

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



RECEIVED

BENJAMIN B. LEE  
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.  
DEPUTY CHIEF PLANNING OFFICER

'91 APR -2 P12:25

VW 1/91-281

OFC. OF ENVIRON.  
QUALITY CONTROL

February 20, 1991

Honorable Bruce Anderson, Acting Director  
Office of Environmental Quality Control  
State of Hawaii  
Central Pacific Plaza  
220 South King Street, 4th Floor  
Honolulu, Hawaii 96813

Dear Dr. Anderson:

NEGATIVE DECLARATION

LOCATION

Waiialae-Kahala, Oahu  
Tax Map Key: 3-3-12: por. 29

PROPOSED ACTION

To redesignate 39,223 sq. ft.  
from Residential Commercial on  
the Primary Urban Center  
Development Plan Land Use Map

CONTACT

Hale Kulana Corp.  
1123 11th Avenue, Suite 102  
Honolulu, Hawaii 96816

REASONS SUPPORTING DETERMINATION

The anticipated effects of the proposed action based on the attached assessment are not significant enough under the criteria of Section 11-200-12 of the EIS Rules to warrant the preparation of an EIS.

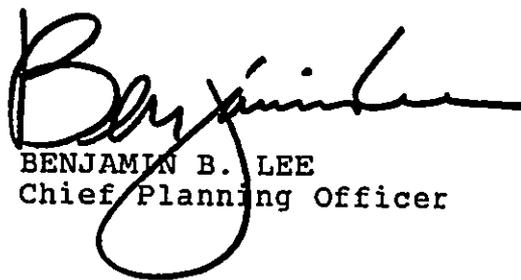
This determination does not constitute approval of the applicant's request for a Development Plan amendment or subsequent development approvals.

37

Honorable Bruce Anderson, Acting Director  
Office of Environmental Quality Control  
February 20, 1991  
Page 2

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

Sincerely,



BENJAMIN B. LEE  
Chief Planning Officer

BBL:js

cc: Hale Kulana Corp.

Attachments

1991-04-23-0A-FEA

3/91-893 A

RECEIVED

'91 MAR 18 PM 4:10

DEPARTMENT  
GENERAL PLANNING  
C & C HONOLULU

**Application for Development Plan Amendment  
and  
Environmental Assessment**

**\* Nohona Kahala Commercial Site \***

TMK: 3-3-12: Portion of 29

Pending as:

Lot 59 of Nohona Kahala Subdivision File Plan Map

Nohona Kahala Commercial Re-zoning application cover letter

3/91-894

Mr. Ben Lee  
Director of Planning  
City and County of Honolulu  
Honolulu, Hawaii

Mr. Lee;

We have from the inception of this project advocated the re-zoning of this subject parcel from R-5 to B-2. This plan has been made known to both the neighborhood, and buyers in the new Nohona Kahala subdivision.

Planned for this site is a six story 100,000 gross square foot commercial building with two levels of underground parking. This building is part of a master-plan for the site and has been designed from the projects beginning to be a key feature in off-setting some of the dis-advantages this site posses for the new residences being constructed. The use of this site as a commercial site is consistent with use of neighboring parcels adjoining Waialae Avenue and is only prevented from being contiguous to adjacent B-2 by the intersecting Ocean View Cemetery. This parcel has been sub-divided into a separate parcel in preparation for re-zoning and has an adequate existing entry directly onto Waialae Avenue at the 21st Avenue intersection.

We advocate this Zoning Change for the following reasons:

1. Development of this parcel as a residential site is possible but would be unfortunate.
  - a. The noise level from traffic in the Waialae Avenue/ 21st Avenue intersection is directed at this parcel by the compressing effect of the concrete over-pass at this intersection.
  - b. The southern situated concrete over-pass would shadow the residences built on the site.
  - c. The site is in a depression with the grade being ten feet below and down wind of higher residential lots and structures which would block the prevailing trade winds.

Please refer to the accompanying photographs and site map.

2. The re-zoning of this parcel to B-2 would not be a detriment to the community.
  - a. Traffic impact is the major and only concern we have heard regarding rezoning of this parcel to a commercial site. The enclosed traffic study verifies that with intersection improvements the level of service in this intersection would not deteriorate with full commercial use of this site.

Please refer to the accompanying traffic assessment study by Wilbur Smith and Associates.

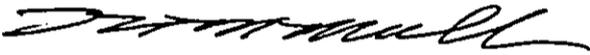
- b. The commercial building has been designed to allow penetration of sun-light to the newly constructed residences at Nohona Kahala.
- c. The commercial building has been designed to serve as a landscaping base for continuing the landscaping themes of the Residential Cluster Subdivision thereby providing visual relief from the concrete over-pass.

Please refer to the accompanying Architectural concept drawing by Kajioaka Okada Partners Inc. Architects.

Nohona Kahala Commercial Re-zoning application cover letter

3. The re-zoning of this parcel to B-2 would be an asset to the community.
  - a. The needed intersection improvements would be provided for the City by the Developer at no cost to the City.
  - b. These improvements would improve the level of service for traffic flow in this intersection during periods when this office building is not in full use.
  - c. The proposed commercial building would screen the new residences from traffic noise in the subject intersection.

At your service;



Leonard H. McMullin  
Pres. Hale Kulana Inc.  
General Partner of  
Waialae Kahala Partners

**Application for Development Plan Amendment  
and  
Environmental Assessment**

**Nohona Kahala Commercial Site**

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Nohona Kahala Commercial Site

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BACKGROUND  
INFORMATION

1. C

2. Q

3. C

Essential Information:

**Applicant:** Hale Kulana Corporation  
1123 11th avenue  
Suite 102  
Honolulu, Hawaii 96816  
Phone: 734-2231

**Landowner:** Waialae Kahala Partners  
1123 11th avenue  
Suite 102  
Honolulu, Hawaii 96816  
Phone: 734-2231

**Request:** To amend the master development plan to allow commercial development of this parcel, changing the zoning from R-5 to B-2.

**Area:** 39,223 square feet

**Location:** This parcel is a portion of the Old Waialae Drive-In site. It is Mauka of Waialae Avenue at the 21st Avenue intersection. This parcel is bound on the Kokohead side by Ocean View Cemetery, on the Makai side by Waialae Avenue, and by new residential development on the Ewa and Mauka sides of this parcel. It was the site of the old movie screen when the Drive-in Theater was operational.

**TMK:** Currently: 3-3-12: a portion of 29  
Pending as: Lot 59 of Nohona Kahala Subdivision File Plan Map

Refer to page 3a following for TMK map.

**Existing Use:**

The site was an abandoned Drive-In Theater which had subsequently been used as a flea market and as a golf driving range. It is currently zoned R-5. The surrounding higher property, being farther from the Waialae Avenue / 21st Avenue intersection is currently being developed as 55 single family homes.

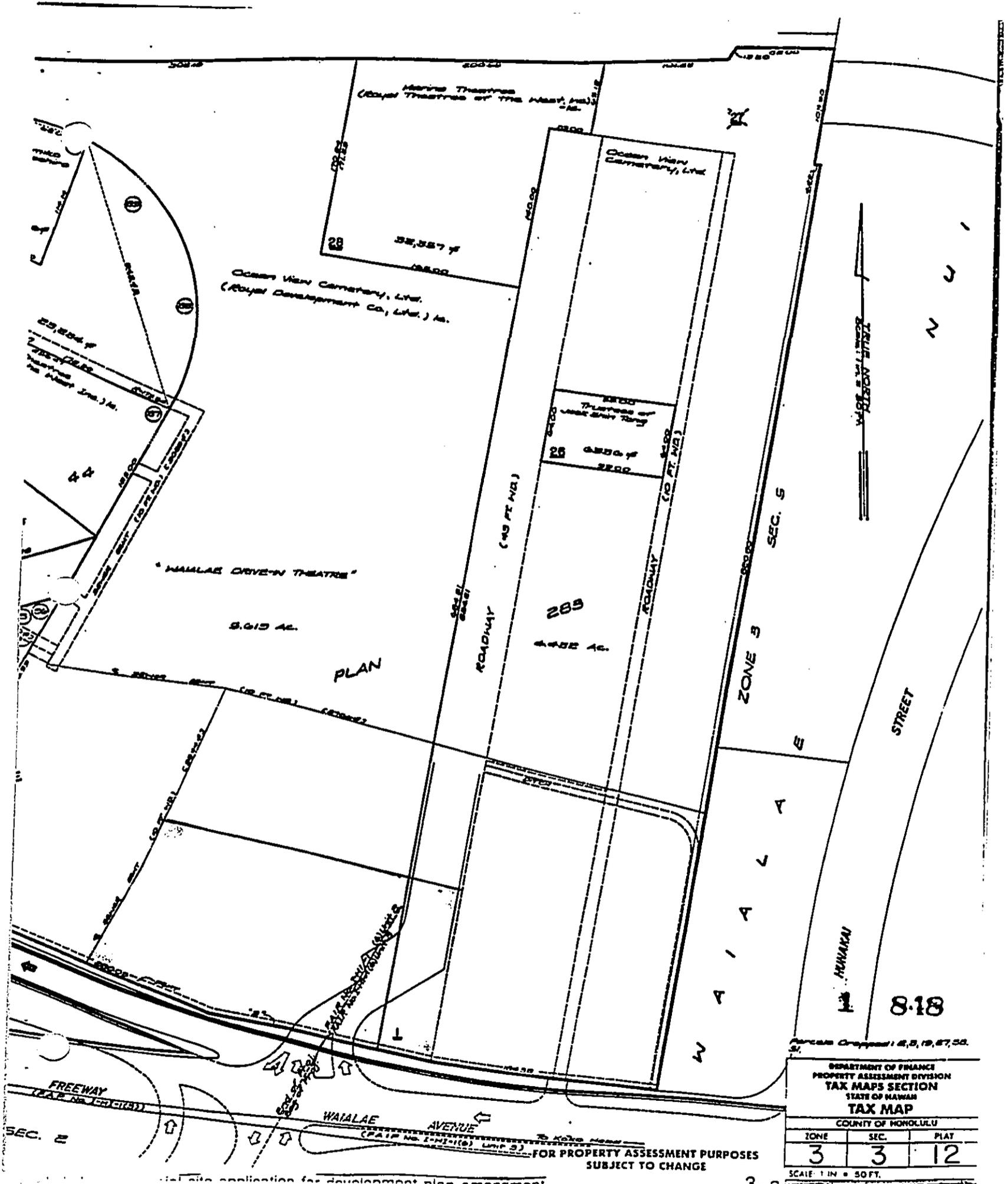
**State Land Use:**

Urban

**Development Plan Designation:**

- a. Land Use Map: Residential
- b. Public Facilities Map: No indication of impeding ROW's or utilities.

**Zoning:** R-5 & P-2



Description of the Property:

Property Boundary:

Please refer to Exhibit "A" boundary description by R.M.Towill Engineering, pages A-1 & A-2, and Exhibit "B" a reproduction from the pending file map for the Nohona Kahala Subdivision lot 59.

Refer to page 4a for picture views of Mauka and Ewa boundaries  
Refer to page 4b for picture views of Makai and Kokohead boundaries.

Topography:

This parcel is relatively flat with level boundaries against Waialae Avenue on the Makai side, and Ocean View Cemetery on the Koko-Head Side. The existing grade for this site is 50 - 52 feet elevation and. The Mauka and Ewa sides of this parcel are bounded by grades approximately 10 feet in elevation higher than this parcel. The most significant physical feature is the close proximity of the concrete over-pass 35' above this parcel on its Makai boundary.

Refer to page 4c for picture view of entire site from Ewa Mauka corner.

Slope: The parcel slopes from its Mauka Ewa corner to its Makai/Koko-Head corner at approximately 1% slope. Please refer to enclosed topographical map, Exhibit "C".

Soils: Soils on this site are partly clay and boulder fills and partly lava rock formation. Indications from borings B-11 and B-12 are that this site was used as a land-fill prior to the Drive-Ins construction. The rock formations necessary for adequate commercial building foundations are compatible at depth with the required two levels of under-ground parking.

Please refer to Exhibit "C" for boring locations designated "B-11 & "B-12"

Please refer to Exhibit "D", soils report excerpts from Walter Lum & Associates Nohona Kahala Soils Report. The excerpts are specific to the proposed commercial site. A full report can be transmitted upon request.

Location Map:

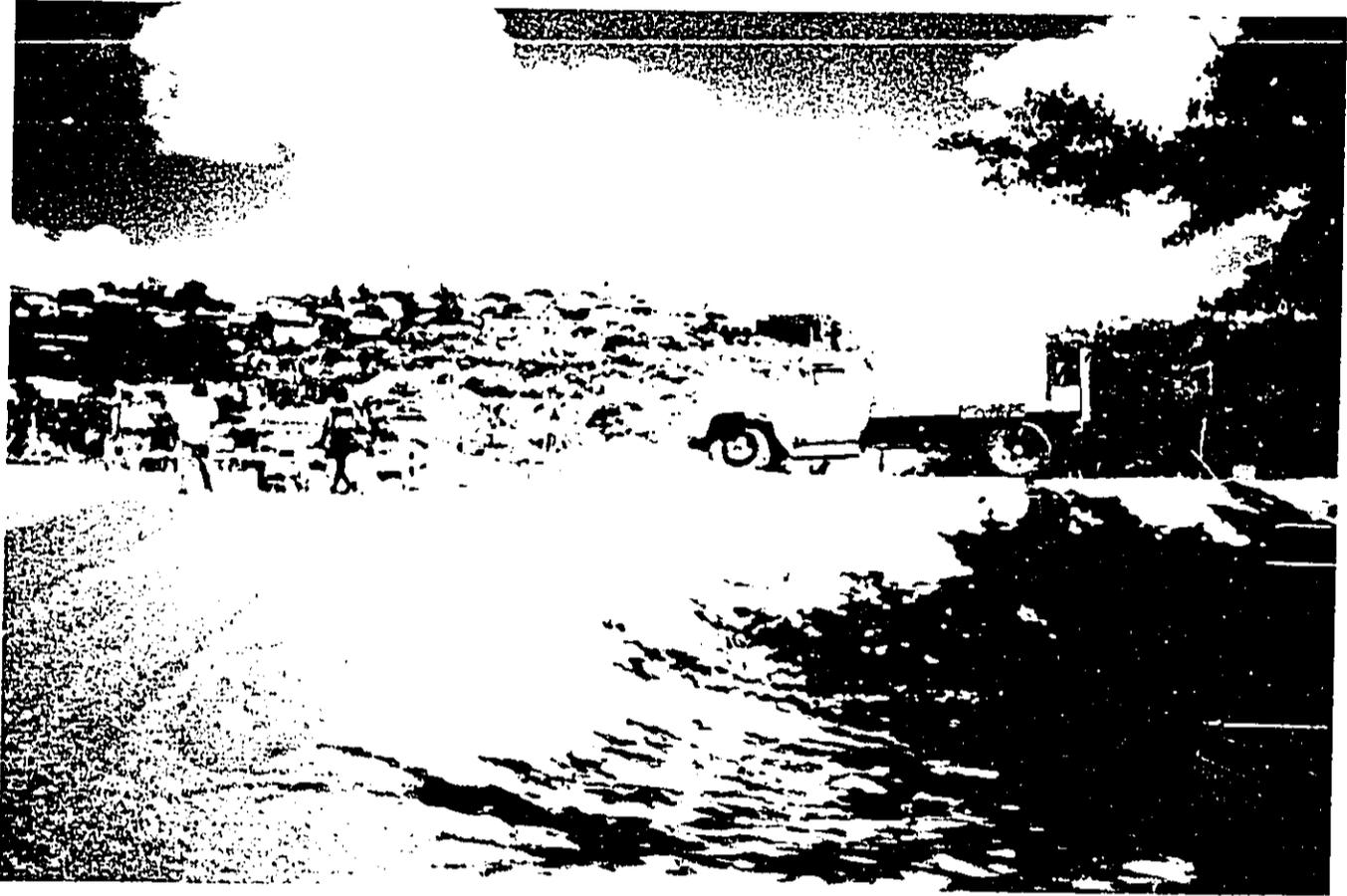
See Pages 5 & 6 Following.

Topo Map: Please refer to Exhibit "C".

Project Layout:

See Page 7 following for ground floor layout.  
See Page 8 following for levels 1&2 under-ground parking lay-out.

DOCUMENT CAPTURED AS RECEIVED



4a

Site entry and makai boundary from inside site (below)



Kokohead boundary view of Ocean View Cemetery from inside parcel (below)





Over-view of site from ewa - muka corner

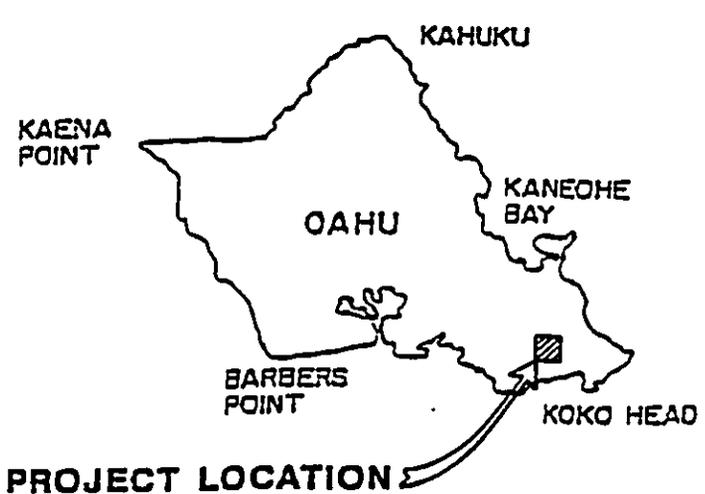
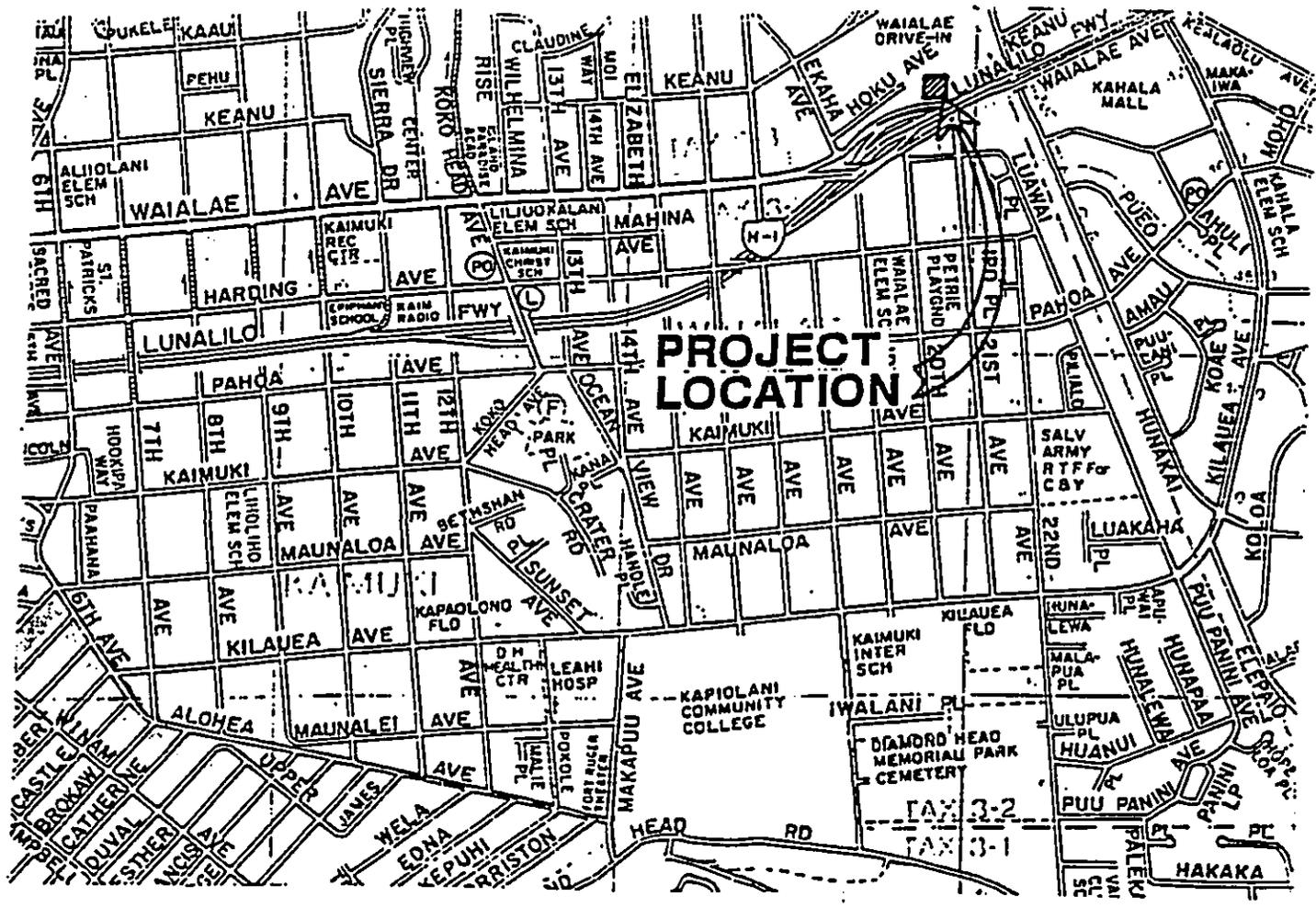


FIGURE NO. 1  
LOCATION MAP

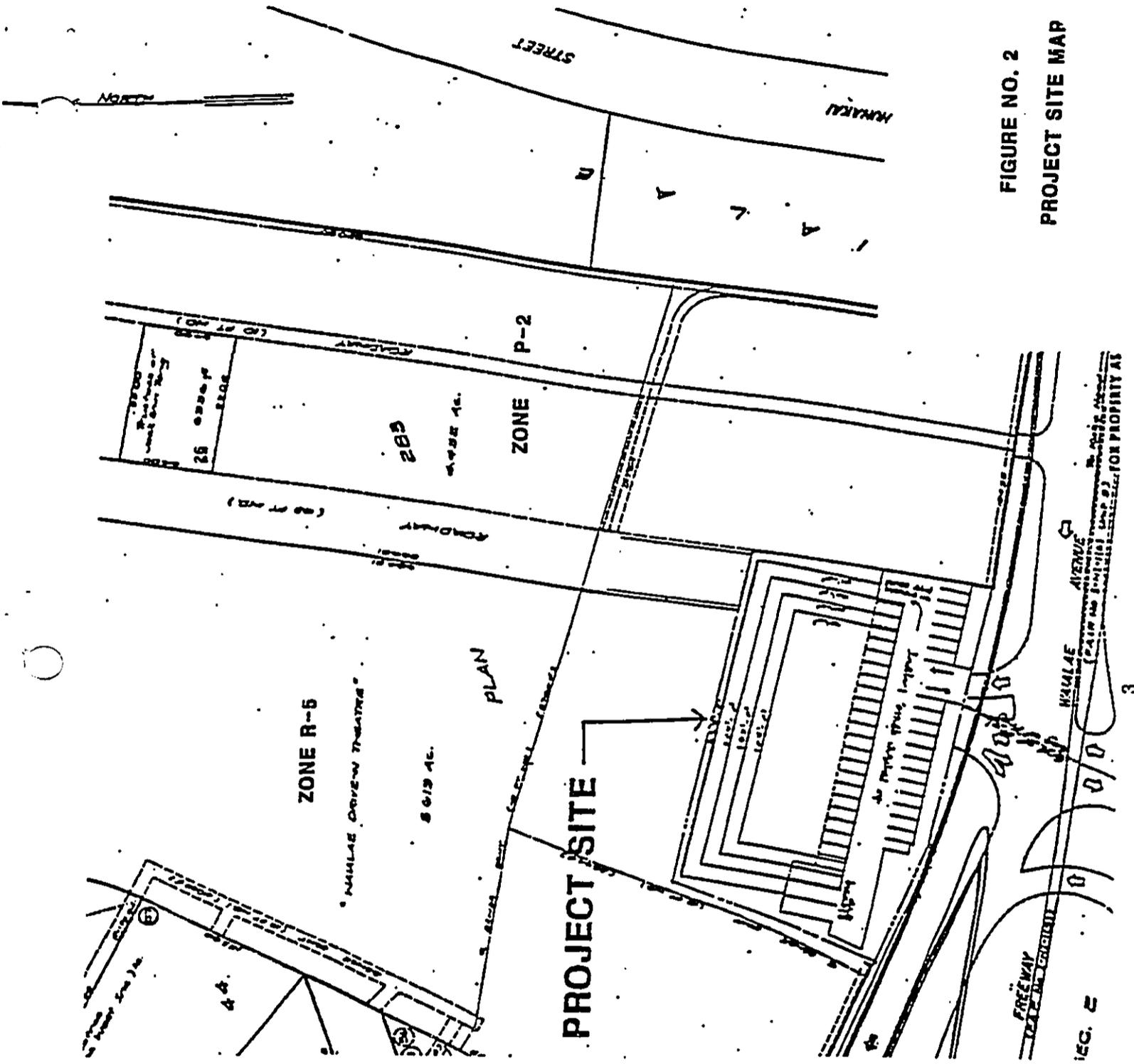


FIGURE NO. 2  
PROJECT SITE MAP

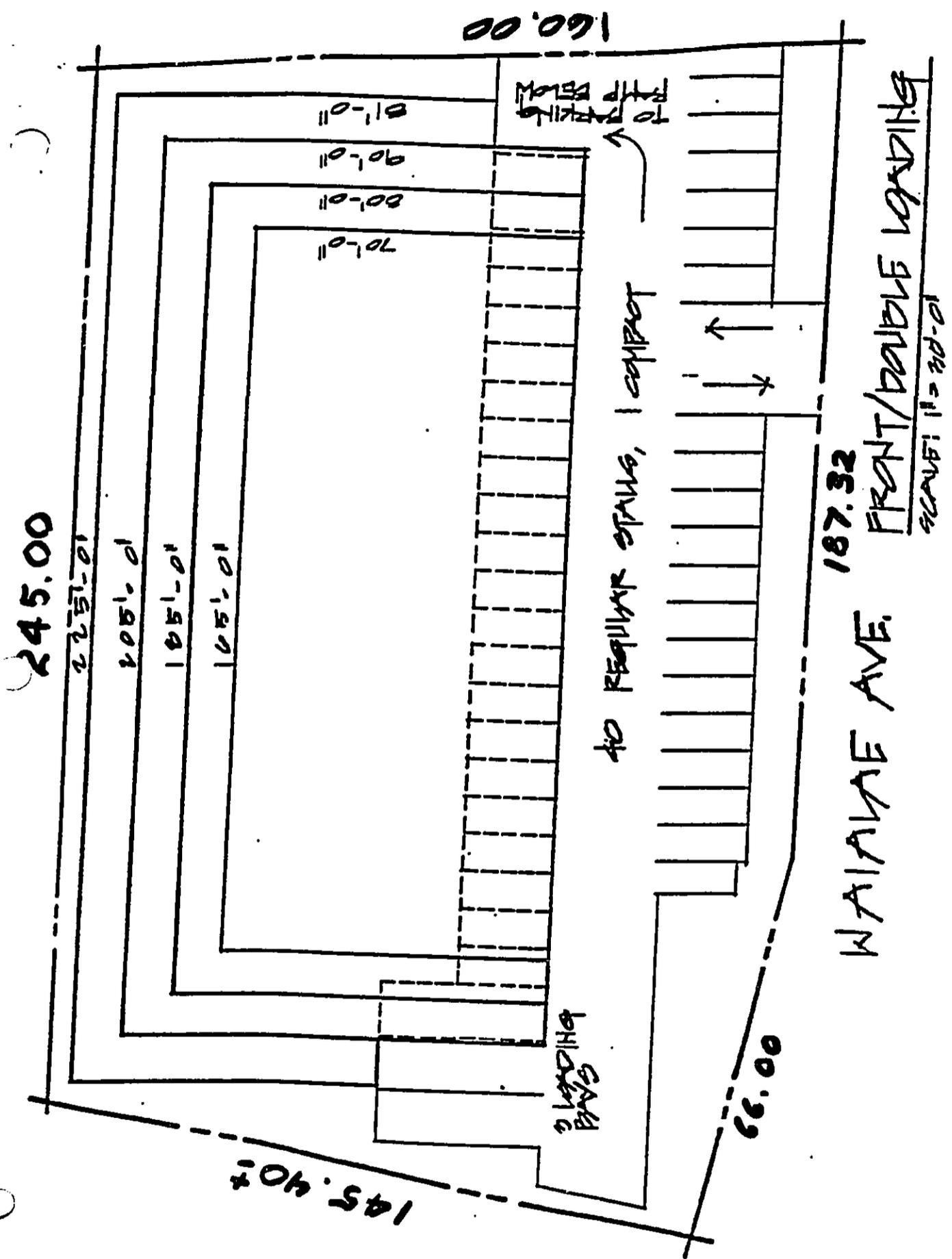
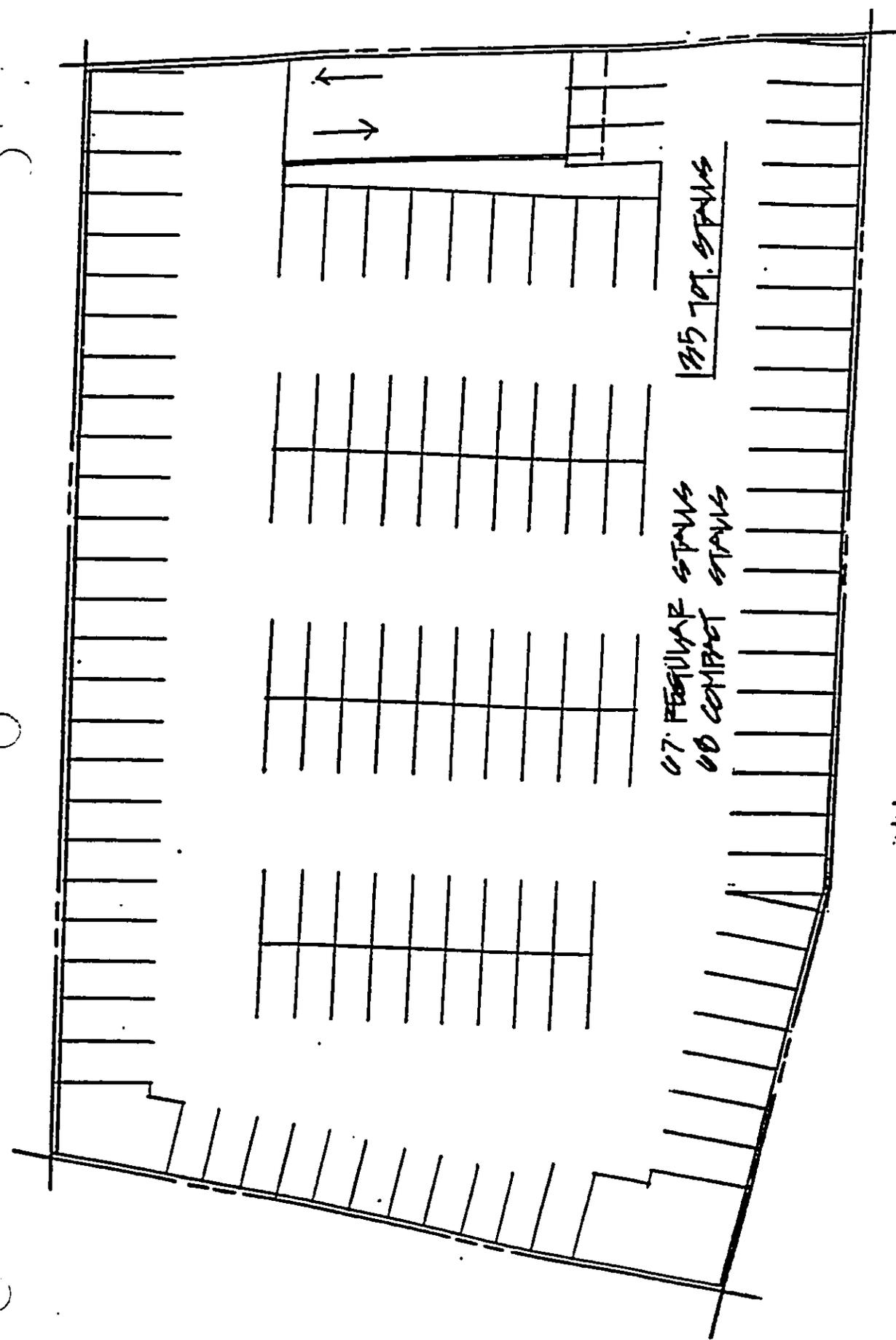


FIGURE NO. 8  
OFF-STREET PARKING  
LAYOUT-GROUND FLOOR

SOURCE: SCHEMATIC PARKING LAYOUT PLAN  
BY KAJIOKA, OKADA & PARTNERS, INC.



UNDERGROUND PARKING SCHEME  
 SCALE: 1" = 30'-0"

FIGURE NO. 9

OFF-STREET PARKING  
 LAYOUT-BASEMENT LEVEL

SOURCE: SCHEMATIC PARKING LAYOUT PLAN  
 BY KAJIOKA, OKADA & PARTNERS, INC.

DEVELOPMENT  
PROPOSAL

1. C

1. 0

0.

### Development Proposal:

#### A. Applicants proposed use of land.

This parcel is to be developed as a 100,000 square foot commercial office building. Use is limited to office and professional lease space. Retail and food establishments are not included in this proposed use.

This building is an integral part of the master-plan for Nohona Kahala. From Projects inception this specific site has been designated for commercial use. It is intended to screen the newly constructed residences from H-1 and Waialae Avenue road noise. It is designed as a landscaped terrace building to replicate and continue the landscaping theme of Nohona Kahala Cluster Subdivision. This terraced landscaping approach is intended to mirror the terraced landscaping of the Makai retaining walls and the terraced appearance of the project itself. The stepped back building terraces are also intended to allow sun-light to penetrate to the newly constructed residences. The residential portion of this development was designed for and successfully marketed to local owner occupant professional families. A pedestrian access walk way has been provided adjacent to residential lot 1 for foot traffic access for Nohona Kahala residents to and from their potential work-places in this commercial building. Home buyers in some instances are planning to relocate their offices to this building should rezoning occur.

During residential marketing, the question of the unattractive view of the freeway and the unpleasant freeway noise was raised numerous times. The answer that we could provide was that the master plan called for placement of a 5-story commercial building to block the unattractive view and noise of the freeway and Waialae Avenue. The integral landscaping design, repeated terrace design, and close proximity for potential work-place access was greeted with approval.

#### B. Development Timetable:

We expect an eighteen month design approval and construction schedule following a successful rezoning effort. Tentative project finish would be winter of 1993.

#### C. Approximate Development Cost:

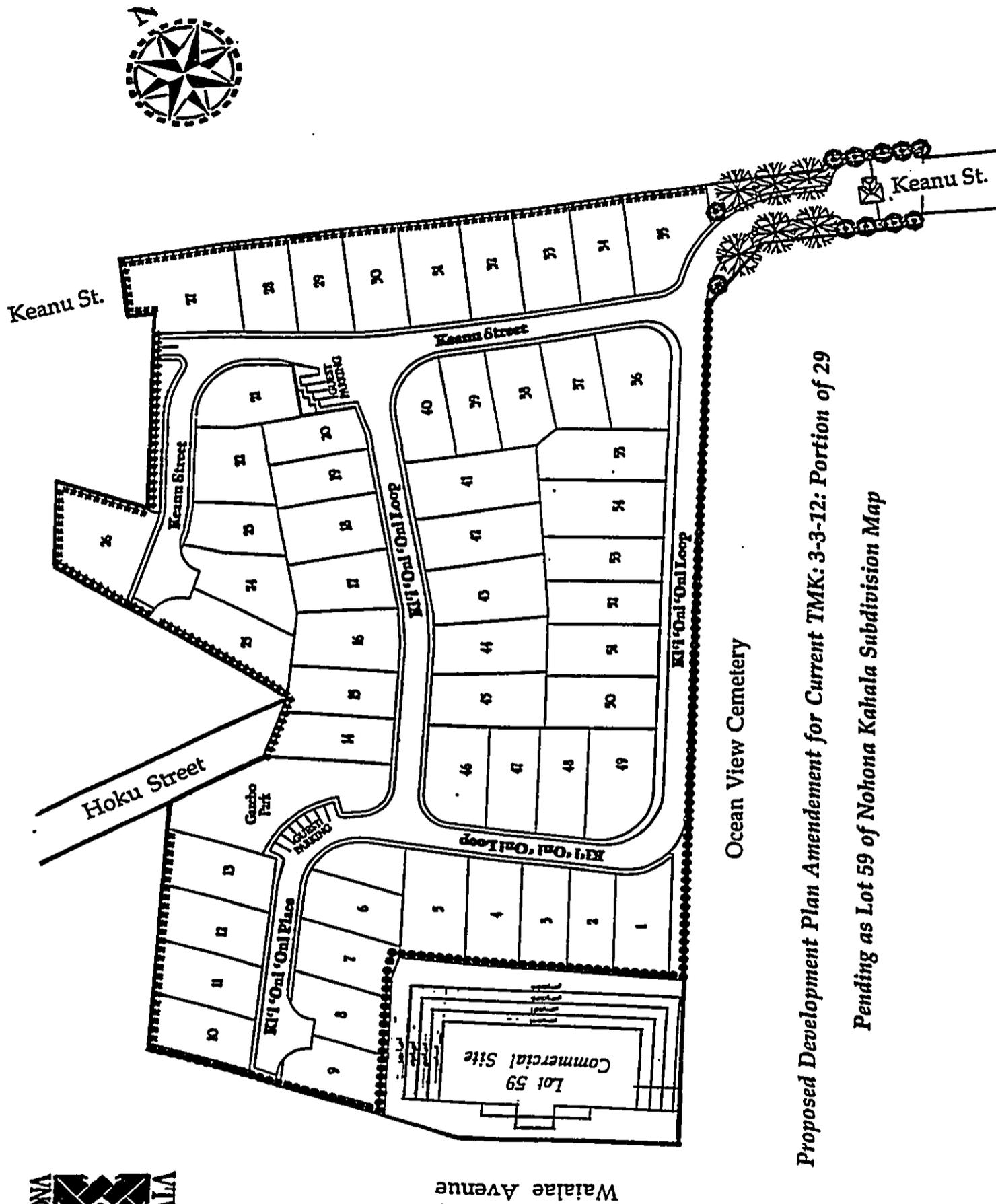
Development cost of this project is expected to be \$14,700,000.00 dollars. This is gross cost inclusive of finance, landscaping, indirect and direct costs. Also included in this cost estimate is \$500,000.00 for mitigating intersection improvements to Waialae Avenue at the 21st Ave. intersection.

Please Refer to Master Plan Map page 9a following.

Mast( Plan Nohona Kahala Site: Residential and Commercial Development



nohona kahala commercial site application for development plan amendment



Proposed Development Plan Amendment for Current TMK: 3-3-12: Portion of 29

Pending as Lot 59 of Nohona Kahala Subdivision Map

NEED FOR PROPOSED  
DEVELOPMENT

1. C

2. C

3. C

## Need for Proposed Development:

### A. Public problem:

1. The site is not well suited for residential development. It is faced with the following problems:
  - a. Noise from the Waialae Avenue / 21st Avenue intersection is particularly obtrusive at this location. The noise of the under-freeway traffic is compressed and directed into this location by the over-head concrete in much the same manner as sound through a card-board tube or megaphone.
  - b. The over-pass shadows this site from sun-light in afternoon and evening hours.
  - c. The site is 10' lower than adjacent up-wind residences thereby blocking prevailing trade winds to this site.
  - d. The view for the residences mauka of the freeway is undesirable at freeway level.

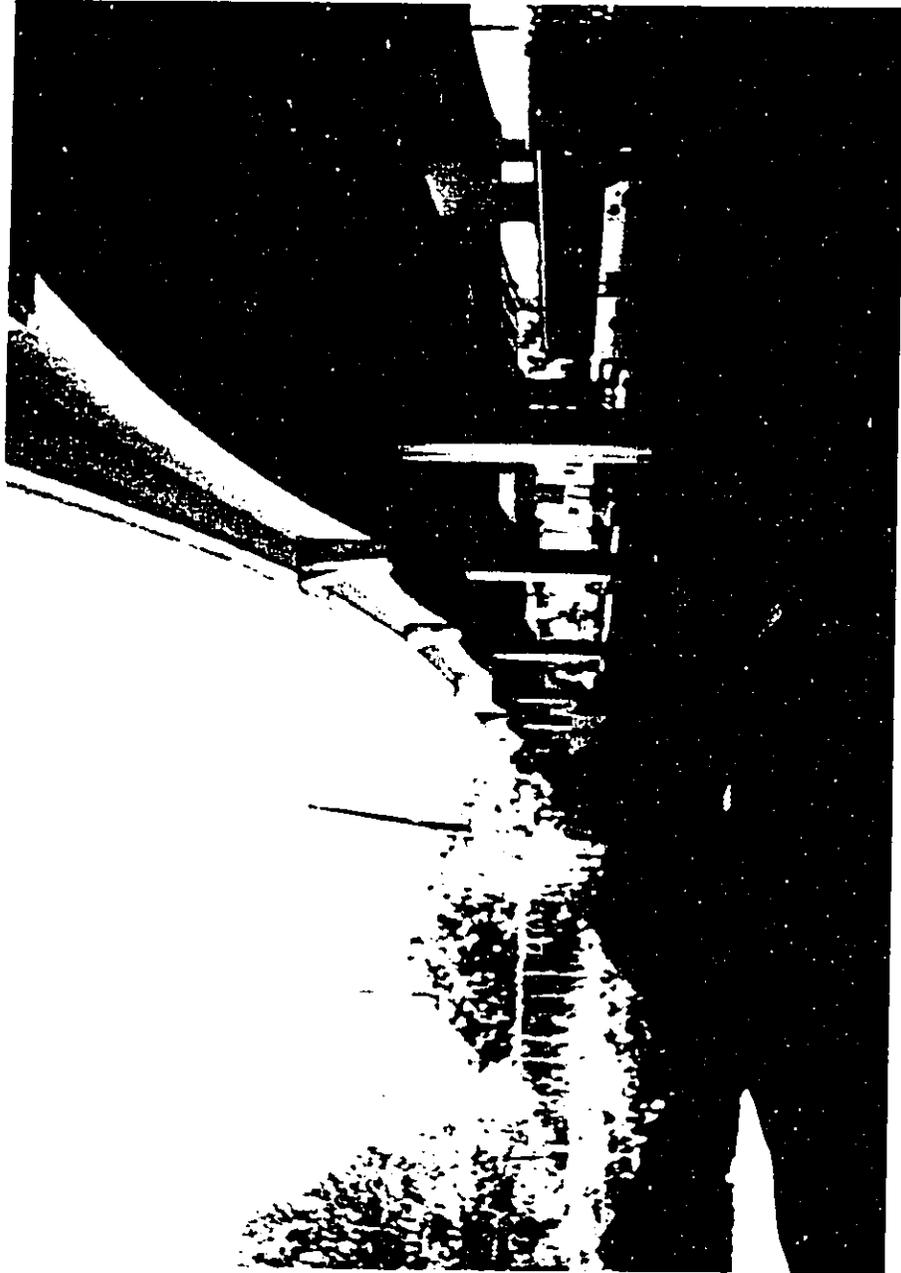
Refer to page 10a for picture view of mauka boundary depicting shadowing beginning at 1:00 P.M., noise source, and undesirable view.
2. There is a shortage of commercial lease space in Eastern Oahu which affects both commuting professionals and residents.
  - a. Commuting professionals from Hawaii Kai, Hawaii Loa Ridge, Kahala etc... must travel farther and longer on roads burdened with traffic to reach Central Oahu office space. Research of available office lease space in the Waialae Kahala area yielded little available office space mandating longer commutes for Eastern Oahu residents to the available office space of Central Oahu.
  - b. Residents of Eastern Oahu served by these professionals are faced with the same travel circumstance as their commuting workforce counterparts.

### B. Intended Market:

The professional office space in this proposed site will serve the Eastern Oahu professional population from Hawaii Kai to Kaimuki. Due to its close proximity to these areas, the intended market for this buildings' tenants will be local businesses, locally owned and operated by residents of these East Oahu communities.

### C. Designated use vs. Intended Use.

The designated use for the Nohona Kahala site as residential is correct and appropriate for the majority of the site. This one low corner adjacent and affected by Waialae Avenue is not best used for residential building. The intended use is not affected by the adverse conditions facing a residential building on the same site. The intended use is consistent with the zoning shared by similar parcels along Waialae Avenue. The designated use is possible but a poor alternative. The designated use would provide five new homes in a poor location at prices inconsistent with the quality of life in this section of the project. The designated use would serve five families poorly. The intended use serves the community of new homes with visual and noise relief while serving the East Oahu communities with office space closer to home and with shorter travel time.



Nakai boundary looking kokohead showing shadowing beginning at 1:00p.m.,  
noise source and undesirable view.

FEDERAL, STATE &  
CITY

100

100

100

FEDERAL, STATE AND CITY PLANS AND PROGRAMS INVOLVED

FEDERAL:

There is no apparent federal interest or jurisdiction over this parcel.

STATE:

The current state plan for this parcel is designated Urban.

CITY

1. General Plan

The subject Parcel is adjacent and opposite commercial zoned land bordering the Waiialae Avenue corridor. Residential neighborhoods abutt this parcel on the Ewa side.

2. Development Plan - Current Zoning - lot 59 is R-5 and P-2.

a. Common Provisions - According to City Plan Maps, the following provisions apply:

Set-Backs - No special set back requirements exist under the current zoning.

CZC - Is currently listed as 06.

Flood Zone - X

b. Special Provisions - No special provisions appear to apply including Historic district, SMA, or other special district.

c. Land Use Map - Residential

d. Public Facilities Map - No right-of-ways or other special public encroachments are noted.

C

Q

O

Nohona Kahala Commercial Building  
Re-Zoning application

Demographic & Economic Impact

The demographic impact on this community would be negligible and the economic impact of this project on the surrounding community is estimated to be small but positive.

This development is expected to serve the residents of East Oahu. This is due to the conformity of the development with the demographic profile of the community it serves. The profile of local residents indicates the majority work in professional services of the type targeted for this development and that the majority of these persons must commute significant distances to work.

Currently, there is insufficient local office professional space to service the residents of this community, (reference office & retail vacancy analysis and summary by Grubb & Ellis for the Kahala area.) This lack of space causes residents to commute to the office and work-place facilities available. Extended commute times directly cost the commuter and indirectly burden the local road systems. This is further substantiated by the extremely low vacancy rates for commercial property in East Oahu.

Vacancy rates for commercial buildings in this area average 1.52% which is approximately 33% lower than Oahu averages as a whole. This current demand for commercial space indicates that the development would be absorbed and used by current local demand rather.

It is highly unlikely therefore that this development would significantly alter the growth pattern or demographic makeup of this neighborhood.

Reference: Population Facts Data Report by Equifax Marketing pages 13a - 13g following, and The retail commercial survey December 1990 by Grubb & Ellis marketing research pages 13h - 13 k following.

Economic Impacts:

Negative economic impacts are minimal as increased costs to the community in terms of increased tax burden for municipal services are not present in this proposed project.

- a. Refuse collection: by private firm with no cost to city.
- b. Fire Protection: In initial inquiry, the fire department estimated that their existing fire equipment and personnel were adequate to provide fire protection to this new commercial building.
- c. Police Protection: In initial inquiry, the police department responded in the same manner as the fire department in that they believed on preliminary inquiry that their existing service personnel were adequate to provide police protection as this building would warrant without the addition of additional personnel or equipment.
- d. Educational burden: As a commercial building, no added burden on the educational facilities of this area would be expected.
- e. Road Service: Costs of improving the intersections for mitigating traffic impact and to increase serviceability of the two affected intersections would be paid by the owner.

Economic benefits to be derived from the re-zoning of this parcel to B-2 and the resulting construction of this commercial building would be two-part:

1. Higher tax income to the City for the same area of land.
  - a. The property taxes paid currently on this property amount to \$3,878.00 annually.
  - b. The property tax projected to be paid to the city if developed under current zoning would be \$14,850.00 annually.
  - c. The property tax projected to be paid to the City if developed as applied for would be \$132,300 annually.
  - d. The result of this re-zoning would be the highest alternative of tax base available to the City for this land.
2. Decreased commute expense for local residents served by this development:
  - a. Less than 11% of the local work-force now lives within 10 minutes of their work-place.
  - b. More than 74% of the local population commute 15 minutes or more to their work-place.
  - c. Slightly over 80% of the local residents are employed in office based job descriptions which would make use of this proposed office building; such as executive and managerial, professional specialty, sales, administrative support etc....

Summary: The majority of local residents commute to work. The demographic profile of this community indicates that the largest majority work are employed in professions which would use this development. Therefore this re-zoning and building development would serve the largest percentage of area residents with a workplace close at hand.

Reference: Population Facts Data Report by Equifax Marketing pages 13a - 13g following, and The retail commercial survey December 1990 by Grubb & Ellis marketing research pages 13h - 13 k following.

ACCT #: 140101

02/06/91

**POP-FACTS: FULL DATA REPORT**  
 (CENSUS '80, UPDATES & PROJECTIONS)  
 BY EQUIFAX MARKETING DECISION SYSTEMS 800-877-5560  
 PREPARED FOR  
 GRUBB & ELLIS 139

WAIALAE AND HUNAKAI  
 HONOLULU, HI

SITE: 291242  
 COORD: 21:16.90 157:47.40

DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
<b>POPULATION</b>			
1995 PROJECTION	26,294	131,994	217,570
1990 ESTIMATE	26,224	130,674	214,706
1980 CENSUS	25,755	126,300	206,264
1970 CENSUS	27,581	125,773	196,617
GROWTH 70-80	-6.62%	0.42%	4.91%
<b>HOUSEHOLDS</b>			
1995 PROJECTION	8,789	50,031	90,381
1990 ESTIMATE	8,757	48,380	87,264
1980 CENSUS	8,487	46,252	82,134
1970 CENSUS	7,768	38,652	64,846
GROWTH 70-80	9.25%	19.66%	26.66%
<b>POPULATION BY RACE &amp; SPANISH ORIGIN</b>			
25,755	126,300	206,264	
WHITE 32.98%	29.21%	30.69%	
BLACK 0.17%	0.44%	0.55%	
AMERICAN INDIAN 0.15%	0.18%	0.18%	
ASIAN & PACIFIC ISLANDER 63.19%	65.91%	64.49%	
OTHER RACES 3.51%	4.26%	4.09%	
SPANISH ORIGIN - NEW CATEGORY 2.72%	3.71%	3.82%	
<b>OCCUPIED UNITS</b>			
8,487	46,252	82,134	
OWNER OCCUPIED 68.23%	49.51%	45.18%	
RENTER OCCUPIED 31.77%	50.49%	54.82%	
1980 PERSONS PER HOUSEHOLD 3.00	2.63	2.44	
<b>YEAR ROUND UNITS AT ADDRESS</b>			
8,831	54,896	95,037	
SINGLE UNITS 76.03%	46.39%	41.45%	
2 TO 9 UNITS 17.62%	17.94%	16.39%	
10+ UNITS 6.32%	35.59%	42.08%	
MOBILE HOME OR TRAILER 0.03%	0.08%	0.08%	
SINGLE/MULTIPLE UNIT RATIO 3.18	0.87	0.71	
<b>1990 ESTIMATED HOUSEHOLDS BY INCOME</b>			
8,757	48,380	87,264	
\$75,000 OR MORE 35.17%	20.90%	17.86%	
\$50,000 TO \$74,999 21.56%	18.00%	16.66%	
\$35,000 TO \$49,999 14.96%	17.12%	17.19%	
\$25,000 TO \$34,999 9.69%	13.65%	14.40%	
\$15,000 TO \$24,999 9.75%	15.30%	16.55%	
\$7,500 TO \$14,999 5.48%	9.58%	10.42%	
UNDER \$7,500 3.39%	5.44%	6.92%	
<b>1990 ESTIMATED AVERAGE HH INCOME</b>			
\$71,295	\$52,073	\$47,149	
<b>1990 ESTIMATED MEDIAN HH INCOME</b>			
\$60,014	\$43,809	\$40,250	
<b>1990 ESTIMATED PER CAPITA INCOME</b>			
\$23,625	\$19,388	\$19,259	

DOCUMENT CAPTURED AS RECEIVED

ACCT #: 140101

02/06/91

POP-FACTS: FULL DATA REPORT  
 (CENSUS '80, UPDATES & PROJECTIONS)  
 BY EQUIPAK MARKETING DECISION SYSTEMS 800-877-5560  
 PREPARED FOR  
 GRUBB & ELLIS 139

WAIALAE AND HUNAKAI  
 HONOLULU, HI

SITE: 291242  
 COORD:21:16.90 157:47.40

DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
POPULATION BY SEX	25,755	126,300	206,264
MALE	48.68%	48.87%	48.49%
FEMALE	51.32%	51.13%	51.51%
POPULATION BY AGE	25,755	126,300	206,264
UNDER 5 YEARS	4.08%	4.38%	4.45%
5 TO 9 YEARS	4.79%	4.44%	4.25%
10 TO 14 YEARS	6.26%	5.32%	4.97%
15 TO 19 YEARS	7.83%	7.93%	7.20%
20 TO 24 YEARS	8.21%	11.17%	10.85%
25 TO 29 YEARS	8.44%	10.56%	11.20%
30 TO 34 YEARS	7.75%	8.76%	9.28%
35 TO 44 YEARS	10.86%	10.52%	11.00%
45 TO 54 YEARS	13.31%	11.66%	11.59%
55 TO 59 YEARS	8.15%	7.14%	6.96%
60 TO 64 YEARS	7.01%	6.26%	6.06%
65 TO 74 YEARS	8.46%	7.57%	7.70%
75+ YEARS	4.84%	4.28%	4.50%
MEDIAN AGE	37.75	34.85	35.11
AVERAGE AGE	39.25	37.63	37.91
FEMALE POPULATION BY AGE	13,217	64,577	106,244
UNDER 5 YEARS	3.87%	4.14%	4.22%
5 TO 9 YEARS	4.53%	4.25%	4.05%
10 TO 14 YEARS	6.00%	5.10%	4.75%
15 TO 19 YEARS	7.51%	7.98%	7.19%
20 TO 24 YEARS	7.78%	11.07%	10.91%
25 TO 29 YEARS	8.21%	10.09%	10.89%
30 TO 34 YEARS	7.23%	8.21%	8.73%
35 TO 44 YEARS	11.16%	10.15%	10.55%
45 TO 54 YEARS	14.26%	12.48%	12.21%
55 TO 59 YEARS	8.20%	7.43%	7.15%
60 TO 64 YEARS	6.95%	6.33%	6.14%
65 TO 74 YEARS	8.46%	7.74%	7.92%
75+ YEARS	5.83%	5.02%	5.30%
FEMALE MEDIAN AGE	35.65	33.48	33.97
FEMALE AVERAGE AGE	40.22	38.47	38.72
POPULATION BY HOUSEHOLD TYPE	25,755	126,300	206,264
FAMILY HOUSEHOLDS	88.62%	79.45%	76.88%
NON FAMILY HOUSEHOLDS	10.08%	16.81%	20.40%
GROUP QUARTERS	1.30%	3.74%	2.73%

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 GRUBB & ELLIS 139

WAIALAE AND HUNAKAI  
 HONOLULU, HI

SITE: 291242  
 COORD:21:16.90 157:47.40

DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
HISPANIC POPULATION BY RACE	701	4,684	7,888
WHITE	37.92%	33.98%	33.10%
BLACK	0.14%	0.68%	0.85%
AMERICAN INDIAN & ASIAN	42.22%	45.81%	45.44%
OTHER RACE	19.72%	19.53%	20.60%
HISPANIC POPULATION BY TYPE	25,755	126,300	206,264
NOT OF HISPANIC ORIGIN	97.28%	96.29%	96.18%
MEXICAN	0.45%	0.48%	0.52%
PUERTO RICAN	0.44%	0.67%	0.70%
CUBAN	0.01%	0.03%	0.02%
OTHER SPANISH	1.83%	2.53%	2.58%
MARITAL STATUS PERSONS 15+	21,858	108,437	178,071
SINGLE	31.06%	36.03%	35.13%
MARRIED	54.95%	48.21%	47.39%
SEPARATED	0.77%	1.33%	1.55%
WIDOWED	6.85%	6.25%	6.60%
DIVORCED	6.37%	8.18%	9.34%
MARITAL STATUS OF FEMALES 15+	11,314	55,862	92,409
SINGLE	27.24%	32.07%	31.40%
MARRIED	52.96%	46.70%	45.58%
SEPARATED	0.91%	1.49%	1.67%
WIDOWED	11.26%	10.21%	10.64%
DIVORCED	7.62%	9.53%	10.70%
PERSONS IN UNIT	8,487	46,252	82,134
1 PERSON UNITS	14.90%	25.33%	30.32%
2 PERSON UNITS	31.10%	32.24%	33.13%
3 PERSON UNITS	21.06%	17.78%	15.86%
4 PERSON UNITS	17.27%	12.90%	11.03%
5 PERSON UNITS	8.76%	6.37%	5.30%
6+ PERSON UNITS	6.92%	5.38%	4.37%
PERSONS IN RENTER UNITS	2,697	23,354	44,993
1 PERSON UNITS	25.31%	34.73%	38.77%
2 PERSON UNITS	29.55%	31.85%	32.60%
3 PERSON UNITS	20.94%	16.14%	14.13%
4 PERSON UNITS	13.68%	9.65%	8.33%
5 PERSON UNITS	5.62%	4.13%	3.48%
6+ PERSON UNITS	4.90%	3.50%	2.69%

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WAIALAE AND HUNAKAI  
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DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
HOUSEHOLDS BY TYPE	8,487	46,252	82,134
SINGLE MALE	6.24%	11.88%	14.00%
SINGLE FEMALE	8.66%	13.45%	16.31%
MARRIED COUPLE	64.72%	51.52%	46.99%
OTHER FAMILY - MALE HEAD	3.55%	3.72%	3.51%
OTHER FAMILY - FEMALE HEAD	10.53%	10.76%	10.15%
NON FAMILY - MALE HEAD	3.63%	5.13%	5.37%
NON FAMILY - FEMALE HEAD	2.68%	3.54%	3.66%
HOUSEHOLDS WITH CHILDREN 0-18	2,883	13,100	20,812
MARRIED COUPLE FAMILY	80.06%	74.19%	72.62%
OTHER FAMILY - MALE HEAD	3.58%	4.49%	4.72%
OTHER FAMILY - FEMALE HEAD	15.45%	20.16%	21.33%
NON FAMILY	0.91%	1.16%	1.33%
1980 OWNER OCCUPIED PROPERTY VALUES	4,487	14,517	19,833
UNDER \$25,000	0.29%	0.57%	0.87%
\$25,000 TO \$39,999	0.66%	1.03%	1.40%
\$40,000 TO \$49,999	0.64%	1.21%	1.37%
\$50,000 TO \$79,999	6.14%	7.90%	8.43%
\$80,000 TO \$99,999	7.67%	9.94%	9.53%
\$100,000 TO \$149,000	24.79%	28.80%	27.76%
\$150,000 TO \$199,999	20.20%	20.69%	21.22%
\$200,000+	39.62%	29.86%	29.42%
1980 MEDIAN PROPERTY VALUE	\$161,751	\$151,706	\$152,179
POPULATION BY URBAN VS RURAL	25,755	126,300	206,264
URBAN	100.00%	100.00%	100.00%
RURAL	0.00%	0.00%	0.00%
POPULATION ENROLLED IN SCHOOL	6,557	32,883	49,360
NURSERY SCHOOL	5.04%	3.91%	4.04%
KINDERGARTEN & ELEMENTARY (1-8)	39.12%	33.88%	35.06%
HIGH SCHOOL (9-12)	25.30%	20.81%	20.80%
COLLEGE	30.54%	41.40%	40.10%
POPULATION 25+ BY EDUCATION LEVEL	17,689	84,279	140,944
ELEMENTARY (0-8)	11.48%	12.67%	12.37%
SOME HIGH SCHOOL (9-11)	7.38%	8.99%	8.91%
HIGH SCHOOL GRADUATE (12)	32.74%	32.76%	32.40%
SOME COLLEGE (13-15)	17.29%	17.65%	18.26%
COLLEGE GRADUATE (16+)	31.11%	27.93%	28.05%

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WAIALAE AND HUNAKAI  
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SITE: 291242  
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DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
<b>POPULATION 16+ BY OCCUPATION</b>			
EXECUTIVE AND MANAGERIAL	13,830	69,106	114,725
PROFESSIONAL SPECIALTY	16.96%	14.30%	14.73%
TECHNICAL SUPPORT	17.21%	14.96%	14.93%
SALES	2.99%	3.15%	3.08%
ADMINISTRATIVE SUPPORT	14.78%	13.41%	13.35%
SERVICE: PRIVATE HOUSEHOLD	18.38%	19.14%	19.48%
SERVICE: PROTECTIVE	-0.60%	0.52%	0.48%
SERVICE: OTHER	0.87%	1.08%	1.30%
FARMING FORESTRY & FISHING	12.73%	15.26%	14.74%
PRECISION PRODUCTION & CRAFT	1.00%	1.08%	1.02%
MACHINE OPERATOR	8.04%	9.21%	9.07%
TRANSPORTATION & MATERIAL MOVING	2.35%	2.51%	2.56%
LABORERS	1.60%	2.42%	2.43%
	2.48%	2.95%	2.83%
<b>FEMALES 16+ WITH CHILDREN 0-18</b>			
WORKING WITH CHILD UNDER 6	2,639	12,114	19,177
NOT WORKING WITH CHILD UNDER 6	22.58%	22.95%	24.18%
WORKING WITH CHILD 6-18 ONLY	13.15%	17.23%	17.99%
NOT WORKING WITH CHILD 6-18 ONLY	45.80%	43.04%	42.26%
	18.47%	16.77%	15.57%
<b>HOUSEHOLDS BY NUMBER OF VEHICLES</b>			
NO VEHICLES	8,461	46,232	82,168
1 VEHICLE	7.45%	15.43%	17.81%
2 VEHICLES	34.30%	43.91%	46.92%
3+ VEHICLES	37.18%	26.77%	24.14%
ESTIMATED TOTAL VEHICLES	21.07%	13.90%	11.12%
	14,899	65,607	107,475
<b>POPULATION BY TRAVEL TIME TO WORK</b>			
UNDER 5 MINUTES	12,914	65,393	108,638
5 TO 9 MINUTES	1.49%	2.14%	1.99%
10 TO 14 MINUTES	9.26%	9.22%	9.85%
15 TO 19 MINUTES	14.81%	17.65%	19.49%
20 TO 29 MINUTES	24.52%	23.98%	23.95%
30 TO 44 MINUTES	28.06%	25.25%	24.09%
45 TO 59 MINUTES	15.27%	15.95%	15.28%
60+ MINUTES	4.27%	3.73%	3.30%
AVERAGE TRAVEL TIME IN MINUTES	2.32%	2.09%	2.05%
	20.08	19.45	19.01
<b>POPULATION BY TRANSPORTATION TO WORK</b>			
DRIVE ALONE	13,435	67,186	111,858
CAR POOL	60.44%	53.78%	53.21%
PUBLIC TRANSPORTATION	23.94%	21.81%	21.46%
WALKED ONLY	8.92%	12.63%	13.00%
OTHER MEANS	2.68%	7.33%	8.11%
WORKED AT HOME	1.96%	2.24%	2.13%
	2.06%	2.21%	2.08%

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DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
<b>HOUSING UNITS BY YEAR BUILT</b>			
BUILT 1979 TO MARCH 1980	8,807	54,886	95,102
BUILT 1975 TO 1978	1.27%	4.64%	3.48%
BUILT 1970 TO 1974	4.07%	8.87%	10.60%
BUILT 1960 TO 1969	7.22%	13.17%	16.27%
BUILT 1950 TO 1959	26.26%	26.90%	29.99%
BUILT 1940 TO 1949	26.47%	22.27%	18.54%
BUILT 1939 OR EARLIER	14.45%	12.04%	10.06%
	20.27%	12.11%	11.06%
<b>1980 HOUSEHOLDS BY 1979 INCOMES</b>			
\$75,000+	8,487	46,252	82,134
\$50,000 TO \$74,999	8.24%	4.20%	3.49%
\$35,000 TO \$49,999	13.26%	7.98%	7.05%
\$25,000 TO \$34,999	20.73%	14.04%	12.44%
\$15,000 TO \$24,999	16.77%	16.10%	15.91%
\$ 7,500 TO \$14,999	18.17%	22.83%	23.66%
UNDER \$7,500	14.04%	20.32%	21.32%
	8.80%	14.52%	16.12%
<b>1979 AVERAGE HOUSEHOLD INCOME</b>	\$37,434	\$27,874	\$25,876
<b>1979 MEDIAN HOUSEHOLD INCOME</b>	\$31,540	\$23,232	\$21,587
<b>1980 FAMILIES BY 1979 INCOMES</b>			
\$75,000+	6,714	30,703	50,077
\$50,000 TO \$74,999	9.03%	5.45%	4.82%
\$35,000 TO \$49,999	15.05%	10.55%	9.96%
\$25,000 TO \$34,999	24.35%	18.98%	17.55%
\$15,000 TO \$24,999	18.07%	19.23%	19.14%
\$ 7,500 TO \$14,999	18.19%	22.37%	23.59%
UNDER \$7,500	10.41%	14.69%	15.76%
	4.89%	8.73%	9.18%
<b>1979 AVERAGE FAMILY INCOME</b>	\$40,651	\$32,970	\$31,290
<b>1979 MEDIAN FAMILY INCOME</b>	\$34,933	\$28,218	\$26,873

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DESCRIPTION	1.0 MILE RADIUS	3.0 MILE RADIUS	5.0 MILE RADIUS
1990 POPULATION BY SEX	26,224	130,674	214,706
MALE	47.98%	48.14%	47.86%
FEMALE	52.02%	51.86%	52.14%
1990 POPULATION BY AGE	26,224	130,674	214,706
UNDER 5 YEARS	4.22%	4.14%	4.05%
5 TO 9 YEARS	4.25%	4.11%	4.01%
10 TO 14 YEARS	3.87%	4.02%	4.12%
15 TO 19 YEARS	5.31%	5.83%	5.43%
20 TO 24 YEARS	7.52%	10.39%	10.00%
25 TO 29 YEARS	8.33%	9.22%	9.45%
30 TO 34 YEARS	7.92%	8.79%	8.99%
35 TO 44 YEARS	15.07%	14.58%	14.69%
45 TO 54 YEARS	10.46%	9.91%	10.43%
55 TO 59 YEARS	6.43%	5.62%	5.72%
60 TO 64 YEARS	7.60%	6.56%	6.45%
65 TO 74 YEARS	12.07%	10.57%	10.26%
75+ YEARS	6.97%	6.25%	6.40%
1990 MEDIAN AGE	40.51	37.70	37.93
1990 AVERAGE AGE	42.33	40.40	40.57
1990 FEMALE POPULATION BY AGE	13,641	67,768	111,938
UNDER 5 YEARS	3.81%	3.75%	3.68%
5 TO 9 YEARS	4.04%	3.95%	3.85%
10 TO 14 YEARS	3.59%	3.78%	3.90%
15 TO 19 YEARS	5.38%	6.21%	5.75%
20 TO 24 YEARS	7.59%	10.95%	10.72%
25 TO 29 YEARS	7.66%	8.67%	9.04%
30 TO 34 YEARS	6.86%	7.80%	8.00%
35 TO 44 YEARS	15.06%	13.93%	13.94%
45 TO 54 YEARS	10.94%	9.81%	10.30%
55 TO 59 YEARS	6.86%	5.93%	5.91%
60 TO 64 YEARS	8.02%	6.98%	6.79%
65 TO 74 YEARS	11.98%	10.76%	10.40%
75+ YEARS	8.19%	7.48%	7.73%
1990 FEMALE MEDIAN AGE	42.26	38.86	38.91
1990 FEMALE AVERAGE AGE	43.49	41.35	41.46

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RETAIL SURVEY DECEMBER 1990

OAHU	STRIP CENTERS	SIZE IN GLA	# of Dec 90	Dec-88		Dec-89		Dec-90		Jan-90		Jun-90		Dec-89		Dec-90		Jun-90 to Dec-90		
				SOFT VACANT	VACANT	SOFT VACANT	VACANT	NET RENT \$/SF/NO	AVERAGE	HIGH	LOW	NET RENT \$/SF/NO	AVERAGE	HIGH	LOW	NET RENT \$/SF/NO	AVERAGE	HIGH	LOW	CAM
	ATKINSON CENTER	7,454	0	0	0	0	0	0.00%	\$2.50	\$2.75	\$2.60	\$2.73	\$2.65	\$2.60	\$2.73	\$2.85	\$2.45	\$0.46	\$0.55	0
	ALA MOANA PLAZA	14,052	0	0	0	0	0	0.00%	\$3.00	\$3.10	\$3.10	\$3.10	\$3.10	\$3.00	\$3.13	\$3.25	\$0.65	\$0.66	\$0.64	0
	HALEWA TOWN	8,174	500	0	0	0	0	0.00%	\$0.85	\$1.25	\$2.20	\$2.20	\$2.20	\$2.20	\$2.20	\$2.20	\$0.25	\$0.26	\$0.26	0
	KAHALA COMMERCIAL	7,809	0	0	0	0	0	0.00%	\$1.65	\$2.00	\$3.00	\$3.13	\$3.25	\$3.00	\$3.13	\$3.25	\$0.65	\$0.65	\$0.65	0
	KAAHUA BEACH CENTER	16,500	0	0	0	0	0	10.30%	\$1.10	\$2.50	\$1.10	\$1.90	\$2.70	\$1.10	\$1.90	\$2.70	\$0.26	\$0.26	\$0.26	0
	KAAHUA COMMERCIAL CENTER	24,700	0	0	0	0	0	20.24%	\$2.25	\$2.75	\$2.25	\$2.50	\$2.75	\$2.25	\$2.50	\$2.75	\$0.29	\$0.29	\$0.29	1,700
	KAAHUA SQUARE	15,905	0	0	0	0	0	0.00%	\$2.00	\$2.00	\$1.09	\$1.55	\$2.50	\$1.00	\$1.50	\$2.00	\$0.25	\$0.25	\$0.25	13,000
	KAAHUA TRADE CENTER	13,000	0	0	0	0	0	0.00%	\$1.60	\$2.10	\$1.60	\$1.94	\$1.00	\$1.00	\$1.25	\$1.50	\$0.25	\$0.25	\$0.25	0
	KAPALANA SHOPPING PLAZA	16,000	1,333	0	0	0	0	7.41%	\$2.28	\$2.93	\$2.28	\$2.51	\$2.20	\$2.28	\$2.51	\$2.00	\$0.25	\$0.25	\$0.25	1,333
	1500 KAPOLANI BLVD	29,228	0	0	0	0	0	14.71%	\$2.10	\$2.15	\$2.15	\$2.15	\$2.15	\$2.10	\$2.15	\$2.15	\$0.43	\$0.43	\$0.43	110,018
	KAPOLANI MARKETPLACE	15,200	14,037	3,091	2,100	2,600	0	17.11%	\$2.25	\$3.00	\$2.50	\$2.63	\$2.75	\$2.00	\$2.20	\$2.20	\$0.40	\$0.40	\$0.40	15,000
	KAPOLANI MALL	17,000	0	0	0	0	0	0.00%	\$1.60	\$2.30	\$1.60	\$1.85	\$2.10	\$1.60	\$1.85	\$2.10	\$0.35	\$0.35	\$0.35	2,285
	KAPOLEI	130,000	50,000	0	0	0	0	1.54%	\$1.75	\$2.25	\$1.41	\$1.41	\$1.41	\$1.41	\$1.41	\$2.47	\$0.35	\$0.48	\$0.48	2,000
	KILOHANA SQUARE	19,136	0	0	0	0	0	7.10%	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$0.48	\$0.48	\$0.48	2,000
	MAKAIKO	5,200	0	0	0	0	0	0.00%	\$1.90	\$2.65	\$1.90	\$2.00	\$2.10	\$1.90	\$2.00	\$2.10	\$0.40	\$0.41	\$0.41	1,333
	MERCHANTSBOW	25,000	1,000	800	500	830	0	3.27%	\$3.25	\$3.00	\$2.41	\$3.41	\$3.41	\$3.25	\$3.41	\$3.50	\$0.46	\$0.47	\$0.47	1,000
	MODULY	35,000	0	0	0	0	0	3.43%	\$1.25	\$3.00	\$1.25	\$2.13	\$3.00	\$1.25	\$2.13	\$3.00	\$0.32	\$0.32	\$0.32	0
	MO-TOWN CENTER	25,000	2,475	5,000	5,000	5,000	0	20.00%	\$0.50	\$2.18	\$0.50	\$1.34	\$2.18	\$0.50	\$1.34	\$2.18	\$0.40	\$0.40	\$0.40	0
	NORTH SHORE VILLAGE	18,091	0	0	0	0	0	7.59%	\$2.20	\$2.75	\$2.20	\$2.20	\$2.20	\$2.20	\$2.20	\$2.20	\$0.35	\$0.35	\$0.35	1,373
	OLUANA	37,565	10,700	0	0	0	0	0.00%	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$0.40	\$0.40	\$0.40	0
	PEARL KAI PHASE I	99,757	0	0	0	0	0	1.20%	\$2.10	\$2.75	\$2.10	\$2.38	\$2.65	\$2.10	\$2.38	\$2.65	\$0.40	\$0.41	\$0.41	0
	POWER STATION	17,459	0	0	0	0	0	0.00%	\$2.10	\$2.65	\$2.10	\$2.38	\$2.65	\$2.10	\$2.38	\$2.65	\$0.40	\$0.41	\$0.41	600
	STADIUM MALL	90,000	1,000	0	0	0	0	0.00%	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$0.30	\$0.30	\$0.30	0
	KAHUKU SUGAR MILL	42,318	650	1,532	427	1,155	0	2.73%	\$1.50	\$1.50	\$1.50	\$1.55	\$1.55	\$1.50	\$1.55	\$1.55	\$0.26	\$0.26	\$0.26	0
	TROPICANA SQUARE	25,574	4,600	1,600	0	0	0	0.00%	\$1.50	\$1.50	\$1.50	\$1.63	\$1.75	\$1.50	\$1.63	\$1.75	\$0.50	\$0.51	\$0.51	0
	UNIVERSITY SQUARE	48,239	0	0	0	0	0	4.14%	\$2.35	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$0.30	\$0.30	\$0.30	1,728
	WAIKALU SHOPPING VILLAGE	20,164	0	0	0	0	0	8.43%	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$0.43	\$0.43	\$0.43	1,800
	WAIKALU	21,071	0	0	0	0	0	0.00%	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$1.70	\$0.38	\$0.38	\$0.38	300
	WAIMALU	20,000	0	0	0	0	0	0.00%	\$1.00	\$1.50	\$1.75	\$1.88	\$2.00	\$1.75	\$1.88	\$2.00	\$0.26	\$0.26	\$0.26	0
	WESTGATE CENTER	12,000	0	0	0	0	0	0.00%	\$0.75	\$1.00	\$0.75	\$1.00	\$1.25	\$0.75	\$1.00	\$1.14	\$0.12	\$0.12	\$0.12	0
	WEST RIDGE	60,707	3,717	0	0	0	0	0.00%	\$2.00	\$2.50	\$2.00	\$2.25	\$2.50	\$2.00	\$2.25	\$2.50	\$0.16	\$0.16	\$0.16	0
	WINDWARD TRADE CENTER	5,482	0	0	0	0	0	0.00%	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$0.47	\$0.47	\$0.47	0
	WINDWARD TOWN & COUNTRY	41,650	5,438	6,000	1,194	0	0	0.00%	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$0.16	\$0.16	\$0.16	0
	WINDWARD TAC PHASE II	33,796	0	0	0	0	0	0.00%	\$2.00	\$2.10	\$1.70	\$1.90	\$2.10	\$1.88	\$1.96	\$2.03	\$0.27	\$0.27	\$0.27	1,194
	STRIP CENTERS	1,065,255	93,628	32,486	23,058	39,219	0	3.66%	\$1.60	\$2.29	\$1.66	\$2.03	\$2.20	\$1.79	\$2.03	\$2.27	\$0.33	\$0.38	\$0.48	116,161





OFFICE SURVEY DECEMBER 1990

127	KAPOLANI TOTALS	GLA	Dec-89		Jun-90		Dec-90		Jun-90		Dec-90		Jun-90		Dec-90		Jun-90 to Dec-90 ABSORPTION
			VACANT	SOFT VACANT	VACANT	% VACANT	GROSS RENT	FENT									
		1,447,818	79,917	63,203	31,501	2.18%	\$2.23	\$2.32	\$2.39	\$0.56	\$0.59	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	31,702

EAST OAHU DISTRICT

139	AIWA HAINA PROFESSIONAL BUILDING	22,350	0	2,097	0	0.00%	\$2.70	\$2.34	\$2.34	\$0.67	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64	2,097
139	HAWAII KAI CORPORATE PLAZA	51,463	0	1,280	1,280	2.49%	\$1.89	\$2.45	\$2.45	\$0.60	\$0.65	\$0.65	\$0.65	\$0.65	\$0.65	\$0.65	0
139	HAWAII KAI MEDICAL OFFICE BUILDING	17,542	0	0	0	0.00%	\$2.15	\$2.25	\$2.25	\$0.50	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	0
139	ISOSHIMA BUILDING	25,500	0	0	0	0.00%	\$1.83	\$1.83	\$1.83	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	0
139	KAHALA OFFICE BUILDING	23,540	0	915	0	0.00%	\$2.00	\$2.91	\$2.55		\$0.91	\$0.38	\$0.38	\$0.38	\$0.38	\$0.38	915
139	KAHALA OFFICE TOWER	22,775	0	819	1,439	0.32%	\$2.00	\$2.91	\$2.08		\$0.91	\$0.91	\$0.91	\$0.91	\$0.91	\$0.91	(820)
139	MOKO HEAD PLAZA	15,200	795	77	0	0.00%	\$2.10	\$2.15	\$2.16	\$0.62	\$0.60	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	77
139	EAST OAHU TOTALS	178,370	795	5,188	2,719	1.52%	\$2.09	\$2.41	\$2.39	\$0.57	\$0.65	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	2,469

OAHU (WINWARD DISTRICT)

145	AMERICAN SAVINGS BUILDING	17,509	1,988	2,170	866	4.95%	\$1.25	\$1.63	\$1.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	1,204
145	CASTLE PROFESSIONAL CENTER*	62,280	6,000	0	10,000	18.05%	\$1.35	\$1.38	\$2.32	\$0.50	\$0.50	\$0.52	\$0.52	\$0.52	\$0.52	\$0.52	(10,000)
145	HONOLULU FEDERAL S & L	22,890	0	0	0	0.00%	\$2.19	\$2.43	\$2.50	\$0.20	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	0
145	KAILUA MEDICAL ARTS BUILDING	20,000	0	0	800	4.00%	\$2.18	\$2.18	\$2.58	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	(800)
145	KAILUA PROFESSIONAL CENTER I	23,904	0	0	584	2.36%	\$2.10	\$2.10	\$2.85	\$0.43	\$0.43	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51	(584)
145	KAILUA PROFESSIONAL CENTER II	15,899	2,400	2,400	900	5.66%	\$2.08	\$2.08	\$2.93	\$0.37	\$0.37	\$0.46	\$0.46	\$0.46	\$0.46	\$0.46	1,500
145	PALIPALMS PLAZA	58,000	6,000	8,000	7,669	13.22%	\$1.95	\$2.55	\$2.58	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	331
145	THE ATRIUM	20,180	7,101	7,101	5,285	26.22%	\$1.75	\$1.84	\$2.17	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	1,818
145	WINWARD BUSINESS CENTER	23,536	1,860	205	205	0.87%	\$1.15	\$1.13	\$1.13	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	0
145	WINWARD TRADE CENTER	18,308	2,020	0	2,020	11.03%	\$0.92	\$1.67	\$1.61	\$0.49	\$0.47	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	(2,020)
145	WINWARD TOTALS	282,229	27,389	19,876	28,309	10.03%	\$1.69	\$1.90	\$2.11	\$0.43	\$0.46	\$0.49	\$0.49	\$0.49	\$0.49	\$0.49	(8,433)

OAHU (LEEWARD DISTRICT)

196	KAAHAWAUNU BUILDING	15,093	800	0	0	0.00%	\$2.50	\$3.19	\$3.19	\$0.50	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	0
196	LEWTON SQUARE	59,375	1,551	504	0	0.00%	\$1.50	\$2.45	\$2.50	\$0.80	\$0.80	\$0.81	\$0.81	\$0.81	\$0.81	\$0.81	504
196	PEARL CITY BUSINESS PLAZA	53,000	0	0	2,100	3.96%	\$1.35	\$1.99	\$2.02	\$0.49	\$0.49	\$0.49	\$0.49	\$0.49	\$0.49	\$0.49	(2,100)
196	PEARL CITY PLAZA **	25,000	0	0	0	0.00%	\$1.90	\$2.50	\$2.50	\$0.40	\$0.40	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	0
196	PEARL RIDGE OFFICE CENTER	32,479	1,211	1,211	1,211	3.73%	\$2.70	\$2.77	\$2.77	\$0.58	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	0
196	WAHAWA COURTHOUSE BUILDING	15,000	2,269	1,925	436	2.91%	\$1.20	\$1.60	\$1.43	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	1,489
196	WAPAHU PROFESSIONAL CENTER	18,455	606	0	0	0.00%	\$1.50	\$1.69	\$1.74	\$0.39	\$0.39	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	0
196	LEEWARD TOTALS	218,402	6,359	3,640	3,747	1.72%	\$1.81	\$2.23	\$2.31	\$0.48	\$0.46	\$0.49	\$0.49	\$0.49	\$0.49	\$0.49	(1,07)

Hale Kulana Corporation 1123 11th Ave., Suite 102, Honolulu, Hawaii 96816 • Tel: (808) 734-2231 • Fax: (808) 734-2235



February 20, 1991

Mr. Leonard McMullin  
Waialae Kahala Partners  
1123 11th Ave., Suite 102  
Honolulu, Hawaii 96816

Re: Comparison of Tax Liability on Portion of Parcel 29, Depending on Use

Dear Mr. McMullin,

Under the existing zoning and conditions the subject property is responsible for its share of real property taxes in the amount of \$3,878.47 annually.

Assuming the property were developed under existing zoning, which would allow for the construction of 6 townhomes valued at approximately \$500,000. each for a total value of \$3,000,000., the subject property would produce an approximate \$14,850. in tax dollars annually.

If however the property were to be rezoned to B-2, to accommodate the proposed Nohoha Kahala Commercial Building with a construction cost of \$14,000,000., this building would create a new tax liability of \$132,300. annually.

All of the above figures are based of the 1990 / 1991 tax rates which are subject to change or increase on an annual basis.

Sincerely,

*Dottie*

Dottie Walters  
Principal Broker  
Real Estate Division  
Hale Kulana Corporation

## IMPACTS ON PUBLIC SERVICES:

### A. Access and transportation:

1. Access is existing directly onto Waialae Avenue via the driveway once used by the Drive-In Theater. The existing entry and access is adequate and can be made very attractive with the landscaping space it provides.
2. Transportation is the single highest concern for impact that we or the community have. A detailed traffic impact assessment is included as "Exhibit E". This intersection operates at poor levels of service at a.m. and p.m. traffic flows. An office building on this site would be an additional burden on this intersection if no mitigating measures were offered or taken.

### B. Water:

No moratorium on water service connections exists or is expected for this area. Service to the site could be provided through either the 16" or 24" water mains located on either side of Waialae Avenue.

Please refer to page 14a following, the water service map for Waialae Kahala.

### C. Wastewater:

Anticipated waste-water impact is 5,400 gallons per day flow based on uniform plumbing code requirements. Preliminary discussion with Waste Water division yielded no problems with the current capacity levels.

Please refer to Exhibit "F" for waste-water impact calculations.

### D. Drainage:

Due to the small area of this site, impact from drainage did not warrant much concern from the consulting engineers. Proper drainage system design will channelize drainage waters properly. No water drains onto this parcel from adjoining properties thereby relieving this project of concern for more storm water run-off than is generated on this 39,000 square feet alone.

Please refer to exhibit "H".

### E. Solid Waste:

Private service waste removal firms will be employed for rubbish removal. Due to the nature of the tenants of this building, paper product waste is the largest single item of waste disposal.

### F. Schools:

No questions were directed to the school board etc... as no impact from this development is expected on the local schools.



IMPACTS ON PUBLIC SERVICES (continued):

G. Parks:

The parks department has no concern with this site re-zoning as a commercial site.

H. Fire:

Prior to building plan check, existing equipment was determined to be sufficient for serving this new building.

I. Utilities:

Electric, gas, telephone, and cable television are available for use on this site if rezoned to commercial.

Agencies Consulted:

1. DLU
2. Waste Water Management
3. The Fire Department
4. The Board of Water Supply
5. Parks Department
6. General Planning
7. Department of Traffic Safety
8. STATE D.O.T.

## IMPACTS ON THE ENVIRONMENT:

### A. Noise:

This building is designed with under-ground parking for noise control in relation to the newly constructed residences mauka of this site. It is intended that this building screen noise from Waialae Avenue for these same residences being constructed.

### B. Air Quality:

As an office building, no cooking establishments or manufacturing facilities etc... would be present on site to generate emissions capable of affecting air quality.

### C. Compatibility with surrounding environment:

1. The height is limited to five-stories in spite of the higher building envelope afforded a building on this site when re-zoned B-2. This owner imposed limit is intended to preserve good ocean views for higher mauka residences while being tall enough to serve the site properly as a professional building, and simultaneously act as a mitigating feature in favor of the new residences being constructed directly adjacent to the new site.
2. Design of the building serves four purposes: 1. to repeat landscaping themes of the Nohona Kahala Subdivision, 2. To repeat the terracing scheme of the project. 3. To allow adequate sunlight to the residences, and 4. To screen offensive noise and views for new residents at Nohona Kahala.
3. Materials are intended to be concrete construction utilizing marble and granite in the design.
4. Siting of the structure is intended to occupy space less suitable for residential use, in the lowest portion of the project, as a screening element to the freeway, and sufficiently long enough to span the under-pass area only.

### D. Historic and Archaeological impacts:

No impacts on these areas will occur. A thorough site history of ownership and use was compiled prior to purchase of this site. No items of historic or archaeological significance became apparent in this research.

The State Department of Land and Natural Resources, Parks and Recreation Division, Historic Sites section was consulted in this issue.

Historic reference indicates that this parcel was a land-fill. Soils borings during soils investigations substantiates this conclusion.

Please Refer to Exhibit "G", for histories of ownership and agencies consulted.

Alternatives Considered:

Developing this parcel as R-5.

When the entire Nohona Kahala site was considered for purchase in the summer of 1988, the disadvantages to developing this site for residential use were many. A great deal of design effort and thought were expended on mitigating some of the undesirable site conditions. As an example, it was determined that this was a hot environment that did not receive a great-deal of relief from the trade winds. Consequently the homes were insulated and air-conditioned. The cemetery was buffered with a road, landscaping strip, trees, and a 6 ft. fence. Additional landscaping effort was made to over-come the hot dusty dry appearance of this unused land.

The single largest obstacle to a quality development was the proximity of the free-way. For this reason, a commercial building of adequate size and design to off-set this problem was planned. We have clearly stated from the beginning our master-plan including a commercial building in the lowest portion of the site.

Developing this parcel as R-5 would not serve the new residences. It would not provide good housing for the occupants of those homes if they were to be constructed.

MITIGATION MEASURES PROPOSED:

The single impact of significance on this re-zoning request is the impact the re-zoning and the subsequent 100,000 sq. ft. commercial building would have on traffic congestion on Waialae Avenue and the transit time for East Oahu residents.

It is the intent of this development to provide sufficient off-site improvements to the Waialae Avenue / 21st Avenue intersection to nullify any negative impact this commercial building would have.

After the traffic analysis was done and mitigating measures suggested, It was determined that this was possible. In addition to preventing a significant negative impact to traffic flow in this intersection during peak commercial building operational hours, the improvements to this intersection provide a positive benefit to local traffic at times when the commercial building traffic is not an influence.

The traffic impact assessment and mitigating proposal is Exhibited with this application as Exhibit "E".

SUMMARY

**SUMMARY OF INFORMATION  
NOHONA KAHALA COMMERCIAL SITE  
APPLICATION FOR AMENDMENT TO DEVELOPMENT PLAN:**

TMK: 3-3-12: a portion of 29

AREA: 39,223 sq. ft.

AMENDMENT REQUEST: To re-zone this parcel from R-5 & P-2 to Commercial B-2.

LOCATION: The site of the Old Waialae Drive-In, Waialae Kahala, directly opposite 21st Avenues intersection with Waialae Avenue.

OWNER / DEVELOPER: Waialae Kahala Partners

REQUESTED BY: Hale Kulana Corporation as a General Partner of Waialae Kahala Partners

Hale Kulana Corporation  
1123 11th Avenue Suite 102  
Honolulu, Hawaii 96816

BASIS FOR REQUEST: Re-zoning this parcel commercial is consistent with the neighboring commercial use. Re-zoning will allow the construction of a necessary element of the master-plan for the Nohona Kahala total Site. Re-zoning this parcel will provide for a more suitable use of this land than provided for in the existing zoning.

TYPE OF PROJECT: A five-story commercial office building with two levels of under-ground parking.

IMPACT ON PROVISION OF HOUSING: This project will not provide additional housing.

**EXISTING CONDITIONS:**

Current land use: Residential

Structures: None

Soil features: Clay and boulder rubble fill

Possible Constraints: Height limit of 5-stories with no other indicated constraints.

**PRESENT PLAN / ZONING DESIGNATIONS:**

State Land Use: Urban

DP Public Facilities Map: No impediments indicated

DP Special provisions: No special provisions noted

Zoning: R-5

NOTIFICATION  
REQUIREMENTS

11

11

11

OWNERS OF ABUTTING LOTS

Mr. Carl Smigielski  
1175 Koloa St.  
Honolulu, Hawaii 96816

Mr. Kenneth Sugita  
745 Fort St. 8th Floor  
Honolulu, Hawaii 96813

Mr. Charles Bocken  
4627 Aukai Ave.  
Honolulu, Hawaii 96816

Senator Hiram Fong  
1102 Alewa Dr.  
Honolulu, Hawaii 96817

Mr. Howard Bilkiss  
4855 Kolohala St.  
Honolulu, Hawaii 96816

Mr. Ron Kobayashi  
1314 Akele St.  
Kailua, Hawaii 96834

Ms. Catherine Chung  
1455 Ehupua St.  
Honolulu, Hawaii 9681

Mr. John McClellan  
1227 Kona St.  
Honolulu, Hawaii 96814

Mr. Scott Rolles  
218 Kaiulani Ave.  
Honolulu Hawaii 96815

Oceanview Cemetary Ltd.  
Mr. Marvin Fong, Manager  
2919 Kapiolani Blvd.

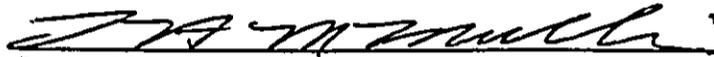
NEIGHBORHOOD BOARDS

Waialae Kahala Neighborhood Board  
Richard Turbin, Chairman  
P.O.Box 10435  
Honolulu, Hawaii 96816

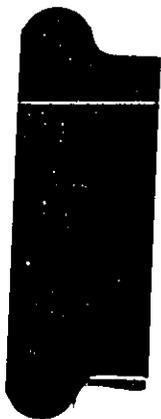
Kaimuki Neighborhood Board  
Henry Iwasa, Chairman  
Kaimuki Library  
1041 Koko Head Ave.  
Honolulu, Hawaii 96816

Ordinance 84-111 states: No application for Development Plan Land Use Map ammendment shall be accepted for process unless the applicant notifies, by mail, all owners, lessees, sub-lessees and residents of the affected property and of each abutting parcel.

I hereby certify that I have complied with the notification requirements of Ordinance 84-111.



Leonard McMullin  
President  
Hale Kulana Corporation



110

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10

## LOT 59

BEING A PORTION OF NOHONA KAHALA,  
SITUATED AT WAIALAE-IKI, KAPAHULU, HONOLULU, OAHU, HAWAII  
FILE PLAN (PENDING)  
SAME BEING A PORTION OF LAND PATENT 8188,  
LAND COMMISSION AWARD 10613, APANA 3 TO A. PAKI

Beginning at the Southeast corner of this parcel of land, on the Northerly side of Waialae Avenue, being also the Southwest corner of Ocean View Cemetery Lot, File Plan 283, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Leahi", being 6,998.04 feet North and 7,827.81 feet East, and running by azimuths measured clockwise from true South:

1. 104° 27' 187.32 feet along the Northerly side of Waialae Avenue;
2. 115° 36' 30" 66.00 feet along same;
3. 191° 00' 131.76 feet along Lots 9, 8 and 7 of Nohona Kahala, File Plan (pending), being also remainder of Land Patent 8188, Land Commission Award 10613, Apana 3 to A. Paki;
4. 207° 00' 13.65 feet along Lot 7 of Nohona Kahala, File Plan (pending), being also remainder of Land Patent 8188, Land Commission Award 10613, Apana 3 to A. Paki;
5. 284° 00' 245.00 feet along Lots 5, 4, 3, 2, 1 and 56 of Nohona Kahala, File Plan (pending), being also remainder of Land Patent 8188, Land Commission Award 10613, Apana 3 to A. Paki;
6. 10° 08' 160.00 feet along Ocean View Cemetery Lot, File Plan 283, to the point of beginning and containing an area of 39,223 square feet.

- 1 -

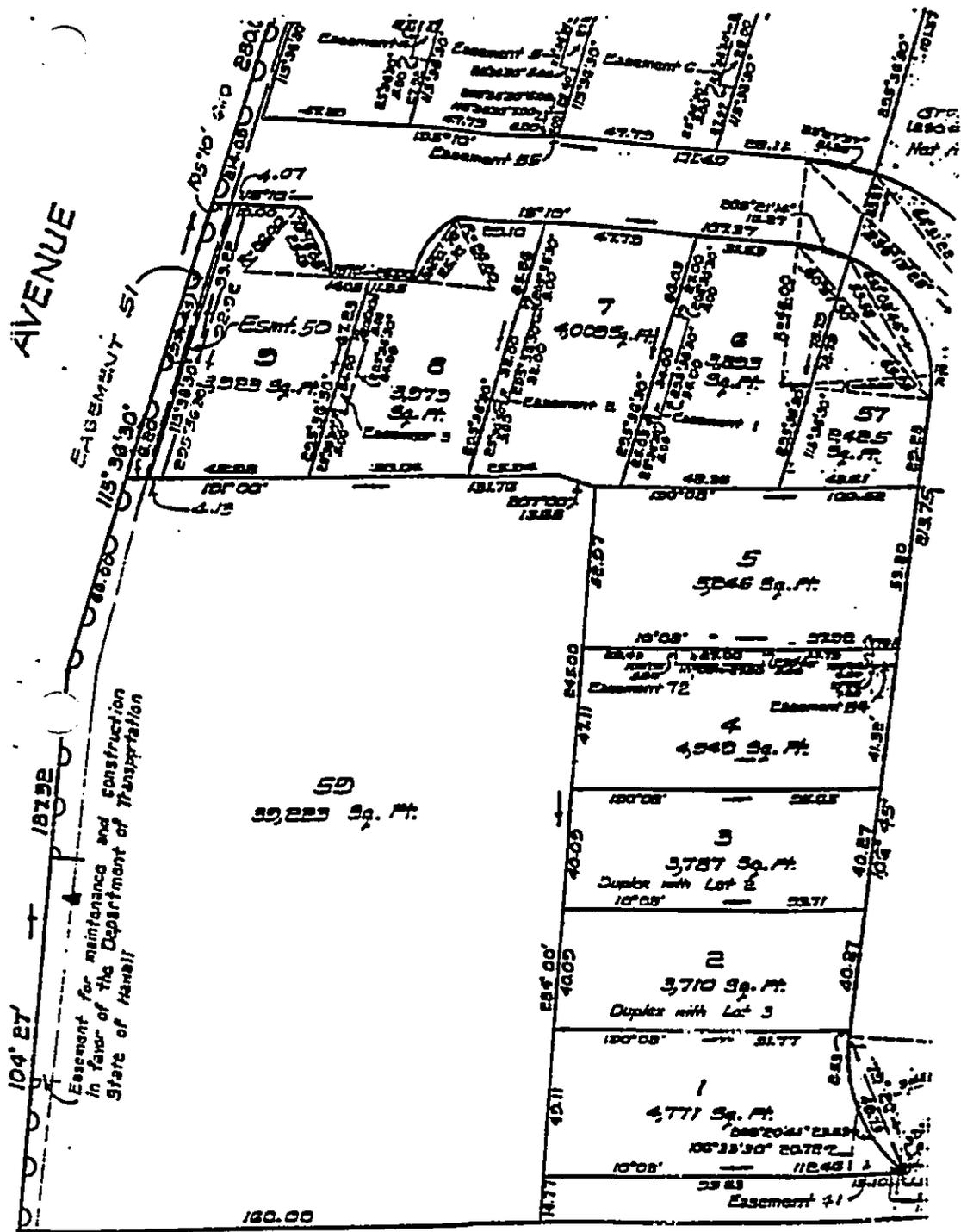
## R.M. TOWILL CORPORATION

CIVIL ENGINEERS • SURVEYORS  
420 WAIAXAMULO ROAD, #411 • HONOLULU, HAWAII 96817-4041



EXHIBIT B

C  
O  
O



"Exhibit B"

nohona kahala commercial site application for development plan amendment



R. M. TOWILL CORPORATION

*George S. Yoshida*  
 Registered Professional Surveyor  
 Certificate Number 1007

480 Waiakamilo Road  
 Honolulu, Hawaii

DOCUMENT CAPTURED AS RECEIVED

The above described Lot 59 is subject, however, to an  
Easement for maintenance and construction in favor of the  
Department of Transportation, State of Hawaii.

R.M. TOWILL CORPORATION

Description Prepared by:

420 Waiakamilo Rd., #411  
Honolulu, Hawaii 96817-4941  
January 30, 1991

  
George S. Yoshimura  
Registered Professional Surveyor  
Certificate Number 2927

- 2 -

**R.M. TOWILL CORPORATION**  
CIVIL ENGINEERS • SURVEYORS  
420 WAIAKAMILO ROAD, #411 • HONOLULU, HAWAII 96817-4941

nohona kahala commercial site application for development plan amendment



EXHIBIT C

1. C  
2. Q  
3. Q





NOHANA KAHALA

Also Known As:

**PROPOSED CLUSTER-TYPE RESIDENTIAL DEVELOPMENT  
(FORMER WAIALAE DRIVE-IN THEATER SITE)  
PRELIMINARY SOIL REPORT**

---

WAIALAE AVENUE, HONOLULU, HAWAII  
TAX MAP KEY: 3-3-12: 1, 22, 24, 28, 29 & 50

To:  
HALE KULANA CORPORATION

HAWAII GEOTECHNICAL GROUP, INC. dba  
**WALTER LUM ASSOCIATES, INC.**  
SOILS & FOUNDATION ENGINEERS

October 2, 1989

nohona kahala commercial site application for development plan amendment.

*"Exhibit D"*

HAWAII GEOTECHNICAL GROUP, INC. dba  
**WALTER LUM ASSOCIATES, INC.**  
SOILS & FOUNDATION ENGINEERS

EDWARD WATANABE  
EZRA KOIKE  
WALLACE WAKAHIRO  
WALTER LUM-CONSULTANT  
88-722 KUAHAO PLACE, PEARL CITY, HAWAII 96782 • (808) 487-5590

October 2, 1989

HALE KULANA CORPORATION  
1123 11th Avenue, Suite 102  
Honolulu, Hawaii 96816

ATTENTION: Mr. Leonard McMullin

Gentlemen:

Subject: Proposed Cluster-Type Residential Development  
(Former Waialae Drive-In Theater Site)  
Preliminary Soil Report  
(for site grading and pavement  
thickness design considerations)  
Waialae Avenue, Honolulu, Hawaii  
Tax Map Key: 3-3-21: 1, 22, 24, 28, 29 & 50

Transmitted herewith is a preliminary soil report for site grading and pavement thickness design considerations for the Proposed Cluster-Type Residential Development at the Former Waialae Drive-In Theater site at Waialae Avenue, Honolulu, Hawaii.

This report includes a Boring Location Sketch, boring logs, laboratory test results, general site grading and pavement thickness design guidelines and limitations.

Respectfully submitted,

Hawaii Geotechnical Group, Inc. dba  
WALTER LUM ASSOCIATES, INC.

By Ezra Koike  
Ezra Koike

CR/EK:gw

DOCUMENT CAPTURED AS RECEIVED

HAWAII GEOTECHNICAL GROUP, INC. dba  
**WALTER LUM ASSOCIATES, INC.** ■ 98-722 KUAHAO PLACE • PEARL CITY, HAWAII 96782 • PHONE 487-5590

Boring Log No. 11  
 Project **PROPOSED CLUSTER-TYPE RESIDENTIAL DEVEL.**  
**(OLD WAIALAE DRIVE-IN THEATER SITE)**

Date: DEC. 21 & 22, 1988  
 Boring: AUGER & CORING  
(CME 55)

Depth (Ft)	Graphic Symbol	Unified Soil Classification	DESCRIPTION	Sample No.	SPT N Blows Per Ft	Prob. Blows Per Ft.	Water Cont. %	Plastic Limit	Liquid Limit	Wet Density P.C.F.	Dry Density P.C.F.	% Minus No. 200	Unconf. Comp P.S.F.	Vane Shear P.S.F.
0-5	(SC)	(SC)	DENSE, BROWN, CLAYEY SAND & GRAVEL (FILL)	A	37	-	31	-	-	-	-	-	-	-
5-10	(SM)	(SM)	DENSE, RED BROWN, SILTY SAND W/ROCK FRAGMENTS (FILL)	B	40/3	-	19	-	-	-	-	-	-	-
10-15			HARD, GRAY, VESICULAR BASALT, WIDELY FRACTURED, SLIGHTLY WEATHERED MODERATELY HARD, HIGHLY VESICULAR BASALT (CLINKER)	RUN #1						CORED : 3.0' RECOV. : 2.8' R.Q.D. : 92%				
15-20			HARD, GRAY, VESICULAR BASALT, CLOSELY TO WIDELY FRACTURED, SLIGHTLY WEATHERED	RUN #2						CORED : 5.0' RECOV. : 4.9' R.Q.D. : 38%				
20-25			MODERATELY HARD, RED BROWN, HIGHLY WEATHERED BASALT (CLINKER)	RUN #3						CORED : 5.0' RECOV. : 5.0' R.Q.D. : 97%				
25-30			HARD, GRAY, VESICULAR BASALT, CLOSELY TO MEDIUM FRACTURED, SLIGHTLY WEATHERED	RUN #4						CORED : 5.0' RECOV. : 4.0' R.Q.D. : 32%				
30-33			29.5'-30' CAVITY?	RUN #5						CORED : 5.0' RECOV. : 5.0' R.Q.D. : 65%				
				RUN #6						CORED : 3.0' RECOV. : 2.3' R.Q.D. : 28%				
				C			34							
			END OF BORING @ 33' 12-22-88											

SYMBOLS:  
 Split Spoon 2"  
 Thin Wall Tube  
 Core "NQ"  
 No/Recovery

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HAWAII GEOTECHNICAL GROUP, INC. dba  
**WALTER LUM ASSOCIATES, INC.** ■ 98-722 KUAHAO PLACE - PEARL CITY, HAWAII 96782 - PHONE 487-5590

Boring Log No. 12  
**PROPOSED CLUSTER-TYPE RESIDENTIAL DEVEL.**  
 Project **(OLD WAIALAE DRIVE-IN THEATER SITE)**

Date: DEC. 20, 1988  
**AUGER & CORING**  
 Boring: (CME 55)

Depth (ft)	Graphic Symbol	Unified Soil Classification	DESCRIPTION	Sample No.	SPT N Blows Per Ft	Probe Blows Per Ft.	Water Cont. %	Plastic Limit	Liquid Limit	Wet Density P.C.F.	Dry Density P.C.F.	% Minus No. 200	Unconf. Comp. P.S.F.	Vane Shear P.S.F.
0-5	[Symbol]	CH	MEDIUM, MOTTLED BROWN CLAY W/ GRAVEL & DECOMPOSED ROCK (FILL)	A	12	-	53	-	-	-	-	-	-	-
5-10	[Symbol]	CH	STIFF, BROWN CLAY W/ GRAVEL & DECOMPOSED ROCK (FILL)	B	-	-	31	36	91	106	81	-	-	-
10-15	[Symbol]	CH	STIFF, BROWN CLAY W/ GRAVEL & DECOMPOSED ROCK (FILL)	C	19	-	36	-	-	-	-	-	-	-
15-20	[Symbol]	CH	DRILLING WATER LOSS AT 17.5' 13'-15' BOULDERS?	D	-	-	38	27	77	117	85	-	2990	3000 3000 2750
20-25	[Symbol]	CH	HARD, GRAY, MODERATELY VESICULAR BASALT, CLOSELY FRACTURED, SLIGHTLY WEATHERED	E	50/4	-	8	-	-	-	-	-	-	-
25-30	[Symbol]	CH	BROWN, TUFF	RUN #1	-	-	-	-	-	CORED : 3.0'	RECOV. : 3.0'	R.Q.D. : 14%	-	-
30-35	[Symbol]	CH	HARD, GRAY, MODERATELY VESICULAR BASALT, CLOSELY TO MEDIUM FRACTURED, SLIGHTLY WEATHERED, w/ MINERAL DEPOSITS IN FRACTURES	RUN #2	-	-	-	-	-	CORED : 3.0'	RECOV. : 3.0'	R.Q.D. : 0%	-	-
35-40	[Symbol]	CH	HARD, GRAY, MODERATELY VESICULAR BASALT, CLOSELY TO MEDIUM FRACTURED, SLIGHTLY WEATHERED, w/ MINERAL DEPOSITS IN FRACTURES	RUN #3	-	-	-	-	-	CORED : 5.0'	RECOV. : 2.5'	R.Q.D. : 0%	-	-
40-45	[Symbol]	CH	HARD, GRAY, MODERATELY VESICULAR BASALT, CLOSELY TO MEDIUM FRACTURED, SLIGHTLY WEATHERED, w/ MINERAL DEPOSITS IN FRACTURES	RUN #4	-	-	-	-	-	CORED : 2.0'	RECOV. : 2.3'	R.Q.D. : 85%	-	-
45-50	[Symbol]	CH	END OF BORING @ 30' 12-21-88											

SYMBOLS:  
 [Symbol] Split Spoon 2"  
 [Symbol] Thin Wall Tube 3"  
 [Symbol] Core "NG"  
 No/Recovery

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**PROPOSED CLUSTER-TYPE RESIDENTIAL DEVELOPMENT  
(OLD WAIALAE DRIVE-IN THEATER SITE)**

**TABLE I C - SUMMARY OF LABORATORY TEST RESULTS**

BORING NO.	9	9	11	
SAMPLE NO.	SURFACE	C	SURFACE	
DEPTH BELOW SURFACE	—	9.0'-6.5'	—	
DESCRIPTION	MOTT. BRN., CLAYEY SAND w/ CORALL FRAGMENTS (FILL)	DARK RED BROWN CLAY (FILL)	BROWN, CLAYEY SAND & GRAVEL (FILL)	
GRAIN-SIZE ANALYSIS (% Passing)				
Sieve				
1-1/2"	84		93	
1"	84		91	
1/2"	78		89	
#4	74		77	
#10	66		69	
#20	60		62	
#40	55		58	
#100	43		52	
#200	39		49	
ATTERBERG LIMITS				
Air Dried or Natural	NATURAL	NATURAL	NATURAL	
Liquid Limit	85	66	68	
Plastic Limit	37	27	28	
Plasticity Index	48	39	40	
Natural Water Content, %	43	28	27	
Dilatancy	SLOW	NONE	SLOW-NONE	
Toughness	VERY STIFF	VERY STIFF	VERY STIFF	
Dry Strength	HIGH	HIGH	MEDIUM HIGH	
UNIFIED SOIL CLASSIFICATION	SC	CH	SC	
APPARENT SPECIFIC GRAVITY				
CBR TEST				
(Surcharge - 51 P.S.F.)				
Molding Moisture, %	24.0		19.0	
Molding Dry Density, P.C.F.	91.4		106.0	
Swell upon saturation, %	1.2		.8	
CBR at 0.1" Penetration	5.4		9.7	
MOISTURE-DENSITY RELATIONS OF SOILS (ASTM D-1557-70, Method )				
Dry to Wet or Wet to Dry				
Max. Dry Density (P.C.F.)				
Optimum Moisture (%)				

REMARKS:

**WALTER LUM ASSOCIATES, INC.**  
STRUCTURAL & SOIL ENGINEERS

Date 3-1-89 By C.R.

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**PROPOSED CLUSTER-TYPE RESIDENTIAL DEVELOPMENT  
(OLD WAIALAE DRIVE-IN THEATER SITE)**

**TABLE I\_D - SUMMARY OF LABORATORY TEST RESULTS**

	12	12		
BORING NO.	B	D		
SAMPLE NO.				
DEPTH BELOW SURFACE	2.5'-3.0'	10.0'-11.5'		
DESCRIPTION	MOTT. BRN. CLAY W/ GRAVEL & DEC. ROCK (FILL)	BROWN CLAY W/ GRAVEL & DEC. ROCK (FILL)		
GRAIN-SIZE ANALYSIS				
(% Passing)				
Sieve				
1-1/2"				
1"				
1/2"				
#4				
#10				
#20				
#40				
#100				
#200				
ATTERBERG LIMITS				
Air Dried or Natural	NATURAL	NATURAL		
Liquid Limit	91	77		
Plastic Limit	36	27		
Plasticity Index	55	50		
Natural Water Content, %	31	38		
Dilatancy	SLOW	SLOW-NONE		
Toughness	MEDIUM STIFF	VERY STIFF		
Dry Strength	MEDIUM HIGH	HIGH		
UNIFIED SOIL CLASSIFICATION	CH	CH		
APPARENT SPECIFIC GRAVITY		2.92		
CBR TEST				
(Surcharge - 51 P.S.F.)				
Molding Moisture, %				
Molding Dry Density, P.C.F.				
Swell upon saturation, %				
CBR at 0.1" Penetration				
MOISTURE-DENSITY RELATIONS OF SOILS				
(ASTM D-1557-70, Method )				
Dry to Wet or Wet to Dry				
Max. Dry Density (P.C.F.)				
Optimum Moisture (%)				

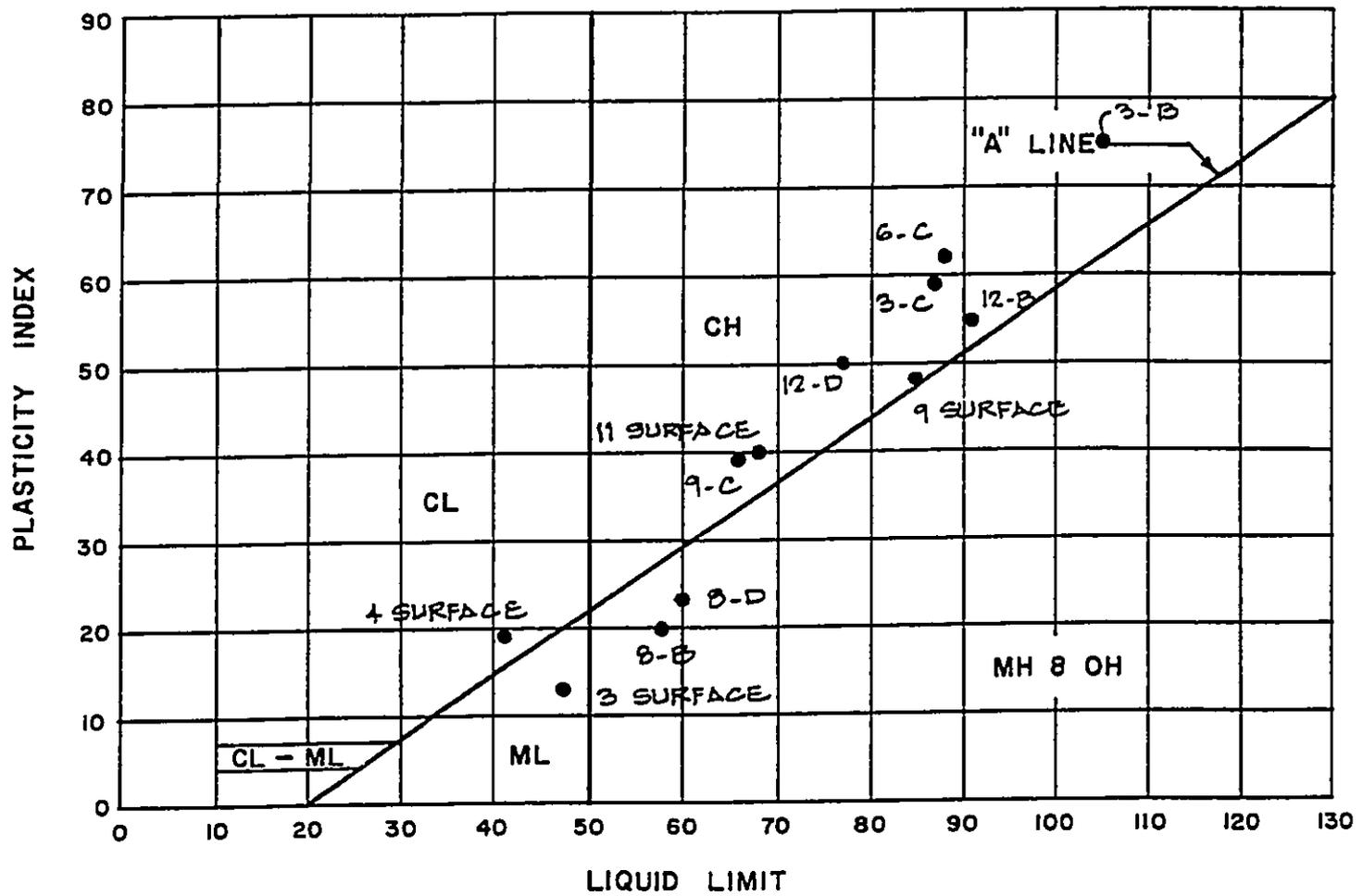
REMARKS:

**WALTER LUM ASSOCIATES, INC.**  
STRUCTURAL & SOIL ENGINEERS

Date 3-1-89 By C.R.

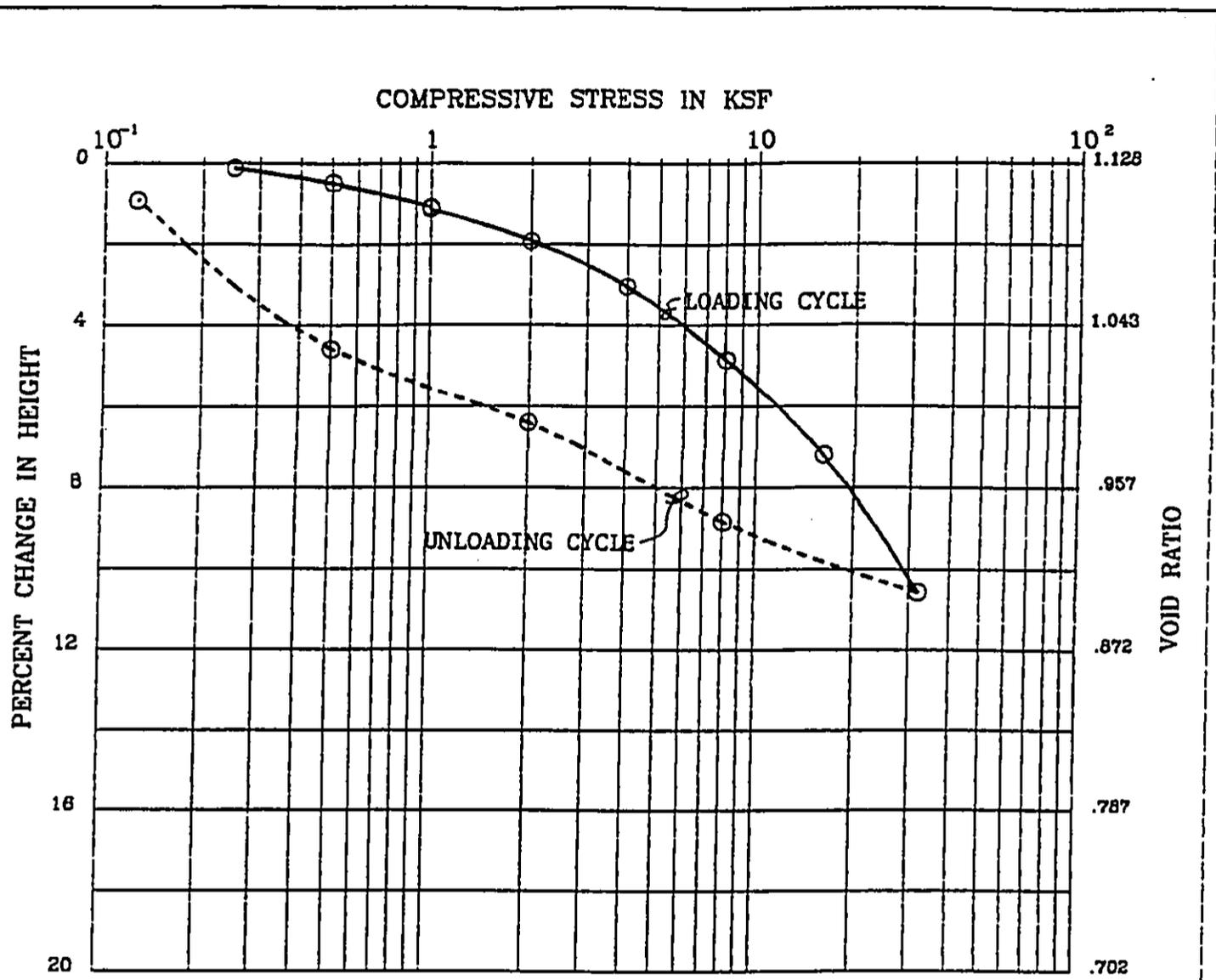
# PLASTICITY CHART

PROPOSED CLUSTER-TYPE RESIDENTIAL DEVELOPMENT  
PROJECT: (OLD WAIALAE DRIVE-IN THEATER SITE)  
LOCATION: WAIALAE AVENUE, HONOLULU, HAWAII



DATE 3-1-89 BY C.R.

WALTER LUM ASSOCIATES, INC.  
CIVIL STRUCTURAL SOILS ENGINEERS



BORING : 12-D  
 DEPTH (ft) : 10.0-11.5'  
 SPEC. GRAVITY : 3.02  
 DESCRIPTION : BROWN CLAY W/GRAVEL & DECOMPOSED ROCK (FILL)  
 LIQUID LIMIT : 77  
 PLASTIC LIMIT : 27

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL	38.3	88.8	103	1.128
FINAL	37.2	88.9	100	1.126

Remark :

PROPOSED CLUSTER-TYPE RESIDENTIAL DEVELOPMENT	
WALTER LUM ASSOCIATES, INC. HAWAII	CONSOLIDATION TEST

Slope planting is recommended on cut and fill slopes to lessen erosion. Slopes should be planted in conformance with the Grading Ordinance of the City and County of Honolulu.

#### Foundations

For the proposed 1 to 2-story residential structures, spread or continuous footing foundations bearing on compacted, select materials over the clay surface soils and boulders may be considered.

For the future 4 to 6-story commercial structure with 1 to 2-level basement parking, foundation excavations will generally extend partly into the clay and boulder fills and partly into the lava rock formation depending upon final design considerations. Ideally, footings should all bear in the same materials, that is all in rock or all on compacted select granular backfill. As the location and structure is finalized, additional soils exploration should be made to develop design guidelines for foundations and basement walls.

Although not encountered in the borings, lava formations may contain voids or cavities. The loss of drilling water may indicate voids or cavities. Where voids or cavities are encountered or suspected at or below the bottom of the footing excavation, field adjustments may be required. Backfilling with granular material or low grade concrete or probing and grouting should be considered.

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YAHIKU ASSOCIATES, INC.  
1314 South King Street Suite 411  
HONOLULU, HAWAII 96814  
Phone 538-7038  
FAX 531-8781

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

OCCUPANT LOAD = SEWER AND WATER: (OFFICE)

$$100,000 \text{ SF} \div 6 \text{ FLRS} = 16,666 \text{ SF}$$

$$13,330 \text{ SF/FLR} \div 1000 = 13.3 \times 7 = 93 \text{ PER FLR.}$$

$$93 \div 2 = 46.5 \text{ ASSUME } 1/2 \text{ MALE AND } 1/2 \text{ FEMALE.}$$

(3) WATER CLOSETS, 1 URINAL 2 LAVATORIES = MALE

(3) WATER CLOSETS, 2 LAVATORIES = FEMALE

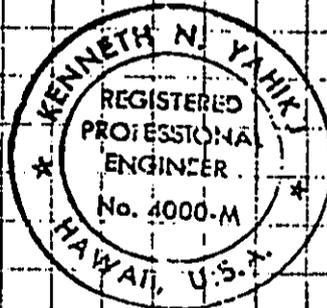
MIN. REQUIREMENT FOR TOILET FACILITIES PER FLR.

$$\text{FIXTURE UNIT PER FLOOR} = 34 \text{ FU OR } 44 \text{ GPM.}$$

$$34 \text{ FU} \times 6 \text{ FLR} = 204 \text{ FU OR } 90 \text{ GPM}$$

$$90 \text{ GPM @ 6 MIN DURATION} = \underline{\underline{5,400 \text{ GALS PER DAY FLOW}}}$$

\*BASED ON UNIFORM PLUMBING CODE REQUIREMENTS\*  
FOR FIXTURES



# Uniform Plumbing Code

Type of Building or Occupancy <sup>1</sup>	Water Closets (Fixtures per person)	Urinals <sup>2</sup> (Fixtures per person)	Lavatories (Fixtures per person)	Bathtubs or Showers (Fixtures per person)	Drinking Fountains <sup>3</sup> (Fixtures per person)
<b>Dwellings<sup>4</sup></b>					
Single Dwelling	1 per dwelling	-----	1 per dwelling	1 per dwelling	-----
Multiple Dwelling or Apartment House	1 per dwelling or apartment unit	-----	1 per dwelling or apartment unit	1 per dwelling or apartment unit	-----
<b>Hospitals</b>					
Waiting Room	1 per room	-----	1 per room	-----	1 per 75 <sup>5</sup>
For employee use	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
<b>Hospitals</b>					
Individual Room	1 per room	-----	1 per room	1 per room	-----
Ward Room	1 per 8 patients	-----	1 per 10 patients	1 per 20 patients	1 per 75 <sup>5</sup>
<b>Industrial Warehouses Workshops, Foundries and similar establishments (for employee use)</b>	Male Female 1:1-10 1:1-10 2:11-25 2:11-25 3:26-50 3:26-50 4:51-75 4:51-75 5:76-100 5:76-100 Over 100, add 1 fixture for each additional 30 persons	-----	Up to 100, 1 per 10 persons Over 100, 1 per 15 persons <sup>6</sup>	1 shower for each 15 persons exposed to excessive heat or to skin contamination with poisonous, infectious, or irritating material.	1 per 75 <sup>5</sup>
<b>Institutional—other than Hospitals or Penal Institutions (on each occupied floor)</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 10 1 per 10	1 per 8	1 per 75 <sup>5</sup>
<b>Institutional—other than Hospitals or Penal Institutions (on each occupied floor)—for employee use</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
<b>Office or Public Buildings</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 4:56-80 4:56-80 5:81-110 5:81-110 6:111-150 6:111-150 Over 150, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-60 3:36-60 4:61-90 4:61-90 5:91-125 5:91-125 Over 125, add 1 fixture for each additional 45 persons	-----	1 per 75 <sup>5</sup>
<b>Office or Public Buildings For employee use</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
<b>Penal Institutions—For employee use</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	1 per 75 <sup>5</sup>
<b>Penal Institutions—For prisoner use</b>	1 per cell	-----	1 per cell	-----	1 per cell block floor 1 per exercise room
<b>Exercise Room</b>	1 per exercise room	1 per exercise room	1 per exercise room	-----	-----
<b>Restaurants, Pubs and Lounges<sup>7</sup></b>	Male Female 1:1-50 1:1-50 2:51-150 2:51-150 3:151-300 3:151-300 Over 300, add 1 fixture for each additional 200 persons	1:1-150 Over 150, add 1 fixture for each additional 150 males	Male Female 1:1-150 1:1-150 2:151-200 2:151-200 3:201-400 3:201-400 Over 400, add 1 fixture for each additional 400 persons	-----	-----
<b>Schools—For staff use</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
<b>All schools</b>	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----

154

UNIFORM PLUMBING CODE

MINIMUM PLUMBING FACILITIES

155

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NOHONA KAHALA PROFESSIONAL BUILDING  
TRAFFIC IMPACT STUDY

Nohona Kahala, Waiialae-Kahala, Island of Oahu

Prepared for:

HALE KULANA CORPORATION

By:

WILBUR SMITH ASSOCIATES

January 1991

## EXISTING CONDITIONS

The project site consists of the makai portion of the old theatre site. The site has been recently graded and is currently being used to park construction worker vehicles and heavy construction equipment.

A subdivision on the mauka portion of the old theatre site is being constructed at this time.

A variety of land uses exist in the vicinity of the project site. Directly adjacent to the site is a cemetery while across from the site is a supermarket and a church. Further away from the project site in both the mauka and makai directions are extensive residential areas.

### Existing Roadway System

The roadway system under study for this report includes Waialae Avenue intersections with the 21st Street and Hunakai Street. The project site is located along the mauka side of Waialae Avenue. Access from the project site to Waialae Avenue occurs at the Waialae Avenue/21st Street intersection at the location of the old theatre driveway. This section of Waialae Avenue is located underneath the H-1 Freeway viaduct, including the intersections both with 21st Street and with Hunakai Street. Structural columns supporting the freeway are located in the median and sides of Waialae Avenue. Waialae Avenue is a two-way, six-lane major arterial roadway servicing Ewa/Kokohead bound traffic.

The Waialae Avenue/21st Street intersection consists of a two-phase, fully-actuated traffic control signal. Left turning movements are currently permitted from the makai and Kokohead approaches. Left turns are prohibited from the Ewa approach for the Kokohead bound traffic. 21st Street is a two-lane, two-way roadway with parallel parking. Access to and from the H-1 freeway is available via ramps which intersect Waialae Avenue immediately Ewa of the 21st Street intersection.

The Waialae Avenue/Hunakai Street intersection consists of a four-phase, fully-actuated traffic control signal. Left-turning movements are permitted from all approaches. A left-turn/U-turn combination movement is permitted from the Ewa approach of this intersection. Hunakai Street is a two-lane, two-way roadway. Hunakai Street is marked as three lanes makai of Waialae Avenue and two lanes mauka of Waialae Avenue. Parallel parking is permitted on both sides of Hunakai Street at a distance away from the intersection.

### Existing Traffic Volumes

Weekday traffic movement counts were conducted by Wilbur Smith Associates at the Waiialae Avenue/21st Street intersection on January 9th and 10th, 1991. Traffic movement counts for the Waiialae Avenue/Hunakai Street were obtained from the City and County of Honolulu, Department of Transportation Services. The existing weekday AM and PM peak hour volumes as recorded by these counts are shown in Figure 2. The AM peak hour was observed to occur between the hours of 7:30 to 8:30 while the PM peak hour occurred between the hours of 4:00 to 5:00.

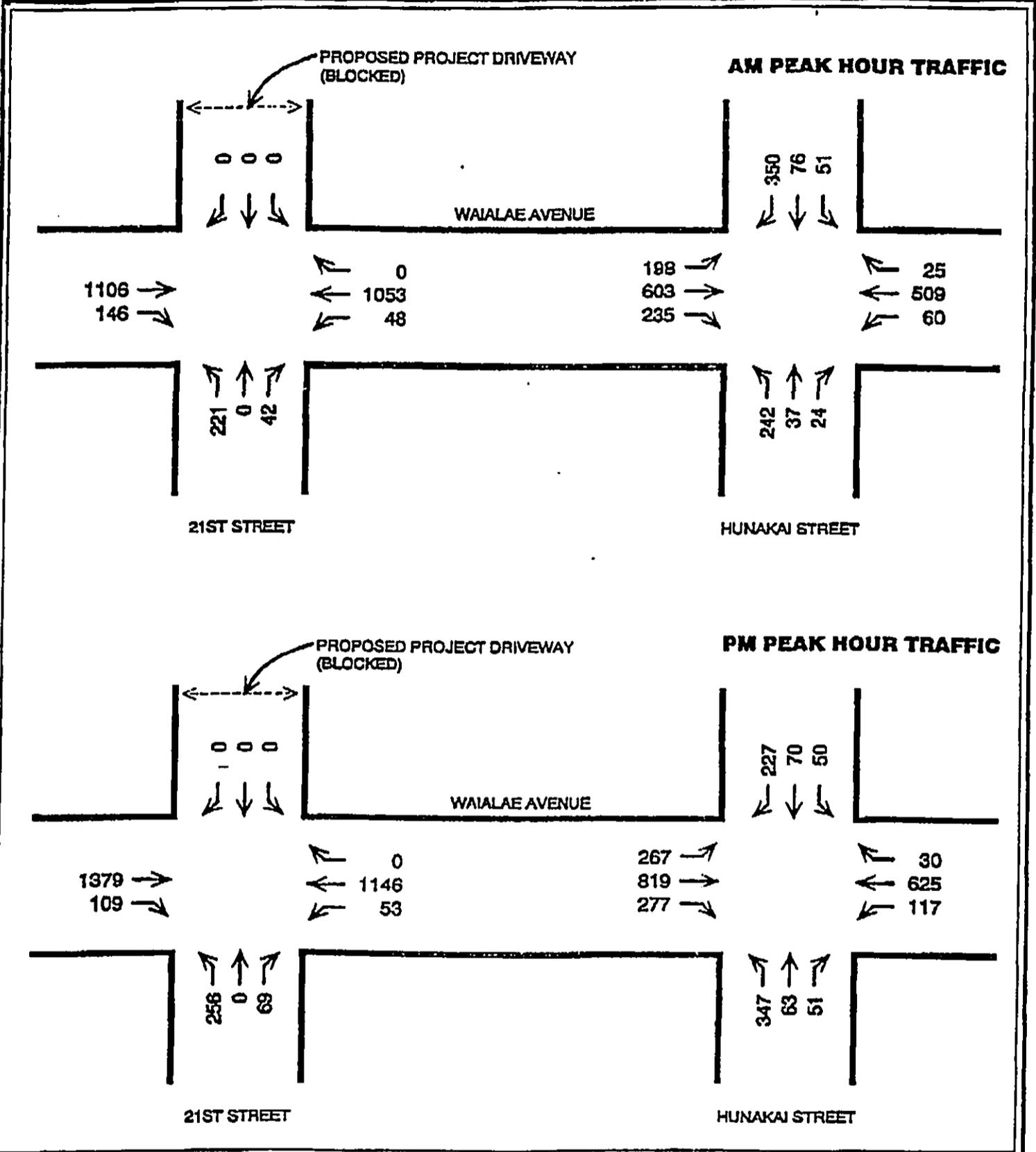
During the AM and PM peak hour traffic periods, total, traffic volumes of 2600 and 3000 vehicles respectively pass through the Waiialae Avenue and 21st Street intersections. In general, AM and PM peak hour volumes through the project area were about the same in magnitude, with the PM volumes slightly higher than the AM, for most movements. Directional distribution of through traffic is nearly 50/50 in both peak periods. Typically, turning movements were heavy at the study intersections with the larger movements in the range of 200 to 350 vehicles.

At the Waiialae Avenue/21st Street intersection, the largest turning movement occurred from the makai approach. Vehicles turning from 21st Street to Honolulu bound Waiialae Avenue were over 200 vehicles in the AM and PM peak hour periods. Long queues of vehicles was observed on this traffic movement although all vehicles were observed to clear the intersection at each cycle.

At the Waiialae Avenue/Hunakai Street intersections, the left turning movement from the makai approach during the PM peak hour and the right turning movement of the mauka approach during the AM peak hour were the largest at about 350 vehicles. The left turn/U turn combined turning movement on the Ewa approach of this intersection had about 200 vehicles in the AM peak period and 270 vehicles in the PM peak period. Stacking of vehicles occurred at all the turning movements of this intersection. Vehicles were observed to clear the intersection at each cycle except the left turning movement on the makai approach. For this movement, vehicle queues of up to a length of 1000 feet were observed and cycle failure for these vehicles occurred frequently.

### Existing Traffic Conditions

A computerized traffic analysis was performed on the existing traffic volumes to determine how the signalized intersections under study are functioning with the current traffic volumes, laneage and traffic signal controls. The methodology used in the analysis is that prescribed for signalized intersections in the



EXISTING WEEKDAY AM AND PM PEAK HOUR TRAFFIC VOLUMES

Nohona Kahala Professional Building

Highway Capacity Manual, 1985 edition. In this procedure, intersection operations are described in terms of a "level of service" or LOS criteria. An LOS rating for an intersection is based on average vehicle delay time computed for the intersection. LOS ratings vary from an LOS rating of "A" (little delay) to "F" (extreme delay). The LOS rating scale is further explained in Appendix A.

The analysis of current traffic conditions for the AM and PM peak hour periods are for the study intersections are shown in Table 1.

Table 1  
1991 EXISTING CAPACITY ANALYSIS

INTERSECTION	V/C (1)	LOS (2)	DELAY (2) (Seconds)
Waialae Avenue and 21st Street:			
1. AM Peak Hour	0.79	B	14.60
2. PM Peak Hour	0.83	B	11.20
Waialae Avenue and Hunakai Street			
1. AM Peak Hour	0.79	C	22.30
2. PM Peak Hour	0.99	* (3)	* (3)

- 
1. V/C, Volume of Capacity Ratio of Intersection
  2. LOS rating based on average vehicle delay time in seconds (See Appendix A).
  3. V/C Ratio greater than 1.2 for a lane group, HCM methodology unable to calculate delay and LOS. LOS considered to be "F" under these conditions.

\* \* \*

The analysis indicates that the Waialae Avenue/21st Street intersection is currently functioning with little delay or congestion at LOS B in the AM and PM peak hour periods. However, LOS ratings for left turning vehicles at the intersection are LOS D. More specifically, the left turn traffic on the makai and Kokohead approaches of the intersections are experiencing congestion and delay. The Waialae Avenue/Hunakai Street intersection is currently operating at LOS C in the AM peak hour and LOS F in the PM peak hour. At this intersection, the analysis indicates that the left turning movements on the makai and Ewa approaches are operating with extreme delay.

FUTURE CONDITIONS WITHOUT THE PROJECT

The anticipated time for completion of Nohona Kahala Professional Building and full occupancy is the early part of 1993. In this chapter, an estimate of future traffic volumes will be made on Waiialae Avenue at the study intersections without the addition of the project generated traffic. The estimated traffic volumes will be analyzed to determine future traffic conditions without the proposed project.

Impacting Planned Developments

The Nohona Kahala subdivision currently under construction on the mauka portion of the Waiialae Drive-In Theatre site is the only planned project in the immediate area to be considered as impacting local traffic conditions in early 1993. This subdivision consists of 55 residential lots with three and four bedroom single-family homes. Traffic estimated to be generated by this project is shown in Table 2.

Table 2

PLANNED DEVELOPMENT TRAFFIC

Nohona Kahala Subdivision  
Peak Hour Traffic

UNITS	TYPE	VEHICLE TRIPS			
		Morning Inbound	Peak Hour Outbound	Afternoon Inbound	Peak Hour Outbound
55	Single-Family Homes	11	30	35	20

-----  
1. Traffic generation taken from Trip Generation Manual,  
Institute of Transportation Engineers, 4th Edition.

\* \* \*

Access to the subdivision is planned via Keanu Street off of Hunakai Street. The project is estimated to be completed and fully occupied by late 1991.

Traffic assignment of the Nohona Kahala Subdivision was based on the existing traffic patterns. Traffic for this project was added to the intersections of Waiialae Avenue/Hunakai Street and Waiialae Avenue/21st Street.

### Future Traffic Growth

Based on the examination of historic traffic increases on Waialae Avenue and in the general area, a yearly traffic volume increase rate of four (4%) percent was determined. Based on a two year time period, a traffic growth factor of eight (8%) percent was calculated. This factor is applied to existing traffic volumes to obtain an estimate of future traffic volumes.

### Future Traffic Volumes and Conditions

The existing traffic volumes from figure 2 were increased by the eight (8%) percent growth factor. In addition, the planned development traffic was combined with these volumes to estimate the 1993 traffic volumes without the project.

The analysis of the future traffic conditions without the project is summarized in Table 3.

In comparison to the existing traffic conditions of Table 1, the analysis indicates a general deterioration in LOS ratings with increased intersection delay times and volume to capacity ratios.

Table 3  
1993 FUTURE CAPACITY ANALYSIS WITHOUT PROJECT

INTERSECTION	V/C (1)	LOS (2)	DELAY (2) (Seconds)
Waialae Avenue and 21st Street:			
1. AM Peak Hour	0.86	C	21.60
2. PM Peak Hour	0.91	B	13.60
Waialae Avenue and Hunakai Street			
1. AM Peak Hour	0.90	* (3)	* (3)
2. PM Peak Hour	1.12	* (3)	* (3)

- 
1. V/C, Volume of Capacity Ratio of Intersection
  2. LOS rating based on average vehicle delay time in seconds (See Appendix A).
  3. V/C Ratio greater than 1.2 for a lane group, HCM methodology unable to calculate delay and LOS. LOS considered to be "F" under these conditions.

FUTURE CONDITIONS WITH THE PROJECT

The Nohona Kahala Professional building is expected to be constructed and fully leased by the early part of 1993. Access to and the proposed project will be through an existing driveway formerly used by the Waiialae Theatre. The driveway is located on the mauka approach of the Waiialae Avenue/21st Street intersection. The driveway has access to a traffic signal at this intersection. Currently, traffic movements from this driveway would occur during the same signal phase as the 21st Street traffic movements.

Traffic Generation

The proposed project is to provide 100,500 square feet of office space. Based on this amount of office space, the traffic generated by the project and the distribution of project traffic inbound and outbound of the project driveway is shown in Table 4.

Table 4

PROJECT GENERATED PEAK HOUR TRAFFIC  
Nohona Kahala Professional Building

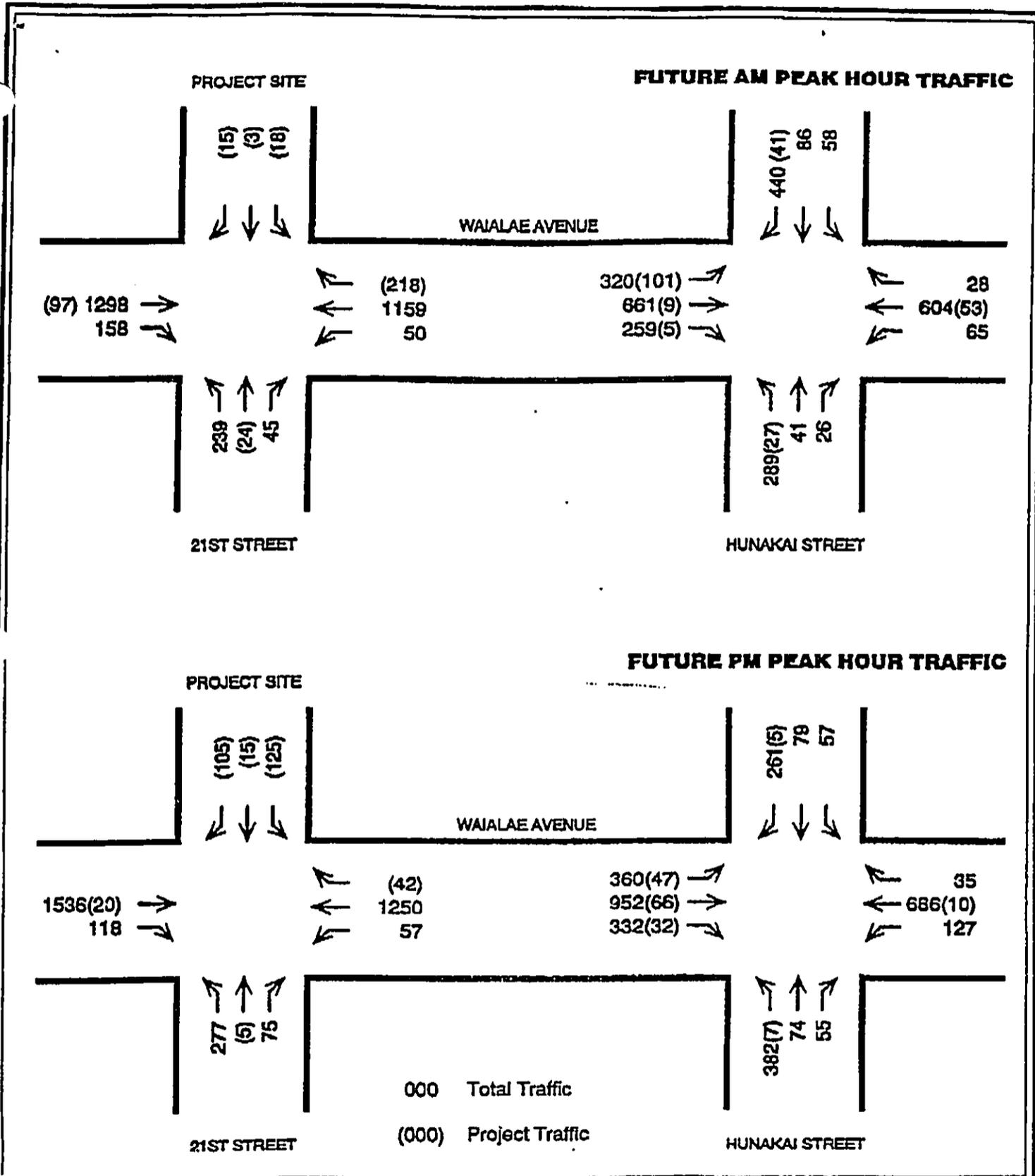
UNITS SQ. FT.	TYPE	VEHICLE TRIPS (1)					
		MORNING (AM) PEAK HOUR		AFTERNOON (PM) PEAK HOUR		PEAK HOUR	
		Total	Inbound	Outbound	Total	Inbound	Outbound
100,500	Office	278	242	36	292	47	245

1. Traffic Generation taken from Trip Generation Manual, Institute of Transportation Engineers, 4th Edition.

\* \* \*

Traffic Assignment

Project generated traffic was assigned to the adjacent roadway system based on the existing traffic volumes. The estimated vehicle trips inbound and outbound of the proposed project as shown above in Table 4 were assigned to intersections of Waiialae Avenue with 21st Street and Hunakai Street. The assigned project traffic and total estimated future generated traffic for 1993 is shown on Figure 3.



FUTURE WEEKDAY AM AND PM PEAK HOUR TRAFFIC VOLUMES

Nohona Kahala Professional Building

The project driveway is located on the makai approach of the Waialae Avenue/21st Street intersection. Outbound traffic assignment at this project driveway during the AM and PM peak hours was the following:

- o 45 percent right or Ewa bound
- o 5 percent through or makai bound
- o 50 percent left or Kokohead bound

Inbound traffic assignment at this intersection was the following:

- o 90 percent right from the Kokohead approach
- o 10 percent through from the makai approach

The 90 percent assignment consisted of 50 percent from the Ewa bound direction and 40 percent from the Kokohead bound direction. The 40 percent Kokohead bound traffic reaches the project driveway and combines with the Ewa bound traffic by making the permitted U-turn movement on the Ewa approach at the Waialae Avenue/Hunakai Street intersection.

The AM and PM outbound traffic assignment at the Waialae Avenue/Hunakai Street intersection on the Ewa approach of the intersection was distributed as follows:

- o 10 percent left or mauka bound
- o 30 percent through or Kokohead bound
- o 10 percent right or makai bound

Inbound traffic assignment at this intersection was as follows:

- o 15 percent left from the makai approach
- o 25 percent through from the Kokohead approach
- o 10 percent right from the mauka approach

#### Future Traffic Conditions

A traffic analysis was completed on the estimated future traffic volumes with the project traffic as shown in Table 5. The analysis was conducted using the present intersection geometrics and traffic signal timing. The results of this capacity analysis is shown in Table 5.

The analysis indicates that the Waialae Avenue/21st Street intersection operations will deteriorate to LOS D and LOS F in the AM and PM peak hour periods, respectively. The analysis identifies that the Kokohead bound through-right traffic movement in the AM and the mauka bound left-through-right movement in the PM are the most critical traffic movements of the intersection.

The Waiialae Avenue/Hunakai Street intersection continues to operate at LOS F in the AM and PM peak hour periods. However, the analysis indicates that the project traffic increases the volume-to-capacity ratio of the AM period by about ten (10%) percent. This increase is attributed primarily from inbound project traffic. Traffic entering the site from the Kokohead bound direction increases the left turning volume on the Ewa approach of the intersection. These vehicles must perform the U-turn movement to access the project driveway. The analysis indicates that the project traffic in the PM period increases the volume to capacity ratio only about five (5%) percent. This is considered a negligible increase.

Table 5

1993 FUTURE CAPACITY ANALYSIS WITH PROJECT

INTERSECTION	V/C (1)	LOS (2)	DELAY (2) (Seconds)
Waiialae Avenue and 21st Street:			
1. AM Peak Hour	0.93	D	35.70
2. PM Peak Hour	1.19	* (3)	* (3)
Waiialae Avenue and Hunakai Street			
1. AM Peak Hour	1.00	* (3)	* (3)
2. PM Peak Hour	1.18	* (3)	* (3)

- 
1. V/C, Volume of Capacity Ratio of Intersection
  2. LOS rating based on average vehicle delay time in seconds (See Appendix A).
  3. V/C Ratio greater than 1.2 for a lane group, HCM methodology unable to calculate delay and LOS. LOS considered to be "F" under these conditions.

\* \* \*

Overall, the project generated traffic has very minor impacts on the future traffic conditions of the Waiialae Avenue/Hunakai Street intersection.

### Mitigation Measures

In order to mitigate the effects of the project on traffic conditions at the Waiialae Avenue/Hunakai Street intersection, the following measures are appropriate:

1. An additional lane could be added to the 21st Street approach of the intersection. The lane could be modified to include one exclusive left turn lane and one combined left-through-right lane.
2. An additional signal phase could be added for the project driveway so that traffic movements on the mauka and makai approaches would be separated. The separate signal phases would provide a protected movement of the left, through, and right traffic from each street without any opposing traffic.

A traffic analysis was performed with these two modifications to the Waiialae Avenue/Hunakai Street intersections. The results of this analysis is shown in Table 6. The existing condition of the stop signal control for makai bound traffic at this intersection will continue to remain with the modified intersection.

The analysis indicates that the intersection can operate with a LOS of C and B in the AM and PM peak periods respectively, with the intersection modifications. In comparison to the future traffic conditions without the project, the analysis indicates that the intersection will operate with relatively no impact to overall future traffic flow conditions. This conclusion is based on the assumption that intersection improvements are implemented.

Although the project traffic was indicated by the analysis to have very minor impacts to the Waiialae Avenue/Hunakai Street intersection, several potential intersection modifications were investigated relative to improving overall traffic conditions at this intersection.

1. On the makai approach, an exclusive right lane is striped to the existing intersection. Furthermore, an exclusive left turn lane and an exclusive left-through lane is striped to the approach.
2. On the mauka approach, an exclusive left-through lane and an exclusive right-through lane is striped to the approach.
3. The signal phases for the mauka/makai approaches could be separated to minimize conflicts with the double left turn movement.

With these minor intersection modifications, a traffic analysis of the Waiialae Avenue/Hunakai Street intersection was performed. The results of this analysis are shown in Table 6.

The analysis indicates the intersection can operate with a LOS of D in the AM and PM peak hours with intersection improvements.

Table 6  
1993 FUTURE CAPACITY ANALYSIS SUMMARY  
WITH PROJECT AND INTERSECTION IMPROVEMENTS

INTERSECTION	V/C (1)	LOS (2)	DELAY (2) (Seconds)
Waiialae Avenue and 21st Street:			
1. AM Peak Hour	0.80	C	16.60
2. PM Peak Hour	0.87	B	14.70
Waiialae Avenue and Hunakai Street:			
1. AM Peak Hour	0.78	D	26.60
2. PM Peak Hour	0.89	D	34.80

WITHOUT PROJECT

INTERSECTION	V/C (1)	LOS (2)	DELAY (2) (Seconds)
Waiialae Avenue and 21st Street:			
1. AM Peak Hour	0.86	C	21.60
2. PM Peak Hour	0.91	B	13.60
Waiialae Avenue and Hunakai Street:			
1. AM Peak Hour	0.90	* (3)	* (3)
2. PM Peak Hour	1.12	* (3)	* (3)

- 
1. V/C, Volume of Capacity Ratio of Intersection
  2. LOS rating based on average vehicle delay time in seconds (See Appendix A).
  3. V/C Ratio greater than 1.2 for a lane group, HCM methodology unable to calculate delay and LOS. LOS considered to be "F" under these conditions

## RECOMMENDATIONS

Based on the traffic analysis performed in this report, the following recommendations are proposed in order to accommodate the project traffic on the existing roadway system.

Intersection modifications are necessary on the Waiialae Avenue/21st Street intersection to accommodate the project traffic. The existing condition of the stop sign control for makai bound traffic continues to operate with the intersection modifications.

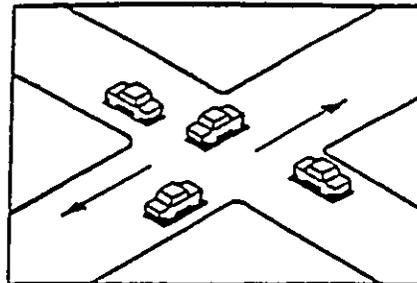
1. An additional lane should be provided on the makai approach of the intersection. The new laneage for the approach should consist of one exclusive left turn lane and one combined left-through-right lane. The additional lane could be provided by widening several feet within the existing right-of-way and by restricting parking for a short distance along the Kokohead side of 21st Street.
2. The makai/mauka bound approaches of the intersection should operate during separate signal phases. This modification does not affect the LOS of the makai approach provided that modification one is completed.

Intersection modifications do not appear to be necessary on the Waiialae Avenue/Hunakai Street intersection to accommodate the project traffic. However, potential intersection improvements are suggested in this report as follows:

1. The laneage on the makai approach of the intersection should be restriped to provide an exclusive left turn lane, a shared left-through lane, and an exclusive right turn lane. These modifications could be provided by restriping the existing pavement.
2. The laneage on the mauka approach should be restriped to provide a left-through lane and a right-through lane.
3. The makai/mauka bound approaches of the intersection should operate on separate signal phases. This modification improves the LOS of the makai approach provided that modification one is completed.

**LEVEL OF SERVICE "A" -  $V/C = 0$  TO  $0.60$**

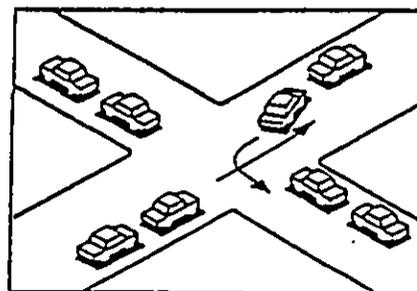
Describes operations with very low delay, i.e., less than 5 seconds per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.



LOS 'A'

**LEVEL OF SERVICE "B" -  $V/C = 0.61$  TO  $0.70$**

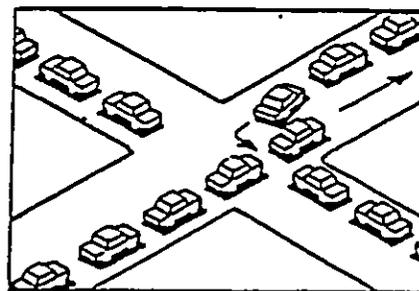
Describes operations with delays in the range of 5 to 15 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS "A", causing higher levels of average delay.



LOS 'C'

**LEVEL OF SERVICE "D" -  $V/C = 0.71$  TO  $0.80$**

Describes operation with delay in the range of 15 to 25 seconds per vehicle. Occasionally vehicles may wait more than one red signal phase. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.



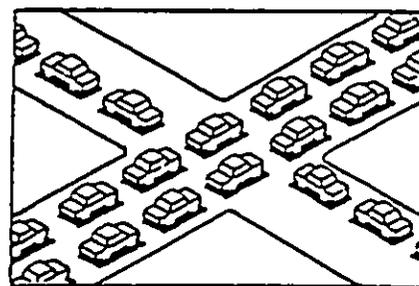
LOS 'D'

**LEVEL OF SERVICE "E" -  $V/C = 0.91$  TO  $1.00$**

Describes operations with delay in the range of 25 to 40 seconds per vehicle. At LOS "D", the influence of congestion becomes more noticeable. Many vehicles stop, and the proportion of vehicles not stopping declines. Noticeable numbers of vehicles fail to clear signal during the first green phase.

**LEVEL OF SERVICE "F" -  $V/C$  GREATER THAN  $1.00$**

Describes operations with delay in excess of 60 seconds per vehicle. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection.



LOS 'F'

SOURCE: Highway Capacity Manual, 1985.



SIGNALIZED INTERSECTION  
LEVEL OF SERVICE DIAGRAM

APPENDIX

A

EXHIBIT F



110  
110  
110



YAHIKU ASSOCIATES, INC.  
1314 South King Street Suite 411  
HONOLULU, HAWAII 96814  
Phone 538-7038  
FAX 531-8781

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

OCCUPANT LOAD = SEWER and WATER: (OFFICE)

$$100,000 \text{ SF} \div 6 \text{ FLRS} = 16,666 \text{ SF}$$

$$13,330 \text{ SF/FLR} \div 1000 = 13.3 \times 7 = 93 \text{ PER FLR.}$$

$$93 \div 2 = 46.5 \text{ ASSUME } \frac{1}{2} \text{ MALE AND } \frac{1}{2} \text{ FEMALE.}$$

(3) WATER CLOSETS, 1 URINAL 2 LAVATORIES = MALE

(3) WATER CLOSETS, 2 LAVATORIES = FEMALE

MIN. REQUIREMENT FOR TOILET FACILITIES PER FLR.

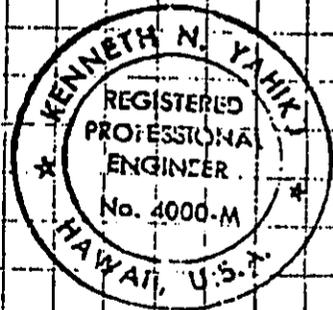
$$\text{FIXTURE UNIT PER FLOOR} = 34 \text{ FU OR } 42 \text{ GPM}$$

$$34 \text{ FU} \times 6 \text{ FLR} = 204 \text{ FU OR } 90 \text{ GPM}$$

$$90 \text{ GPM @ } 6 \text{ MIN DURATION} = \underline{\underline{5,400 \text{ GALS PER}}}$$

DAY FLOW

\*BASED ON UNIFORM PLUMBING CODE REQUIREMENTS\*  
FOR FIXTURES



DOCUMENT CAPTURED AS RECEIVED

Uniform Plumbing Code

DOCUMENT CAPTURED AS RECEIVED

Type of Building or Occupancy <sup>a</sup>	Water Closets (Fixtures per person)	Urinals <sup>b</sup> (Fixtures per person)	Lavatories (Fixtures per person)	Bathubs or Showers (Fixtures per person)	Drinking Fountains <sup>c</sup> (Fixtures per person)
Dwellings <sup>a</sup> Single Dwelling Multiple Dwelling or Apartment House	1 per dwelling 1 per dwelling or apartment unit	-----	1 per dwelling 1 per dwelling or apartment unit	1 per dwelling 1 per dwelling or apartment unit	-----
Hospitals Waiting Room For employee use	1 per room Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	----- 1 per 50	1 per room Male Female 1 per 40 1 per 40	-----	1 per 75 <sup>d</sup>
Hospitals Individual Room Ward Room	1 per room 1 per 8 patients	-----	1 per room 1 per 10 patients	1 per room 1 per 20 patients	----- 1 per 75 <sup>d</sup>
Industrial <sup>a</sup> Warehouses Workshops, Foundries and similar establishments (for employee use)	Male Female 1:1-10 1:1-10 2:11-25 2:11-25 3:26-50 3:26-50 4:51-75 4:51-75 5:76-100 5:76-100 Over 100, add 1 fixture for each additional 30 persons	-----	Up to 100, 1 per 10 persons Over 100, 1 per 15 persons <sup>a</sup>	1 shower for each 15 persons exposed to excessive heat or to skin contamination with poisonous, infectious, or irritating material.	----- 1 per 75 <sup>d</sup>
Institutional—other than Hospitals or Penal Institutions (on each occupied floor)	Male Female 1 per 25 1 per 20	1 per 50	Male Female 1 per 10 1 per 10	1 per 8	1 per 75 <sup>d</sup>
Institutional—other than Hospitals or Penal Institutions (on each occupied floor)—for employee use	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
Office or Public Buildings	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 4:56-80 4:56-80 5:81-110 5:81-110 6:111-150 6:111-150 Over 150, add 1 fixture for each additional 40 persons	-----	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-60 3:36-60 4:61-90 4:61-90 5:91-125 5:91-125 Over 125, add 1 fixture for each additional 45 persons	-----	1 per 75 <sup>d</sup>
Office or Public Buildings For employee use	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----
Penal Institutions— For employee use	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	1 per 75 <sup>d</sup>
Penal Institutions— For prisoner use	1 per cell	-----	1 per cell	-----	1 per cell block floor 1 per exercise room
Exercise Room	1 per exercise room	-----	1 per exercise room	-----	-----
Restaurants, Pubs and Lounges <sup>a</sup>	Male Female 1:1-50 1:1-50 2:51-150 2:51-150 3:151-300 4:151-300 Over 300, add 1 fixture for each additional 200 persons	1:1-150 Over 150, add 1 fixture for each additional 150 males	Male Female 1:1-150 1:1-150 2:151-200 2:151-200 3:201-400 3:201-400 Over 400, add 1 fixture for each additional 400 persons	-----	-----
Schools—For staff use All schools	Male Female 1:1-15 1:1-15 2:16-35 2:16-35 3:36-55 3:36-55 Over 55, add 1 fixture for each additional 40 persons	1 per 50	Male Female 1 per 40 1 per 40	-----	-----

154

UNIFORM PLUMBING CODE

MINIMUM PLUMBING FACILITIES

155

DOCUMENT EDGE CUT OFF

2/4/91

DIVISION OF WASTEWATER MANAGEMENT  
City and County of Honolulu

57/31

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

RECEIVED  
DIV. WWM  
JAN 30 2 31 PM '91  
PUBLIC SERVICE SECTION

PLEASE PRINT

PART A - TO BE FILLED BY APPLICANT

1. Project Name: Nohona Kahala Commercial Bldg.
2. Address or Location: Waialae Avenue
3. Tax Map Key: 3-3-12: Portion of 29
4. Type Development: PD-H  Cluster  Subdiv.   
Apt.  Other Re-Zoning R-5 To B-2
5. Total No. of Units 1 (Give breakdown below)  
Studio  1 Bdrm.  2 Bdrm.  3 Bdrm.   
4 Bdrm.  Other:
6. Sewer Connection Work Desired: (Give length, size, depth, etc.)  
Existing Connection
7. Approximate Date Connection is Required: 1991
8. Number and Type of Existing Structures on Property: 0  
(Check One: Structures to Remain  To be Demolished
9. Remarks: Proposed Re-Zoning From R-5 To B-2  
Approx. 700,000 sq. ft. Bldg Lot  
39,223
10. Information provided By: (MAILING ADDRESS)  
Name: Leonard McMullin Date: 1-30-91  
Firm: Hale Kulana Corp. Phone: 734-2231  
Address: 1123 11th Ave #102 Hon. 96816  
Street City Zip Code

PART B - TO BE FILLED BY DIVISION OF WASTEWATER MANAGEMENT

1. Present Zoning: \_\_\_\_\_ General Plan: \_\_\_\_\_
2. Sewers: Adequate  Inadequate  Not Available   
Other: \_\_\_\_\_
3. Charges: Yes  No   
a. Sewer Assessment  \_\_\_\_\_ sq. ft.... \$ \_\_\_\_\_  
Rate Area  
b. Sewer Connection ..... \$ \_\_\_\_\_  
c. Total Estimated Charge ..... \$ \_\_\_\_\_
4. Remarks: \_\_\_\_\_
5. Application:  
Approved: A. Saavedra, Jr. Date 1-31-91  
(Valid for One Year After Date of Approval)  
Not Approved: \_\_\_\_\_ Date \_\_\_\_\_

EXHIBIT G

C

O

O

**OWNERSHIP HISTORY  
OF  
SUBJECT PROPERTIES**

**HISTORICAL ENVIRONMENTAL EXAMINATION**

TMK: 1-3-3-12-1,22,24,28,29,48,50

NOHONA KAHALA DEVELOPMENT  
WAIALAE KAHALA PARTNERS INC.

This historical examination of ownership and use produced no known incidents of use of the sites for (a) landfill, or for the storage (in underground tanks or otherwise) of hazardous materials; (b) nor any environmentally hazardous materials or toxic substances otherwise placed, located, held, manufactured or stored on, under or within the properties; nor will we utilize ( Or produce as a by-product ) any environmentally-hazardous materials in the conduct of our business on the properties.

The examination utilized: a)oral history, b)government record, tax record, Hawaii State Archaeologist, Department of Commerce and Consumer Affairs, U.S. Army Corps of Engineers, State Dept. of Health, Environmental Permits Branch, State Tax Office records.

Following is a chronological history of ownership and use compiled from the sources noted.

HISTORY OF OWNERSHIP

TMK: 3-3-12-PARCEL 1 and PARCEL 29:

<u>DATE</u>	<u>DESCRIPTION</u>	<u>SOURCE</u>	<u>Uses</u>
9/30/15	Hawaiian Land Co. Ltd. to <u>George F. Straub</u> Instrument 85708 Bk 435 p 63 10.785 Acs.	State Tax Office History Sheet	
8/25/17	George F. Straub to <u>Guy C. Milnor</u> 10.785 Acs.	State Tax Office History Sheet Field Book/Bureau of Conveyances	
5/02/18	Guy C. & Nell P. Milnor to <u>Bishop Trust Co., Ltd.</u> Bk 498 p 299 10.785 Acs.	State Tax Office History Sheet Field Book/Bureau of Conveyances	
6/14/18	Bishop Trust Co., Ltd. to <u>Ocean View Ass'n, Ltd.</u> Bk 500 p 3 10.785 Acs.	State Tax Office History Sheet Field Book/Bureau of Conveyances	
9/22/26	Ocean View Cemetery Ass'n. Ltd. to <u>Tsen Kong</u> Bk 840 p 459 10.632 Acs.	State Tax Office History Sheet Field Book/Bureau of Conveyances	

4/03/35	Tsen Kong to <u>Leonard Y. K. Fong, Receiver</u> Instrument 66844 Bk 1273 p 478 9.742 Acs.	State Tax Office History Sheet Field Book/Bureau of Conveyances
6/25/35	Leonard Y. K. Fong to <u>Leong Yee, Tr.</u> Instrument 84040 Bk 1351 p 52 9.742 Acs	State Tax Office History Sheet Field Book/Bureau of Conveyances
12/3/36	<u>Leong Yee, Tr. to Ocean View Cemetery, Ltd.</u> Instrument 84041 Bk 1351 p 52 9.742 Acs	State Tax Office History Sheet Field Book/Bureau of Conveyances
	From 1915 to 1936 some square footage was deeded out of Parcel #1 reducing it in size from the original 10.785 Acs. to 9.742 by 1936	Cemetery on Section of Prop Now identified as Parcel 27 Not included in this purchase
	There were also additions:	Business Registration DCCA and Senator Hiram Fong
01/21/37	<u>Kaimuki Land Co., Ltd. to Ocean View Cemetery</u> <u>Ass'n. Ltd, Instrument 85708 Bk 1356 p 56</u> <u>1.165 Acs. (Parcel 29)</u>	
11/26/37	<u>Bishop Estate to Ocean View Cemetery, Ltd.</u> Instrument 95189 .097 Acs.	
09/15/48	<u>J. W. Achuck to Ocean View Cemetery, Ltd.</u> Instrument 53151 .174 Acs.	

This was a 50' Right of Way  
Is now know as parcel #1

02/02/55 Parcel 29 dropped into parcel 1

03/30/55 Drive In Theatre - 3/30/55-  
1/9/86 Swap Meet approx last  
2 yr Concurrent w/Drive In Use  
1986-87 & Part of 1988  
Driving Range

08/02/55 State Tax Office  
History Sheet  
Field Book/Bureau  
of Conveyances

03/05/68 Merger: Royal Theaters, Ltd, with and into Royal  
Development Company, Ltd.

02/02/68 Business Registration  
DCCA & Senator Hiram  
Fong

02/02/68 From 6.043 Acs., .424 Acs. dropped into road.  
Bk 8735 p299, leaving balance of 5.619 Acs.

After considerable research and dilligent investigation, to the best of our knowledge, TMK 1-3-3-12-parcels 1 and 29 were never used for the following purposes.

1. No Pre-contact burial. Reference: Joyce Bath, Archaeologist, State Department of Land and Natural Resources, Parks and Recreation, Historic Sites. State has no record of ancient burial site located on subject property and has no reason to believe it was ever used as one due to its location, its prior use as a quarry, its history of ownership and use. (As per discussion in November 1988)  
Phone: 548- 7460, 1151 Punchbowl, Honolulu, Hi. 96813.
2. No Industrial use. Reference: Department of Commerce and Consumer affairs. (8/24/89)

3. No Military use. Reference: Mike Taylor, Pacific Ocean Division, U.S. Army Corps of Engineers, Real Estate Division, Building 230, Fort Shafter, Attention: CEPOD-RE-C, Honolulu, Hawaii 96858-5440. (8/24/89) Pending Confirmation.
4. No Land Fill. Reference: Mr. Al Dung, State Department of Health, "Environmental Permits Branch", 645 Halekauwile St., 3: Fl., Honolulu, Hawaii. Phone: 548-6410 (8/23/89)

DOCUMENT CAPTURED AS RECEIVED

JAN 30 '91 15:59 P. M. TOWILL CORP. 808 842-1937

P. 1

**R. M. TOWILL CORPORATION**  
Facsimile No. (808) 842-1937  
420 Waiakamilo Road, Suite #11  
Honolulu, Hawaii 96817 • (808) 842-1193

TO: HALE KULANI CORP.

DATE: 1-30-91

ATTN: LEONARD McMILLIN

FROM: Craig Luke

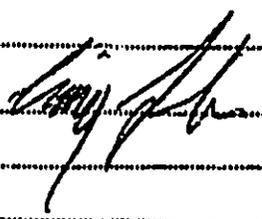
NO. OF PAGES: 1  
(INCLUDING THIS SHEET)

PROJECT: NOHONA KAHALA

RMTC JOB NO.: \_\_\_\_\_  
*Please contact our office should any problems occur with transmission or receipt of facsimile.*

**MESSAGE:**

In regard to the commercial property at the Old Waiialae Drive In site, we feel that the increase in runoff from the development of this property will not cause any drainage problems with proper drainage system design.





NO DOCUMENTS

EXHIBIT H

