

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

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DEPUTY DIRECTOR

December 13, 1993

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL
93 DEC 13 P 3 05
RECEIVED

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

Dear Mr. Choy:

Subject: Final Environmental Assessment (Negative Declaration) for
Vancouver Drive Housing Project, Tax Map Key: 2-8-16: 27 & 29,
Honolulu, Oahu, Hawaii

The Department of Housing and Community Development has reviewed the Final Environmental Assessment (EA) for the subject project and wishes to submit a negative declaration. Please publish the notice of availability for this project in the December 23, 1993 OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final EA. Please contact Mr. Jason Ching at 523-4368 if you have any questions.

Sincerely,

Gail Kaito
E. JAMES TURSE
Director

Enclosures

DEC 23 1993

1993-12-23-0A-FAA-

Vancouver Drive Housing Project

ENVIRONMENTAL ASSESSMENT

ADMINISTRATIVE INFORMATION

A. Name of Project: Vancouver Drive Housing Development

B. Type of Action: Applicant
 Agency

Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th floor
Honolulu, Hawaii 96813
E. James Turse, Director

C. Approving Agencies:

Planning Department
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813
Robin Foster, Director

State of Hawaii
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

D. Environmental Assessment Prepared by:

Department of Housing and Community Development
July 1993

DESCRIPTION OF PROPOSED ACTIONS

A. Proposed Actions: Single Activity
 Aggregation of activities
 Multi-year Activities

ENVIRONMENTAL ASSESSMENT PREPARED FOR COMPLIANCE WITH HUD REQUIREMENTS AND ENVIRONMENTAL REVIEW REQUIREMENTS OF OTHER LEVELS OF GOVERNMENT AS FOLLOWS:

A. State of Hawaii, Supplemental Form EA-S-SOH
B. Guam, Supplemental Form EA-S-Guam
C. Northern Mariana Islands, Supplemental Form EA-S-NMI
D. Trust Territories of the Pacific Islands, Form EA-S-TTPI
E. American Samoa, Supplemental Form EA-S-ASG

FINDINGS AND CONCLUSIONS RESULTING FROM THE ENVIRONMENTAL REVIEW

A. Environmental Findings

- Finding of No Significant Impact on the Environment (FONSI).
 An Environmental Impact Statement is required.

B. Agencies/Interested Parties Consulted
(See Appendix A.)

C. Publication Notification

1. Finding of No Significant Impact on the Environment and Request
Release of Funds (Combined Notice)

- a. Date FONSI/RROF published in local Newspaper _____
b. Last day for recipient to receive comments _____
c. Last day for HUD to receive comments _____
d. Date FONSI transmitted to Federal, State, or local
government agencies of interested groups or individuals _____
e. Date HUD released grant conditions _____

2. Negative Declaration (Hawaii Only)

- a. Date Negative Declaration published in OEQC Bulletin _____
b. Date on which 60-day waiting period expires _____
c. Documentation attached: Yes No

PROPOSED PROJECT

The Department of Housing and Community Development (DHCD) is proposing to acquire two adjoining properties with a total area of 26,700 square feet on Vancouver Drive in the University area (see location map, of Exhibits 1 and 2). Both properties are vacant and were listed for sale in the Multiple Listing Service. Federal Community Development Block Grant (CDBG) and possibly HOME program funds will be used for acquisition and development of the project. Envisioned is a two- to three-story multi-family building with 40-60 units with one level of parking below. The units are proposed to be rented at affordable rates.

An advisory committee has been formed to assist DHCD in planning the subject project. The committee is comprised of representatives from the Manoa community, including the Manoa Neighborhood Board, elected officials, representatives from the University of Hawaii (UH) at Manoa Student Housing Office and Center for Adults Returning to Education (CARE), Malama O Manoa, Affordable Housing Alliance, and the State Department of Human Services JOBS Program. Issues such as unit management, building security and common area facilities will be dealt with by the committee during the planning stages. The feasibility of incorporating the driveway of the abutting property into the project will also be explored.

NEED FOR PROJECT

Based on input from the advisory committee and other public and private officials, the DHCD is proposing to develop housing for nontraditional students. More specifically, tenants who are low-income and obtaining General Education Diplomas (GED) and undergraduate college degrees would receive priority if they are single parents, physically and/or emotionally challenged, homeless, transitional, senior citizens, veterans, or any combination of these. Graduate students that satisfy the above priorities may be considered if space is available.

There is an overall need on Oahu to provide affordable rental housing units. In recent years, there has been a growing number of nontraditional students who, for various social and economic reasons, choose to return to formal education after an absence of a year or more. These students may be married, separated, divorced, or widowed; supporting dependents (children, spouse/significant other, parents); veterans; elderly recipients of high school GED; or any combination of these. This trend is not unusual as approximately 45 percent of students enrolled in higher education nationwide may now be described as nontraditional students (does not include GED students).

Currently, there are very few programs designed to assist nontraditional students. Two such programs are the UH Center for Adults Returning to Education (CARE) and the State-funded Job Opportunities and Basic Skills Training Program (JOBS). The CARE program has been in operation since 1989 and provides a centralized information center where UH students can obtain information on services and programs available at UH, such as child care, scholarships and career counseling. The center offers workshops and support groups which are designed for the special needs of the re-entry adult learner. Tuition waivers for full-time, classified and undergraduate students, based on financial need, may be obtained through CARE. Veteran certification and information for federal education benefits and tuition waivers for senior citizen who are bona fide Hawaii residents over 60 years of age are also part of the Center's program. During the 1992-1993 year, the CARE program assisted approximately 18,804 student and professional contacts, including phone calls, appointments, letters and walk-in contacts.

JOBS provides job training and schooling for people receiving Aid for Families with Dependent Children (AFDC). The JOBS program has six units serving Oahu which have been in operation for approximately three years. Combined, they are serving approximately 141 individuals who are attending a post secondary school.

The UH Manoa Student Housing Office houses full-time undergraduate and graduate students (those taking 12 or more credits) in on-campus dormitories. However, nontraditional students tend to attend school on a part-time basis for various reasons and are not eligible for student housing. Currently, this special needs housing group has a great need for assistance that can be served by the implementation of this program.

ALTERNATIVES CONSIDERED

1. No Project

If this project is not implemented, the vacant properties will continue to be marketed and unused. The opportunity to provide much needed affordable housing units for individuals with special needs will not be realized. If the City does not acquire this property, the community may not have an opportunity to participate in the design and development of the property.

2. Alternative Location

The DHCD investigates sites around the island for potential housing projects. Where feasible, the Department attempts to develop those sites to house low-income families or people with special living needs.

The proposed site is considered to be very desirable for prospective clients due to its size, topography, proximity to bus lines, shopping areas, public and private facilities, and immediate availability. The project site is conveniently located to public and private schools, the University of Hawaii at Manoa, child care, commercial areas and public transportation.

3. Alternative Uses

There is a tremendous need for housing of all types on Oahu, particularly for people with special living needs, such as the physically and mentally handicapped, troubled youth, AIDS victims and single parent families. Considering the general character of the area, community and location, some kind of special need housing designed to assist people desiring to improve their living condition through education and job training would be deemed the most appropriate use of the site.

Based on an analysis of the alternatives considered, it is determined that there are no practical alternatives other than to develop the project as proposed at the subject site.

SITE INSPECTION

A site inspection was conducted on January 8, 1993 by Jason Ching, Planner, Laura Teramoto, Planner, and Lorna Aragon, Intern Architect/Planner, all of the Department of Housing and Community Development.

SITE DATA

Tax Map Key:	2-8-16: 27 & 29
Land Owner:	Hawaii Community Foundation, Trust
Trustees:	Bishop Trust Co. Ltd.
Location:	2019 and 2031 Vancouver Dr.

Land Area: 15,000 Square Feet (parcel 27)
11,700 Square Feet (parcel 29)
26,700 Square Feet Total

LAND USE DATA

State Land Use: Urban
Development Plan Designation: Residential
Zoning: R-5 Residential
Existing Uses: Both parcels are vacant.
Flood Zone: Flood Zone X (unshaded) [Area outside of 500 year flood plain]
Special Management Area: Not in SMA
Height Limit: 25'
Street Setback: 2-5 feet on both parcels along Vancouver Drive
Surrounding Uses: Schools, church, multi-family dwellings and single family dwellings.

IMPACT CATEGORIES

The following criteria are used to rate the level of impact the project will have on the various categories:

- 1 - Potentially beneficial impact.
- 2 - No impact anticipated.
- 3 - Minor adverse impacts anticipated.
 - a. Short Term
 - b. Long Term
- 4 - Adverse impact. Requires mitigation.
- 5 - Adverse impact. Requires modification to project/activity.

A. Land Development

1. Conformance with Comprehensive Plans and Zoning

Rating: 4 - Adverse impact. Requires mitigation.

Sources: Department of Land Utilization letter dated May 14, 1993

Department of Public Works letter dated April 27, 1993

Planning Department letter dated April 29, 1993

State Land Use Commission letter dated April 15, 1993

Manoa Neighborhood Board letter dated May 12, 1993

The subject site has the following land use designations:

State Land Use: Urban
Development Plan
Designation: Residential
Zoning: R-5 Residential

The subject property is located in the R-5 Single Family Residential District which does not allow apartments or boarding facilities. The maximum building height in the R-5 District is 25 feet. A three story structure as proposed would likely exceed the height limit.

There is a 2 to 5 foot property line setback along Vancouver Drive.

Improvements fronting the project site will be required in compliance with City standards as well as the Americans with Disabilities Act to make the building accessible.

The DHCD will request City Council approval to waive some of these land use restrictions under the provisions of Section 201E-210 and 46-15.1, Hawaii Revised Statutes (HRS), where necessary to allow development of the proposed project, provided public health and safety standards are met.

2. Compatibility and Urban Impact

Rating: 2 - No impact anticipated.

Sources: Manoa Neighborhood Board letter dated May 12, 1993
Vancouver Drive Advisory Committee Meetings held on May 5, 1993 and June 16, 1993
Site Inspection, January 8, 1993
Department of Land and Natural Resources, State Historic Preservation Division letter dated August 23, 1993

The following are among the concerns raised by elected representatives, residents of the Manoa Valley and Department of Land and Natural Resources, State Historic Preservation Division regarding compatibility and urban impact.

- The John Guild Inn is a registered historic building and represents an architectural style that is truly unique to this area. There are also numerous other older historic homes on Vancouver Drive west of Hunnewell Street.

- The neighborhood character surrounding the proposed project site is single family residential, multi-family boarding houses, institutional and business. A multi-family complex on this site will blend in with the surrounding buildings and uses.
- The project requires the concurrence from DLNR in accordance with Chapter 6E-8, HRS. DLNR will review the design of the project in terms of its character, scale and style to assure that the project blends into the existing residential neighborhood. They would also review to be sure that adequate setbacks and landscaping will be provided between the project and the John Guild Residence.

One of the goals of the project is to be sensitive to surrounding historic buildings and replicate the period architecture and complement the neighborhood.

3. Hazards, Nuisances and Site Safety

Rating: 2 - No impact anticipated.

Source: Site Inspection, January 8, 1993

Hazardous Waste Study prepared by Levine Fricke (Appendix B) dated December 10, 1993

A site investigation revealed no evidence of the presence of thermal or explosive hazards on or near the project site. The site is not located in an airport clear zone. There is no evidence of natural hazards such as geologic faults, flooding, volcanic activity or landslide.

A Phase I site characterization study prepared for the site revealed no evidence of hazardous substances in or near the site.

4. Slope, Erosion and Soil Suitability

Rating: 2 - No impact anticipated.

Source: United States Soil Conservation Service: "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii," August 1972

The U.S. Soil Conservation Service classifies the soil as Tantalus Silty Clay Loam, 8 to 15 percent slopes (TCC). This series consists of well-drained soils formed in volcanic ash and cinders. The surface layer is very dark brown silt loam about 18 inches thick. The subsoil is dark reddish brown very fine sandy loam about 11 inches thick. The substratum is black cinders. Elevations range from 100 to 2200 feet.

This very deep, well-drained soil occurs on moderately sloping uplands. It developed in volcanic ash and material weathered from cinders. The soil is neutral in the surface layer and subsoil. Included are small area of stony soils in the drainageways. Permeability is moderately rapid. Runoff is slow, and the erosion hazard is slight.

5. Energy Consumption

Rating: 2 - No Impact Anticipated

The project will receive electrical and telephone services from the respective utility companies.

6. Noise

Rating: 3 - Minor adverse impacts anticipated (Short Term).
2 - No impact anticipated (Long Term).

Sources: Site Inspection, January 8, 1993

Existing Land Use Map

Short term increases in ambient noise levels resulting from construction related activities are anticipated. The building contractor will be required to comply with Title 11, Department of Health Administrative Rules, Chapter 43, "Community Noise Controls for Oahu" and Chapter 42, "Vehicular Noise Control for Oahu."

A site inspection revealed no evidence of stationary noise sources such as air conditioning units, compressors, industrial machinery or power generating stations which would create excessive noise for project residents.

C. Air Quality

Rating: 3 - Minor adverse impacts anticipated (Short Term).
2 - No impact anticipated (Long Term).

Sources: 1989 Air Quality Assessment for the UH Arena project at the Makai Campus by Barry D. Root and Barry D. Neal

Site Inspection, January 8, 1993

Present air quality in the project area is mostly affected by exhaust from motor vehicles, with carbon monoxide being the most abundant of the air pollutants emitted. No recent air pollutant monitoring data are available for the University area. However, a 1989 Air Quality Assessment for the UH Arena project at the Makai Campus by Barry D. Root and Barry D. Neal made reference to records of carbon monoxide concentrations at the DOH monitoring station in Waikiki, at Kalakaua Avenue, near the intersection with

Saratoga Avenue. The report stated that carbon monoxide concentrations recorded at the Waikiki station "are likely indicative of concentrations that occur at traffic congested locations in the project area due to the relatively short distance between the two locations and the similarity of dispersal conditions." The report also stated, "No exceedances of the State 1-hour or 8-hour AAQS for carbon monoxide were recorded during 1986 and 1987."

Temporary adverse impacts may be caused during construction activities by dust and heavy equipment. However, frequent watering of the site during grading and excavation in accordance with Title 11, Department of Health Administrative Rules, Chapter 60, "Air Pollution Controls," Section 5, "Fugitive Dust," will minimize the release of fugitive dust into the immediate environment.

D. Environmental Design and Historic Values

1. Visual Quality - Coherence, Diversity, Compatible Use and Scale

Rating: 2 - No impact anticipated.

Sources: Site Inspection, January 8, 1993

Manoa Neighborhood Board letter dated May 12, 1993

Department of Land and Natural Resources, State Historic Preservation Division letter dated August 23, 1993

The Manoa Neighborhood Board letter stated that the John Guild Inn is a registered historic building and represents an architectural style that is truly unique to this area. There are also a number of other historic homes on Vancouver Drive west of Hunnewell Street.

Plans for the project will be submitted to the Department of Land and Natural Resources for review in accordance with Chapter 6E-8, HRS, in terms of its character, scale and style to assure that it will blend into the existing neighborhood.

The proposed project will be designed to blend in with surrounding structures and provide the necessary on site parking.

2. Historic, Cultural and Archaeological Resources

Rating: 2 - No impact anticipated.

Sources: Department of Land and Natural Resources, letter dated June 15, 1993.

Department of Land and Natural Resources, State
Historic Preservation Division letter dated May 18,
1993, August 23, 1993 and November 30, 1993.

"An Archaeological Assessment of Two Vancouver Drive
Lots in Manoa Valley, Waikiki, Oahu, Hawaii, TMK: 2-8-
16: 27 & 29" by Scientific Consultant Services dated
October, 1993.

The project site is not listed on the State or National Registers
of Historic Sites, nor has it been nominated for inclusion on said
registers. The Department of Land and Natural Resources (DLNR),
Division of Historic Preservation, has stated that it is unlikely
that there are any significant subsurface archaeological remains
on the site. However, if any archaeological or skeletal remains
are found during construction, the contractor will be required to
stop construction and notify DLNR immediately.

A subsequent letter from DLNR, dated August 23, 1993, stated that
the project will require the Department's concurrence in
accordance with Section 6E-8, HRS, (Appendix A).

It has been noted that the John Guild Residence is located
adjacent to the proposed site at TMK: 2-8-16:28, a property listed
on both the State and National Registers. DLNR will review the
plans for the project when they become available for potential
impact on the existing structure.

An archaeological study was undertaken by Scientific Consultant
Services for the City (Appendix C). DLNR has concurred with the
finding that historic sites are unlikely to be found at these two
previously developed parcels.

E. Socio-Economic

1. Demographic/Community Character Impacts

Rating: 2 - No impact anticipated.

Source: State of Hawaii Data Book, 1992

The proposed project will add roughly 80-145 persons to the Manoa
Community. This is considered a negligible increase to the 23,961
people living within the boundaries of the Manoa neighborhood
board area as of 1989.

Hawaii's population, in general, is getting older. Since 1980,
the median age of Hawaii residents has steadily increased from
28.3 years of age to 32.6 years in 1990. The segment of the
population 18 to 64 years of age contains the majority of the

population. In 1980, this group totaled 612,958, or 63.5 percent, of the total State population of 964,691. By 1990, this group increased to 703,098 and made up 63.4 percent of the total State population of 1,108,229. The 18 to 64 years of age group of the population was the most stable segment of the population during the period of 1980 to 1990 and is expected to continue.

2. Displacement

Rating: 1 - Potentially beneficial impact.

Source: Site Inspection, January 8, 1993

Development of the proposed project will not cause displacement of residents or commercial tenants. The proposed project will make use of parcels which are currently vacant and provide much needed affordable housing.

3. Employment and Income Patterns

Ratings: 1 - Potentially beneficial impact (Short Term).
2 - No impact anticipated (Long Term).

Source: State Department of Business, Economic Development and Tourism letter dated April 23, 1993

The proposed project will result in short term employment in construction related trades during construction of the project.

The project location provides the potential for access to education and job training that could help tenants improve their earning power. A letter from the Department of Business, Economic Development and Tourism (DBED&T) does not provide adverse comments relating to the employment and income patterns in the area.

F. Community Facilities

1. Educational Facilities

Rating: 2 - No impact anticipated.

Source: Department of Education letter dated April 22, 1993

The Department of Education stated that the proposed development will have no enrollment impact on the public schools in the area.

2. Commercial Facilities

Rating: 2 - No impact anticipated.

Sources: Site Inspection, January 8, 1993

Department of Business, Economic Development and
Tourism letter dated April 15, 1993

There are several commercial areas located within close proximity to the project site including Puck's Alley, as well as various banks, shops and restaurants. The Manoa Market Place and Ala Moana Shopping Center are easily accessible by public transportation. The DBED&T letter does not provide adverse comments relating to the businesses in the area.

- 3. Health Care
- 4. Emergency Medical

Rating: 2 - No impact anticipated.

Sources: Site Inspection, January 8, 1993

Existing Land Use Map

The central location of the site enables quick and easy access to most of the major medical facilities on the island, including:

Queens Hospital on Punchbowl Street
Straub Hospital and Clinic on Ward Avenue and King Street

Both of these facilities provide a full range of medical services, including 24-hour emergency service, and are 5 to 10 minutes away from the site. There are also private medical, dental and shiatsu/chiropractic offices in the area.

- 5. Social Services

Rating: 1 - Potentially beneficial impact.

Sources: Department of Human Resources letter dated April 28, 1993

Existing Land Use Map

The project site is conveniently located in close proximity to the University of Hawaii at Manoa, public transportation, area businesses, churches and child care services. Services provided by government social service agencies in such categories as child care, adult assistance and family services are available from the State Department of Social Services and Housing located on Punchbowl Street. Also, on Bethel Street, a public welfare unit offers aid for food, shelter and utility payments.

The Department of Human Resources (DHR) recognizes the shortage of affordable housing options on Oahu and supports this proposal as a means to increase needed single room occupancy housing in Manoa Valley. After completion and occupancy of this project, DHR is

available to provide job training assistance for low income residents or information and referral for any older tenants.

6. Sanitary Sewer and Solid Waste

Rating: 1 - Potentially beneficial impact.

Sources: Department of Public Works letter dated April 7, 1993

Department of Health letter dated May 24, 1993

The Department of Public Works (DPW) indicated that the existing municipal sewer system is inadequate to serve the proposed project. Therefore, a sewer relief line on Metcalf Street will be required to accommodate the sewer flows from the proposed project. These infrastructure improvements will be available to area residents.

The Department of Health suggested that an area for the collection of recyclable material be included in the building.

The Department of Public Works currently provides trash pick-up on Vancouver Drive twice a week from the Honolulu Refuse Collection Yard.

7. Storm Water

Rating: 4 - Adverse impact. Requires mitigation.

Sources: Site Inspection, January 8, 1993

DPW Storm Drainage System Maps

The site inspection and DPW Storm Drainage System Maps revealed that there is no storm water drainage system serving the project site. Storm water appears to run down through the adjacent and lower properties to Seaview Avenue which flows into a storm drain located at the corner of University Avenue and Seaview Avenue.

Drainage improvements will be provided for the proposed site.

8. Water Supply

Rating: 2 - No impact anticipated.

Sources: Board of Water Supply letter dated May 13, 1993

City and County Water Maps

There are individual water laterals serving the two subject parcels. Water service to parcel 27 was terminated on September 19, 1991. The developer has until September 19, 1996 to

reactivate the water service to this parcel free of Water Systems Facilities Charges. Water service to parcel 29 was terminated on July 11, 1980. If this water service is activated, the City will be required to pay the prevailing Water System Facilities Charges.

The availability of water will be confirmed when the building permit application is submitted for review and approval. If a three-inch or larger meter is required, construction drawings showing the installation of the meter should also be submitted for review and approval by the Board of Water Supply (BWS). The City and County Water Map for the areas shows that there is a 20" water main located on Vancouver Drive.

The proposed project is subject to BWS cross-connection control requirements prior to the issuance of the building permit application.

9. Public Safety

a. Police

Rating: 2 - No impact anticipated.

Source: Honolulu Police Department letter dated April 23, 1993

Police service is available for the proposed project. The Police Department does not expect a substantial increase in calls for police service as a result of the proposed project.

b. Fire

Rating: 2 - No impact anticipated.

Source: Honolulu Fire Department letter dated May 3, 1993

Response to a major fire at the project site would come from the McCully Fire Station (engine and ladder company), the Manoa Fire Station (engine company) and the Waikiki Fire Station. Backup would be provided by the Makiki Fire Station (engine company) and the Pawa'a Fire Station (engine, ladder and rescue company). As mandated by the Fire Department, all access for fire apparatus, water supply and building renovation shall be in conformance with existing fire codes and standards.

10. Open Space, Recreation

Rating: 3 - Minor Adverse Impacts

Sources: Department of Parks and Recreation letter dated May 18, 1993

Department of Parks and Recreation "Index of Parks and Facilities," January 1993

Manoa Neighborhood Board letter dated May 12, 1993

The proposed project is subject to compliance with the City's Park Dedication Ordinance No. 4261. It is recommended that the project comply with the Ordinance by providing a private park with recreational facilities suitable for single-occupancy type of development. The project will include landscaped outdoor areas and possibly child care and lounge facilities. DHCD will consult with the Departments of Parks and Recreation and Land Utilization on appropriate recreational facilities. If the planned amenities are determined not to meet park dedication requirements, exemptions to the requirements may be requested from the City Council.

The nearest public recreation areas are the Kamanele Square Urban Park and Manoa Valley District Park which are located approximately four-blocks and 1 mile from the project site respectively. The 2.04 acre Kamanele Square Urban Park contains one comfort station/pavilion, one tree house with slide and children's play apparatus. The 29.46-acre Manoa District Park contains a large recreation building with a kitchen, arts and crafts room, multiple-purpose/meeting room, office and maintenance storage room; a gymnasium with weight lifting equipment, stage/physical fitness area, pool, changing/shower facilities, two lighted basketball courts, two lighted volleyball courts, four lighted tennis courts, practice tennis court, baseball field, three softball fields, multi-purpose field, children's play apparatus, 92 community garden plots, 327 parking stalls and eleven handicapped stalls.

11. Transportation

Rating: 3 - Minor adverse impacts anticipated.

Sources: Department of Transportation Services letter dated May 26, 1993

Department of Transportation letter dated April 23, 1993

Planning Department letter dated April 29, 1993

Manoa Neighborhood Board letter dated May 12, 1993

Councilmember Morgado's letter dated May 10, 1993

1991 Street Index, City and County of Honolulu

Site Inspection, January 8, 1993

Traffic Impact Assessment Report for Vancouver Drive
Housing Project by Pacific Planning & Engineering,
Inc., December 9, 1993

The State Department of Transportation (DOT) stated that the proposed project will have no significant impact on State highway facilities. However, the local road system in the area will probably be affected with the increase in residential units.

The Department of Transportation Services (DTS) stated that there is a 2 to 5 foot road widening setback on Vancouver Drive along the frontage of both parcels. Off-street parking should be provided in accordance with the Land Use Ordinance.

The block is located in one of the original subdivisions, contains no paved sidewalks, and has very little on-street parking in the vicinity of the proposed project. The area is heavily congested whenever the University of Hawaii is in session.

Due to the proximity to the University of Hawaii, public transportation and area businesses, parking for bicycles, mopeds and motorcycles will be considered.

Appropriate measures will be taken to help alleviate traffic congestion within the area, especially during construction.

The project is located close to bus lines on University Avenue and Metcalf, making public transportation easily accessible to project residents.

Vancouver Drive, from University Avenue to McKinley Street, is in private ownership according to the City's 1991 Street Index.

A traffic impact assessment was undertaken by Pacific Planning & Engineering, Inc. for the City. The study indicated that although the project will add additional traffic to Vancouver Drive, the incremental increase is minimal and, therefore, the project will have no significant impact on the future traffic flow in the project area (Appendix B).

G. Natural Features

1. Water Supply

Rating: 2 - No Impact Anticipated

Sources: Board of Water Supply, "Oahu Water Plan," July 1982

Site Inspection, January 8, 1993

The proposed project is located in the Honolulu Water Use District which encompasses 88 square miles from Makapuu point to Moanalua. The Honolulu Water Use District is reliant on water developed in other water use districts and imported via the BWS's transmission system.

The proposed project is not located near any streams, lakes, rivers or wells and does not involve the discharge of wastewater into the ground which could affect water quality or yields.

2. Floodplain Management

Rating: 2 - No impact anticipated.

Sources: Department of the Army letter dated April 22, 1993

Federal Emergency Management Agency, "Flood Insurance Rate Map, City and County of Honolulu," Panel No. 150001 0120 C, September 4, 1987

The project site is located in flood zone X (unshaded), an area determined to be outside of the 500-year floodplain (see FIRM Map, Exhibit 3). According to the Department of the Army, a permit under the Clean Water Act will not be required.

3. Wetlands Protection

Rating: 2 - No impact anticipated.

Source: Site Inspection, January 8, 1993

The proposed project is located in an area which has been in urban use for an extended period of time and there are no wetlands or other important wildlife in the area.

4. Coastal Zone Management

Rating: 2 - No Impact Anticipated

Source: Chapter 205A, Hawaii Revised Statutes

A review indicated that the proposed project does not conflict with the objectives of the Hawaii Coastal Zone Management Program as provided in Chapter 205A, HRS.

5. Unique Natural Features
6. Vegetation and Animal Life

Rating: 2 - No impact anticipated.

Source: Site Inspection, January 8, 1993

The project site and surrounding area has been in urban use for an extended period of time. As the entire area has been developed, there are no endangered and threatened species or unique natural features in the project area.

7. Agricultural Lands

Rating: 2 - No impact anticipated.

Source: Site Inspection, January 8, 1993

The proposed project is in an area which has been in urban use for an extended period of time. The proposed project will not result in the conversion of agricultural lands to nonagricultural uses.

DETERMINATION

It is determined that the proposed actions will have no significant impact on the human environment and that an Environmental Impact Statement is not required. The reasons supporting this determination are as follows:

1. The number of units to be emplaced by the proposed project is far below the threshold (2,500 units) which would require the preparation and dissemination of an environmental impact statement under the provisions of Section 58.37, Federal Register, Volume 47, No. 70 dated April 12, 1982.
2. The proposed project will not generate a significant amount of additional vehicular traffic which would result in an increase in vehicle generated air pollution or ambient noise levels.
3. Short term increases in ambient noise levels generated by construction activities will be mitigated through compliance with Title 11, Department of Health Administrative rules, Chapter 43, "Community Noise Controls for Oahu."
4. The escape of fugitive dust into the environment will be mitigated by frequent watering of the project site.
5. Development of a low density apartment building will require waivers from the R-5 zoning. DHCD will seek exemptions to allow development of the project.
6. The project is located in an area that has long been urbanized and is expected to have no significant archaeological remains. However, should such remains or artifacts be found, construction activities will be stopped and DLNR will be notified immediately.
7. All infrastructure, with the exception of municipal sewer, is available and adequate to support the proposed project. The necessary

improvements to the wastewater system to accommodate the proposed project will be included in the project plans. The availability of water will be confirmed when the building permit application is submitted for review and approval.

8. Community services, including social services, public transportation, medical care, police and fire protection, are available to project residents.
9. The project will provide approximately 25 parking stalls and one loading space for the project. The rate of car ownership among the proposed project tenants is expected to be low. An exemption from residential parking requirements will be requested pursuant to Chapter 201E-210, HRS.
10. The project will have on-site recreation amenities and several parks are located in close proximity to the project. If the planned amenities are determined not to meet park dedication requirements, exemptions to the requirements may be requested pursuant to Chapter 201E-210, HRS.
11. The proposed project is located in an area that has been in urban use for an extended period of time and will have no impact on fish and wildlife resources, vegetation, natural features and views.
12. The proposed project will have the positive benefits of providing affordable rental units with programming to help the residents improve their social and economic situations.

A negative declaration will be published in the Office of Environmental Quality Control Bulletin and a Finding of No Significant Impact will be published in a newspaper of general circulation.

EXHIBITS

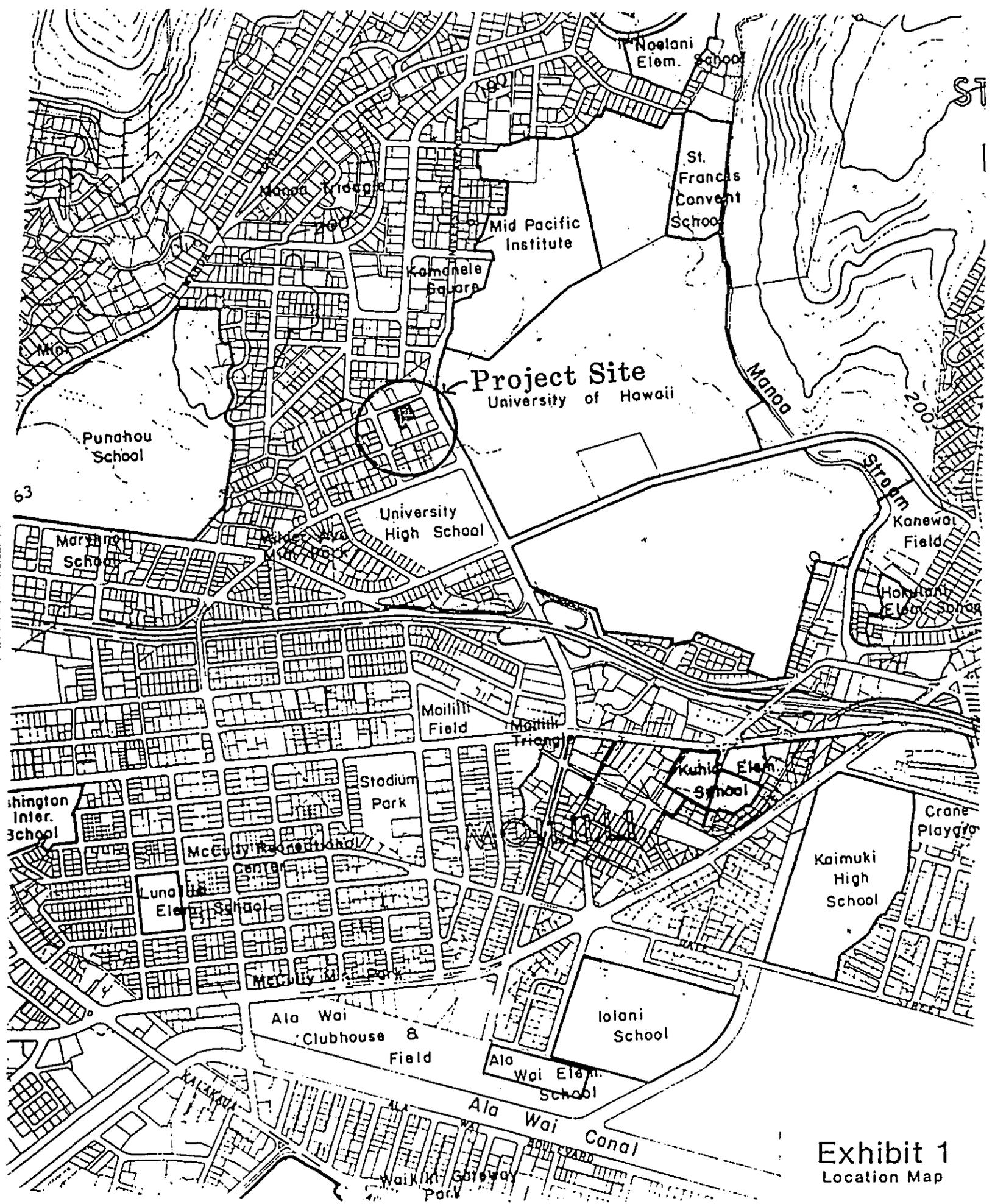


Exhibit 1
Location Map

DOCUMENT CAPTURED AS RECEIVED



Project Site

UNIVERSITY

Exhibit 2
Location Map

APPENDIX A
AGENCY RESPONSE

AGENCY RESPONSE

<u>Federal</u>	<u>Date of Response</u>
U.S. Department of Housing and Urban Development	04/27/93
U.S. Army Corps of Engineers	04/22/93
U.S. Department of the Interior, Fish and Wildlife Service	---
 <u>State</u>	
Department of Education	04/21/93
Department of Business, Economic Development and Tourism	04/15/93
Office of State Planning, Governor's Office	04/22/93
Department of Health	05/24/93
Department of Land and Natural Resources	05/13/93
	06/15/93
	05/13/93
Department of Land and Natural Resources, Historic Preservation Division	11/23/93
	08/23/93
	05/18/93
	04/23/93
Department of Transportation	---
Department of Agriculture	---
Housing Finance and Development Corporation	05/10/93
Hawaii Housing Authority	05/19/93
University of Hawaii Environmental Center	---
Office of Environmental Quality Control	---
Land Use Commission	---
 <u>City</u>	
Planning Department	04/29/93
Department of Land Utilization	05/14/93
Department of Transportation Services	05/26/93
Building Department	04/15/93
Department of Public Works	04/27/93
Department of Parks and Recreation	05/18/93
Board of Water Supply	05/13/93
Honolulu Fire Department	05/03/93
Honolulu Police Department	04/23/93
Department of Human Services	04/28/93
Department of Finance	05/12/93
 <u>Others</u>	
Honorable Arnold Morgado, Jr., City Council	05/10/93
Manoa Neighborhood Board No. 7	05/12/93



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Honolulu Office
Seven Waterfront Plaza, Suite 500
500 Ala Moana Boulevard
Honolulu, HI 96813

'93 APR 28 P12:44

DEPT. OF HOUSING
& COMM. DEVELOPMENT

APR 27 1993

Mr. E. James Turse
Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, HI 96813

This responds to your letter dated April 12, 1993, requesting comments on a proposed Single Room Occupancy (SRO) project in Manoa, to determine the need for a full Environmental Impact Statement.

We understand that the City will acquire two properties that contain 26,700 square feet, to permit the construction of 80 to 90 SRO units.

Our comments follow:

1. Under 24 CFR Part 58, a full Environmental Impact Statement would not be required based on the construction of 80 to 90 units.
2. The State Historic Preservation Officer must be given an opportunity to comment on the proposed action.
3. The site should be screened for hazards that would be subject to compliance with 24 CFR Part 51.

If you have any questions, you may call Frank Johnson at 541-1327.

Very sincerely yours,

Frank Johnson
for Patty A. Nicholas
Director
Community Planning and
Development Division



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

REPLY TO
ATTENTION OF

April 22, 1993 APR 28 A10:16

Planning Division

DEPT. OF HOUSING
& COMM DEVELOPMENT

Mr. E. James Turse, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

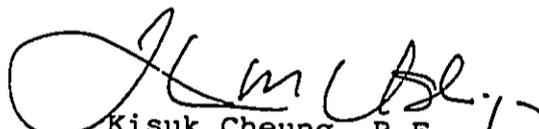
Dear Mr. Turse:

Thank you for the opportunity to review and comment on the Vancouver Drive Single Room Occupancy Project, Oahu (TMK 2-8-16: 27, 29). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. The project does not involve work in waters of the U.S.; therefore, a DA permit will not be required.

b. The flood information provided in the Project Fact Sheet is correct.

Sincerely,


Kisuk Cheung, P.E.
Director of Engineering

JOHN WAIHEE
GOVERNOR

CHARLES T. TOGUCHI
SUPERINTENDENT



'93 MAY -4 P1:26

STATE OF HAWAII DEPT. OF HOUSING,
DEPARTMENT OF EDUCATION & COMM. DEVELOPMENT
P. O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

April 21, 1993

Mr. E. James Turse, Director
Department of Housing
and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

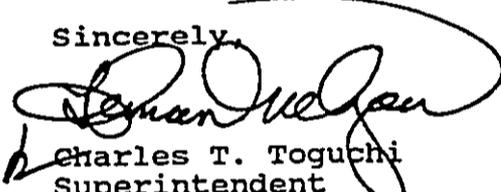
Dear Mr. Turse:

SUBJECT: Vancouver Drive
Single Room Occupancy (SRO) Project
TMK: 2-8-16: 27, 29

We have reviewed the subject project and the proposed development of 80-90 units for single-resident occupancy will have no enrollment impact on the public schools in the area.

Thank you for the opportunity to comment.

Sincerely,


Charles T. Toguchi
Superintendent

CTT:hy

cc: A. Suga
E. Masagatani

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

JOHN WAIHEE
GOVERNOR



ESTHER UEDA
EXECUTIVE OFFICER

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
Room 104, Old Federal Building
335 Merchant Street
Honolulu, Hawaii 96813
Telephone: 587-3822

April 15, 1993

Mr. E. James Turse, Director
Department of Housing & Community
Development
City & County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Turse:

Subject: Request for Comments, Vancouver Drive Single
Room Occupancy (SRO) Project, TMK No.: 2-8-16:
27 and 29

We have reviewed the fact sheet and maps for the subject project transmitted with your letter of April 12, 1993, and have no comments to offer except to confirm that the subject parcels are located within the State Land Use Urban District.

We appreciate the opportunity to comment on this matter.

Should you have any questions, please call me or Bert Saruwatari of our office at 587-3822.

Sincerely,

A handwritten signature in cursive script, appearing to read "Esther Ueda".

ESTHER UEDA
Executive Officer

EU:th

cc: DBEDT

DEPT. OF HOUSING
& COMM. DEVELOPMENT

93 APR 19 A9:22



OFFICE OF STATE PLANNING

Office of the Governor

MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96811-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808)587-2848, 587-2800

'93 APR 28 P2:30

Director's Office 587-2848
Planning Division 587-2824

DEPT. OF HOUSING
& COMM. DEVELOPMENT

Ref. No. C-4

April 22, 1993

The Honorable James E. Turse, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Turse:

We have reviewed the proposal for a Single Room Occupancy Housing Project in Manoa, and do not have any comments to offer.

We appreciate very much the opportunity to review the proposal.

Sincerely,

Harold S. Masumoto
Director

JOHN WAIHEE
GOVERNOR OF HAWAII



'93 MAY 27 AIO:17

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

STATE OF HAWAII
DEPARTMENT OF HEALTH
DEPT. OF HOUSING
& COMM. DEVELOPMENT
P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
93-113/epo

May 24, 1993

Mr. E. James Turse, Director
Department of Housing and Community Development
City & County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Turse:

Subject: Request for Comments
Vancouver Drive Single Room Occupancy (SRO) Project
Tax Map Key: 2-8-16: 27 & 29

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

Solid Waste

The Department of Health strongly suggests that the Department of Housing and Community Development include an area for the collection of recyclables within the building. The State of Hawaii, in Act 324-91, established waste diversion goals of 25% by 1995 and 50% by the year 2000. The City and County of Honolulu has adopted even more ambitious recycling goals of 50% diversion by 1995 and 75% by the year 2000. As this is a City and County project, measures to accommodate recycling efforts of the residents should be included in the design.

If you have any questions on this matter, please contact Ms. Carrie McCabe of the Office of Solid Waste Management at 586-4227.

Wastewater

The subject project is located within the county sewer service system. As the area is sewered, we have no objections to the proposed project, provided that the project is connected to the public sewer.

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

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

Mr. E. James Turse, Director
May 24, 1993
Page 2

Due to preliminary plans being the sole source of discussion, we reserve the right to impose future environmental restrictions on the project when more detailed information is submitted to the Department of Health.

Very truly yours,



JOHN C. LEWIN, M.D.
Director of Health

c: Office of Solid Waste Management
Wastewater Branch

JOHN W. WEE
GOVERNOR OF HAWAII



KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEPPELER, II
DONAL L. HANAIKE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

REF:OCEA:SKB

P. O. BOX 621
HONOLULU, HAWAII 96809

FILE NO.: 93-554a
DOC. ID.: 2915

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

The Honorable E. James Turse, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

JUN 15 1993

Dear Mr. Turse:

SUBJECT: Early Consultation for an Environmental Assessment (EA)
for the Vancouver Drive Single Room Occupancy (SRO) Project
Manoa, Oahu, TMK: 2-8-16: 27, 29

The following are our Historic Preservation Division's (HPD) comments on the subject project which supplement those forwarded in our previous letter dated May 13, 1993.

Historic Preservation Division

A review of our records shows that there are no known historic sites at these parcels which are vacant. In addition, they show that the parcels were previously developed, so it is unlikely that historic sites remain on the surface. However, at TMK: 2-8-16: 28 is the John Guild Residence, a property listed on both the State and National Registers. We have some concerns as to the impact of the development on the adjoining parcel and ask to review the plans for the project when they become available.

It is possible that historic sites, including human burials, will be uncovered during routine construction activities. Should this be the case all work in the vicinity must stop and HPD must be contacted.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Tom Dye at our Historic Preservation Division, 587-0014, should there be any questions.

Very truly yours,

for KEITH W. AHUE

93 JUN 17 P2:35
DEPT. OF HAWAIIAN
& COMM. DEVELOPMENT

JOHN WAHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

REF:OCEA:SKK

MAY 13 1993

FILE NO.: 93-554
DOC. ID.: 2749

KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEPPELER, II
DONA L. HANAIKE

AQUACULTURE DEVELOPMENT
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BOATING AND OCEAN RECREATION
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

The Honorable E. James Turse, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Turse:

SUBJECT: Early Consultation for an Environmental Assessment (EA)
for the Vancouver Drive Single Room Occupancy (SRO) Project
Manoa, Oahu, TMK: 2-8-16: 27, 29

We have reviewed the preliminary information for the proposed project transmitted by your letter dated April 22, 1993, and have no comments to offer at this time.

We will forward our Historic Preservation Division comments as they become available.

Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

Keith W. Ahue
KEITH W. AHUE

93 MAY 17 10:08
DEPT. OF LAND AND NATURAL RESOURCES
& COMM. DEVELOPMENT

JOHN WAINIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

KEITH AHLE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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JOHN P. KEPPELER II
DONA L. KAWAHE

AQUACULTURE DEVELOPMENT
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ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT

CONVEYANCES

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS

WATER AND LAND DEVELOPMENT

November 30, 1993

Robert L. Spear
Scientific Consultant Services, Inc
47-269 Hui Iwa Street
Kaneohe, Hawaii 96744

LOG NO: 10119
DOC NO: 93117D19

Dear Dr. Spear:

**SUBJECT: Informal Review of an Archaeological Assessment of Two Vancouver
Drive Lots in Manoa Valley
Waikiki, Kona, O'ahu
TMK: 2-8-16: 27, 29**

Thank you for the opportunity to review this assessment, which agrees with our assessment that historic sites are unlikely to be found at these two previously developed parcels. The document has been added to our library, where it will be useful for information purposes.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

TD:jt

JOHN WADSWORTH
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

KEITH AHIUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

JOHN P. KEPPELER II
DONA L. HANAKE

AQUACULTURE DEVELOPMENT
PROGRAM

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CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND

RESOURCES ENFORCEMENT
CONVEYANCES

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION

DIVISION

LAND MANAGEMENT

STATE PARKS

WATER AND LAND DEVELOPMENT

August 23, 1993

Jason Ching
City and County of Honolulu
Department of Housing and Community Development
650 South King Street, 5th floor
Honolulu, Hawaii 96813

LOG NO: 92108
DOC NO: 9308DP07
ARCHITECTURE

Dear Mr. Ching:

SUBJECT: **Vancouver Drive Housing Project**
TMK: 2-8-16:27 and 29, Honolulu

We are writing in response to the anticipated negative declaration determination for the above project. We are concerned about the potential visual impact on the John Guild Residence, a State and National Register property, located adjacent to the project parcels at TMK: 2-8-16:28. In addition, our office is working on an historic district nomination for Manoa and we seek to minimize intrusions in this historic neighborhood. As this project is a City and County project, it will require our department's concurrence in accordance with Chapter 6E-8. We will be especially concerned that the design of the project, in terms of its character, scale and style would blend with the existing residential neighborhood. We would also expect adequate setbacks and landscaping to screen the project from the John Guild Residence.

If you have any questions, please call Daina Penkiunas at 587-0005.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

DP:jen

c: OEQC

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

REF:HP-BEK

MAY 18 1993

KEITH AILE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

JOHN P. KEPPELER II
DONA L. HANAKE

AQUACULTURE DEVELOPMENT
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AQUATIC RESOURCES
CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT

CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

E. James Turse
Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

LOG NO: 8134
DOC NO: 9305TD14

Dear Mr. Turse:

**SUBJECT: Section 106 Review--Early Consultation for an Environmental Assessment (EA): Vancouver Drive Single Room Occupancy (SRO) Project Waikiki, Kona, O'ahu
TMK: 2-8-16: 27, 29**

Thank you for the opportunity to review this project. A review of our records shows that there are no known historic sites at these parcels, which are vacant. Our records show that the parcels were previously developed, so it is unlikely that historic sites remain on the surface. However, the adjoining parcel, TMK: 2-8-16: 28, is the site of the John Guild Residence, a property listed on both the Hawaii and National Registers. We have some concerns about the impact of this project on the Guild Residence and ask to review the development plans when they become available.

It is possible that historic sites, including human burials, will be uncovered during ~~mine~~ construction activities. Should this be the case all work in the vicinity must stop and the Historic Preservation Division must be contacted at 587-0047.

93
MAY 25 P1:20
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

E. James Turse
Page 2

If you have any questions about archaeological work please call Tom Dye at 587-0014. Please call Daina Penkiunas at 587-0005 if you have questions about the John Guild Residence.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Ahue". The signature is written in a cursive style with a large initial "K" and a long horizontal stroke.

KEITH AHUE, Chairperson and
State Historic Preservation Officer

TD:bek

JOHN WAIHEE
GOVERNOR



93 APR 27 A10:16

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION & HOUSING
& COMMUNITY DEVELOPMENT
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

REX D. JOHNSON
DIRECTOR
DEPUTY DIRECTORS
JOYCE T. OMINE
AL PANG
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

HWY-PS
2.6493

APR 23 1993

Mr. E. James Turse, Director
Department of Housing and
Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Turse:

Vancouver Drive, Single Room Occupancy Project
TMK: 2-8-16: 27, 29

Thank you for your letter of April 12, 1993, requesting our
comments on the subject project.

The proposed project will not have a significant impact on the
State highway facilities. The local road system in the area will
be affected, particularly the parking situation, as the number
of units exceeds the number of parking stalls.

Sincerely,


for Rex D. Johnson
Director of Transportation

JOHN WAIHEE
GOVERNOR



'93 MAY 13 A10:35

JOSEPH K. CONANT
EXECUTIVE DIRECTOR

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

IN REPLY REFER TO:
93:PPE/2221

May 10, 1993

The Honorable E. James Turse
Director
Department of Housing and
Community Development
City & County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

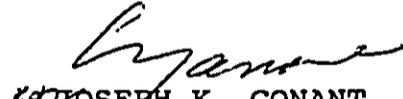
Dear Mr. Turse:

Re: Proposed Vancouver Drive SRO Project

Thank you for the opportunity to comment on the subject project.

While it is unclear what target group (e.g., working homeless, elderly, etc.) will occupy the proposed project, we are generally supportive of your efforts to expand affordable housing opportunities for Hawaii's residents.

Sincerely,


JOSEPH K. CONANT
Executive Director

JOHN WAIHEE
GOVERNOR



'93 MAY 24 A8:11

MITSUO SHITO
EXECUTIVE DIRECTOR

STATE OF HAWAII DEPT. OF HOUSING
DEPARTMENT OF HUMAN SERVICES & COMM. DEVELOPMENT
HAWAII HOUSING AUTHORITY
P. O. BOX 17907
HONOLULU, HAWAII 96817

LEONARD PARESA, JR.
DEPUTY EXECUTIVE DIRECTOR

FAX: (808) 848-3313

IN REPLY REFER TO:

93:PLNG/550

May 19, 1993

Mr. E. James Turse, Director
Department of Housing & Community Development
City & County of Honolulu
650 S. King Street, 5th Floor
Honolulu, Hawaii 96813

Attention: Jason Ching

Dear Mr. Turse:

RE: Vancouver Drive Single Room Occupancy (SRO) Project
Tax Map Key: 2-8-16: 27,29

The Hawaii Housing Authority has no comment at this time on the above-referenced proposed project. We would appreciate being kept informed of its progress, especially of the target group to be served when that determination is made.

Sincerely,

A handwritten signature in cursive script, appearing to read "Mitsuo Shito".

MITSUO SHITO
Executive Director

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

APR 30 P1:31

FRANK F. FASI
MAYOR



DEPT. OF HOUSING
COMM DEVELOPMENT

ROBIN FOSTER
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER

TH 4/93-985

April 29, 1993

MEMORANDUM

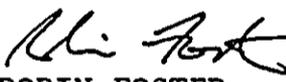
TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: ROBIN FOSTER, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

SUBJECT: REQUEST FOR COMMENTS, VANCOUVER DRIVE SINGLE ROOM
OCCUPANCY PROJECT, 2019 AND 2031 VANCOUVER DRIVE
HONOLULU, OAHU, HAWAII, TMK: 2-8-16: 27 AND 29

In response to your memorandum of April 12, 1993, we have reviewed the subject proposal but will defer our comments until the Draft Environmental Assessment is completed. However, we recommend that the Draft Environmental Assessment include and address parking and traffic impacts as well as a site plan indicating building heights, setbacks.

Should you have any questions, please contact Tim Hata of our staff at 527-6070.


ROBIN FOSTER
Chief Planning Officer

RF:ft

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4444

93 MAY 17 AIO:01

FRANK F. FASI
MAYOR



DEPT. OF HOUSING
& COMM. DEVELOPMLN.

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

93-02527 (AC)

May 14, 1993

MEMORANDUM

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: DONALD A. CLEGG, DIRECTOR

SUBJECT: Vancouver Drive Single Room Occupancy (SRO) Project
Tax Map Key: 2-8-16: 27 & 29

Thank you for providing the Department of Land Utilization the opportunity to review the above-referenced project proposal. We offer the following comments:

The subject property is located in the R-5 Single Family Residential District. This zoning district does not allow apartments or boarding facilities. Also, the maximum building height in the R-5 District is 25 feet. A three-story structure as proposed would most likely exceed the height limit. We suggest that the Department of Housing and Community Development utilize the 201-E process in order to develop the project as proposed.

Based upon our past review of similar types of projects, a shared kitchen for 80-90 people seems impractical. What provisions for meal preparation or cooking facilities are envisioned for the project?

The Environmental Assessment (EA) should describe the intended occupants and whether the anticipated length of occupancy is long or short term.

We have no further comments at this time, however, we look forward to a more in-depth review when the EA is completed.

Should you have any questions, please call Mr. Art Challacombe of our staff at 523-4107.

A handwritten signature in cursive script that reads "Donald Clegg".

DONALD A. CLEGG
Director of Land Utilization

DAC:ak
G:hcdasro.adc

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

93 MAY 26 P4:07

FRANK F. FASI
MAYOR



DEPARTMENT OF HOUSING
AND COMMUNITY DEVELOPMENT

JOSEPH M. MAGALDI, JR.
DIRECTOR

AMAR SAPPAL
DEPUTY DIRECTOR

TE-1432
PL93.1.150

May 26, 1993

MEMORANDUM

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: JOSEPH M. MAGALDI, JR., DIRECTOR

SUBJECT: VANCOUVER DRIVE-SINGLE ROOM OCCUPANCY PROJECT
COMMENTS TO DETERMINE NEED FOR E.I.S.
TMK: 2-8-16: 27 AND 29

This is in response to your memorandum dated April 12, 1993 requesting our comments on the subject project.

We have the following traffic concerns:

1. There is a 2- to 5-foot road widening setback on Vancouver Drive along the frontage of these parcels. The property line should be set back and the frontage should be improved to City standards.
2. The off-street parking requirements should be in accordance with the Land Use Ordinance.
3. Our department should review the construction plans for all work done within the road right-of-way.

Should you have any questions, please contact Wayne Nakamoto of my staff at local 4190.



JOSEPH M. MAGALDI, JR.

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 93-407

April 15, 1993

MEMO TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: VANCOUVER DRIVE SINGLE ROOM OCCUPANCY PROJECT
TMK: 2-8-16: 27,29

We have reviewed the subject pre-assessment and have no comments to offer. Thank you for allowing us to review the document.


HERBERT K. MURAOKA
Director and Building Superintendent

cc: J. Harada

DEPT. OF HOUSING
& COMM. DEVELOPMENT

93 APR 16 10:03

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

'93 APR 29 A10:26

FRANK F FASI
MAYOR



DEPT. OF HOUSING
& COMM DEVELOPMEN.

C. MICHAEL STREET
DIRECTOR AND CHIEF ENGINEER

FELIX B. LINTIACO
DEPUTY DIRECTOR

ENV 93-100

April 27, 1993

MEMORANDUM

TO: MR. E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER

SUBJECT: PRELIMINARY ENVIRONMENTAL ASSESSMENT (PEA)
VANCOUVER DRIVE SINGLE ROOM OCCUPANCY PROJECT
TMK:2-8-16:27 AND 29

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

1. There is a 2-ft. property line setback along Vancouver Drive.
2. Improvements fronting the project site will be required and should be in compliance with City standards as well as the Americans With Disabilities Act.
3. Existing municipal sewer system is inadequate to serve the proposed project. Therefore, a sewer relief line on Metcalf Street will be required to accommodate the sewer flows from the proposed project.

If you have any questions, please contact Mr. Alex Ho, Environmental Engineer, at x4150.

C. Michael Street

C. MICHAEL STREET
Director and Chief Engineer

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

'93 MAY 19 A8:17

FRANK F. FASI
MAYOR



DEPT. OF HOUSING
& COMM. DEVELOPMENT

WALTER M. OZAWA
DIRECTOR

ALVIN K. AU
DEPUTY DIRECTOR

May 18, 1993

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: RECREATION ASSESSMENT
VANCOUVER DRIVE SINGLE-OCCUPANCY PROJECT
TAX MAP KEY 2-8-16: 27 & 29

The residential project will be required to comply with Park Dedication Ordinance NO. 4621. We recommend that the project comply with the Ordinance by providing a private park with recreational facilities suitable for single-occupancy type of development. Private-park requirements to comply with the Ordinance are specified in the City's Park Dedication Rules and Regulations.

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

A handwritten signature in black ink, appearing to read "Walter M. Ozawa".

FOR WALTER M. OZAWA, Director

WMO:js

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843



May 13, 1993

'93 MAY 17 P3:35

DEPT. OF HOUSING
COMM. DEVELOPMENT

FRANK F. FASI, Mayor
WALTER O. WATSON, JR., Chairman
MAURICE H. YAMASATO, Vice Chairman
SISTER M. DAVILYN AH CHICK, O.S.F.
JOHN W. ANDERSON, JR.
REX D. JOHNSON
MELISSA Y.J. LUM
C. MICHAEL STREET
KAZU HAYASHIDA
Manager and Chief Engineer

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER *K.H.*
BOARD OF WATER SUPPLY

SUBJECT: YOUR MEMORANDUM OF APRIL 12, 1993 REGARDING THE
ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED VANCOUVER
DRIVE SINGLE ROOM OCCUPANCY PROJECT, TMK: 2-8-16: 27, 29,
VANCOUVER DRIVE

Thank you for the opportunity to comment on the proposed Vancouver Drive Single Room Occupancy Project. We have the following comments:

1. There are individual water laterals currently serving the two subject parcels.
2. Water service to parcel 27 was terminated on September 19, 1991. The developer has until September 19, 1996 to reactivate the water service to this parcel. Thereafter, the developer will be required to pay the prevailing Water System Facilities Charges.
3. Water service to parcel 29 was terminated on July 11, 1980. If this water service is activated, the applicant will be required to pay the prevailing Water System Facilities Charges for source-transmission and daily storage and any applicable meter installation charges.
4. The availability of water will be confirmed when the building permit application is submitted for our review and approval.
5. If a three-inch or larger meter is required, construction drawings showing the installation of the meter should be submitted for our review and approval.
6. The proposed project is subject to Board of Water Supply cross-connection control requirements prior to the issuance of the building permit application.

If you have any questions, please contact Roy Doi at 527-5235.

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU

3375 KOAPAKA STREET, SUITE H425
HONOLULU, HAWAII 96819-1869

'93 MAY 10 P1:39

FRANK F. FASI
MAYOR



DEPT. OF HOUSING
& COMM. DEVELOPMENT.

DONALD S.M. CHANG
FIRE CHIEF

RICHARD R. SETO-MOOK
DEPUTY FIRE CHIEF

May 3, 1993

TO: E. JAMES TURSE
DIRECTOR, DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: RICHARD R. SETO-MOOK
FIRE DEPUTY CHIEF

SUBJECT: REQUEST FOR COMMENTS
VANCOUVER DRIVE SINGLE ROOM OCCUPANCY (SRO) PROJECT
TAX MAP KEY 2-8-16: 27, 29

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

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

Should additional information or assistance be required, please call Acting Captain Stephen Kishida of our Fire Prevention Bureau at 523-4186.

Richard R. Seto-Mook
RICHARD R. SETO-MOOK
Fire Deputy Chief

DSMC/SK:bm

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111

'93 APR 26 P4:11

FRANK F. FASI
MAYOR



DEPT. OF HOUSING,
& COMM. DEVELOPMENT.

MICHAEL S. NAKAMURA
CHIEF

HAROLD M. KAWASAKI
DEPUTY CHIEF

OUR REFERENCE BS-LK

April 23, 1993

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

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

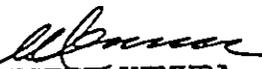
SUBJECT: VANCOUVER DRIVE SINGLE ROOM OCCUPANCY (SRO) PROJECT
TAX MAP KEY: 2-8-16: 27, 29

This is in response to your letter of April 12, 1993 requesting comments about a Vancouver Drive Single Room Occupancy Project.

The Honolulu Police Department has no comments about the project at this time.

Thank you for the opportunity to review this document.

MICHAEL S. NAKAMURA
Chief of Police

By 
EUGENE UEMURA
Assistant Chief of Police
Administrative Bureau

DEPARTMENT OF HUMAN RESOURCES
CITY AND COUNTY OF HONOLULU

STANDARD FINANCE BUILDING
715 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813 • (808) 527-5311

'93 APR 29 P1:35

FRANK F. FASI
MAYOR



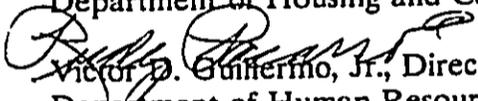
DEPT. OF HOUSING
AND COMMUNITY DEVELOPMENT

VICTOR D. GUILLERMO, JR.
DIRECTOR

RUDY PACARRO
DEPUTY DIRECTOR

April 28, 1993

To: E. James Turse, Director
Department of Housing and Community Development

From: 
Victor D. Guillermo, Jr., Director
Department of Human Resources

Subject: Vancouver Drive Single Room Occupancy (SRO) Project

The Department of Human Resources recognizes the shortage of affordable housing options on Oahu and supports this proposal as a means to increase needed single room occupancy housing in Manoa Valley. After completion and occupancy of this 80 - 90 unit project, DHR is available to provide job training assistance for low income residents or information and referral for any older tenants.

DEPARTMENT OF FINANCE
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813

'93 MAY 14 P4:12

FRANK F. FASI
MAYOR



DEPT. OF HOUSING
& COMM. DEVELOPMENT

RUSSELL W. MIYAKE
DIRECTOR

GLEN S. NONAKA
DEPUTY DIRECTOR

May 12, 1993

TO: E. JAMES TURSE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: RUSSELL W. MIYAKE, DIRECTOR OF FINANCE

SUBJECT: VANCOUVER DRIVE SINGLE ROOM OCCUPANCY PROJECT

We have no comments or recommendations on your proposal to acquire two properties along Vancouver Drive for the subject project.



RUSSELL W. MIYAKE
Director of Finance

RWM:jw



ARNOLD MORGADO, JR.
Councilmember, District VIII
(808) 523-4829

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813-3000 / TEL: (808) 523-4000

DEPT. OF HOUSING
& COMM. DEVELOPMENT

May 10, 1993

Mr. E. James Turse, Director
Department of Housing and
Community Development
City and County of Honolulu
Honolulu, Hawaii

Dear Mr. Turse:

Subject: Request For Comments
Vancouver Drive Single Room Occupancy (SRO) Project

Thank you for allowing me the opportunity to comment on the subject project.

As part of my review of this project proposal, I requested comments and input from area resource persons. Attached are responses received from Toy Arre and Rachel Bolante of the University of Hawaii, and from Steven Ito of the Affordable Housing Alliance. Their comments, as well as my own, are incorporated in the following points:

1. Due to close proximity to the University of Hawaii, public transportation and area businesses, parking areas for bicycles, mopeds and motorcycles should be considered.
2. How will the units be managed? Perhaps a resident manager should be present to maintain the facility and respond to emergencies.
3. Some type of building security should be provided.
4. Is it possible or desirable to include common area facilities, such as a kitchen or TV lounge, for the tenants use?
5. What is the cost of acquiring the unimproved portion of Parcel 25? Is it necessary to acquire this portion? Would it be more cost effective to have the City enter into an agreement with the parcel's owner to improve the driveway in exchange for its usage.

6. Appropriate measures should be taken to help alleviate traffic congestion within the area, especially during construction. Are there any plans to widen Vancouver Drive or install sidewalks?
7. With the infrastructure improvements the City will be making, will the surrounding neighborhood be able to also make improvements and/or additions to their homes.

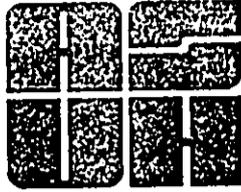
I am very supportive of this project and applaud the efforts of your Department to help alleviate the critical affordable housing crisis faced by the City and County of Honolulu. I am also very pleased with the efforts of your Department to work hand in hand with the community.

If I can be of assistance, please feel free to call my office at X4829.

Sincerely,



ARNOLD MORGADO, JR.
CHAIR, Housing Committee



The Associated Students of the University of Hawaii at Manoa
2465 Campus Road • Campus Center 211 • Honolulu, HI 96822-2216
Phone (808) 956-4834 • Fax (808) 956-5360

May 1, 1993

Councilmember Arnold Morgado, Jr.
City Council
City and County of Honolulu
Honolulu, HI 96813-3065

Dear Councilmember Morgado:

I apologize for my delayed response regarding the Vancouver Drive Project. At this time, however, I would like to voice my full support of the project as currently planned.

Lack of sufficient housing has been a problem on the University of Hawaii at Manoa campus for quite some time. Hundreds of students living as far away as Ewa Beach and Mililani are forced to commute to school daily due to the lack of housing space in and around campus. Even university freshmen who could benefit greatly from the away-from-home experience are denied that privilege by the lack of housing.

Students constantly challenge ASUH to alleviate or remedy the housing situation. While ASUH recognizes the importance of this student concern, it frequently runs into economic and physical obstacles in trying to create a solution. It is often difficult to win monies from the State Legislature to build such units. Should funds be appropriated for such a project, available land surrounding the university is still sparse. Organized attempts to ease the housing crunch are long overdue and are likely to be well received by both the Manoa and university communities.

I look forward to speaking with you again regarding this issue. Please contact my office at 956-4824 should you have any further questions. Thank you.

Sincerely,

Rachel L. Bolante
ASUH President

ASUH is chartered by the University of Hawaii Board of Regents as the undergraduate student association of UH-Manoa, an Equal Opportunity/Affirmative Action Institution



University of Hawaii at Manoa

Student Housing Office

Johnson Hall A Basement • 2555 Dole Street • Honolulu, Hawaii 96822
Telephone: (808) 956-8177 • Facsimile: (808) 956-5995

April 23, 1993

Honorable Arnold Morgado, Jr., Chair
Housing Committee
Honolulu City Council
Honolulu Hale
Honolulu, HI 96813

Dear ~~Mr. Morgado~~ ^{Arnold}:

Thank you for your letter of April 20, 1993, soliciting input regarding the City's proposal to acquire and develop a 27,000 square foot parcel on Vancouver Drive, into single room occupancy housing for students. I understand that 80-90 units will be contained in a three-story structure with about 20-25 parking stalls.

I think this will be a welcome addition to our off-campus affordable rentals. As you are aware, each Fall over the last three years, our waiting lists have averaged in excess of 1,000 after the first round of assignments.

I suggest that some parking for bicycles, mopeds and motorcycles be provided. Because of the number of units involved, the presence of a resident manager may be desirable not only to enforce house rules but to respond to emergencies. Unless each unit has a kitchen, many residents will probably bring their own T.V., mini-fridge and/or microwave. Jacks for telephones and computers are a must. A laundry room, a lounge/reception area adjacent to the manager's office, and enough space for a bank of vending machines should be provided. Students would normally use their room for studying, so lighting is critical over the study desk.

Security should always be a top priority. Solid core doors and brass/steel locks are a must for the rooms. Should there be a main entrance to the building, an entry phone with remote door release would be helpful. If janitorial/cleaning services are not going to be provided, residents should be able to rent/borrow a vacuum cleaner, wet mop and a water bucket.

Should you have any questions or need more information please do not hesitate to call or write me.

Sincerely,


Germaine Q. Arre, Jr.
Director

gt4:Morgado

MANOA NEIGHBORHOOD BOARD NO. 7
c/o MANOA LIBRARY
2716 WOODLAWN DRIVE
HONOLULU, HAWAII 96822



'93 MAY 12 P12:45

May 12, 1993

DEPT. OF HOUSING
& COMM. DEVELOPMENT

E. James Turse, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, Fifth Floor
Honolulu, Hawaii 96813

Re: Vancouver Drive Single Room Occupancy Project

Dear Mr. Turse:

Thank you for your April 12, 1993 letter requesting comments on your Department's Environmental Assessment preparation for this project. After thoughtful consideration, the Manoa Neighborhood Board has the following areas of concern that we request your Department address in the Environmental Assessment.

1) Occupant/Unit Density The proposed occupant/unit density of 80-90 units this apartment project will be many times larger than what is now allowed in the single family residential zoning on this block. The block is located in one of the original subdivisions of Manoa Valley. Vancouver Drive is narrow by modern standards, contains no paved sidewalks, and has very little on-street parking in the vicinity of the proposed project. The area is heavily congested whenever the University of Hawaii is in session.

The Environmental Assessment should evaluate whether or not this proposed increased occupant density in this already congested area will likely significantly change the otherwise single family residential character of area in each of the following areas:

a) population density and attendant human activities such as increased noise, need for municipal services such as refuse collection, police and fire protection, and increased pedestrian and vehicular traffic on Vancouver Drive and the adjacent roadways.

b) sewer, utility and roadway/traffic infrastructure.

c) on-street parking and vehicular traffic flow/congestion at the Hunnewell Street-Vancouver Drive and University Avenue-Vancouver Drive intersections.

2) Architectural Compatibility Historic Homes The John Guild Inn is a registered historic building and represents an architectural style that is truly unique to this area. There are numerous other older historic homes on Vancouver Drive west of Hunnewell Street. The Environmental Assessment should evaluate

E. James Turse
Re: Vancouver Drive Apartment Project
May 12, 1993
Page 2

whether an apartment project of "modern design" and building construction directly adjacent to the John Guild Inn and down the street from other older homes of historical and aesthetic value will significantly affect the intangible, highly desirable qualities of the immediately surrounding older, established residential neighborhood.

3) View Plane/Visual Blight The neighborhood surrounding the proposed project site on Vancouver Drive is single family residential. An apartment complex on this site will change the single family residential character of the area. The environmental assessment should evaluate whether or not this proposed project will significantly alter existing view planes and whether it will add to the existing "visual blight" and the non-single family residential character particularly in the Seaview and Hunnewell Street areas.

4) Open Space This area of Manoa Valley has very little open space dedicated for public use. The nearest public park is Kamanele Square. The vacant lots on Vancouver Drive have served over the years as buffers against increased housing density in this area. The Environmental Assessment should address whether this proposed project will provide sufficient open space for its tenants or whether it will instead contribute to the already significant lack of public open space in this neighborhood.

Thank you for the opportunity to provide comments on your Department's Environmental Assessment.

Sincerely,



John C. McLaren
Chairperson

APPENDIX B
HAZARDOUS WASTE ASSESSMENT

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
VANCOUVER DRIVE HOUSING PROJECT
PROPERTY
OAHU, HAWAII**

**December 10, 1993
LF 3035**

**Levine-Fricke, Inc.
220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321**

**Prepared for:
Design Partners Incorporated
1580 Makaloa Street, Suite 1199
Honolulu, Hawaii 96814**

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6.2 United States Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	9
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APPENDICES:

- A AERIAL PHOTOGRAPHS FROM R.M. TOWILL CORPORATION
- B SANBORN INSURANCE MAPS
- C DEPARTMENT OF LAND AND NATURAL RESOURCES TITLE INFORMATION

APPENDICES (Continued):

- D SITE PHOTOS
- E STATE OF HAWAII, DEPARTMENT OF HEALTH, REGISTERED UNDERGROUND STORAGE TANK LIST, UNDERGROUND STORAGE TANK LEAK LOG, AND PUNAHOU SCHOOL FILES (Applicable Pages)
- F U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION IX CERCLIS LIST FOR THE STATE OF HAWAII, AND UNIVERSITY OF HAWAII AT MANOA FILES (Applicable Pages)
- G CITY AND COUNTY OF HONOLULU, FIRE DEPARTMENT FILES AND CORRESPONDENCE
- H HAWAIIAN ELECTRIC COMPANY CORRESPONDENCE

LIST OF FIGURES

Figure 1: Site Vicinity

December 10, 1993

LF 3035

EXECUTIVE SUMMARY

Levine-Fricke conducted a Phase I Environmental Site Assessment of a site located at 2019 and 2031 Vancouver Drive in the Manoa area of Oahu, Hawaii. The assessment included a review of historical documents and background information, a review of regulatory agency files, and performance of a reconnaissance level site inspection.

Significant findings of the assessment are summarized below.

- Review of aerial photographs dating from 1949 through 1992 did not indicate the presence of containment vessels, surface staining, distressed vegetation, or other indicators of chemical release at the Site.
- Our site reconnaissance did not identify areas of potential environmental concern. Two plastic standpipes were identified near the southeast corner of the Site near the corner of a concrete retaining wall that separates an off-site apartment building from the Site. The tops of the standpipes were approximately two feet above ground surface with no concrete foundation for either pipe. Inspection of the inside of the pipes indicated that the pipes were dry with no odor or residual product or material evident and that they both curve at a 90 degree angle toward the southwest two feet below ground surface. It is suspected that these pipes are tie-ins for a sanitary sewer.
- Review of applicable regulatory records indicate that no incidents or conditions are known at the Site or in the near vicinity that would be of environmental concern to the Site.

Levine-Fricke recommends the following activities be performed:

- Further investigation of the two standpipes identified on-site. Contact with the owner of the apartment building located near the pipes or the City and County of Honolulu, Public Works Department may reveal the purpose of these pipes.

- Request that HECO collect and analyze an oil sample from the electrical transformer (# 34512) located near the Site to evaluate the presence or absence of PBCs.

December 10, 1993

LF 3035

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
VANCOUVER DRIVE HOUSING PROJECT PROPERTY
OAHU, HAWAII**

1.0 INTRODUCTION

As requested by Mr. Alan Torimoto of Design Partners Incorporated ("the Client"), Levine-Fricke conducted a Phase I Environmental Site Assessment (ESA) of a site located at 2019 and 2031 Vancouver Drive in the Manoa area of Oahu, Hawaii ("the Site"; Figure 1). We understand that the Site is to be acquired by the City and County of Honolulu, Department of Housing and Community Development for development of apartment units.

The major objective of the ESA will be to evaluate potential sources of hazardous substances related to on-site or nearby off-site activities which may have affected the soil or groundwater at the Site. The ESA will investigate past and present uses of the Site focusing on the use, handling, storage, and release, or on-site disposal of hazardous substances. The ESA will also assess the potential for migration of hazardous substances onto the site from reported chemical releases, if any, in the near vicinity of the Site.

2.0 SCOPE OF WORK

The Scope of Work for this ESA included the activities described below.

Task 1: Review of Background Information on Site Setting and History of Site Usage

Relevant background information pertaining to the physical setting of the Site was obtained from readily available records. Features that were investigated include local surface topography, site drainage, general soil and geologic characteristics of the area, characteristics of the local groundwater and nearby surface water sources, water and wastewater utilities at the Site, and land use.

Information concerning the present and past usage of the Site and neighboring properties was obtained and reviewed to

identify evidence of activities that may have resulted in release of hazardous materials. Sources for this information consisted of aerial photographs, Sanborn Fire Insurance Maps, and title information from the State of Hawaii, Department of Land and Natural Resources (DLNR). Investigations concerning neighboring properties were limited to the aerial photographs and the Sanborn Fire Insurance Maps.

Task 2: Field Inspection of Site and Neighboring Properties

A walk-through inspection of the Site was conducted on November 17, 1993 to observe general site conditions; evidence for the use, storage, handling, and disposal of potentially hazardous substances; and evidence indicating release(s) of hazardous substances to the environment. The Site was examined for storage tanks, pipes, drums, septic systems, sumps, ponds, dry wells, water wells, and other types of containment or conduits which, if present, may have indicated a potential for the release of hazardous substances to the subsurface. The site was also inspected for indications of dumping, landfilling, staining of soils and paved surfaces, distressed vegetation, other evidence suggesting the possible presence of hazardous substances.

In addition to the site walk-through, a drive-by survey was conducted of neighboring properties to observe the nature of off-site activities, and to identify potential off-site sources of hazardous substances that could affect the Site, with particular attention to the adjacent properties.

Task 3: Review of Regulatory Records Concerning Site and Surrounding Area

State and local regulatory agency records pertaining to the use, storage, disposal, and/or release of hazardous substances at the Site and in the immediate surroundings were reviewed to identify and evaluate the potential environmental hazards. For the Site, such records included available files pertaining to hazardous substances storage and handling, leakage, discharges, and contamination cases. Review of records concerning neighboring properties was limited to readily available public information concerning reported environmental problems at the Site and in the immediately surrounding areas. Sources of information included:

- State of Hawaii, Department of Health, Underground Storage Tank (UST) List

- State of Hawaii, Department of Health, Underground Storage Tank Leak Log, dated April 2, 1993
- State of Hawaii, Department of Health, Hazard Evaluation and Emergency Response (HEER) List
- United States Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List
- City and County of Honolulu, Fire Department Hazardous Materials Incidents Files
- Hawaiian Electric Company Electrical Transformer Files

Task 4: Data Evaluation and Report Preparation

The information collected was evaluated and a final report documenting the results of the Phase I ESA was produced.

LIMITATIONS

The assessment was based solely on available records, visual observations, and personal interviews. The Scope of Work for the ESA did not include the collection or analysis of any samples at the Site; sampling of polychlorinated biphenyls (PCBs) in electrical equipment; an assessment of naturally occurring chemical hazards such as methane gas; an assessment of environmental hazards such as the presence of naturally occurring asbestos, radon gas, or radionuclides; an assessment of the potential for earthquake or flood damage or the presence of endangered species or wildlife habitat; or an audit to assess the compliance status of the Site or businesses operating at or in the vicinity of the Site.

3.0 PHYSICAL CHARACTERISTICS OF THE SITE AND VICINITY

The 0.61 acres (26,700 square feet) Site is comprised of two adjacent parcels (Tax Map Key Numbers 2-8-16:27 and 2-8-16:29) at 2019 and 2031 Vancouver Drive in the Manoa area of Oahu, Hawaii. The two parcels are on the southern side of Vancouver Drive between University Avenue on the east and Hunnewell Drive on the west. The surrounding areas are residential consisting of single family homes and apartment buildings. There are several commercial buildings located along University Avenue, and the University of Hawaii at Manoa campus is located on the east side of University Avenue.

3.1 Topography

The surface of the Site is at an elevation of approximately 150 feet above mean sea level, and slopes to the south at approximately 15 degrees.

3.2 Regional Geology and Hydrogeologic Setting

The Site is located in an area that is part of a volcanic basement complex overlain by unconsolidated residual soils. Although no site-specific ground-water data is available, the approximate depth to ground water at the Site is expected to be greater than 10 feet below ground surface. It is suspected that two shallow zones of ground water and a deep volcanic aquifer (greater than 200 feet below ground surface) are located subsurface of the Site. Based upon the regional topography, the regional ground-water flow directions is anticipated to be toward the south with the direction of flow from the mountains toward the ocean (Norris Yehara, State Department of Health - Water Board personal communication).

Manoa Stream is the closest surface-water body to the Site (approximately 250 feet from the eastern perimeter of the Site).

4.0 SITE HISTORY

From our review of available aerial photographs, structures on the Site and surrounding area appear to be primarily residential or associated with the University of Hawaii at Manoa campus. The photographs reviewed included:

<u>Year</u>	<u>Approximate Scale</u>
1949	1:12,000
1969	1:16,000
1992	1:12,000

In the 1949 and 1969 aerial photographs, two houses were observed on the Site. No evidence of containment vessels, surface staining, distressed vegetation or other indicators of chemical release were observed in the photographs.

In the 1992 aerial photograph, the two houses are not observed on the Site. Several cars are parked on the Site, but no other structures are apparent. No evidence of containment vessels, surface staining, distressed vegetation or other indicators of chemical release were observed in the

photograph. Copies of the aerial photographs are included in Appendix A.

A review of Sanborn Fire Insurance Maps from 1927 and 1951 indicated that two dwellings were located on the Site and that the surrounding areas also included dwellings. Copies of the Sanborn Fire Insurance Maps are included in Appendix B.

Title records obtained from the Department of Land and Natural Resources indicate that the Site was deeded to private citizens and eventually to the Okamura Boys and Girls Home Trust. Copies of the title records are included in Appendix C.

5.0 SITE RECONNAISSANCE

Mr. Glenn Leong, Senior Project Chemist conducted a field inspection of the Site on November 17, 1993.

5.1 On-Site Reconnaissance

The Site consists of two adjacent parcels on the southern side of Vancouver Drive between University Avenue on the east and Hunnewell Drive on the west. An apartment building and house are located to the south of the Site, while another house is located to the west of the Site. To the east is a combination residential building and restaurant.

Most of the Site is overgrown with vegetation, although a concrete foundation of a house occupies part of the eastern portion of the Site. On the day of the reconnaissance, cars were parked along the northern and eastern perimeters of the site. Two, black 4-inch diameter plastic standpipes with aluminum caps were identified near the southeast corner of the Site. The pipes were located near the corner of a concrete retaining wall that separates the apartment building from the Site. The tops of the standpipes were approximately two feet above ground surface with no concrete foundation for either pipe. The pipes were located approximately three feet from each other and about two feet from the apartment building retaining wall. Observation of the inside of the pipes indicated that the pipes were dry with no odor or residual product or material evident and that both pipes curve at a 90 degree angle toward the southwest at a depth of two feet below ground surface. It is suspected that these pipes are tie-ins for a sanitary sewer system associated with either a previously planned development on-site or the installation or repair of a sewer line in the area.

No indications of the use, storage, handling, or disposal of potentially hazardous substances or waste, or evidence indicating release(s) of chemicals to the environment were observed. No storage tanks, drums, sumps, ponds, dry wells, water wells, and other types of containment or conduits which may indicate a potential for the release of hazardous substances to the subsurface were observed. No indications of dumping, landfilling, staining of soils and paved surfaces, distressed vegetation, or other evidence suggesting the possible release of chemicals was observed. Photographs of the Site taken during the site reconnaissance are included in Appendix D.

5.2 Off-Site Reconnaissance

The area surrounding the Site consists of properties associated with the University of Hawaii at Manoa campus and private residential properties. No evidence of activities or businesses that use, store or dispose of hazardous materials or hazardous waste were observed in the areas immediately adjacent to the Site.

6.0 REGULATORY REVIEW

A review of pertinent regulatory records concerning the Site and nearby areas was performed to identify potential on-site and off-site sources of hazardous materials that might affect soil and ground-water quality at the Site.

6.1 State of Hawaii, Department of Health, Underground Storage Tank (UST) List and UST Leak Log

One facility located within a 0.5 mile radius of the Site has registered USTs that were also listed on the UST Leak Log. The facility is Punahou School at 1601 Punahou Street, Honolulu, Hawaii 96822. The school is located approximately 0.4 miles to the west and, based upon the topography of the area, probably downgradient from the Site

A review of the Department of Health UST Section's records of Punahou School indicate the following:

- Two USTs were found in the Barwick playground of the school and were removed on December 6, 1990. According to a letter from Punahou School to the Department of Health on September 7, 1991, "Follow-up ground testing by Brewer environmental was conducted with no findings and the closure was completed."

- A 500-gallon steel gasoline UST was removed from the school's Maintenance Shop on December 11, 1989. The site assessment during closure indicated that there was a release of gasoline with soil concentrations up to 3000 mg/kg of gasoline and 110 mg/kg of benzene. The Department of Health, in a letter to Punahou Schools dated April 8, 1993 reported that site investigation activities indicated that "the gasoline contamination appears to be limited to the area directly beneath the former UST", but because gasoline-affected soil remains at the school, the Department of Health "cannot agree with your consultant's recommendation that no further action is necessary in response to this confirmed release."
- A 2000-gallon fiberglass/plastic gasoline UST and a 1000-gallon fiberglass/plastic diesel UST were installed at the school's Maintenance Shop in 1986 and are still in use.
- A 2000-gallon steel used-oil UST and a 1000-gallon steel gasoline UST were installed at the school's Repair Shop in 1987 and are still in use.

Because the Vancouver Drive Site is located approximately 2100 feet away, and is probably hydraulically upgradient from the previously mentioned Punahou School USTs, it is not anticipated that a leak from those USTs would have impacted the soil or ground-water quality beneath the Site. Copies of applicable pages from the UST List, UST Leak Log and State of Hawaii, Department of Health, Underground Storage Tank Files for Punahou School are included in Appendix E.

6.2 United States Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List

The CERCLIS list indicated that one facility was within a 0.5 mile radius of the Site. The University of Hawaii at Manoa (UH), 2500 Campus Road, Honolulu, Hawaii 96822 (Identification Number HID087190542) was identified as a target site by the U.S. Environmental Protection Agency (EPA) in 1980 and was the subject of a Preliminary Assessment in 1985 by the Hawaii Department of Health. Review of the Department of Health's records regarding UH indicated that the UH was placed on the list for improper labeling, record keeping, and for exceeding allowable storage time (90 days) of the chemical and radioactive waste produced by on-campus educational and research laboratories. The records review

indicated that the waste was stored in the proper containers, clearly labeled hazardous waste, and inspected weekly. The records review did not indicate evidence of chemical release(s) to the soil or ground water.

Additionally, DOH records revealed that EPA took legal action against UH because thirty-one on-campus PCB containing transformers had not been equipped with high current protectors as required by law. Copies of applicable pages of the CERCLIS List and State of Hawaii, Department of Health Files for the University of Hawaii at Manoa are included in Appendix F.

6.3 State of Hawaii, Department of Health, Hazard Evaluation and Emergency Response (HEER) List

No incidents that may have impacted the soil or ground-water beneath the Site were found on the HEER list.

6.4 City and County of Honolulu, Fire Department Hazardous Materials Incidents Files

Review of the City and County of Honolulu, Fire Department files regarding hazardous materials incidents indicates that four incidents were reported within a quarter mile radius of the Site. The four incidents were all automobile accident related incidents that resulted in petroleum products spilling onto roadways. Due to the small volume of material spilled during each of the incidents and the remedial measures initiated by the Fire Department, it is not anticipated that any of these incidents impacted the Site. Copies of the incident reports provided by the Fire Department are included in Appendix G.

6.5 Hawaiian Electric Company Electrical Transformer Files

Hawaiian Electric Company (HECO) reported that transformer 34512 was purchased in October 1974 and installed in April 1975. HECO indicated that PCB test data is not available for that transformer. Additionally, all untested transformers purchased prior to July 1, 1979 must be considered PCB-contaminated by law. However, HECO also indicated in their letter to us (Appendix H) that as a result of testing, 93.7 % of their transformers are non-PCB containing. To determine whether the transformer in the vicinity of the site is PCB-containing, HECO will test the oil in the transformer at the request of a customer for a fee. Copies of correspondence with Hawaiian Electric Company are included in Appendix H.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Significant findings of the assessment are summarized below.

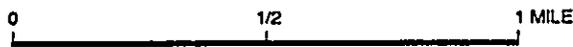
- Review of aerial photographs dating from 1949 through 1992 did not indicate the presence of containment vessels, surface staining, distressed vegetation, or other indicators of a chemical release at the Site.
- Site reconnaissance did not identify areas of potential environmental concern. Two plastic standpipes were identified near the southeast corner of the Site. Levine-Fricke suspects that these pipes are tie-ins for the sanitary sewer system.
- Review of applicable regulatory records indicate that no incidents or conditions are known to have occurred at the Site or in the near vicinity that would be expected to have environmental impact to the Site.

Levine-Fricke recommends the following activities be performed:

- Investigate the two standpipes identified on-site to confirm that they are sanitary sewer tie-ins. The pipes might be identified by contacting the owner of the apartment building located near the pipes, or the City and County of Honolulu, Public Works Department.
- Request that HECO collect and analyze an oil sample from the electrical transformer (# 34512) located near the site to evaluate the presence or absence of PBCs.

8.0 REFERENCES

- City and County of Honolulu, Fire Department. (1992). Hazardous Materials Incidents Files.
- Hawaiian Electric Company, Inc. (1993). Letter from William Bonnet (HECO) to Glenn Leong (Levine-Fricke).
- Personal Communication between Glenn Leong of Levine-Fricke and Norris Yehara of the State of Hawaii, Department of Health, Safe Drinking Water Branch. (1993) Telephone Memorandum.
- R.M. Towill Corporation. (1949, 1949, 1969, and 1992). Aerial Photographs.
- Sanborn Map Company. (1927 and 1955). Maps.
- State of Hawaii, Department of Health, Underground Storage Tank Branch. (1991). Underground Storage Tank Registration List.
- State of Hawaii, Department of Health, Underground Storage Tank Branch. (1993). Underground Storage Tank Leak Log.
- State of Hawaii, Department of Health, Underground Storage Tank Branch. (Assorted Years). Punahou School Files.
- State of Hawaii, Department of Health, Hazard Evaluation and Emergency Response Branch. (1991) Health, Hazard Evaluation and Emergency Response List.
- State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management. (1992). Ground Water Index and Summary.
- United States Environmental Protection Agency. (1992). Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List.



MAP SOURCE:
U.S.G.S. Honolulu, Hawaii
7.5' Quadrangle
1983

Figure 1: SITE VICINITY

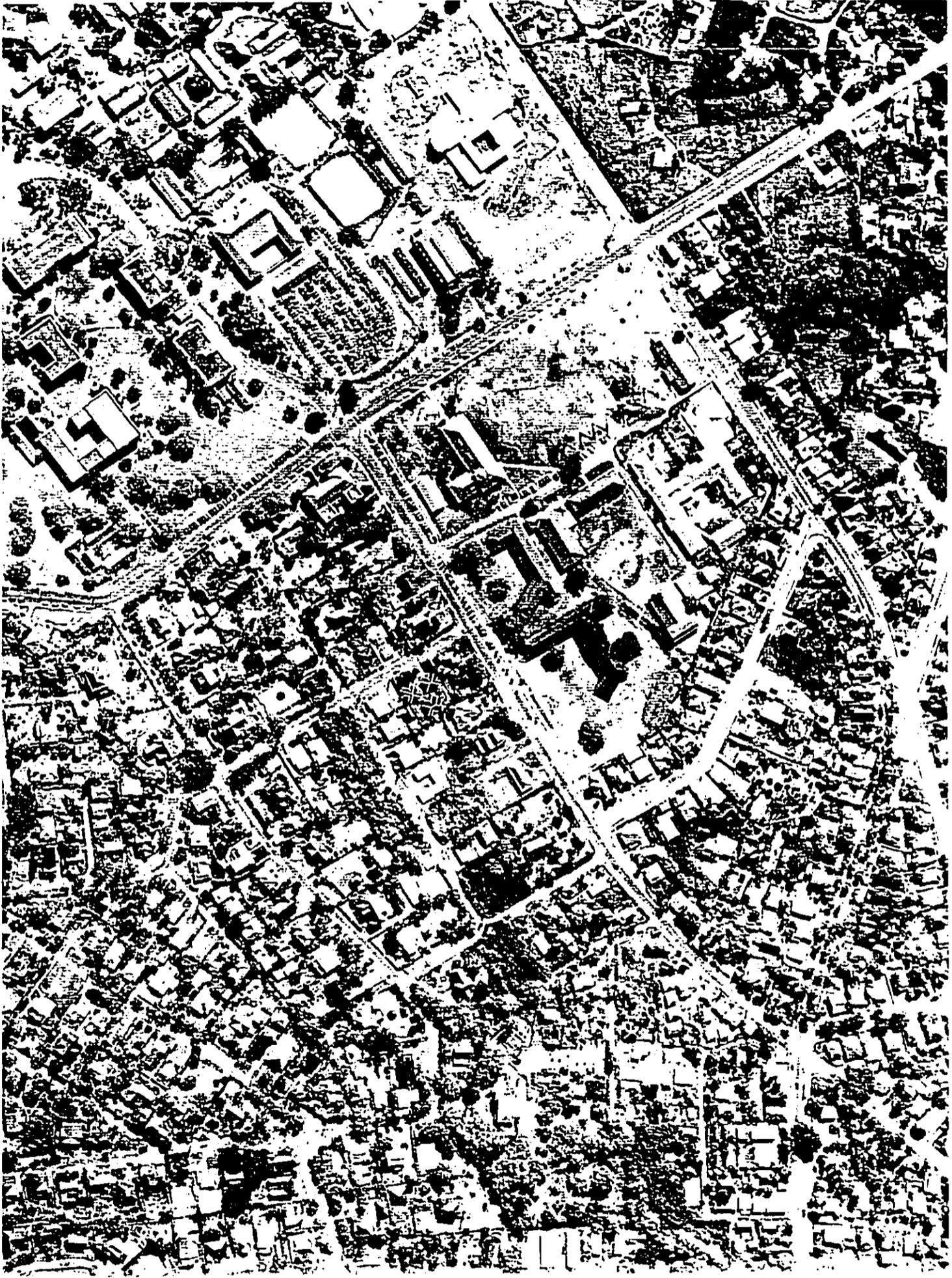
Project No. 3035

GML29NOV93RYL

LEVINE·FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

APPENDIX A
AERIAL PHOTOGRAPHS FROM R.M. TOWILL CORPORATION

DOCUMENT CAPTURED AS RECEIVED



Aerial Photo - 1949

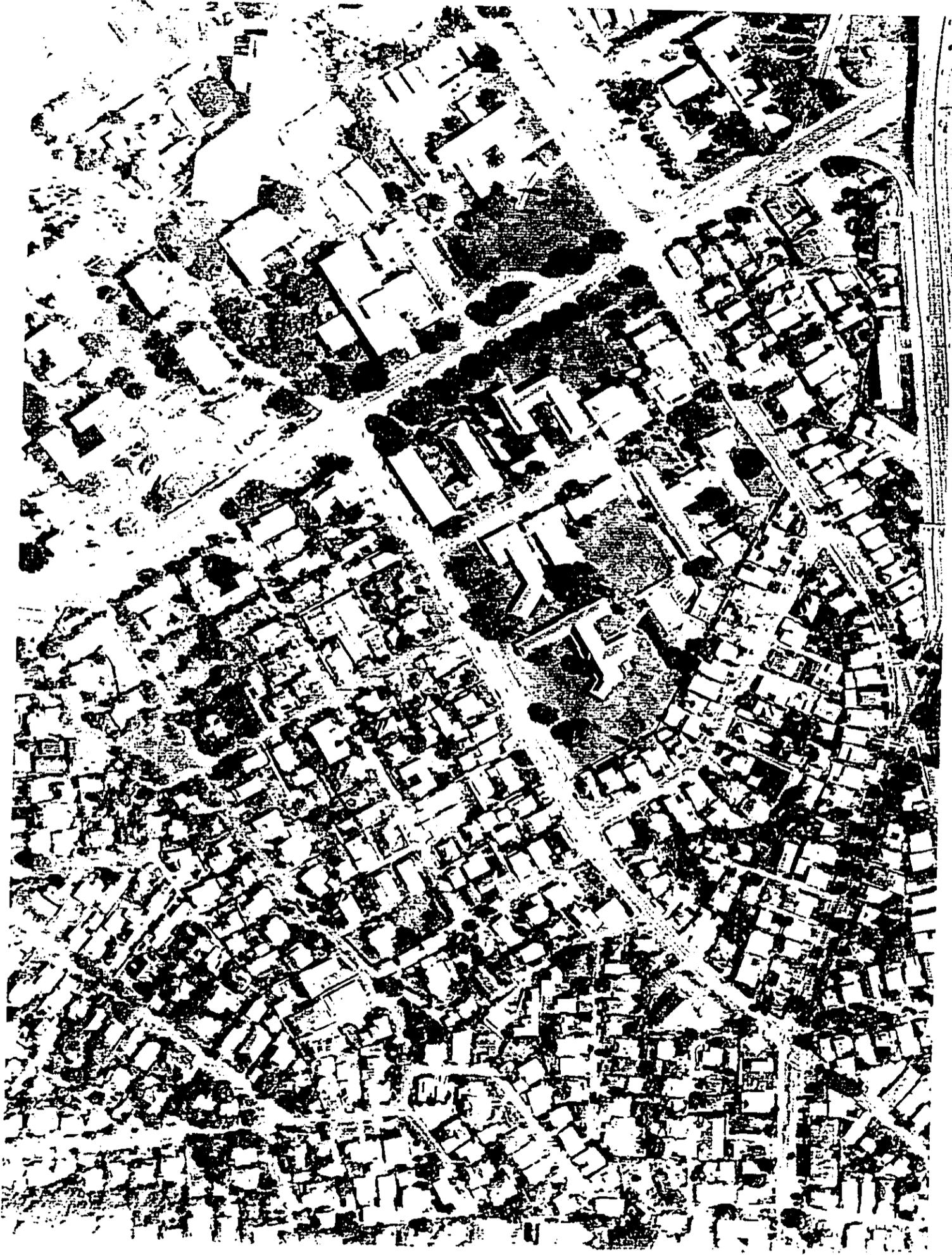
Source: R.M. Towill

DOCUMENT CAPTURED AS RECEIVED



Aerial Photo - 1969

Source: R.M. Towill



DOCUMENT CAPTURED AS RECEIVED

Aerial Photo - 1992

Source: R.M. Towill

APPENDIX B
SANBORN INSURANCE MAPS

INSURANCE

MAPS OF

Sanborn

ISLAND of

THE TERRITORY OF

HAZAR VYZANTOT

VALHALLA

THE

PUBLISHED BY THE

Sanborn

MAP

Company

of NEW YORK

1927

COPYRIGHT 1927 BY THE SANBORN MAP CO.

THIS MAP IS PUBLISHED IN THE
INTEREST OF THE PUBLIC AND
WITHOUT REGARD TO PROFIT
ACCURACY IS NOT GUARANTEED

KEY to SYMBOLS

	FIRE PROOF CONSTRUCTION
	IRON BUILDING
	STONE BUILDING
	HOLLOW CONCRETE OR CEMENT BLOCK CONSTRUCTION
	CONCRETE OR REINFORCED CONCRETE CONSTRUCTION
	TILE BUILDING
	BRICK BUILDING WITH BUCK OR METAL CORNICE
	BRICK BUILDING WITH FRAME CORNICE
	STONE FRONT
	FRAME SIDE
	BRICK VENEERED BUILDING
	BRICK AND FRAME BUILDING
	FRAME BUILDING
	METAL CLAD
	STABLE
	TENANT BUILDING OCCUPIED BY VARIOUS MANUFACTURING RISKS
	FIRE WALL 6 INCHES ABOVE ROOF
	12 INCH WALL
	18 INCH WALL
	36 INCH WALL
	AUTO. HOUSE OR PRIVATE GARAGE
	GASOLINE TANK
	FIGURES 12, 16 - INDICATE THICKNESS OF WALL IN INCHES
	WALL WITHOUT OPENINGS AND SIZE IN INCHES
	OPENING WITH SINGLE IRON OR TIN CLAD DOOR
	DOUBLE DOORS
	STANDARD IRON VAULT DOORS OR STANDARD TIN CLAD DOORS
	WIRED GLASS DOORS
	SKYLIGHT LIGHTING TOP STORY ONLY
	SKYLIGHT LIGHTING THREE STORIES
	WIRED GLASS SKYLIGHT
	WATER TANK

Fire proof construction.
 Iron building.
 Stone building.
 Hollow concrete or cement block construction.
 Concrete or reinforced concrete construction.
 Tile building.
 Brick building with buck or metal cornice.
 Brick building with frame cornice.
 " " " stone front
 " " " frame side
 Brick veneered building.
 Brick and frame building.
 Frame building
 " " metal clad. Stable
 Tenant building occupied by various manufacturing risks.
 fire wall 6 inches above roof Auto. house or private garage.
 " " 12 " " " Gasoline tank.
 " " 18 " " " "
 " " 36 " " " "
 Figures 12, 16 - indicate thickness of wall in inches.
 Wall without openings and size in inches.
 " with openings on floors as designated.
 Opening with single iron or tin clad door.
 " double " " " doors.
 " " standard iron vault doors or standard tin clad doors
 " " wired glass doors.

FOOT REPRESENTS OFF RING SYSTEMS INDICATE STORIES COUNTING FROM LEFT TO RIGHT, LOOKING TOWARD BUILDING

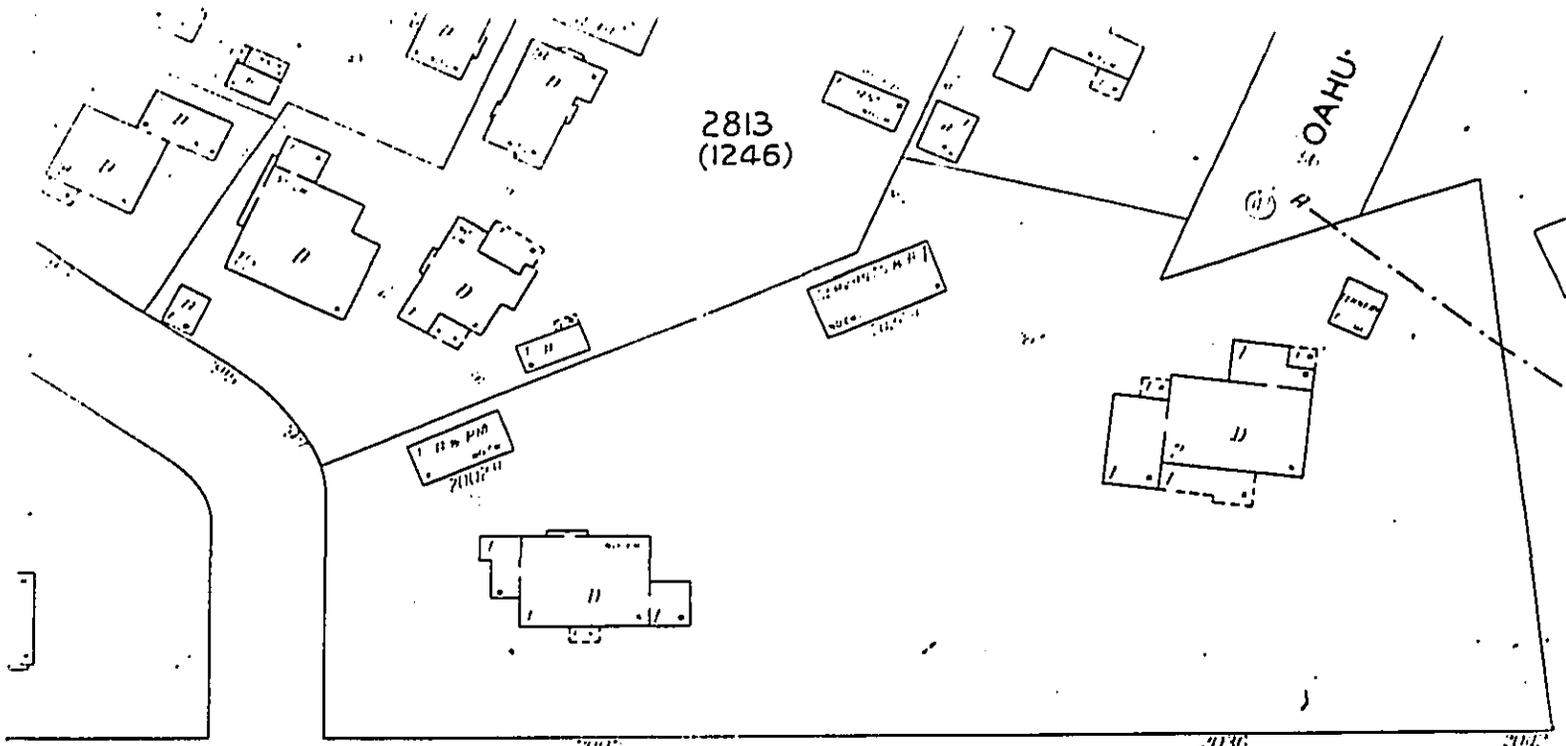
Window opening in first story
 " " second and third stories.
 " " " " fourth " " with wired glass iron or tin clad shutters.
 Elevators. Hoistways.
 Frame enclosed elevator
 " " with traps
 " " self closing traps
 " " " self closing traps
 " " " wired glass door.
 Horizontal steam boiler
 Vertical " " AFA Automatic fire alarm
 Vertical " " I.E.P. Independent electric plant
 Brick Chimneys. Vertical pipe or stand pipe
 Iron chimney 50ft high with spark arrester
 Terra cotta chimney CBC Cement brick chimney
 Concrete block chimney PC. Patent chimney
 NOTE - All buildings in which chimney marks are not shown have brick chimneys.

Automatic sprinklers Outside hose connection to sprinklers
 " " not installed throughout building.
 (Note under symbol indicates protected portion of building)
 Automatic chemical sprinklers Water pipes and size in inches.
 Not sprinklered.
 Fire alarm box. Single hydrants.
 Fire pump. Double
 Elevation Triple
 Reference to adjoining page.

Block number. **5**
 Fire engine house, as shown on key map.

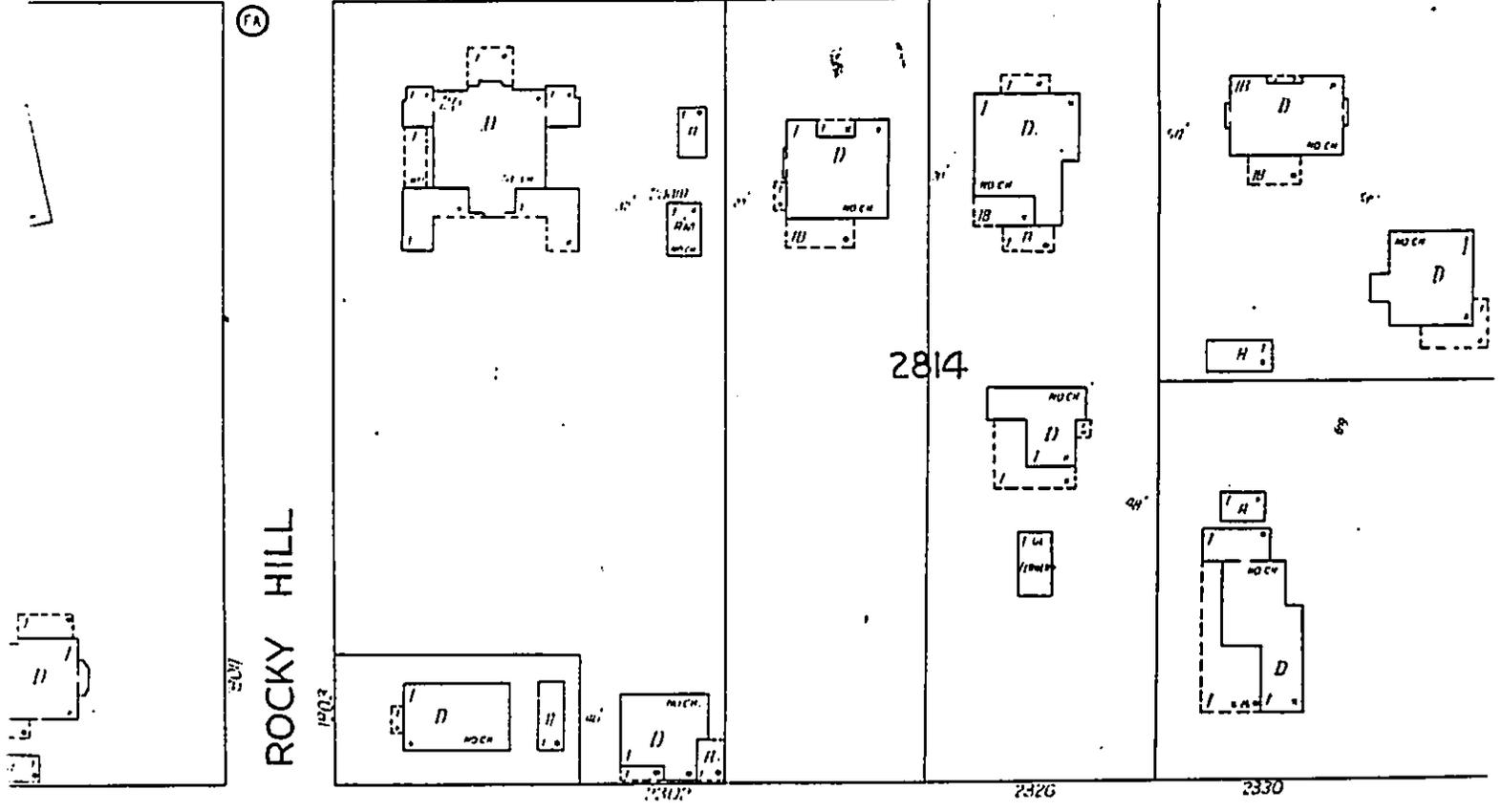
72

DOCUMENT CAPTURED AS RECEIVED

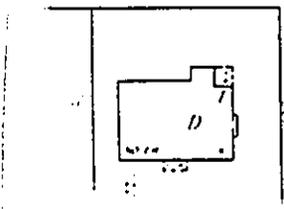


VANCOUVER HWY

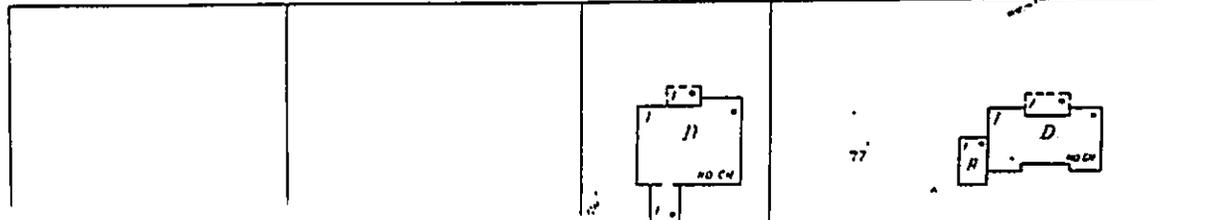
2007 2009 2029 2039 2047



A VIEW



2323 2326 2330 2337



INSURANCE
MAPS of

HONOLULU

ISLAND OF OAHU,
TERRITORY OF HAWAII

VOLUME THREE

SANBORN MAP Company

NEW YORK

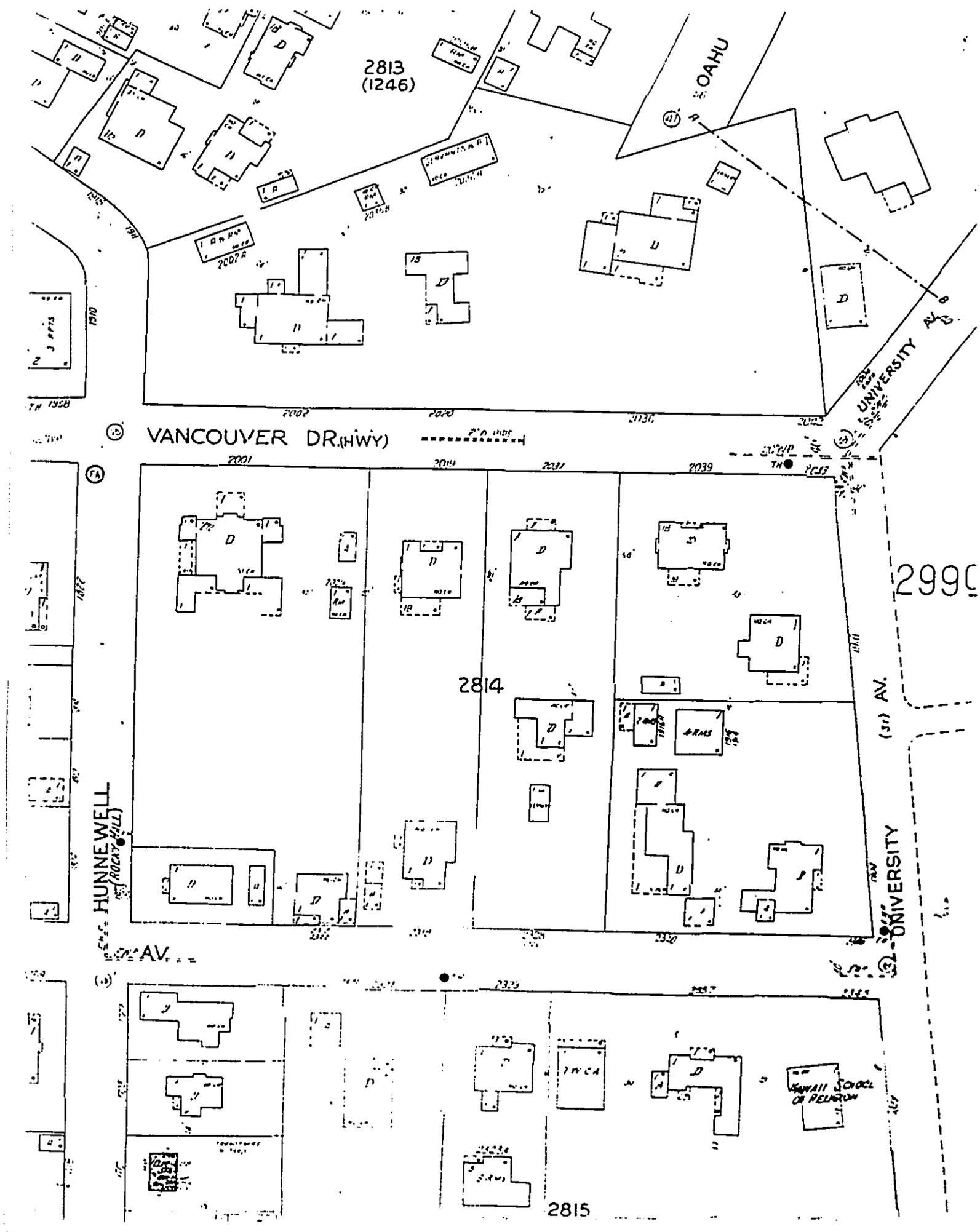
1927

F 10011

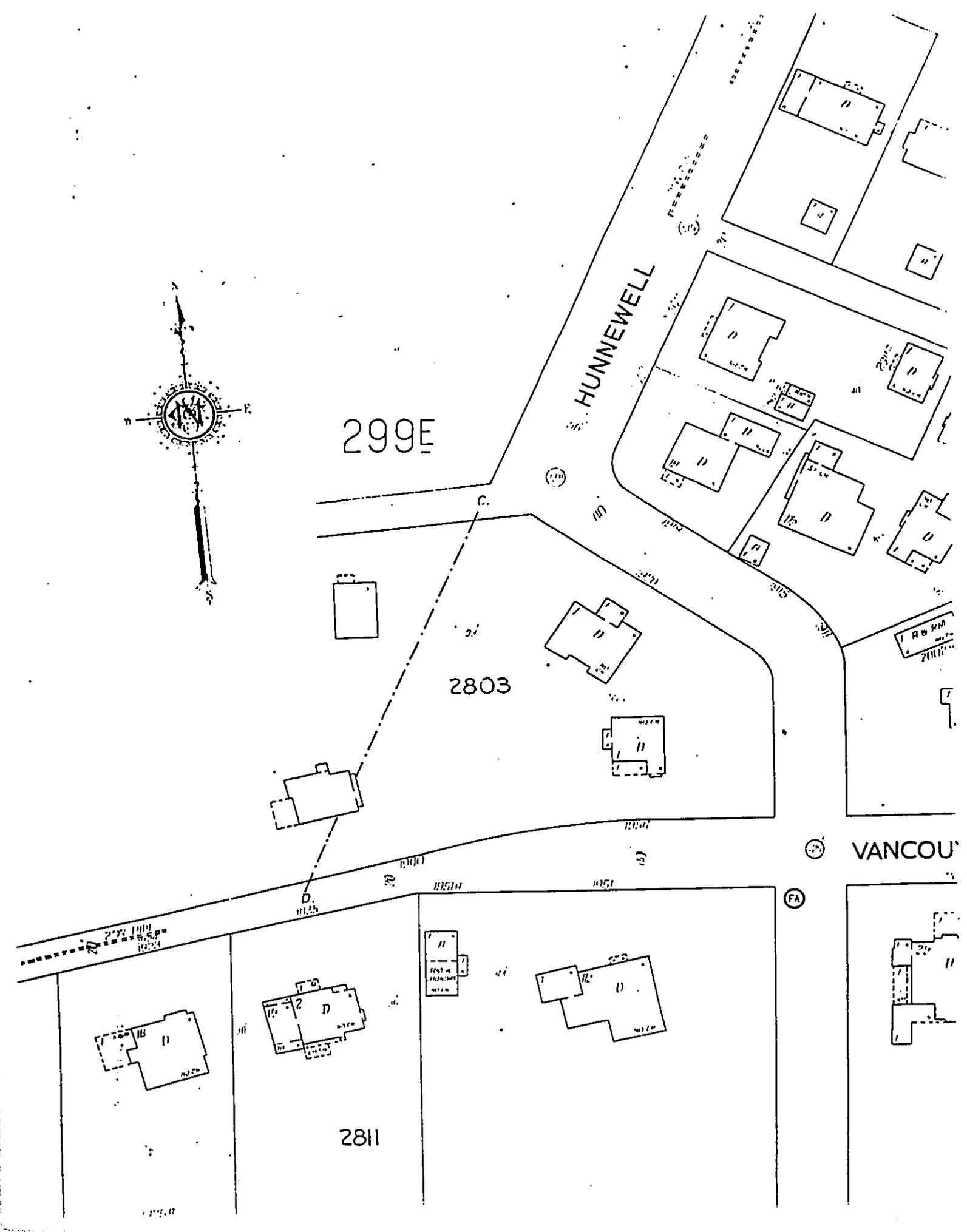
REPRINTED 1951

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DOCUMENT CAPTURED AS RECEIVED

APPENDIX C

DEPARTMENT OF LAND AND NATURAL RESOURCES

TITLE INFORMATION

DOCUMENT CAPTURED AS RECEIVED

SOURCE:		VCC & TITLE		Punahoa		DIV.				
N.	CCW	DATE	12/5/50	DEED, ETC.	TMD NO.	7336	2	8	16	27
1					22,500		Charles H Edmondson & wf Margaret B J/T			
2	Toi 2-8-16-62	12/5/50	7500		15,000		do -			
3	TMB 5380161			WD/ny 7/27/61	15,000		do			
	A/S: Bk 4085 p 459			Amt-260,000			With: (Okumura Boys & Girls Home) A/A			
	\$1,500 dn etc.	6/30/61	7/6/61	DEC						
4	TMB 10932186			WD/ny 8/26/66	15,000		To: Okumura Boys & Girls Home			
	D: Charles H Edmondson & wf Margaret B.									
	Bk 5410 p 303	RS-566	7/8/66	8/15/66						
	DES									

NOTE: LAST AREA & GRANTEE FINAL DATA AS SHOWN ON TAX

RECEIVED

DOCUMENT CAPTURED AS RECEIVED

SOURCE	Record	LOCATION	Eunahou	1942	DIVISION								
BY M Kerr	DATE 9/11/42 2893			D E E D	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>TON</td> <td>SEC</td> <td>PLAT</td> <td>PAGE</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">8</td> <td style="text-align: center;">16</td> <td style="text-align: center;">29</td> </tr> </table>	TON	SEC	PLAT	PAGE	2	8	16	29
TON	SEC	PLAT	PAGE										
2	8	16	29										
Inst 55591 Bk 1710 p 158 Cons: \$10.00 Rev Stamp: \$11.00 Date: Aug 24, 1942 Rec: Aug 29, 1942			Laura C MacAllep (Widow) to (also known as Laura C McAllep) CITIZEN		Charles D Rea & Wf Jessica L T/E Hon. Citizens								

TAX MAPS	Portion of Block J Sea View Tract Area 11700 [] Des. Together with a perpetual R/W, to be used in common with Margaret C Jackson, over strip of land 9 ft wide running along E side of above land. No Des. Area not given
TAX OFFICE	
TR NO	
ROUTE SLIN	
SKETCH	
ADJOINING A C	
LEDDER	
TOWN PLATE	
FORMER KEY	
CHANGE	

TO	BY	PARCEL	AL DATA AS SHOWN ON TAX MAPS AS OF				OWNER	INT
			ZONE	ST.	PARCEL	AREA		



DOCUMENT CAPTURED AS RECEIVED

SOURCE <u>Circuit Court</u>		LOCATION <u>Manoa</u>		DIVISION						
BY <u>M. Kerr</u> DATE <u>10/2/40</u>		3674 / FINAL ORDER OF DISTRIBUTION Estate of <u>Will R McAllep</u> Devises 1940 Laura C McAllep Honolulu		ZONE	SEC.	PLAT	PARCEL			
				2	8	16	29			
Probate No 11191 1st Jud Circuit Date: 8/6/40 Died: Oct 21, 1939		Land situated at 2031 Vancouver Drive Area not given								
TAX MAPS <input checked="" type="checkbox"/> <u>W.R. McAllep</u> TAX OFFICE <input checked="" type="checkbox"/> <u>M. Kerr</u> TRACING <input checked="" type="checkbox"/> <u>H.R. Voller</u> ROUTE SLIP <input checked="" type="checkbox"/> SKETCH <input checked="" type="checkbox"/> ADJOINING PARCELS <input checked="" type="checkbox"/> F.S. LEDGER <input checked="" type="checkbox"/> RETURN PLATE <input checked="" type="checkbox"/>										
FORMER KEY		CHANGE		FINAL DATA AS SHOWN ON TAX MAPS AS OF <u>10/3/40</u>						
ZONE	SEC.	PLAT	PARCEL	ZONE	SEC.	PLAT	PARCEL	AREA	OWNER	INT.
				2	8	16	29	11,700	Laura C McAllep	

RECEIVED



APPENDIX D
SITE PHOTOS

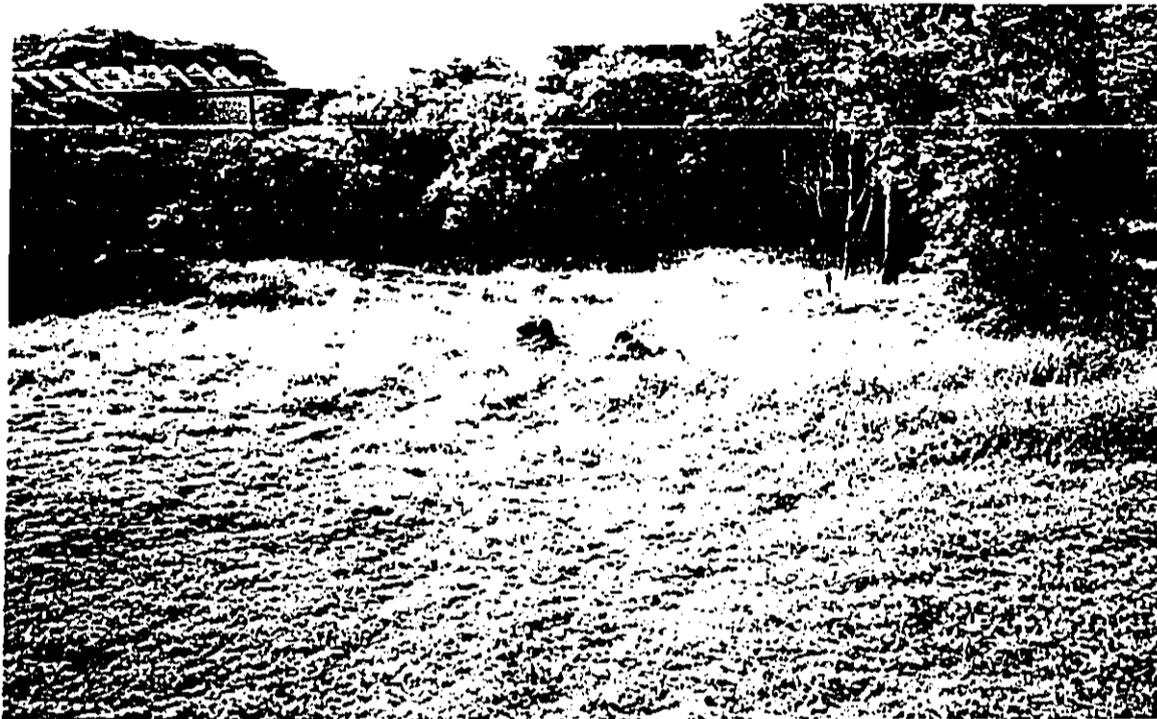


Photo #1: General Site Photo



Photo #2: Concrete Foundation of Former Building



Photo #3: Standpipes

APPENDIX E

**STATE OF HAWAII, DEPARTMENT OF HEALTH, REGISTERED UNDERGROUND
STORAGE TANK LIST, UNDERGROUND STORAGE TANK LEAK LOG, AND
PUNAHOU SCHOOL FILES
(Applicable Pages)**



LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

October 29, 1993

LF 3035

Steve Chang
State of Hawaii, Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Underground Storage Tank Section
Five Waterfront Plaza, Suite 250
500 Ala Moana Boulevard
Honolulu, Hawaii 96813

Subject: Information from Underground Storage Tank Section
Regarding Properties in the Manoa Area

Dear Mr. Chang:

This letter is a request for past or current information from the State of Hawaii Department of Health Environmental Management Division, Solid and Hazardous Waste Branch, Underground Storage Tank (UST) Section regarding the tanks at:

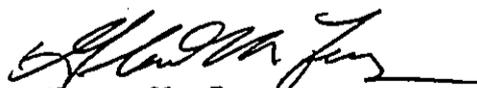
Punahou School
1601 Punahou Street
Honolulu, HI 96822

According to the UST List and UST Leak Log, there are five registered USTs at the school and there has been some sort of reported leak associated with them.

I would like to schedule an appointment to review applicable files that the Underground Storage Tank Section may have that pertain to this property. The information is to be used in a Phase I Environmental Site Assessment that Levine-Fricke, an environmental consulting firm, is conducting in Manoa. I will be contacting you in the near future to schedule the appointment to review the files.

Thank you very much for your time and cooperation and please don't hesitate to contact me or Jeff Morrell at 522-0321 if you have any questions or require any additional information for this request.

Sincerely,


Glenn M. Leong
Senior Project Chemist

220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321 • Fax (808) 522-0366

Other offices in Emeryville, CA; Irvine, CA; Sacramento/Roseville, CA; Tallahassee, FL

JOHN WAINEE
GOVERNOR OF HAWAII



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

STATE OF HAWAII
DEPARTMENT OF HEALTH
ENVIRONMENTAL MANAGEMENT DIVISION
FIVE WATERFRONT PLAZA, SUITE 250
500 ALA MOANA BOULEVARD
HONOLULU, HAWAII 96813

In reply, please refer to:
EMD / SHW

April 2, 1993

U0405RK

UST LEAK LOG

NOTICE TO REQUESTORS

This listing contains the names of facilities in Hawaii for which we have information in our files indicating that a suspected or confirmed release of regulated substances (petroleum products and/or hazardous substances) from underground storage tanks (USTs) and/or other sources has occurred.

The primary purpose of this listing is to assist the Department's UST Section in tracking suspected and confirmed releases from USTs that are subject to regulation by Title 40 of the Code of Federal Regulations (CFR) Part 280 and Hawaii Revised Statutes Chapter 342L. However, this listing also contains the names of facilities which may not be directly regulated by these Federal UST rules or the State UST statute but are being monitored by our UST Section. This listing is strictly used as a program tracking tool. Please note that the information on this listing does not reflect the regulatory status of a facility with respect to 40 CFR Part 280, the type or severity of regulated substances that may have been released at a facility, or the extent of environmental clean-up work which has been undertaken at a site by the facility owner (or other responsible party) in response to the discovery of regulated substances.

Should you have any questions regarding our Leaking UST listing or its use, please contact our UST Section at (808) 586-4228.

RK:erm

1 MAR 1991
 432 AC. 870

DEPARTMENT OF HEALTH

LOCATIONS OF UNDERGROUND STORAGE TANKS FOR OAHU

DOCUMENT CAPTURED AS RECEIVED

Location Name and Address	Owner Name and Address	Tank ID	Age of Tank	Tank Material of Construction	Capacity	Product Stored
101124 PUNAHOU SCHOOL 1501 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1501 PUNAHOU ST. HONOLULU, HI 96822	E	UNK 0.5 miles	UNK		
101125 PUNAHOU AIR FORCE STATION HQR 15TH AIR BASE WING (15 ABW) BLDG #72 HICKAM AFB, HI 96854-500	U.S. AIR FORCE HQR 15TH AIR BASE WING (15ABW) HICKAM AFB, HI 96853-5000	T78A	UNK	500 Unknown		Diesel
101126 PUNAHOU AIR FORCE STATION HQR 15TH AIR BASE WING (15 ABW) BLDG #72 HICKAM AFB, HI 96854-500	U.S. AIR FORCE HQR 15TH AIR BASE WING (15ABW) HICKAM AFB, HI 96853-5000	T78B	UNK	500 Unknown		Diesel
101128 PUU KAPAA BAPTIST CONF. CNTR. 55-199 PUA HEMA ST. WAIKANE, HI 96792	HAWAII BAPTIST CONVENTION 20-2 VANCOUVER DR. HONOLULU, HI 96822	001	24	500 Steel		Diesel
101129 PUU KAPAA RADIO STATION 44-354 KANEHOE BAY DR. KANEHOE, HI 96744	ETE HAWAIIAN TELEPHONE INC. P.O. BOX 2200 HONOLULU, HI 968-1	001	22	200 Steel		Diesel
101130 PUULOA CENTRAL OFFICE KIMITO HWY AND MAIN STREET HONOLULU, HI 96818	HAWAIIAN TELEPHONE CO. 1177 BISHOP STREET HONOLULU, HI 96813	001	4	2,500 Lined Interior Fiberglass/Plastic		Diesel
101131 PUULOA CENTRAL OFFICE KIMITO HWY AND MAIN STREET HONOLULU, HI 96818	HAWAIIAN TELEPHONE CO. 1177 BISHOP STREET HONOLULU, HI 96813	R-001	18	1,000 Steel		Diesel
101137 PUULOA RIFLE RANGE EWA BEACH BLDG #17 EWA BEACH, HI 96706	CAMP H.M. SMITH, USMC FACILITY & SERVICES OFFICE MAINTENANCE SECTION CAMP H.M. SMITH, HI 96861	18	48	UNK Concrete		OIL AND W
101138 PUUNUI CENTRAL OFFICE 415 KYLLIE ST.	ETE HAWAIIAN TELEPHONE INC. P.O. BOX 2200	001	8	550 Steel		Diesel

FORM 1001
 FEB 10, 1959

DEPARTMENT OF HEALTH

LISTING OF UNDERGROUND STORAGE TANKS FOR OAHU

Location Name and Address	Owner Name and Address	Tank ID	Age of Tank	Tank Material of Capacity Construction	Product Stored
45-1021 KAM HWY KANELOE, HI 96744 PUBLIC STORAGE (ALOHA KANELOE)	739 N. NIMITZ HWY, HONOLULU, HI 96817 ALOHA PETROLEUM LTD.	R-004	24	550 Steel	Gasoline
45-1021 KAM HWY KANELOE, HI 96744 PUBLIC STORAGE (ALOHA KANELOE)	739 N. NIMITZ HWY, HONOLULU, HI 96817 ALOHA PETROLEUM LTD.	R-005	20	550 Steel	Used Oil
45-1021 KAM HWY KANELOE, HI 96744 PUBLIC STORAGE (ALOHA KANELOE)	739 N. NIMITZ HWY, HONOLULU, HI 96817 ALOHA PETROLEUM LTD.	R-006	51	1,000 Steel	Diesel
100225 PUNAHOU CENTRAL OFFICE 8034 YOUNG ST. HONOLULU, HI 96826	ETE HAWAIIAN TELEPHONE INC. P.O. BOX 2809 HONOLULU, HI 96841	001	20	2,500 Steel Cathodically Prot. Steel	Diesel
100227 PUNAHOU REPAIR SHOP 1550 SO. KING ST. HONOLULU, HI 96826	PUNAHOU REPAIR SHOP 1550 SO. KING ST. HONOLULU, HI 96826	1	39	2,000 Steel	Used Oil
100227 PUNAHOU REPAIR SHOP 1550 SO. KING ST. HONOLULU, HI 96826	PUNAHOU REPAIR SHOP 1550 SO. KING ST. HONOLULU, HI 96826	2	UNK	3,000 Steel	Gasoline
100227 PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	1	34	500 Steel	Gasoline
100222 PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	1	5	2,000 Lined Interior Fiberglass/Plastic	Gasoline
100223 PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	2	5	1,000 Lined Interior Fiberglass/Plastic	Diesel
100224 PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	1	UNK	UNK	UNK

0.5 miles

DOCUMENT CAPTURED AS RECEIVED

STATE OF HAWAII - DEPARTMENT OF HEALTH - UNDERGROUND STORAGE TANK SECTION
ACTIVE LEAKING UNDERGROUND STORAGE TANK LISTING

Location Name and Address	Owner Name and Address	Facility ID	Leak ID
2054 YOUNG ST. HONOLULU, HI 96826	1177 BISHOP ST HONOLULU, HI 96813	-	-
PUNAHOU REPAIR SHOP 1558 S. KING ST. HONOLULU, HI 96826	PUNAHOU REPAIR SHOP 1558 S. KING ST. HONOLULU, HI 96826	9-101357	920135
PUNAHOU SCHOOL - MAINTENANCE SHD 1601 PUNAHOU ST. HONOLULU, HI 96822	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822	9-100397	920135
PUU NANA RADIO STATION TOP OF PUU NANA PUU NANA, HI 96770	GTE HAWAIIAN TELEPHONE CO., INC 1177 BISHOP ST HONOLULU, HI 96813	9-800335	920135
PUULOA RIFLE RANGE BLDG 48 TANK 19 EWA BEACH, HI 96706	USMC - CAMP H.M. SMITH FACILITY & SERVICES OFFICE MAINTENANCE SECTION HONOLULU, HI 96861-5010	9-800335	920135
QUEEN'S MEDICAL CENTER 1301 PUNCHBOWL ST. HONOLULU, HI 96813	THE QUEEN'S MEDICAL CENTER 1301 PUNCHBOWL ST. HONOLULU, HI 96813	9-100301	920056
RAY'S AUTO SERVICE 959 QUEEN ST HONOLULU, HI 96814	RAYMOND TANURA RAY'S AUTO SERVICE 959 QUEEN ST HONOLULU, HI 96814	9-100311	920135
RICHARD'S UNION SERV. L-0471 1136 NORTH KING ST. HONOLULU, HI 96817	UNOCAL P.O. BOX 659 HONOLULU, HI 96809	9-100023	920023
ROBERTS HAWAII TOURS 759 KELIKOI ST. HONOLULU, HI 96813	ROBERTS HAWAII TOURS 759 KELIKOI ST. HONOLULU, HI 96813	9-100893	910017
ROD'S AUTO SERVICE 1489 PUNCHBOWL ST. HONOLULU, HI 96813	WILLUM, LTD. 94-748A HIKIMOE ST. WAIPAHU, HI 96797	9-100859	910053
ROSCOE MOSS COMPANY 830 AHUA ST. HONOLULU, HI 96819	ROSCOE MOSS COMPANY 830 AHUA ST. HONOLULU, HI 96819	9-100305	910056
ROY'S KAM TEXACO STATION 1634 MAKUAHINE ST. HONOLULU, HI 96817	TEXACO REFINING & MARKETING INC. 1602 NUUANU AVE, SUITE 201 HONOLULU, HI 96817	9-100336	920135

DOCUMENT CAPTURED AS RECEIVED

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
ENVIRONMENTAL MANAGEMENT DIVISION
FIVE WATERFRONT PLAZA, SUITE 250
500 ALA MOANA BOULEVARD
HONOLULU, HAWAII 96813

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

COPY

In reply, please refer to:
EMD / SHW

April 8, 1993

U03105PA

Mr. Steven Piper
Punahou Schools
1601 Punahou Street
Honolulu, Hawaii 96822

Subject: Underground Storage Tank (UST) Permanent Closure
(Removal) at Punahou School, Honolulu, Hawaii, Facility
I.D. No. 9-100297, Leak I.D. No. 900015.

Dear Mr. Piper:

We have reviewed the reports entitled "Underground Storage Tank Investigation", prepared by Brewer Environmental Services, dated June 4, 1990, and "Investigation for Soil and Groundwater Cleanup, Punahou Schools, 1601 Punahou Street, Honolulu, Hawaii", dated August 5, 1991, prepared by Brewer Environmental Services regarding the closure of and actions taken in response to a leaking UST located at Punahou School. We understand that a 500-gallon gasoline UST was permanently closed and removed by Industrial Technology on December 11, 1989. The site assessment during closure showed that the gasoline UST had a release. A brief summary of our review of the file is attached.

Upon completion of a soil and ground water investigation, your consultant recommended no further work at this site. This recommendation is included in the "Investigation of Soil and Groundwater Cleanup" report and is based on the following: 1) the geology of the site is such that "hard layers of rock at a depth of 18 to 37 feet beneath the site restricted the movement of fluids from reaching the underlying groundwater"; 2) the release appears to be very limited in extent; and 3) the source of the petroleum release (i.e., the UST) has been removed.

NOV - 1993

DOCUMENT CAPTURED AS RECEIVED

Mr. Piper
April 8, 1993
Page two

Based on information in our file, we concur with your consultant's conclusion that the gasoline contamination appears to be limited to the area directly beneath the former UST and that the geology of this site may have prevented further vertical migration of gasoline contaminants. However, no remedial activities were performed to address the gasoline-contaminated soils left in-place and as such the levels of residual contaminants in the UST excavation do not meet our recommended cleanup goals. Therefore, we cannot agree with your consultant's recommendation that no further action is necessary in response to this confirmed release.

Should you have any questions, please contact Ms. Pierette L. Arroyo, Environmental Health Specialist, of our Underground Storage Tank Section at (808) 586-4239.

Sincerely,



ARLENE M. KABAI, Chief
Solid and Hazardous Waste Branch

AMK/pla

Attachment

c: Russ Beckwith, U.S. Environmental Protection Agency, San Francisco

DOCUMENT CAPTURED AS RECEIVED

ATTACHMENT

SOLID AND HAZARDOUS WASTE BRANCH
UNDERGROUND STORAGE TANK SECTION
PERMANENT CLOSURE OF UST AT PUNAHOU SCHOOL

A soil sample was collected by Industrial Technology, two feet below the bottom of the 500-gallon gasoline UST and analyzed for total petroleum hydrocarbons (TPH) measured as gasoline; benzene, toluene, ethylbenzene and xylene (BTEX). Laboratory preparation and analytical methods used to test this soil sample were not specified in the report. Nevertheless, the laboratory results showed TPH measured as gasoline at a concentration of 3000 parts per million (ppm); BTEX at a concentration of 110 ppm, 100 ppm, 65 ppm and 400 ppm, respectively. Inspection of the tank showed evidence of holes on the bottom. Petroleum vapor field readings indicated levels as high as 86 part per million (ppm) in soils below the UST; however there were no visual signs of contamination. This soil was not excavated from the area except for the soil above the bottom of the UST which showed no contamination by field instrumentation. The excavation was left open for one day and the soil was placed back into the excavation.

Brewer Environmental was retained to continue the environmental work at this site. One soil boring (B-1) was located in the excavation area approximately five feet northeast of the previous soil sampling point where high TPH and BTEX levels were detected. Three other soil borings were located immediately outside of the excavation area, five feet from north, east, and west of B-1. A total of eight soil samples were collected and analyzed for TPH measured as gasoline by EPA method 5030/8015; BTEX by EPA method 5030/8020. Laboratory results showed a soil sample collected at B-1, 7 feet depth, with a concentration of TPH as gasoline at 1,600 ppm; BTEX at 7.04 ppm, 294 ppm, 100 ppm and 614 ppm, respectively. Laboratory results of other soil samples were non-detect or below the DOH recommended cleanup levels for soil. Ground water was not encountered during excavation or drilling activities.

Two additional soil borings were later performed on April 16, 1990 to assess the extent of contamination. One boring was located approximately 7 feet south of B-1 and the other boring was located 10 feet west B-1. Field measurements from soil samples taken at the 12 and 18 foot depths from these borings were non-detect for hydrocarbon vapors. Laboratory results of one soil sample from one boring confirmed non-detect levels for

Page two

TPH measured as gasoline by EPA method 5030/8015 and BTEX by EPA method 5030/8020. In addition, one monitoring well was installed in the excavation area, located 3 feet northeast of B-1, to assess any impact to ground water which was encountered at 38 feet depth. Sampling and laboratory analysis of one ground water sample showed non-detect levels for TPH gasoline by EPA method 5030/8015 and BTEX by EPA method 602. A water sample from the Punahou School domestic well was also collected and showed non-detect levels for TPH as gasoline by EPA method 5030/8015 and BTEX by EPA method 602.

Comments prepared by Ms. Pierette L. Arroyo, Environmental Health Specialist, UST Section.

PUNAHOU SCHOOL • 1601 PUNAHOU STREET



HONOLULU, HAWAII 96822 • PH: (808) 944-5711

September 27, 1991

COPY

State of Hawaii
Department of Health
Solid and Hazardous Waste Branch
Five Waterfront Plaza, Suite 250
500 Ala Moana Blvd.
Honolulu, Hawaii 96813

Attn: Caroline Winters

Dear Ms. Winters,

I am writing this letter in response to two directives from your office and to follow-up on our conversation on Friday, September 27. The directives make reference to underground storage tanks and their self-certification and registration fee. After talking to you it was decided that we do not have what you think we have in the way of storage tanks.

At present we only have two underground storage tanks on our campus. Tank #1 is a 2000 gallon gas storage tank and Tank #2 is a 1000 gallon diesel storage tank. Both tanks are located at the Punahou School Operations Shop and were installed in 1987 and are currently in compliance with federal release requirements.

The other three tanks you have in your records are no longer in use and have been removed from the ground and disposed of in compliance with all federal regulations.

In December of 1989, we notified your department that we were closing our #3 tank at our Maintenance Shop and on December 11, 1989, Industrial Technology removed the tank and since, additional information and test results have been submitted to your office for final closure.

Two previously unreported tanks were found in our Barwick playground in October of 1990 during an excavation to install some new playground equipment. Not knowing how to handle the removal, we consulted your office and followed normal closure procedures and the tanks were removed on December 6, 1990. Follow-up ground testing by Brewer Environmental was conducted with no findings and the closure was completed.

NOV - 1991

Ms. Caroline Winters
Solid and Hazardous Waste Branch

Page 2

I have discussed all of this with you over the phone and this letter is to put all of this "on the record."
Enclosed you will find a check for \$500. to cover the registration fee for the two tanks that we do have.

Thank you for all your help over the telephone. If I can be of further help, please let me know at 944-5811.

Sincerely,



Steven J. Piper
Assistant Director
PUNAHOU Physical Plant

SJP:jt
encl. 4

DOCUMENT CAPTURED AS RECEIVED

STATE OF HAWAII - DEPARTMENT OF HEALTH
SOLID & HAZARDOUS WASTE BRANCH
UNDERGROUND STORAGE SECTION
FIVE WATERFRONT PLAZA, SUITE 250
500 ALA MOANA BLVD.
HONOLULU, HI 96813
(808) 543-8228

* INVOICE *

September 9, 1991

Page 1 of 1

** UNDERGROUND STORAGE TANK REGISTRATION FEE **

TO: PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822 RE: PUNAHOU SCHOOL	LOCATION ADDRESS: PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, HI 96822
---------------------------------------------------------------------------------------	-------------------------------------------------------------------------------

Pursuant to Section 2 (c) of Act 267 of the 1991 Legislature, every UST owner who has notified the Department of Health of the existence of their UST(s) and whose UST is currently in use, must pay an annual UST registration fee of \$250.00 per petroleum UST to the Hawaii Department of Health. A copy of this invoice must be submitted with your payment.

Facility #	Tank #	Description	Cost
9-100297	1	500 Gal - Gasoline	\$250.00

*4/28/92
removed in 12/89
leak
amount
dtd
dtd*

*No longer in ground - closure information
in your office*

Number of Eligible Tanks: 1
Total Number of Tanks: 1

Registration Fee: \$ ~~250.00~~
Late Fee: 0
Amount Received: 0
Amount Due: \$ ~~250.00~~

Make Checks Payable to: HAWAII DEPT. OF HEALTH
Payment Due on or Before: OCTOBER 1, 1991

APPENDIX F

**EPA REGION IX CERCLIS LIST FOR THE STATE OF HAWAII AND
UNIVERSITY OF HAWAII AT MANOA FILES
(Applicable Pages)**

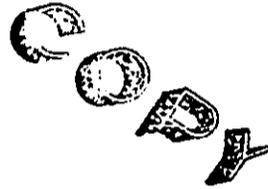


LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

November 3, 1993

LF 3035

Paul Kalaiwaa
State of Hawaii, Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Hazardous Waste Section
Five Waterfront Plaza, Suite 250
500 Ala Moana Boulevard
Honolulu, Hawaii 96813



Subject: Information from Solid and Hazardous Waste Branch
regarding the University of Hawaii at Manoa

Dear Mr. Kalaiwaa:

This letter is a request for past or current information from the State of Hawaii Department of Health Environmental Management Division, Solid and Hazardous Waste Branch, Hazardous Waste Section regarding:

University of Hawaii at Manoa
2500 Campus Road
Honolulu, HI 96822
HID087190542

The University of Hawaii at Manoa was listed in the EPA Region IX - CERCLIS List of November 2, 1992. The CERCLIS List indicated that EPA reported a "Discovered Site" in 1980 and the State of Hawaii completed a "Preliminary Assessment" in 1985. The University of Hawaii at Manoa is in close proximity to the subject area of a Phase I Environmental Site Assessment that Levine-Fricke, an environmental consulting firm, is conducting.

Levine-Fricke is requesting an appointment to review the appropriate file(s) that the State of Hawaii, Department of Health, Environmental Management Division, Solid and Hazardous Waste Branch has regarding the site noted above. I will be calling you next week to schedule a time that is convenient for you to retrieve the file(s) for me to review. Please let me know if I need to redirect this request to another department.

Because the Phase I Environmental Site Assessment is linked to a property transaction, a timely response by you or your department would be greatly appreciated. Thank you very much

220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321 • Fax (808) 522-0366

Other offices in Emeryville, CA; Irvine, CA; Sacramento-Roseville, CA; Tallahassee, FL

LEVINE-FRICKE

for your time and cooperation and please don't hesitate to contact me or Jeff Morrell at 522-0321 if you have any questions or require any additional information for this request.

Sincerely,

A handwritten signature in cursive script, appearing to read "Glenn M. Leong".

Glenn M. Leong
Senior Project Chemist



COPY

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

December 7, 1993

LF 3035

Ms. Liz Galvez
State of Hawaii, Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Hazardous Waste Section
Five Waterfront Plaza, Suite 250
500 Ala Moana Boulevard
Honolulu, Hawaii 96813

Subject: Information from Solid and Hazardous Waste Branch
regarding the University of Hawaii at Manoa

Dear Ms. Galvez:

This letter is a request for past or current information from the State of Hawaii Department of Health Environmental Management Division, Solid and Hazardous Waste Branch, Hazardous Waste Section regarding:

University of Hawaii at Manoa
2500 Campus Road
Honolulu, HI 96822
HID087190542

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Levine-Fricke is requesting an appointment to review the appropriate file(s) that the State of Hawaii, Department of Health, Environmental Management Division, Solid and Hazardous Waste Branch has regarding the site noted above. I will be calling you next week to schedule a time that is convenient for you to retrieve the file(s) for me to review. Please let me know if I need to redirect this request to another department.

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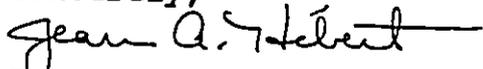
220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321 • Fax (808) 522-0366

Other offices in Emeryville, CA; Irvine, CA; Sacramento/Poseville, CA; Tallahassee, FL

LEVINE·FRICKE

for your time and cooperation and please don't hesitate to contact me or Jeff Morrell at 522-0321 if you have any questions or require any additional information for this request.

Sincerely,



Jean A. Hebert
Senior Project Hydrogeologist

RUN DATE 11/06/92

PAGE NO. 22

EPA REGION IX - CERCLIS SITES
LIST-8 REPORT FOR HAWAII
SORTED BY SITENAME

EPA ID NO.	SITE NAME STREET CITY, COUNTY CODE AND NAME	STATE ZIP CONG DIST.	EVENT QUALIF	OP UN	TYE	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
H1D087190542	003 HONOLULU UNIVERSITY OF HAWAII AT HAKOA 2500 CAMPUS RD HONOLULU 003 HONOLULU	HI-01	N	00	DS1 PA1	10/01/84	02/01/80 02/01/85	EPA (FUND) STATE(FUND)
H1D000633081	UNOCAL/INILE TANK FARM 411 PACIFIC STREET HONOLULU 003 HONOLULU	HI 96822 HI-01	N	00	DS1 PA1	04/01/84	02/01/80 02/01/85	EPA (FUND) STATE(FUND)
H10122390008	USDA FOREST SERVICE PSM EXPT STATION 1643 KILAUEA AVE AT KAWILI HILO 001 HAWAII	HI 96817 HI-01		00	DS1		11/07/89	STATE(FUND)
H14170090035	USN FLEET TRAINING GROUP 1430 SOUTH AVE PEARL HARBOR 003 HONOLULU	HI 96720 HI-02	N	00	DS1 PA1		03/01/86 03/01/86	EPA (FUND) FED. FAC.
H1D000628446	VECTOR CONTROL BRANCH 54 HIGH ST WAILUKU MAUI 009 MAUI	HI 96860 HI-01	N	00	DS1 PA1		05/01/88 01/07/92	FED. FAC. FED. FAC.
H1D000628321	VECTOR CONTROL BRANCH HI DOH 2611 KILTHAU ST HONOLULU 003 HONOLULU	HI 96793 HI-02	N	00	DS1 PA1	08/01/84	02/01/80 09/01/84	EPA (FUND) STATE(FUND)
H1D982400475	WAIAXEA POND/HAWAIIAN CANE PROTS PLANT HILO 001 HAWAII	HI 96819 HI-01	N	00	DS1 PA1	04/01/84	09/01/80 09/01/84	EPA (FUND) STATE(FUND)
		HI 96720 HI-02		00	DS1		08/01/88	EPA (FUND)

APPENDIX G

**CITY AND COUNTY OF HONOLULU, FIRE DEPARTMENT FILES AND
CORRESPONDENCE**



LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

October 28, 1993

LF 3035

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

Subject: Information Regarding Hazardous Material Spills or
Fires in the Vicinity of Properties in Manoa

Dear Mr. Chang:

This letter is a request for information regarding hazardous material spills or fires in the vicinity of properties located in Manoa. The properties are as follows:

<u>Tax Map Key #</u>	<u>Location</u>
2-8-16: 27	2019 Vancouver Street
2-8-16: 29	2031 Vancouver Street

The attached figure highlights the properties.

The properties are the subject of a Phase I Environmental Site Assessment that Levine-Fricke, an environmental consulting firm, is conducting. Levine-Fricke is requesting that the Fire Department of the City and County of Honolulu provide any information regarding hazardous material spills or fires on these properties or within two blocks of these properties.

Because the Phase I Environmental Site Assessment is linked to a property transaction, a timely response by you or your department would be greatly appreciated. Thank you very much for your time and cooperation and please don't hesitate to contact me or Jeff Morrell at 522-0321 if you have any questions or require any additional information for this request.

Sincerely,

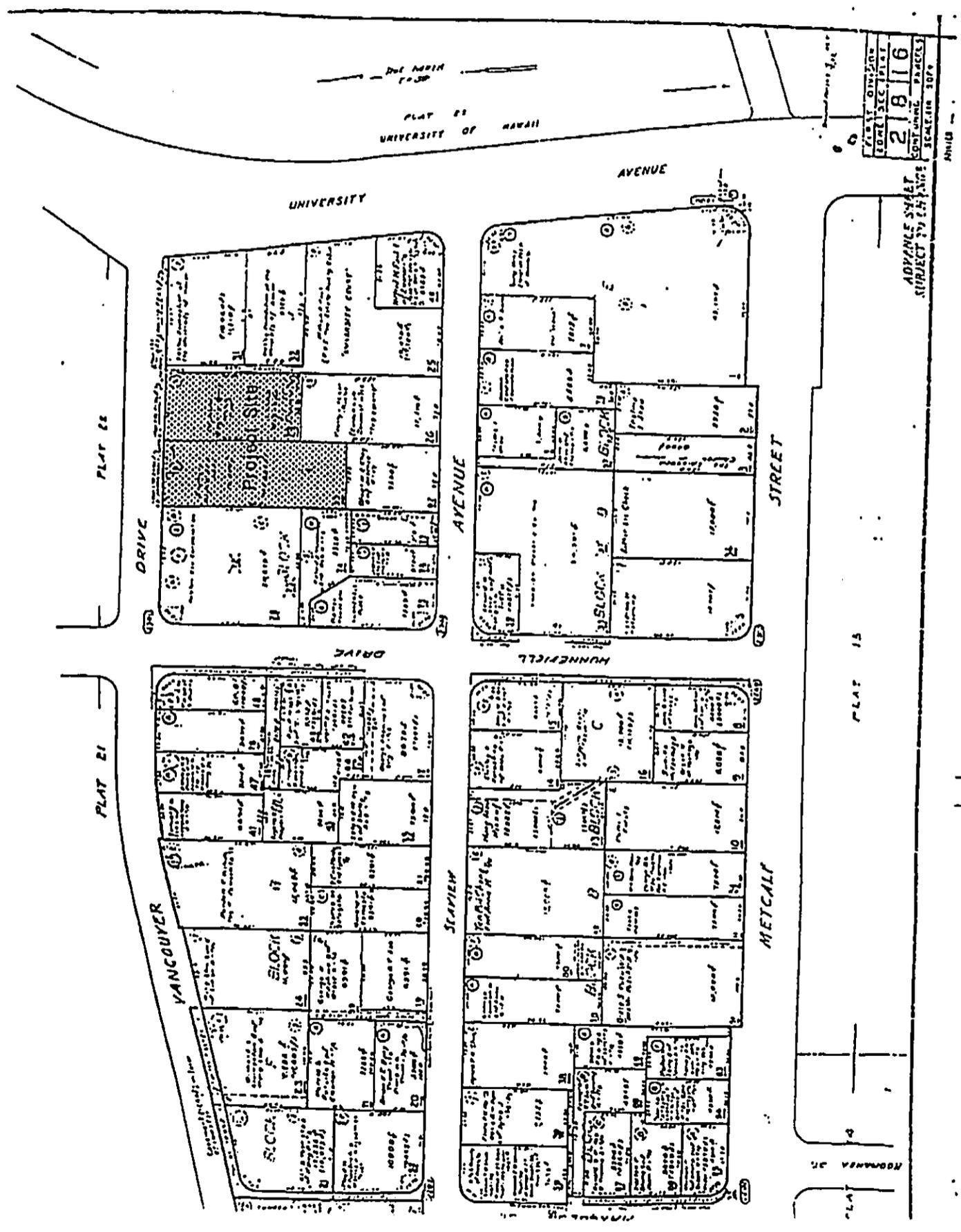

Glenn M. Leong
Senior Project Chemist

Enclosure

220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321 • Fax (808) 522-0366

Other offices in Emeryville, CA; Irvine, CA; Sacramento/Roseville, CA; Tallahassee, FL

DOCUMENT CAPTURED AS RECEIVED



PLAT DIVISION	218116
FORM SEC PLAT	
CONT. AREA	
SECTION	

Exhibit 2
Map Key

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425
HONOLULU, HAWAII 96819-1869



FRANK F. FASI
MAYOR

DONALD S. M. CHANG
FIRE CHIEF
RICHARD R. SETO-MOOK
FIRE DEPUTY CHIEF

November 9, 1993

Mr. Glenn M. Leong
Senior Project Chemist
Levine-Fricke
220 South King Street, Suite 1290
Honolulu, Hawaii 96813

Dear Mr. Leong:

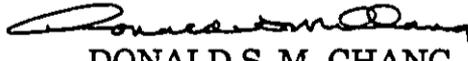
SUBJECT: Hazmat Incidents 2019 and 2041
Vancouver Street

Listed below are the Hazardous Materials Incidents which have occurred within a 1/4 mile radius of the cited locations:

<u>Incident No.</u>	<u>Date</u>	<u>Address</u>	<u>Situation</u>
2395	3/31/89	Lanihuli and McKinley	41
8765	10/28/91	2015 Wilder Avenue	41
11572	2/11/92	Wilder/Metcalf	41
1954	2/28/93	Fronting 2028 Wilder Avenue	41

If you require specific information regarding a particular incident, you may request a Fire Incident Report through the Administrative Services Bureau, Honolulu Fire Department. For further questions, please call Mr. Edward Yee, Administrative Officer, 831-7734 at any time.

Sincerely,


DONALD S. M. CHANG
Fire Chief

EY:lm

WRITE IN BLOCK LETTERS, WITH A WRITTEN AND CODED RESPONSE, (WHEN NECESSARY), LEAVING NO ITEM BLANK.

Honolulu

FIRE DEPARTMENT

1 DELETE
2 CHANGE

CA	10	FDID (5) 52022	INCIDENT NO. (6) 002395	EXP. 00	MO. 03	DAY 31	YEAR 89	DAY OF WEEK 1 SUNDAY 3 TUESDAY 2 MONDAY 4 WEDNESDAY 5 THURSDAY 6 FRIDAY 7 SATURDAY	6	ALARM TIME 1345	ARRIVAL TIME 1347	TIME IN SERVICE 1451	
CB	SITUATION FOUND	31. INHALATOR CALL 32. EMERGENCY MED. 33. LOCK-IN 34. SEARCH 35. EXTRICATION	39. RESCUE, N.C.A. 30. RESCUE, INSUF. INFO. 41. SPILL, LEAK, NO FIRE 42. EXPLOSIVE BOMB REMOVAL 44. POWER LINE DOWN	46. AIRCRAFT STD-BY 47. CHEMICAL EMERGENCY 40. HAZ. CON. STD-BY 51. LOCK-OUT 52. WATER EVACUATION	54. ANIMAL RESCUE 55. ASSIST POLICE 56. SERVICE CALL N.C.A. 50. SERVICE CALL, INSUF. INFO. 72. BOMB SCARE, NO BOMB	OTHER						41	
CC	ACTION TAKEN	2 RESCUE 3 INVESTIGATION ONLY 4 REMOVE HAZARD	5 STANDBY 6 SALVAGE 7. AMBULANCE SERVICE	8 ACTION N.C.A. 0. UNDETERMINED	4	MUTUAL AID 1 RECEIVED 2 GIVEN 3 N/A	0	FIXED PROPERTY USE (3) Paved public Street		.962			
CD	CORRECT ADDRESS Intersection of Lanihuli Dr. & McKinley Street												
CE	11	OCCUPANT NAME (LAST, FIRST, MI) SHULER, Joy						TELEPHONE (7): (808) Unk		ROOM or APT. Unk			
CF	12	OWNER NAME (LAST, FIRST, MI) City & County Of Hon.			ADDRESS 650 S. King St						TELEPHONE (7) (808) 523-4754		
CG	13	METHOD OF ALARM 1. TELEPHONE DIRECT 3. PRIVATE ALARM SYSTEM 4. RADIO	5. VERBAL 6. NO ALARM REC'D 7. TIE-LINE (911) 8. VOICE SIGNAL MUNICIPAL ALARM SYS.	9. N.C.A. 0. UNDETERMINED OR NOT REPORTED	7	COMPANY INSPECTION DISTRICT (3) 022	SHIFT	1	NO. ALARMS	1			
CH	NO. FIRE SERVICE PERSONNEL (3) RESPONDED		004	NO. ENGINES (3) RESPONDED		001	NO. AERIAL APPARATUS (3) RESPONDED		000	NO. OTHER VEHICLES (3) RESPONDED		000	
CI	20	NUMBER OF INJURIES (3) FIRE SERVICE (NFIRS 3)		000	(3) OTHER (NFIRS 2)		001	NUMBER OF FATALITIES (3) FIRE SERVICE (NFIRS 3)		000	(3) OTHER (NFIRS 2)		000

CJ	CASUALTY SEVERE ENOUGH TO CHECK ON LATER YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>						CASUALTY NUMBER (3) 001		1. <input type="checkbox"/> DELETE REC 2. <input type="checkbox"/> CHANGE			
CK	CASUALTY NAME (LAST, FIRST, MI) SHULER, Joy						D.O.B. 7/10/89		AGE 62		TIME OF INJURY 1345	
CL	HOME ADDRESS 2078 Kakela Pl						TELEPHONE (7) (808) Unk					
CM	SEX 1 MALE 2 FEMALE		CASUALTY TYPE 1 FIRE CASUALTY 2 ACTION CASUALTY 3 EMS CASUALTY		SEVERITY 1 INJURY 2 DEATH		AFFILIATION 2 OTHER EMERGENCY PERSONNEL 3 CIVILIAN		3			
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CP	NATURE OF INJURY 1 BURNS AND ASPHYXIA/SMOKE 2 BURNS ONLY 3 ASPHYXIA/SMOKE ONLY 4 WOUND, CUT, BLEEDING 5 DISLOCATION, FRACTURE 6 COMPLAINT OF PAIN 7 SHOCK 8 STRAIN, SPRAIN 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED			PART OF BODY INJURED 1 HEAD, NECK 2 BODY, TRUNK, BACK 3 ARM 4 LEG 5 HAND 6 FOOT 7 INTERNAL 8 INCLUDED ARE RESPIRATORY SYSTEM, HEART 9 MULTIPLE PARTS 0 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED			DISPOSITION 1. REFUSED HELP 2. TREATED AT SCENE AND RELEASED 3. TAKEN TO HOSPITAL BY FIRE DEPT. VEHICLE 4. TAKEN TO HOSPITAL BY NON FIRE DEPT. VEHICLE 5. TAKEN TO OTHER THAN A HOSPITAL 6. DIED 7. NOT CLASSIFIED ABOVE 8. UNDETERMINED OR NOT REPORTED			1		
Q	<input checked="" type="checkbox"/> SEE REMARKS ON BACK						<input type="checkbox"/> SEE ADDITIONAL REPORT					

R	OFFICER IN CHARGE AT INCIDENT (NAME, POSITION, ASSIGNMENT) DATE	MEMBER MAKING REPORT	DATE
	Robert A. Reyla, Captain, 3/31/89		

NFIRS-2 (7/88)

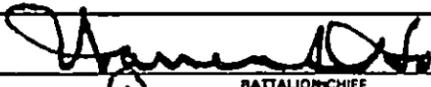
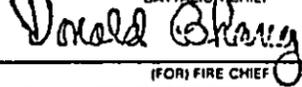
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RB	CASUALTY NAME (LAST, FIRST, MI)			D.O.B.	AGE
RC	HOME ADDRESS				TELEPHONE (7) (808)
RD	SEX 1 MALE <input type="checkbox"/> 2 FEMALE <input type="checkbox"/>	CASUALTY TYPE 1 FIRE CASUALTY <input type="checkbox"/> 2 ACTION CASUALTY <input type="checkbox"/> 3 EMS CASUALTY <input type="checkbox"/>	SEVERITY 1. INJURY <input type="checkbox"/> 2. DEATH <input type="checkbox"/>	AFFILIATION 2. OTHER EMERGENCY PERSONNEL <input type="checkbox"/> 3. CIVILIAN <input type="checkbox"/>	
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<input type="checkbox"/> SEE ADDITIONAL REPORT					

CASUALTY 2

INDIVIDUAL COMPANY REPORT OF WORK TIME AND EQUIPMENT USED

RH	6 COMPANIES RESPONDING	E-22		IN QUARTERS (IQ)	1451	MAINT. COMPLETED (MC)	1500
RI	COS. WORKED						TOTAL E-22
RJ	WORK TIME						1:15
RK	MANPOWER						4
RL	TOTAL MANHOURS						5:00
RM	MILEAGE						2

REMARKS
Viewed oil spill at the intersection, Oil was tracked in 4 direction by vehicles traveling on the oil. Appeared oil was spilled probably in the morning. Victim was riding a moped and slid on the oil slick. She suffered multiple abrasions on arm & leg. She refused ambulance service. This writer recommended she see a doctor. E22 washed down the spill. HPD Officer Ford # 2234

RO	REVIEWED BY:		DATE	4-2-89
RP	APPROVED:		DATE	APR 04 1989

1A	CASUALTY SEVERE ENOUGH TO CHECK ON LATER YES <input type="checkbox"/> NO <input type="checkbox"/>			CASUALTY NUMBER (3)	1 <input type="checkbox"/> DELETE REC 2 <input type="checkbox"/> CHANGE
	CASUALTY NAME (LAST, FIRST, MI)			D.O.B.	AGE
1B	HOME ADDRESS				TELEPHONE (7) (808)
1C	SEX	CASUALTY TYPE	SEVERITY	AFFILIATION	
	1 MALE <input type="checkbox"/> 2 FEMALE <input type="checkbox"/>	1 FIRE CASUALTY <input type="checkbox"/> 2 ACTION CASUALTY <input type="checkbox"/> 3 EMS CASUALTY <input type="checkbox"/>	1 INJURY <input type="checkbox"/> 2 DEATH <input type="checkbox"/>	2 OTHER EMERGENCY PERSONNEL <input type="checkbox"/> 3 CIVILIAN <input type="checkbox"/>	
1D	FAMILIARITY WITH STRUCTURE	LOCATION AT IGNITION	CONDITION BEFORE INJURY		
	1 LESS THAN 1 DAY 2 1 TO 7 DAYS 3 8 TO 30 DAYS 4 1 TO 2 MONTHS 5 3 TO 6 MONTHS 6 7 TO 12 MONTHS 7 OVER 1 YEAR 8 NOT A STRUCTURE 9 UNDETERMINED OR NOT REPORTED	1 INTIMATELY INVOLVED WITH IGNITION 2 IN THE ROOM OR SPACE OF FIRE ORIGIN 3 ON SAME FLOOR AS ORIGIN OF FIRE 4 IN SAME BUILDING AS ORIGIN OF FIRE 5 OUTSIDE OF BUILDING OF FIRE ORIGIN 6 FIRE ON PROPERTY 7 FIRE CASUALTY OFF PROPERTY OF FIRE ORIGIN 8 NOT A FIRE CASUALTY 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED	1 ASLEEP 2 BEDRIDDEN, OTHER PHYSICAL HANDICAP 3 IMPAIRED BY DRUGS, ALCOHOL 4 UNDER RESTRAINT 5 TOO YOUNG TO ACT 6 TOO OLD TO ACT 7 MENTALLY HANDICAPPED, SENILE 8 AWAKE, UNIMPAIRED 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED		
1E	CONDITION PREVENTING ESCAPE	ACTIVITY AT TIME OF INJURY	CAUSE OF INJURY		
	1 NO TIME TO ESCAPE; EXPLOSION OR FIRE PROGRESSED TO RAPIDLY 2 FIRE BETWEEN CASUALTY AND EXIT 3 LOCKED DOORS 4 ILLEGAL GATE LOCKS 5 CLOTHING ON CASUALTY BURNING 6 MOVED TOO SLOWLY 7 VICTIM INCAPACITATED PRIOR TO IGNITION 8 NO CONDITIONS PREVENTED ESCAPE OR NOT A FACTOR 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED	1 ESCAPING 2 RESCUE ATTEMPT 3 FIRE CONTROL 4 RESPONSE/RETURN 5 CLEANUP, SALVAGE MOP-UP 6 SLEEPING 7 UNABLE TO ACT 8 IRRATIONAL ACTION 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED	1. CAUGHT IN, UNDER, BETWEEN; TRAPPED BY 2. EXPOSED TO FIRE PRODUCTS 3. EXPOSED TO CHEMICAL RADIATION 4. FELL OR STEPPED ON, OVER, INTO 5. OVEREXERTION 6. RUBBED BY CONTACT WITH 7. STRUCK BY 8. NOT APPLICABLE 9. NOT CLASSIFIED ABOVE 0. UNDETERMINED OR NOT REPORTED		
1F	NATURE OF INJURY	PART OF BODY INJURED	DISPOSITION		
	1 BURNS AND ASPHYXIA-SMOKE 2 BURNS ONLY 3 ASPHYXIA/SMOKE ONLY 4 WOUND, CUT, BLEEDING 5 DISLOCATION, FRACTURE 6 COMPLAINT OF PAIN 7 SHOCK 8 STRAIN, SPRAIN 9 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED	1 HEAD, NECK 2 BODY, TRUNK, BACK 3 ARM 4 LEG 5 HAND 6 FOOT 7 INTERNAL 8 INCLUDED ARE RESPIRATORY SYSTEM, HEART 9 MULTIPLE PARTS 0 NOT CLASSIFIED ABOVE 0 UNDETERMINED OR NOT REPORTED	1. REFUSED HELP 2. TREATED AT SCENE AND RELEASED 3. TAKEN TO HOSPITAL BY FIRE DEPT. VEHICLE 4. TAKEN TO HOSPITAL BY NON FIRE DEPT. VEHICLE 5. TAKEN TO OTHER THAN A HOSPITAL 6. DIED 7. NOT CLASSIFIED ABOVE 8. UNDETERMINED OR NOT REPORTED		
1G	<input type="checkbox"/> SEE ADDITIONAL REPORT				

CASUALTY 2

INDIVIDUAL COMPANY REPORT OF WORK TIME AND EQUIPMENT USED

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REMARKS
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O	REVIEWED BY:	<i>Donald Gray</i>	BATTALION CHIEF	<i>4-2-89</i>	DATE
	APPROVED:	<i>Donald Gray</i>	(FOR) FIRE CHIEF	APR 04 1989	DATE

APPENDIX H
HAWAIIAN ELECTRIC COMPANY CORRESPONDENCE



LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

October 28, 1993

LF 3035

William A. Bonnet
Environmental Department
Hawaiian Electric Company
P.O. Box 2750
Honolulu, Hawaii 96840-001

Subject: Information Regarding Potential Polychlorinated
Biphenyl Containing Electrical Equipment in the
Vicinity of Properties in Manoa

Dear Mr. Bonnett:

This letter is a request for information regarding
polychlorinated biphenyl (PCB) containing electrical equipment
in the vicinity of properties located in Manoa. The
properties are as follows:

<u>Tax Map Key #</u>	<u>Location</u>
2-8-16: 27	2019 Vancouver Street
2-8-16: 29	2031 Vancouver Street

The attached figure highlights the properties.

The properties are the subject of a Phase I Environmental Site
Assessment that Levine-Fricke, an environmental consulting
firm, is conducting. Levine-Fricke is requesting that
Hawaiian Electric Company provide any information regarding
PCB containing electrical equipment on these properties or
immediately adjacent to these properties.

Because the Phase I Environmental Site Assessment is linked to
a property transaction, a timely response by you or your
department would be greatly appreciated. Thank you very much
for your time and cooperation and please don't hesitate to
contact me or Jeff Morrell at 522-0321 if you have any
questions or require any additional information for this
request.

Sincerely,

Glenn M. Leong
Senior Project Chemist

Enclosure

220 South King Street, Suite 1290
Honolulu, Hawaii 96813
(808) 522-0321 • Fax (808) 522-0366

Other offices in Emeryville, CA; Irvine, CA; Sacramento/Roseville, CA; Tallahassee, FL

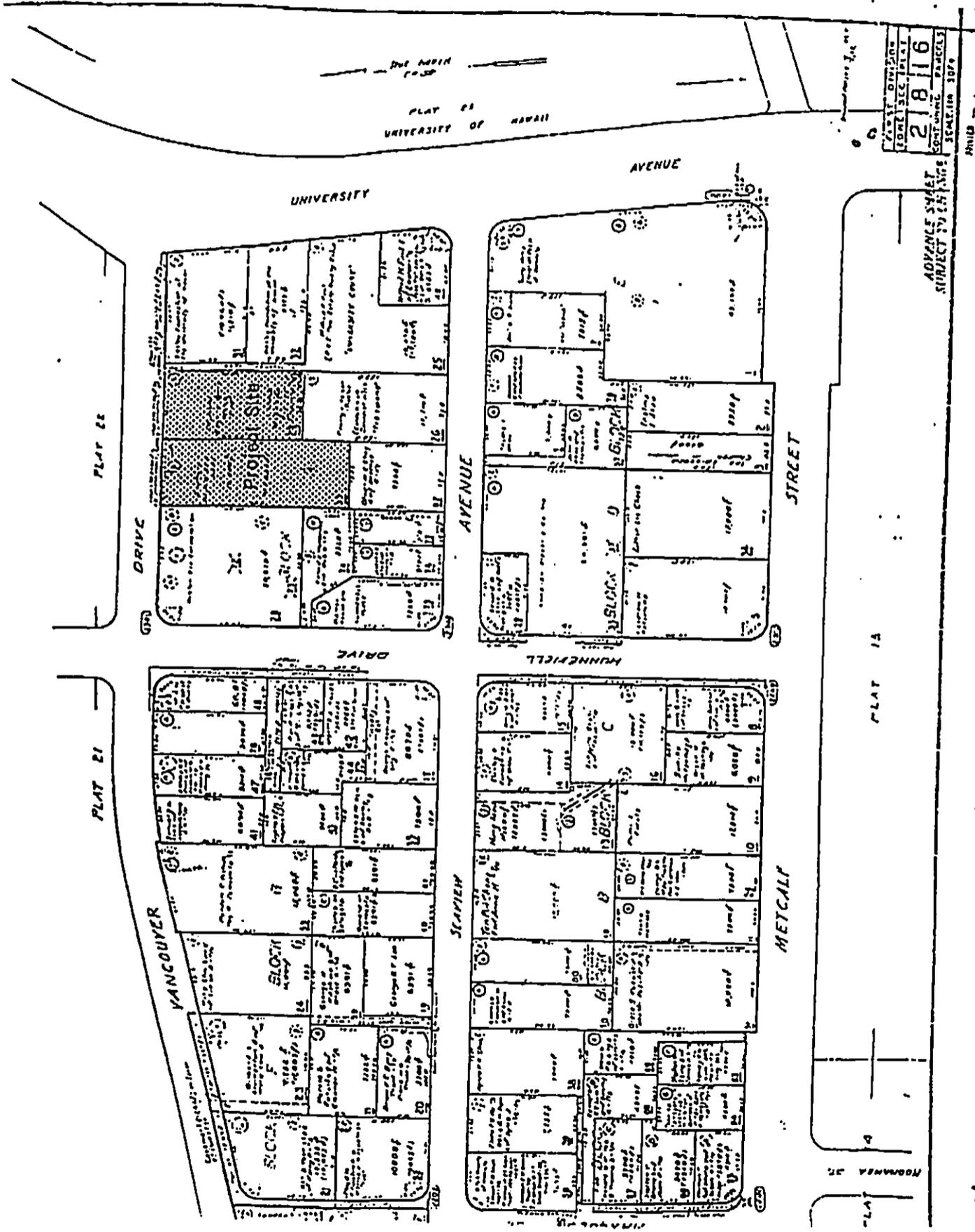


Exhibit 2
Map Key

DOCUMENT CAPTURED AS RECEIVED



William A. Bonnet
Manager
Environmental Department

December 3, 1993

Mr. Glenn M. Leong
Senior Project Chemist
Levine-Fricke
220 South King Street
Suite 1290
Honolulu, HI 96813

Dear Mr. Leong:

**Subject: Information on HECO Transformers Servicing:
2019 and 2031 Vancouver Street**

In response to your October 28, 1993 request regarding Hawaiian Electric Company (HECO) transformers serving the above-referenced addresses, we submit the following information:

Transformer 34512 was purchased in October of 1974 and installed at its present Vancouver Street location in April of 1975. PCB test data is not available for this transformer.

Over 10,000 HECO transformers have been tested to date. These analytical data (i.e., as of September 30, 1993) indicate that 93.7% of HECO's transformers are non-PCB (<50 ppm), while about 5.7% are PCB-contaminated (50-499 ppm) and less than 0.6% are PCB (>500 ppm). Because of the federal prohibition against distribution in commerce of PCBs in 1979, units purchased after 1979 are not considered suspect of contamination. All untested mineral oil transformers, such as those used in HECO's distribution system, purchased prior to July 1, 1979 must be considered PCB-contaminated by law.

However, EPA rules for PCBs, Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761.30) provide that "PCBs at any concentration may be used in transformers...for the remainder of their useful lives subject to...conditions." With respect to the subject transformers, we are, to the best of our knowledge in compliance with the Toxic Substances Control Act (TSCA) and all applicable regulations promulgated thereunder.

An HEI Company

Mr. Glenn M. Leong
December 3, 1993
Page Two

For your information, HECO has a policy for the testing of transformers per customer request. Should you determine that testing is needed, please contact us.

If you have any questions regarding the information submitted or need additional information, please contact Mike Choy at 543-5679.

Sincerely,

A handwritten signature in black ink, appearing to read "W. A. B.", is written over a vertical line of scanning artifacts.

DOCUMENT CAPTURED AS RECEIVED



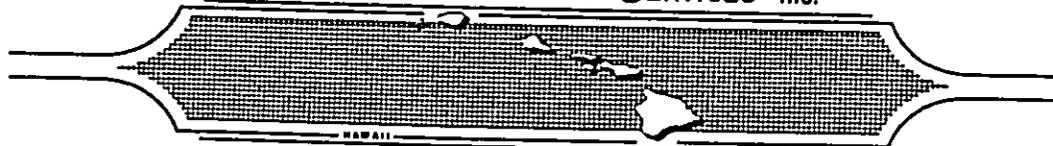
DOCUMENT CAPTURED AS RECEIVED

AN ARCHAEOLOGICAL ASSESSMENT OF
TWO VANCOUVER DRIVE LOTS IN MANOA VALLEY
WAIKIKI, O'AHU, HAWAI'I
[TMK: 2-8-16: 27,29]

By
David B. Chaffee
and
Robert L. Spear Ph.D.
October, 1993

For
Department of Housing and Community Development
City and County of Honolulu

SCIENTIFIC CONSULTANT SERVICES Inc.



47-269 D HUI IWA STREET KANEOHE, HAWAII 96744

INTRODUCTION

At the request of the Department of Housing and Community Development, City and County of Honolulu, Scientific Consultant Services, Inc. conducted an archaeological assessment of two parcels of land fronting Vancouver Drive, Manoa Valley, Waikīkī ahupua'a, Kona District, O'ahu, Hawai'i (Figure 1). These parcels are further identified by Tax Map Key [TMK] 2-8-16:27 and 29, lots 27 and 29 being 15,000 sq. ft. and 11,700 sq. ft., respectively (Figure 2). This assessment included discussions with the State Historic Preservation Division, review of other archaeological reports prepared for projects in the vicinity of the project area currently under study, and field inspection of the project location.

The parcels are currently owned by Hawaii Community Foundation, Trust. Both lots are now vacant land (Figures 3 and 4).

ENVIRONMENTAL SETTING

These two Vancouver Drive lots are approximately 140 ft. above mean sea level and are situated approximately 1.75 miles (2.2 km.) north of Kuhio Beach Park in Waikiki.

The mean annual rainfall at this location is approximately 35.5 inches (900 milliliters) (Giambelluca et al. 1986). Soil in the project area is a Tantalus silty clay loam, 8-15 percent slope where runoff is slow and the erosion hazard is slight (Foote et al. 1972:121).

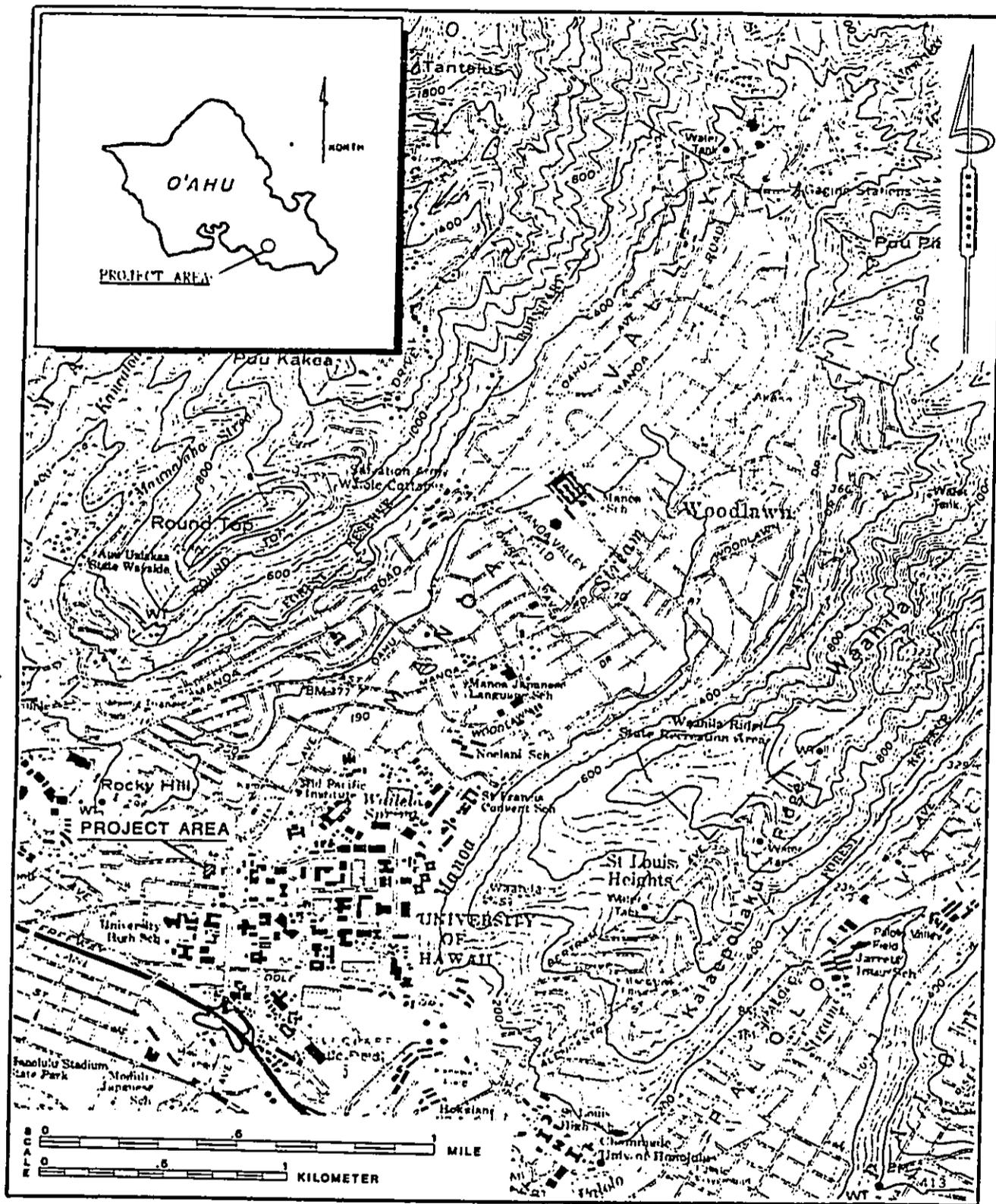


FIGURE 1: USGS HONOLULU QUADRANGLE SHOWING PROJECT AREA, (SHADED).

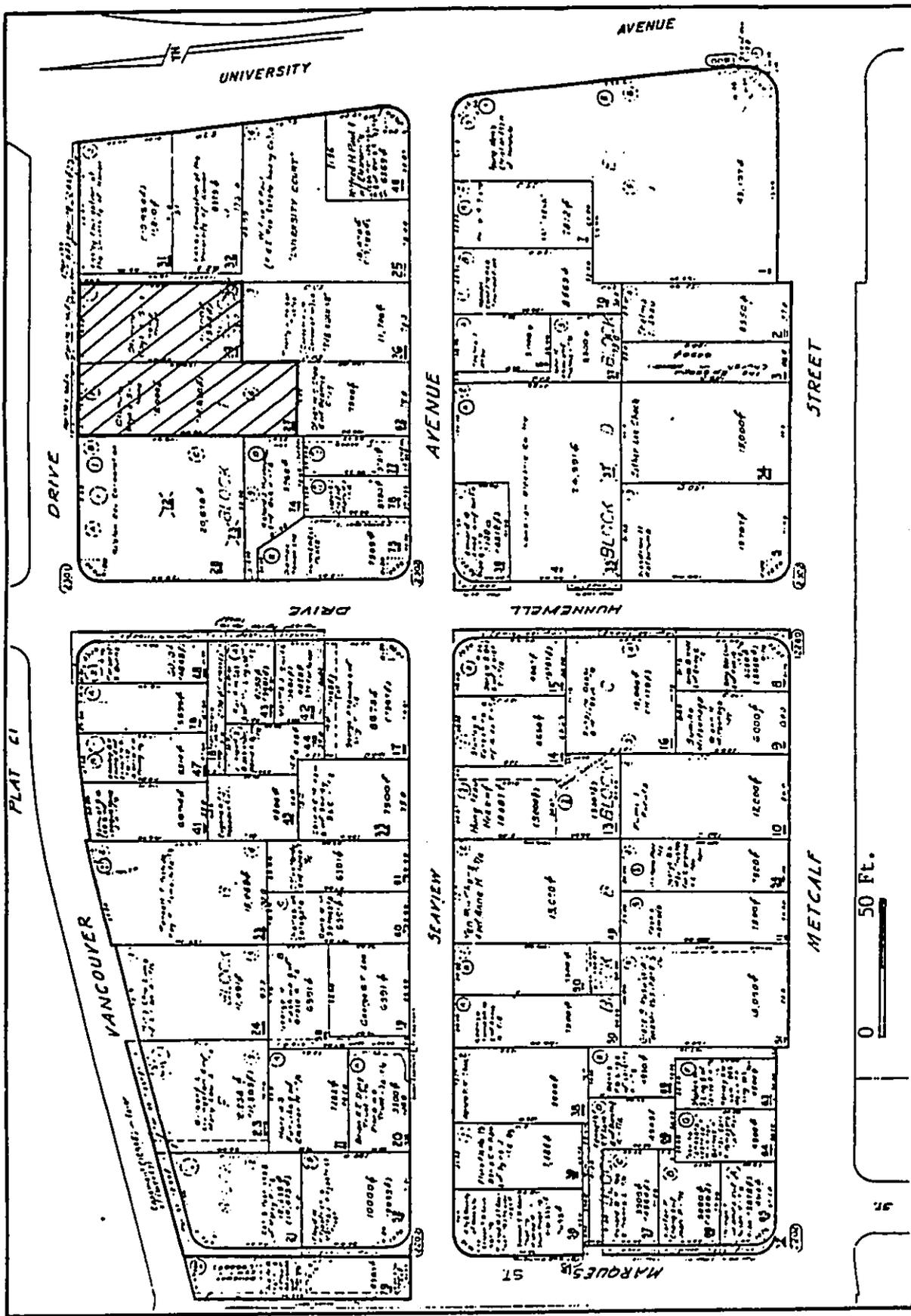


FIGURE 2: TAX MAP KEY 2-8-16 SHOWING PROJECT AREA, PARCELS 27 and 29, (SHADED).



FIGURE 3: VACANT LOT AT 2019 VANCOUVER DRIVE.
TMK 2-8-16:27. VIEW TO S.



FIGURE 4: VACANT LOT AT 2031 VANCOUVER DRIVE.
TMK 2-8-16:29. VIEW TO SW.

Vegetation in Manoa Valley at the elevation of the project area is dominated by recently introduced exotic species, including banyon (*Ficus* sp.), bamboo (*Bambusa* sp.), octopus tree (*Brassaia actinophylla*), avocado (*Persea americana*), java plum (*Eugenia* sp.), philodendron (*Philodendron* sp.), mock orange (*Philadelphus* sp.), Christmas berry (*Schinus terebinthifolius*), and miscellaneous palms.

Polynesian introductions and native plants in the project area include ti (*Cordyline terminalis*), kukui (*Aleurites moluccana*), laua'e (*Microsorium scolopendria*), and coconut (*Cocos nucifera*).

CULTURAL CONTEXT

Land use in historic times in Manoa Valley saw a variety of use with taro cultivation being the most prominent. "At the summit of the road the whole valley opens out to view, the extensive flat area set out in taro, looking like a huge checkerboard, with its symmetrical emerald squares in the middle ground, surrounded by pasture fields on the slopes at the base of the guarding hills" (Thrum 1892:110-111).

Manoa Valley is the location of O'ahu's first sugar plantation, established by John Wilkinson in 1825 (Cleghorn and Anderson 1992:7). Some coffee was planted in Manoa Valley foothills in conjunction with Wilkinson's agricultural endeavors as well (Thrum 1892:114).

For a two year period of time beginning in 1882 some Chinese companies attempted to shift their taro agriculture to rice

cultivation. High winds, cold rains and rice birds confounded those early attempts at diversification, and the fields were once again used to grow taro (Thrum 1892:116).

Manoa Valley was also utilized as pasture land in historic times for the "stock of more than one dairy enterprise" (Thrum 1892:110).

Eventually taro fields gave way to residential land use. "Some of the lower portions of the old taro area inland from the slightly elevated land southwest of Rocky Hill is now covered by streets and houses" (Handy 1940:77).

ARCHAEOLOGICAL FRAMEWORK

No Land Commission Awards (LCAs) were found within the project area nor on neighboring lots.

No archaeological sites are known to be in close proximity to the project area. The adjacent parcel (TMK 2-8-16:28) to these lots however, is state site number 80-14-1347, the John Guild Residence, also known by the common name, Spitzer Residence. It is currently doing business as the Manoa Valley Inn and is listed on both the Hawaii and National Registers of Historic Places (Figures 5 and 6).

"This historic residence is a three story wood-framed gable roofed structure distinguished by elaborate bracketing and woodwork in an eclectic style... The [Spitzer] Residence is architecturally significant as a typical upper-class residence in the eclectic style... Once typical of the area, it is now only one



FIGURE 5: THE JOHN GUILD RESIDENCE. VIEW TO SW.



FIGURE 6: THE JOHN GUILD RESIDENCE. VIEW TO NW.

of two that remain" (National Register of Historic Places Inventory--Nomination Form).

Other archaeological investigations in the area of Manoa Valley include an inventory survey and preservation plan done for Kukao'o Heiau (site number 50-80-14-64) by Cleghorn and Anderson in 1992. The area of study described by Cleghorn and Anderson is approximately 4500 ft. upvalley from the two Vancouver Drive lots. They conclude "Traditional sources, in the form of legends, date Kukao'o Heiau to the prehistoric era. These sources also give it considerable significance, given its association with menehune, the owl god, and ali'i personages" (Cleghorn and Anderson 1992:27).

Kukao'o Heiau was first recorded by McAllister as "a small heiau measuring 50 by 40 feet overall" (McAllister 1933:79).

Kennedy also did a survey of this heiau and the adjoining area but the client for whom the work was done has not released the report for public review.

Prehistoric land use of the project area was likely agricultural (taro lo'i) and possibly temporary habitation. Historic land use of the project area was likely to have been in taro and perhaps cattle grazing.

CONCLUSIONS AND RECOMMENDATIONS

No evidence of surface architectural features remain in the project area other than the existence of a 1900's house foundation and walkways on parcel 29. If any archaeological features

were present on or near the ground surface, the disturbance due to development has destroyed them. The State Historic Preservation Division (SHPD) also notes that their records show that the lots have been previously developed (Ahue 1993). The possibility of deeply buried archaeological features seems very low given the topography of the area which is not suitable for soil accumulation through colluvial and alluvial action.

The information available for this location indicates that development will have no effect on any historic sites on these parcels.

No further archaeological work is recommended at this location.

Although the chances of encountering human burials is low, the possibility does exist. Should this happen, all work in the vicinity is to stop and the Historic Preservation Division must be notified.

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APPENDIX D
TRAFFIC ASSESSMENT

APPENDIX C
ARCHAEOLOGICAL ASSESSMENT

**TRAFFIC IMPACT ASSESSMENT REPORT
FOR
VANCOUVER DRIVE HOUSING PROJECT**

December 9, 1993

**Honolulu, Oahu, Hawaii
TMK 2-8-16:27 & 29**

Prepared for:

**Department of Housing and Community Development
City & County of Honolulu**

Prepared by:

**Pacific Planning & Engineering, Inc.
1221 Kapiolani Boulevard, Suite 740
Honolulu, Hawaii 96814**

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FOREWORD

The traffic forecasts shown within this report's figures and tables are the direct result of Pacific Planning & Engineering, Inc.'s proprietary analytical tools. For report editing and review purposes, the forecast values have been rounded to the nearest five vehicles from our mathematical results, although we do not imply this level of accuracy can exist in any forecast method. The rounded values, however, reasonably quantify the forecasted traffic volumes for the purposes of this study.

EXECUTIVE SUMMARY

Pacific Planning & Engineering, Inc. (PP&E) was engaged to undertake a traffic impact study to identify and assess the expected traffic impact that would be caused by the proposed Vancouver Drive Housing Project.

Project Description

The Department of Housing and Community Development is proposing to develop the Vancouver Drive Housing Project in Manoa, Oahu, Hawaii. The project is located on the south side of Vancouver Drive, between University Avenue and Hunnewell Street.

The project site is currently designated in the Primary Urban Center Development Plan for residential use. The housing project will be a residential development for non-traditional students attending school on a part-time basis. The intended market for the project are single-parent families or single students who earn up to 80% of the median family income in Hawaii. The majority of units will be rented to families earning less than 50% of the median family income. The housing project will be a two to three story building with approximately 25 parking stalls provided on site. The project site is currently vacant, although a portion of the property is being used for parking. The proposed development is expected to be completed and fully occupied in the year 1996.

Methodology

Analysis was conducted for the following study intersections to determine the relative impact of the proposed project on the local roadway system:

- University Avenue with Vancouver Drive
- Vancouver Drive with Hunnewell Street
- Vancouver Drive with the project driveway

Future traffic was forecasted at the study intersections for the weekday morning and afternoon peak hours for the year 1996 by adding the following:

- Existing traffic volumes,
- The increase in through traffic along University Avenue,
- Traffic generated by other planned developments in the project area which would impact study intersections, and
- Traffic generated by the proposed Vancouver Drive Housing Project.

The report assesses the impact on each intersection by comparing the *level-of-service* (LOS) for three conditions:

- Existing traffic conditions,
- Forecast traffic conditions for the year 1996 with non-project generated traffic growth (*without* traffic generated by the Vancouver Drive Housing Project), and
- Forecast traffic conditions for the year 1996 with non-project generated traffic growth *and* traffic generated by the Vancouver Drive Housing Project.

Conclusions and Recommendations

The Vancouver Drive Housing Project is not expected to have a significant impact on traffic conditions when completed in the year 1996, due to the low volume of traffic generated by the project. The project would add up to 20 vehicles during the weekday peak hours, which is less than 5%

of the existing traffic volumes approaching the study intersections during those time periods.

The number of vehicles generated by the proposed Vancouver Drive Housing Project is expected to be minimal due to the market for the project (families or individuals in the lower-income bracket attending college or obtaining their General Education Diploma) and the close proximity to the University of Hawaii. The actual number of vehicular trips generated by the project is expected to be lower than the values used in this study because a significant percentage of the project occupants would likely use alternative forms of transportation such as the city bus system, mopeds, bicycles, and walking.

Presently, at the unsignalized intersection of University Avenue with Vancouver Drive, all motorists exiting Vancouver Drive experience long delays (LOS D) during the afternoon peak hour. The study intersections of Vancouver Drive with Hunnewell Street and Vancouver Drive with the Wesley Foundation driveway operate with little to no delay (LOS A) during the morning and afternoon peak hours.

Without the project in the year 1996, the delays at the intersections would increase, however, the levels-of-service at the study intersections would remain at LOS D or better for all movements during the weekday peak hours.

With the project in the year 1996, the study intersections would continue to operate under capacity and the levels-of-service at the study intersections would remain at LOS D or better during the weekday peak hours. The impact of moped traffic due to the project is included in the analysis results for the study intersections because a portion of the projected trips for the

project are expected to be moped traffic. The study intersections have sufficient capacity to accommodate the project traffic in the year 1996 without improvements to the existing intersection configurations.

The existing travel width of Vancouver Drive is narrow (12 feet) for a two-way street along a short section between University Avenue and Hunnewell Street. There is not sufficient lane width for two vehicles to pass, which creates short delays along Vancouver Drive as motorists wait to permit vehicles travelling in the opposite direction to pass. In order to minimize potential conflicts along this roadway, several viable options are listed below:

- Partially or fully ban parking on north side of Vancouver Drive between University Avenue and Hunnewell Street. This would eliminate up to 11 parking stalls.
- Convert Vancouver Drive to one-way *only* in either eastbound or westbound direction between University Avenue and Hunnewell Street.
- Accept the existing condition for the following reasons: 1) the traffic volumes along Vancouver Drive are relatively low, 2) the project adds a maximum of 20 additional vehicles and mopeds to the roadway during the peak hours, and 3) the length of Vancouver Drive between University Avenue and Hunnewell Street is relatively short (550 feet).

PROJECT DESCRIPTION

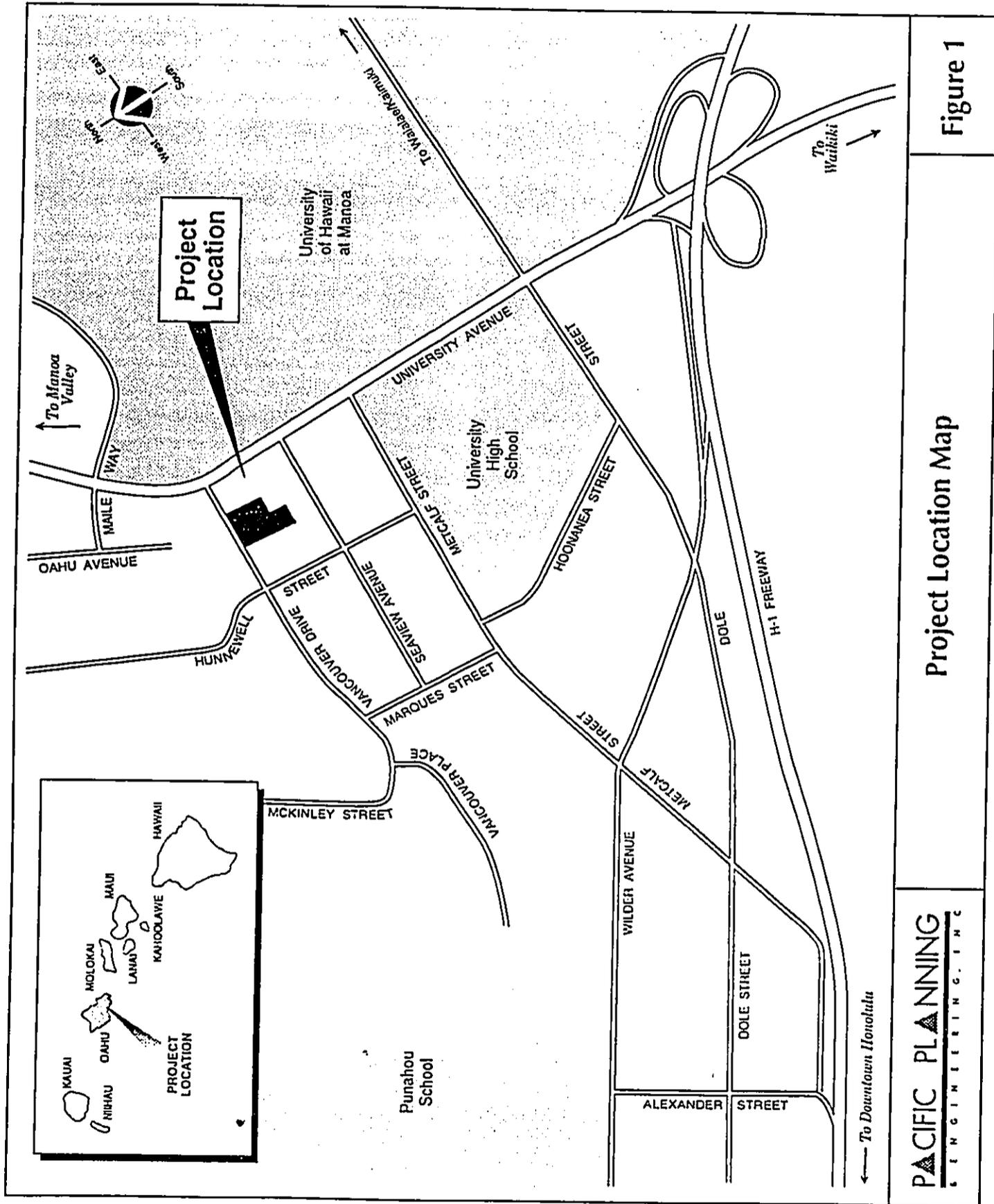
The Department of Housing and Community Development is proposing to develop the Vancouver Drive Housing Project in Manoa on the island of Oahu. The project would be located on the south side of Vancouver Drive between University Avenue and Hunnewell Street. Figure 1 shows the location of the project site and the surrounding roadway network.

The project is proposed to be an apartment building for non-traditional students. The project is intended to provide affordable housing to families or single persons who meet the following qualifications:

- Earn less than 80% of median income in Hawaii,
- Are enrolled in a General Education Diploma (GED) or post-high school program and take six or more credits per term, and
- Have no more than three residents per household.

The apartment building will be two to three stories tall with approximately 25 parking stalls provided on the bottom level. There will be a maximum of 60 individual units, comprised of studios, one-bedroom and two-bedroom apartments.

The development would be developed over an area of 26,700 square feet, which is currently designated for residential use in the Primary Urban Center Development Plan. The project site is vacant, however, a portion of the site is currently being used for parking. The proposed development is expected to be completed and fully occupied by the year 1996.



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Figure 1

EXISTING CONDITIONS

An inventory of existing conditions was conducted to ascertain the current traffic conditions in the area and to provide a basis for estimating the potential traffic impact of the project. The review included the land uses in the area, roadway facilities, and existing traffic conditions.

Land Uses

The area surrounding the project site contains a variety of land uses including the University of Hawaii, churches, student centers, restaurants, and residential developments. The land uses directly adjacent to the project site along Vancouver Drive include two student centers, an inn, and a private residence.

Roadway Facilities

The major roadways in the vicinity of the project are University Avenue, Dole Street, Metcalf Street, and the H-1 freeway. One of the study roadways, University Avenue, is a primary access road for traffic entering and exiting Manoa and the University of Hawaii.

Vancouver Drive provides access to the adjacent roadways, including University Avenue and Hunnewell Street, from residential areas in the project vicinity. The nearby Punahou School can also be accessed via Vancouver Drive and McKinley Street. Hunnewell Street runs parallel to University Avenue and intersects Metcalf Street south of the project site.

Streets and Highways

University Avenue is under the jurisdiction of the City & County of Honolulu. It is a four-lane roadway with two 12-foot lanes in each direction and metered parking stalls along both sides of the roadway. The posted speed limit is 35 miles per hour in the vicinity of the project. There is a bus stop in the southbound direction located at the Vancouver Drive intersection.

Hunnewell Street is also under the jurisdiction of the City & County of Honolulu. It is a two-way roadway with a 20-foot wide pavement at its intersection with Vancouver Drive and the posted speed limit is 20 miles per hour in the vicinity of the project.

Vancouver Drive is a private road maintained by the City & County of Honolulu. It is a two-way roadway with a 20-foot wide pavement in the vicinity of the project. There are marked parking stalls on the north side of the street which are 8 feet wide. Therefore, the total travel width is 12 feet for two directions. The block from University Avenue to Hunnewell Street is approximately 550 feet long.

Study Intersections

The study intersection of University Avenue with Vancouver Drive is an unsignalized T-intersection with a stop sign for the eastbound approach. Vancouver Drive with Hunnewell Street is an unsignalized cross intersection with stop signs on both Vancouver Drive approaches.

The approximate location of the future project driveway is close to an existing driveway along Vancouver Drive. The existing driveway is used by the Wesley Foundation Co-op and Student Center. This driveway is currently unpaved. Illustrations of the existing study roadways and turning movements are shown in Figure 2.

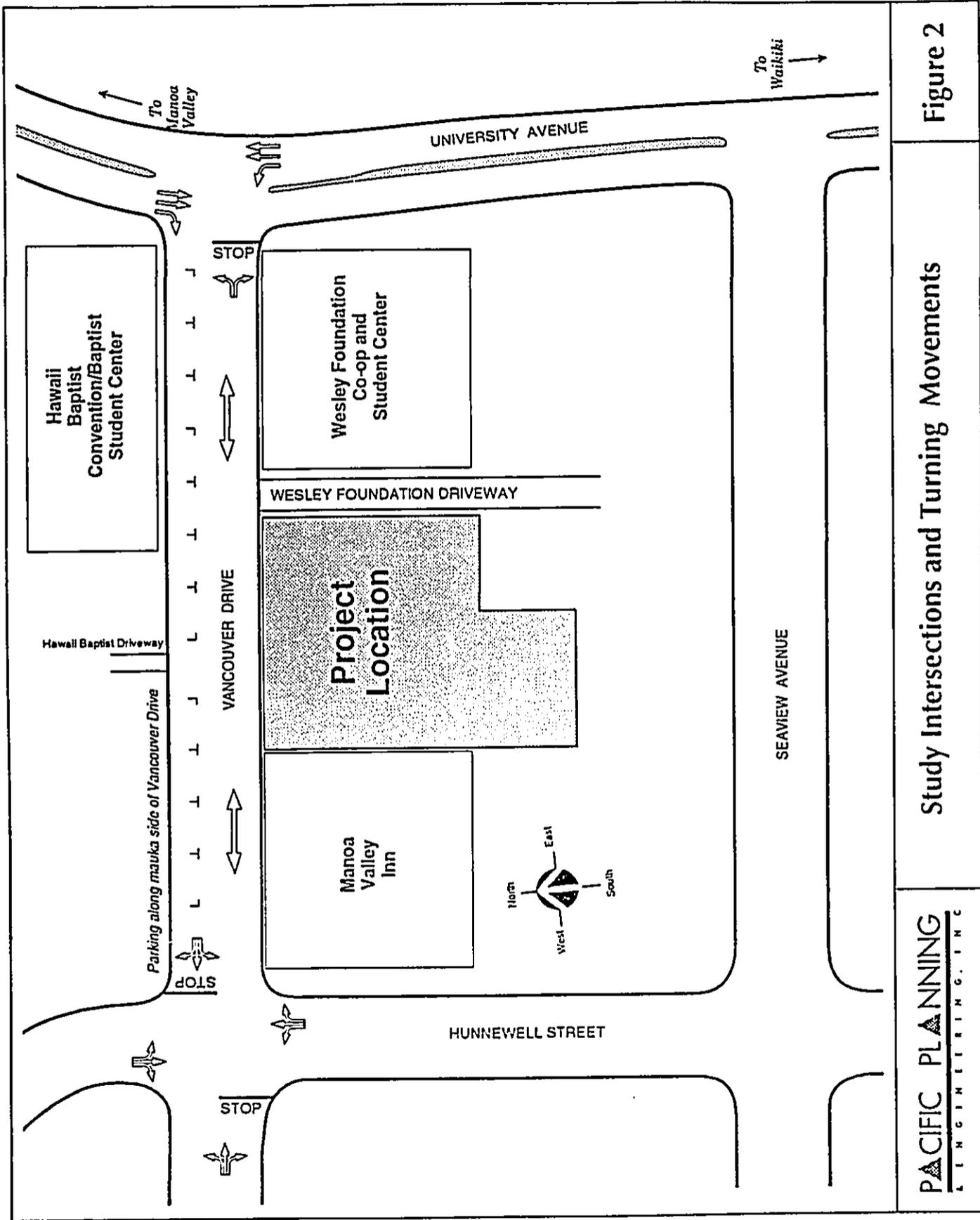


Figure 2

Study Intersections and Turning Movements

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Traffic Conditions

A review of traffic count data taken by the City & County of Honolulu's Department of Transportation Services (DTS) in 1991 indicated that the weekday commuter peak period occurs between 6:30 and 8:30 a.m. in the morning and between 3:30 and 5:30 p.m. in the afternoon. These weekday peak periods were used to determine traffic impacts, since the peak hours of the project traffic would be expected to coincide with the commuter peak periods of the surrounding roadways.

Manual traffic counts were taken during the weekday morning and afternoon peak hours on Thursday, October 28, 1993. Traffic counts were taken at the following study intersections:

- University Avenue with Vancouver Drive
- Vancouver Drive with Hunnewell Street
- Vancouver Drive with Wesley Foundation driveway

Observed Traffic Conditions

The following descriptions of existing traffic conditions at the study intersections are based on field observations taken in October 1993 during the manual traffic counts.

University Avenue with Vancouver Drive

- During the morning peak hour and a half-hour period during the afternoon peak hour, vehicles backed up along University Avenue in both directions.
- Vehicles pulled over on the northwest corner of the intersection to allow motorists travelling in the eastbound direction to pass through the narrow sections of Vancouver Drive.
- There were about 40 pedestrians crossing Vancouver Drive and University Avenue during the peak hours.

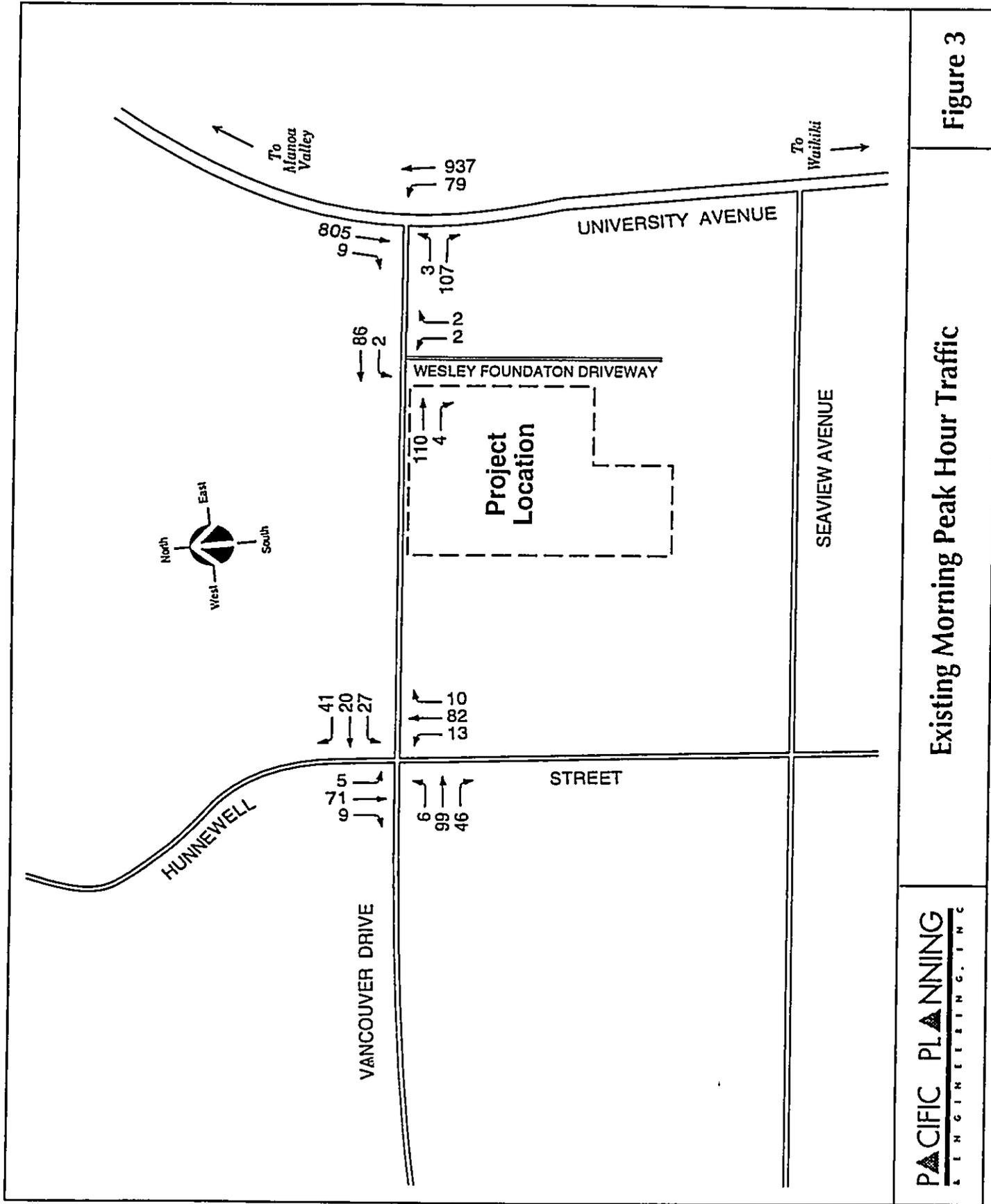
Vancouver Drive with Hunnewell Street

- During the morning and afternoon peak hours, the traffic at this intersection moved freely, with very little congestion on all approaches.
- Vehicles pulled over on the northwest or northeast corners of the intersection to allow motorists travelling in the eastbound direction to pass through the narrow sections of Vancouver Drive.
- Most motorists travelling in the eastbound direction on Vancouver Drive inched past the marked stop bar in order to see beyond a protruding wall and lightpost at the southwest corner of the intersection.
- There were about 30 pedestrians crossing Vancouver Drive and Hunnewell Street during the peak hours.

Vancouver Drive with Wesley Foundation Driveway

- The width of Vancouver Drive is narrow (12 feet for through traffic) at this location, therefore motorists exiting the driveway would yield to any through traffic.
- Some vehicles circulate around the project area more than once during the peak hours. Drivers of some vehicles were observed to park their cars and walk to UH. (Parking along Vancouver Drive, Hunnewell Street, and nearby streets is free of charge.)

Figures 3 and 4 show the existing 1993 traffic volumes at the study intersections for the weekday morning and afternoon peak hours, respectively.



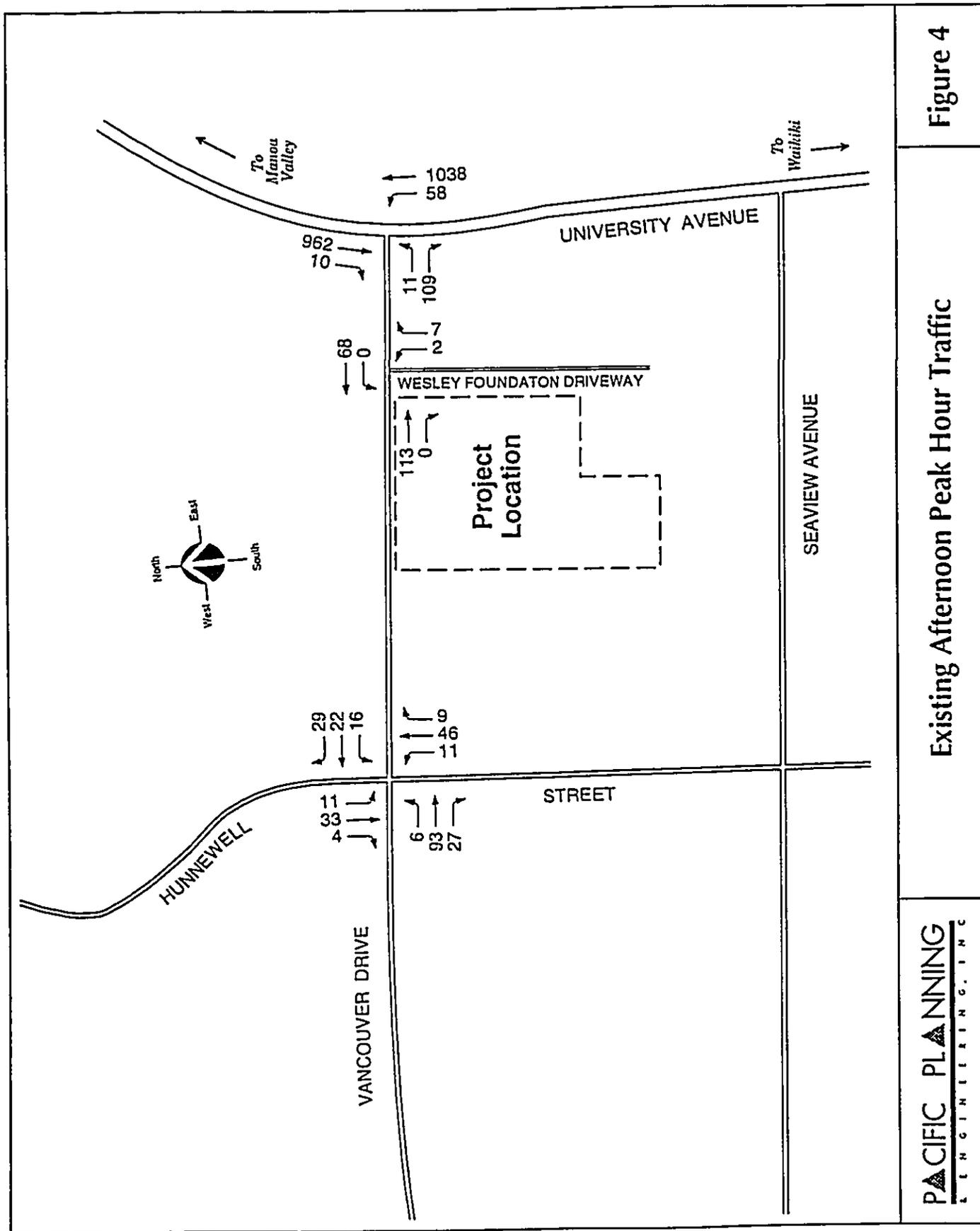


Figure 4

Existing Afternoon Peak Hour Traffic

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FUTURE CONDITIONS

Research of approved planned developments and improvements to transportation facilities was conducted to estimate future traffic conditions at the study intersections.

Future Land Uses

Traffic generated by the University of Hawaii (UH) Faculty Housing development is expected to impact the study intersections by the year 1996. This development is currently under construction and is located in Manoa at the intersection of Woodlawn Drive and Lowrey Avenue. This development will consist of 151 rental apartments and 30 townhouse condominium units, and will be occupied by UH faculty and their families.

Future Roadway Improvements

There are no known roadway projects scheduled by the year 1996, which would impact the study intersections.

PROJECTED TRAFFIC CONDITIONS

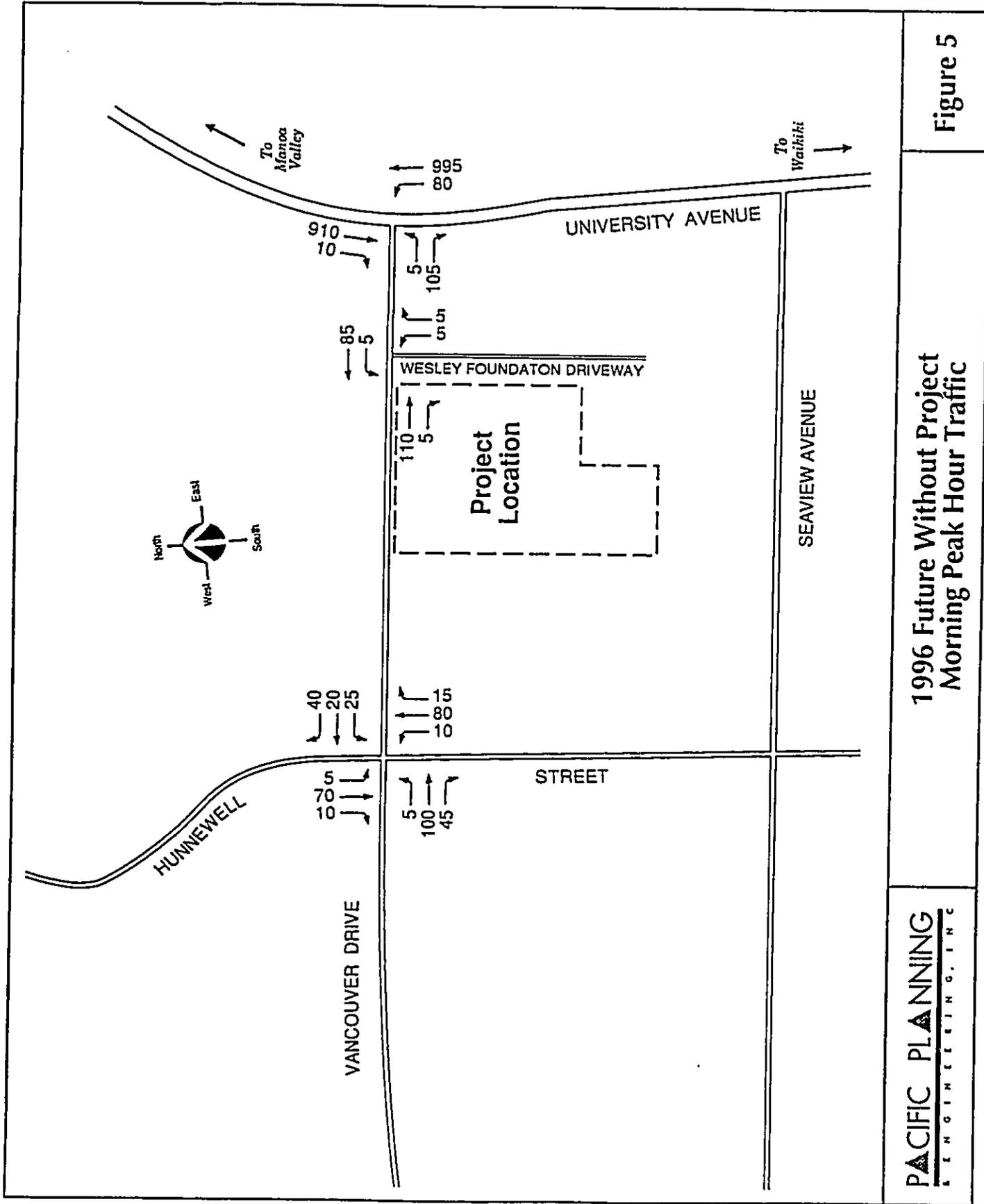
Future traffic was forecast for traffic conditions without and with the proposed Vancouver Drive Housing Project. Traffic forecasts were estimated for the year 1996 when the project is expected to be completed and fully occupied.

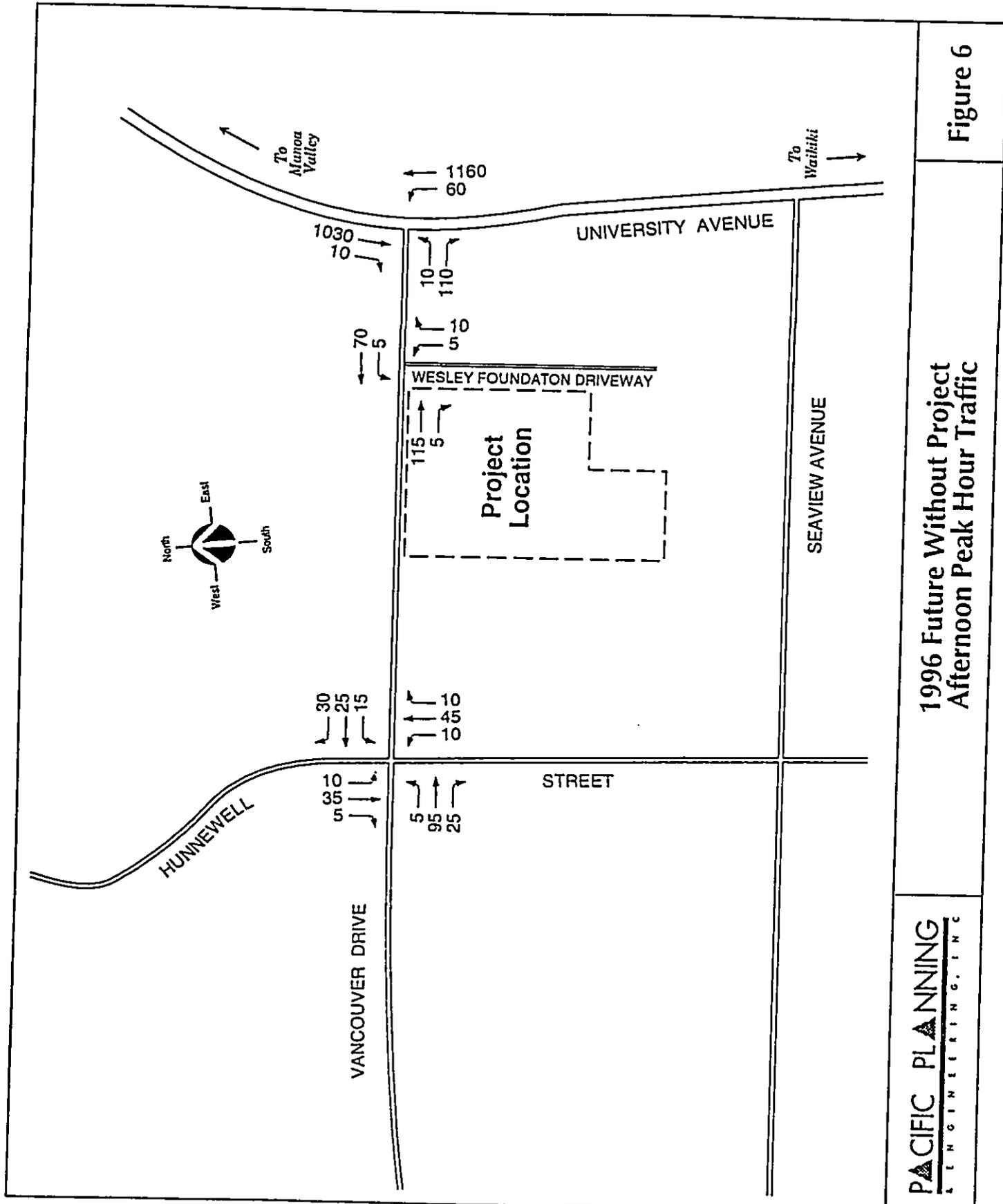
Future Traffic Without Project

Future traffic without the project was forecasted by adding the following: (1) existing peak hour traffic volumes, (2) the increase in through-traffic along University Avenue, and (3) traffic generated by other developments that would be completed by 1996. The forecasted traffic volumes were assigned to the existing roadway network. The resultant forecast traffic without the project is shown in Figures 5 and 6 for the weekday morning and afternoon peak hours.

Through-Traffic Growth along University Avenue

Through-traffic growth describes vehicular traffic without an origin or destination point near the project site. The growth in through-traffic was estimated based upon historical Department of Transportation (DOT) traffic count data for roadways near the study intersection. The existing through traffic along University Avenue was increased by six percent (2% x 3 years) for the 1996 traffic projections.





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1996 Future Without Project
Afternoon Peak Hour Traffic

Figure 6

Traffic From Other Developments

The forecasted traffic due to the other future development was obtained from the traffic study for the UH Faculty Housing¹. The traffic study for the UH Faculty Housing used the three-step procedure of trip generation, trip distribution, and traffic assignment to forecast future weekday morning and afternoon peak hour traffic for the project.

The trip generation step estimates the number of vehicle trips that would be generated based upon the development's land use and data from the ITE Trip Generation Report². Table 1 below shows the number of trips expected to be generated by the UH Faculty Housing development.

Table 1. Trip Generation for Other Developments in Project Area

<u>Development</u>	<u>Units</u>	<u>Land Use</u>	<u>AM Peak</u>			<u>PM Peak</u>		
			<u>Enter</u>	<u>Exit</u>	<u>Total</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
UH Faculty Housing	151	Rental apartments	15	62	77	63	33	96
	30	Condominiums	<u>2</u>	<u>12</u>	<u>14</u>	<u>11</u>	<u>6</u>	<u>17</u>
Total:			17	74	91	74	39	113

The trip distribution step assigns vehicle trips from their predicted origins to destinations. The trip distribution, from the UH Faculty Housing traffic study, was 100% of the traffic entering and exiting the Manoa area.

¹ Traffic Impact Assessment Report for University of Hawaii Faculty Housing, by Pacific Planning & Engineering, Inc., February 25, 1992.

² Trip Generation Report, by the Institute Transportation Engineers, Fifth Edition, 1991.

The traffic assignment step assigns vehicle trips to specific routes on the roadway network that will take the driver from origins to destinations. The traffic assignment from the traffic study was 80% to University Avenue and 20% to Punahou Street.

Future Traffic With Project

Future traffic with project was forecasted by adding the future without project traffic to the traffic generated by the proposed project. The three-step procedure of trip generation, trip distribution, and traffic assignment was used to estimate peak hour traffic for the proposed project.

The trip generation step estimates the number of vehicle trips that would be generated based upon the development's land use and data from the ITE Trip Generation Report. Appendix C shows calculations of the number of trips expected to be generated by the Vancouver Drive Housing Project for the morning and afternoon peak hours. The trip generation values shown below in Table 2 are based on the following assumptions:

- Two-bedroom, one-bedroom and studio units
- Maximum household size of 3 persons (including children)
- One or less vehicles per unit
- Density of more than 60 units per acre

Table 2. Trip Generation for Vancouver Drive Housing Project

<u>Development</u>	<u>Units</u>	<u>Land Use</u>	<u>AM Peak</u>			<u>PM Peak</u>		
			<u>Enter</u>	<u>Exit</u>	<u>Total</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
Vancouver Drive Housing Project	60	Apartment	4	22	26	22	10	32

Due to the lower income market intended for the project and the close proximity to the University of Hawaii, it is likely that some residents would choose alternative forms of transportation such as the city bus system, bicycles, mopeds, and walking. Parking data from developments similar to the project indicate that the ratio of parking stalls to number of units is relatively low. Therefore, the actual number of vehicle trips generated by the project may be lower than the estimated values shown in Table 2. Appendix D contains collected parking data from similar developments and an estimated parking requirement for the Vancouver Drive Housing Project.

The trip distribution for the project traffic was based on existing traffic characteristics for land uses in the project area. The land uses surrounding the project are multi-unit buildings used for student housing as well as single-family residences. Since the proposed project land use is similar to the land uses in the project area, the traffic characteristics of the project were assumed to be similar to those of the surrounding land uses. The trip distribution for the project traffic is shown below in Table 3.

Table 3. Trip Distribution for Vancouver Drive Housing Project

<u>To/From</u>	<u>Distribution</u>
North of Project	25%
South of Project	<u>75%</u>
	100%

The traffic assignment step assigns trips to a specific route on the roadway network that will take the driver from origins to destinations. Traffic was assigned based on the estimated shortest path or travel time between origins and destinations and existing traffic patterns in the project area. Since University Avenue and Hunnewell Street are the closest roadways to the project site which carry north and southbound traffic, the traffic generated by the project was assigned to these roadways. The traffic assignment for the project traffic is shown below in Table 4.

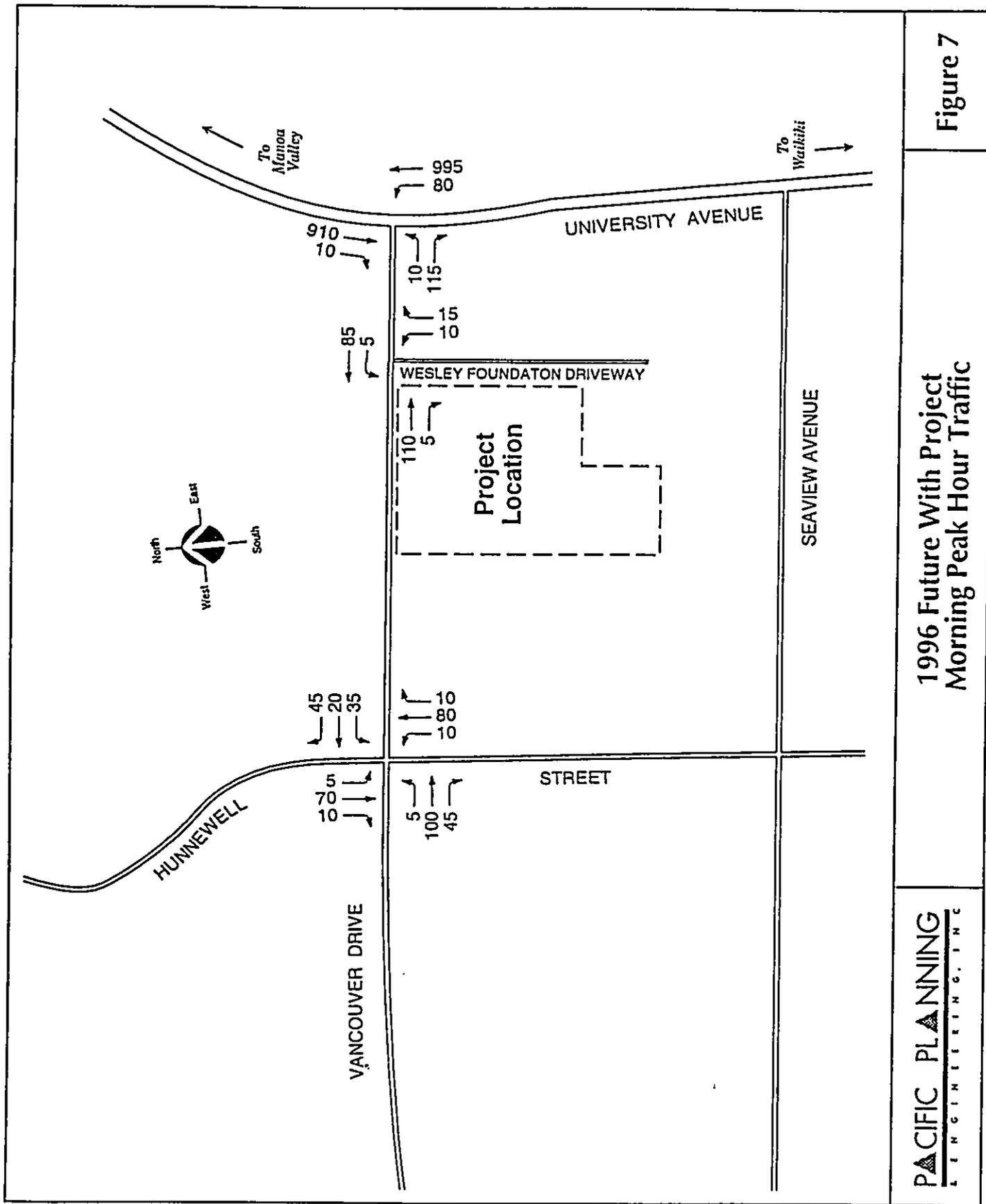
Table 4. Traffic Assignment for Vancouver Drive Housing Project

<u>Roadway</u>	<u>Assignment</u>
University Avenue	65%
Hunnewell Street	35%
	100%

The resultant forecast traffic with the project are shown in Figures 7 and 8 for the weekday morning and afternoon peak hours, respectively.

Moped Traffic in Project Area

During the manual traffic counts, there were mopeds observed travelling in the project area. The project area consists primarily of housing for university students and from observations of the campus and nearby areas, it is apparent that a significant percentage of students use mopeds as their primary mode of transportation. For this reason, it is expected that a percentage of the traffic generated by the project would be moped traffic, and is assumed to be included in the vehicular trip generation estimates shown in Table 2.



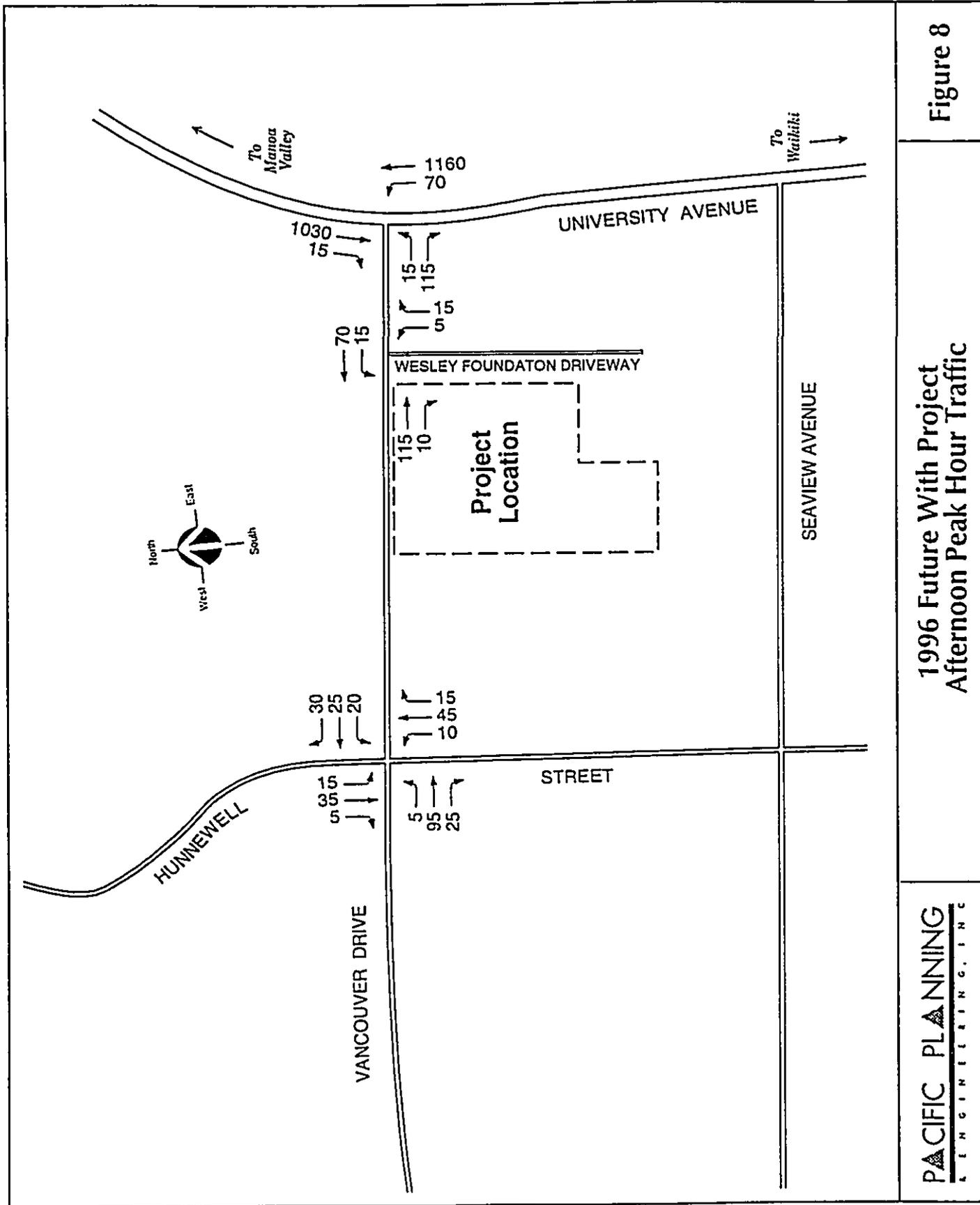


Figure 8

1996 Future With Project
Afternoon Peak Hour Traffic

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TRAFFIC ANALYSIS

Analyses were conducted on the study intersections to determine the relative impact of the Vancouver Drive Housing Project on the local roadway system and to determine improvements to mitigate the impact of the project, if necessary.

Project Impact Analysis

Analyses were conducted for the existing, 1996 forecast without project, and 1996 forecast with project traffic conditions for the weekday morning and afternoon peak hours.

The roadway facilities were analyzed based on the existing roadway geometrics of the study intersections. At this time, there are no known committed improvements to the study facilities.

Analysis Methods

The study roadway facilities were analyzed using the unsignalized intersection analysis contained in the Highway Capacity Manual³ (HCM).

The unsignalized intersection analysis measures *level-of-service* (LOS) based on the reserve capacity for a turning movement. The reserve capacity is the additional number of vehicles which could cross or exit a minor street and turn onto a major street or cross it. As the reserve capacity decreases, the LOS also decreases. Unsignalized intersection analysis describes

³ Highway Capacity Manual, Special Report 209, by the Transportation Research Board, National Research Council, 1985.

traffic flow conditions in terms of LOS ranging from A to F, where LOS A is the best and LOS F is the worst. Appendix A describes the level-of-service definitions for the unsignalized intersections.

Unsignalized Analysis Findings

The results of the unsignalized intersection analysis for the existing, 1996 without project, and 1996 with project traffic conditions for weekday and weekend peak hours is shown in Table 5 and described below:

University Avenue with Vancouver Drive:

- *Presently*, motorists experience little or no delays (LOS A) for the turning movements at this intersection during the weekday morning peak hours. During the afternoon peak hour, motorists exiting Vancouver Drive onto University Avenue experience long delays (LOS D).
- *In the year 1996 without the project*, motorists turning left from University Avenue onto Vancouver Drive are expected to experience slightly longer delays (LOS B) during the afternoon peak hour. The levels-of-service for the other turning movements at this intersection will remain the same as existing conditions.
- *In the year 1996 with the project*, the levels-of-service for all turning movements are expected to remain the same as the without project conditions for the weekday peak hours.

Vancouver Drive with Hunnewell Street:

- *Presently*, motorists experience little or no delays (LOS A) for all turning movements at this intersection during the weekday morning and afternoon peak hours.
- *In the year 1996 without the project*, the levels-of-service for all turning movements are expected to remain the same as existing conditions for the weekday peak hours.
- *In the year 1996 with the project*, the levels-of-service for all turning movements are expected to remain the same as the without project conditions for the weekday peak hours.

Vancouver Drive with Project Driveway:

- *Presently*, motorists at the Wesley Foundation driveway experience little or no delays (LOS A) for all turning movements during the weekday morning and afternoon peak hours.

Table 5. Unsignalized Intersection Analysis

<u>Intersection and Turning Movement</u>	<u>1993 Existing</u>	<u>1996 Without Project</u>	<u>1996 With Project</u>
	<u>LOS AM (PM)</u>	<u>LOS AM (PM)</u>	<u>LOS AM (PM)</u>
<i>University Avenue with Vancouver Drive</i>			
University Avenue Northbound LT	A (A)	A (B)	A (B)
Vancouver Drive Eastbound LT/RT	A (D)	A (D)	B (D)
<i>Vancouver Drive with Hunnewell Street</i>			
Vancouver Drive Eastbound LT/TH/RT	A (A)	A (A)	A (A)
Vancouver Drive Westbound LT/TH/RT	A (A)	A (A)	A (A)
Hunnewell Street Northbound LT	A (A)	A (A)	A (A)
Hunnewell Street Southbound LT	A (A)	A (A)	A (A)
<i>Vancouver Drive with Project Driveway</i>			
Vancouver Drive Westbound LT	A (A)	A (A)	A (A)
Project Driveway Northbound LT/RT	A (A)	A (A)	A (A)

Notes:

AM - Morning Peak Hour
 PM - Afternoon Peak Hour
 LT - Left turn
 RT - Right turn

- *In the year 1996 without the project*, the levels-of-service for all turning movements at the project driveway are expected to remain the same as existing conditions for the weekday peak hours.
- *In the year 1996 with the project*, the levels-of-service for all turning movements at the project driveway are expected to remain the same as the without project conditions for the weekday peak hours.

The unsignalized analysis results indicate very little impact on level-of-service for year 1996 conditions at the study intersections from existing conditions. The additional vehicles would reduce the amount of reserve capacity at the intersections slightly, however, the future levels-of-service would remain similar to existing levels-of-service.

Moped Traffic Impacts

Based on the assumption that some project residents would use mopeds as their primary mode of transportation, the resulting impact of mopeds at the study intersections is included within the unsignalized intersection analysis results. Therefore, the analysis results indicate the moped traffic from the project would have very little impact on level-of-service for year 1996 at the study intersections from existing conditions.

Improvement Measures

Although the project will have a negligible traffic impact on Vancouver Drive, several alternatives to minimize potential conflicts along this roadway due to its relatively narrow width, are listed below along with advantages and disadvantages for each alternative:

- 1) Partially or fully ban parking on north side of Vancouver Drive between University Avenue and Hunnewell Street. This would

eliminate up to 11 parking stalls. Parking could be banned for the morning and afternoon peak hours or be banned at all times.

Advantages:

- Would provide adequate travel width for two-way traffic.
- Would minimize potential conflicts along Vancouver Drive.

Disadvantages:

- Would eliminate parking stalls, of which there already exists a shortage in the area.

2) Convert Vancouver Drive to one-way *only* in either eastbound or westbound direction between University Avenue and Hunnewell Street. The direction would be determined following coordination with the City & County of Honolulu.

Advantages:

- Would provide adequate travel width for one-way traffic.
- Would minimize potential conflicts along Vancouver Drive.

Disadvantages:

- Would require existing traffic to alter some of their established travel routes.
- Would likely add traffic to adjacent roadways, such as Seaview Avenue and Maile Way.

3) Accept the existing condition of Vancouver Drive for the following reasons:

- The traffic volumes along Vancouver Drive are relatively low,
- The project adds a maximum of 20 additional vehicles to the roadway during the peak hours, and
- The length of Vancouver Drive between University Avenue and Hunnewell Street is relatively short (550 feet).

Advantages:

- Would not require changes to existing roadways and conditions.
- Would minimize disruption to residents of Vancouver Drive.

Disadvantages:

- Potential for traffic conflicts along Vancouver Drive would not change from existing conditions.

CONCLUSIONS AND RECOMMENDATIONS

The Vancouver Drive Housing Project is not expected to have a significant impact on traffic conditions when completed in the year 1996, due to the low volume of traffic generated by the project. The project would add up to 20 vehicles during the weekday peak hours, which is less than 5% of the existing traffic volumes approaching the study intersections during those time periods.

The number of vehicles generated by the proposed Vancouver Drive Housing Project is expected to be minimal due to the market for the project (families or individuals in the lower-income bracket attending college) and the close proximity to the University of Hawaii. The actual number of vehicular trips generated by the project is expected to be lower than the values used in this study because a significant percentage of the project occupants would likely use alternative forms of transportation such as the city bus system, mopeds, bicycles, and walking.

Presently, at the unsignalized intersection of University Avenue with Vancouver Drive, motorists exiting Vancouver Drive experience long delays (LOS D) during the afternoon peak hour. The study intersections of Vancouver Drive with Hunnewell Street and Vancouver Drive with the Wesley Foundation driveway operate with little to no delay (LOS A) during the morning and afternoon peak hours.

Without the project in the year 1996, the delays at the intersections would increase, however, the levels-of-service at the study intersections would remain at LOS D or better for all movements during the weekday peak hours.

With the project in the year 1996, the study intersections would continue to operate under capacity and the levels-of-service at the study intersections would remain at LOS D or better during the weekday peak hours. The impact of moped traffic due to the project is included in the analysis results for the study intersections because a portion of the projected trips for the project are expected to be moped traffic. The study intersections have sufficient capacity to accommodate the project traffic in the year 1996 without improvements to the existing intersection configurations.

The existing travel width of Vancouver Drive is narrow (12 feet) for a two-way street along a short section between University Avenue and Hunnewell Street. There is not sufficient lane width for two vehicles to pass, which creates short delays along Vancouver Drive as motorists wait to permit vehicles travelling in the opposite direction to pass. In order to minimize potential conflicts along this roadway, several viable options are listed below:

- Partially or fully ban parking on north side of Vancouver Drive between University Avenue and Hunnewell Street. This would eliminate up to 11 parking stalls.
- Convert Vancouver Drive to one-way *only* in either eastbound or westbound direction between University Avenue and Hunnewell Street.
- Accept the existing condition for the following reasons: 1) the traffic volumes along Vancouver Drive are relatively low, 2) the project adds a maximum of 20 additional vehicles and mopeds to the roadway during the peak hours, and 3) the length of Vancouver Drive between University Avenue and Hunnewell Street is relatively short (550 feet).

APPENDIX A
DEFINITION OF LEVEL-OF-SERVICE
FOR
UNSIGNALIZED INTERSECTIONS

DEFINITION OF LEVEL-OF-SERVICE
FOR
UNSIGNALIZED INTERSECTIONS

The concept of levels-of-service is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A level-of-service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Six levels-of-service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with Level-of-Service A representing the best operating conditions and Level-of-Service F the worst.

Level-of-Service definitions--In general, the various levels of service are defined as follows for uninterrupted flow facilities:

Level-of-Service A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

Level-of-Service B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.

Level-of-Service C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

Level-of-Service D represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

Level-of-Service E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such a maneuver. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

Level-of-Service F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go wave, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level-of-Service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of the vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow

which causes the queue to form, and Level-of-Service F is an appropriate designation for such points.

These definitions are general and conceptual in nature, and they apply primarily to uninterrupted flow. Levels-of-service for interrupted flow facilities vary widely in terms of both the user's perception of service quality and the operational variables used to describe them.

REFERENCE: Highway Capacity Manual (Special Report 209, 1985)

APPENDIX B

MANUAL TRAFFIC COUNTS

Intersection: University Avenue with Vancouver Drive
 Date: Thursday, October 28, 1993

	University Avenue:				Vancouver Drive:	
TIME PERIOD	NB TH	NB LT	SB TH	SB RT	EB LT	EB RT
6:30-6:45	154	7	113	5	0	6
6:45-7:00	197	9	110	5	0	16
7:00-7:15	173	12	182	2	0	28
7:15-7:30	342	22	252	6	1	28
7:30-7:45	190	21	174	1	1	28
7:45-8:00	232	24	197	0	1	23
8:00-8:15	186	9	147	0	0	11
AM Peak Hr:	937	79	805	9	3	107
3:15-3:30	272	21	300	1	1	18
3:30-3:45	221	20	253	0	4	30
3:45-4:00	229	14	196	0	1	12
4:00-4:15	279	12	242	2	3	24
4:15-4:30	240	17	243	2	2	39
4:30-4:45	259	11	243	5	1	28
4:45-5:00	260	18	234	1	5	18
5:00-5:15	237	11	225	2	2	26
PM Peak Hr:	1038	58	962	10	11	109

Intersection: Vancouver Drive with Hunnewell Street
 Date: Thursday, October 28, 1993

Hunnewell Street:						
TIME PERIOD	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
6:30-6:45	2	8	3	2	8	0
6:45-7:00	2	6	4	1	3	3
7:00-7:15	3	13	1	1	17	1
7:15-7:30	3	25	1	2	20	1
7:30-7:45	3	31	3	1	20	1
7:45-8:00	4	13	5	1	14	6
8:00-8:15	4	7	7	1	9	1
AM Peak Hr:	13	82	10	5	71	9
3:15-3:30	3	11	1	1	5	0
3:30-3:45	2	9	2	3	8	1
3:45-4:00	0	13	3	2	15	1
4:00-4:15	3	12	3	1	4	2
4:15-4:30	0	17	1	5	10	2
4:30-4:45	4	7	3	3	10	0
4:45-5:00	4	10	2	2	9	0
5:00-5:15	3	11	0	1	11	0
PM Peak Hr:	11	46	9	11	33	4

Vancouver Drive:						
TIME PERIOD	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT
6:30-6:45	0	3	1	0	4	6
6:45-7:00	2	5	1	2	5	2
7:00-7:15	0	18	4	11	4	1
7:15-7:30	1	28	11	8	6	15
7:30-7:45	3	35	15	4	4	15
7:45-8:00	2	18	16	4	6	10
8:00-8:15	2	16	12	3	7	6
AM Peak Hr:	6	99	46	27	20	41
3:15-3:30	1	15	1	6	6	1
3:30-3:45	2	30	9	3	6	6
3:45-4:00	0	13	5	1	5	5
4:00-4:15	0	26	10	4	4	5
4:15-4:30	2	32	9	6	8	4
4:30-4:45	2	20	4	3	5	10
4:45-5:00	2	15	4	3	5	10
5:00-5:15	0	21	5	3	2	3
PM Peak Hr:	6	93	27	16	22	29

Intersection: Wesley Foundation Driveway
 Date: Thursday, October 28, 1993

Wesley Foundation Driveway:				
TIME PERIOD	EB RT	WB LT	NB LT	NB RT
7:00-7:15	3	0	0	0
7:15-7:30	0	2	1	3
7:30-7:45	1	0	1	2
7:45-8:00	0	0	0	2
AM Peak Hr:	4	2	2	7
4:00-4:15	0	0	0	0
4:15-4:30	0	0	1	3
4:30-4:45	0	0	1	2
4:45-5:00	0	0	0	2
PM Peak Hr:	0	0	2	7

APPENDIX C

TRIP GENERATION CALCULATIONS

APPENDIX C

TRIP GENERATION CALCULATIONS

The trip generation for the Vancouver Drive Housing Project was estimated based on the development's land use and data from the Institute of Transportation Engineers (ITE) Trip Generation Report¹ for apartment land use. The Trip Generation Report provides adjustment factors to account for the following characteristics of apartments:

- Household size
- Vehicles owned
- Density (dwelling units per acre)

The adjustment factors in the Trip Generation Report were applied to the average weekday trips for the project. The same adjustment was applied proportionally to the weekday morning and afternoon peak hour trips to account for the following characteristics of the Vancouver Drive Housing Project:

- Two-bedroom, one-bedroom, and studio units
- Maximum household size of 3 persons (including children)
- One or less vehicles per unit
- Density of more than 60 units per acre

The trip generation values were calculated by multiplying the the trip rate by the number of units for the project. The resulting trip generation rates and values for the Vancouver Drive Housing Project are shown in Table C-1.

¹ Trip Generation Report, by the Institute of Transportation Engineers, Fifth Edition, 1991.

Table C-1. Trip Generation for Vancouver Drive Housing Project

<u>Land Use</u>	<u>No. of Units</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
		<u>Trip Rate per D.U.</u>	<u>Total Trips</u>	<u>Trip Rate per D.U.</u>	<u>Total Trips</u>
Apartment	60 dwelling units	0.51	31	0.63	38
Adjustment Factors:					
	Household Size	-0.08	-5	-0.10	-6
	Vehicles Owned	-0.02	-1	-0.03	-2
	Density	<u>+0.03</u>	<u>+2</u>	<u>+0.04</u>	<u>+2</u>
	Total Adjustment:	-0.07	-4	-0.09	-6
Resulting Trip Generation		0.44	26	0.54	32
	Entering Trips	17%	4	68%	22
	Exiting Trips	83%	22	32%	10

Note: D.U. - dwelling unit

APPENDIX D

PARKING REQUIREMENTS

APPENDIX D

PARKING REQUIREMENTS

The data shown below in Table D-1 includes the number of units and parking stalls for residential developments similar to the Vancouver Drive Housing Project. This data was used to estimate the approximate number of parking stalls required by the project. The intended market for the project are individuals or families who earn less than 80% of the median income in Hawaii with three or less residents per unit. The tenants of the housing developments listed below meet the criteria for residency at the Vancouver Drive Housing Project.

Table D-1. Parking Data from Similar Developments

<u>Development</u>	<u>No. of Units</u>	<u>No. of Parking Stalls Provided</u>	<u>No. of Parking Stalls Used By Tenants</u>
Weinberg Hale (Hale Pua)	59	42	13
Kuakini Spouse Abuse Shelter	11	8	4
Na Kolea	100	28	10
Loliana	44	24	5

Based on the above data, the average ratio of stalls per unit is approximately 1 stall for every 7 units. This average ratio was applied to 60 units for the Vancouver Drive Housing Project to determine the number of parking stalls needed for the project. Due to the nature and intended market for the project, the estimated number of stalls required for the project is approximately 10 parking stalls. Therefore, the 25 parking stalls planned should be adequate to accommodate the project vehicles.