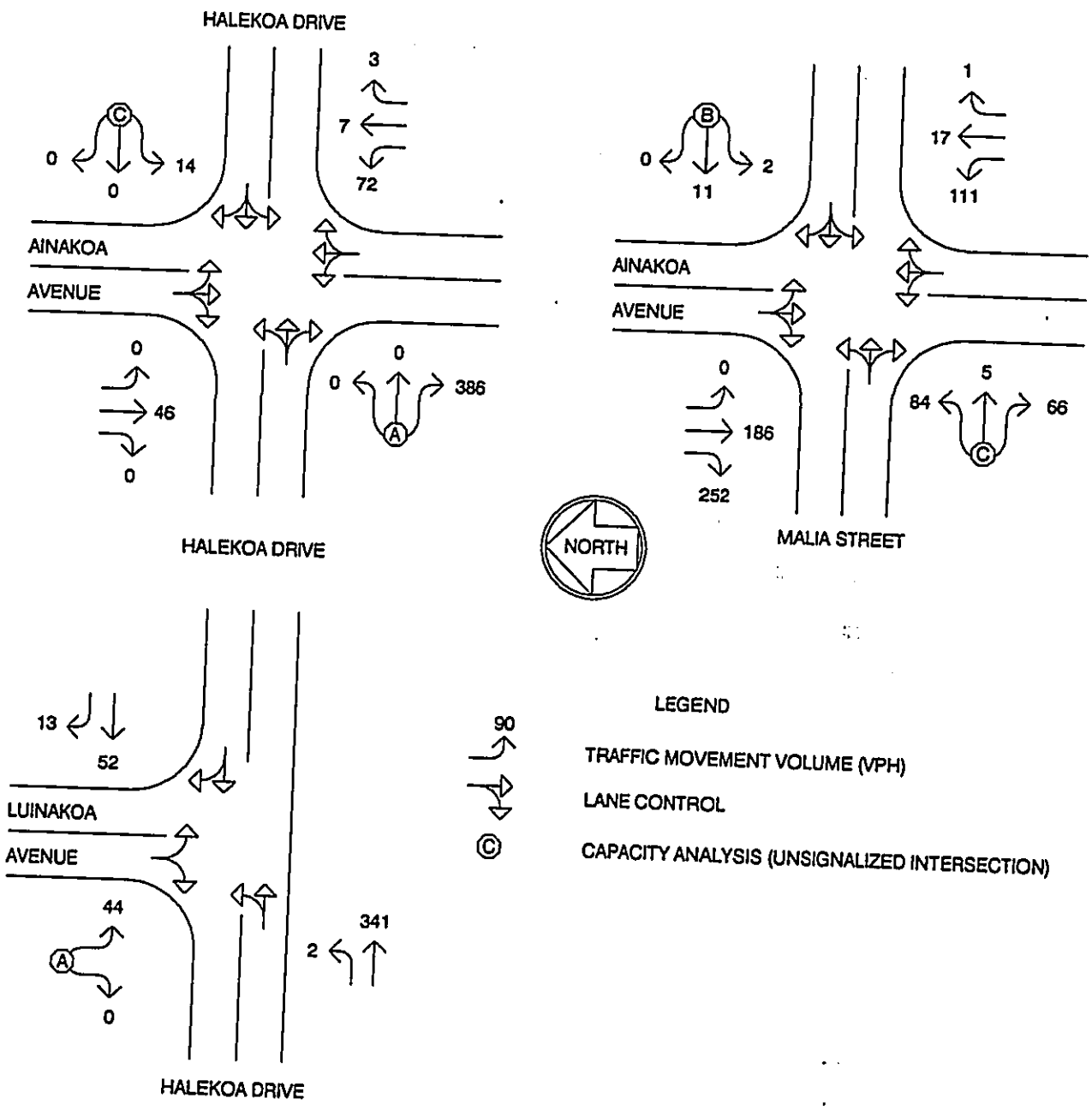

FIGURE 7 - CUMULATIVE AM PEAK HOUR TRAFFIC

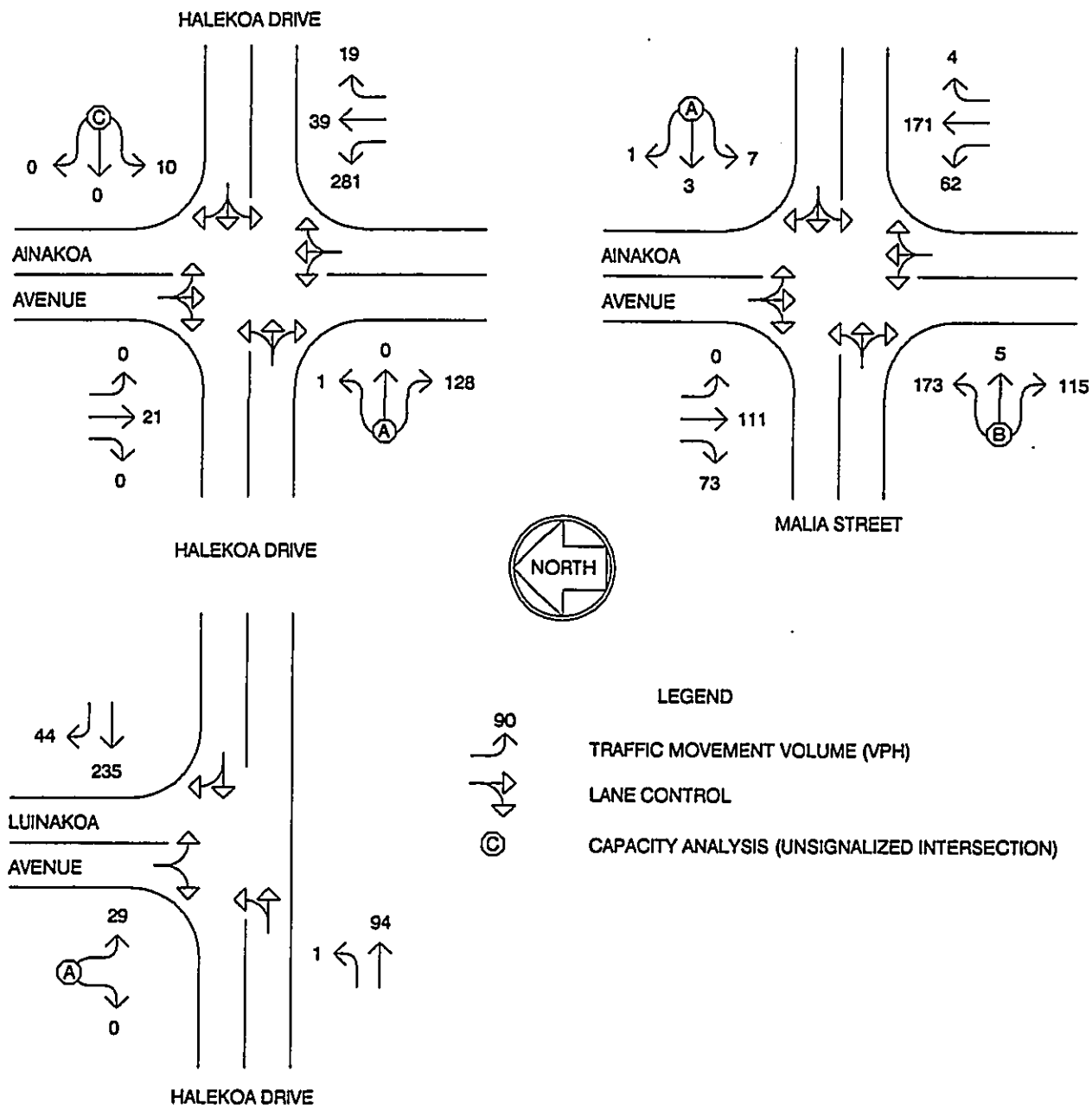

FIGURE 8 - CUMULATIVE PM PEAK HOUR TRAFFIC

B. Cumulative AM Peak Hour Traffic With Project

At the intersection of Ainakoa Avenue and Malia Street, the eastbound approach of Malia Street would operate at LOS "C" during the projected AM peak hour of traffic. The westbound approach of Malia Street would operate at LOS "B". A total of 32 vehicles would be added to Malia Street, as a result of the proposed project, during the projected AM peak hour of traffic. A total of 14 vehicles would be added to Ainakoa Avenue, makai of Malia Street, during the projected AM peak hour of traffic as a result of the proposed project.

At the intersection of Ainakoa Avenue and Halekoa Drive, the westbound approach on Halekoa Drive would operate at LOS "C" during the projected AM peak hour of traffic. The eastbound movements at the intersection would operate at LOS "A". The total number of vehicles entering this intersection would increase by 46 vehicles during the projected AM peak hour of traffic over existing conditions. Ainakoa Avenue, both mauka and makai of Halekoa Drive would operate at satisfactory LOS. Luinakoa Street at Halekoa Drive would operate at LOS "A" during the projected AM peak hour of traffic.

C. Cumulative PM Peak Hour Traffic With Project

At the intersection of Ainakoa Avenue and Malia Street, the westbound approach of Malia Street would operate at LOS "A" during the projected PM peak hour of traffic. The eastbound approach of Malia Street would operate at LOS "B". A total of 28 vehicles would be added to Malia Street, as a result of the proposed project, during the projected PM peak hour of traffic. A total of 22 vehicles would be added to Ainakoa Avenue, makai of Malia Street, during the projected PM peak hour of traffic as a result of the proposed project.

At the intersection of Ainakoa Avenue and Halekoa Drive, the westbound approach on Halekoa Drive would operate at LOS "C" during the projected PM peak hour of traffic. The eastbound traffic movements at the intersection would operate at LOS "A". The total number of vehicles entering the intersection would increase by 60 vehicles during the projected PM peak hour of traffic over existing conditions. Luinakoa Street at Halekoa Drive would operate at LOS "A" during the PM peak hour of traffic.

D. Parking Impacts

Prohibiting on-street parking on one side of Luinakoa Street is not recommended at this time. According to the City and County of Honolulu Department of Transportation Services (DTS), banning parking on a residential street would require a petition from 90% of the affected residents before DTS would take any action.

Parking on both sides of the existing 28-foot wide roadway would still provide one lane of traffic, where a vehicle would yield the right of way to an opposing vehicle by pulling over to an open area of the roadway. Some minor delay may be experienced when two vehicles headed in opposite directions approach a section of roadway, where vehicles are parked on both sides of the road. However, on a residential street, traffic is generally uni-directional, i.e., outbound in the morning and inbound during the evening. Furthermore, the relatively low volumes and slow operating speeds should not significantly affect traffic safety.

Because City and County ordinances prohibit on-street parking over a 24-hour period, the vehicles parked on Luinakoa Street are expected to be used more frequently, clearing the street of on-street parking during the day. This assumption is confirmed by the parking survey, conducted during the peak periods of traffic.

The extension of Luinakoa Street would provide more on-street parking for residents along the street. The proposed dwelling units would each have a two car garage, increasing the availability of parking along the road extension.

Luinakoa Street is constructed according to City and County of Honolulu requirements. The extension of Luinakoa Street would likewise be designed and constructed to City and County standards for local roads. The total number of dwelling units would be consistent with City and County guidelines for cul-de-sacs.

VI. CONCLUSIONS

The existing Luinakoa Street is approximately twenty-eight (28) feet wide (curb-to-curb), with a 44-foot right-of-way. With parked vehicles on both sides of Luinakoa Street, the two way, two-lane travel way is reduced to represent a two way, one-lane roadway. Many of the residents on Luinakoa Street utilize on-street

parking because they do not have two car garages on their lots. The 1,300 feet extension of Luinakoa Street should provide additional on-street parking for residents and guests during occasions of peak usage.

Luinakoa Street at Halekoa Drive operates at LOS "A" during the existing and projected peak hour periods. A 28-foot travel way on Luinakoa Street assures one freely moving lane even when parking occurs on both sides of the street. An inconvenience to motorists may arise when vehicles in both directions meet on the street. This is the case on Luinakoa Street under existing conditions. Random intermittent parking on both sides of the street would still allow one vehicle to move to the side while the other safely passes. According to City and County of Honolulu requirements for corner sight distances, the existing sight distances to the left and right of the Luinakoa Street approach at Halekoa Drive are adequate for the posted speed of 25 mph on Halekoa Drive.

City and County guidelines suggest a maximum of 100 single-family residential dwelling units on a cul-de-sac with a 44-foot right-of-way. The proposed Luinakoa Street project would add 52 single-family residential dwelling units on Luinakoa Street. The existing 27 single-family residential dwelling units on Luinakoa Street plus the proposed 52 dwelling units would result in a total 79 dwelling units on Luinakoa Street, below the City and County's suggested maximum. The existing Luinakoa Street generates only about one half of traffic expected from a typical 27 unit subdivision.

Based upon existing travel patterns, the proposed project is expected to add 46 vehicles and 60 vehicles to Ainakoa Avenue, between Halekoa Drive and Malia Street, during the AM and PM peak hours of traffic, respectively. The increases in peak hour traffic, generated by the proposed project, are not considered significant, according to recommended guidelines for traffic impact studies proposed by the Institute of Transportation Engineers. Roadway improvements as a result of the proposed project are not required. The trips generated by the proposed project are relatively low and would not significantly change the operating Levels of Service in the study area.

APPENDIX
CAPACITY ANALYSIS CALCULATIONS

Existing Peak Hour Conditions
Capacity Analysis Calculations

1985 HCM: UNSIGNALIZED INTERSECTIONS
****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .79

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/9/92

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... AINMALA. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	72	2	111	0
THRU	5	11	17	172
RIGHT	58	0	1	232

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/9/92 ; AM PEAK HOUR
OTHER INFORMATION.... AINMALA. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	91	464	377	>		377	>	286	> C
THROUGH	6	531	439	>	480	439	> 309	433	>B A
RIGHT	73	732	732	>		732	>	658	> A
MINOR STREET									
WB LEFT	3	337	260	>		260	>	258	> C
THROUGH	14	437	362	>	342	362	> 325	348	>B B
RIGHT	0	999	999	>		999	>	999	> A
MAJOR STREET									
SB LEFT	0	1000	1000			1000		1000	A
NB LEFT	169	703	703			703		534	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/9/92 ; AM PEAK HOUR
OTHER INFORMATION.... AINMALA. EXISTING

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .8

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/10/92

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... AINHALA. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	14	60	0
THRU	0	0	7	46
RIGHT	352	0	3	0

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-2.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS					
	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS					
	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS					
	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS					
	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; AM PEAK HOUR
OTHER INFORMATION.... AINHALA. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	0	775	725	>	997	725 >	557	725 >	A
THROUGH	0	850	796	>		796 >		796 >	A A
RIGHT	440	997	997	>		997 >		557 >	A
MINOR STREET									
WB LEFT	19	436	260	>	260	260 >	241	241 >	C
THROUGH	0	852	797	>		797 >		797 >	C A
RIGHT	0	999	999	>		999 >		999 >	A
MAJOR STREET									
SB LEFT	0	1000	1000			1000		1000	A
NB LEFT	105	1000	1000			1000		895	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; AM PEAK HOUR
OTHER INFORMATION.... AINHALA. EXISTING

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .94

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... LUINAKOA STREET

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/10/92

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... HALLUIA. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE SOUTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	2	0	--	10
THRU	341	52	--	0
RIGHT	0	1	--	0

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	1	--	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-4.00	90	20	N
WESTBOUND	4.00	90	20	N
NORTHBOUND	-----	---	---	-
SOUTHBOUND	-4.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	---	---	---
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	SB	5.50	5.50	0.00	5.50
MAJOR LEFTS	EB	5.00	5.00	0.00	5.00
MINOR LEFTS	SB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; AM PEAK HOUR
OTHER INFORMATION.... HALLUIA. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v (pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
SB LEFT	10	546	545	545	536	A
RIGHT	0	997	997	997	997	A
				545	536	A
MAJOR STREET						
EB LEFT	2	1000	1000	1000	998	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; AM PEAK HOUR
OTHER INFORMATION.... HALLUIA. EXISTING

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .98

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/9/92

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... AINMALP. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	154	7	33	0
THRU	5	3	152	98
RIGHT	92	1	4	64

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/9/92 ; PM PEAK HOUR
OTHER INFORMATION.... AINMALP. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	157	613	596	>	694	596 >	438	439 >	A
THROUGH	5	687	670	>		670 >		665 >	A A
RIGHT	94	961	961	>		961 >		867 >	A
MINOR STREET									
WB LEFT	7	523	478	>	540	478 >	529	471 >	A
THROUGH	3	659	643	>		643 >		640 >	A A
RIGHT	1	935	935	>		935 >		934 >	A
MAJOR STREET									
SB LEFT	0	991	991			991		991	A
NB LEFT	40	990	990			990		950	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/9/92 ; PM PEAK HOUR
OTHER INFORMATION.... AINMALP. EXISTING

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .94

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/10/92

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... AINHALP. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	1	10	243	0
THRU	0	0	39	21
RIGHT	106	0	19	0

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-2.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; PM PEAK HOUR
OTHER INFORMATION.... AINHALP. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v (pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	1	603	427	>	427	>	426	>	A
THROUGH	0	672	476	>	987 476	>	873 476	>A	A
RIGHT	113	999	999	>	999	>	886	>	A
MINOR STREET									
WB LEFT	12	529	349	>	349	>	337	>	B
THROUGH	0	681	482	>	349 482	>	337 482	>B	A
RIGHT	0	997	997	>	997	>	997	>	A
MAJOR STREET									
SB LEFT	0	1000	1000		1000		1000		A
NB LEFT	362	1000	1000		1000		638		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; PM PEAK HOUR
OTHER INFORMATION.... AINHALP. EXISTING

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .95

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... LUINAKOA STREET

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... 9/10/92

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... HALLUIP. EXISTING

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE SOUTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	1	0	--	7
THRU	94	235	--	0
RIGHT	0	6	--	0

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	1	--	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-4.00	90	20	N
WESTBOUND	4.00	90	20	N
NORTHBOUND	-----	---	---	-
SOUTHBOUND	-4.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	---	---	---
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	SB	5.50	5.50	0.00	5.50
MAJOR LEFTS	EB	5.00	5.00	0.00	5.00
MINOR LEFTS	SB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; PM PEAK HOUR
OTHER INFORMATION.... HALLUIP. EXISTING

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
SB LEFT	7	597	597	>	597	597 >	590	590 >	A
				>		>		>A	
RIGHT	0	839	839	>		839 >		839 >	A
MAJOR STREET									
EB LEFT	1	934	934			934		933	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... 9/10/92 ; PM PEAK HOUR
OTHER INFORMATION.... HALLUIP. EXISTING

Projected Peak Hour Conditions w/o Project
Capacity Analysis Calculations

1985 HCM: UNSIGNALIZED INTERSECTIONS
****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .79

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... AINMAOA. W/O PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	72	2	111	0
THRU	5	11	17	172
RIGHT	66	0	1	232

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINMAOA. W/O PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	91	464	377	>	377	>	286	>	C
THROUGH	6	531	439	> 489	439	> 308	433	>B	A
RIGHT	84	732	732	>	732	>	648	>	A
MINOR STREET									
WB LEFT	3	331	253	>	253	>	250	>	C
THROUGH	14	437	362	> 340	362	> 323	348	>B	B
RIGHT	0	999	999	>	999	>	999	>	A
MAJOR STREET									
SB LEFT	0	1000	1000		1000		1000		A
NB LEFT	169	703	703		703		534		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINMAOA. W/O PROJECT

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .98

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... AINMAOP. W/O PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	154	7	62	0
THRU	5	3	152	98
RIGHT	115	1	4	64

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINMAOP. W/O PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	157	591	561	>	682	561 >	402	404 >	A
THROUGH	5	660	630	>		630 >		625 >A	A
RIGHT	117	961	961	>		961 >		843 >	A
MINOR STREET									
WB LEFT	7	487	426	>	490	426 >	479	419 >	A
THROUGH	3	633	604	>		604 >		601 >A	A
RIGHT	1	935	935	>		935 >		934 >	A
MAJOR STREET									
SB LEFT	0	991	991			991		991	A
NB LEFT	76	990	990			990		914	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINMAOP. W/O PROJECT

Cumulative Peak Hour Conditions w/Project
Capacity Analysis Calculations

1985 HCM: UNSIGNALIZED INTERSECTIONS
****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .79

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... AINMA1A. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	84	0	111	0
THRU	5	11	17	186
RIGHT	66	2	1	252

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINMA1A. WITH PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	106	442	354	>	354	>	247	>	C
THROUGH	6	509	416	>	452 416	>	255 410	>C	A
RIGHT	84	705	705	>	705	>	621	>	A
MINOR STREET									
WB LEFT	0	307	231	>	231	>	231	>	C
THROUGH	14	413	337	>	376 337	>	359 323	>B	B
RIGHT	3	999	999	>	999	>	996	>	A
MAJOR STREET									
SB LEFT	0	1000	1000		1000		1000		A
NB LEFT	169	668	668		668		499		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINMA1A. WITH PROJECT

1985 HCM: UNSIGNALIZED INTERSECTIONS
****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .8

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... AINHA1A. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	14	72	0
THRU	0	0	7	46
RIGHT	386	0	3	0

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-2.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS					
	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS					
	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS					
	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS					
	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINHA1A. WITH PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	0	760	699	>	699	>	699	>	A
THROUGH	0	835	768	> 997	768	> 515	768	>A	A
RIGHT	483	997	997	>	997	>	515	>	A
MINOR STREET									
WB LEFT	19	402	220	>	220	>	201	>	C
THROUGH	0	837	769	> 220	769	> 201	769	>C	A
RIGHT	0	999	999	>	999	>	999	>	A
MAJOR STREET									
SB LEFT	0	1000	1000		1000		1000		A
NB LEFT	126	1000	1000		1000		874		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... AINHA1A. WITH PROJECT

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .94

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... LUINAKOA STREET

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... AM PEAK HOUR

OTHER INFORMATION.... HALLU1A. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE SOUTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	2	0	--	44
THRU	341	52	--	0
RIGHT	0	12	--	0

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	1	--	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-4.00	90	20	N
WESTBOUND	4.00	90	20	N
NORTHBOUND	-----	---	---	-
SOUTHBOUND	-4.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	---	---	---
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	SB	5.50	5.50	0.00	5.50
MAJOR LEFTS	EB	5.00	5.00	0.00	5.00
MINOR LEFTS	SB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... HALLU1A. WITH PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
SB LEFT	37	542	541	>	541	>	504	>	A
				>		>		>A	
RIGHT	0	997	997	>		997 >		997 >	A
MAJOR STREET									
EB LEFT	2	1000	1000			1000		998	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; AM PEAK HOUR
OTHER INFORMATION.... HALLU1A. WITH PROJECT

1985 HCM: UNSIGNALIZED INTERSECTIONS
****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .98

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MALIA STREET

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... AINMA1P. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	173	7	62	0
THRU	5	3	171	111
RIGHT	115	1	4	73

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS					
	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS					
	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS					
	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS					
	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINMA1P. WITH PROJECT

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	177	563	535	>	535	>	358	>	B
THROUGH	5	627	598	>	645 598	>	346 593	>B	A
RIGHT	117	942	942	>	942	>	825	>	A
MINOR STREET									
WB LEFT	7	459	401	>	401	>	394	>	B
THROUGH	3	601	573	>	462 573	>	451 570	>A	A
RIGHT	1	915	915	>	915	>	914	>	A
MAJOR STREET									
SB LEFT	0	988	988		988		988		A
NB LEFT	76	987	987		987		911		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MALIA STREET
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINMA1P. WITH PROJECT

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .94

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... AINAKOA AVENUE

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... AINHA1P. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

CONTROL TYPE WESTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	1	10	281	0
THRU	0	0	39	21
RIGHT	128	0	19	0

NUMBER OF LANES AND LANE USAGE

	EB	WB	NB	SB
LANES	1	1	1	1
LANE USAGE	LTR	LTR		

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-2.00	90	30	N
WESTBOUND	0.00	90	30	N
NORTHBOUND	2.00	90	20	N
SOUTHBOUND	-2.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	5.50	5.50	0.00	5.50
	WB	5.50	5.50	0.00	5.50
MAJOR LEFTS	SB	5.00	5.00	0.00	5.00
	NB	5.00	5.00	0.00	5.00
MINOR THROUGHS	EB	6.00	6.00	0.00	6.00
	WB	6.00	6.00	0.00	6.00
MINOR LEFTS	EB	6.50	6.50	0.00	6.50
	WB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINHA1P. WITH PROJECT

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)		SHARED CAPACITY c_{SH} (pcph)		RESERVE CAPACITY $c_R = c_{SH} - v$		LOS
MINOR STREET									
EB LEFT	1	573	375	>	375	>	374	>	B
THROUGH	0	635	416	> 986	416	> 849	416	>A	A
RIGHT	136	999	999	>	999	>	863	>	A
MINOR STREET									
WB LEFT	12	486	290	>	290	>	279	>	C
THROUGH	0	644	422	> 290	422	> 279	422	>C	A
RIGHT	0	997	997	>	997	>	997	>	A
MAJOR STREET									
SB LEFT	0	1000	1000		1000		1000		A
NB LEFT	419	1000	1000		1000		581		A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... AINAKOA AVENUE
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... AINHA1P. WITH PROJECT

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .95

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE

NAME OF THE NORTH/SOUTH STREET..... LUINAKOA STREET

NAME OF THE ANALYST..... PGP

DATE OF THE ANALYSIS (mm/dd/yy)..... PROJECTED

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... HALLU1P. WITH PROJECT

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE SOUTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	1	0	--	29
THRU	94	235	--	0
RIGHT	0	44	--	0

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	1	--	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	-4.00	90	20	N
WESTBOUND	4.00	90	20	N
NORTHBOUND	-----	---	---	-
SOUTHBOUND	-4.00	90	30	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	---	---	---
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	SB	5.50	5.50	0.00	5.50
MAJOR LEFTS	EB	5.00	5.00	0.00	5.00
MINOR LEFTS	SB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... HALLU1P. WITH PROJECT

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
SB LEFT	27	582	582	> 582	> 554	> A
						>A
RIGHT	0	819	819	> 819	> 819	> A
MAJOR STREET						
EB LEFT	1	896	896	896	895	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... HALEKOA DRIVE
NAME OF THE NORTH/SOUTH STREET.... LUINAKOA STREET
DATE AND TIME OF THE ANALYSIS..... PROJECTED ; PM PEAK HOUR
OTHER INFORMATION.... HALLU1P. WITH PROJECT

EXHIBIT D

SOCIO - ECONOMIC IMPACT STUDY

Luinakoa Residential Subdivision

Social Impact Assessment

1. Background and Introduction

This report was prepared by Earthplan, whose office is located at 81 South Hotel Street, Honolulu, Hawai'i. Included in this report is a description of the existing community in terms of demographic characteristics and housing information, and a possible future of the community without the Luinakoa Residential Subdivision, based on public policies and other proposed changes. Possible social impacts of the project discussed in this report include population impacts, relationship to the existing community, and public facilities and services. Preliminary community issues related to the Luinakoa Residential Subdivision are also presented, based on interviews held in conjunction with this study and related correspondence.

2. Description of the Existing Community

In 1990, 5,105 persons lived in the Study Area, of which 54 percent were Primary Area residents. The 1990 Census suggests that the Study Area exhibits several characteristics which distinguish its residents from the islandwide norm, as follows:

Demographics.

* There are 1.09 females per male in the Study Area, whereas, islandwide, there are 1.04 males per female.

* Caucasians and Japanese make up over 85 percent of the Study Area's population, with the proportion of ethnic Japanese outnumbering the islandwide proportion by almost two-to-one. The proportion of ethnic Chinese in the Study Area is also nearly twice that for O'ahu. There are also significantly small proportions of Hawaiians and Filipinos.

* The Study Area is significantly older than the islandwide population. On O'ahu, 2.9 persons out of every ten were 45 years old or older; 1.1 persons out of ten were 65 years or older. In the Study Area, out of every ten persons, 4.3 were 45 years old or older, and 1.6 persons out of ten were in the elderly category. At 42.8 years, the Primary Area's median age was *ten years* older than the islandwide median of 32.2 years.

Housing.

* The Study Area had a relatively low housing vacancy rate, with 3.4 percent reported in the 1990 census. At the same time, 5.8 percent of the islandwide housing stock was vacant.

* Almost 79 percent of the total Study Area housing units are owner-occupied; the 88 percent in the Primary Area is among the island's highest.

* Proportionally, the Study Area has 30 percent more single-family detached housing units than O'ahu. In the Primary Area almost 90 percent of the housing units are single family detached units.

* Housing in the Study Area is more expensive than the islandwide norms. On O'ahu, owner-occupied housing units have a median value of $283,600. In the Primary Area, the median value was $450,800, which is almost 60 percent higher than the islandwide median. In a recent study of property values on Luinakoa Street, all of the properties on Luinakoa Street were valued much higher than the 1990 islandwide median.

* Rents in the Primary Area are relatively high, with the median estimated at $1,001. By comparison, the islandwide median monthly rent was $615 in 1990.

Households and Families.

* The Study Area is more family-oriented than O'ahu, with almost 86 percent family households, as compared to 75 percent throughout O'ahu.

* In the Study Area, the average household size was 2.75 persons, which is smaller than the O'ahu-wide average of 3.02 persons.

* In the Study Area, only five percent of the units were considered crowded, as compared to the islandwide 16.4 percent.

3. Possible Future of the Community Without the Proposed Project

Based on public policies and current development proposals in the vicinity of the project site, it is expected that, *without the Luinakoa Residential Subdivision*, the area will remain suburban residential development on the lower ridges, inner valley floors, and along Kalanianaole Highway.

Changes in the Study Area and in the region would be due primarily to residential in-filling development, and population growth is expected to be relatively small. The potential for increasing the residential supply in the Study Area is limited by the developable land identified in the East Honolulu Development Plan. As of June 1990, East Honolulu contained 15,613 housing units. Based on the estimated 585 acres of developable land, there is a potential for an additional 3,367 units. Hence, the total units estimated for 2010 is 19,250 units.

If these units are built, then East Honolulu could accommodate a population of 58,600 persons. This implies a 28.4 percent increase over the 1990 population, and an average annual growth of 1.3 percent.

Other changes in the Study Area would be relatively minor. Commercial development would likely be limited to uses which are supportive of the predominant residential character, as directed for Urban Fringe areas. Even the public improvement projects are expected to be minor, as suggested by the scale of improvements along Kalanianaole Highway near the project site.

4. Possible Social Impacts of the Proposed Project

4.1 Population and Housing

The proposed project will have nominal impact on the existing and projected population for the East Honolulu Development Plan area. In terms of impact to the existing population, the additional 143 to 157 new residents estimated for the proposed project will increase the Primary Area population by five to six percent, based on the 1990 census information. The Luinakoa Residential Subdivision will increase the Study Area's population by three percent.

4.1 Relationship to the Existing Community

A major issue raised in correspondence, testimony and interviews was compatibility between the existing residents and the Luinakoa Residential Subdivision residents. This section looks at different components which affect the project's compatibility with existing residents. These components include short-term impacts, the effects of a new development project in the area, the addition of new residents and physical impacts.

4.2.1 Description of the Existing Community

The valley in which the Luinakoa Residential Subdivision is located was one of the few and early instances of the Bishop Estate selling land in fee. This is an old neighborhood, having been built in the 1950s as a housing project for World War II and Korean War veterans. Only six homes at the end of 'Ainakoa were constructed on Bishop Estate lease land, and these properties or a portion may have been converted to fee.

The project site runs parallel to the Kapakahi Gulch drainage channel and 'Ainakoa Avenue. The two-way Luinakoa Street branches from Halekoa Drive at the juncture opposite the Board of Water Supply standpipe tank. The existing Luinakoa residences rise above the street level on the Wai'alae Nui ridge side and are below street level on the Kapakahi Gulch channel side. The street is short and dead ends about an eighth of a mile mauka into the Kapakahi Gulch side of Wai'alae Nui valley.

Available census information, as well as correspondence related to the Luinakoa Residential Subdivision and interviews conducted for this report, indicate that the neighborhoods in the valley and on Luinakoa Street are fairly homogeneous. Many are original owners, which means they bought their homes directly from Bishop Estate in the early 1950s; they've lived there about 36 years. Most of those interviewed were ethnic Japanese and elderly people in their 60s and 70s. The younger people interviewed were often related to the original owners.

4.2.2 Short-Term Impacts

The proposed project will have short-term impacts due to construction activities, particularly in terms of noise and dust. Because many of the neighboring residents are elderly, construction-related impacts may be especially problematic.

Conditions would be further exacerbated if residents need to change their daily activities to adjust to construction impacts. Residents will be further inconvenienced if construction workers park on Luinakoa Street, or if the current on-site parking situation is altered to accommodate large construction vehicles.

4.2.3 Effects of A New Development Project in the Area

As suggested in Section 3, the only changes which are likely to occur in the Study Area and its environs would be those related to residential development, and only two proposals are active. Hence, the neighborhood is expected to remain very stable, except for the re-sale or transfer of existing units, and the possible addition of elderly units on the makai portion of the Study Area.

The Luinakoa Residential Subdivision will add 52 new houses to the area, and bring in between 140 and 160 persons at full buildout. A new residential project in the area could have the following effects:

* *Consistent with Existing Uses* -- The Luinakoa Residential Subdivision will not introduce a new use to the area, nor is it expected to stimulate the development of non-residential uses.

* *Differences in Architecture and Condition of New and Existing Homes* -- The new houses will be clearly differentiated from the existing homes.

* *Further Development Interest in the Valley Depending on Physical Constraints* -- The proposed project may signal a new potential for developers. New development may be limited, however, by environmental and physical constraints, including slope and terrain, soil conditions and roadway access limitations.

* *Change in Natural Environment and Visual Quality* -- The project will reduce the natural, undeveloped area by almost nine acres. For residents who enjoy views of the valley, the project will replace the natural setting with homes.

* *No Significant Impact on Property Values* -- Locations, Inc. conducted a study of the possible property value impacts of the Luinakoa Residential Subdivision on the nearby homes and found that the project will not significanly influence property values; rather the overall O'ahu market will determine values.

* *Minimal Encouragement to Upgrade of Existing Homes* -- The project may encourage some homeowners to upgrade their homes, but this is not expected to be a significant trend.

4.2.4 Addition of New Residents

At the time of this writing, the only characteristic which is predictable about the new project residents is the ability to afford purchasing a $250,000 lot and building a house on the lot. Whatever the financing method used, it is likely that the new residents will have more buying power, hence be more affluent, than the average O'ahu resident.

The concern regarding potential economic disparity suggest that the existing residents believe that they will be less affluent than the new residents. The basis for this apprehension is not specific; residents did not cite specific instances of existing disparity which may exist between the valley residents and residents of the newer, more expensive homes of Wai'alae Nui Ridge.

In the absence of 1990 income-related information on tract level, it is difficult to accurately assess if the existing residents have incomes which are below, at or above average. Another financial indicator is assets. Values of owner-occupied housing units were available in the 1990 Census and property values were researched with the Department of Taxation. In both instances, it was found that Luinakoa Street residents own homes which are much higher in value than the O'ahu-wide median. At least in terms of housing values, nearby residents are "better off" than the average island resident. Economic disparity may therefore not be a major factor, or at least no more so than that which may already exist with residents of Wai'alae Nui Ridge.

It is very likely that underlying the apprehension about the new residents is the expectation that the Luinakoa Residential Subdivision residents will be different in terms of not just income, but also age, ethnic composition and social ties. The new residents may very likely be younger, ethnically diverse, and from different social backgrounds. Existing residents will therefore need to adjust to people of different backgrounds.

From a social impact perspective, social integration can be both a positive experience or have negative overtones. The diversity of cultures and backgrounds can be an enriching experience when both new and existing residents are willing to work with each other. New residents may contribute skills and ideas to community efforts, and existing residents can help the new residents adjust to the new neighborhood. Social integration can be a negative experience if there is an expectation of any group -- existing or new -- that the other group will be a problem. Such conflict is possible in this project, as existing residents have already exhibited resistance to new residents.

4.2.5 Physical Effects

The area reportedly is subject to very unstable soil conditions and Luinakoa Partners proposes to mitigate this impact in a two-part program. First, the developer will collect all boulders on-site and drill over the 8.74-acre parcel to determine soil stability for future structural improvements related to residential and offsite work. Second, to the extent

allowed by existing residents, there will be videotaped records of existing structures along Luinakoa Street before and after construction. This will document whether any damage occurred during construction.

Regarding the adequacy of the present roadway conditions for additional traffic, roadway adequacy for emergency vehicles exists with or without the project, as existing residents may have need for ambulances or fire trucks. Thus, the project may increase the need for these vehicles but would not be the origin of the problem. Prohibiting on-street parking on one side of the street would be a big problem for residents, and the impact increases for households with many cars.

4.2.6 Analysis

The neighborhood in which Luinakoa Residential Subdivision is being proposed is a stable, quiet area, where people are familiar with each other and many share social ties which go back for more than 35 years. People have long enjoyed neighborhood stability and are comfortable with the few changes which have occurred over the years. The existing community has expressed strong concern and opposition to the project and some of the reasons for opposition are consistent with the positions taken on Hale O Malia, another proposed development in the area.

The project will bring social and physical change to the area, and this section discussed temporary and long-term impacts. Some of these changes are definitely negative, and these include noise and dust from construction. Some impacts are difficult to determine at this time, such as the potential for further development. There are project impacts regarding social integration; though the community suspects the worst, there may be positive outcomes in the long run. Further, some impacts supposedly can be mitigated, such as those related to construction.

From a social impact standpoint, the basic question is "*Should this community be spared change because they do not want it?*" Ultimately, the decision makers will answer this question.

This is a community where change is strongly resisted, and the proposed project is no exception. The project will bring social and physical change to the area, and the community opposes the changes the Luinakoa Residential Subdivision represents. This does not mean, however, that the residents are unable to adapt to change. Change is neither inherently good no bad, and people are able to adapt to change, whether it is welcomed or not. Most O'ahu communities have had to undergo major transformation and many continue to be desirable places to live.

4.3 Public Services and Facilities

4.3.1 Police Protection

The project site is in District Seven of the Honolulu Police Department. This district extends from Waikiki to Makapu'u Point. The Luinakoa Residential Subdivision is part of Beat 86, which is mauka of Kalanianaole Highway and extends from Kilauea Avenue in

Wai'alae Nui Valley to Po'ola Street on Wiliwilinui Ridge. The de facto population generated by the proposed project is not expected to cause a discernible increase in demand for police protection.

4.3.2 Fire Protection

Fire Station 23 is located on Kalanianaole Highway at Wailupe, approximately 1.9 miles from the project site. Fire trucks are expected to be able to access the project site in approximately four to five minutes. Backup services would be provided by the Kaimuki Fire Station. The infrastructure provided at the project site will include fire hydrants designed to meet the required capacity. Further, the design of residences to be constructed at the site will follow City fire protection standards and safety precaution measures.

4.3.3 Schools

Wilson Elementary School, Kaimuki Intermediate School, and Kalani High School currently service the area in which the project site is located. The Hawaii Department of Education estimates that the project site's population will include approximately 20 students who may attend these schools.

4.3.4 Health Care and Emergencies

Ambulance service for the project site is provided from the facility which houses Fire Station 23 at Wailupe. Response time to the project site is again approximately four to five minutes.

Honolulu's three largest medical facilities are located approximately ten to 20 minutes from the project site by ambulance. These include the 506-bed Queens Medical Center and the 159-bed Straub Clinic and Hospital, both located in Downtown Honolulu, and the 259-bed Kaiser Permanente Medical Center at Moanalua. Timely access is more likely because the project site and each of the medical facilities are situated less than one half mile from the H-1 freeway. This project is not expected to constitute an additional undue burden on the City and County of Honolulu's health care service.

4.3.5 Recreation

The project site would be serviced by three parks -- the Aina Koa Playground, Wilson Community Park, and the Wai'alae Iki Playground. It is anticipated that the Luinakoa Residential Subdivision will have minimal impact on the public parks and the project will meet standards and requirements of the City's Park Dedication Rules and Regulations.

5. Preliminary Community Issues on the Luinakoa Residential Subdivision

5.1 Sources of Information Used in This Analysis

Three sources of information were used in this analysis. First, to understand the values, concerns and issues of Study Area residents, this study examined the minutes of the Wai'alae - Kahala Neighborhood Board No. 3 over a two-year period. Second, Earthplan conducted 33 interviews with people who live on Luinakoa Street, Halekoa Drive near Luinakoa, and Ainakoa Avenue; four Neighborhood Board members were interviewed as well. The purpose of the interviews was to isolate issues and identify personal and community concerns about the project. No attempt was made to quantify responses since only a survey utilizing rigid sampling procedures could produce meaningful results, and would not substantively add to the issues analysis. The third source included 53 letters written by area residents on this project.

5.2 Neighborhood Board Issues

The Wai'alae-Kahala Neighborhood Board No. 3 deals with issues related to maintaining the livability and character of the existing community. Board members constantly look for ways to reduce inconveniences and problems and to enhance the predominantly single-family suburban character. In general, this Board tends to support efforts to improve the resident-oriented facilities, and consistently discourages actions which may place further burdens on constituents. The Board was very open to community input, and often solicited input from its constituents and elected officials.

Selected issues addressed over the last two years include property taxes, proposed development projects including the Hale O Malia and the Nohona Kahala proposals, and public services and facilities.

The Board has been discussing the proposed Luinakoa Residential Subdivision since May 1992, when a presentation was made. The Board subsequently voted to sent flyers to all residents on Luinakoa Street and held a forum on the project in July 1992. Several people spoke against the project, and after deliberation, the Board voted to recommend that a full EIS be prepared on the project. No subsequent action was taken.

5.3 Characteristics of the Area Discussed by Those Interviewed

We asked several questions regarding people's feelings about the existing community. Everyone valued their neighborhood, and had very few negative feelings about their community. All of those interviewed liked their community, their natural surroundings and their common social bonds.

Problems were few but serious, and almost all concerned the physical environment. Soil stability was a big problem, as were flooding and traffic.

Those interviewed felt that the neighborhood has hardly changed over the years, and except for the increase in traffic, the quality of life has remained good.

We asked people what kinds of changes they expected in the future, and if they foresaw any major problems with these changes. Very few people anticipated major changes in the area, and some iterated that they did not want to see any changes. Of those who did anticipate future change, development was the major change, and this was considered to be a very negative transformation.

5.4 Issues Related to the Luinakoa Residential Subdivision

The existing neighboring community has clearly stated its position opposing the Luinakoa Residential Subdivision. Issues raised included soil instability and flooding, construction effects, the narrowness of streets and traffic congestion, the change in ambience and environment, the precedence for further development and compatibility. The following provides an analysis of this position, based on interviews and materials reviewed for this study.

1. **The neighborhood's position on this project is consistent with positions taken on other projects.**

   The Ainakoa residents have vocally opposed Hale O Malia. They felt that the project was for rich outsiders and that traffic would be worsened. In the interviews, it was indicated that these sentiments were also felt about the Wai'alae Nui Ridge development and that many people did not like the recent Wai'alae Pinnacles project. It was also pointed out in interviews that the new Kahala Pacifica project was not favored.

   The current opposition to the Luinakoa Residential Subdivision is no exception, and a different position on the proposed project -- or on any other development in the area -- would be out of character.

2. **The underlying fear is that personal lives and social interactions will be negatively and irreversibly altered.**

   The nearby residents are very comfortable with the area as it is today. The long-time associations, social interaction, views, peace and quiet, low levels of daily disruptions -- these are all considered essential factors in their quality of life. These factors are also considered very specific and fragile and the valley's residents expect that any change to these factors would be a disruptive element. The Hale O Malia project is already threatening to alter the community. Fifty-two new houses and 160 new people represent yet a major change which is expected to further upset the stability of this neighborhood.

3. **The project is associated with all of the major problems cited about the existing community.**

   To the existing residents, the project will do nothing to improve what is good in the valley. The community is apprehensive that the Luinakoa Residential Subdivision will exacerbate all of the problems which already plague this

community. Soil problems, flooding, traffic, new people -- these are problems now, and to the existing residents, the proposed project will only mean more of the same.

4. **In the community's view, the only real solution to project impacts is to move the project elsewhere.**

For almost all of those interviewed and for those who wrote letters on the project, no amount of project modification will improve the problems associated with the project. They believe that the project will be harmful and technical studies showing otherwise will not change this opinion. They simply do not want to see the Luinakoa Residential Subdivision implemented. As such, it is believed that the only solution which will be acceptable to the residents is to move the project to another community, or as one person put it, "to someone else's backyard."

Luinakoa Residential Subdivision

Social Impact Assessment

Prepared for
Luinakoa Partners
by Earthplan

October 1992

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1. Background and Introduction

1.1 Purpose Of This Report

Luinakoa Partners proposes to develop a residential project in east Honolulu. The project requires an Urban designation by the State Land Use Commission. Further, the East Honolulu Development Plan map needs to be amended to incorporate the project, and the site needs to be appropriately rezoned by the City and County of Honolulu.

Environmental Communications prepared an environmental assessment on the proposed project in April 1992; the environmental assessment constituted a Notice of Negative Declaration. In June 1992, the Chief Planning Officer of the City and County of Honolulu Department of General Planning determined that the project will have no significant environmental impacts and filed a negative declaration on the Luinakoa Residential Subdivision. [1]

Luinakoa Partners has since decided to prepare an Environmental Impact Statement, and a Notice of Preparation was issued on September 8, 1992. This report assesses the social impacts of the proposed action. This social impact assessment is appended to and summarized in the Environmental Impact Statement.

1.2 Report Preparation and Organization

This report was prepared by Earthplan, whose office is located at 81 South Hotel Street, Honolulu, Hawai'i. Berna Cabacungan, principal of Earthplan, was project manager and principal researcher, analyst and writer.

Assistance was provided by two independent contractors. *Traver Carroll* conducted research on the demographic and housing characteristics of the Study Area, analyzed public policies and other development proposals, and identified impacts on public services and facilities. *Michael Mays* conducted interviews with nearby residents and regional community leaders, and reviewed correspondence related to the Luinakoa Residential Subdivision.

This report is organized as follows:

* The remaining portions of Section 1 describe the proposed project and discuss the role of a social impact assessment in the Luinakoa Residential Subdivision.

* Section 2 describes the existing community in terms of demographic characteristics and housing information.

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1 *Letter dated 2 June 1992 from Benjamin B. Lee, Chief Planning Officer of the City and County of Honolulu Department of General Planning to the Honorable Brian J. J. Choy, Director of the Office of Environmental Quality Control.*

* Section 3 suggests a possible future of the community without the Luinakoa Residential Subdivision, based on public policies and other proposed changes.

* Section 4 presents possible social impacts of the project, in terms of population impacts, relationship to the existing community, and public facilities and services.

* Preliminary community issues related to the Luinakoa Residential Subdivision are presented in Section 5, and are based on interviews held in conjunction with this study and related correspondence.

1.3 Description of the Proposed Luinakoa Residential Subdivision

The project site runs parallel to the Kapakahi Gulch drainage channel and 'Ainakoa Avenue. It is located on the mauka end of Luinakoa Street, which is a two-way street branching off Halekoa Drive. This is an older neighborhood, most of it having been built in the 1950s as a post World War II housing project.

Luinakoa Partners proposes to develop approximately eight acres located at the mauka end of Luinakoa Street. The site is currently undeveloped and vacant. Proposed are 52 residential lots, the average size of which would be 5,000 square feet. The finished lots will be sold at prevailing market fee simple prices, and the average is estimated at $250,000. There is no specific demographic group targeted for marketing purposes.

Residents of the new subdivision will use Luinakoa Street for access; the project will require extending this road by 1,025 feet.

1.4 Role of a Social Impact Assessment in this Project

Social impact assessment is a field of applied social science which has to do with the development and disclosure of social information relevant to (1) informing the decision-making process, and/or (2) developing management actions to deal with problematic social outcomes of a proposed project. It draws sometimes from social science, but other times from organizational development, political analysis, or simple journalism.

Commonly identified uses of social impact assessments include (1) understanding the ability of a community or group to adapt to changing conditions; (2) defining the problems or clarify the issues involved in a proposed change; (3) illuminating the meaning and importance of anticipated change, and (4) identifying mitigation opportunities or requirements.

The emphasis of this process varies, based on the particular land use characteristics of a project, the extent of development in nearby areas and the requirements of the different permit processes.

This report serves as the mechanism to identify potential social impacts for Luinakoa Residential Subdivision in efforts to (1) obtain Urban designation from the State Land Use Commission; to (2) secure amendments to the East Honolulu Development Plan; and (3) for rezoning.

In the overall social impact assessment process, this report can be useful in establishing community dialogue between Luinakoa Partners and the affected parties. The ongoing nature of this process can lead to an informed community and project team, possible project modifications, and, ideally, consensus on proposed actions.

2. Description of the Existing Community

This section describes the Study Area used in this report and presents population and housing information for this area.

2.1 Description of the Study Area

The Luinakoa Residential Subdivision is being proposed in a stable residential neighborhood in East Honolulu. Due to the relatively small scale of the project, the Study Area for this report was selected based on proximity of neighborhoods and sharing of neighborhood roadways. Two Census Tracts were selected as follows:

* The project site is in Census Tract 4.97, which extends from Wai'alae Iki Ridge to the Wai'alae Nui Canal. Included in this Census Tract are the residences in the valley formed by Kapakahi Gulch, and those located on Wai'alae Nui ridge. This tract is considered the *Primary Area.*

* We also included Census Tract 9.01, which is west of Census Tract 4.97. This tract includes residences between Wai'alae Nui Canal and the fence at the rim of the bluff; this fence is roughly mauka of Hunakai Street. This tract is considered the *Secondary Area.*

Figure A illustrates the Study Area. [2]

2.2 Demographic Characteristics

The Study Area was home to 5,105 persons in 1990, as indicated in *Table 1.* Fifty-four percent, or 2771 persons, lived in the Primary Area.

The Study Area differs from the islandwide population in terms of sex distribution in that there are more females than males. Islandwide, there are 1.04 males per female. In the Study Area, this situation is reversed and there are 1.09 females per male.

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[2] *In a response to the Notice of Preparation for the EIS, the 'Ainakoa Community Association requested that the EIS "identify the demographic composition of the residents on Luinakoa Street including number of persons, age, sex, retirement status, health status, employment status, fixed income, children, grandchildren, and cars . . ." We are not including this information for three reasons. First, a census tract may be further delineated into "Block Groups", which would allow finer analysis of information. In Census Tract 4.97, there is only Block Group 1. Second, the detailed demographic information requested by the Association is available only on "Summary Tape File 3-A" as produced by the U. S. Bureau of the Census. This information is not yet available at the State DBEDT. Third, this level of detail would provide interesting information but would not substantially affect the findings regarding social impacts of the Luinakoa Residential Subdivision.*

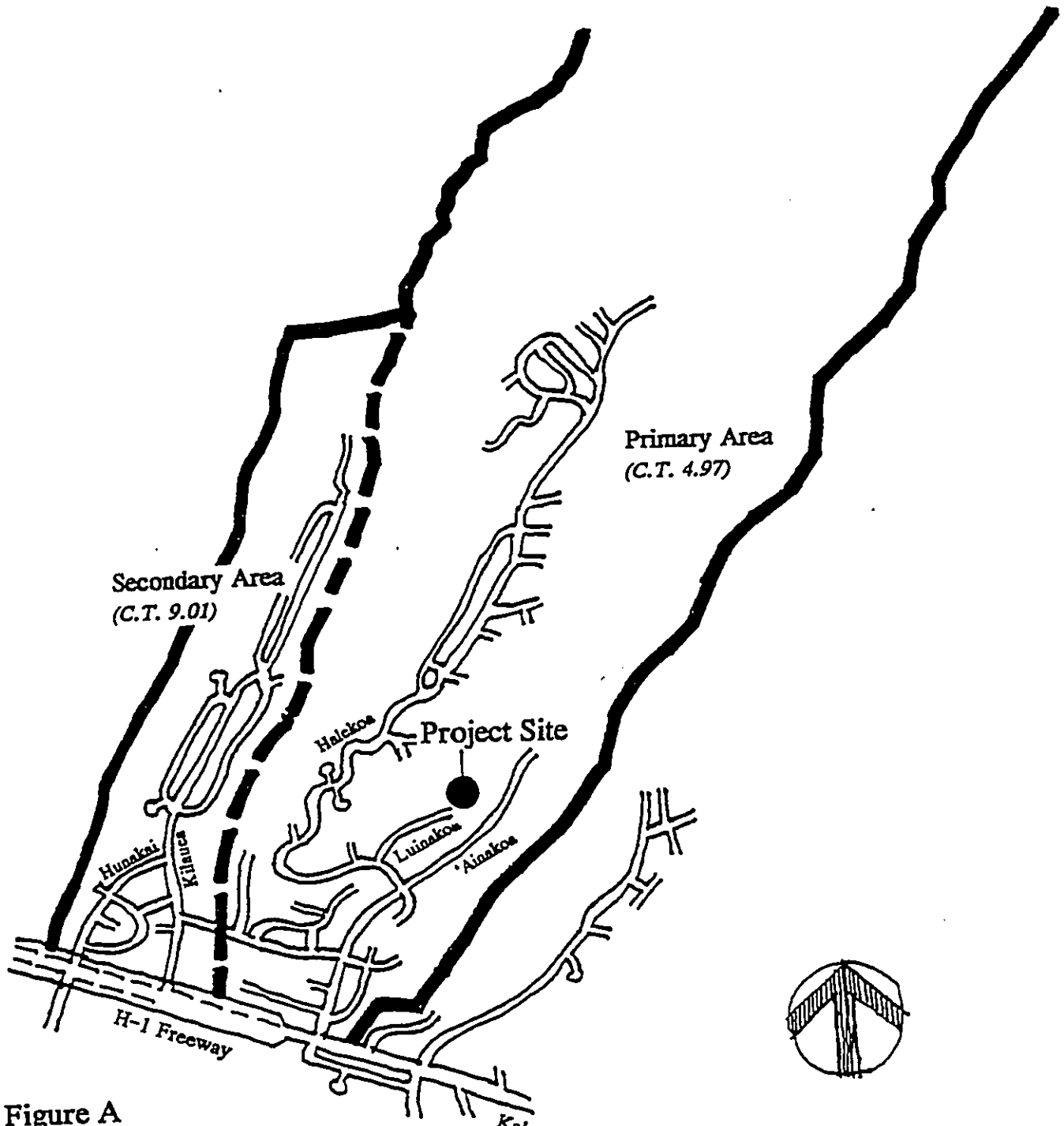

Figure A
Luinakoa Residential Subdivision
Study Area for Social Impact Assessment

Table 1

Demographic Characteristics of the Study Area

	O'ahu	Total Study Area	Primary Area *Ainakoa (CT 4.97)*	Secondary Area *(CT 9.01)*
Population	836,231	5,105	2,771	2,334
Sex				
Male	50.9%	47.8%	49.9%	45.3%
Female	49.1%	52.2%	50.1%	54.7%
Ethnicity				
Caucasian	31.6%	34.7%	36.4%	32.8%
Chinese	7.6%	12.7%	13.7%	11.4%
Filipino	14.4%	1.6%	1.4%	1.9%
Japanese	23.3%	40.5%	39.1%	42.2%
Korean	2.7%	2.9%	2.2%	3.7%
Hawaiian	11.0%	4.7%	4.7%	4.7%
Other	9.4%	2.9%	2.5%	3.3%
Age				
Less Than 5	7.4%	5.0%	4.4%	5.7%
5 to 17 years	17.1%	13.5%	14.0%	13.0%
18 to 44 years	46.2%	38.1%	35.8%	40.8%
45 to 64 years	18.3%	27.2%	28.4%	25.8%
65 years or old	11.0%	16.1%	17.4%	14.6%
Median Age	32.2	NA	42.8	39.4

Source: U.S. Bureau of the Census, 1991

O'ahu's population ethnicity is dominated by Caucasians and Japanese, with the two collectively representing 54.9 percent of the population. The Study Area generally follows this trend, but in much greater proportions. Caucasians and Japanese make up over 85 percent of the Study Area's population. This difference is due to the almost doubling of the proportion of ethnic Japanese in each of the Study Area census tracts. The proportion of ethnic Chinese in the Study Area is also nearly twice that for O'ahu.

These figures are balanced by the proportion of ethnic Hawaiians in the Study Area, which is almost 60 percent lower than that of O'ahu. Additionally, the proportion of ethnic Filipinos for the Study Area is 88.8 percent lower than that for the Island.

In terms of age, the Study Area is significantly older than the islandwide population. Each of the age categories below 45 years is consistently smaller for the Study Area than for O'ahu. Only 18 percent are under 18 years of age, as compared to almost 25 percent islandwide. On O'ahu, 46 percent of the population was between 18 and 44 years old, while only 38 percent of the Study Area were in this category.

The Study Area thus had higher proportions of people older than 45 years of age. On O'ahu, 2.9 persons out of every ten were 45 years old or older; 1.1 persons out of ten were 65 years or older. In the Study Area, out of every ten persons, 4.3 were 45 years old or older, and 1.6 persons out of ten were in the elderly category.

The extent of the difference in age proportions is best illustrated in term of median ages. At 42.8 years, the Primary Area's median age was *ten years* older than the islandwide median of 32.2 years. The combined, weighted mean of the median age of 41.2 years for the two Census Tracts provides an approximate median age for the overall Study Area; this is 28 percent higher than the islandwide median.

2.3 Housing Units

As indicated in *Table 2*, the Study Area has a relatively low housing vacancy rate, with 3.4 percent reported in the 1990 census. At the same time, 5.8 percent of the islandwide housing stock was vacant. This indicates a higher demand for housing in the Study Area than the already high demand for O'ahu.

The Study Area has a signficantly high proportion of owner-occupied housing units. Almost 79 percent of the total Study Area housing units are owner-occupied; the 88 percent in the Primary Area is among the island's highest.

Another distinguishing characteristic of the Study Area's housing stock is the proportion of single family detached housing units. The Study Area has, proportionally, 30 percent more of these types of units than the islandwide housing stock. This high proportion is due to the Primary Area, where almost 90 percent of the housing units are single family detached units.

On the other hand, in the Secondary Area, the majority of the housing units are either attached single family units (18 percent), or in multi-family structures (74 percent).

Table 2

Study Area Housing Vacancy and Occupancy Characteristics, 1990

	O'ahu	Total Study Area	Primary Area *Ainakoa (CT 4.97)*	Secondary Area *(CT 9.01)*
Total Housing Units	281,683	1,921	980	941
Percent Vacant Units	5.8%	3.4%	3.2%	3.7%
Total Occupied Units	265,304	1,855	949	906
Owner Occupied	52.0%	78.6%	87.8%	69.0%
Renter Occupied	48.0%	21.4%	12.2%	31.0%
Units per Structure				
1 Detached	44.9%	58.3%	89.3%	25.9%
1 Attached	10.3%	12.9%	7.4%	18.6%
2 to 9 Units	13.4%	13.3%	2.2%	24.9%
More Than 10	30.0%	14.9%	0.3%	30.1%
Mobile Home, Other	1.5%	0.6%	0.7%	0.5%
Owner Occupied Median Value	$283,600	NA	$450,800	$355,300
Renter Occupied Median Rent	$615	NA	$1,001	$979

Source: U.S. Bureau of the Census, 1991

- Both the median value of owner-occupied units and the median monthly rents of rental units are significantly higher than the islandwide figures. On O'ahu, owner-occupied housing unit have a median value of $283,600. In 1990, the median values of both Census Tracts in the Study Area are much higher. In the Primary Area, the median value was $450,800, which is almost 60 percent higher than the islandwide median.

While it may be believed that this high median is attributable mostly to the newer, higher-priced units on Wai'alae Nuie ridge, it was fount that the 'Ainakoa Valley units, including those on Luinakoa Street, also contribute to this high median. In a recent inventory of property values of 27 properties on Luinakoa Street, the following was found:

* only one was valued at less than $300,000, but above O'ahu's median;
* two were valued between $300,000 and $350,000;
* one was valued between $350,000 and $375,000;
* 14 were valued between $375,000 and $400,000; and
* nine were valued above $400,000. [3]

Hence, all of the properties on Luinakoa Street are valued much higher than the 1990 islandwide median.

Further, rents in the Primary Area are relatively high, with the median estimated at $1,001. By comparison, the islandwide median monthly rent was $615 in 1990.

2.4 Household and Families

The Study Area is more family-oriented than O'ahu, as suggested on *Table 3*. On O'ahu, less than three-fourths of the total households are family households, and about 60 percent contain married couples. In the Primary Area, almost 86 percent are family households, and almost three-fourths contain married couples.

In terms of households with only one person, 19.2 percent of the islandwide households comprised one person. In the Study Area, 15 percent were in this category. The Primary Area was especially low with less than ten percent of its households having only one person.

Overall, the Study Area had smaller households than O'ahu. Islandwide, there was an average of 3.02 persons per household in 1990. In the Study Area, the average household size was 2.75 persons.

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[3] *Based on information provided by Locations, Inc., in conjunction with this project. Whereas the census-based values are based on the respondents' estimates, these values are those used as the basis for property tax computation. The actual values are therefore estimated as being 20 percent higher than those provided.*

Table 3

Household and Family Characteristics, 1990

	O'ahu	Total Study Area	Primary Area *Ainakoa (CT 4.97)*	Secondary Area *(CT 9.01)*
Total Households	265,304	1,855	949	906
Family Households	74.4%	79.0%	85.6%	72.2%
Married Couple Families	*59.7%*	*64.4%*	*74.0%*	*54.3%*
Nonfamily Households	25.6%	21.0%	14.4%	27.8%
Householder Living Alone	*19.2%*	*15.4%*	*9.9%*	*21.2%*
Persons in Households	802,338	5,105	2,771	2,334
Persons per Household	3.02	2.75	2.92	2.58
Persons per Room (1)				
1.0 to 1.5 (2)	8.2%	3.5%	2.8%	4.1%
1.51 or More (3)	8.2%	1.3%	1.2%	1.5%

Notes:
(1) Universe: occupied housing units
(2) Indicates "mildly crowded" conditions
(3) Indicates "very crowded" conditions

Source U.S. Bureau of the Census, 1991

In keeping with the small households is the low incidence of crowded housing units. At 16.4 percent, the aggregated proportions of both mildly crowded and very crowded conditions for O'ahu was almost two and one half times that of the Study Area. In the Study Area, about five percent of the units were considered crowded; the Primary Area units had a very low crowded figure at four percent.

2.5 Summary of Existing Community Characteristics

In 1990, 5,105 persons lived in the Study Area, of which 54 percent were Primary Area residents. The 1990 Census suggests that the Study Area exhibits several characteristics which distinguish its residents from the islandwide norm, as follows:

Demographics.

* There are 1.09 females per male in the Study Area, whereas, islandwide, there are 1.04 males per female.

* Caucasians and Japanese make up over 85 percent of the Study Area's population, with the proportion of ethnic Japanese outnumbering the islandwide proportion by almost two-to-one. The proportion of ethnic Chinese in the Study Area is also nearly twice that for O'ahu. There are also significantly small proportions of Hawaiians and Filipinos.

* The Study Area is significantly older than the islandwide population. On O'ahu, 2.9 persons out of every ten were 45 years old or older; 1.1 persons out of ten were 65 years or older. In the Study Area, out of every ten persons, 4.3 were 45 years old or older, and 1.6 persons out of ten were in the elderly category. At 42.8 years, the Primary Area's median age was *ten years* older than the islandwide median of 32.2 years.

Housing.

* The Study Area had a relatively low housing vacancy rate, with 3.4 percent reported in the 1990 census. At the same time, 5.8 percent of the islandwide housing stock was vacant.

* Almost 79 percent of the total Study Area housing units are owner-occupied; the 88 percent in the Primary Area is among the island's highest.

* Proportionally, the Study Area has 30 percent more single-family detached housing units than O'ahu. In the Primary Area almost 90 percent of the housing units are single family detached units.

* Housing in the Study Area is more expensive than the islandwide norms. On O'ahu, owner-occupied housing units have a median value of $283,600. In the Primary Area, the median value was $450,800, which is almost 60 percent

higher than the islandwide median. In a recent study of property values on Luinakoa Street, all of the properties on Luinakoa Street were valued much higher than the 1990 islandwide median.

* Rents in the Primary Area are relatively high, with the median estimated at $1,001. By comparison, the islandwide median monthly rent was $615 in 1990.

Households and Families.

* The Study Area is more family-oriented than O'ahu, with almost 86 percent family households, as compared to 75 percent throughout O'ahu.

* In the Study Area, the average household size was 2.75 persons, which is smaller than the O'ahu-wide average of 3.02 persons.

* In the Study Area, only five percent of the units were considered crowded, as compared to the islandwide 16.4 percent.

3. Possible Future of the Community Without the Proposed Project

3.1 Major Public Policies Guiding the Future of The Region

The City and County of Honolulu General Plan recognizes the Study Area as part of O'ahu's urban fringe. The Study Area is part of a string of residential communities clustered along East Honolulu's single primary transportation corridor, Kalanianaole Highway. The suburban character has been firmly established.

The 1990 East Honolulu population of 45,654 [4] constituted 5.4 percent of the population of O'ahu. This is consistent with the General Plan population distribution guidelines for East Honolulu in 2005, which recommend that East Honolulu accommodate between 5.3 to 5.8 percent of the islandwide total.

The overall pattern of development within East Honolulu is to continue to be linear, running parallel with the shoreline and bounded by the mountainous conservation lands and the sea. Suburban residential development is to remain on the lower ridges, inner valley floors, and along Kalanianaole Highway. Some low and medium-density apartment uses will be permitted in Hawai'i Kai, as designated on the land use map.

Further, development priorities for the East Honolulu Development Plan area are proposed as follows:

1. Expediting the necessary improvements to Kalanianaole Highway;
2. Expansion of regional and local park opportunities and the preservation of natural space;
3. Affordable housing within the Medium and Low Density apartment uses in Hawai'i Kai;
4. Preservation of beach access. [5]

3.2 Major Development Proposals

In the Study Area, there are only two development projects which are undergoing or have recently completed the permitting process:

* **Hale O Malia.**

  The Episcopal Homes of Hawaii, Inc. proposes to establish an elderly life care facility with 300 units of elderly housing on a 7.9 acre portion of the Star of the Sea Church and School property, located at 449 Malia Street. The

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[4] *Personal communication with Steve Young, Chief of the Planning Information Branch of Department of General Planning, October 2, 1992.*
[5] *Special Provisions for East Honolulu Development Plan.*

project site is located at the makai end of the 'Ainakoa area. The Honolulu City Council approved a request by this applicant to amend the land use designation of the property from Public and Quasi-Public use to Medium Density Apartment use on December 17, 1991. [6]

On July 16, 1992, an application was submitted to the City and County of Honolulu Planning Commission for a change of zoning from R-7.5 Residential District to A-2 Medium Density Apartment District. This request is pending.

* **Residential development on Wai'alae Nui Ridge.**

Eighteen acres of land located at Aha Niu Place on Wa'ialae Nui Ridge has received approvals for residential development and are on the market. As a condition of the zoning, the property has been limited to no more than 14 or 15 single family houses when it is developed. It has been on the market since 1990. [7]

In terms of projects just outside of the Study Area, only two efforts suggest possible changes. First, Waialae Kahala Partners proposes to develop the **Nohona Kahala Professional Center**, a three story office building, on the old Waialae Drive-In site. The project was scaled back from the original six-story proposal.

Second, **Kalanianaole Highway** improvements are being implemented in phases; the current phase is the work between Aina Haina to Niu Valley in which the roadway is being widened and improved. The last phase will occur in the region of the project site, between the H-1 Freeway and Aina Haina. On this stretch, the improvements will be primarily cosmetic and will include underground utilities, sidewalks and bike lanes. [8]

3.3 Likely Future Scenario Without the Luinakoa Residential Subdivision

Based on public policies and current development proposals in the vicinity of the project site, it is expected that, *without the Luinakoa Residential Subdivision*, the area will remain suburban residential development on the lower ridges, inner valley floors, and along Kalanianaole Highway.

Changes in the Study Area and in the region would be due primarily to residential in-filling development, and population growth is expected to be relatively small. The potential for increasing the residential supply in the Study Area is limited by the developable land identified in the East Honolulu Development Plan. As of June 1990, East Honolulu

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6 *Ordinance No. 91-92*
7 *Personal communication with David Imada, Land Manager of Kamehameha Schools, Bishop Estate, August 27, 1992.*
8 *Personal communication with Mr. Abeshima, Project Manager for Kalanianaole Highway, State Department of Transportation, October 5, 1992.*

contained 15,613 housing units. Based on the estimated 585 acres of developable land, there is a potential for an additional 3,367 units. Hence, the total units estimated for 2010 is 19,250 units.

If these units are built, then East Honolulu could accommodate a population of 58,600 persons.[9] As *Table 4* indicates, this implies a 28.4 percent increase over the 1990 population, and an average annual growth of 1.3 percent.

Other changes in the Study Area would be relatively minor. Commercial development would likely be limited to uses which are supportive of the predominant residential character, as directed for Urban Fringe areas. Even the public improvement projects are expected to be minor, as suggested by the scale of improvements along Kalanianaole Highway near the project site.

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[9] *Based on City and County of Honolulu Department of General Planning, 1992.*

Table 4

Possible Population Changes in the Region Without the Luinakoa Residential Subdivision

1990 Population (1)	45,654
Projected 2010 Population (2)	58,600
Increase	12,946
Percent Increase Over 1990 Population	28.4%
Average Annual Growth Rate	1.3%

1. *Based on personal communication with Steve Young, Chief of Planning Information Branch of Department of General Planning, October 2, 1992.*

2. *Department of General Planning, 1991.*

4. Possible Social Impacts of the Proposed Project

In correspondence and testimony related to the Luinakoa Residential Subdivision and in interviews conducted for this study, area residents have expressed strong concern about the impacts of the project. Though some of those community concerns are social-related, many have to do with physical and environmental impacts. Section 5 summarizes and analyzes those concerns.

This section focusses on possible social impacts related to the Luinakoa Residential Subdivision. Section 4.1 identifies population impacts in terms of the Primary Area, the Study Area and the region. Section 4.2 discusses the project's relationship to the existing community, and Section 4.3 presents impacts on public services and facilities.

4.1 Population and Housing

The Luinakoa Residential Subdivision will increase the population in the Study Area by an approximate range of 143 to 157 persons. This range is based on average household sizes of 2.75 [10] to 3.02 [11] persons.

In terms of impact to the existing population, the proposed project will increase the Primary Area population by five to six percent, based on the 1990 census information. The Luinakoa Residential Subdivision will increase the Study Area's population by three percent.

The proposed project will have nominal impact on the existing and projected population for the East Honolulu Development Plan area.

4.1 Relationship to the Existing Community

A major issue raised in correspondence, testimony and interviews was compatibility between the existing residents and the Luinakoa Residential Subdivision residents. This section looks at different components which affect the project's compatibility with existing residents. These components include short-term impacts, the effects of a new development project in the area, the addition of new residents and physical impacts.

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10 *Based on the 1990 average household size of Census Tract 4.97, in which the project site is located.*
11 *Based on average household size in O'ahu in 1990.*

4.2.1 Description of the Existing Community

The valley in which the Luinakoa Residential Subdivision is located was one of the few and early instances of the Bishop Estate selling land in fee. This is an old neighborhood, having been built in the 1950s as a housing project for World War II and Korean War veterans. Only six homes at the end of 'Ainakoa were constructed on Bishop Estate lease land, and these properties or a portion may have been converted to fee. The offer has been made several times in the last few years. [12]

The largest traffic artery into the Wai'alae Nui Valley from the Kalanianaole Highway is 'Ainakoa Avenue which is a two-way four lane avenue up to Halekoa Street intersection, just past the Aina Koa Neighborhood Park. The street narrows into a two-lane affair, allowing for street parking on both sides, until its terminus at a City channel maintenance lot. At the time of this writing, this lot is occupied by a bulldozer used to clear the Kapakahi catchment basin of rock and vegetation.

The only public park, with playing field and public rest shelter, lies between the Malia Street and Halekoa Drive intersection, on the Wai'alae Iki side of the 'Ainakoa Avenue. Star of The Sea School is makai of the Malia Street between 'Ainakoa Avenue and Kilauea Avenue. No public schools or public service facilities are located in Wai'alae Nui Valley.

Residences occupying small lots line both sides of 'Ainakoa Avenue. The homes are old and of wooden construction; only a few scattered newer replacement homes can be found along this street.

Halekoa Drive intersects 'Ainakoa Avenue (at the beginning of the 1400 block) and begins its ascent of Wai'alae Nui ridge at the Board of Water Supply tank. The residences closest to Luinakoa Street intersection line both sides of Halekoa Drive. The roadway is two-way and has two lanes; it is lined with street-parked cars much like Luinakoa Street. Cars outnumber garages along lower Halekoa Drive. The lower parts of the drive contain older, modest homes, but homes become decreasing less modest and newer as one ascends the ridge.

The project site runs parallel to the Kapakahi Gulch drainage channel and 'Ainakoa Avenue. The two-way Luinakoa Street branches from Halekoa Drive at the juncture opposite the Board of Water Supply standpipe tank. The existing Luinakoa residences rise above the street level on the Wai'alae Nui ridge side and are below street level on the Kapakahi Gulch channel side. The street is short and dead ends about an eighth of a mile mauka into the Kapakahi Gulch side of Wai'alae Nui valley.

As footnoted in Section 2.1, detailed demographic information from the 1990 census on Wai'alae Nui Valley and Luinakoa Street was not available at this writing. Nevertheless, the available census information, as well as correspondence related to the Luinakoa Residential Subdivision and interviews conducted for this report, indicate that the neighborhoods in the valley and on Luinakoa Street are fairly homogeneous.

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12 *Personal communication with David Amada, Land Manager with the Bishop Estate.*

Of the 14 people interviewed on Luinakoa Street, nine were original owners, which means they bought their homes directly from Bishop Estate in the early 1950s; they've lived there about 36 years. Four moved in between 1956 and 1965, and one person has been a resident since 1984. Of the other valley residents, ten were original owners, one lived there since 1958 and two have been residents for 16 years.

Most of those interviewed were ethnic Japanese and elderly people in their 60s and 70s. The younger people interviewed were often related to the original owners.

4.2.2 Short-Term Impacts

The proposed project will have short-term impacts due to construction activities, particularly in terms of noise and dust. Even though these impacts may be minimized by following regulations set forth and enforced by public agencies, some impact will be unavoidable, and the homes closest to the construction activities may be impacted as such.

Because many of the neighboring residents are elderly, construction-related impacts may be especially problematic. Neighbors with respiratory problems may be affected, and the increased noise levels may be particularly stressful for those who have become accustomed to or require long periods of quiet.

Conditions would be further exacerbated if residents need to change their daily activities to adjust to construction impacts. Of particular concern is on-street parking. Although estimating construction-related traffic impacts is not part of Earthplan's scope of work, we note that on-street parking is scarce on Luinakoa Street. Luinakoa households own more than one car apiece, even though most of the houses have only one-car garages. There is already competition for the available parking spaces among Luinakoa households and Halekoa Drive households near the intersection, and this competition is heightened when there are parties or gatherings in some households. With the project, residents will be further inconvenienced if construction workers park on Luinakoa Street, or if the current on-site parking situation is altered to accommodate large construction vehicles.

4.2.3 Effects of A New Development Project in the Area

As suggested in Section 3, the only changes which are likely to occur in the Study Area and its environs would be those related to residential development, and only two proposals are active. Hence, the neighborhood is expected to remain very stable, except for the re-sale or transfer of existing units, and the possible addition of elderly units on the makai portion of the Study Area.

The Luinakoa Residential Subdivision will add 52 new houses to the area, and bring in between 140 and 160 persons at full buildout. A new residential project in the area could have the following effects:

* **Consistent with Existing Uses.**

  The Luinakoa Residential Subdivision will not introduce a new use to the area, nor is it expected to stimulate the development of non-residential uses. The latter is limited by public policy.

* **Differences in Architecture and Condition of New and Existing Homes.**

  The new houses will be clearly differentiated from the existing homes. The new units will likely be larger than existing units. The developer will comply with current regulations which implies that the units will have larger garages and wider setbacks, and will conform to current structural requirements. The new units will also be of contemporary design.

* **Further Development Interest in the Valley Depending on Physical Constraints.**

  The proposed project will "open up" an area which is currently undeveloped. It will extend the roadway, as well as sewerage, water and utility lines. In a valley which had not experienced new development in many years, these improvements may signal a new potential for developers.

  New development may be limited, however, by environmental and physical constraints. Grading of the slope and terrain may prove too costly for developers, and roadway access limitations could further restrict development beyond that which is proposed.

* **Change in Natural Environment and Visual Quality.**

  The project will reduce the natural, undeveloped area by almost nine acres. Given the amount of land in the back of the valley, this is not a significant reduction. For residents who enjoy views of the valley, the project will replace the natural setting with homes.

* **No Significant Impact on Property Values.**

  Locations, Inc. conducted a study of the possible property value impacts of the Luinakoa Residential Subdivision on the nearby homes. Four case studies were examined: Nohono Kahala, Hawai'i Loa Ridge, Queen's Gate and Royal Summit. In each of these cases, it was found that the specific projects had no significant impact on the property values of the existing homes. Rather, the O'ahu and immediate area neighborhood prices followed the same trends. The immediate area neighborhood median price trends tended to mirror the behavior of the entire O'ahu market both before

and after the introduction of the new development projects.[13]

* **Minimal Encouragement to Upgrade of Existing Homes.**

  The project may encourage some homeowners to upgrade their homes simply because newer homes are being added to their neighborhood. While this is a possibility, however, it is not expected to be a significant trend. Over the years, few of the original homes have undergone major renovation nor have many been replaced. Many of the homeowners are elderly and either cannot afford to upgrade their homes or have no interest in doing so.

4.2.4 Addition of New Residents

A frequent apprehension raised in letters, testimony and interviews is that the Luinakoa Residential Subdivision will house only affluent people and that this will be incompatible with the existing residents. As noted previously in this report, the Study Area and the immediate neighborhood exhibit distinct age, sex, ethnic and other characteristics which distinguish existing residents from the islandwide norm.

At the time of this writing, the only characteristic which is predictable about the new project residents is the ability to afford purchasing a $250,000 lot and building a house on the lot. The new residents will most likely have incomes above the islandwide median, and many will likely be "moving up" in the housing market. For example, they may have accumulated sufficient equity in their present properties which can be used in the purchase of the new homes. Or, they may use the proceeds from the sale of their present properties. to finance the new homes. Whatever the financing method used, it is likely that the new residents will have more buying power, hence be more affluent, than the average O'ahu resident.

The concern regarding potential economic disparity suggest that the existing residents believe that they will be less affluent than the new residents. The basis for this apprehension is not specific; residents did not cite specific instances of existing disparity which may exist between the valley residents and residents of the newer, more expensive homes of Wai'alae Nui Ridge.

In the absence of 1990 income-related information on tract level, it is difficult to accurately assess if the existing residents have incomes which are below, at or above average. Another financial indicator is assets. Values of owner-occupied housing units were available in the 1990 Census and property values were researched with the Department of Taxation. In both instances, it was found that Luinakoa Street residents own homes which are much higher in value than the O'ahu-wide median. At least in terms of housing values, nearby residents are "better off" than the average island resident. Economic disparity may therefore not be a major factor, or at least no more so than that which may already exist with residents of Wai'alae Nui Ridge.

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13 *Letter from Michael A. Sklarz, Director of Research at Locations, Inc. to Luinakoa Partners.*

It is very likely that underlying the apprehension about the new residents is the expectation that the Luinakoa Residential Subdivision residents will be different in terms of not just income, but also age, ethnic composition and social ties. The new residents may very likely bring in new social characteristics to the area:

* On the average, they will likely be younger; a few will have school-aged children.

* They will likely bring ethnic diversity to the area, which means proportionally less Caucasians and people of Japanese and Chinese ethnicity and more people of Hawaiian, Filipino, Koreans and other groups found throughout O'ahu.

* The predominant factor which forms many of the current social ties are that many of the residents are veterans or are related to veterans. The new residents will not necessarily share this background, although we understand that a few former valley residents have expressed interest in purchasing a lot in the proposed project.

With the proposed project, then, the Primary Area will become slightly less homogeneous and the existing residents will need to adjust to people of different backgrounds. From a social impact perspective, social integration can be both a positive experience or have negative overtones:

* The diversity of cultures and backgrounds can be an enriching experience when both new and existing residents are willing to work with each other. New residents may contribute skills and ideas to community efforts, and existing residents can help the new residents adjust to the new neighborhood.

* Social integration can be a negative experience if some groups resent or reject the newcomers, or if the newcomers look down on the existing residents. The potential for social conflict exists if there is an expectation of any group -- existing or new -- that the other group will be a problem. Such conflict is possible in this project, as existing residents have already exhibited resistance to new residents.

4.2.5 Physical Effects

Although the project's environmental impacts are being addressed by other members of the project team, letters from area residents and those interviewed expressed strong concern about the project's effect on soil stability and the adequacy of the roadway to accommodate the proposed project. These topics are therefore discussed from a social impact perspective; that is, how these factors may affect the quality of life of existing residents.

The area reportedly is subject to very unstable soil conditions, and there are many instances in which residents have had to prop up their structures to adjust to soil movement. If the project further exacerbates this problem, it will constitute additional hardship for those living near and below the project site. Luinakoa Partners proposes to

mitigate this impact in a two-part program. First, the developer will collect all boulders on-site and drill over the 8.74-acre parcel to determine soil stability for future structural improvements related to residential and offsite work. Second, to the extent allowed by existing residents, there will be videotaped records of existing structures along Luinakoa Street before and after construction. This will document whether any damage occurred during construction.

Regarding the adequacy of the present roadway conditions for additional traffic, residents raised concern that (1) emergency vehicles may not be able to access the new subdivision and that (2) additional traffic may not be able to be accommodated on the narrow street. The basis of this concern is that parking may be prohibited on one side of the street to accommodate additional traffic.

The roadway adequacy for emergency vehicles exists with or without the project, as existing residents may have need for ambulances or fire trucks. Thus, the project may increase the need for these vehicles but would not be the origin of the problem. Prohibiting on-street parking on one side of the street would be a problem for residents. Financial and space limitations may prevent some residents from installing another parking space on their property, and this would mean increased competition for on-street parking spaces and longer walking distances to and from the automobiles. The impact increases for households with many cars.

4.2.6 Analysis

The neighborhood in which Luinakoa Residential Subdivision is being proposed is a stable, quiet area, where people are familiar with each other and many share social ties which go back for more than 35 years. People have long enjoyed neighborhood stability and are comfortable with the few changes which have occurred over the years. The existing community has expressed strong concern and opposition to the project and some of the reasons for opposition are consistent with the positions taken on Hale O Malia, another proposed development in the area.

The project will bring social and physical change to the area, and this section discussed temporary and long-term impacts. Some of these changes are definitely negative, and these include noise and dust from construction. Some impacts are difficult to determine at this time, such as the potential for further development. There are project impacts regarding social integration; though the community suspects the worst, there may be positive outcomes in the long run. Further, some impacts supposedly can be mitigated, such as those related to construction.

From a social impact standpoint, the basic question is "*Should this community be spared change because they do not want it?*" Ultimately, the decision makers will answer this question.

This is a community where change is strongly resisted, and the proposed project is no exception. The project will bring social and physical change to the area, and the community opposes the changes the Luinakoa Residential Subdivision represents. This does not mean, however, that the residents are unable to adapt to change. Change is

neither inherently good no bad, and people are able to adapt to change, whether it is welcomed or not. Most O'ahu communities have had to undergo major transformation and many continue to be desirable places to live.

4.3 Public Services and Facilities

4.3.1 Police Protection

The project site is in District Seven of the Honolulu Police Department. This district extends from Waikiki to Makapu'u Point. The Luinakoa Residential Subdivision is part of Beat 86, which is mauka of Kalanianaole Highway and extends from Kilauea Avenue in Wai'alae Nui Valley to Po'ola Street on Wiliwilinui Ridge.

The District Police protection services are provided by officers from the Main Police Station located on Alakea Street in Downtown Honolulu. One police officer is on duty in the beat during each shift; the response time is five to six minutes to locations near the project site. [14]

The de facto population generated by the proposed project is not expected to cause a discernible increase in demand for police protection.

4.3.2 Fire Protection

Fire Station 23 is located on Kalanianaole Highway at Wailupe, approximately 1.9 miles from the project site. Fire trucks are expected to be able to access the project site in approximately four to five minutes.

Backup services would be provided by other fire stations with a response time of six to eight minutes. The other station closest to the project site is the Kaimuki Fire Station located 2.1 miles away on Koko Head Avenue. [15]

The infrastructure provided at the project site will include fire hydrants designed to meet the required capacity. Further, the design of residences to be constructed at the site will follow City fire protection standards and safety precaution measures.

4.3.3 Schools

When completed, the project's proposed 52 single family homes may increase the public school population of the Study Area. Wilson Elementary School, Kaimuki Intermediate School, and Kalani High School currently service the area in which the project site is located.

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14 *Personal communication with Nathan Matsuoka, Research Statistician with the Honolulu Police Department, September 1, 1992.*

15 *Personal communication with Captain Tomita, Honolulu Fire Department, September 1, 1992.*

The Hawaii Department of Education estimates that the project site's population will include approximately 12 students in the elementary grades of kindergarten through sixth. The project site may also house an estimated three students in the seventh and/or eighth grades, and five high school students. These increases are not anticipated to pose a burden on the public education system. [16]

4.3.4 Health Care and Emergencies

Ambulance service for the project site is provided from the facility which houses Fire Station 23 at Wailupe. Response time to the project site is again approximately four to five minutes.

Honolulu's three largest medical facilities are located approximately ten to 20 minutes from the project site by ambulance. These include the 506-bed Queens Medical Center and the 159-bed Straub Clinic and Hospital, both located in Downtown Honolulu, and the 259-bed Kaiser Permanente Medical Center at Moanalua. Timely access is more likely because the project site and each of the medical facilities are situated less than one half mile from the H-1 freeway. [17]

These three facilities provide approximately 40 percent of the 2,017 acute care beds which service the entire civilian population of O'ahu. Hospital average daily occupancy on Oahu in 1990 was 69.7 percent. [18] This project is not expected to constitute an additional undue burden on the City and County of Honolulu's health care service.

4.3.5 Recreation

The project site would be serviced by three parks, two of which are in the Study Area. The closest is the Aina Koa Playground which covers 2.4 acres and is located on 'Ainakoa Avenue. Wilson Community Park is a 4.1 acre park located on Kilauea Avenue. Outside of the Study Area, and in the Kuliouou/Kalani Iki Neighborhood Board Area No. 2, is the 9.8-acre Wai'alae Iki Playground.

It is anticipated that the Luinakoa Residential Subdivision will have minimal impact on the public parks. The project will meet standards and requirements of the City's Park Dedication Rules and Regulations.[19]

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16 *Personal communication with Thomas Saka, Information Specialist with the Hawai'i State Department of Education, September 2, 1992; and letter dated 1 September 1992 from Charles T. Toguchi, Superintendent of the State Department of Education to Donald A. Clegg, Director of the City Department of Land Utilization.*
17 *Personal communication with Mark Rigg, Paramedic, Wailupe Ambulance Facility, September 2, 1992.*
18 *Hawai'i State Department of Business, Economic Development and Tourism, 1991.*
19 *Letter dated 9 September 1992 from Walter M. Ozawa, Director of the City Department of Parks and Recreation to Fred Rodriguez of Parametrix, Inc.*

5. Preliminary Community Issues on the Luinakoa Residential Subdivision

5.1 Sources of Information Used in This Analysis

Three sources of information were used in this analysis:

1. **Neighborhood Board minutes.**

   The Neighborhood Board system is a formal mechanism for citizen input to public entities regarding islandwide City policies, specific community problems and other matters, and proposed changes. The types of issues addressed by a Neighborhood Board and subsequent actions often reflect values and concerns of the constituent population.

   To understand the values, concerns and issues of Study Area residents, this study examined the minutes of the Wai'alae - Kahala Neighborhood Board No. 3. We reviewed the minutes of meetings held from June 1990 through August 1992.[20] Section 5.2 discusses issues addressed by this Board.

2. **Interviews Conducted for This Study.**

   Earthplan conducted 33 interviews with people who live on (1) Luinakoa Street, (2) Halekoa Drive near Luinakoa, and (3) Ainakoa Avenue. In addition, four Neighborhood Board members were interviewed for a regional perspective; two lived on Halekoa Drive and two in the neighboring valley.

   The interviews were conducted by telephone. The purpose of the interviews was to isolate issues and identify personal and community concerns about the project. No attempt was made to quantify responses since only a survey utilizing rigid sampling procedures could produce meaningful results. This was not within the scope of Earthplan's work in conducting a social impact assessment. The only time we make reference to the quantity of opinion is where there was a significant difference in numbers, such as "only one respondent," or "all of those interviewed."

   The interviews were informal, and the interviewer followed the same guideline for all of the interviews. The areas of questions are as follows:

   * Feelings about the existing community -- likes and dislikes, changes in the quality of life, major regional changes, experiences related to most recent construction

   * Proposed project -- previous knowledge, aspects people liked, problems with the project, compatibility, mitigation

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20 *The Board did not have an August meeting, and the September meeting minutes were unavailable at the time of this writing.*

The 33 people interviewed during this study are identfied on *Table 5*. Each person was informed that input would be summarized in the Social Impact Assessment and that individual opinions would remain confidential. All of those contacted agreed to be interviewed, and some took the initiative to request an interview. Many were willing to provide referrals, and indicated that they would let people know that we may be contacting residents in the area.

Those interviewed were not asked to represent the views of their organizations, although if the organization has taken a formal position, they were asked to discuss these positions. Sections 5.3 and 5.4 present the findings of the interviews.

3. **Correspondence**

In response to the zoning application for this project, area residents submitted numerous letters to the City Department of Land Utilization. These letters are valuable indicators of how residents perceive the Luinakoa Residential Subdivision. We reviewed 53 such letters, and the list is presented in *Appendix A*.

5.2 Neighborhood Board Issues

The Wai'alae-Kahala Neighborhood Board No. 3 deals with issues related to maintaining the livability and character of the existing community. Board members constantly look for ways to reduce inconveniences and problems and to enhance the predominantly single-family suburban character. In general, this Board tends to support efforts to improve the resident-oriented facilities, and consistently discourages actions which may place further burdens on constituents. The Board was very open to community input, and often solicited input from its constituents and elected officials.

Selected issues addressed over the last two years are highlighted as follows:

* **Property taxes.**

  In a 1990 Neighborhood Board survey, it was found that the number one concern of the Board's constituents is property taxes. The Board responded to this concern by sponsoring a public forum to discuss various forms of tax relief. The January 1991 meeting was devoted solely to this topic and in the February 1991 meeting, the Board unanimously supported a resolution to allow "owner-occupants to defer paying property taxes in excess of seven percent.

Table 5

List of People Interviewed For This Study

These people were asked to provide their perspective about the existing Study Area, and how they feel the Luinakoa Residential Subdivision will affect them. Selection was based on (1) leadership in the community; (2) previous input; (3) random selection in telephone listings; and (4) referrals. We also spoke to those who chose to contact us,

Name	Affiliation
Mark Akisada	Luinakoa Street Resident Member of 'Ainakoa Community Association
Michael Carter	Kilauea Avenue Resident Member of Waialae Kahala Neighborhood No. 3
Beatrice Chong	Halekoa Drive Resident Member of 'Ainakoa Community Association
Fred Chun	Halekoa Drive Resident Member of 'Ainakoa Community Association
Quentin Doar	Luinakoa Street Resident President of 'Ainakoa Community Association
Galen Fox	Halekoa Drive Resident Vice President of Waialae Kahala Neighborhood Board No. 3 Member of Waialae Nui Ridge Assocation
Ken Fukuda	Ainakoa Avenue Resident
Robson Hind	Halekoa Drive Resident Member of Waialae Kahala Neighborhood No. 3
Richard Iwata	Luinakoa Street Resident Member of 'Ainakoa Community Association

Name	Affiliation
James Kagawa	Luinakoa Street Resident Member of 'Ainakoa Community Association
Herbert Kam	Ainakoa Avenue Resident Member of the American Legion Member of 'Ainakoa Community Association
Suichi Kamisato	Ainakoa Avenue Resident
Andy Kano	Ainakoa Avenue Resident Member of 'Ainakoa Community Association
Lynn Kano	Ainakoa Avenue Resident Member of 'Ainakoa Community Association
Theresa Keliikipi	Luinakoa Street Resident Member of 'Ainakoa Community Association
Takeo Kondo	Ainakoa Avenue Resident Member of 'Ainakoa Community Association
Katherine Kurakake	Luinakoa Street Resident Member of 'Ainakoa Community Association
Wilbert Lee	Ainakoa Avenue Resident
Winifred Lee	Luinakoa Street Resident Member of 'Ainakoa Community Association Member of Association of Retired Persons
Morris Matsui	Luinakoa Street Resident Member of 'Ainakoa Community Association
Hideo Matsushima	Halekoa Drive Resident Member of Teamsters Retirement Club Member of 'Ainakoa Community Association
Henry Martin	Ainakoa Avenue Resident

Name	Affiliation
Scott McCormack	Kilauea Avenue Resident Member of Waialae Kahala Neighborhood No. 3
Miles Nakatani	Luinakoa Street Resident Member of 'Ainakoa Community Association
Henry Nakagawa	Ainakoa Avenue Resident
Annette Nobriga	Luinakoa Street Resident Member of 'Ainakoa Community Association
Isami Osato	Luinakoa Street Resident Member of 'Ainakoa Community Association
Jan Sakoda	Ainakoa Avenue Resident Member of Sons and Daughters of the 100th Battalion Member of 'Ainakoa Community Association
Andrew Sham	Luinakoa Street Resident
Frank Suzuki	Halekoa Drive Resident
Yotaka Tomita	Ainakoa Street Resident
Hachico Uchida	Luinakoa Street Resident Member of 'Ainakoa Community Association 1399 Veterans Club
Minoru Yoneshige	Luinakoa Street Resident Recent President of 'Ainakoa Community Association

* **Proposed development projects.**

  The Board has been discussing the proposed Hale O Malia project since March of 1991. Concerns raised during such discussions include the building height and related zoning adjustments, and traffic. Attempts to oppose the project failed, and the Board chose to (1) take a survey of the whole community and (2) encourage the development of more affordable units in the project. In an August 25th community meeting hosted by the area's City Council representatives, 250 showed up and most of those who spoke were against the project.[21] In September 1991, it was reported that of the survey respondents, 60 percent were opposed to the rezoning.

  Another project which received Board scrutiny is the Nohona Kahala proposal. The Board has consistently opposed commercial development on that location, citing traffic and circulation patterns as major project drawbacks. Although the recent reduction of building height and density impressed some Board members, these modifications failed to change the official position.

* **Public services and facilities.**

  The Board wanted to see the State Board of Education decentralized, and encouraged the establishment of at least five elected school boards on O'ahu. Board members also supported having all of Kahala Elementary School enclosed by a fence.

  The Board favored the closing of Wilson Playground at night, and opposed the continuation of Federal Aviation Administration activities and facilities in the Diamond Head crater. Board members preferred that the crater be used for recreational purposes only.

  The Board supported the Outdoor Circle on beautification efforts along Kalanianaole Highway. Regarding rapid transit, Board members recently reaffirmed its opposition to the proposed system, as long as the system does not terminate at Kahala Mall.

The Board has been discussing the proposed Luinakoa Residential Subdivision since May 1992, when a presentation was made. The Board subsequently voted to sent flyers to all residents on Luinakoa Street and held a forum on the project in July 1992. Several people spoke against the project, and after deliberation, the Board voted to recommend that a full EIS be prepared on the project. No subsequent action was taken.

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21 *Tangonan, 1992.*

5.3 Characteristics of the Area Discussed by Those Interviewed

We asked several questions regarding people's feelings about the existing community. Everyone valued their neighborhood, and had very few negative feelings about their community. The major issues they raised were related to physical and environmental problems. This has been a very stable community, both in terms of social and physical changes, and those interviewed saw the same for the future. The following summarizes responses to questions:

* **Existing community's positive characteristics and problems.**

  All of those interviewed placed extremely high value on their neighborhood, their natural surroundings and their community. They described a "peaceful valley," and serenity was an oft-mentioned characteristic. The social quality was equally valued. Both the elderly and younger people liked the common bond of being veterans. They said that "we all moved in at the same time," "we all know each other," and "we're all from the same generation."

  Problems were few but serious, and almost all concerned the physical environment. Soil stability was a big problem, and we spoke with people who have had to reinforce their houses' foundation many times, or have had boulders fall near or on their properties. The flooding of Kapakahi Canal was a problem for the 'Ainakoa Avenue residents and instances of water under houses were cited. Luinakoa Street residents also named flooding as a problem, and this was related to water flowing off the hillside during heavy rains; this flooding further shifted the soils and caused foundation problems.

  Traffic was a major problem, and it was often a response to many of our questions. There are more cars on the road, and people have difficulty in safely backing out of their driveways. The lack of parking was typically mentioned in the same breath. People complained that Halekoa Drive only allowed parking on the descent side of the street, so parking is a premium for nearby residents. Luinakoa Street residents were particularly frustrated that Halekoa Drive residents parked on their street.

* **Ways the neighborhood has changed.**

  For the most part, the neighborhood has hardly changed over the years. It was pointed out that very few homes have been redeveloped. One change, however, was increased traffic, and this was attributed to residential development on Wai'alae Nui Ridge.

* **Quality of life -- better or worse?**

  Interviewees' quality of life was unanimously described as good, and it was felt that this quality has remained the same over the years. The only exception was traffic.

* **Major future changes.**

We asked people what kinds of changes they expected in the future, and if they foresaw any major problems with these changes. Very few people anticipated major changes in the area, and some iterated that they did not want to see any changes.

Of those who did anticipate future change, three types were mentioned, and all three were negative. First, Hale O Malia was considered a big change, and except for one person, all who mentioned that project were opposed to it. The second type of change was traffic and increased competition for limited parking. Those interviewed expected that traffic will worsen in the future. Third, people felt that if there is more development and more traffic, then the environmental quality will deteriorate and there will be more noise, dust and general air pollution.

* **Previous construction.**

Because construction-related impacts were previously raised in letters and to the Neighborhood Board, we asked interviewees about their experiences with previous construction. They mentioned the development on Wai'alae Nui Ridge over the last few years. Construction vehicles were a problem because they slowed traffic. Also, noise was discussed; it was felt that the valley has an echo effect which amplified construction-related noise. The other construction project discussed was that related to the last six houses on 'Ainakoa Avenue; people remembered structural damage in other units.

5.4 Issues Related to the Luinakoa Residential Subdivision

All of those interviewed knew about the project. Two people indicated that they thought the project included a connection between the mauka-most end of the extended Luinakoa Street to the mauka-most end of 'Ainakoa Avenue.

Those interviewed were asked to identify project aspects they liked best. One person felt that the proposed project would increase the housing supply. All of the others stated that they saw nothing positive.

This section summarizes issues related to the proposed project, as discussed in the interviews. These issues are identical to those raised in project-related letters, and include:

* Soil instability and flooding;
* Construction effects;
* Narrowness of streets and traffic congestion;
* Change in ambience and environment;
* Precedence for further development; and

* Compatibility.

5.4.1 Soil Instability and Flooding

Those interviewed were very concerned that the project will worsen soil conditions in the valley. They felt that the construction of 52 new homes would loosen boulders which are tenuously set in clayey soil. There were many stories shared in the letters and during the interviews about how people had to reinforce their own houses many times over the years. They cited instances where doors could not close and walls would crack, all because the soil is constantly shifting. It was reported that virtually all of the Luinakoa Street homes have had problems with foundations and retaining walls, and that remedying the situation was an expensive effort, especially for the elderly with fixed incomes.

To those interviewed, the project further threatened an already fragile condition. There was fear that blasting would jar large boulders, and that the constant movement of large construction vehicles would cause vibrations which would eventually cause slides and loosen rocks. They envisioned more costly repairs, and feared accidents.

A related concern is that the clearing of vegetation and other sitework will increase the potential for flooding. As noted earlier, flooding occurs in the channel, and during heavy rains, water flows down the side of the ridge. Flooding dislodges boulders, sometimes causing considerable damage. Those interviewed warned that the development of more houses will worsen the flooding problem for existing residents and will plague the new residents.

5.4.2 Construction Effects

In addition to the physical and environmental effects of construction activities, those interviewed were very concerned about the such effects on the residents. Both in interviews and in letters, area residents pointed out that the project's neighbors are elderly people and many are home during the day. Some babysit grandchildren, some are ailing, some work at home.

Those interviewed feared that the effects of construction would cause emotional stress and worsen health problems. It was pointed out that construction noise, including blasting, hammering, pounding, generators and motors, will be heard constantly throughout the day. It was pointed out that there is an echo effect in the valley, so this noise would be heard throughout the valley and not just by nearby residents. Dust will be a nuisance, but will be particularly problematic for those with respiratory problems.

The time frame was also of concern. Interviewees pointed out that after the sitework is done and the lots are sold, then house construction would begin. Overall, construction could take several years.

5.4.3 Narrowness of Streets and Traffic Congestion

The narrowness of Luinakoa Street was a frequent issue. Even though the street allows two-way circulation, present conditions allow for the passage of only one car at a time. The fundamental problem is that there are inadequate parking accommodations. Most houses have only one-car garages, and most multi-generation households in this neighborhood have at least two cars. It was estimated that the 27 households owned a total of 68 automobiles, and one person claimed in letter to have five cars and a two-car garage. Also, because Halekoa Drive has limited parking, some of those residents park on Luinakoa Street also, thus further limiting available parking spaces.

The proposed project represents an additional threat to the parking situation. Because of the narrow width, people are afraid that emergency vehicles will block the street and it was report that this is already occurring. To those interviewed, adding 52 more houses means increasing the need for fire trucks and ambulances. The narrow street also means that construction vehicles may not pass, and that the additional cars from the new subdivision will not be able to be accommodated.

Interviewees were very concerned that the only solution to the narrow street is to prohibit parking on one side of the street. This means either having to spend a lot of money in expanding existing garages, or experiencing even greater difficulty in finding parking spaces, thus resulting in long walking distances for the elderly. For those interviewed, either solution was unacceptable.

Traffic was the number one issue in the existing community and the proposed project was viewed as another contribution to the problem. Those interviewed said that they already have difficulty in exiting Luinakoa Street because of Halekoa Drive traffic. Further, there is traffic congestion at all major intersections in this valley.

5.4.4 Change in Ambience and Environment

Peace and quiet -- these qualities are attached to the valley in its present condition. The view of the valley was very important; it allows residents a reprieve from the urban environment just outside the valley. Also important is the natural environment, with its vegetation and animals.

Those interviewed were very concerned that the natural setting which allows these qualities will be irreversibly altered. The sheer reduction of the natural environment was a big problem, and interviewees felt that the project would change natural habitats and cause the loss of wildlife. One person claimed that there are artifacts in one of the caves; it was feared that the project will destroy these.

5.4.5 Precendence for Further Development

One type of change envisioned by interviewees was that the valley will eventually have more than 52 new houses. They were apprehensive that the proposed project will "open the valley up for more development." They felt that, if this project is approved, then it will be easier to approve more projects in the valley, since precedence would be set. More

development would then imply more of the problems previously discussed. It was felt that the only solution to avoiding precedence-related problems is to not allow *any* new development in the valley, thereby sending a clear signal to other developers.

5.4.6 Property Taxes and General Compatibility

Interviewees of all ages were concerned that the project would raise their taxes. Some of the elderly residents have already had to obtain financial aid to adjust to the increased real property taxes.

We specifically asked if interviewees felt that the Luinakoa Residential Subdivision would be compatible with the existing community. Those interviewed believed that the project will be incompatible with the valley community. They suspected that the new residents will be wealthy "with two or three fancy cars." Interviewees saw the new residents as a socially disruptive element because, as one person said, "We have too much in common now." *They don't share our background and our roots."*

It was expected that the new houses would also be incompatible; the new two-story homes wouldn't fit in with the existing older homes.

5.4.7 Mitigation Measures Recommended by Those Interviewed

For the most part, those interviewed were not hopeful that any project changes or mitigation measures could address their concerns. They felt that the valley already has physical problems, and that the Luinakoa Residential Subdivision would only add to the list. The most obvious solution to them was to locate the project in another community with less problems.

Mitigation was only recommended by those farthest from the project site and they focussed on three areas:

* **Roadway improvements.**

  It was suggested that the developer widen Luinakoa Street all the way to Halekoa Drive. However, some Luinakoa Street residents indicated that they would not allow their properties to be condemned for street-widening purposes.

* **Parking.**

  One person recommended that the developer install two-car garages for existing residents. Another suggestion was that the developer convert the lot closest to the existing homes into a parking lot for existing residents.

* **Soils and foundations.**

It was suggested that the developer conduct a quantitative ground-shifting study and share the findings with existing residents. It was felt that the developer should help existing residents by correcting flood runoff to inhibit water and rock movement.

Also recommended was a written commitment that the developer will repair related structural damage to existing units. One person felt that current foundation problems should be handled by the developer as well. It was suggested that the developer provide low-interest loans to help in home improvements and garage construction.

* **Community relations.**

It was recommended that the developer meet with affected parties so that a working dialogue is established. It was felt that residents needed to talk to the developer directly, rather than have the two parties confront each other in the public forum.

5.5 Analysis

The existing neighboring community has clearly stated its position opposing the Luinakoa Residential Subdivision. The following provides an analysis of this position, based on interviews and materials reviewed for this study.

1. **The neighborhood's position on this project is consistent with positions taken on other projects.**

   The Ainakoa residents have vocally opposed Hale O Malia. They felt that the project was for rich outsiders and that traffic would be worsened. In the interviews, it was indicated that these sentiments were also felt about the Wai'alae Nui Ridge development and that many people did not like the recent Wai'alae Pinnacles project. It was also pointed out that the new Kahala Pacifica project was not favored.

   The current opposition to the Luinakoa Residential Subdivision is no exception, and a different position on the proposed project -- or on any other development in the area -- would be out of character.

2. **The underlying fear is that personal lives and social interactions will be negatively and irreversibly altered.**

   The nearby residents are very comfortable with the area as it is today. The long-time associations, social interaction, views, peace and quiet, low levels of daily disruptions -- these are all considered essential factors in their quality of life. These factors are also considered very specific and fragile and the valley's residents expect that any change to these factors would be a disruptive element. The Hale O Malia project is already threatening to alter

the community. Fifty-two new houses and 160 new people represent yet a major change which is expected to further upset the stability of this neighborhood.

3. **The project is associated with all of the major problems cited about the existing community.**

   To the existing residents, the project will do nothing to improve what is good in the valley. The community is apprehensive that the Luinakoa Residential Subdivision will exacerbate all of the problems which already plague this community. Soil problems, flooding, traffic, new people -- these are problems now, and to the existing residents, the proposed project will only mean more of the same.

4. **In the community's view, the only real solution to project impacts is to move the project elsewhere.**

   For almost all of those interviewed and for those who wrote letters on the project, no amount of project modification will improve the problems associated with the project. They believe that the project will be harmful and technical studies showing otherwise will not change this opinion. They simply do not want to see the Luinakoa Residential Subdivision implemented. As such, it is believed that the only solution which will be acceptable to the residents is to move the project to another community, or as one person put it, "to someone else's backyard."

References

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Hawaii State Department of Business, Economic Development, and Tourism. **The State of Hawaii Data Book: 1991.** Honolulu, Hawaii. November 1991.

Tangonan, Shannon. *Home for seniors opposed.* **Honolulu Advertiser.** August 25, 1992.

United States Department of Commerce, Bureau of the Census. **1990 Census of Population and Housing.** Available on CD ROM, State of Hawaii Department of Business, Economic Development, and Tourism Library, Honolulu, Hawaii. Washington, D.C. 1992.

United States Department of Commerce, Bureau of the Census. **1990 Census of Population and Housing Summary Tape File 1A.** Available on CD ROM, State of Hawaii Department of Business, Economic Development, and Tourism Library, Honolulu, Hawaii. Washington, D.C. 1992.

Yamaguchi, Andy. *Plans for offices at Waialae Drive-In site scaled back.* **The Sunday Star-Bulletin and Advertiser.** October 4, 1992.

Add in other articles

Appendix A

List of Letters Reviewed for Issues Analysis

Received from:	Date of correspondence
Ainakoa Community Association	Sept 20, 1992
Akana, Kainoa & Frances	July 28, 1992
Akisada, Mark	July 22, 1992
Chang, Harry K.A.	July 27, 1992
Ching, Arthur M.A.	July 27, 1992
Choy, Bradley	July 28, 1992
Chuck, David & Mrs,	July 26, 1992
Doar, Quentin & Rebecca	July 25, 1992
Fukuda, Kenneth	July 28, 1992
Gainsley, Stephen & Gloria	July 22, 1992
Harada, Haruto	July 27, 1992
Heirakuji, Walter & sally	July 29, 1992
Inouye, Marian	July 29, 1992
Ishihara, John & Margaret	July 28, 1992
Iwata, Richard & Izetta	July 15, 1992
Jodoi, T.	July 29, 1992
Kagawa, James	July 21, 1992
Kam, Herbert	July 22, 1992
Kano, Lynn Y.	July 29, 1992
Kawano, James H.	July 25, 1992
Keliikipi, Theresa D.	July 23, 1992
Kikuta, Norman N.	July 29, 1992
Kondo, Takeo, Kay, & Janice	July 27, 1992
Kurakake, Raymond & Katherine	July 20, 1992
Kuramoto, Edna	July 24, 1992
Kuromoto, Wayne T.	July 26, 1992
Kyono, Wade	August 3, 1992
Lee, Winifred & Belinda	July 27, 1992
Leong, Ah Nee	July 27,1992
Leong, Leonard A.G.	July 28, 1992
Lum, Earle Q.Y.	August 10, 1992
Matsui, Morris T.	

Appendix A, Continued

Received from:	Date of correspondence
Matsumoto, Shizuko	July 27, 1992
Matsushima, Hideo & Nahiko	July 29, 1992
Moriguchi, Walter T.	July 29, 1992
Nakagawa, Kenichi	July 28, 1992
Nakatani, Miles	July 23, 1992
Nobriga, Annette c.	July 19, 1992
Odido, Jeanette Y.	July 28, 1992
Ontai, William & Peggy	July 26, 1992
Osato, Isami & Edna	July 22, 1992
Sakota, Janice	July 21, 1992
Sakurai, Noboru	July 26, 1992
Sasaki, Warren & Sherri	July 28, 1992
Sham, Michael Y.K.	July 23, 1992
Shinn, Stuart	
Suzuki, Frank & Grace	July 28, 1992
Turbin, Richard	July 21, 1992
Uchida, H.	
Ushijima, Tetsuro	July 27,1992
Usui, Ethel M.	July 27, 1992
Yamachika, Harold & Helen	July 29, 1992
Yim, William	July 20, 1992
Yoneshige, Minoru & Mitsuyu	July 23, 1992

EXHIBIT E

CORRESPONDENCE - DP/ZONING PROCESS

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

BENJAMIN B. LEE
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER

August 20, 1992

RECEIVED
AUG 21 1992
PARAMETRIX, INC.
HONOLULU

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, 16th Floor
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

This is to inform you that the Departments of General Planning and Land Utilization will defer processing of the Development Plan Amendment and zone change applications for the proposed Luinakoa Subdivision until the applicant completes the environmental impact statement (EIS) for the project.

Should you have any questions regarding the Development Plan Amendment, please contact Mr. Ben Lee, Chief Planning Officer of the Department of General Planning at 523-4713. Questions pertaining to the zone change should be directed to Mr. Don Clegg, Director of Land Utilization at 523-4432.

Sincerely,

BENJAMIN B. LEE
Chief Planning Officer
Department of General Planning

DONALD A. CLEGG
Director
Department of Land Utilization

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:

May 13, 1992

92-143/epo

Mr. Fred J. Rodriguez, President
Environmental Communications, Inc.
1146 Fort Street Mall, Suite 200
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Preliminary Draft Environmental Assessment
Luinakoa Residental Subdivision
Honolulu, Oahu
TMK: 3-5-24:1

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

Wastewater

The subject project is located within the County sewer service system. As the area is sewered, we have no objections to the proposed residential subdivision provided that the project is connected to the public sewers.

The developer should work closely with the County to assure the availability of additional treatment capacity and adequacy for the project. Non-availability of treatment capacity will not be an acceptable justification for use of any private treatment works.

If you should have any questions on this matter, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4290.

Water Pollution

A storm water National Pollutant Discharge Elimination System permit application is required for construction activities which involves the clearing, grading, and excavation of more than five (5) acres of total land area. This application should be submitted to the Director of Health at least 90 days before the date on which construction is to commence.

CORRECTION

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

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

BENJAMIN B. LEE
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER

August 20, 1992

RECEIVED
AUG 21 1992
PARAMETRIX, INC.
HONOLULU

Mr. F. J. Rodriguez
Parametrix, Inc.
1164 Bishop Street, 16th Floor
Honolulu, Hawaii 96813

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Sincerely,

BENJAMIN B. LEE
Chief Planning Officer
Department of General Planning

DONALD A. CLEGG
Director
Department of Land Utilization

JOHN WAIHEE
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

APR 22 1992

REX D. JOHNSON
DIRECTOR

DEPUTY DIRECTORS
JOYCE T. OMINE
AL PANG
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

HWY-PS
2.1708

Mr. Fred Rodriguez
Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Environmental Assessment
Luinakoa Residential Subdivision
TMK: 3-5-24: 1

Thank you for your memorandum of April 8, 1992, requesting our comments of the subject project.

We do not anticipate the proposed subdivision to have an adverse impact on our State Highway System.

Very truly yours,

T. HARANO
Chief
Highways Division

APR 23 1992

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:

May 13, 1992

92-143/epo

Mr. Fred J. Rodriguez, President
Environmental Communications, Inc.
1146 Fort Street Mall, Suite 200
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Preliminary Draft Environmental Assessment
Luinakoa Residental Subdivision
Honolulu, Oahu
TMK: 3-5-24:1

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

Wastewater

The subject project is located within the County sewer service system. As the area is sewered, we have no objections to the proposed residential subdivision provided that the project is connected to the public sewers.

The developer should work closely with the County to assure the availability of additional treatment capacity and adequacy for the project. Non-availability of treatment capacity will not be an acceptable justification for use of any private treatment works.

If you should have any questions on this matter, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4290.

Water Pollution

A storm water National Pollutant Discharge Elimination System permit application is required for construction activities which involves the clearing, grading, and excavation of more than five (5) acres of total land area. This application should be submitted to the Director of Health at least 90 days before the date on which construction is to commence.

92-143

If you should have any questions on this matter, please contact Mr. Alec Wong, Engineering Section of the Clean Water Branch, at 586-4309.

Very truly yours,

JOHN C. LEWIN, M.D.
Director of Health

c: Wastewater Branch
Clean Water Branch

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

FRANK F. FASI
MAYOR

WALTER M. OZAWA
DIRECTOR

ALVIN K.C. AU
DEPUTY DIRECTOR

April 20, 1992

Mr. F. J. Rodriguez
Environmental Communications, Inc.
1146 Fort Street Mall, Suite 220
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Luinakoa Residential Subdivision Lots

We have reviewed the draft environmental assessment for the Luinakoa Residential Subdivision and found that there is no discussion on how the recreational needs for the residents in this subdivision will be met. This development will be subject to compliance with Park Dedication Ordinance No. 4621.

Should you have any questions, please contact Jason Yuen of our Advance Planning Branch at 527-6315.

Sincerely,

WALTER M. OZAWA, Director

WMO:ei

APR 23 1992

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
1455 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96814 - AREA CODE (808) 943-3111

FRANK F. FASI
MAYOR

MICHAEL S. NAKAMURA
CHIEF

HAROLD M. KAWASAKI
DEPUTY CHIEF

OUR REFERENCE KN-LK

April 24, 1992

Mr. F. J. Rodriguez, President
Environmental Communications Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Luinakoa Residential Subdivision Lots

We have reviewed the materials for the above subject and find that the proposed residential developments will not significantly impact police services provided for the area.

Sincerely,

MICHAEL S. NAKAMURA
Chief of Police

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

APR 28 1992

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

FRANK F. FASI
MAYOR

JOSEPH M. MAGALDI, JR.
DIRECTOR

AMAR SAPPAL
DEPUTY DIRECTOR

TE-1519
PL92.1.124

April 24, 1992

Mr. F. J. Rodriguez, President
Environmental Communications, Inc.
1146 Fort Street Mall, Suite 200
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Luinakoa Residential Subdivision
Preliminary Environmental Assessment
TMK: 3-5-24: 1

This is in response to your letter of April 8, 1992 requesting our comments on the preliminary environmental assessment.

Based on our review, we have the following comments:

1. We understand that the Luinakoa Street Extension is planned to be dedicated to the City. This being the case, the roadway should be a standard 44-foot roadway. This includes 8-foot sidewalks, 2-foot gutters, and 24 feet of pavement.

2. A standard turnaround should be provided at the end of the new roadway.

3. The driveway grade should not exceed 5 percent (5%) for a minimum distance of 35 feet from the curb line.

4. Preliminary construction plans for all work within the proposed City right-of-way should be submitted for our review and approval prior to the processing of building permit applications.

Should you have any questions, please contact Lance Watanabe of my staff at 523-4199.

Sincerely,

JOSEPH M. MAGALDI, JR.
Director

APR 27 1992

DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

~~SAM CALLEJO~~
~~DIRECTOR AND CHIEF ENGINEER~~

C. MICHAEL STREET
~~DEPUTY DIRECTOR~~
Acting Director and Chief Engineer

ENV 92-90

April 24, 1992

Mr. F.J. Rodriguez
Environmental Communications Inc.
P.O.Box 536
Honolulu, HI 96809

Dear Mr. Rodriguez:

Subject: Environmental Assessment (EA)
Luinakoa Residential Subdivision Lots
TMK:3-5-24:1

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

1. We have no objections to the proposed residential subdivision on Luinakoa Street.

2. The existing municipal sewer system is available and adequate to provide sewer service for the project.

3. Wastewater System Facility Charges, which are applicable to this project, will be determined and payable at the time of building permit application.

4. All improvements should be constructed in accordance with the City standards.

Very truly yours,

C. Michael Street

C. MICHAEL STREET
Acting Director and Chief Engineer

APR 29 1992

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
1455 SOUTH BERETANIA STREET, ROOM 305
HONOLULU, HAWAII 96814

FRANK F. FASI
MAYOR

LIONEL E. CAMARA
FIRE CHIEF

DONALD S.M. CHANG
DEPUTY FIRE CHIEF

April 27, 1992

Mr. F. J. Rodriguez
Environmental Communications, Inc.
1146 Fort Street Mall, Suite 200
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Luinakoa Residential Subdivision Lots

This is in response to your memorandum dated April 8, 1992. We have reviewed your application and made an on-site assessment of the above subject request, and have no objections to the proposal providing the following conditions are complied with prior to subdivision 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 minumum 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.

Should additional information or assistance be required, please call Captain Michael Chung of our Fire Prevention Bureau at 523-4186.

Very truly yours,

DONALD S. M. CHANG
Fire Deputy Chief

DSMC/MC:mc

APR 28 1992

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET

HONOLULU, HAWAII 96843

FRANK F. FASI, Mayor

WALTER O. WATSON, JR., Chairman
MAURICE H. YAMASATO, Vice Chairman
SISTER M. DAVILYN AH CHICK, O.S.F.
JOHN W. ANDERSON, JR.
REX D. JOHNSON
MELISSA Y.J. LUM

KAZU HAYASHIDA
Manager and Chief Engineer

April 28, 1992

Mr. F. J. Rodriguez
Environmental Communications, Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Your Letter of April 8, 1992 Regarding the Environmental Assessment for the Proposed Luinakoa Street Subdivision, TMK: 3-5-24: 1

Thank you for your letter regarding the proposed 42-lot subdivision.

We have the following comments to offer:

1. The developer will be required to obtain a water allocation for the proposed subdivision from Bishop Estate.

2. The developer will be required to install the necessary water system improvements to serve the proposed subdivision. The construction drawings should be submitted for our review and approval.

3. The proposed subdivision will require action by the City Department of Land Utilization.

4. The availability of water to the proposed subdivision will be confirmed when the construction drawings are submitted for our review and approval. If water is made available, the developer will be required to pay our Water System Facilities Charges for transmission and daily storage.

5. For your information, the service limit for the area is the 405-foot elevation.

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

Very truly yours,

Kazu Hayashida

KAZU HAYASHIDA
Manager and Chief Engineer

MAY 4 1992

OHN WAIHEE
VERNOR

CHARLES T. TOGUCHI
SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

'92 SEP 17 PM 1 37

September 1, 1992

Mr. Donald A. Clegg, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Clegg:

SUBJECT: Zone Change Application File No. 92/Z-10
Waialae-Nui, Honolulu, Oahu
TMK: 3-5-24: Portion 1

We have reviewed the subject application and the proposed 52 market priced single-family residential subdivision will have the following enrollment impact on the area schools:

School	Grade	Projected Students
Wilson Elementary	K-5	12
Kaimuki Intermediate	6-8	3
Kalani High	9-12	5

All three schools are operating within their capacity and should be able to accommodate the enrollment increase of the 20 students from this development.

The Department of Education will request that the developer contribute a fair share for the construction of needed school facilities.

Should there be any questions, please call the Facilities Branch at 737-4743.

Sincerely,

Charles T. Toguchi

Charles T. Toguchi
Superintendent

CTT:hy

cc: A. Suga
J. Kim

EXHIBIT F

BIOLOGICAL RECONNAISSANCE

AECOS No. 690

A Biological Reconnaissance Survey of Kapakahi Gulch, East O'ahu

Prepared For:

Environmental Comunications, Inc.
1146 Fort Street Mall, Suite 200
Honolulu, Hawaii 96809

Prepared By:

AECOS, Inc.
970 N. Kalaheo Ave., Suite C311
Kailua, Hawaii 96734

June 1992

INTRODUCTION

Purpose and Methods

A survey of Kapakahi Gulch, Waialae, Oahu was conducted on April 25, 1992. Two biologists traversed the length of the gulch from the upper end of Ainakoa Avenue at the 220-foot elevation to about the 1500-foot elevation on the valley floor, a distance of some 3.7 miles in a straight line. Travel time up was 7 hours; return time was 2 hours (few observations were made on the return because of fading light conditions). Elevations in the text are estimated from the U.S.G.S. topographic map. 7.5 minute series, Koko Head Quadrangle.

The purpose of the survey was to establish that Kapakahi Stream is intermittant in all segments, and does not provide habitat for native aquatic fauna at upper elevations where moisture inputs would be substantially greater than at the lower elevation of the project site off Ainakoa Avenue. Information is provided on riparian (stream side) vegetation as a means of characterizing different parts of the valley, although the proposed housing subdivision and associated stream alteration will impact only a relatively small section in the lower part of the valley (to about the 400-foot elevation on the stream bed).

General Description of Kapakahi Valley

Kapakahi is a relatively narrow valley between Waialae Nui and Waialae Iki ridges (Figure 1). The valley opens onto the coastal plain beside Waialae Nui valley and the drainages from both join together below the H-1 Freeway, to flow within the Waialae Golf Course before reaching the sea at Waialae Beach Park. Despite the narrowness of Kapakahi Gulch as compared with most of the other valleys along this part of the Koolau (Manoa, Palolo, Waialai Nui to the west; Wailupe, Niu, Kuliouou to the east), Kapakahi does extend all the way to the crest of the Ko'olau near Pu'u Lanipo.

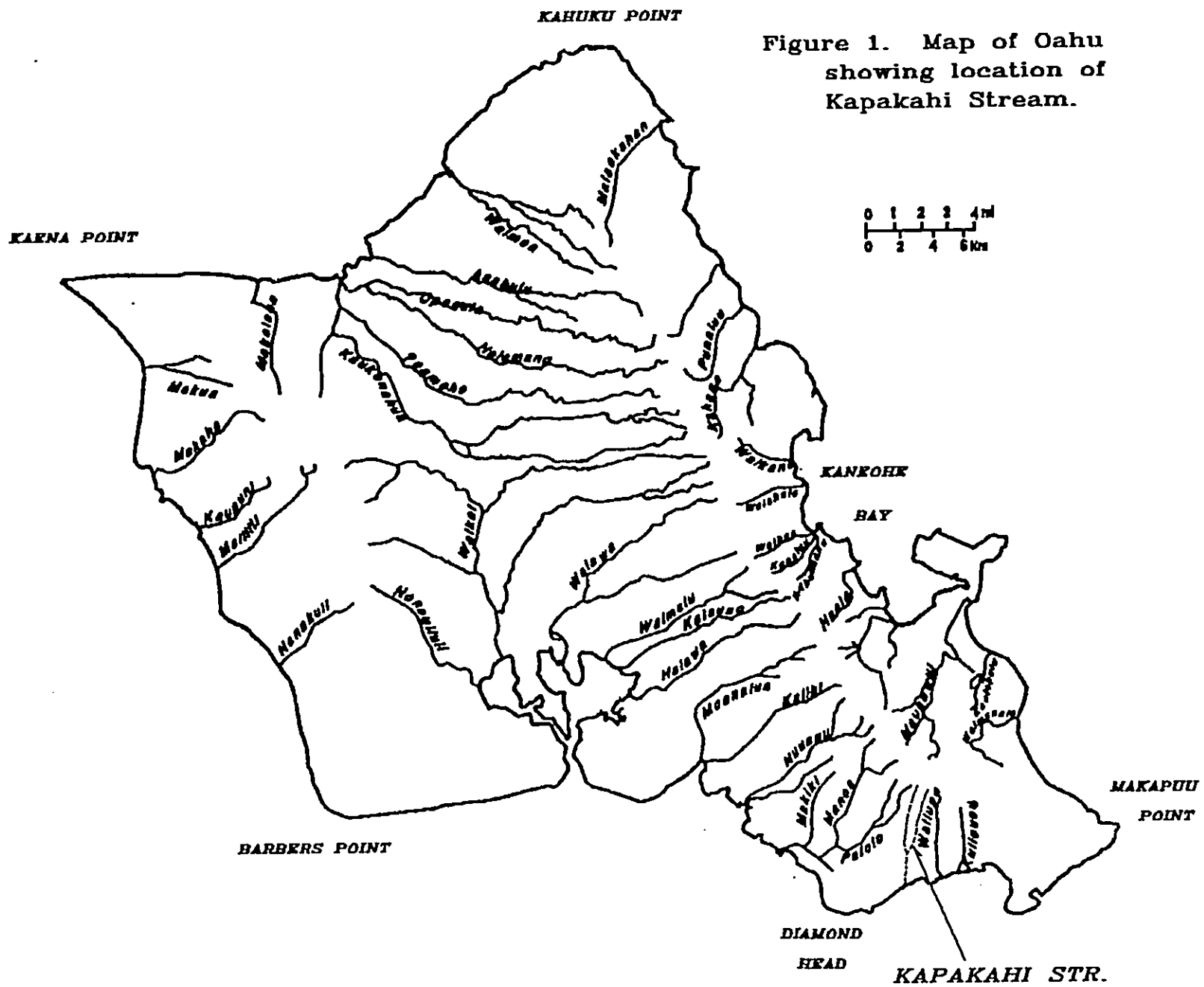


Figure 1. Map of Oahu showing location of Kapakahi Stream.

From one end of the valley to the other, a gradient in the vegetation is apparent, reflecting variation in annual rainfall which is less than 30 inches near the mouth and nearly 100 inches at the valley head (from charts in Teliaferro, 1959). The change in plant species and groups is perhaps more evident along the valley walls than within the riparian community on the valley floor. It is likely that some water flows beneath the bouldery sediment of the stream bed, providing greater moisture to the riparian assemblages than is available to the plants on the sloping sides of the valley. Other vegetation communities occur in the valley, but only the narrow valley floor was surveyed.

The changes in plant species, species abundances, and growth characteristics with elevation along the valley floor are fairly subtle in the riparian environment. The following plant communities or associations were observed: (1) a Guinea grass/koa haole shrub in the driest areas near the existing housing development; (2) a Kukui Forest Community which occupies the valley floor above about 300 feet, but is restricted to a narrow zone along the stream bed; (3) a Kukui / Guava Forest which represents the Kukui Forest in wetter conditions that prevail above 700 feet; and (4) the 'Ohi'a/Uluhe community in the valley and on the slopes found between about 1300 feet and the Koolau crest at an elevation of 2400 feet in this area.

SURVEY RESULTS

Guinea grass / koa haole shrubland

Within the urban area above H-1 Freeway, the stream is confined within a concrete-lined culvert. At the upper end of Ainakoa Street, the stream opens into a recently cleared and graded debris basin with a concrete retention barrier.

The lower part of the valley, above the urban lots, is dominated by a shruby growth of koa haole (*Leucaena leucocephala*). Along the stream, which is relatively narrow here, Guinea grass (*Panicum maximum*) forms a dense growth, but this growth thins upstream, as larger trees come to

dominate and shade the riparian zone. Away from the stream, air plants (Kalanchoe pinnata) dominate the herb layer beneath the koa haole shrub growth.

A list of plants characteristic or observed along the valley floor within the area dominated by Guinea grass is presented below. The relative abundances (close to the stream bed or in the riparian zone) are indicated by "A" = abundant, "C" = common, "P" = present, and "R" = rare in this and subsequent lists. Indigenous and endemic species are indicated by (i) and (e) respectively; Polynesian introductions by (p). All of the species recorded in the Guinea grass / koa haole shrubland are considered naturalized exotics.

herbs and grasses		
Kalanchoe pinnata	air plant	A
Panicum maximum	Guinea grass	A
Asystasia gangetica	Chinese violet	C
Ipomoea obscura	morning-glory	P
Solanum sp.	popolo	R
Ageratum conyzoides	maile hohono	R
Oxalis corymbosa	pink wood sorrel	R
Commelina diffusa	honohono	R
Coix lachryma-jobi	Job's tears	R
shrubs		
Leucaena leucocephala	koa haole	A
Cassia bicapsularis	cassia	C
Ricinus communis	castor bean	P
Coffea arabicum	Arabian coffee	P
trees		
Aleurites moluccana (p)	kukui nut	P
Schinus terebinthifolius	Christmasberry	P
Prosopus pallidus	kiawe	P
Ficus microcarpa	Chinese banyan	P
Psidium guajava	common guava	P
Psidium cattleianum f. lucidum	yellow-fruit guava	P
Clusia rosea	autograph tree	R
Schefflera actinophylla	octopus tree	R

One small pool occurs in the stream bed in this area on basalt a short distance upstream from the retention basin. This pool, only about one square meter in area, was stagnant appearing and contained a stringy growth of a bright green alga (?Cladophora) sp.

Kukui Forest Community

Not far upstream from the debris basin, starting at an elevation of perhaps 300 feet, a kukui forest (a lowland mesic forest type) comes to dominate the riparian zone. Although kukui (Aleurites moluccana) is common, even abundant within a relatively narrow swath along the valley floor, several other trees are also common to abundant including Christmasberry (Schinus terebinthifolius), guava (Psidium guajava), and yellow-fruited strawberry guava (Psidium cattleianum form lucidum). Wiliwili trees (Erythrina sandwicensis) and kiawe (Prosopis pallida) are present along with koa haole on the lower slopes of the valley mostly just outside the kukui forest. An understory is dominated by coffee (Coffea arabicum), while the herb layer within and close to the dry stream bed is covered with palm grass (Setaria palmaefolia). Away from the stream, the air plant (Kalanchoe pinnata) is particularly abundant. Sourbush (Pluchea symphytifolia) appears wherever the stream bed meanders beside a cliff face.

Nearly all of the plants found in this lowland riparian environment are introduced species which have become naturalized. Note that most of the species observed in the Guinea grass/koa haole shrub are also present in the kukui forest. The latter is more shaded, favoring palm grass over Guinea grass and, with higher elevation and greater moisture, an enhanced diversity of species occurs along the margins of the riparian zone. Below about 700 feet elevation, the composition of the kukui forest in Kapakahi Gulch is as follows:

ferns		
Dryopteris ?dentata	oak fern	P
herbs and grasses		
Setaria palmaefolia	palm grass	A
Asystasia gangetica	Chinese violet	A
Chamaesyce hypericifolia	graceful spurge	C
Kalanchoe pinnata	air plant	P
Panicum maximum	Guinea grass	P
Oplismenus hirtellus	basket grass	P
Stachytarpheta jamaicensis	Jamaican vervain	R
Passiflora ?suberosa	huehue haole	R
Ageratum conyzoides	maile hohono	R
Clidemia hirta	Koster's curse	R

Oxalis corymbosa	pink wood sorrel	R
Ipomoea sp.		R
Solanum seaforthianum		R
shrubs, lianas		
Coffea arabicum	Arabian coffee	A
Leucaena leucocephala	koa haole	A
Cordyline fruticosa (p)	ti	C
Pluchea symphytifolia	sourbush	P
Cassia bicapsularis	cassia	P
Dodonaea viscosa (i)	'a'ali'i	R
Morinda citrifolia (p)	noni	R
Passiflora edulis f. flavicarpa	passion fruit	R
trees		
Aleurites moluccana (p)	kukui nut	A
Schinus terebinthifolius	Christmasberry	A
Leucaena leucocephala	koa haole	P
Erythrina sandwicensis (e)	wiliwili	P
Ficus microcarpa	Chinese banyan	P
Prosopus pallidus	kiawe	P
Syzygium cumini	Java plum	P
Schefflera actinophylla	octopus tree	P
Psidium guajava	common guava	P
Psidium cattleianum f. lucidum	yellow-fruit guava	P
Clusia rosea	autograph tree	R
Reynoldsia sandwicensis (e)	'ohe	R

Birds observed in this area include shama thrush (Copsychus malabaricus), red-vented bulbul (Pycnonotus cafer), and lace-necked dove (Streptopelia chinensis chinensis). No flowing water or pools of water were noted in the stream bed below the 700-foot elevation, outside of the stagnant pool described above.

Kukui / Guava Forest

Above about 700 feet, the riparian environment becomes notably damper, with basket grass (Oplismenus hirtellus) prominent, and an increasing abundance and variety of ferns and mosses appearing on rocks and in shaded areas. The kukui (Aleurites moluccana) remains prominent, but common guava (Psidium guajava) and mountain apple (Syzygium malaccense) are also abundant.

The stream bed was mostly everywhere without flowing or standing water within this segment, which extends to at

least the 1000-foot elevation. However, sections of dense basalt representing dikes or exceptionally dense flows, retained shallow pools, some of which may be permanent. The rugulose frog (Rana rugosa) was the most conspicuous inhabitant in larger pools, whereas dragonfly nyads (Odonata), diving beetles (Hydrophilidae or Dytiscidae), and mosquito larvae were characteristic of most of the smaller or more isolated pools.

The first stream bed cataract, about 5 or 6 meters high, is found around the 750-foot elevation. A plunge pool is present at the base of the exposed massive basalt. The pool was fed by a trickle of water flowing from above, where several other small pools occur on the dense basalt surface. A small trickle of water connected these pools which continue upstream for a short distance and are inhabited by snails (Melania sp. and "Lymnaea" sp.), frog tadpoles, and a few adults (Rana rugosa). The sinistral lymnaeid, Pseudisidora reticulata, was collected in 1929 from Kapakahi at the 1500-foot level (Judd and Ewart in Hubendick, 1952). This snail is regarded as endemic to the Hawaiian Islands (Morrison, 1968). Five specimens collected during the present survey all appear to be the introduced species, Galba viridis, or possibly the endemic, Pseudisidora rubella.

Two species of birds were seen or heard regularly in this part of Kapakahi gulch: shama thrush (Copsychus malabaricus) and Elapaio (Chasiempis sandwichensis). The following list of plants characterizes the valley floor and riparian habitat between about 700 and 1300 feet:

cryptogams		
Dryopteris ?dentata	oak fern	A
Adiantum cuneatum	maidenhair fern	C
Blechnum occidentale		P
Asplenium nidus (i)	birds-nest fern	P
Psilotum nudum (i)	moa	P
Selaginella sp.	lepelepe-moa	P
Nephrolepis ?exaltata	sword fern	R
Gonocormis minutis (e)	filmy fern	R
herbs and grasses		
Oplismenus hirtellus	basket grass	A
Setaria palmaefolia	palm grass	A

Zingiber zerumbet	shampoo ginger	A
Paspalum conjugatum	Hilo grass	C
Ageratum conyzoides	maile hohono	P
Kalanchoe pinnata	air plant	P
Clidemia hirta	Koster's curse	P
Stachytarpheta jamaicensis	Jamaican vervain	R
Passiflora ?suberosa	huehue haole	R
Oxalis corymbosa	pink wood sorrel	R
Commelina diffusa	honohono	R
Ageratina adenophora	Maui pamakani	R
Plectranthus parviflorus (i)	'ala'ala wai nui	R
Alocasia macrorrhiza (p)	'ape	R
Passiflora ?suberosa	huehue haole	R
Ipomoea sp.		R
Cyrtandra spp.		R
Machaerina sp.	'uki	R
shrubs		
Coffea arabicum	coffee bean	A
Cordyline fruticosa (p)	ti	A
Pluchea symphytifolia	sourbush	C
Dioscorea bulbifera (p)	yam	R
Dodonea sp.		R
Morinda citrifolia (p)	noni	R
Eugenia uniflora	Surinam cherry	P
Pipturis sp.	mamaki	R
Lantana camara	lantana	R
Carica papaya	papaya	R
Rubus rosifolius	thimbleberry	R
trees		
Aleurites moluccana (p)	kukui nut	A
Psidium guajava	common guava	A
Schefflera actinophylla	octopus tree	A
Schinus terebinthifolius	Christmasberry	C
Psidium cattleianum f. lucidum	yellow-fruit guava	C
Syzygium malaccense (p)	mountain apple	C
Leucaena leucocephala	koa haole	P
Canthium oderatum (i)	alahe'e	P
Syzygium cumini	Java plum	P
Hibiscus arnottianus var. (e)	koki'o	P

Although introduced species characterize this riparian forest, a few native species are present. A wide variety of ferns, found as ground cover and on large boulders in the stream bed especially differentiate this community from the previous one.

'Ohi'a/Uluhe Fern Forest

Above about the 1300-foot elevation, 'Ohi'a trees are seen scattered along the valley slopes and some koa is present near the stream. The plant assemblage viewed along the stream is perhaps somewhat intermediate between remnants of lowland mesic forest types and the 'ohi'a/uluhe (Metrosideros and Dicranopteris) fern forest (lowland wet forest), or may once have been one of the lowland wet riparian shrubland types. Open slopes above the stream bed are dominated by uluhe (Dicranopteris linearis). Whatever the community type, this area is interesting from a floristic standpoint because of the variety of native plants, a number of which are rare on O'ahu. However, numerous introduced species that are commonly regarded as serious invaders of native forest ecosystems are present to abundant:

cryptogams		
Cibotium splendens (e)	hapu'u	A
Sadleria cyatheoides (e)	'ama'u	A
Dicranopteris linearis (i)	uluhe	A
Adiantum cuneatum	maidenhair fern	C
Blechnum occidentale		P
Psilotum nudum (i)	moa	P
Selaginella sp.	lepelepe-moa	P
Asplenium nidus (i)	birds-nest fern	R
Gonocormis minutis (e)	filmy fern	R
Polypodium sp.	maile-scented fern	R
Pleopeltis thunbergiana (i)		R
Sphenomeris chusana	pala'a	R
herbs and grasses		
Peperomia sp.		R
Peperomia sp. (e)		R
Musa sp.	banana	R
shrubs		
Freycinetia arborea (i)	'ie'ie	A
Cordyline fruticosa (p)	ti	A
Clidemia hirta	Koster's curse	C
Colocasia esculenta (p)	taro	R
Rollandia humboldtiana (e)		R
Touchardia latifolia (e)	olona	R
Piper methysticum (p)	'awa	R

trees		
Psidium guajava	common guava	A
Aleurites moluccana (p)	kukui nut	P
Metrosideros polymorpha (e)	'ohi'a lehua	P
Acacia koa (e)	koa	P
Pisonia sp. (i or e)	papala kepau	P
Antidesma pulvinatum (e)	mehame	R
Charpentiera obovata (e)	papala	R
Perrottetia sandwicensis (e)	olomea	R
Psychotria sp. (e)	kopiko	R

The stream bed was without surface water. However, a few isolated pools on dense basalt outcrops harbored frogs and tadpoles (Rana rugosa) in this area. No snails were observed in pools at the higher elevations.

CONCLUSIONS

Kapakahi Stream is the eastern branch of Waialaenui Stream. Kapakahi is an intermittant stream within a long, narrow valley which extends to just below the crest of the Ko'olau Range on east O'ahu. This stream may contain an interrupted flow of water during the wet season and continuous flow for a time after significant rainfall events. During drier periods, such as might characterize the summer or dry season months, flow diminishes then disappears. To some extent, flow continues beneath the loose material of the stream bed, and this flow feeds small pools where impermeable basalt outcrops occur scattered along the length of the stream. Some of these pools, which vary from a few decimeters in dimensions up to several meters across and 0.5 meters deep, are probably permanent aquatic features.

The pools presently provide habitat for the rugulose frog (Rana rugosa), at least two species of snails, and several aquatic insects. Native species of snails or insects may be present. During a survey in April, no native fishes or crustaceans were observed.

Kapakahi Gulch lacks trails, but the stream bed is relatively easy to traverse up to at least the 1500-foot

elevation and probably beyond, although the stream bed begins to narrow at this point. While several cataracts exist, none is difficult to acend or descend. Two pakalolo growers encountered during the survey claimed to access the stream from the ridgeline above, but this was not independently confirmed. A trail on Wiliwilinui Ridge to the east connects Waialae Iki and the Ko'olau crest trail. A trail may be present along Waialae Nui ridge to the west.

Because nearly all of the narrow valley floor is forested, hiking conditions are pleasant. Biologically, the most interesting aspects of Kapakahi Gulch are the variety of native plants that can be observed all along the valley floor and the changes in vegetation which occur as a consequence of a fairly substantial gradient of increasing moisture from the valley mouth to the Ko'olau crest.

REFERENCES

Hubendick, B. 1952. Hawaiian Lymnaeidae. Occ. Pap. B. P. Bishop Mus., Honolulu, Hawaii. 20(19): 307-328.

Morrison, J.P.E. 1978. Notes on Hawaiian Lymnaeidae. Malac. Rev., 1: 31-33

Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the Flowering Plants of Hawai'i. Univ. of Hawaii Press, Bishop Museum Press. 1854 p.

EXHIBIT G

REAL PROPERTY TAX ANALYSIS

LOCATIONS
Real Estate Sales & Research

RECEIVED
OCT 0 2 1992
PARAMETRIX, INC.
HONOLULU

October 1, 1992

Luinakoa Partners
43 Ahui Street
Honolulu, HI 96813

Dear Luinakoa Partners:

SUBJECT: Property Tax and Property Value Impact

We are pleased to submit our study assessing the impact of new development on nearby existing property. The enclosed study was provided as part of an EIS for the proposed Luinakoa Street development. This study should address any potential concerns property owners in the immediate area may have.

The findings of this study indicate that no significant property value or property tax increases should result from the proposed Luinakoa Street development. Should you have any questions, please contact me at 545-8826.

Sincerely,

Michael A. Sklarz
Director of Research

Locations Inc.: Seven Waterfront, Suite 210, 500 Ala Moana Blvd., Honolulu, Hawaii 96813 Telephone: (808) 545-8800 FAX: (808) 545-8850

THE IMPACT OF NEW DEVELOPMENT ON NEARBY EXISTING PROPERTY

Introduction: The issue of increased property taxes and property values as a result of the development of a new project has been raised a number of times. These concerns are legitimate. The information and analysis to follow will provide an objective independent opinion on this issue.

Property Taxes: Real property taxes are based on two factors: (1) the real property tax rate established by the Honolulu City Council, and (2) the assessed value of a property established by the Real Property Tax Assessment Division. The method of establishing assessed value is of concern since tax rates effect all property owners.

Assessed property values are established using a mass appraisal based on the sales comparison approach. A mass appraisal establishes benchmark[1] property values for an entire neighborhood[2]. The sales comparison approach is the method used to established benchmark property values[3].

Total assessed values are generally established in the following manner. The assessed building value is based on the replacement cost less depreciation for the age of the building. The assessed land value is based on recent sales of comparable vacant land and/or existing homes less the building value.

Property Values: To address the concern of a new luxury development increasing property values in immediate areas, four similar cases were analyzed. The four cases involved the introduction of new luxury subdivisions: Nohono Kahala, Hawaii Loa Ridge, Queen's Gate, and Royal Summit. These subdivisions were selected because of their relative similarity to the Luinakoa Street case and ability to illustrate the effects of new development.

In each of the four cases studied, a historical median[4] price series was plotted for Oahu and immediate area neighborhoods with a reference to the introduction of the luxury development. The idea was to analyze the price performance of immediate area neighborhoods after the introduction of the luxury development. Specifically, the price performance before and after the introduction of the luxury development was measured against the performance of the overall Oahu market over the same time period. If the luxury development impacted the immediate area neighborhood, then prices in that neighborhood should clearly and consistently deviate from the overall Oahu price trend.

The median price histories and performance of the four areas studied is shown in Figure 1. As seen, after the introduction of Hawaii Loa Ridge, Queen's Gate, and Royal Summit there was very little, if any impact on the non-luxury immediate area neighborhoods. Both Oahu and immediate area neighborhood prices generally moved in tandem. In the case of Nohono Kahala, not enough time has passed to accurately assess the impact on immediate area single family homes. However, the fact that prices have not risen sharply in 1991 appears to imply that there has been very little, if any impact. Immediate area townhouses have not shown any effect resulting from the introduction of Nohono Kahala.

Conclusion: New development has no significant impact on existing immediate area properties. Property taxes should not be affected based on the current method of property tax assessment. Analysis of the impact new developments have on immediate area property has shown that immediate area neighborhood median price trends mirror the behavior of the entire Oahu market both before and after the introduction of a new development. In general, the most important factors impacting prices are the trends in sales activity and appreciation in the overall marketplace, rather than a particular effect which could be attributed to the introduction of a new development.

---

1 a standard by which something can be measured or judged

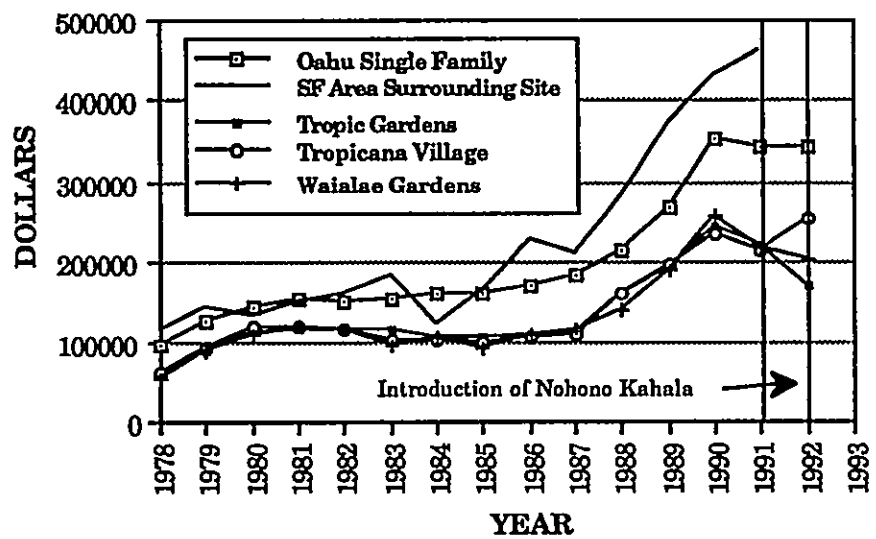
2 neighborhoods are defined by the tax assessor's office for the purpose of grouping similar properties to be used in the sales comparison approach

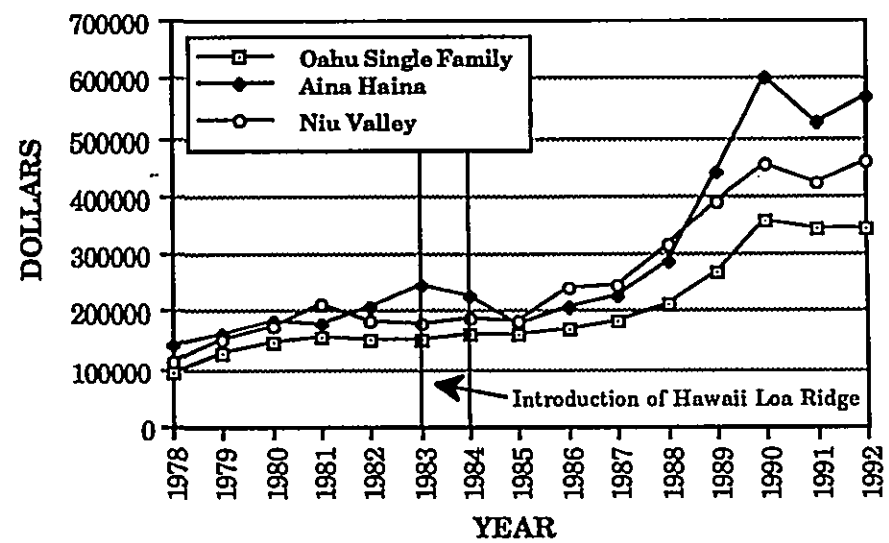
3 method of appraisal based on analysis of recent sales prices of similar properties after making adjustment for any differences in the properties

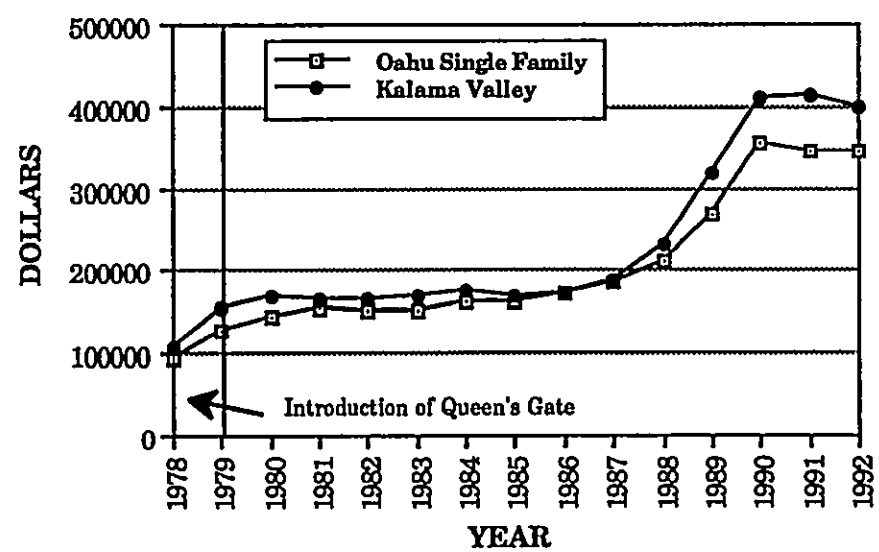
4 the middle number in a given sequence of numbers; for home prices, the mid point in a sequence sorted by price

Figure 1

SELECTED OAHU MEDIAN RESALE PRICES







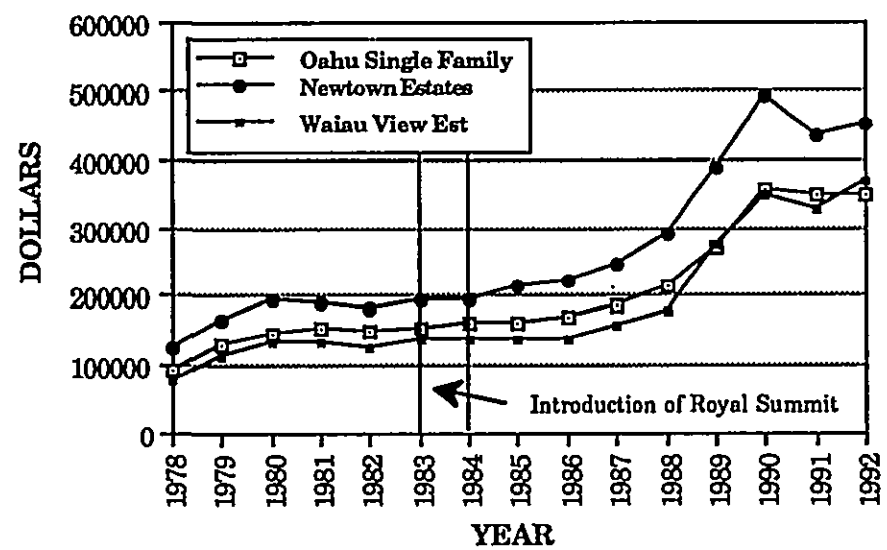


EXHIBIT H

SLOPE ANALYSIS -

ARCHITECTURAL TREATMENT

Architectural Treatment - Slope Analysis

By Joseph Lancor, A.I.A.

Our firm was retained by Luinakoa Partners in the early part of 1992 to study various design options for residential units on a proposal being prepared to extend the existing Luinakoa Street. Under consideration was an extension of the Street approximately 1300 feet in a mauka direction. Our assignment was to select the four most difficult lots to build on based on the topography and slope factors. Further, we were to design structural homes consistent with the existing residences on Luinakoa Street.

Our initial review of the topography of the project area showed us that there is little difference from the already established lots to those being proposed. Lots on the Honolulu side of Luinakoa Street would be "uphill" lots, and those on the Koko Head side of the Street would be "downhill" lots. We selected the four most difficult lots so that a valid examination of the terrain conditions could be made. This way, we would be looking at truly the "worst case" scenario rather than the best of the lots.

Our first design (**Scheme A**) is an uphill, steepest slope lot of nearly 40%. Our Scheme A is a literal derivation of the early to middle 1950s tract subdivision house common in the adjoining neighborhood. We used these numerous examples as this would demonstrate the values of simply extending the Street with the same neighborhood style, size, height, mass, topography, etc. We found that this would fit and feel that **Scheme B** was a modernized upgraded version, with more glass area, two car garages, up to date kitchens and bathrooms, as well as adding a few decks. These are **Schemes B & C**.

The existing neighborhood solution simply applied to this Street extension and then modernized is described by our A, B, and C study sketches. These are all applicable to the four most difficult lots. It is demonstrated that the Schemes A, B, and C are developable in total design consistency with the existing neighborhood.

Joseph Lancor Architects, Inc.
133 Kailuana Place
Kailua, HI 96734
(808) 532-5511

December 10, 1992

INTRODUCTION

Our task was to test the development capability ofselected new lots on the proposed future extension of Luinakoa Street. The character of the desired houses was to design a residence as similar in size to the neighbors; similar in height, bulk, and general mass and comparable in today's housing market place. If this result could be achieved for a reasonable cost, then this extension of Luinakoa Street become a feasible and appropriate way to provide for increasing the population density without the need to generate new infrastructures.

I. Lot size

The lot sizes are generally the same or slightly larger than those already existing. A good number of those already existing lots are as steep of nearly as steep as those proposed and so it is self evident that similar sized houses may be constructed on the proposed new lots.

Current building codes require many things that were not required when the existing neighborhood was being built. Soil investigation is now required as well as foundation and retaining wall standards far in excess of what previous 1950-60 building codes asked for. New reinforcing schemes ensure that walls and slabs are well tied together and are founded on better prepared sites. Implementation of these new codes and standards will cause these new houses to last and endure far better than the existing residences , but from all outward appearances they will be similar.

II. Design Criteria

The uphill, steepest lots provide the greatest design challenge and so it was these lots that were selected for design testing. Assuming a two car garage and a three bedroom house of approximately 1700 sq. ft. , we found no problems in fitting the design to the hillside. However, today's market competition demands a few things improved from the models of the existing neighborhood. One of those requirements is a reduction in the number of steps to climb from the garage to the house and so our study shows the main living level of the house located directly above the garage. The two car garage is benched into the hillside and the main living level above provides a second bench into the hill at it's backside. This sectional geometry allows the house to be more compact and less extended vertically (more steps) than its' neighbors. Without risking aesthetic design, the

structural integrity of the foundation for the house and the required drainage above the house can be installed to meet today's more stringent building codes.

This method works particularly well on the steeper sites and breaks up the retaining wall in two medium increments. This further improves the visual results of grading, as the house volume occupies the cavity that is excavated. And so the house is easier to live in (less steps) and better to look at (less height and bulk on the hillside). With these upgrades and by compliance with current codes and construction standards, these proposed houses will out last their mortgage terms and avoid the bulk of the construction problems found today in their neighbor's houses.

TYPICAL HOUSE PLAN FOR LUINAKOA S

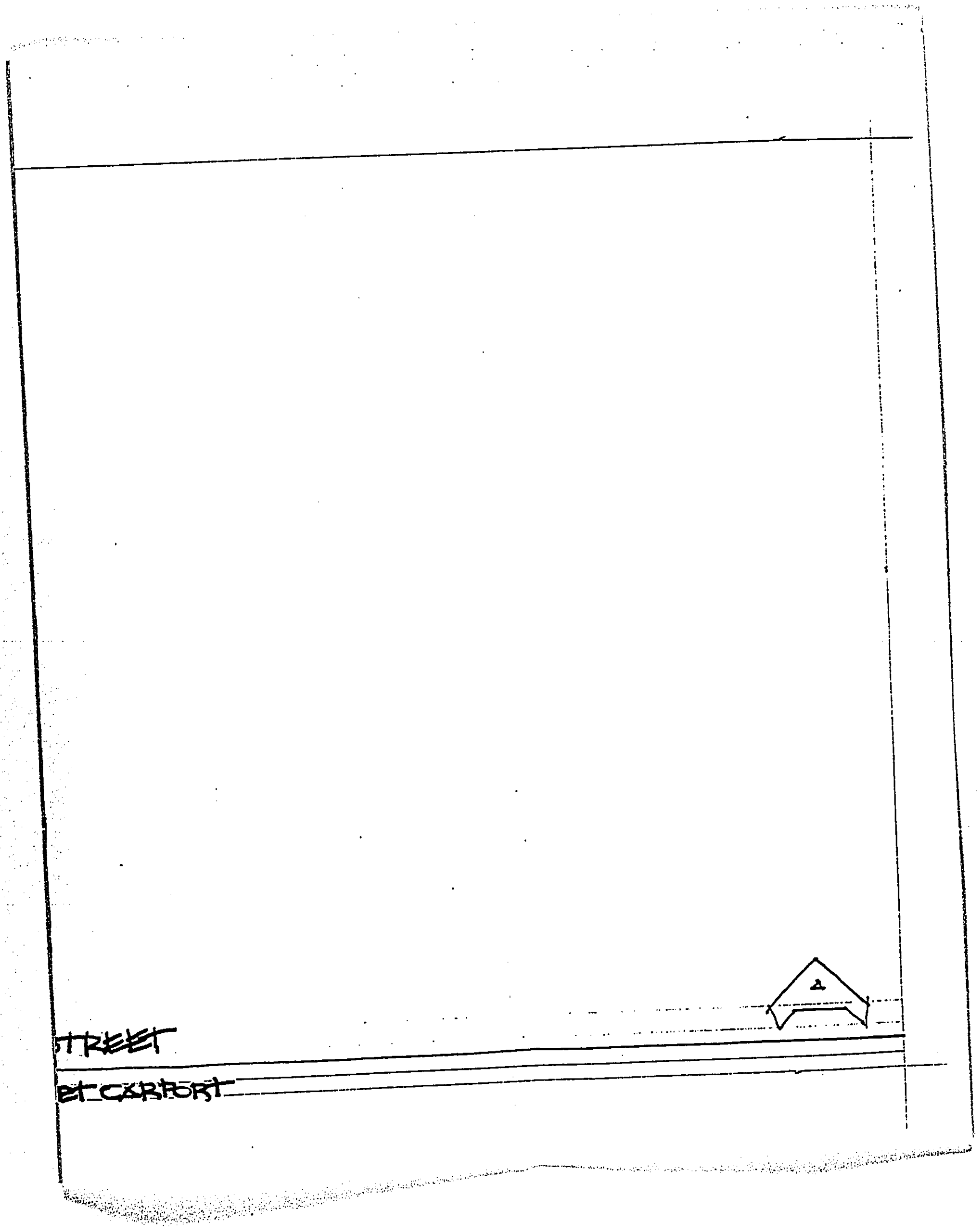
1800 SQUARE FEET HOUSE WITH 400 SQUARE FE

CORRECTION

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

TYPICAL HOUSE PLAN FOR LUINAKOA STREET

1800 SQUARE FEET HOUSE WITH 400 SQUARE FEET CARPORT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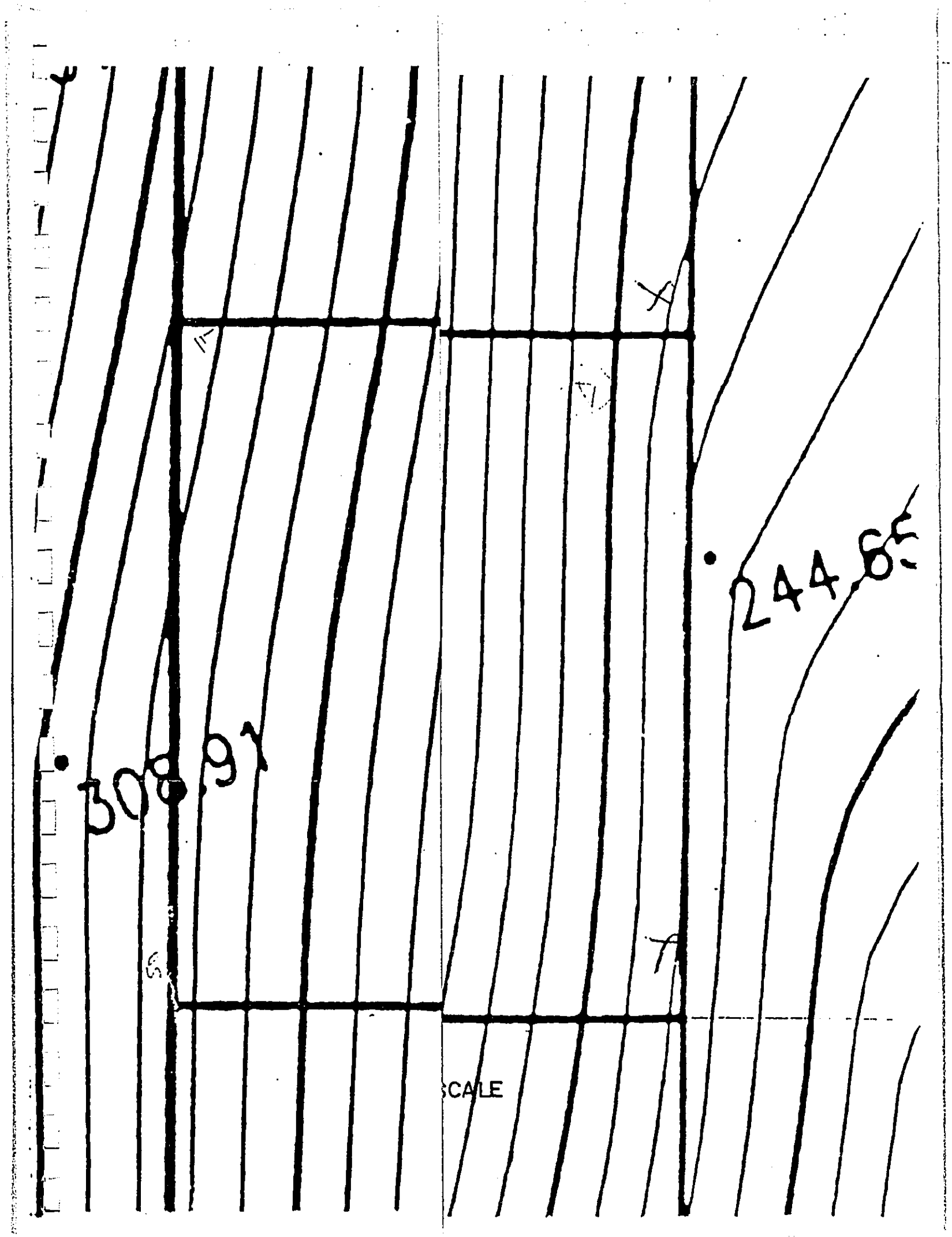
STREET
ET CARPORT

DOCUMENT CAPTURED AS RECEIVED



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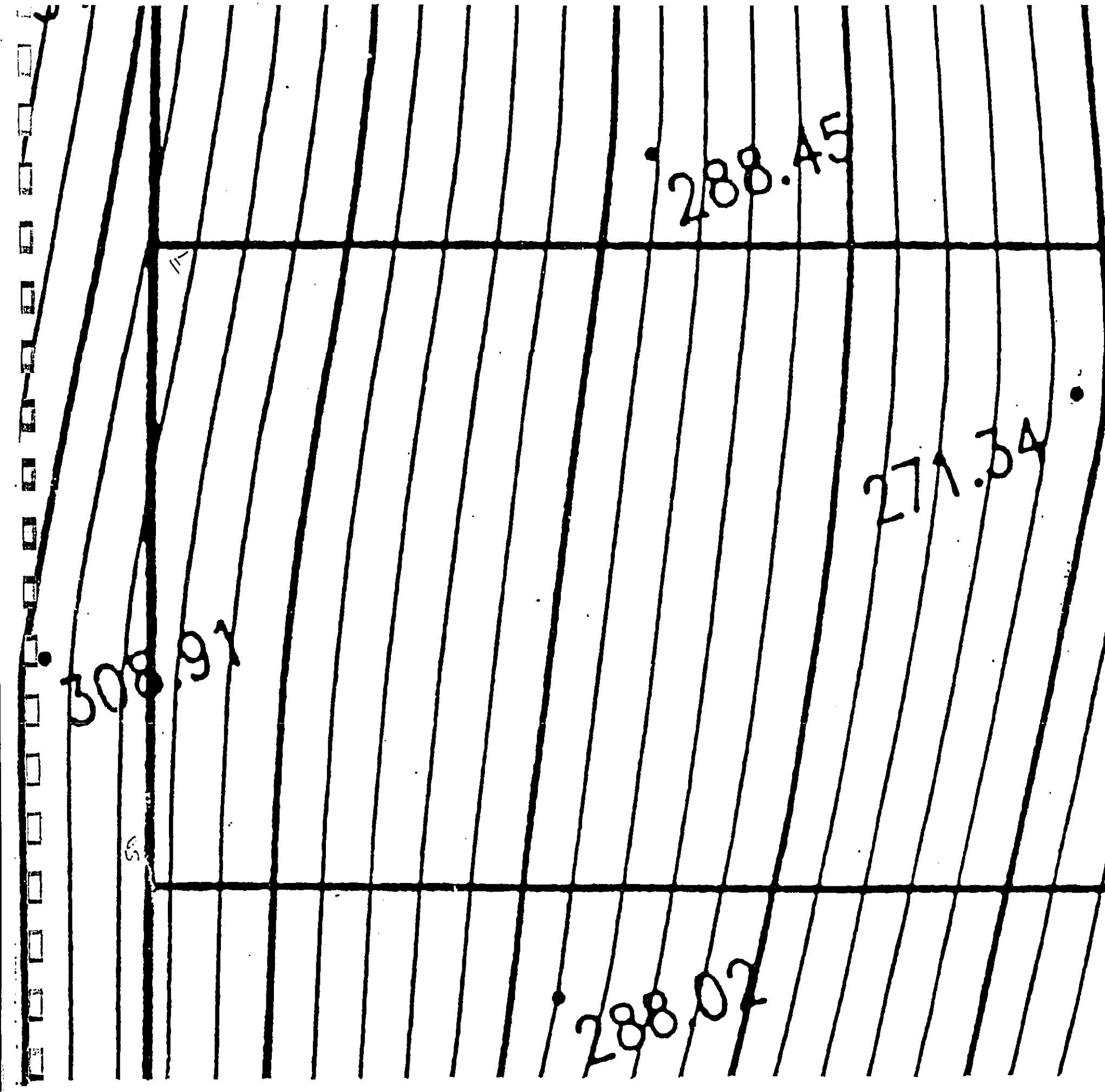
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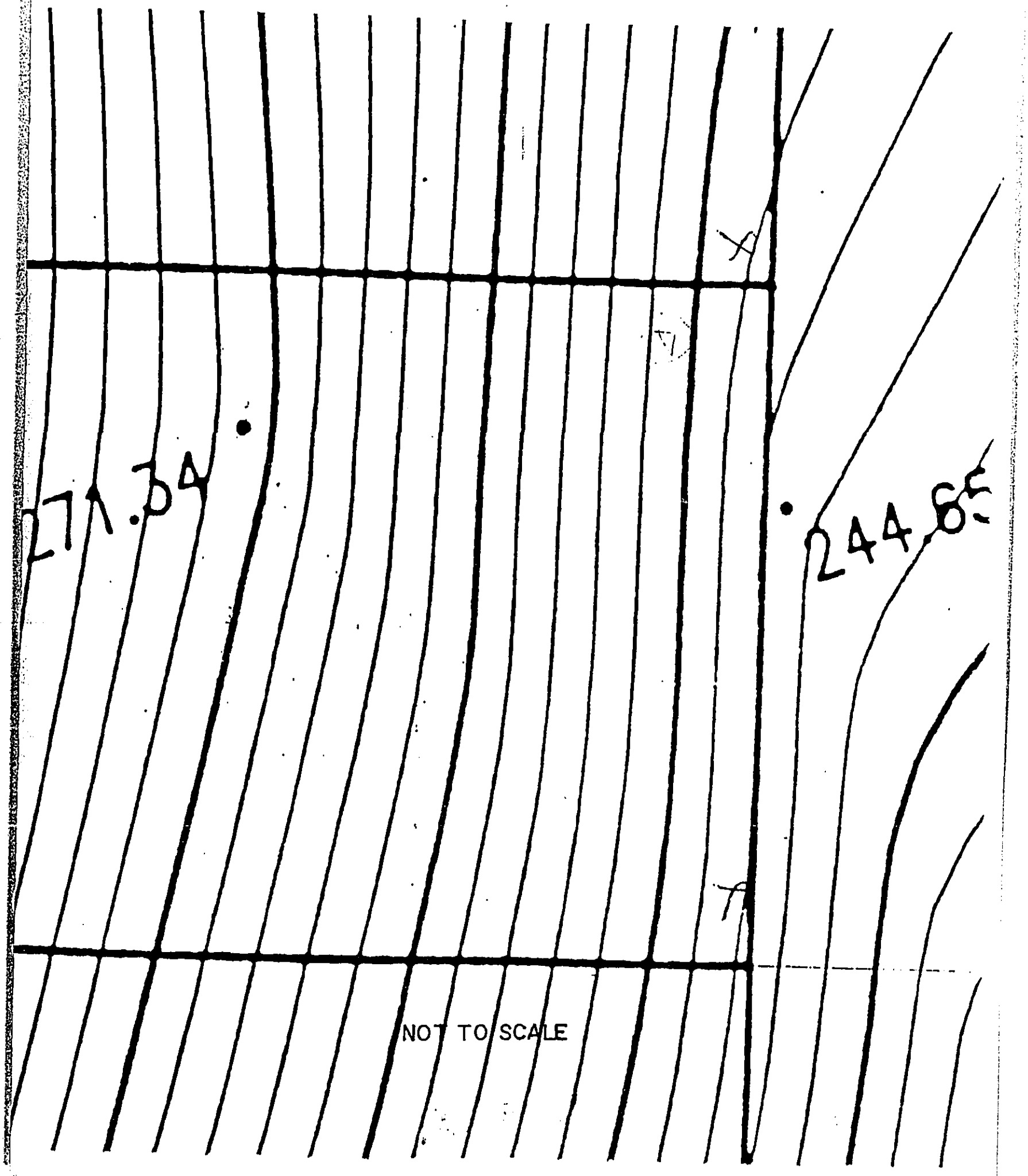
271.34
308.91
288.02


271.34
244.85
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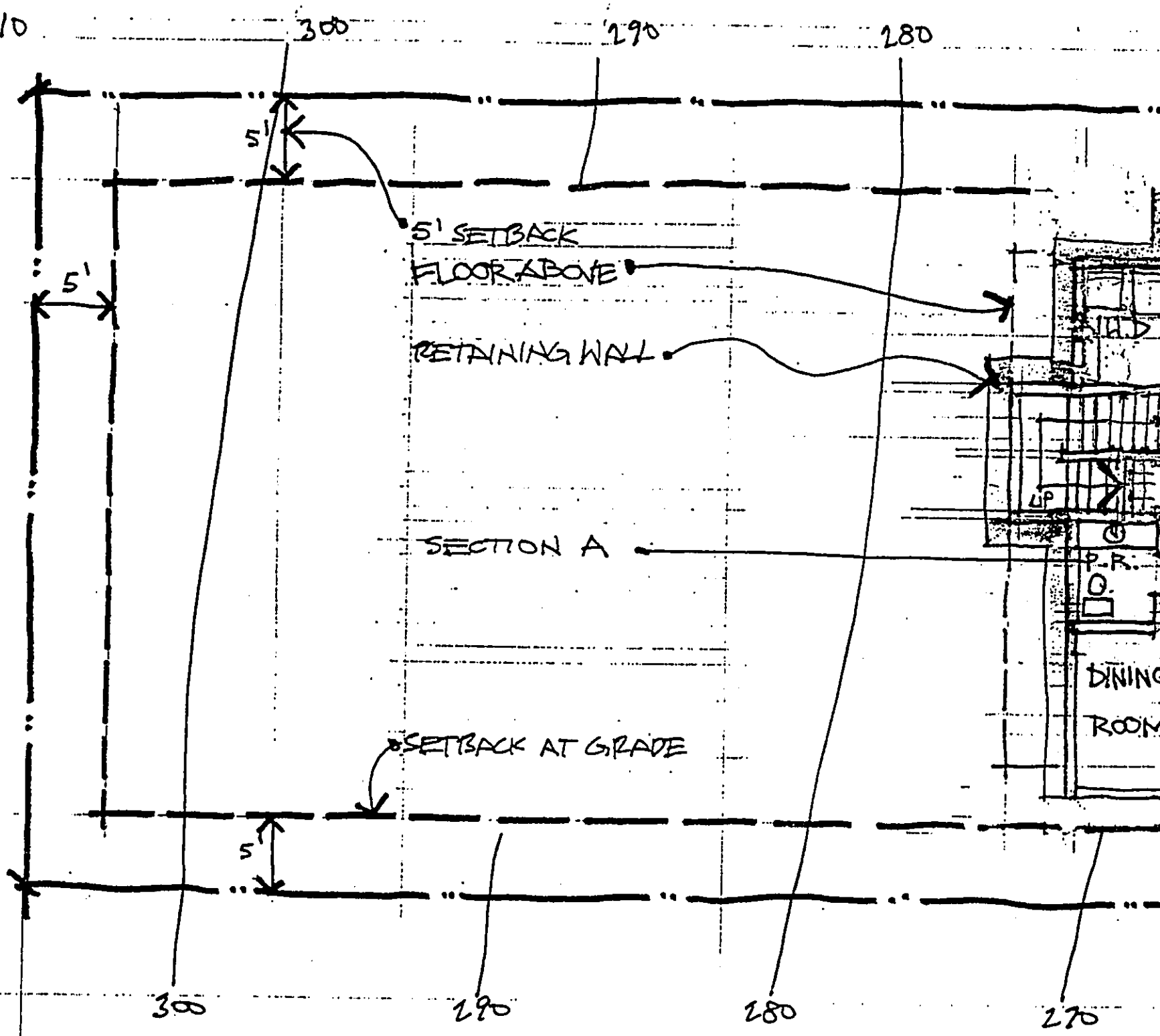

MAIN FLOOR PLAN

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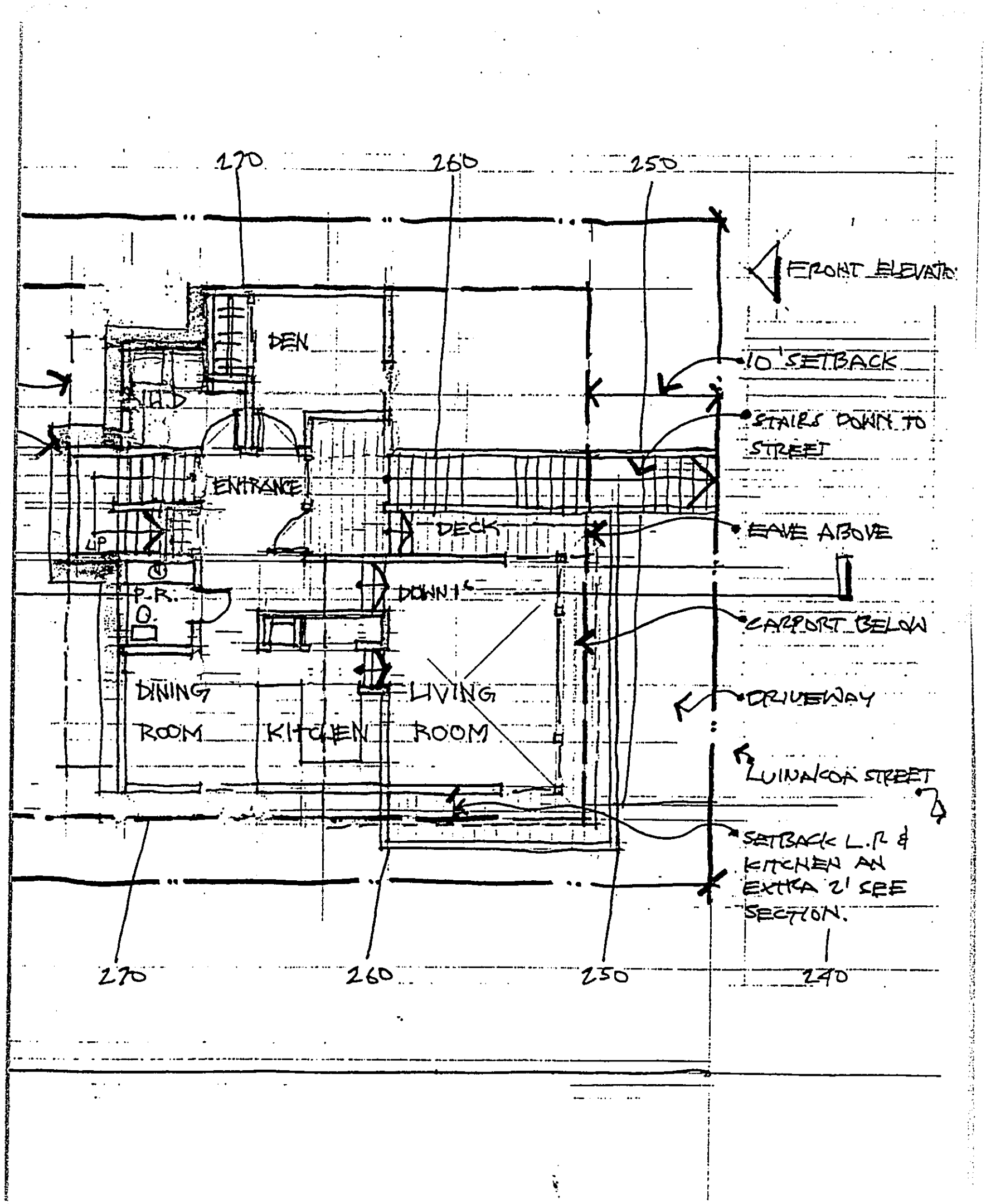
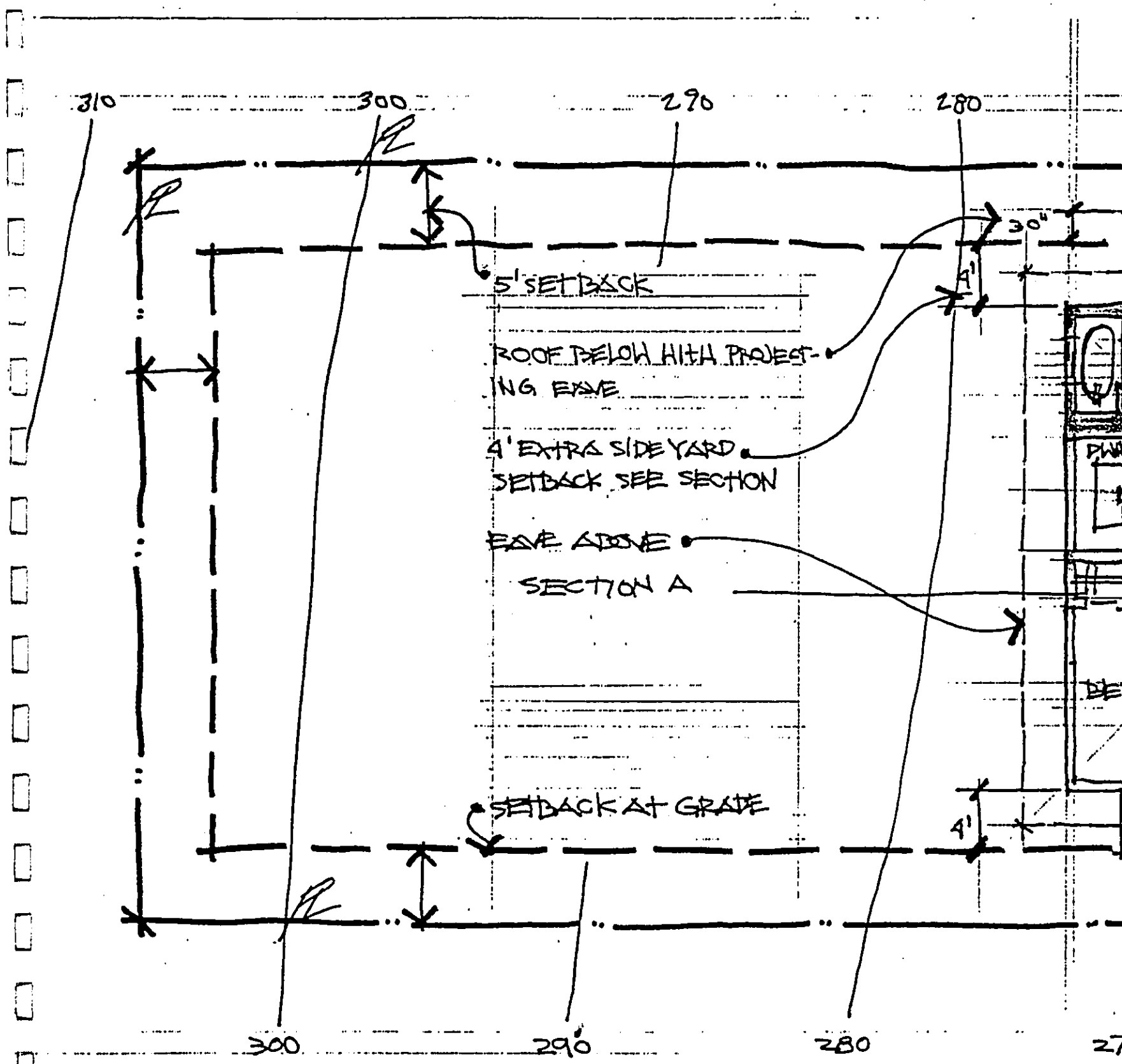

270
260
250
FRONT ELEVATION
DEN
10' SETBACK
STAIRS DOWN TO STREET
ENTRANCE
DECK
EAVE ABOVE
UP
P.R.
O.
DOWN
CARPORT BELOW
DINING ROOM
KITCHEN
LIVING ROOM
DRIVEWAY
LUINACOA STREET
SETBACK L.R & KITCHEN AN EXTRA 2' SEE SECTION.
270
260
250
240



RAISED FLOOR PLAN WITH BEDROOMS

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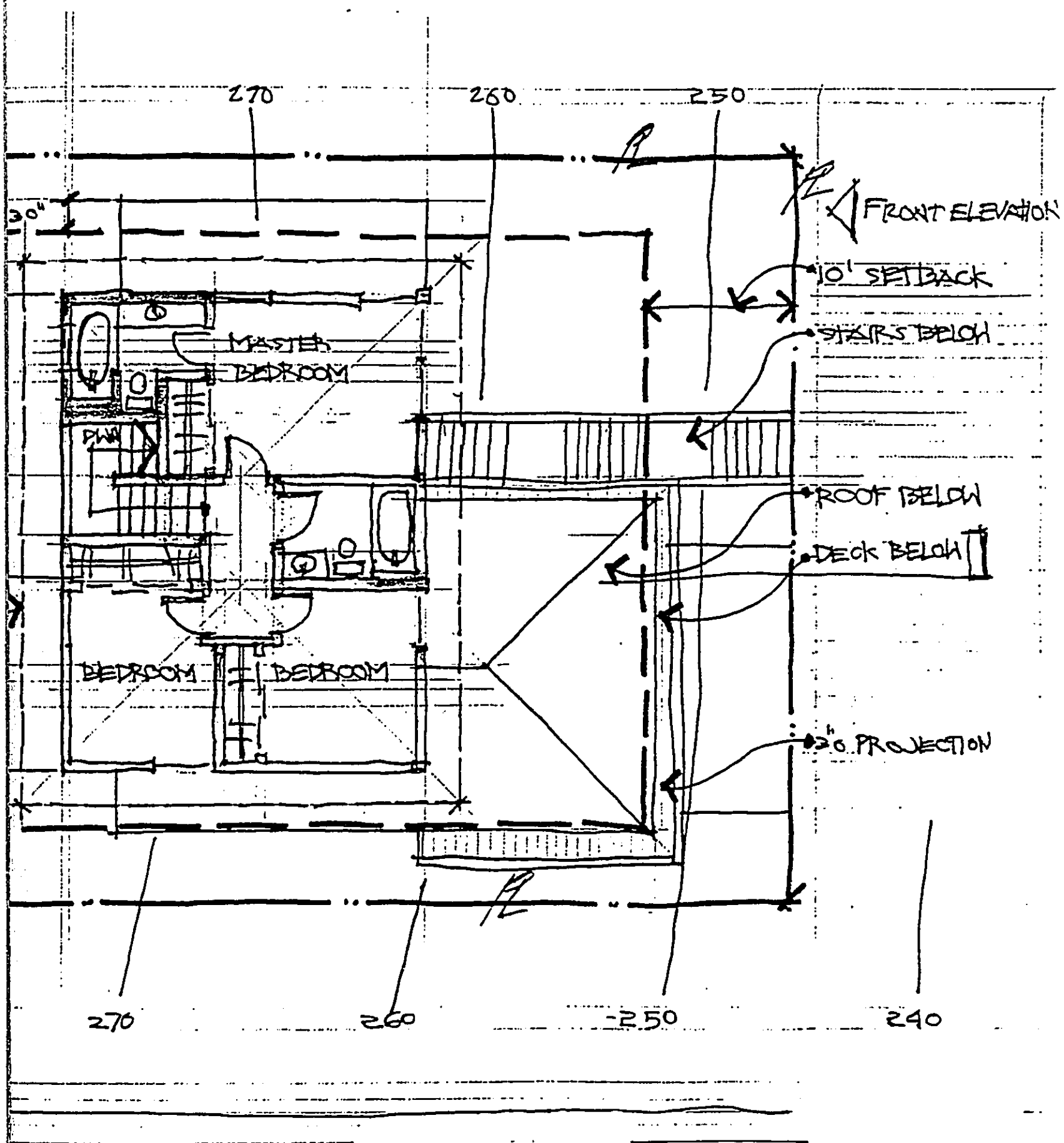
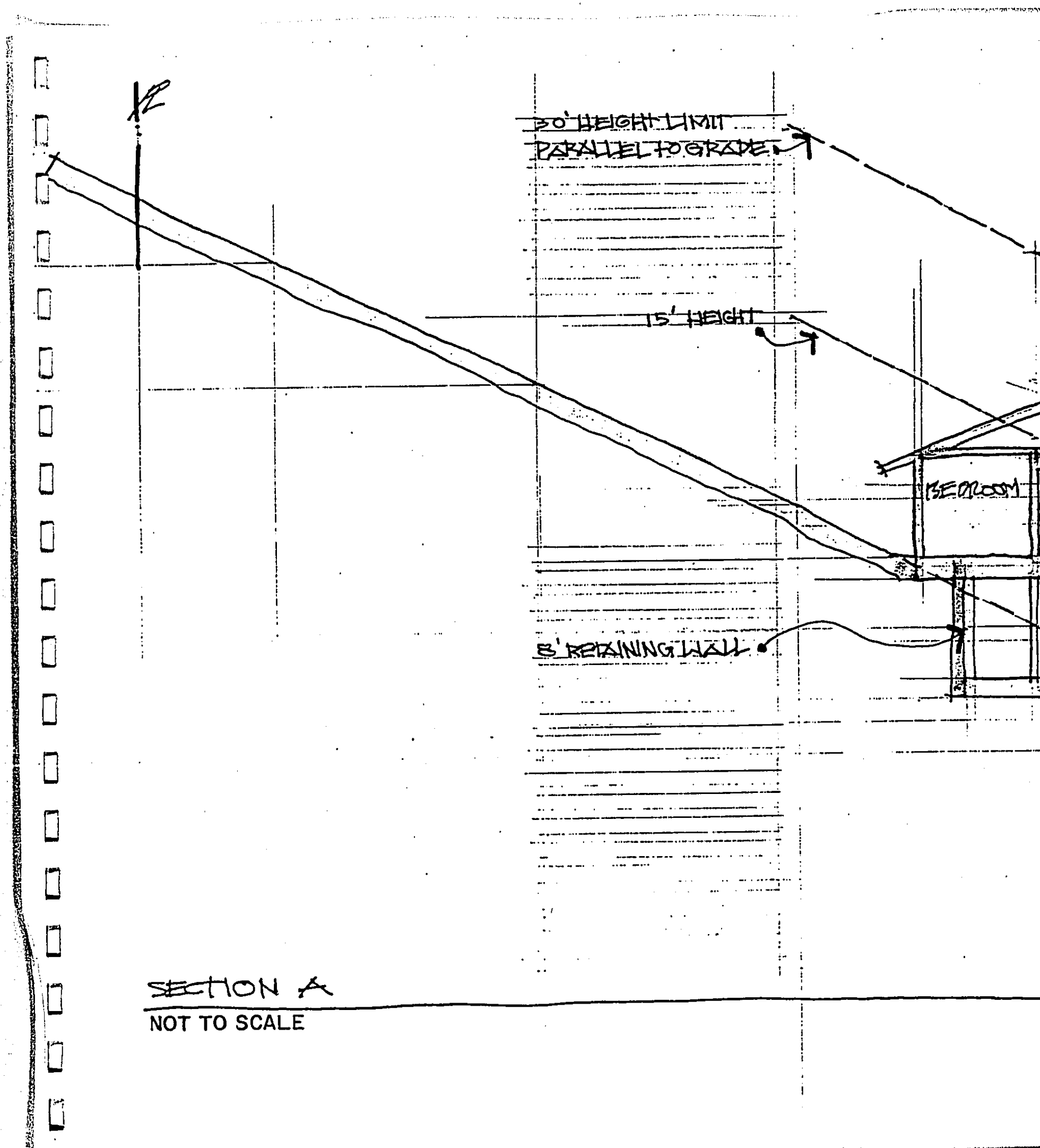

270
260
250
30"
FRONT ELEVATION
10' SETBACK
MASTER BEDROOM
STAIRS BELOW
DWN
ROOF BELOW
DECK BELOW
BEDROOM
BEDROOM
2'0" PROJECTION
270
260
250
240



SECTION A

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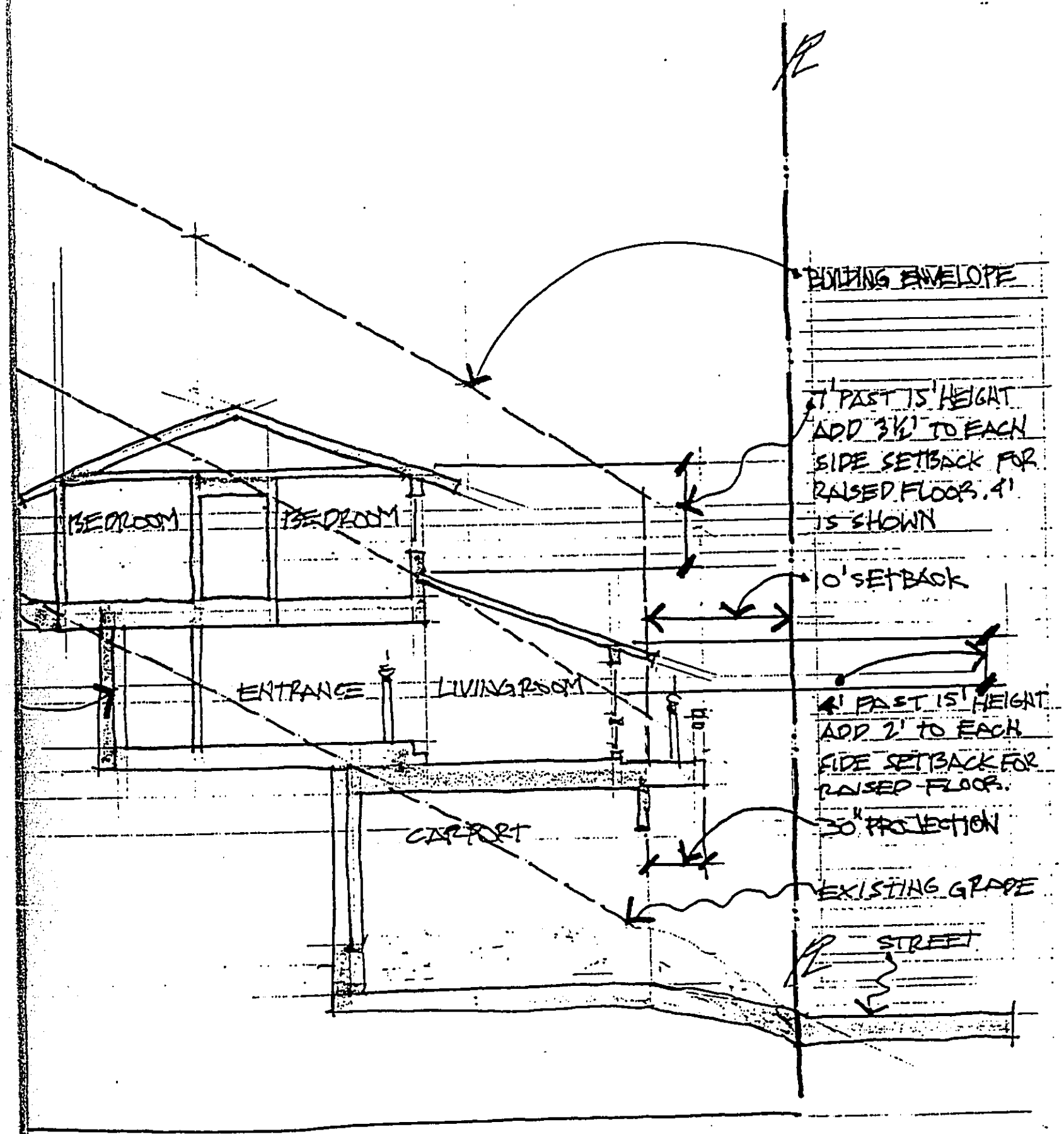
BUILDING ENVELOPE
1' PAST 15' HEIGHT ADD 3½' TO EACH SIDE SETBACK FOR RAISED FLOOR. 4' IS SHOWN
BEDROOM
BEDROOM
0' SETBACK
ENTRANCE
LIVINGROOM
4' PAST 15' HEIGHT ADD 2' TO EACH SIDE SETBACK FOR RAISED FLOOR.
CARPORT
30" PROJECTION
EXISTING GRADE
STREET

CORRECTION

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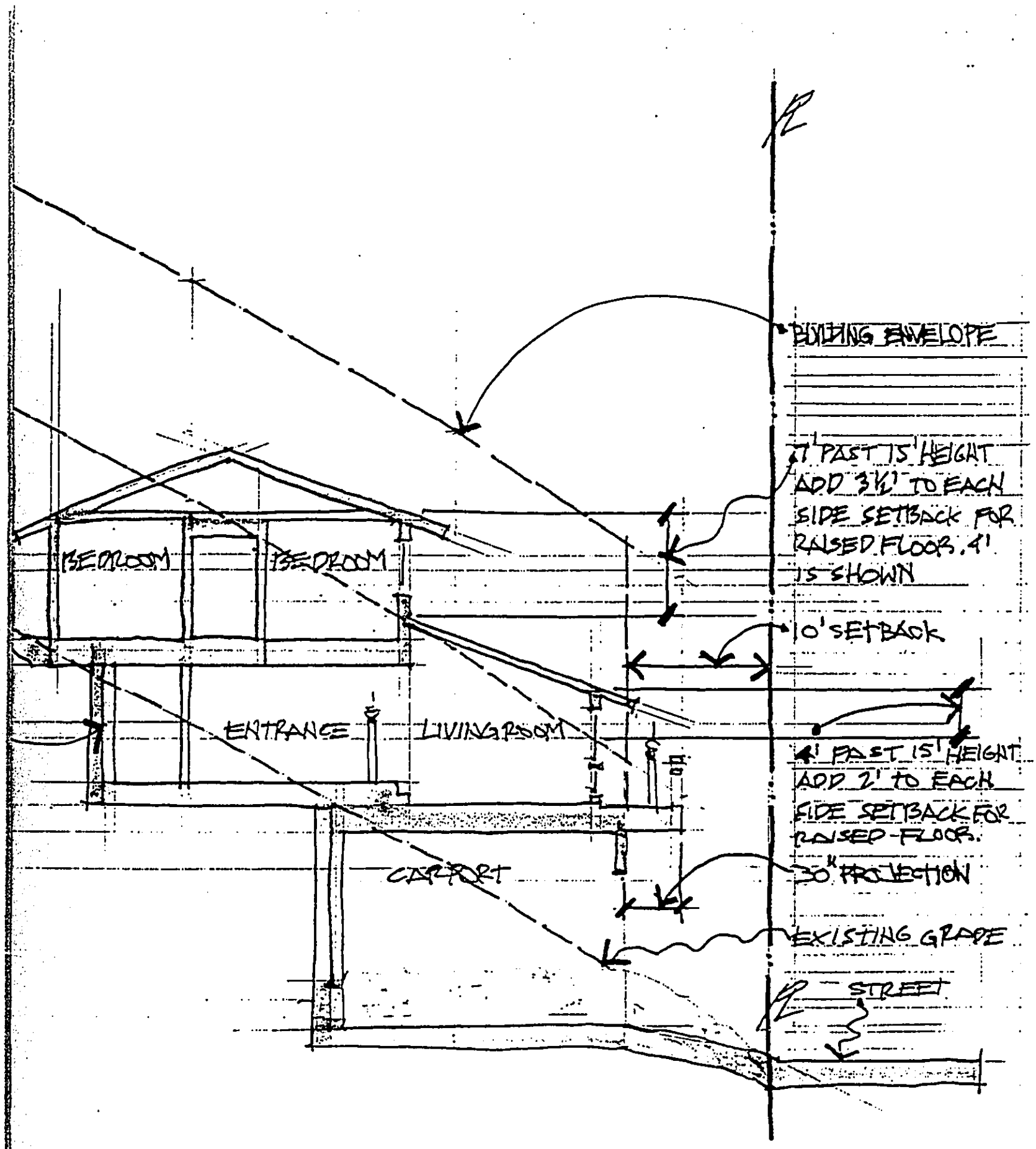
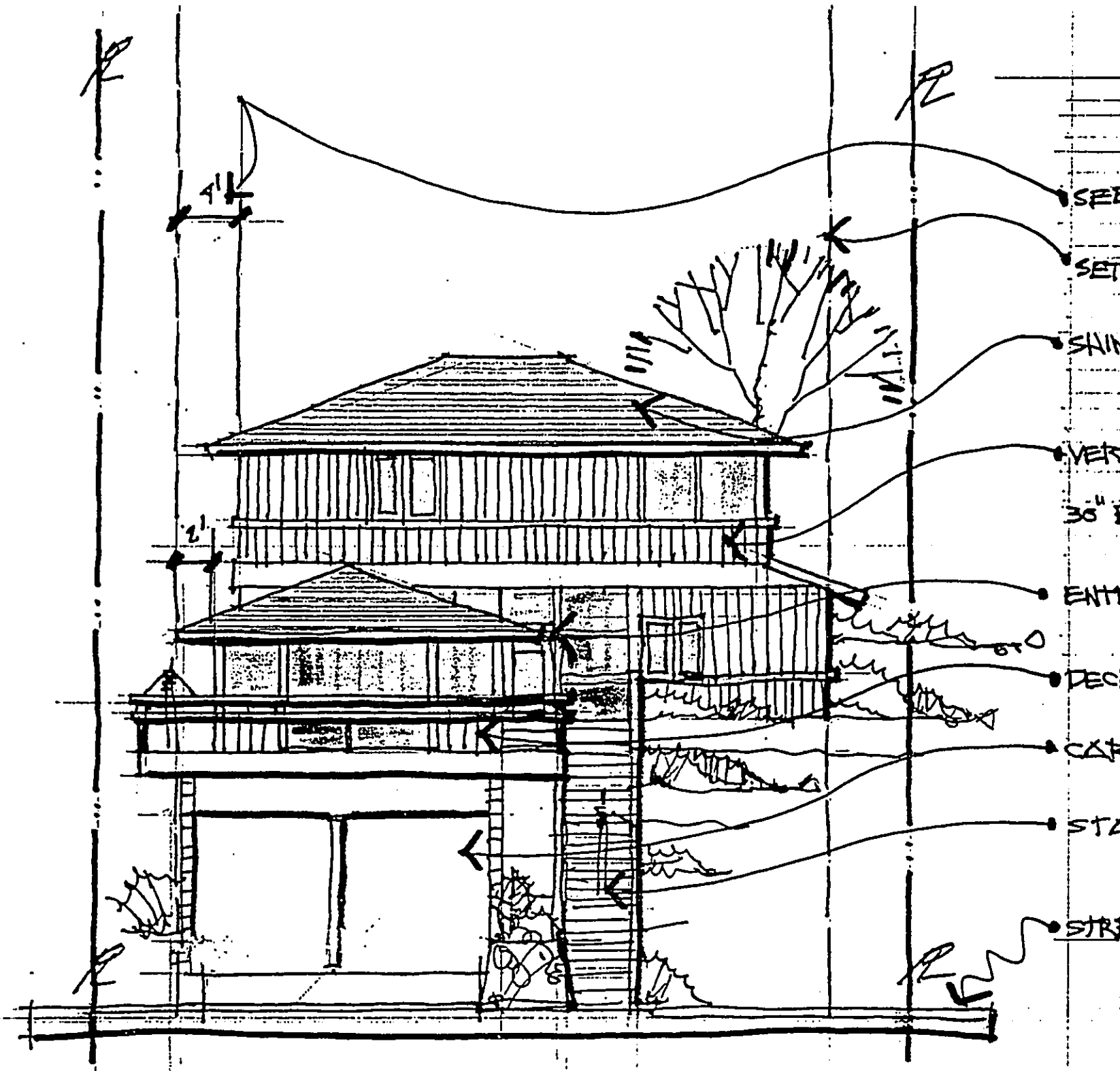
SEE FRAME(S) IMMEDIATELY FOLLOWING


BUILDING ENVELOPE
1' PAST 15' HEIGHT ADD 3½' TO EACH SIDE SETBACK FOR RAISED FLOOR. 4' IS SHOWN
BEDROOM
BEDROOM
0' SETBACK
ENTRANCE
LIVINGROOM
4' PAST 15' HEIGHT ADD 2' TO EACH SIDE SETBACK FOR RAISED-FLOOR.
CARPORT
30" PROJECTION
EXISTING GRADE
STREET



FRONT ELEVATION · FACING STREET

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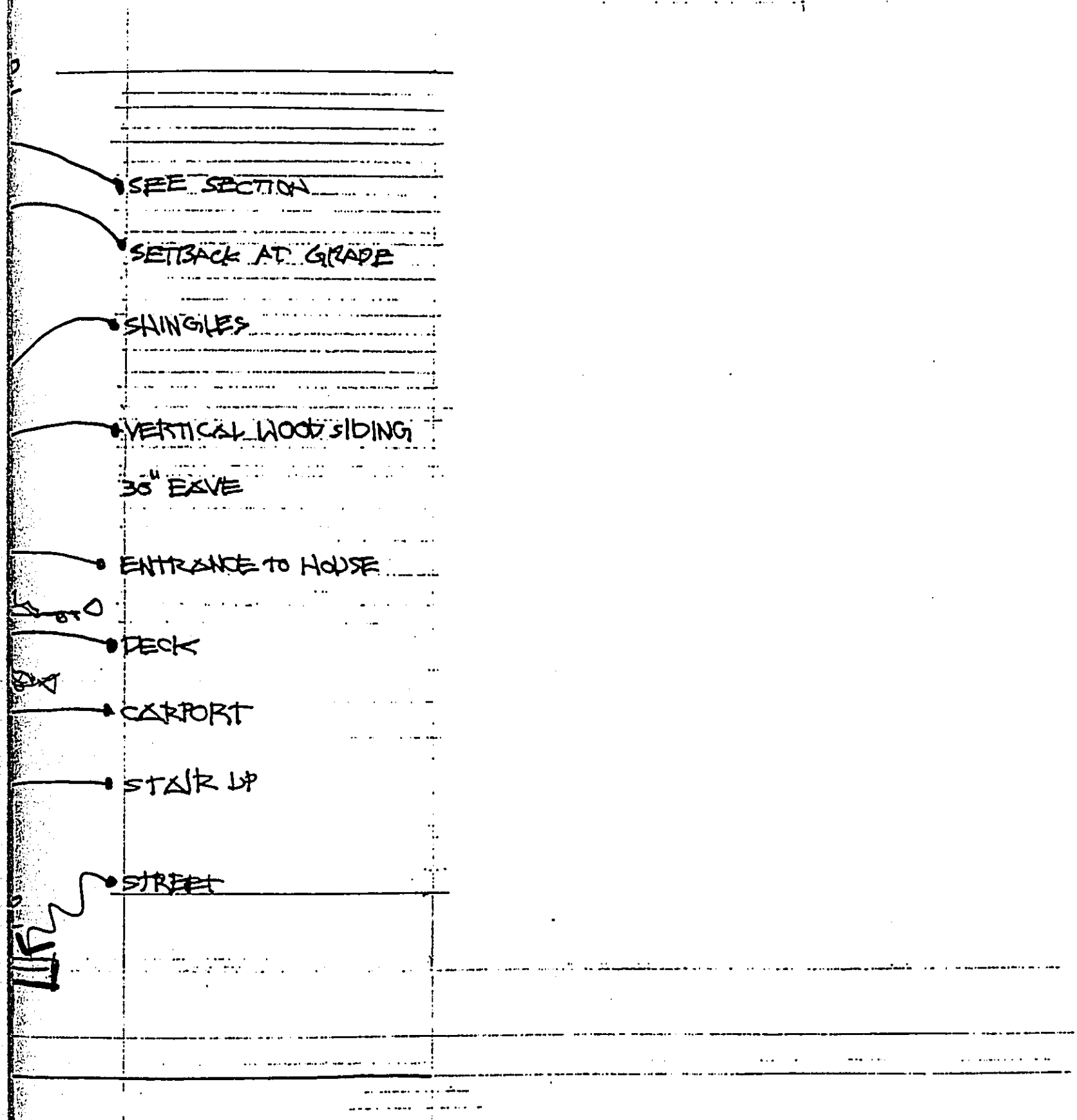

SEE SECTION
SETBACK AT GRADE
SHINGLES
VERTICAL WOOD SIDING
30" EAVE
ENTRANCE TO HOUSE
DECK
CARPORT
STAIR UP
STREET

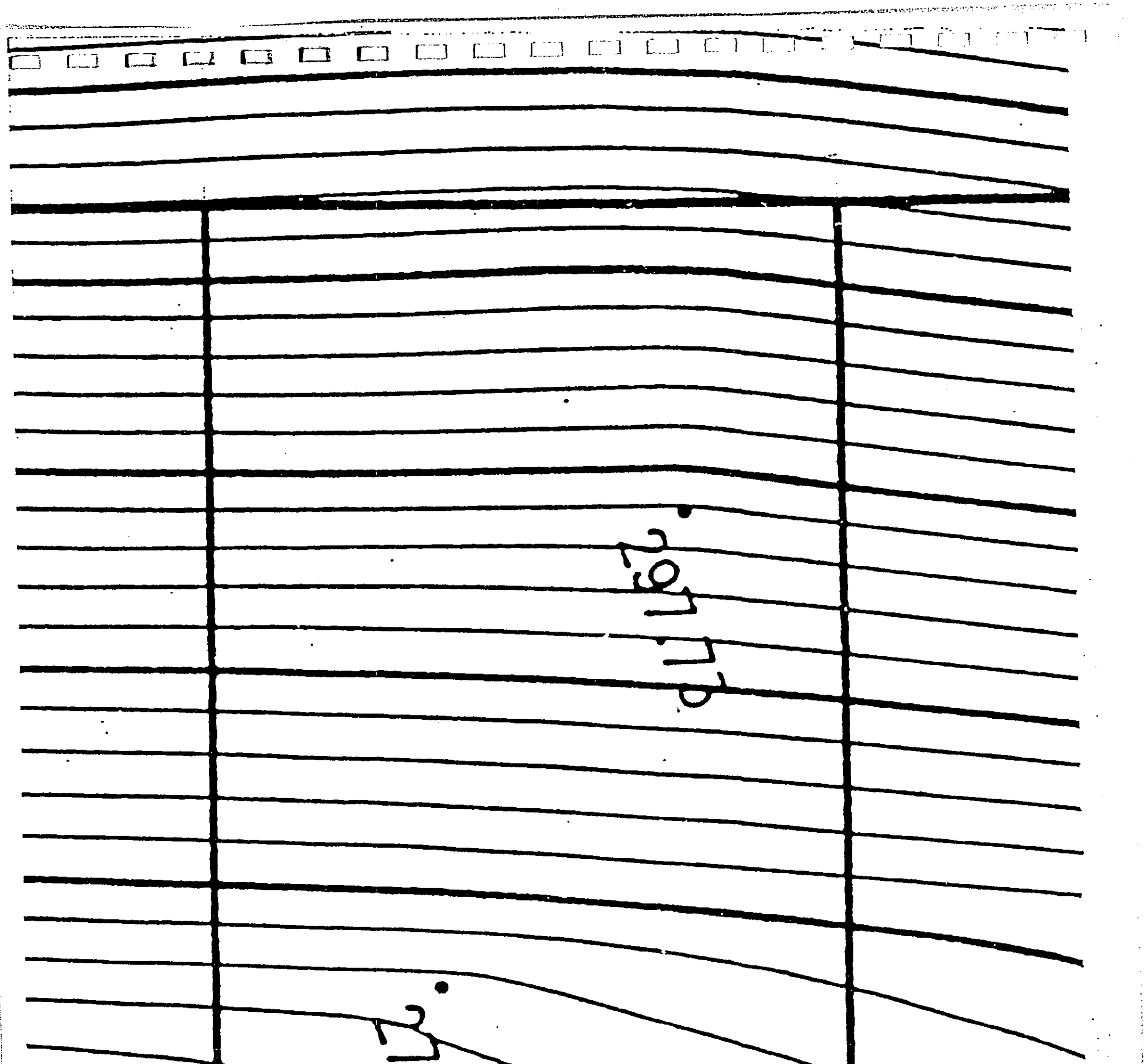
TYPICAL HOUSE PLANS FOR LUINAKOA STREET

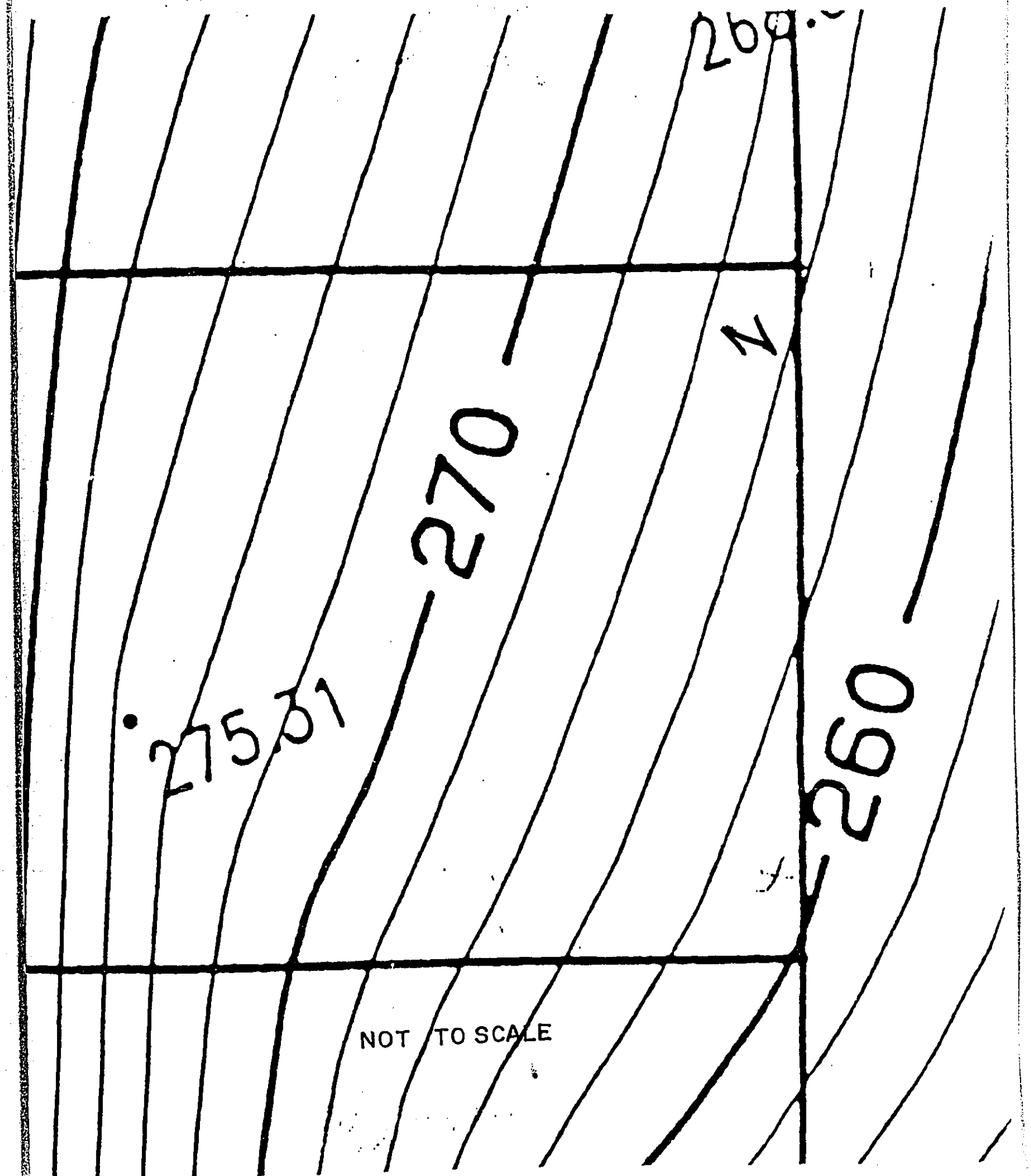
1800 SQUARE FEET CARPORT 400 SQUARE FEET

A STREET EXTENSION

B

FEET




275
270
260
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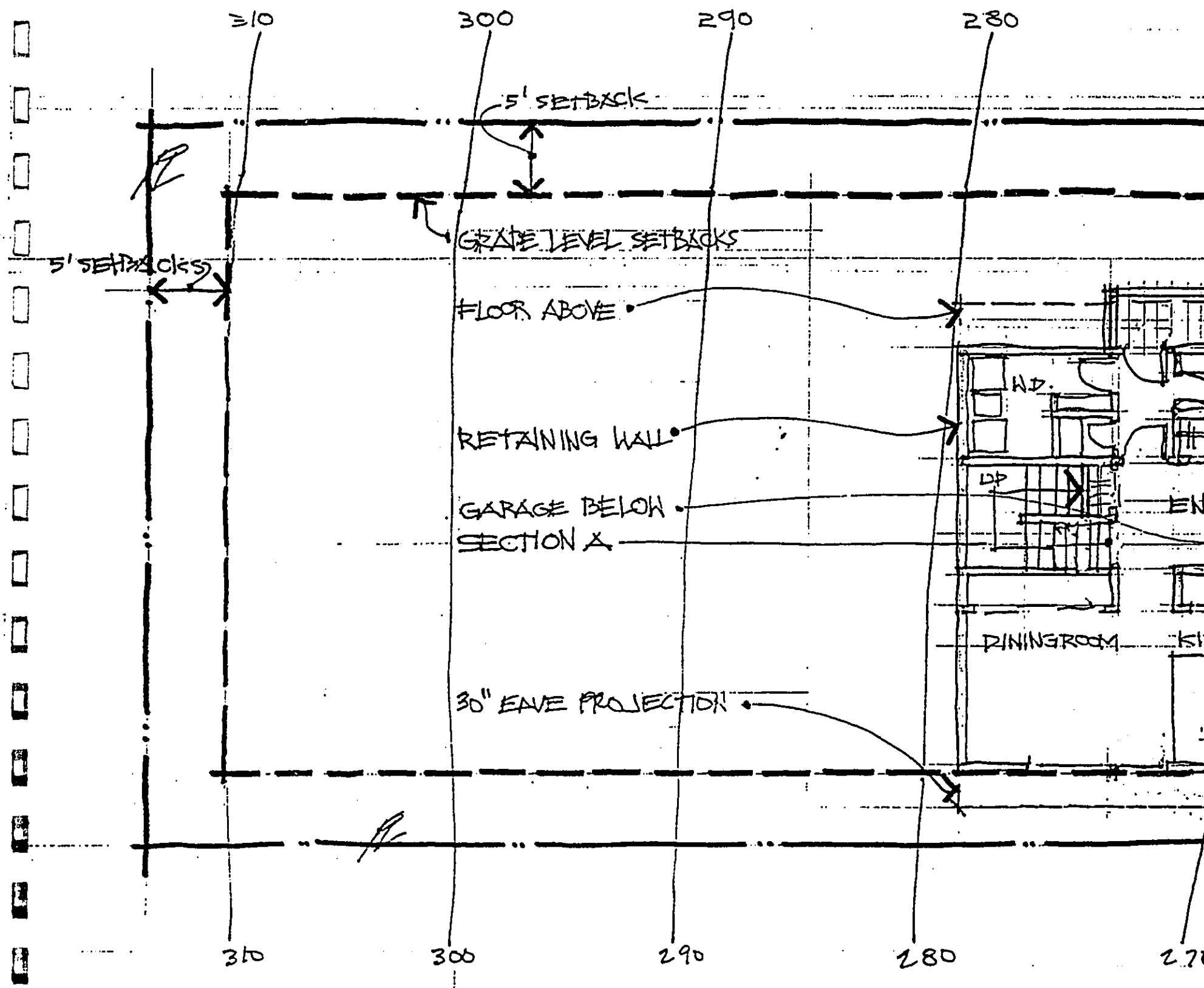

MAIN LIVING AREA PLAN

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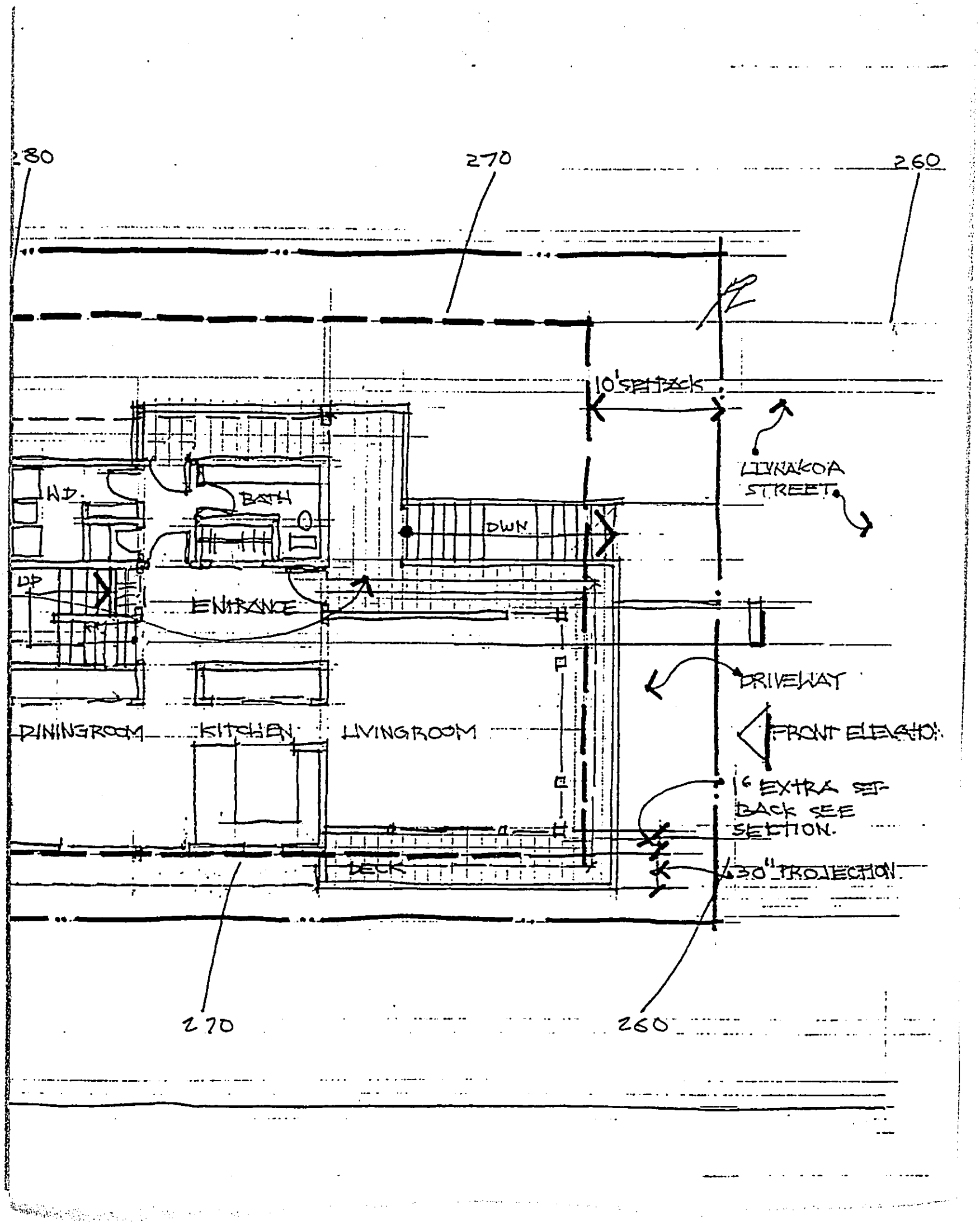
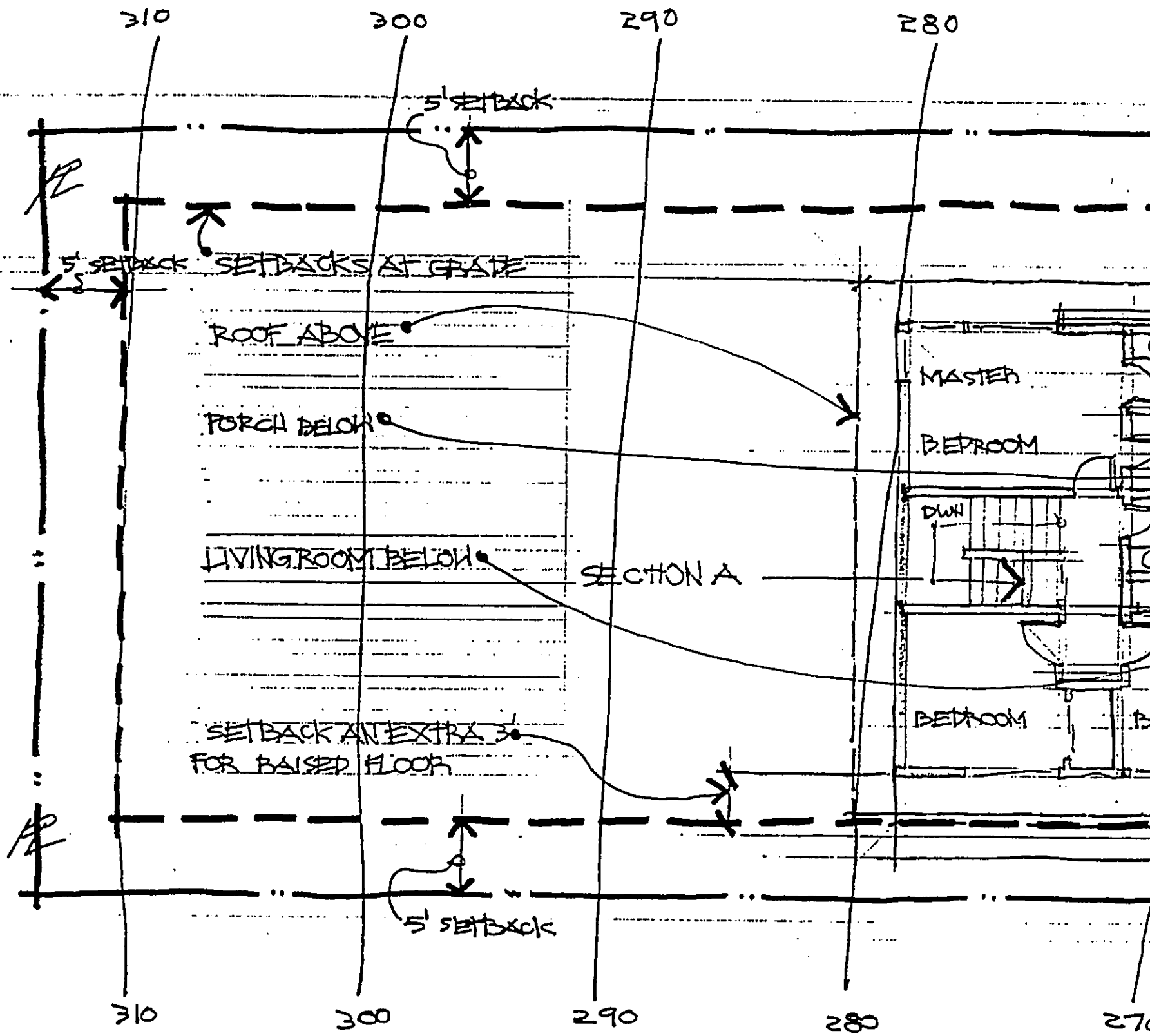

280
270
260
10' SETBACK
LIVNAKOA STREET
W.D.
BATH
DWN
UP
ENTRANCE
DRIVEWAY
DININGROOM
KITCHEN
LIVINGROOM
FRONT ELEVATION
6" EXTRA SET-BACK SEE SECTION.
DECK
30" PROJECTION
270
260



RAISED BEDROOM PLANS

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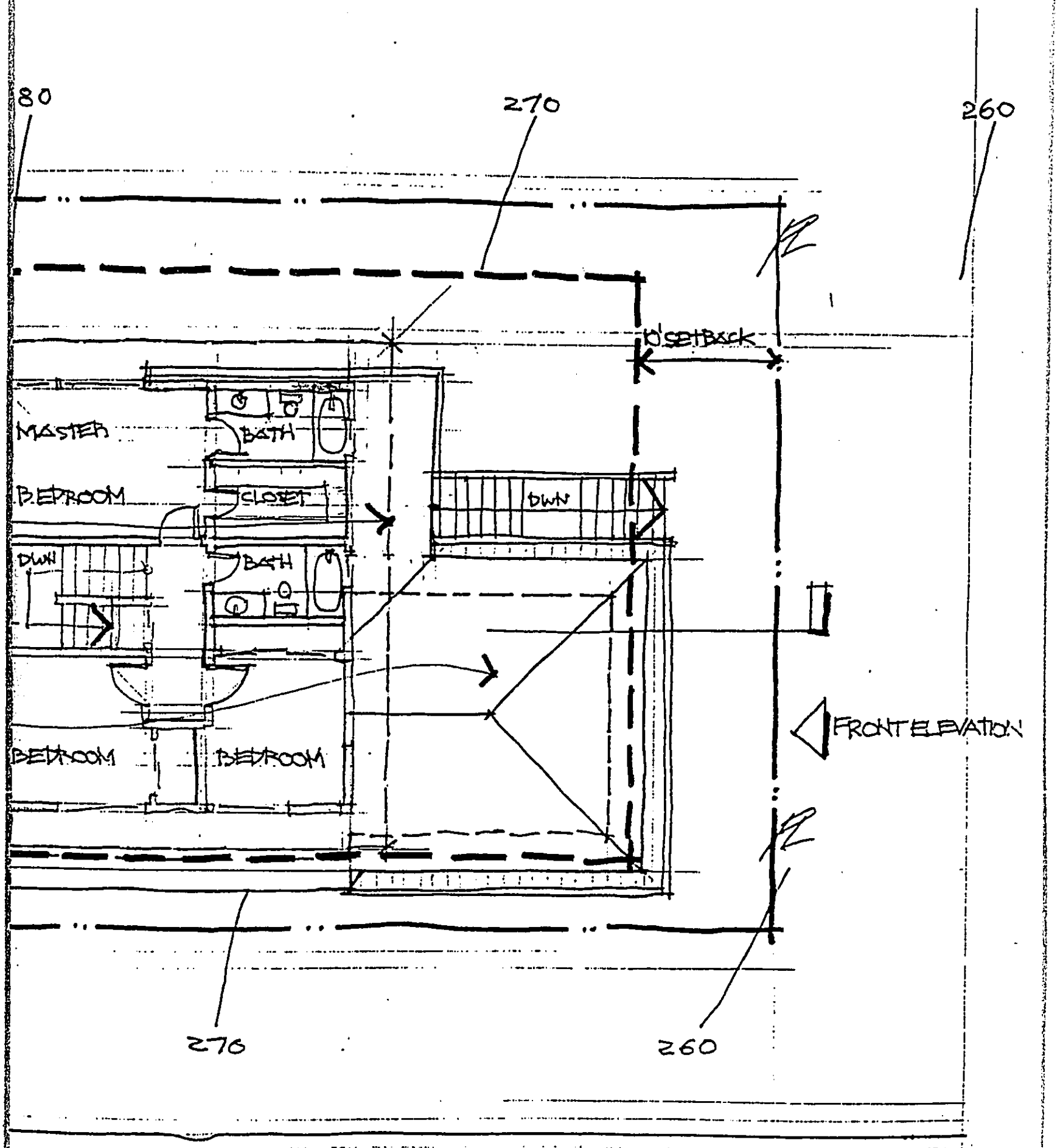
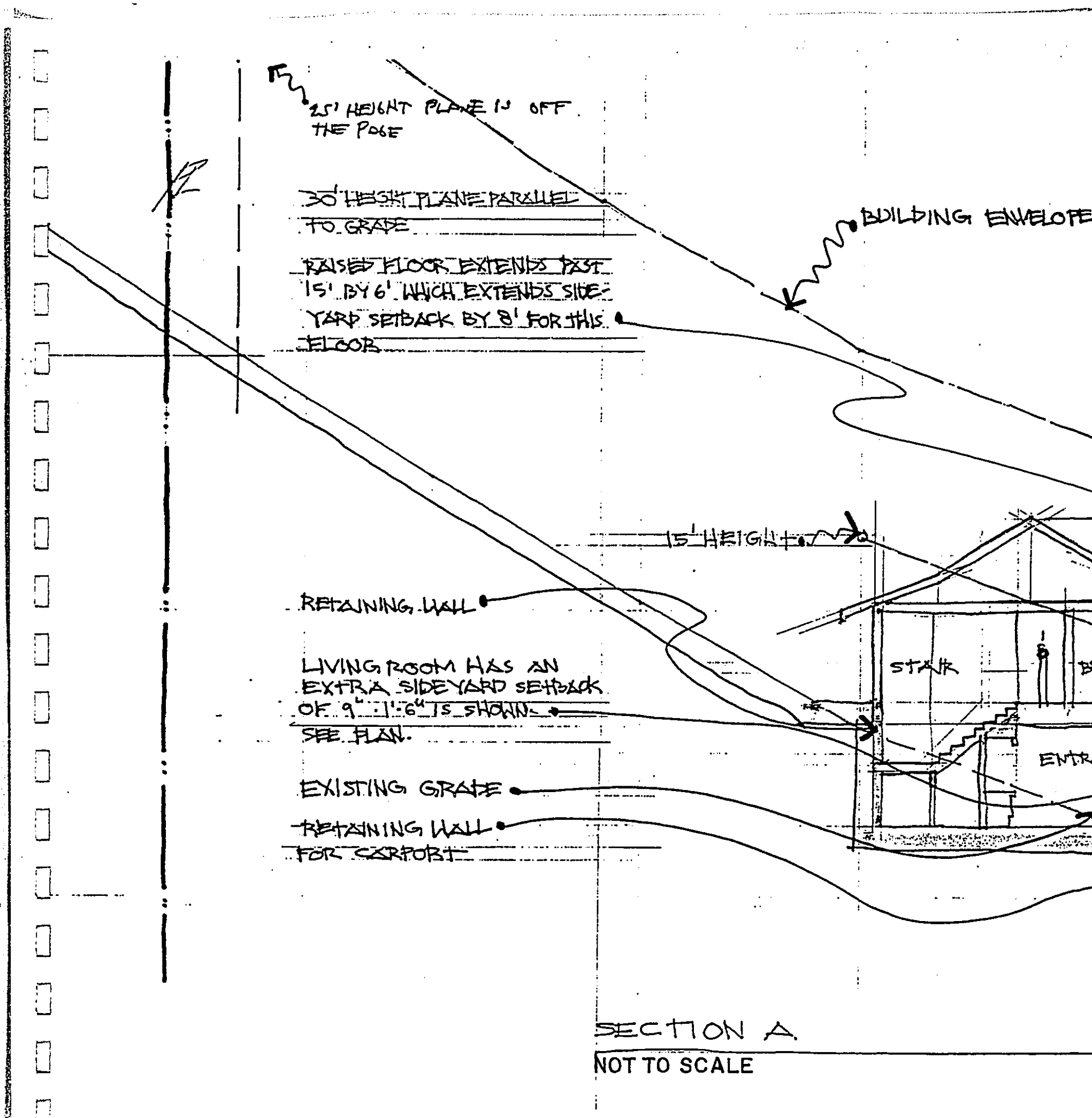
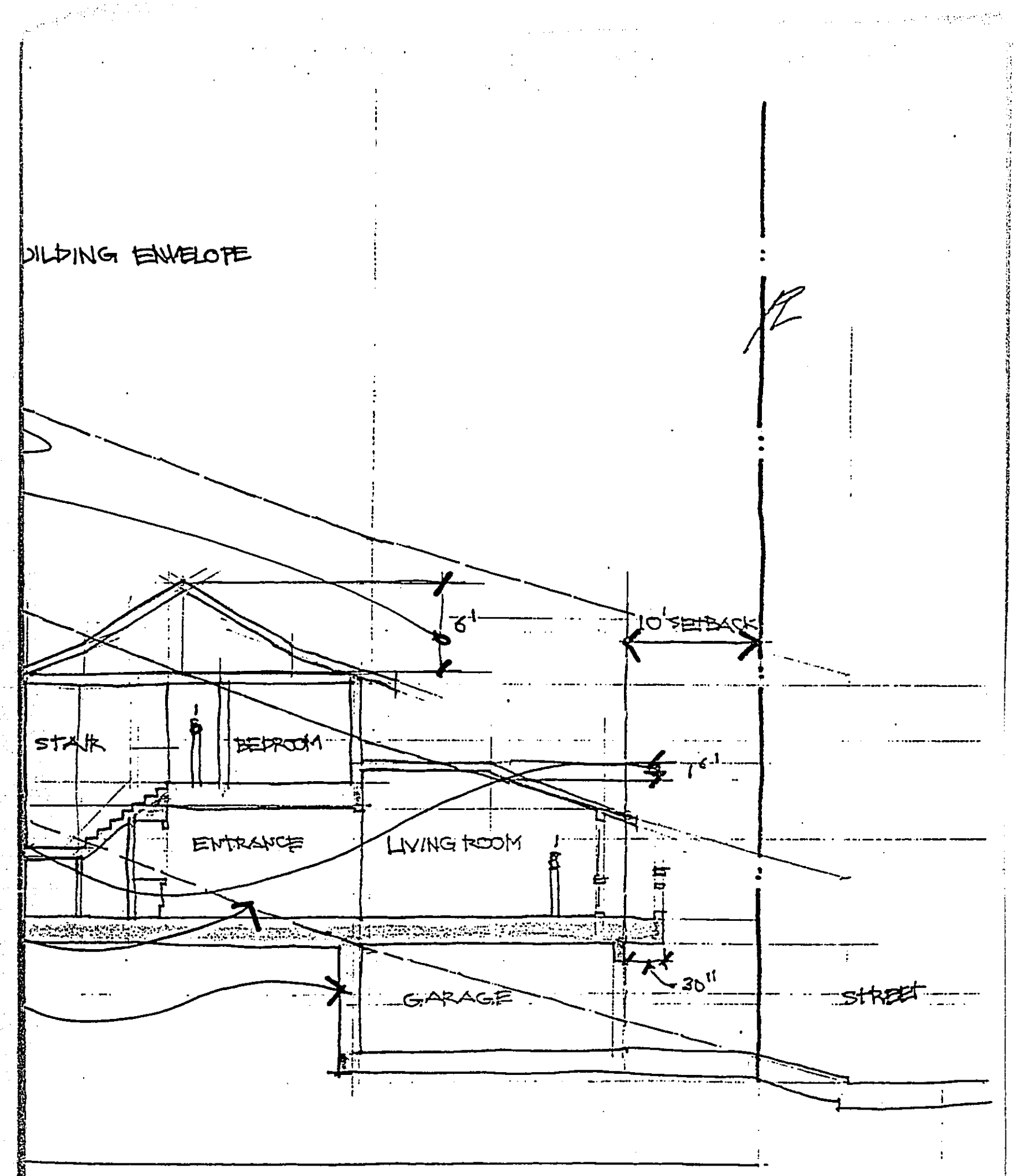
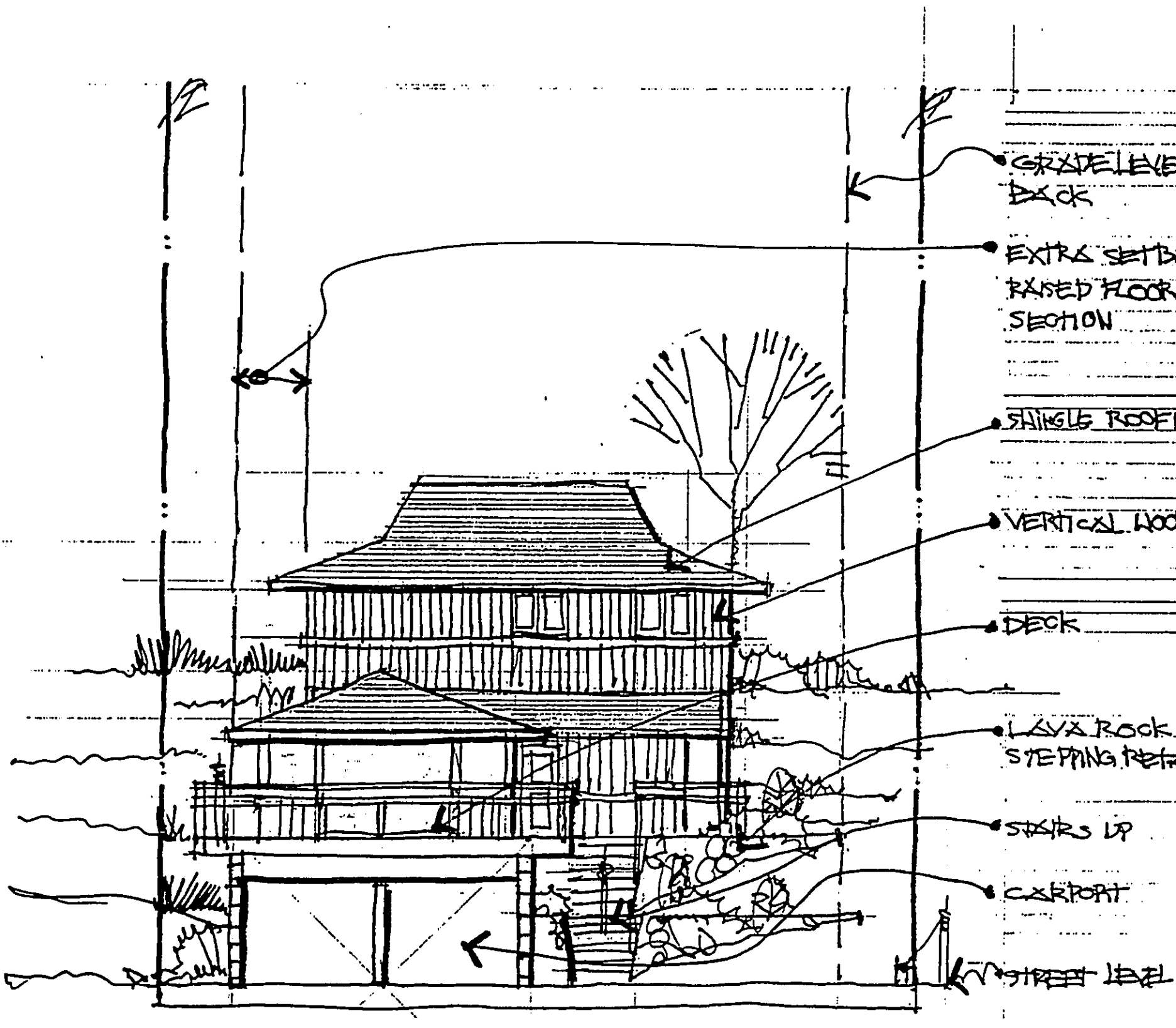

80
270
260
10' SETBACK
MASTER
BATH
BEDROOM
CLOSET
DWN
DWN
BATH
BEDROOM
BEDROOM
FRONT ELEVATION
270
260



SECTION A.

NOT TO SCALE


DILDING ENVELOPE
6'
10' SETBACK
STAIR
BEDROOM
6'
ENTRANCE
LIVING ROOM
30"
GARAGE
STREET



FRONT ELEVATION

NOT TO SCALE

GRADE LEVEL SET-BACK

EXTRA SETBACK FOR RAISED FLOOR SEE SECTION

SHINGLE ROOFING

VERTICAL WOOD SIDING

DECK

LAVA ROCK VENEER STEPPING RETAINING WALL

STAIRS UP

CARPORT

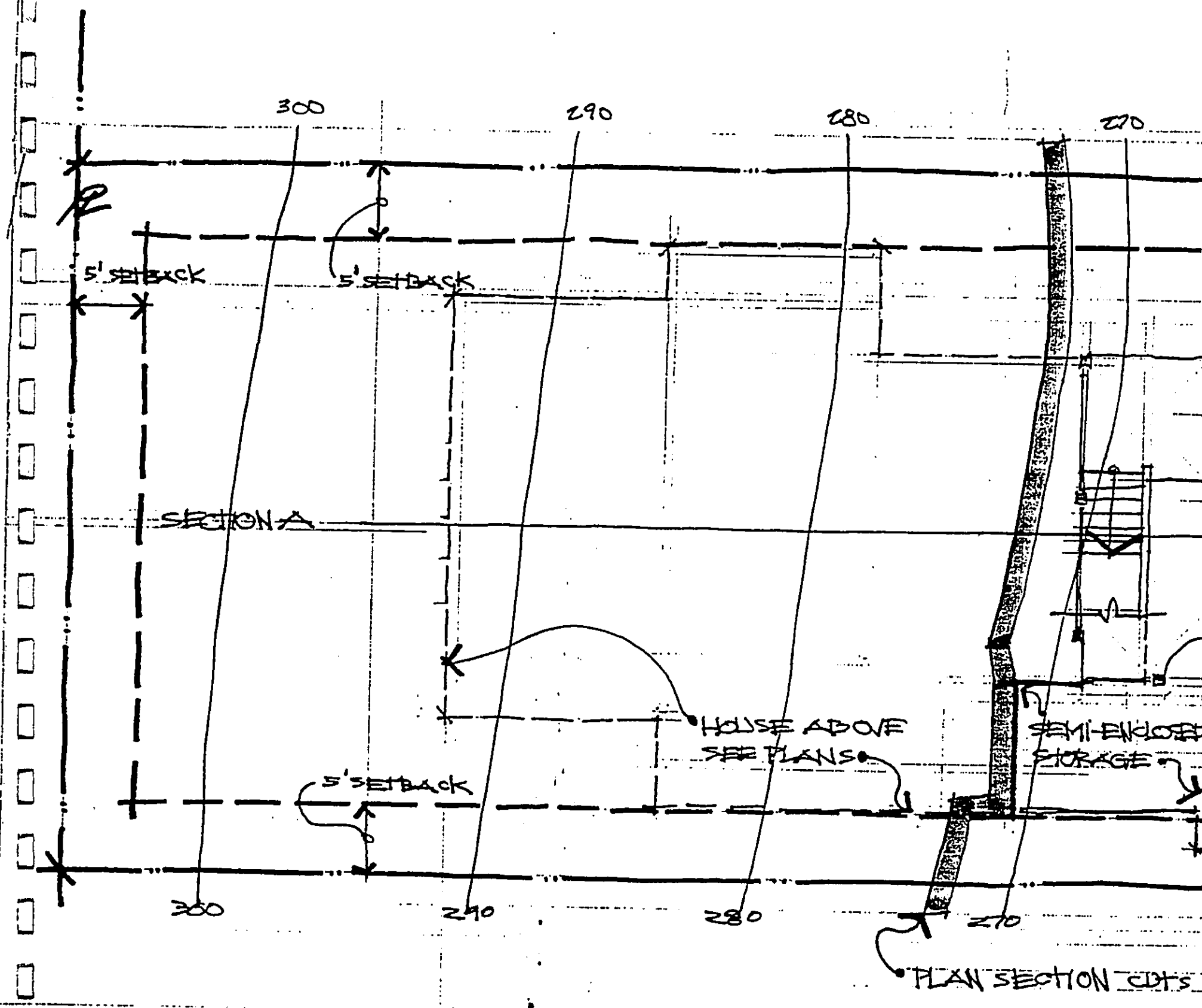
STREET LEVEL

TYPICAL HOUSE PLAN FOR LUINAKOA STREET E

TOTAL AREA OF HOUSE 1800 SQUARE FEET PLUS CARPORT

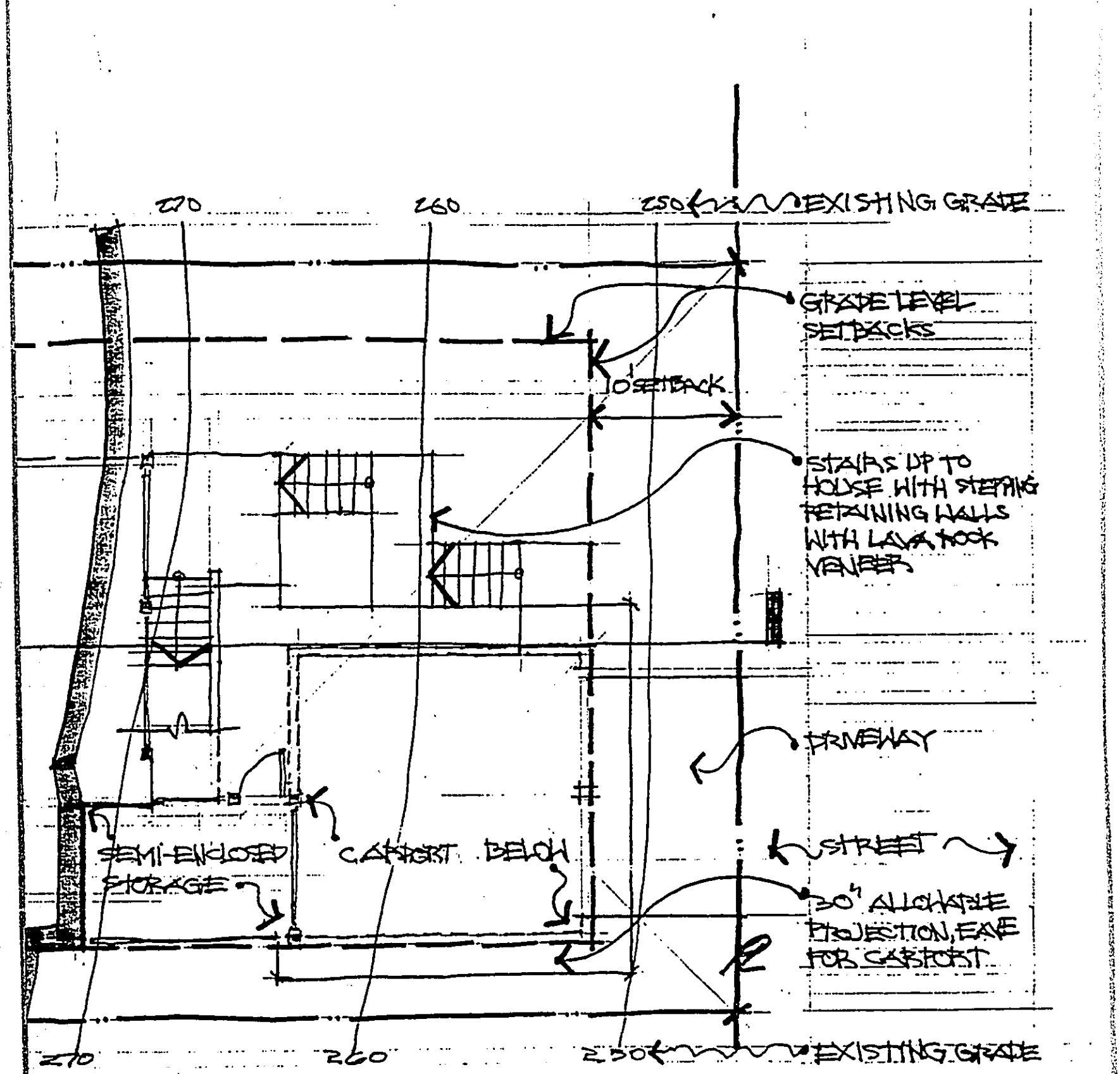
STREET EXTENSION

HAS CARPORT OF 400 SQUARE FEET

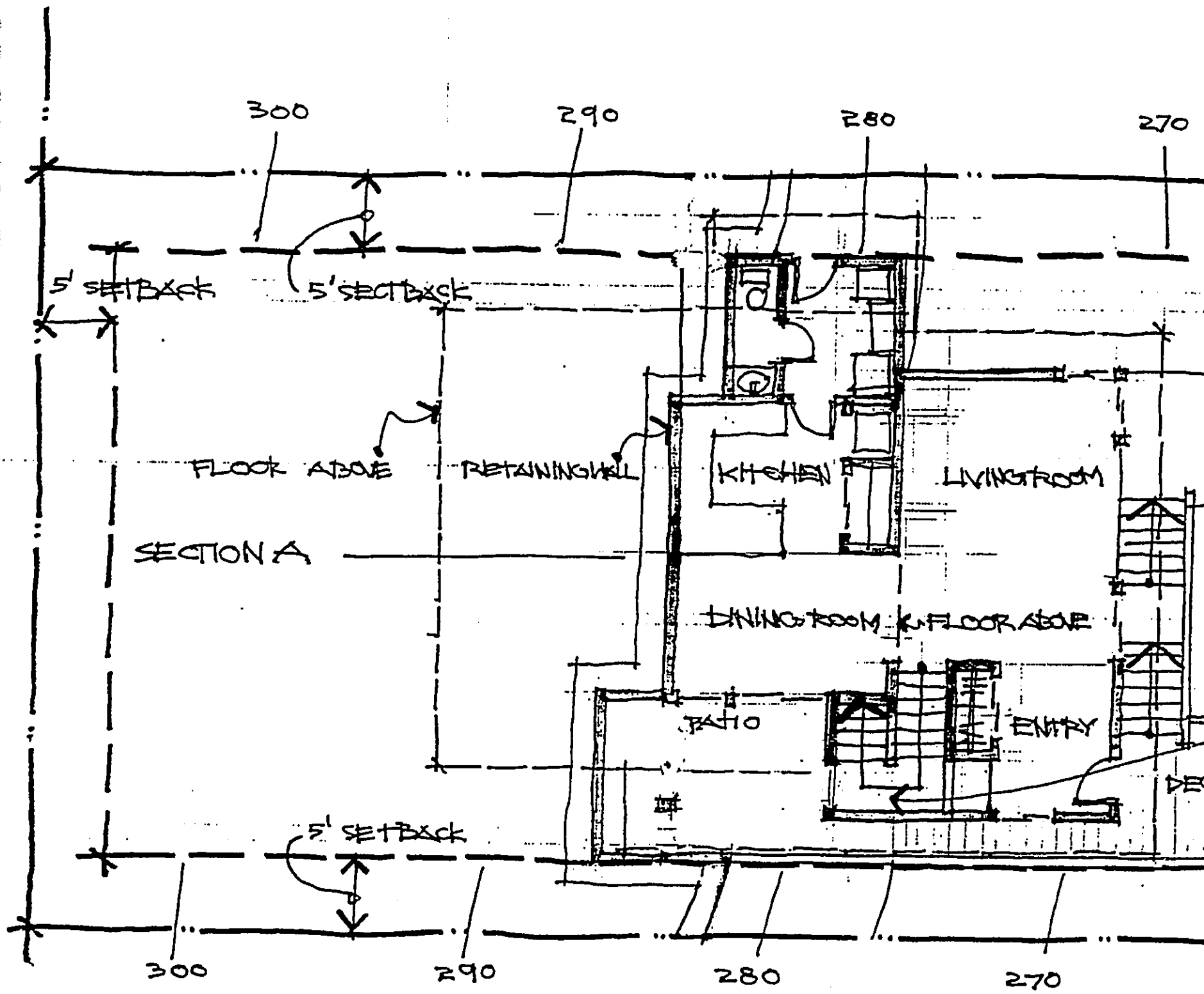


HOUSE ENTRY WALK PLAN.

NOT TO SCALE

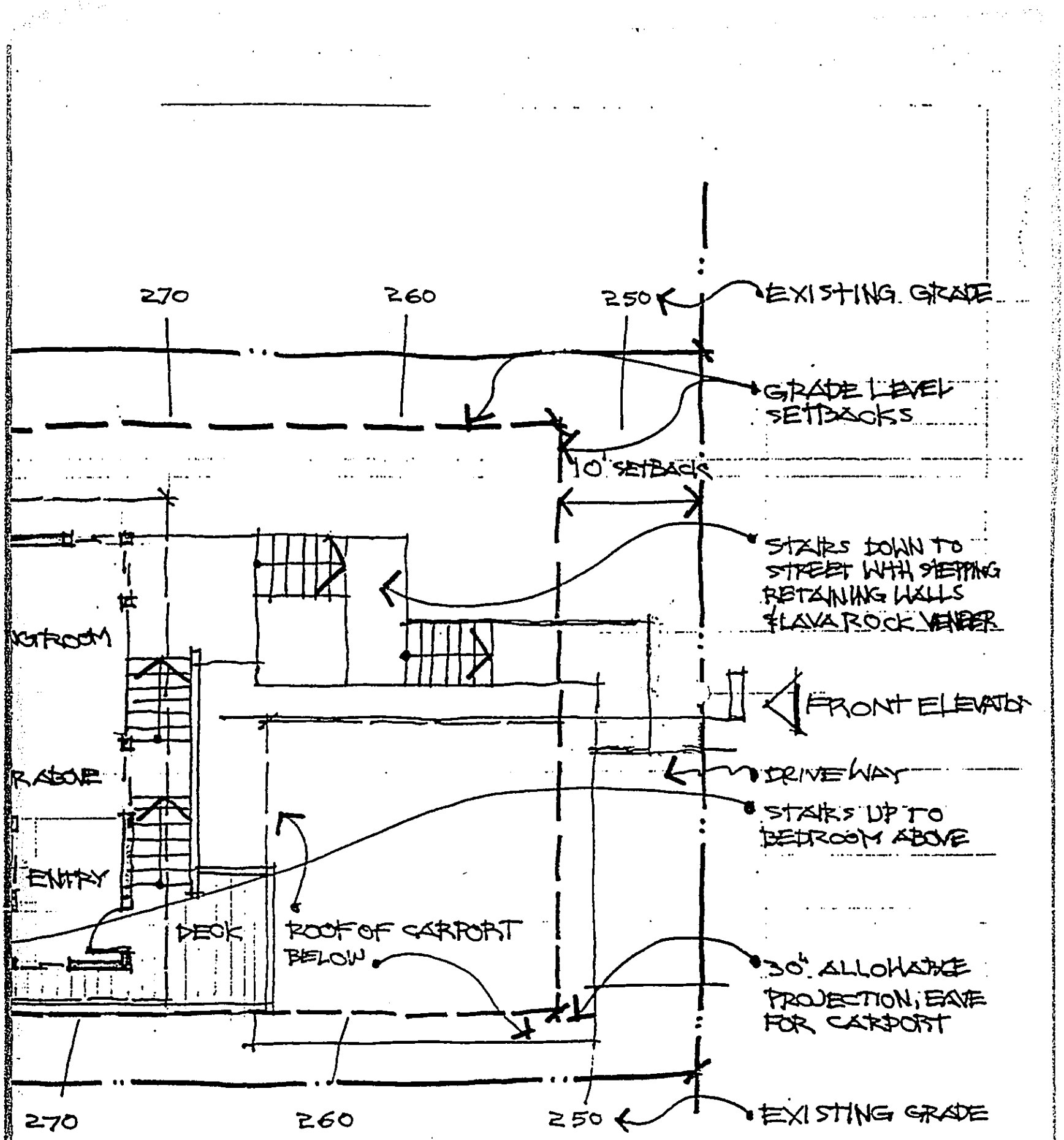


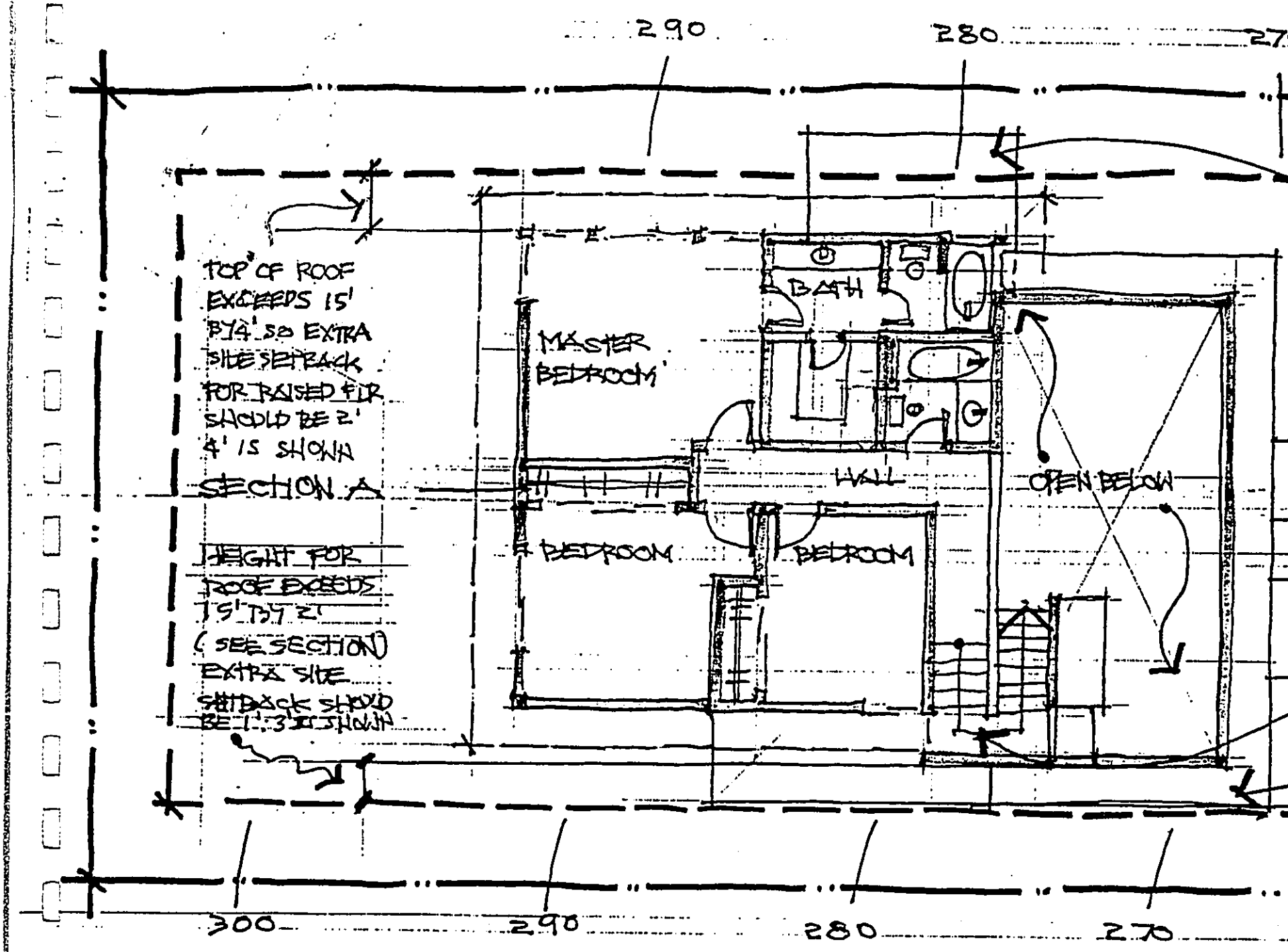
SW SECTION CUTS INTO HILL HERE



HOUSE PLAN MAIN FLOOR

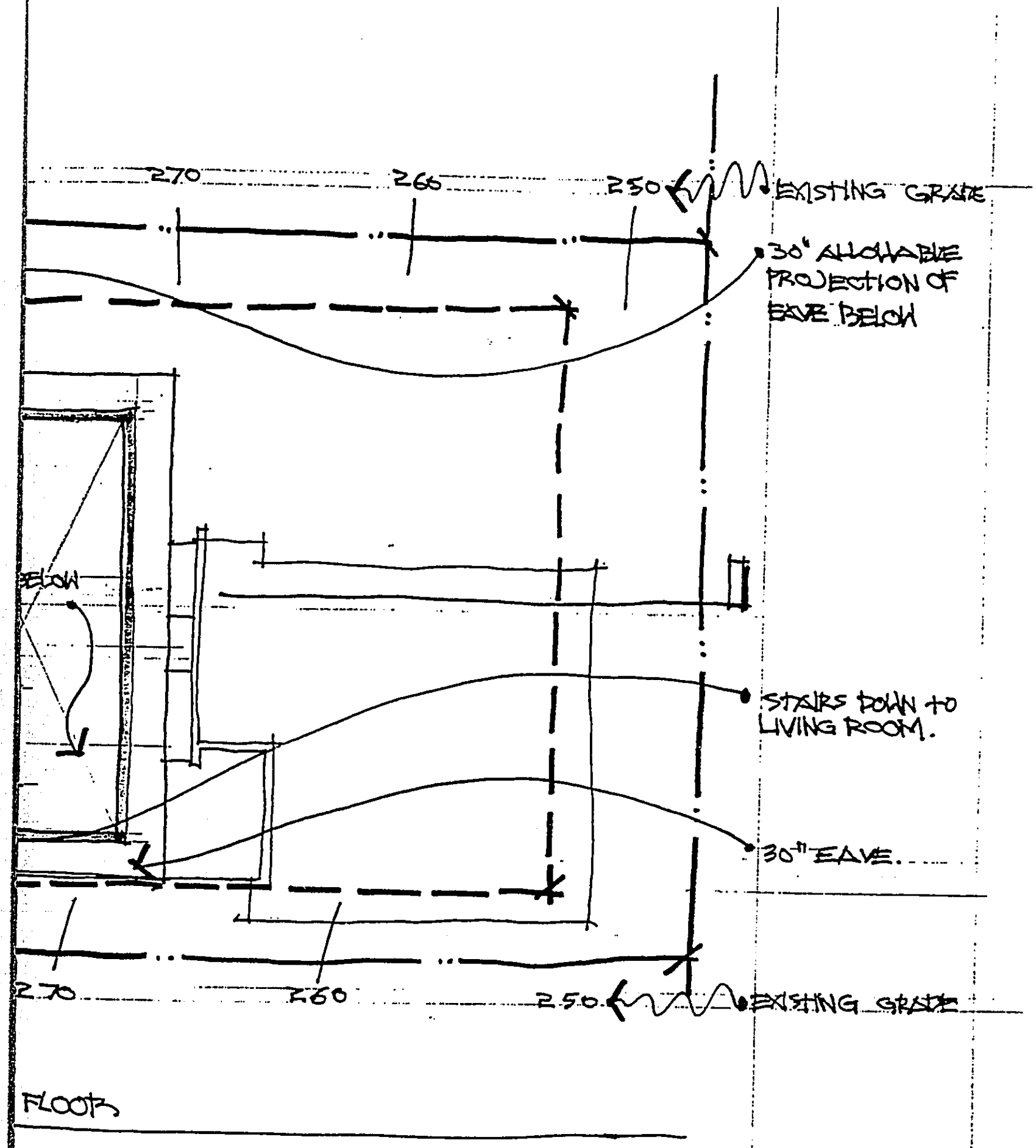
NOT TO SCALE

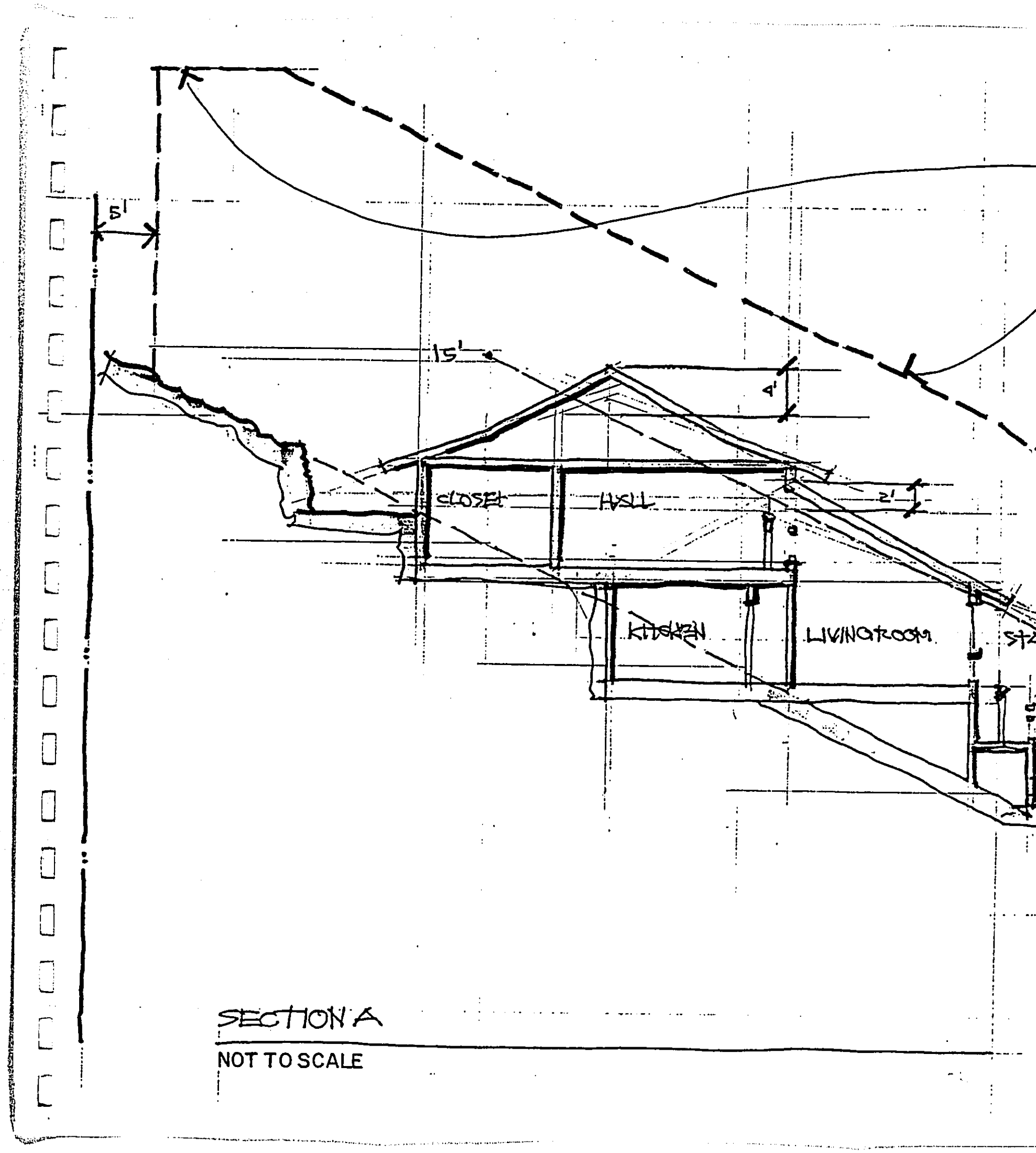

270
260
250
EXISTING GRADE
GRADE LEVEL SETBACKS
10' SETBACK
STAIRS DOWN TO STREET WITH STEPPING RETAINING WALLS & LAVA ROCK VENEER
NGROOM
FRONT ELEVATION
DRIVEWAY
R ABOVE
STAIRS UP TO BEDROOM ABOVE
ENTRY
DECK
ROOF OF CARPORT BELOW
30" ALLOWABLE PROJECTION; EAVE FOR CARPORT
270
260
250
EXISTING GRADE



HOUSE PLAN · RAISED BEDROOM FLOOR

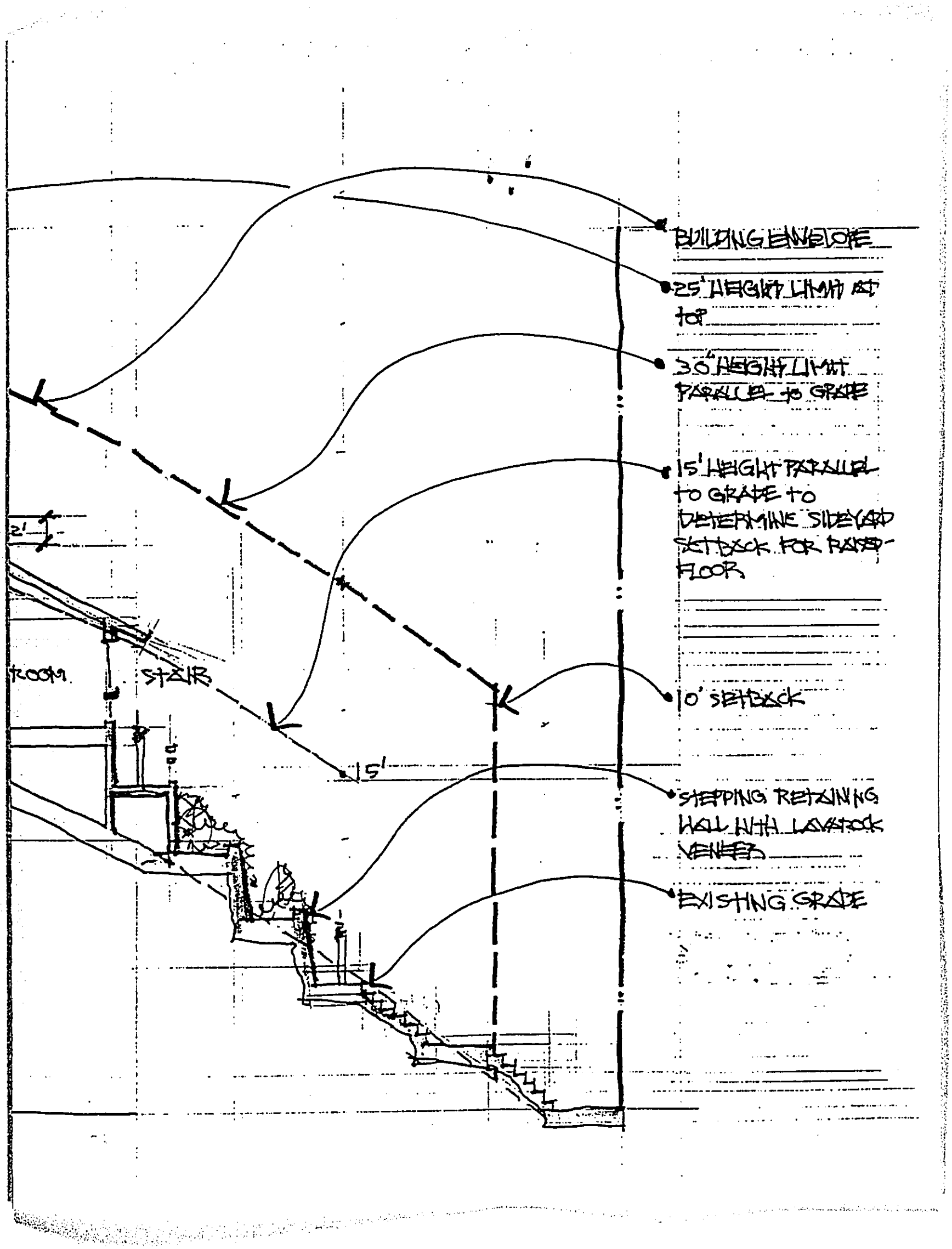
NOT TO SCALE

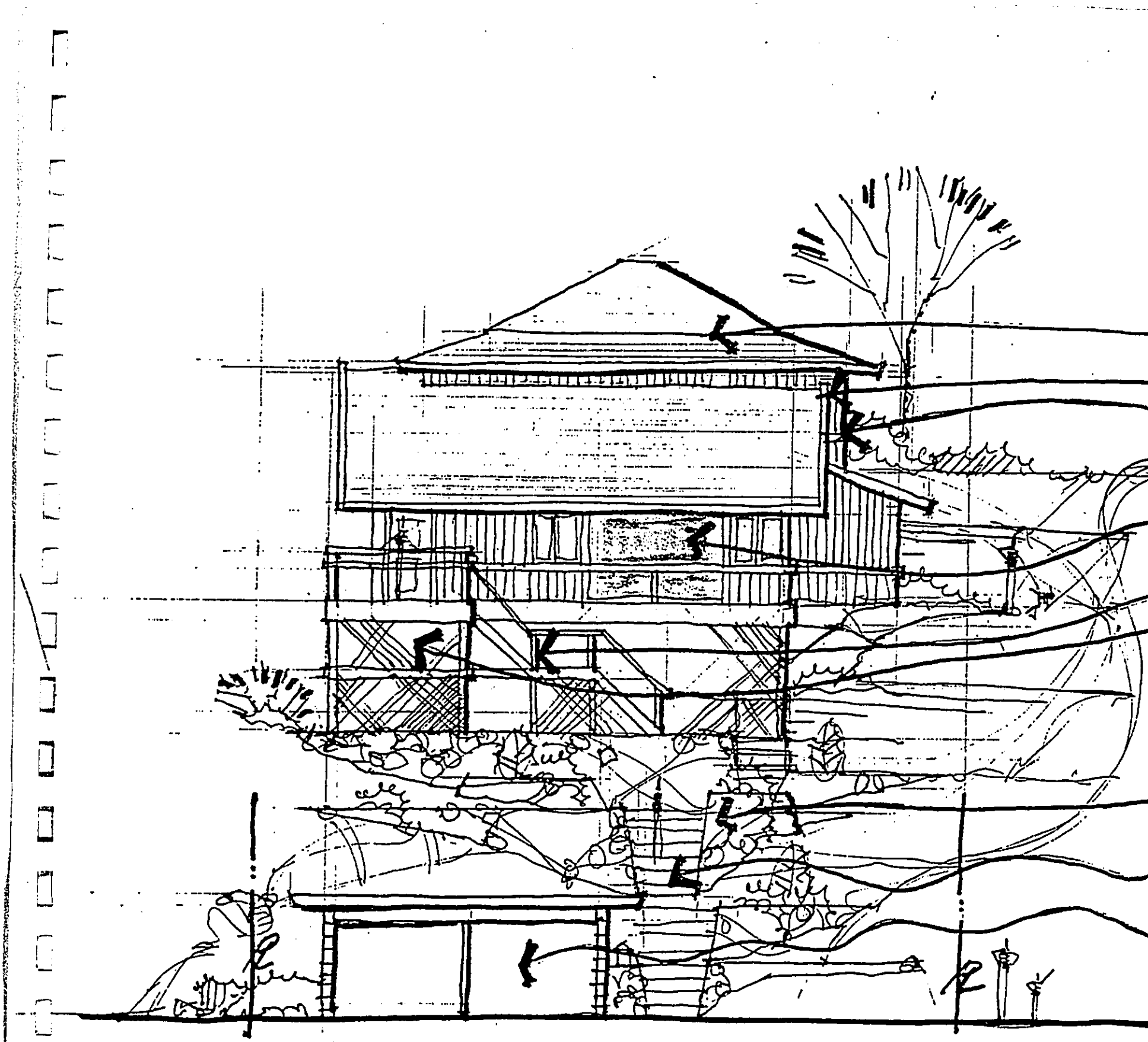

270
260
250
EXISTING GRADE
30" ALLOWABLE PROJECTION OF EAVE BELOW
BELOW
STAIRS DOWN TO LIVING ROOM.
30" EAVE.
270
260
250
EXISTING GRADE
FLOOR



SECTION A

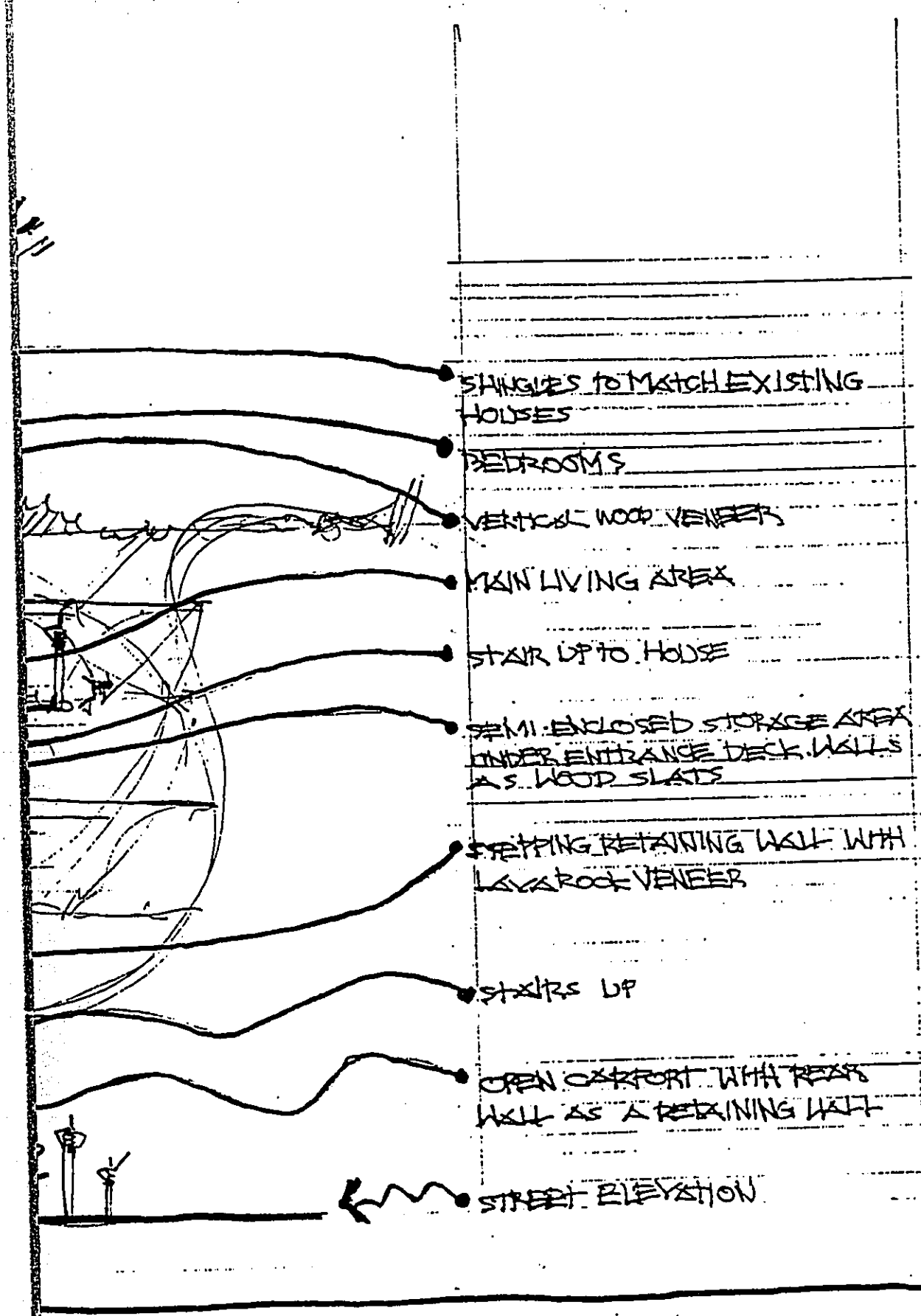
NOT TO SCALE


BUILDING ENVELOPE
25' HEIGHT LIMIT AT TOP
30' HEIGHT LIMIT PARALLEL TO GRADE
15' HEIGHT PARALLEL TO GRADE TO DETERMINE SIDEYARD SETBACK FOR PARTIAL FLOOR
0' SETBACK
STEPPING RETAINING WALL WITH LAVASTONE VENEER
EXISTING GRADE
2'
ROOM
STAIR
15'



FRONT ELEVATION

NOT TO SCALE


SHINGLES TO MATCH EXISTING HOUSES
BEDROOMS
VERTICAL WOOD VENEER
MAIN LIVING AREA
STAIR UP TO HOUSE
SEMI ENCLOSED STORAGE AREA UNDER ENTRANCE DECK. WALLS AS WOOD SLATS
STEPPING RETAINING WALL WITH LAVA ROCK VENEER
STAIRS UP
OPEN CARPORT WITH REAR WALL AS A RETAINING WALL
STREET ELEVATION

END

CERTIFICATION

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

2006
DATE

Cathyrina Miyashiro
SIGNATURE OF OPERATOR