October 11, 1995

Mr. Gary Gill, Director
Office of Environmental Quality Control
Central Pacific Plaza
220 South King Street, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Final Environmental Assessment for the Kaneohe Elderly Housing Project
Tax May Key: 1-4-5-50: 39

Transmitted herein are four copies of the Final Environmental Assessment/Negative Declaration and a completed OEQC Bulletin Publication Form for the subject project. We request that the Negative Declaration be published in the October 23, 1995 OEQC Bulletin.

Please contact Rae Gee at 527-5088 if you have any questions.

Sincerely,

[Signature]

Acting Director

Enclosures
Kaneohe Elderly Housing Project
Kaneohe, O'ahu, Hawai'i

Prepared by:
City and County of Honolulu
Department of Housing and Community Development

October 1995
FINAL ENVIRONMENTAL ASSESSMENT
FOR THE
KANEHOE ELDERLY HOUSING PROJECT

Department of Housing and Community Development
October 1995
ENVIRONMENTAL ASSESSMENT

Administrative Information

A. Project: Kaneohe Elderly Housing Project

B. Type of Action: 
   X Agency
   
   Department of Housing and Community Development
   City and County of Honolulu
   650 South King Street, 5th Floor
   Honolulu, Hawaii 96813
   Ronald S. Lim, Director

C. Approving Agencies:
   
   Department of Housing & Community Development
   City and County of Honolulu
   650 South King Street, 5th Floor
   Honolulu, Hawaii 96813

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

D. Environmental Assessment Prepared by:
   
   Department of Housing and Community Development
   October 1995

Description of Proposed Actions

A. Proposed Activity
   
   X Single activity;
   
   --- Aggregation of activities;
   
   --- Multi-year activity.

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

A. X 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-TTPPI
E.       American Samoa, Supplemental Form EA-S-ASG
FINDINGS AND CONCLUSIONS FROM THE ENVIRONMENTAL REVIEW

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

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

C. Public Notification
   1. Finding of No Significant Impact on the Environment and Request for
      Release of Funds (Combined Notice)
      a. Date of 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 governmental
         agencies or 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 30-day waiting period expires ___________
      c. Documentation attached: ___ Yes ___ No

PROPOSED PROJECT

The Department of Housing and Community Development (DHCD) proposes to acquire a 65,865 square foot property located at 45-705 Kamehameha Highway, Kaneohe, Oahu, Hawaii (Tax Map Key: 1-4-5-50: 39) (see location map attached as Exhibit 1) to develop approximately 85 rental units for senior citizens. The project will also include management offices, a multi-purpose community room, open space and supporting parking.

PROPOSED ACTION

DHCD proposes to acquire a privately-owned 65,865 square foot parcel on Kamehameha Highway, in Kaneohe, for development of approximately 81 rental units in a four-story structure with a mix of studio and one-bedroom units for the elderly, plus management offices, a multi-purpose community room, open space and approximately 40 stalls of supporting parking. The property acquired will be leased to a nonprofit corporation who will own and develop the rental project using a combination of Community Development Block Grant and HOME funds provided by the City, and other sources of financing.

The proposed project's conceptual design includes a one-story low-rise building at street level fronting Kamehameha Highway, buffered with landscaping and terraced to a 4-story building in the rear and utilizing the natural topography
of the property. The building mass has been broken to create smaller, separate buildings similar to the adjacent single-family homes and integrating flora and fauna in landscaping reflecting the lush characteristic of Kaneohe town.

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

NEED FOR PROJECT

The DHCD's goal is to provide a project which will fulfill the need for elderly living units in Kaneohe and integrate into the neighborhood. All of the five publicly-assisted housing projects in Kaneohe are fully occupied and have waiting lists averaging 2.5 years. The 44-unit State-assisted Keola Kaneohe Elderly housing project has a waiting list of 3 to 4 years.

There is an overall need on Oahu to provide independent and assisted living units for the elderly. The population, in general, is getting older. The elderly, defined by the U.S. Housing and Urban Development guidelines as an individual aged 62 years and older, represents the fastest growing and the most vulnerable segment of the community. Since 1980, the median age of Hawaii residents has steadily increased from 28.3 years of age to 32.5 years of age in 1990. The elderly population is the fastest growing segment throughout the nation. In 1970, there were 44,116 senior citizens (aged 65 years and older) who comprised of 6% of the total State population of 768,561. By 1990, the number of seniors increased by two and a half times the number of persons in 1970, to 125,005 persons comprising 11.3% of the total State population of 1,108,229. (Source: U.S. Census of Population, 1970, PC(V2)-13, and 1990 Census of Population, General Population Characteristics, Hawaii, 1990, CP-1-13 (June 1992), tables 17, 39, 54, and 57). A further breakdown shows that in 1990, there were 4,296 senior citizens who comprised 10% of the total population in Kaneohe of 40,595. Also, 3.3% of the 4,296 senior citizens in Kaneohe live below the poverty level indicating there is a need for low-income rental housing. (Source: 1990 Neighborhood Board Data, Bureau of the Census, Compiled by the City Department of Human Resources, Elderly Affairs Division, October 1993)

The proposed project directly addresses the need for more community-based housing for the elderly.

ALTERNATIVES CONSIDERED

A. ALTERNATIVES CONSIDERED

1. Alternative Sites. DHCD organized a community advisory committee comprised of a cross-section of members of the community including business leaders, seniors groups, elected public officials and businesses to assist in the planning process. This project was also presented to the Kaneohe Neighborhood Board and DHCD solicited suggestions from community members on alternative sites. The following six alternative sites were presented to the Kaneohe Community Advisory Committee for selection:
<table>
<thead>
<tr>
<th>SITE NAME</th>
<th>ADDRESS</th>
<th>LAND AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahinui Road Site</td>
<td>45-607 Mahinui Road</td>
<td>3.6 Acres</td>
</tr>
<tr>
<td>Kaneohe Stream Site</td>
<td>45-803 Kamehameha Highway</td>
<td>3.6 Acres</td>
</tr>
<tr>
<td>Kaneohe District Park Site</td>
<td>45-660 Keaahala Road</td>
<td>1 Acre</td>
</tr>
<tr>
<td>Pookela Street Site</td>
<td>No address listed. Located near the State Hospital in Kaneohe.</td>
<td>2 Acres</td>
</tr>
<tr>
<td>Pookela Mountain Site</td>
<td>No address listed. Located near the State Hospital in Kaneohe.</td>
<td>5 Acres</td>
</tr>
<tr>
<td>William Henry Road Sites</td>
<td>45-269 William Henry Road 45-271 William Henry Road</td>
<td>20,921 s.f. 15,105 s.f.</td>
</tr>
</tbody>
</table>

Each site was evaluated on the basis of the following criteria: site availability, proximity to community services, compatibility with neighboring uses, access to public transportation, development feasibility and environmental considerations. The project site was evaluated as the best site because of its convenient location relative to shopping and employment centers, schools, retail stores and public transportation; and it is available for sale. The site is located on Kamehameha Highway and in a residential area with a mix of single-family and multi-family homes. The site can be developed at a reasonable cost.

The other sites reviewed were less desirable because: three sites near the Windward State Hospital belong to the State and are part of the ceded lands trust. The Mahinui Road site near Hoomaluhia Botanical Gardens is a sloping parcel away from amenities in Kaneohe Town. The Kaneohe Stream site has a 40-feet drop below grade and requires extensive filling, grading and drainage. Lastly, the William Henry Road sites are too small to consider for a project this size and requires relocation of seven single family homes.

B. Higher Density Use

The project site could be developed to a higher density use under Chapter 201E, Hawaii Revised Statutes, which provides for exemptions from development standards for affordable housing. DHCD worked and accommodated the Kaneohe Community Advisory Committee in establishing design guidelines including: limiting the height limit to accommodate the neighboring single-family homes; providing an adequate amount of parking for today’s mobile seniors; setbacks with adequate landscaping and buffers from the highway and adjacent properties; and rooflines to match the existing architectural characteristics of buildings in Kaneohe. The Committee felt that a higher density project would be out of character in the surrounding neighborhood.
C. No Project

Should the City not move forward with this project, the Kaneohe community would not receive the benefits of additional rental elderly housing to meet the growing demands of the community.

By not implementing the project, none of the adverse environmental impacts would occur, however, none of the positive social benefits, including providing short term construction employment and permanent affordable housing for senior citizens would be realized.

The anticipated social benefits of this project far outweigh the potential environmental impacts which can easily be mitigated. 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 December 5, 1994 by Keith Ishida, Rae Gee and Lorna Uesato, Planners, Department of Housing and Community Development.

SITE DATA

Tax Map Key: 1-4-5-50: 39
Ownership: Pacific Atlas (Hawaii), Inc.
Location: 45-705 Kanehameha Highway, Kaneohe
Land Area: 65,065 Square Feet

LAND USE DATA

State Land Use
District: Urban
Development Plan
District: Koolaupoko
Zoning: R-7.5 Residential District
Existing Use: Vacant Lot
Flood Zone: FIRM Zone X (unshaded), outside of the 500-year flood plain.
Special Management Area: Not in SMA

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: 3 - Minor Adverse Impact Anticipated

   Sources: State Land Use Commission Letter dated March 3, 1995
            Planning Department's letter dated February 22, 1995

   The State Land Use Commission confirmed that the proposed project is located within the State Land Use Urban District. The Planning Department states that the subject site is designated for Residential use on the Koolau Poko Development Plan Land Use Map.

   There are no publicly funded or privately funded improvements designated in the general vicinity on the Koolau Poko Development Plan Public Facilities Map.

   The project site is zoned R-7.5 single family residential.

   The City will request exemptions from the Land Use Ordinance (LDO) pursuant to Chapter 201E-210, Hawaii Revised Statutes, to permit A-2 Medium Density Apartment development with a 40 foot height limit on a site designated for R-7.5 single family residential use. The City will further require exemptions from the A-2 development standards to allow the provision of 1 parking stall per 2.5 residential units instead of the 1 stall per unit required by the LDO. Exemptions from A-2 height and yard setback requirements may also be requested. All Chapter 201E-210 exemptions are subject to the approval of the City Council.

2. Compatibility and Urban Impact

   Rating: 3 - Minor Adverse Impact Anticipated

   Sources: Site Inspection - December 5, 1994

   The proposed project will not significantly alter existing land use patterns in the neighborhood.

   A site inspection on December 5, 1994 indicated that there is a remaining, unoccupied, dilapidated structure at the rear of the property.

   The proposed project will add a mid-rise building in the neighborhood adjacent to single- and multi-family residences in a neighborhood containing a mix of business and residential uses. The project will be similar in height and scale with the 4-story Manai Hale condominium project located adjacent to the project site.

3. Hazards, Nuisance and Site Safety
Rating: 2 - No Impact Anticipated

Source: Site Inspection - December 5, 1994

State Department of Health letter dated September 14, 1995

A site inspection revealed no indication of natural hazards such as geologic faults, flooding, volcanic activity, or landslide. There is no evidence of any man-made hazards such as inadequate separation of vehicular and pedestrian traffic, lack of traffic control, or the presence of toxic materials or explosives.

The State Department of Health has no information on the site on both Spill Reports Database and Comprehensive, Environmental, Response, Compensation and Liability Information System (CERCLIS).

4. Slope, Erosion and Soil Suitability

Rating: 2 - No Impact Anticipated


Site Inspection - December 5, 1994.

The site slopes approximately 30 to 35 feet from the Kanehameha Highway frontage to the rear of the property. Proper site grading and building foundation will minimize the impact from the site slope.

The United States Soil Conservation Service classifies the soil at the project site as Kaneohe silty clay (KgB), 3 to 8 percent slopes. The Kaneohe soil series consists of well drained soils on terraces and alluvial fans on the island of Oahu. Elevations range from 100 to 1,000 feet. Rainfall amounts to 70 to 90 inches annually, which is fairly distributed throughout the year. Permeability is moderately rapid. Runoff is slow to medium, and the erosion hazard is slight. The available water capacity is 1.2 inches per foot in the surface layer and 1.4 inches per foot in the subsoil. In places roots penetrate to a depth of 5 feet or more.

A site inspection revealed no indication of unstable soil conditions.

5. Energy Consumption

Rating: 2 - No Impact Anticipated

The project will receive electrical, gas, cable and telephone service from the respective utility companies.

6. Noise

Rating: 3 - Minor adverse impacts anticipated (Short Term)
2 - No Impact Anticipated (Long Term)


The project site is located adjacent to primary access roadways such as the Kamehameha Highway, Likelike Highway and Kaneohe Bay Drive. Y. Ebisu and Associates conducted an assessment for the Traffic Management Consultant (TMC) in which future traffic noise levels in the vicinity of the proposed project were evaluated for their potential impacts and their relationship to current Federal Housing Administration (FHA)/Housing and Urban Development (HUD) noise standards. At full build-out and occupancy of the proposed project, Y. Ebisu and Associates forecasted increases in non-project traffic noises of 0.1 Ldn (Day-Night Average Sound Level) units are predicted to occur in the Year 1997 as a result of project plus non-project traffic. By the Year 2005, increases in traffic noise of 0.5 Ldn units are predicted to occur, primarily as a result of non-project traffic.

Project traffic should not cause any noticeable increase in traffic noise or adverse traffic noise impacts along the roadways servicing the project. The forecasted increases in traffic noise levels by Years 1997 and 2005 are not expected to generate adverse noise impacts.

The location of the project's living units, as proposed, meet the 65 Ldn FHA/HUD noise standard. Predicted long-term noise levels at all of the planned living units of the project are expected to be less than 65 Ldn by Years 1997 through 2005. As a result, adverse impacts from traffic noise are not anticipated at the proposed project dwelling units in the future, and special noise mitigation measures are not required.

Unavoidable, but temporary, short-term noise impacts may occur during the construction of the proposed project. Because construction activities are predicted to be audible at adjoining properties, the quality of the acoustic environment may be degradable to unacceptable levels during periods of construction. Mitigation measures to reduce construction noise include use of quieter equipment and the implementation of the State Department of Health construction noise permit procedures. The building contractor will be required to comply with Title 11, Department of Health Administrative Rules, Chapter 43, "Community Noise Controls For Oahu." The "Noise Study for the Kaneohe Elderly Housing Project", prepared by Y. Ebisu and Associates, July 1995, is attached as Appendix B of this report.

7. Air Quality

Rating: 3 - Minor adverse impacts anticipated (Short Term)
2 - No Impact Anticipated (Long Term)

Site Inspection - December 5, 1994

Air quality in the vicinity of the project is primarily affected by vehicle emissions. State and national air quality standards are currently being met in the vicinity of the project, expect for certain more stringent standards, which may be occasionally exceeded.

Short term impacts on air quality could occur as a result of the construction activities, i.e., fugitive dust from site preparation and exhaust emissions from construction equipment on site. Frequent watering of the site during grading and excavation in accordance with Title II, Department of Health Administration Rules, Chapter 60, "Air Pollution Controls," Section 5, "Fugitive Dust" will minimize the release of fugitive dust into the environment.

Short-term emissions from construction equipment are not likely to violate air quality standards, which are established on an annual basis. Short term traffic related impacts on air quality may result from construction equipment travelling to and from the site and the daily commute of construction workers. These impacts can be mitigated by scheduling the movement of equipment, materials, and workers during the off peak traffic hours.

Long term impacts on air quality are usually the result of motor vehicle emissions generated by site traffic. The estimated traffic, generated by the proposed project, is about 24 vehicles per hour (vph). Based upon experience in the air quality impact analysis of other similar projects, traffic volume increases of less than 100 vph do not cause any significant impacts on air quality. The "Kaneohe Elderly Housing Project Air Quality Impact Assessment", prepared by B.D. Neal and Associates, July 26, 1995, is attached as Appendix C of this report.

B. Environmental Design and Historic Value

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

   Rating: 2 - No Impact Anticipated

   Sources: Site Inspection - December 5, 1994

   Existing Land Use Map

   The new complex will continue the existing residential land use pattern of the existing 4-story multi-family development adjacent to the site, Manai Hale.

2. Historic, Cultural and Archaeological Resources
Rating: 2 - No Impact Anticipated

Sources: Department of Land and Natural Resources, State Historic Preservation Division letter dated February 17, 1995.

Site Inspection - December 5, 1994

The Department of Land and Natural Resources states that there are no known archaeological sites or significant sites which are eligible for or listed on the Hawaii or National Registers of Historic Places at the project site. Aerial records show that in the late 1970's this site has been cleared and developed making the possibility of subsurface remains being presently remote. However, if subsurface remains are encountered during site clearance and excavation, the building contractor will be required to stop all work and notify the State Historic Preservation Office.

C. Socio-Economic

1. Demographic/Community Character Changes

Rating: 3 - Minor Adverse Impact Anticipated


1990 Neighborhood Board Data, Bureau of the Census, Compiled by the City Department of Human Resources, Elderly Affairs Division, October 1993

The proposed project will add approximately 85 persons to the Kaneohe community. This is a minor increase to the 39,212 persons living within the boundary of the Kaneohe Neighborhood Board area as of 1990. The population, in general, is getting older. Since 1980, the median age of Hawaii residents has steadily increased from 26.3 years of age to 32.6 years of age in 1990. The elderly population (aged 65 years and older) is the fastest growing segment throughout the nation. In 1970, there were 44,116 senior citizens who comprised 6% of the total State population of 768,561. By 1990, the number of seniors increased by two and a half times the number of persons in 1970, to 125,005, comprising 11.3% of the total State population of 1,108,229. These trends are expected to continue as medical advancements are made and people become more health conscious.

A further breakdown shows that in 1990, there were 4,296 senior citizens who comprised of 10% of the total population in Kaneohe of 40,595. Also, 3.3% of the 4,296 senior citizens in Kaneohe live below the poverty level indicating there is a need for low-income rental housing.

2. Displacement
Rating: 2 - No Impact Anticipated

Source: Site Inspection - December 5, 1994

The existing site is a vacant lot. The proposed project will not require or result in the displacement of any residences or businesses. The proposed project will make use of vacant land in Kaneohe and provide much needed affordable housing.

3. Employment and Income Patterns

Ratings: 1 - Potential Beneficial Impact (Short Term)
2 - No Impact Anticipated (Long Term)

Source: Site Inspection - December 5, 1994

The project will result in the creation of temporary employment in construction related trades during the construction of the project.

The proposed project will not significantly alter the community’s employment and income patterns. The residents of the project are expected to be of a mix of low and moderate income senior citizens.

D. Community Facilities and Services

1. Educational Facilities

Rating: 2 - No Impact Anticipated

Source: Department of Education letter dated February 22, 1995

The Department of Education has reviewed the proposed project and has determined that the proposed rental units for the elderly will have no impact on area schools, including Kapunahala, Ben Parker and Puchala Elementary Schools and Castle High School.

2. Commercial Facilities

Rating: 2 - No Impact Anticipated

Source: Existing Land Use Map

Department of Human Resources letter dated February 15, 1995

Site Inspection December 5, 1994

The Department of Human Resources states that conveniences are abundant in this location. The Windward City Shopping Center is located approximately a quarter of a mile from the project site at the intersection of Kamehameha Highway, Likelike Highway, and Kaneohe Bay Drive. The Center has many restaurants, a supermarket, and other
amenities. All of the above are within walking distance from the site. Additional shopping opportunities are available at the Kaneohe Shopping Center, half a mile away; Windward Mall, a mile away; and other business establishments along Kamehameha Highway including banks, restaurants, drug stores and supermarkets. These businesses will benefit from the patronage of the new residents of the proposed project.

Approximately 0.7 miles from the site is the Kaneohe Senior Center which a senior could reach by riding bus number 26. At $5.00 annually, a senior is able to join the Kaneohe Seniors' club and take advantage of daily activities held at the Center. Activities include: ceramics; guitar/ukulele lessons; hula, Japanese and other ethnic dance lessons; arts and crafts; and many other activities to keep active. This Center, open 5 days a week, also has health maintenance programs with the Honolulu Gerontology Program on Tuesdays and Thursdays. This exercise group is available for frail elders able to participate in therapeutic exercises. For the more active, Tai Chi classes are available. Group Dining is available at the Kaneohe District Park about 2 miles away.

DHR would like to know if the proposed project would have a community room to house a group dining program as the meals program at the Kaneohe Community Park at 45-529 Keahalal Road is being shared with a senior club (Koolau Seniors' Hui). A more neutral site closer to transportation services and more accessible due to the level site may be a better location for services. DHCD will consider this suggestion as the design progresses.

3. Health Care
4. Emergency Medical

Rating: 2 - No Impact Anticipated
Source: Existing Land Use Map
Site Inspection - December 5, 1994

The Hawaii State Hospital and the Windward Public Health Nurses Office are 2 miles away from the site. The Castle Memorial Medical Center is located approximately 4.5 miles from the project site. The Kaiser Clinic is a quarter of a mile away from the site while the Castle Physical Fitness Center is a third of a mile away. There are also a multitude of private medical, dental and shiatsu/chiropractic offices in the area.

In addition to providing a full range of medical services, Castle Medical Center also provides 24-hour emergency health care and ambulance services.

5. Social Services

Rating: 2 - No Impact Anticipated
Source: Department of Human Resources letter dated February 15, 1995

Site Inspection - December 5, 1994

Satellite offices of several State social service agencies are located nearby in Kaneohe Town. The Kaneohe Civic Center is a half a mile away from the site and includes the Kaneohe Library, Police Station, Department of Human Resources and various State social services offices. The Kaneohe Satellite City Hall and the U.S. Post Office are a mile away on Kamehameha Highway.

6. Sanitary Sewer and Solid Waste

Rating: 2 - No Impact Anticipated

Source: Department Public Works letter dated February 23, 1995

Department of Wastewater Management (DWWM) letter dated March 7, 1995 and subsequent letters from DWWM on June 7, 1995

Department of Health (DOH) letter dated July 14, 1995

The Department of Public Works, Refuse Division, currently provides bi-weekly refuse collection service to the project site. If refuse design requirements cannot be met, the project will be serviced by a private collection service.

The Department of Health (DOH) states that the subject project is located below the Underground Injection Control (UIC) line and, in the No Pass Zone and in the critical wastewater disposal area. It has also been determined that the subject project is located within the County sewer service system. As the area is sewered, the DOH has no objections to the project provided that the project is connected to the municipal wastewater system.

The Department of Wastewater Management states that the municipal system can support the project if sewer lines in the area are relieved of their current inadequacy. The local sewer lines which need to be improved are the 8-inch sewer on easement located between Waiawi Street and Pua Makahala Street and Lanipola Place (1,340 feet) and the 10-inch line on Hilina Street and Wena Street (1,640 feet). DHCD plans to install the required relief lines. Also, the time of connection to the system must be coordinated with the completion of the City's construction of the Kailua Effluent Pump Station Modification project. The project is scheduled to be completed in early 1997.

7. Storm Water

Rating: 2 - No Impact Anticipated
Source: DPW Storm Drainage System Maps

Site Inspection - December 5, 1994

The site inspection and DPW Storm Drainage Maps revealed that storm water runoff is collected by curbs and gutters along the sidewalks fronting Kamehameha Highway. Storm water drains off the gradual 30-foot slope from the west side of the site on Kamehameha Highway into a natural drainage and sewer easement to the rear of the property. The storm water flows into catch basins on Pua Alowalo Street, and proceed to drain into another 20-foot wide natural easement at the rear of the Puohala Village properties on Pua Makahala Street. The storm water flows to catch basins and the drain line on Pua Inia and Lanipola Street which eventually flows into the Kaneohe Stream.

Drainage improvements will be provided, if necessary, for the proposed site and a drainage report will be submitted to the Drainage Section, Division of Engineering, for review and approval. To minimize the impact on the surrounding area, DHCD will implement Best Management Practices (BMP) during and after construction to minimize storm water runoff.

8. Water Supply

Rating: 2 - No impact anticipated.


City and County Water Maps

The City and County Water Map for the area shows that there is a 30-inch low service concrete main water line on the east side of Kamehameha Highway fronting the property and a 6-inch distribution water line on the west side of Kamehameha Highway.

The Board of Water Supply (BWS) states that there were five existing water meters serving the subject property which were ordered-off. Water services must be ordered-on within five years of the ordered-off dates to receive the water system facilities charge credit.

The existing water system is presently inadequate to accommodate the proposed project. The availability of water for the proposed project will be confirmed when the building permit is submitted for the BWS review and approval. If the development plan requires action by the Department of Land Utilization, the plan should be approved by that department before BWS takes action on the proposed development. When water is made available, the applicant will be required to pay Water System Facilities Charges for resource development, transmission and daily storage.

The fire protection in the vicinity of the proposed project does not meet BWS's water system requirements. The existing water system
cannot provide adequate fire protection for the proposed project. The nearest fire hydrant is located approximately 300 linear feet (l.f.) away and can only provide a flow of 1,100 gallons per minute (gpm). BWS standards require a fire hydrant to be located within 125 l.f. of the site and provide a flow of 1,500 gpm for low rise developments of three stories or less or 2,000 gpm for high rise developments.

BWS further stated that: if a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for BWS’s review and approval; on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department, and the proposed project is subject to cross-connection control requirements prior to the issuance of the building permit.

The proposed project will be designed to address BWS’s fire protection water flow requirements.

9. Public Safety
a. Police

Rating: 2 - No Impact Anticipated

Source: Honolulu Police Department letter dated February 15, 1995

The Kaneohe Police Station is part of the Kaneohe Civic Center located at 45-270 Waikalua Road.

The Honolulu Police Department states that the proposed project will have no significant impact on police operations.

b. Fire Protection

Rating: 2 - No Impact Anticipated

Source: Honolulu Fire Department letter dated February 14, 1995

The Honolulu Fire Department (HFD) considers existing fire protection services and facilities from the Kaneohe and Aikani engine companies to be adequate to service the proposed project. HFD has no objections to the proposed project.

As mandated by the HFD, all access for fire apparatus, water supply and building construction shall be in conformance to existing codes and standards.

Refer to Section D-8 (as stated above) on the adequacy of water supply for the fire protection resources for the proposed project.
10. Open Space, Recreation and Cultural Facilities

Rating: 2 - No Impact Anticipated

Source: Department of Parks and Recreation letter dated February 17, 1995

Existing Land Use Map

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

The proposed project will need to comply with the City's Park Dedication Ordinance No. 4261 and tree planting requirements. A street planting plan will need to be submitted to the Department of Parks and Recreation for review. DHCD will consult with the Department 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 31-acre Kaneohe District Park is approximately one mile from the project site. In addition to soccer, softball/baseball fields, tennis, volleyball and basketball courts, the District Park also has a swimming pool, gymnasium and multi-purpose meeting rooms. The District Park regularly hosts community events such as ethnic festivals, carnivals and craft fairs.

The 5.5-acre Kaneohe Community Park is half a mile from the site on Kamahameha Highway with a recreation building that hosts the seniors daily meal program. The park also has a softball field, basketball and volleyball courts and a tot lot. This facility also hosts the Kaneohe Seniors' club.

11. Transportation

Rating: 3 - Minor Adverse Impact Anticipated

Source: Department of Transportation Services letter dated February 28, 1995

Department of Transportation letter dated February 23, 1995

Department of Human Resources letter dated February 15, 1995

Existing Land Use Map

Site Inspection - December 5, 1994

A site inspection reveals that the site is within walking distance of three City bus routes, Nos. 55, 56 and 57, on Kamehameha Highway. Bus No. 56 will take seniors to the Kaneohe Senior Center on Puohala Road, approximately 0.7 miles from the project. Directly across the street is a bus stop that will take the senior in the direction of Kailua or Kaneohe Bay Drive or Likelike Highway. Residents of the project may experience difficulty in crossing the Kamehameha Highway to access the bus stop on the mauka side of the highway.

A hundred yards from the site is a bus stop which will take the residents to Windward Mall. Other amenities are within walking distance to the site. The increase in the number of persons to be served by the project is expected to marginally increase traffic volumes on roadways servicing the project as residents are likely to utilize public transportation.

Exemptions from residential parking requirements of the Land Use Ordinance (LUO) may be requested under the provision of Chapter 201E-210, Hawaii Revised Statutes. Conceptual plans indicate that there will be 48 parking stalls, 40 stalls for tenants and 8 stalls for guests, however, this is subject to change as the design for the project is refined.

The State Department of Transportation (DOT) stated that the proposed project will have no adverse impacts on the State highway facilities.

The Department of Transportation Services (DTS) stated that off-street parking requirements should be in accordance with the Land Use Ordinance (LUO). The LUO indicates that adequate off-street parking for multi-family dwellings is 1 stall for every 10 units.

DTS further stated that the driveway should be designed wide enough to accommodate two-way traffic comfortably; the landscaping at the entrance of the driveway should be the type that will not obstruct visibility to vehicles and pedestrians; and the project should address the need for off-site roadway improvements, as required, to support this development.

The proposed project's conceptual design will be refined to address the concerns raised and provide the necessary off-site roadway improvements.

The traffic study conducted for the project indicated that the proposed project is not considered a significant traffic generator and not expected to be affected by the development of the elderly housing project. Existing traffic conditions on Kamehameha Highway were analyzed to establish base line conditions from which to project future increase in background traffic. Based upon long traffic forecasts for the region, the future growth in traffic on Kamehameha Highway is less than one percent per year.
The proposed elderly housing project in Kaneohe is not considered a significant traffic generator and is expected to generate a total of 24 vehicles per hour (vph) during the AM peak hour of traffic and 23 vph during the PM peak hour of traffic. The traffic, generated by the proposed project, would increase peak hour traffic on Kamehameha Highway by less than one percent during both the AM and PM peak hours of traffic. The Levels of Service of the intersections, within the study area are unaffected by site traffic.

Site access would be provided by a driveway on Kamehameha Highway. The existing landscaped median on Kamehameha Highway prevents the left-turn movements into and out of the project driveway. Honolulu-bound traffic, exiting the site, would be required to turn right onto Kamehameha Highway and make a U-turn at the existing median opening, located immediately to the north of the site, to travel in the Honolulu-bound direction. Southbound traffic, entering the site, would be required to make a U-turn on Kamehameha Highway at Kapalai Road, located south of the project access, then turn right into the project site.

The one parking stall per two dwelling units, proposed for the project, are well in excess of the one stall per six dwelling units parking ratio, successfully used in other City and County of Honolulu elderly housing projects. The "Traffic Impact Analysis Report for the Proposed Kaneohe Elderly Housing Project", prepared by the Traffic Management Consultant, August 22, 1995, is attached as Appendix D of this report.

The proposed project will be designed to address the concerns raised and promote the necessary on site parking.

E. Natural Features

1. Water Resources

   Rating: 2 - No Impact Anticipated

   Sources: Board of Water Supply, "Oahu Water Plan", July 1982
            Site Inspection - December 5, 1994

   The project is located in the Board of Water Supply's Windward Water Use District. The Windward district had a sustainable capacity of 9 million gallons per day (MGD) and was operating at a rate of 6.68 MGD.

   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 February 15, 1995
Federal Emergency Management Agency, "Flood Insurance Rate
Map, City and County of Honolulu," Panel No. 15001-0090C,
September 28, 1990

The parcel is located in Flood Zone X (unshaded), an area determined
to be outside the 500-year flood plain (see FIRM Map, Exhibit 2). According
to the Department of the Army, a permit under the Clean
Water Act; the Rivers and Harbors Act of 1899; and the Marine
Protection, Research and Sanctuaries Act will not be required.

3. Wetlands Protection
Rating:  2 - No Impact Anticipated
Sources: Site Inspection - December 5, 1994

The 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: Coastal Zone Management Assessment Form
Office of State Planning letter dated July 13, 1995
Chapter 205A, Hawaii Revised Statutes

DHCD had made a determination of consistency with the Hawaii Coastal
Zone Management Program and does not conflict with the objectives of
Chapter 205A, HRS. DHCD has received the Office of State Planning
concurrence with this determination. Hawaii Coastal Zone Management
Assessment forms are attached as Exhibit 3.

5. Unique Natural Features
6. Vegetation and Animal Life
Rating:  3 - No Impact Anticipated
Source: U.S. Department of the Interior, Fish and Wildlife
Service, Ecological Services and Wetlands Branch phone
conversation with Mary Martz and Karen Evans, March 20,
1995.

Site Inspection - December 5, 1994

The project site has been in an urban use for a period of time and a
site inspection has revealed no evidence of unique natural features
of fish and wildlife. The Ecological Services and Wetlands Branch
with the U.S. Department of the Interior, Fish and Wildlife has no comments.

7. Agricultural Lands

Rating: 2 - No Impact Anticipated

Source: Department of Agriculture telephone conversation with E. Yamamoto of the Planning Division on March 2, 1995

The proposed project is located in an area which has been in urban use for an extended period of time and will have no impact on agricultural lands.

The proposed project will not result in the conversion of agricultural land to nonagricultural land.

DETERMINATION

It is determined that the proposed action will have no significant impact on the quality of the human environment and an Environmental Impact Statement is not required. The bases for this determination are as follows:

1. The number of units to be emplaced by the 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, 1992.

2. The potential environmental impacts of this project are easily mitigated or are evaluated as not significantly affecting the quality of the human environment.

3. 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.

4. 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."

5. The escape of fugitive dust into the environment will be minimized by frequent watering of the project site during clearance and excavation.

6. The development of a medium density apartment building will require waivers from the R-7.5 zoning and the residential development plan land use designation. DHCD will seek exemptions to allow development of the project.

7. All infrastructure, with the exception of municipal sewer and water for fire protection, is available and adequate to support the project. The necessary improvements to the wastewater system and fire protection water adequacy 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 residents. The impacts of the project on public services and facilities, and the visual impacts of the project on the neighborhood are evaluated as minimal and not significantly affecting the quality of the human environment.

9. The project conceptual plans will provide approximately 48 parking stalls including guest, loading and accessible stalls. One stall for every two units is projected.

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 Section 201E-210, HRS.

11. The 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 view.

12. The project will have the positive benefits of providing affordable rental units and programs for the elderly.

13. The Planning Department concurs with the determination that the proposed action will have no significant impact on the environment and an environmental impact statement is not required.

A Negative Declaration will be filed with the State Office of Environmental Quality Control and a Finding of No Significant Impact on the Environment will be published in a newspaper of general circulation.
LOCATION MAP

EXHIBIT 1
KANEHOE ELDERLY HOUSING PROJECT

PROJECT DESCRIPTION

Site Information
Location: 45-705 Kamehameha Highway
Tax Map Key: 1-4-5-50: 39
Land Area: 65,865 Square Feet or 1.512 Acres
Land Owner: Pacific Atlas (Hawaii) Inc.

Land Use Information
Existing Uses: Vacant lot.
Zoning: R-7.5 Residential District
Development Plan Designation: Residential
State Land Use: Urban
Surrounding Uses: 4-story apartment building, single family homes, and a church.

Proposed Activities
Acquire land and develop approximately 70 to 90 affordable rental units for the elderly in Kaneohe.

Source of Funds
Community Development Block Grant Funds and HOME Program Funds
FIRM MAP

EXHIBIT 2
HAWAII CZM PROGRAM
ASSESSMENT FORM

RECREATIONAL RESOURCES

Objective: Provide coastal recreational opportunities accessible to the public.

Policies

1) Improve coordination and funding of coastal recreation planning and management.

2) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

   a) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

   b) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

   c) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

   d) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

   e) Encouraging expanded public recreational use of County, State, and Federally owned or controlled shoreline lands and waters having recreational value;

   f) Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters;

   g) Developing new shoreline recreational opportunities, where appropriate, such as artificial reefs for surfing and fishing; and

   h) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, County planning commissions; and crediting such dedication against the requirements of section 46-6.
Check either "Yes" or "No" for each of the following questions:

<table>
<thead>
<tr>
<th>Question</th>
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<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Will the proposed action involve or be near a dedicated public right-of-way?</td>
<td></td>
<td>X</td>
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<tr>
<td>2. Does the project site abut the shoreline?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3. Is the project site near a State or County park?</td>
<td></td>
<td>X</td>
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<tr>
<td>4. Is the project site near a perennial stream?</td>
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<td>X</td>
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<tr>
<td>5. Will the proposed action occur in or affect a surf site?</td>
<td></td>
<td>X</td>
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<tr>
<td>6. Will the proposed action occur in or affect a popular fishing area?</td>
<td></td>
<td>X</td>
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<tr>
<td>7. Will the proposed action occur in or affect a recreational or boating area?</td>
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<td>X</td>
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<tr>
<td>8. Is the project site near a sandy beach?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>9. Are there swimming or other recreational uses in the area?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Discussion
HISTORIC RESOURCES

Objective: Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies

1) Identify and analyze significant archaeological resources;
2) Maximize information retention through preservation of remains and artifacts or salvage operations; and
3) Support State goals for protection, restoration, interpretation, and display of historic resources.

Check either "Yes" or "No" for each of the following questions.

1. Is the project site within a historic/cultural district? Yes No X
2. Is the project site listed on or nominated to the Hawaii or National Register of historic places? Yes No X
3. Does the project site include undeveloped land which has not been surveyed by an archaeologist? Yes No X
4. Has a site survey revealed any information on historic or archaeological resources? Yes No X
5. Is the project site within or near a Hawaiian fishpond or historic settlement area? Yes No X

Discussion

2, 3 The Department of Land and Natural Resources has stated that there are no known historic sites on the project site. The site had been cleaned and graded previously.

- 3 -
SCENIC AND OPEN SPACE RESOURCES

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:
1) Identify valued scenic resources in the coastal zone management area;
2) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
3) Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and
4) Encourage those developments which are not coastal dependent to locate in inland areas.

Check either "Yes" or "No" for each of the following questions.

Yes   No
1. Does the project site abut a scenic landmark?  X
2. Does the proposed action involve the construction of a multi-story structure or structures?  X
3. Is the project site adjacent to undeveloped parcels?  X
4. Does the proposed action involve the construction of structures visible between the nearest coastal roadway and the shoreline?  X
5. Will the proposed action involve construction in or on waters seaward of the shoreline? On or near a beach?  X

Discussion
2. The project involves construction of a three or four story structure at 45-705 Kanehamahana Highway, Kaneohe, Oahu, Hawaii, but will not impact coastal views.
**COASTAL ECOSYSTEMS**

**Objective:** Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

**Policies**

1) Improve the technical basis for natural resource management;

2) Preserve valuable coastal ecosystems of significant biological or economic importance;

3) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land water uses, recognizing competing water needs; and

4) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

Check either "Yes" or "No" for each of the following questions.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the proposed action involve dredge or fill activities?</td>
<td></td>
<td>X</td>
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<tr>
<td>2. Is the project site within the Shoreline Setback Area (30 to 40 feet inland of the shoreline)?</td>
<td>X</td>
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<tr>
<td>3. Will the proposed action require some form of effluent discharge into a body of water?</td>
<td>X</td>
<td></td>
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<td>4. Will the proposed action require earthwork beyond clearing and grubbing?</td>
<td></td>
<td>X</td>
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<tr>
<td>5. Will the proposed action include the construction of special waste water treatment facilities, such as injection wells, discharge pipes, or cesspools?</td>
<td></td>
<td>X</td>
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<tr>
<td>6. Is an intermittent or perennial stream located on or near the project site?</td>
<td>X</td>
<td></td>
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<tr>
<td>7. Does the project site provide habitat for endangered species of plants, birds, or mammals?</td>
<td>X</td>
<td></td>
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<tr>
<td>8. Is any such habitat located nearby?</td>
<td>X</td>
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<tr>
<td>9. Is there a wetland on the project site?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
10. Is the project site situated in or abutting a Natural Area Reserve? [X]

11. Is the project site situated in or abutting a Marine Life Conservation District? [X]

12. Is the project site situated in or abutting an estuary? [X]

Discussion

4. Construction will require excavation for utilities and building foundation.

Although site is vacant now, it was previously developed and cleared. Runoff from the project will be controlled during construction to prevent adverse impact to coastal waters.
ECONOMIC USES

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies

1) Concentrate in appropriate areas the location of coastal dependent development necessary to the State's economy;

2) Insure that coastal dependent development such as harbors and ports, visitor industry facilities, and energy generating facilities are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

3) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such development and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
   a) Utilization of presently designated locations is not feasible;
   b) Adverse environmental effects are minimized; and
   c) Important to the State's economy.

Check either "Yes" or "No" for each of the following questions.

1. Does the project involve a harbor or port? Yes No X
2. Is the project site within a designated tourist destination area? Yes No X
3. Does the project site include agricultural lands or lands designated for such use? Yes No X
4. Does the proposed activity relate to commercial fishing or seafood production? Yes No X
5. Does the proposed activity relate to energy production? Yes No X
6. Does the proposed activity relate to seabed mining? Yes No X

Discussion
COASTAL HAZARDS

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.

Policies

1) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazards;

2) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;

3) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

4) Prevent coastal flooding from inland projects.

Check either "Yes" or "No" for each of the following questions.

1. Is the project site on or abutting a sandy beach? No
2. Is the project site within a potential tsunami inundation area as depicted on the National Flood Insurance Program flood-hazard map? Yes
3. Is the project site within a potential flood inundation area according to a flood hazard map? Yes
4. Is the project site within a potential subsidence hazard area according to a subsidence hazard map? Yes
5. Has the project site or nearby shoreline areas experienced shoreline erosion? Yes

Discussion

The site is located in Flood Zone X, an area outside the 500-year floodplain.
MANAGING DEVELOPMENT

Objective: Improve the development review process, communication and public participation in the management of coastal resources and hazards.

Policies

1) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;

2) Facilitate timely processing of application for development permits and resolve overlapping or conflicting permit requirements; and

3) Communicate the potential short- and long-range impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Check either "Yes" or "No" for each of the following questions.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Will the proposed activity require more than two (2) permits or approvals.</td>
<td>X</td>
</tr>
<tr>
<td>2. Does the proposed activity conform with the State and County land use designations for the site?</td>
<td>X</td>
</tr>
<tr>
<td>3. Has or will the public be notified of the proposed activity?</td>
<td>X</td>
</tr>
<tr>
<td>4. Has a draft or final environmental impact statement or an environmental assessment been prepared?</td>
<td>X</td>
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</tbody>
</table>

Discussion

1. In addition to obtaining building and grading permits from the City and County, the Contractor must obtain a Community Noise Control Permit from the State Department of Health.

2. The project is within the State Urban boundary, is designated for residential use on the Koolau Poko Development Plan Land Use Map, and is zoned R-7.5 Residential District. Exemptions from the Koolau Poko Development Plan Land Use Map to permit medium density apartment development on a site designated for single-family residential use; and the Land Use Ordinance to allow multi-family development in a residential district, as well as exemptions to parking, building
height and setback requirements will be requested under the provisions of Chapter 201E-210, Hawaii Revised Statutes.

4. Environmental Assessment is being prepared at this time.
FEDERAL CONSISTENCY
SUPPLEMENTAL INFORMATION FORM

Project/Activity Title or Description: Kanesha Elderly Housing Project

Island Oahu Tax Map Key No. 1-4-5-50: 32 Est. Start Date: ______

APPLICANT OR AGENT

Name & Title Rae Gas, Planner
Agency/Organization Department of Housing and Community Development
Telephone 527-5088
Address 650 South King Street, 5th Floor, Honolulu, HI Zip 96813

TYPE OF APPLICATION (check one only)

[ ] I. Federal Activity
   (statement "a")
   "The proposed activity is consistent with and will be conducted in a manner consistent to the maximum extent practicable with the Hawaii Coastal Zone Management Program."

   Signature ___________________________ Date ____________

[ ] II. Permit or License
   (statement "b")
   "The proposed activity complies with Hawaii's Coastal Zone Management Program and will be conducted in a manner consistent with such a program."

   Signature ___________________________ Date 4-27-95

[ ] III. OCS Plan/Permit

[XX] IV. Grants and Assistance
AGENCY RESPONSE

APPENDIX A
# AGENCY RESPONSE

**Date of Response**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Date</th>
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<tbody>
<tr>
<td>Federal</td>
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<tr>
<td>U.S. Department of Housing and Urban Development</td>
<td>3/1/95</td>
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<tr>
<td>U.S. Army Corps of Engineers</td>
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<td>U.S. Department of the Interior, Fish and Wildlife Service</td>
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<td>U.S. Soil Conservation Services</td>
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<td>State</td>
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<td>Department of Education</td>
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<td>Department of Business, Economic Development and Tourism</td>
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<td>Office of State Planning, Governor's Office</td>
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<td>Department of Health</td>
<td>7/14/95, 12/14/91</td>
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<td>Department of Natural Resources, Historic Preservation Division</td>
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<td>Department of Transportation</td>
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<td>Department of Agriculture</td>
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<td>Housing Finance and Development Corporation</td>
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<td>Hawaii Housing Authority</td>
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<tr>
<td>University of Hawaii Environmental Center</td>
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<td>Office of Environmental Quality Control</td>
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<td>Land Use Commission</td>
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<td>Department of Human Services</td>
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<td>Department of Parks and Recreation</td>
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<td>Kaneohe Neighborhood Board No. 3</td>
<td>4/18/95</td>
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<tr>
<td>Senator Mike McCartney</td>
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<td>Councilmember Steve Holmes</td>
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<tr>
<td>Kaneohe Business Group</td>
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<tr>
<td>State Representative Devon Nekoba</td>
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<tr>
<td>Koolau Senior Hui</td>
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<tr>
<td>Kaneohe Seniors</td>
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<tr>
<td>Kokua Council for Senior Citizens</td>
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</tbody>
</table>
March 1, 1995

Mr. Ronald S. Lim
Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Lim:

SUBJECT: Environmental Assessment
Kaneohe Elderly Housing Project
Tax Map Key: 4-5-50: 39

This responds to your transmittal dated February 3, 1995, regarding the proposed action that 70 to 90 rental units for the elderly on a 1.5 acre site in Kaneohe. We understand that the project will include management offices, a multi-purpose community room, open space and parking.

We have reviewed this project and submit the following comments that should be considered if HUD programs or assistance is contemplated:

1. A full Environmental Impact Statement (EIS) would not be required by the Department of Housing and Urban Development (HUD).

2. The State Historic Preservation Officer must be consulted and given an opportunity to comment on the potential effect the proposed action may have on historic properties per 36 CFR Part 800.

3. Noise generated by vehicular traffic on Kamehameha Highway should be evaluated for compliance with 24 CFR Part 51 Subpart B; Noise Abatement and Control.

4. The design of residential units should be consistent with 24 CFR Part 8: Nondiscrimination Based on Handicap in Federally Assisted Programs and Activities of the Department of Housing and Urban Development (HUD) and the Uniform Federal Accessibility Standards.
If you have any questions, please do not hesitate to call Frank Johnson at (808) 522-8180.

Very sincerely yours

Chin Wing Chun

Patty A. Nicholas
Director
Community Planning and Development Division
DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96768-0440

February 14, 1995

Planning Division

Mr. Ronald S. Lim, Director
City and County of Honolulu
Department of Housing and Community Development
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Thank you for the opportunity to review and comment on the Environmental Assessment Preparation Notice for the Kaneohe Elderly Housing Project, Kaneohe, Oahu (TMK 4-5-50: 39). 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. Based on the information provided, a DA permit will not be required.

b. According to the enclosed Federal Emergency Management Agency's Flood Insurance Rate Map, panel number 150001 0090B, dated September 28, 1990, the project site is located in Zone X (unshaded; areas determined to be outside of the 50-year flood plain).

Sincerely,

Ray H. Jyo, P.E.
Director of Engineering

Enclosure
February 22, 1995

Mr. Ronald S. Lim, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

SUBJECT: Environmental Assessment
Kanoehe Elderly Housing Project
Tax Map Key: 4-5-50: 32

We have reviewed the subject development and have determined that the proposed 70-90 rental units for the elderly will have no impact on the schools in the area.

Thank you for the opportunity to comment.

Sincerely,

Herman M. Aizawa, Ph.D.
Superintendent

cc: A. Suga
    R. Hiraishi
February 10, 1995

Mr. Ronald S. Lim
Director
Department of Housing and Community Development
City & County of Honolulu
830 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Environmental Assessment
Kaneohe Elderly Housing Project

The Department of Business, Economic Development & Tourism has no comments to offer on the project. We defer to other appropriate State agencies on the environmental assessment of the Kaneohe Elderly Housing Project.

Sincerely,

Shelley M. Mark
Senior Advisor
July 13, 1995

Mr. Ronald S. Lim
Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Hawaii Coastal Zone Management (CZM) Program Federal Consistency for the Kaneohe Elderly Housing Project (FC/87-014 & 15)

Your proposal to acquire land and develop 70 to 90 elderly rental units in Kaneohe under the Community Development Block Grant (CDBG) and HOME Program has been reviewed for consistency with Hawaii’s CZM Program. We find that the project meets the criteria established in the CZM general consistency previously granted for the U.S. Department of Housing and Urban Development (HUD) CDBG and Housing Programs. Therefore, we have no objections to the proposed project. We will notify HUD of this CZM consistency approval.

CZM consistency approval is not an endorsement of the project nor does it convey approval with any other regulations administered by any State or County agency. Thank you for your cooperation in complying with Hawaii’s CZM Program. If you have any questions, please call our CZM office at 587-2878.

Sincerely,

[Signature]

Gregory G.Y. Pai, Ph.D.
Director

cc: U.S. Dept. of Housing and Urban Development, Honolulu Office
Department of Land Utilization, City & County of Honolulu
Mr. Ronald S. Lim, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Environmental Assessment
Kaneohe Elderly Housing Project
45-705 Kamalama Road
Kaneohe, Hawaii
TMK: 4-5-50: 39

The subject project is located below the Underground Injection Control (UIC) Line, in the No Pass Zone and in the critical wastewater disposal area. It has also been determined that the subject project is located within the County sewer service system. As the area is sewered, we have no objections to the proposed elderly housing project provided that the project is connected to the public sewers.

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

Should you have any questions, please contact Ms. Lori Kajiwara of the Wastewater Branch at 566-4294.

Sincerely,

[Signature]
LAWRENCE MIKE
Director of Health

C: WWB
December 14, 1991

TO: Those Persons Requesting Comments on Land Use Documents

FROM: June Harrigan-Lum, Manager
Environmental Planning Office

SUBJECT: Temporary Discontinuance of Land Use Reviews

Because of the lack of funds and resources this year, we are not able to hire someone to coordinate our 1995 legislative activities. As a result, we are using one of our existing staff members to do this work on a full time basis during the legislative session.

The legislative coordinator selected, Mr. Art Bauckham, is also the person who was coordinating the land use reviews and responses. Therefore, starting on January 1, and continuing until May 1, 1995, the Environmental Planning Office (EPO) will not be accepting any land use documents for coordinated replies.

If you would like staff in a specific branch or office (for instance, the Wastewater Branch) to comment on your proposal, you are welcome to contact the staff directly. A list of the Branch/Office names are attached for your reference. If you have already sent a copy of the document to the EPO, and you wish to have us send it to a specific branch, you may call 586-4337 and ask the clerical staff to send it to the appropriate branch. Please describe the document and the date of your cover letter.

Remember, on May 1, 1995 we will again start preparing coordinated responses throughout the Environmental Health Administration.

Thank you for your cooperation and patience in this matter.

Ref: Environmental Assessment
Kamehia Elderly Housing Project
TMK: 4-5-50; 39
### Branches and Offices in the Environmental Health Administration

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<tr>
<th>Office</th>
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<tr>
<td>Hazard Evaluation and Emergency Response</td>
<td>586-4249</td>
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<td>Environmental Planning Office</td>
<td>586-4337</td>
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<td>Clean Air Branch</td>
<td>586-4200</td>
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<td>Clean Water Branch</td>
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<td>Safe Drinking Water Branch</td>
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<td>Office of Solid Waste Mgt.</td>
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<td>Hazardous Waste Branch</td>
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<td>Wastewater Branch</td>
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<td>Food and Drug Branch</td>
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<td>Vector Control Branch</td>
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Ref: LM:NV/pmr

Ronald S. Lim
Director
City and County of Honolulu
Department of Housing and Community Development
650 South King Street, 5th floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Environmental Assessment, Kaneohe Elderly Housing Project, Tax Map Key: 4-5-50-39

Thank you for your letter dated February 3, 1995, received by us February 9, 1995 regarding the Department of Housing and Community Development’s proposal to utilize Community Development Block Grant and Home Funds for the purpose of developing rental housing (project) unit in the Kaneohe area.

We understand that the Elderly Housing Project will include 70 to 90 rental units and will have a multi-purpose community room and open space and also parking facilities.

The Department of Land and Natural Resources, Land Management Division (DLNR/LMD) Oahu District has no objection to the proposed use of development funds or the development of the Elderly Housing Project. We find that the project has no significant or detrimental impact to State-owned land managed by DLNR/LMD which are either near or surrounding the proposed Kaneohe Elderly Housing site. However, we do request that the following agencies be notified of the proposed action for their review for purposes that the Development may affect economical, existing infrastructures and environment of the area:

Department of Health
Local Neighborhood Board
State Department of Transportation
DLNR Water Commission
DLNR Historic Preservation
City and County Wastewater Management
City and County Board of Water Supply
City and County Police Department (Response)
City and County Fire Department (Response)
Please forward to us the complete copy of the Environment Assessment prior to its OEQC publication.

Should you have any questions, please contact Nicholas Vaccaro, Oahu Land Agent, at 587-0433.

Aloha,

[Signature]

Michael D. Wilson

cc: Mr. C. Hatsumoto
     Mr. M. Nakoba
     Mr. W.M. Young
February 17, 1995

Mr. Ronald S. Lim, Director
Department of Housing and
Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

SUBJECT: Environmental Assessment (EA):
Kane‘ohe Elderly Housing Project
Kane‘ohe, Ko‘olaupoko, O‘ahu

Thank you for the opportunity to review this project which proposes development of housing for the elderly on a 65,856 sq. ft. site located in Kane‘ohe, O‘ahu. A review of our records shows that there are no known historic sites at this parcel. Aerial photographs taken in the late 1970s, indicate that this parcel has been previously cleared and developed making it unlikely that historic would be found on this parcel. Therefore, we believe that this action will have "no effect" on historic sites.

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 the Historic Preservation Division must be contacted at 587-0047.

Sincerely yours,

DON HIBBARD, Administrator
Historic Preservation Division

EJ:amk
Mr. Ronald S. Lim, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Pre-Environmental Assessment Consultation, Kanesha Elderly Housing Project, Oahu

THK: 4-5-50: 39

The proposed elderly housing project will not adversely impact our State highway facilities.

Very truly yours,

KAZU HAYASHIDA
Director of Transportation
February 27, 1995

Mr. Ronald S. Lim
Director
Department of Housing and Community Development
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Re: Environmental Assessment for Kaneohe Elderly Housing Project

Thank you for the opportunity to provide input on the preparation of the environmental assessment for the subject project.

We are generally supportive of your efforts to increase affordable rental housing opportunities for the elderly. Please keep us apprised of your efforts.

Sincerely,

ROY S. OSHIRO
Acting Executive Director
The Honorable Ronald S. Lim  
Director  
Department of Housing and Community Development  
City and County of Honolulu  
650 South King Street, 5th Floor  
Honolulu, Hawaii 96813  

Attn: Rae Gee  

Subject: Environmental Assessment, Kaneohe Elderly Housing Project, TMK 4-5-50: 39  

Dear Mr. Lim:  

We have received your letter dated February 3, 1995, regarding a planned environmental assessment for the above project.  

The Hawaii Housing Authority (HHA) generally supports the development of affordable rental housing because it will increase housing opportunities for the people of the City and County of Honolulu. Accordingly, HHA supports this elderly housing project in Kaneohe.  

Should you have any questions please contact Bob Young, Chief Planner at 832-6015 or Wayne Nakamoto, Project Coordinator at 832-5920.  

Sincerely,  

MITSUO SHITO  
Executive Director
March 3, 1995

Mr. Ronald S. Lim
Director
Department of Housing and
Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Environmental Assessment for the Kaneohe Elderly Housing Project

We have reviewed your letter dated February 3, 1995 together with the attached fact sheet and location map, received on March 2, 1995, and confirm that the project site as shown on the location map is located within the State Land Use Urban District.

We have no other comments to offer at this time.

Should you have any questions, please feel free to call me or Kathy Yonamine of our office at 587-3822.

Sincerely,

[Signature]

ESTHER UEDA
Executive Officer

EU:KY:th
Mr. Ronald S. Lim  
Dept. of Housing and Community Development  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Lim:

Subject: Environmental Assessment  
Kaneohe Elderly Housing Project  
Tax Map Key: 4-5-50: .39

Thank you for the opportunity to review this document. We have no comments to offer at this time.

Sincerely,

Susan M. Chandler, M.S.W., Ph.D.  
Director

AN EQUAL OPPORTUNITY AGENCY
MEMORANDUM

TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: CHERYL D. SOON, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KANEHOE
ELDERLY HOUSING PROJECT. TAK MAP KEY: 4-5-30: 39

In response to your department's request of February 3, 1995, we have reviewed the subject project and have the following comments to offer:

1. We confirm that the subject site is designated for Residential use on the Koolaupoko Development Plan Land Use Map.

2. There are no publicly funded nor privately funded improvements designated in the general vicinity on the Koolaupoko Development Plan Public Facilities Map.

3. We have no objections to the proposed elderly housing project provided that facilities and utilities are adequate.

Should you have any questions, please contact Matthew Higashida of our staff at 527-6056.

CHERYL D. SOON
Chief Planning Officer

CDS:ft
MEMORANDUM

TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: CHARLES O. SWANSON, DIRECTOR

SUBJECT: Kaneohe Elderly Housing Project
Environmental Assessment Preparation

This is in response to your memorandum dated February 3, 1995 requesting our comments on the subject project.

We have the following traffic concerns:

1. The off-street parking requirements should be in accordance with the Land Use Ordinance.

2. The driveway should be designed wide enough to accommodate two-way traffic comfortably.

3. The landscaping at the entrance to the driveway should be the type that will not obstruct visibility to vehicles and pedestrians.

4. Address the need for off-site roadway improvements, as required, to support this development.

Should you have any questions, please contact Wayne Nakamoto of my staff at local 4190.
MEMO TO: DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT

FROM: RANDALL K. FUJIKI
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: ENVIRONMENTAL ASSESSMENT
KANEHOE ELDERLY HOUSING PROJECT
TMK: 4-5-50;39

In response to your February 3, 1995 request, we have received the description of the subject project and have no comments to offer.

RANDALL K. FUJIKI
Director and Building Superintendent

cc: G. Tamashiro
MEMORANDUM:

TO:  RONALD S. LIN, ACTING DIRECTOR
      DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: KENNETH E. SPRAGUE
      ACTING DIRECTOR AND CHIEF ENGINEER

SUBJECT: ENVIRONMENTAL ASSESSMENT (EA)
          KANEHOE ELDERLY HOUSING PROJECT
          TAX MAP KEY: 4-5-50: 39

we have reviewed the subject EA and have the following comments:

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

2. Frontage improvements should be constructed in accordance with City standards as well as the Americans with Disabilities Act Accessibility Guidelines.

3. Adequate on-site parking should be provided for residents and guests.

4. A two-way 20-ft wide minimum standard drop curb driveway or two 12-ft wide driveway for ingress and egress is required.

5. Implement best management practices (BMPs) to minimize storm water runoff during and after construction.

should you have any questions, please contact Mr. Alex Ho, Environmental Engineer, at Local 4150.
June 7, 1995

TO: MR. RONALD LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

VIA: MR. FELIX B. LIMTIACO, DIRECTOR
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: STEPHEN CHING, ACTING CHIEF
DIVISION OF PLANNING AND SERVICE CONTROL

SUBJECT: KANEHOE ELDERLY HOUSING
45-705 KANEHARMA HIGHWAY
TAX MAP KEY: 4-5-050-039

This confirms my recent telephone discussion with Ms. Rae Gee of your office.

The wastewater system constraints affecting this project have not changed. As indicated before, the constraints are:

Kailua Effluent Pump Station Inadequacy

Improvements are scheduled to be completed December 1996.

8-Inch Sewer Line Inadequacy (1,340 feet)
Between Waiawa Street and Pua Makahala Street

No improvements are scheduled.

10-Inch Sewer Line Inadequacy (1,640 feet)
on Hilina Street and Wena Street

No improvements are scheduled.

If there are any questions, you may call me at Local 5037.

STEPHEN CHING
Acting Chief
MEMORANDUM

TO: MR. RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: FELIX B. LIMTIACO, DIRECTOR
DEPARTMENT OF WASTEWATER MANAGEMENT

SUBJECT: KAMEOHE ELDERLY HOUSING PROJECT, TKM 4-1-50129

We have reviewed the fact sheet and concluded that our sewer system can support this project if various sewer lines are relieved of their current inadequacy. Also, the time of connection must be coordinated with the completion of our Kailua Effluent Pump Station Modification Project. This project is scheduled to be completed in early 1997.

The local sewer lines that need to be improved are the 8-inch sewer on easement located between Waiai Street and Pua Makahala Street and Lanipola Place (1,340 feet) and the 10-inch sewer on Hilina Street and Nana Street (1,640 feet). These lines would have to be relieved before the project can proceed.

If you have any questions, please contact Ms. Tessa Yuan of the Division of Planning and Service Control at 527-6732.
DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
450 SOUTH KING STREET
HONOLULU, HAWAII 96813

February 17, 1995

TO: RONALD LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: DONA L. HANAIKE, DIRECTOR

SUBJECT: ENVIRONMENTAL ASSESSMENT
KANEHOE ELDERLY HOUSING PROJECT
TAX MAP KEY 4-5-50: 39

We have reviewed the preliminary information for the
above-described project and make the following comments.

A street planting plan will need to be submitted to our
department for review and comment.

The proposed project will need to comply with the City’s Park
Dedication Ordinance No. 4621.

If there are any questions, please contact Lester Lei of our
Advance Planning Branch at extension 4696.

For DONA L. HANAIKE
Director

DLH:si
July 28, 1995

Mr. Roland D. Libby, Jr.,
Department of Housing and Development
Community Development
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Libby:

Subject: Your Letter of July 13, 1995 Regarding the Proposed Preliminary Environmental Assessment for the Kanahe Elderly Housing Project,

Thank you for your letter regarding the proposed Elderly Housing Project.

The existing water supply cannot provide adequate fire protection for the proposed Elderly Housing project. The nearest fire hydrant is located approximately 300 linear feet (l.f.) away and can only provide a flow of 1,100 gallons per minute (gpm). Our standards require a fire hydrant to be located within 125 l.f. of the site and provide a flow of 1,500 gpm for low rise developments and 2,000 gpm for high rise developments. The developer will be required to install the necessary water system improvements to provide fire protection in accordance with our water system standards. The construction drawings should be submitted for our review and approval.

The availability of water for the Elderly Housing Project will be confirmed when the building permit is submitted for our review and approval. If the development plan requires action by the Department of Land Utilization, the plan should be approved by that department before we take action on the proposed development. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resources development, transmission, and daily storage.

If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Joseph Kaakua at 327-6123.

Very truly yours,

RAYMOND H. SATO
Manager and Chief Engineer

Pure Water... man’s greatest need - use it wisely
TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: RAYMOND H. SATO, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: YOUR LETTER OF FEBRUARY 3, 1995 ON THE ENVIRONMENTAL ASSESSMENT (EA) FOR THE PROPOSED KANEHOE ELDERLY HOUSING PROJECT, KANEHOE, OAHU, HAWAII. TMK: 4-5-50: 39

March 9, 1995

Thank you for the opportunity to review and comment on the EA for the proposed Kaneohe Elderly Housing project. We have the following comments to offer:

1. There were five existing water meters serving the subject property which were ordered-off. Water services must be ordered-on within five years of the ordered-off dates to receive the water system facilities charge credit.

2. The existing water system is presently inadequate to accommodate the proposed Elderly Housing project.

3. The fire protection in the vicinity of the proposed project does not meet the requirements of our water system standards. The nearest fire hydrant is located approximately 300 linear feet (l.f.) away and can only provide a flow of 1,100 gallons per minute (gpm). Our standards require a fire hydrant to be located within 125 l.f. of the site and provide a flow of 1,500 gpm for low rise developments of three stories or less or 2,000 gpm for high rise developments. The developer will be required to install the necessary water system improvements to provide fire protection in accordance with our water system standards.

4. The construction drawings should be submitted for our review and approval.

5. The availability of water will be confirmed when the building permit application is submitted for our review and approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Pure Water... man's greatest need - use it wisely
6. If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.

7. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

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

If you have any questions, please contact Barry Usagawa at 527-5235.
February 24, 1995

TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: RAYMOND H. SATO, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: YOUR LETTER OF FEBRUARY 3, 1995 ON THE ENVIRONMENTAL ASSESSMENT (EA) FOR THE KANEHOE ELDERLY HOUSING PROJECT, TMG: 4-5-50: 39

We are still evaluating the EA for the proposed project and will complete our review by March 2, 1995.

If you have any questions, please contact Barry Usagawa at 527-5235.
February 14, 1995

TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: RICHARD R. SETO-MOOK, ACTING FIRE CHIEF

SUBJECT: ENVIRONMENTAL ASSESSMENT
KANEHOE ELDERLY HOUSING PROJECT
TAX MAP KEY: 4-5-50: 39

We have reviewed the application for the above subject. Fire protection services provided from Kaneohe and Aikahi engine companies with ladder service from Kaneohe are adequate. We have no objections to the proposed project.

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

Thank you for the opportunity to comment on the project.

Should you have any questions, please call Assistant Chief Attilio Leonardi of our Administrative Services Bureau at 831-7775.

Richard R. Seto-Mook
Acting Fire Chief

A KL: ny
TO: RONALD S. LIM, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

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

SUBJECT: ENVIRONMENTAL ASSESSMENT
KANEOHE ELDERLY HOUSING PROJECT
TAX MAP KEY: 4-5-501 32

February 15, 1995

This is in response to your memorandum of February 3, 1995, requesting for comments on a proposed elderly housing project in Kaneohe.

This project should have no significant impact on the operations of the Honolulu Police Department.

Thank you for the opportunity to comment.

MICHAEL S. NAKAMURA
Chief of Police

 By
EUGENE UEMURA, Assistant Chief
Administrative Bureau
To:       Ronald S. Lim, Director  
          Department of Housing and Community Development

From:   Salvatore S. Lanzilotti, Ed.D., Director  
         Department of Human Resources

Subject: Kaneohe Elderly Housing Project

February 15, 1985

Thank you very much for the opportunity to review and comment on the proposed housing project to be constructed in Kaneohe.

Our Information and Referral Rural Team Supervisor, Mr. Tony Baccay, made an on-site assessment of the proposed location (see attached). The site appears to be a good choice as it is conveniently located near many services and amenities.

We would like to know, however, if the building would have a room large enough to house a group dining program such as was built in the Lani Hull Senior Housing. Currently, there is a meals program at the Kaneohe Community Park at 45-529 Keahalalo Road but this site is shared with a senior club and this sharing has historically created some problems. A more neutral site closer to transportation services and more accessible due to the level site, may be a better location for services. A room to house a meals program of about 70-75 participants would require about 1,000 square feet.

We would appreciate a response to the possibility raised. Please contact Mrs. Karen Miyake at 523-4362. Thank you.
The proposed site for the new elderly housing project is in a residential area next to an apartment complex, single family homes, and St. Mark's Church and school. It is located along Kamehameha Highway approximately 300 yards from Likelike Highway and Kaneohe Bay Drive. The site is on level ground, unlike the apartment next door which has a steep incline just to get to the main road. Although the site is located on a main thoroughfare, the traffic did not seem too congested during the mid-morning hours and is far enough away from a major intersection to cause any noisy situation.

Transportation seems to be very convenient. Given that the senior is able to ride the bus, there are 3 bus lines one is able to ride - 55, 56, and 77 (depending on which direction and destination one is going). Bus number 56 is able to take the senior to the Kaneohe Senior Center on Puohala Road, just about 0.7 mile from the project. Directly across the street is a bus stop that will take the senior in the direction of Kailua or Kaneohe Bay Drive or Likelike Highway. About 100 yards from the project is a bus stop that will take the senior in the direction of Windward Mall.

Conveniences are abundant in this location. At the intersection of Kamehameha Highway, Likelike Highway and Kaneohe Bay Drive is the Windward City Shopping Center. The Center has many restaurants including Kentucky Fried Chicken, McDonald's, Burger King and Fiamingo's; Banks; Payless Drugs; Ross; Foodland; 7-11 and other amenities. All of the above are within walking distance of the site. Other stores and markets are located in the direction of Windward Mall, which is approximately one mile away.

Security and safety are major factors. Although the location is at a major thoroughfare, it seems relatively safe. The neighborhood is neat and clean and the residents take pride in their property. Should trouble or emergencies occur, the police station and fire department are only 0.5 miles away and could respond to a call within minutes.

Government offices are located nearby. The Kaneohe Satellite City Hall and U.S. Post Office are only a mile away. There are many doctors' offices in the vicinity. The Hawaii State Hospital and the Windward Public Health Nurses office are about 2 miles away. Castle Medical Center is about 4.5 miles in the direction of Kailua.

There are many activities to be found around this area. McDonald's has daily bingo games. The seniors can either go to the Windward City Shopping Center or Windward Mall to play bingo. Just about 0.7 miles from the proposed site is the Kaneohe Senior Center which a senior could reach by riding bus number 26. At $5.00 annually, a senior is able to join the club and take advantage of daily activities held at the center. Activities include: ceramics; guitar/ukulele lessons; hula, Japanese and other
ethnic dance lessons; arts and crafts; and many other activities to keep active. This 5-day a week Center also has health maintenance programs with the Honolulu Gerontology Program on Tuesdays and Thursdays. This exercise group is available for frail elders able to participate in therapeutic exercises. For the more active, Tai Chi classes are available. Group Dining is available at the Kaneohe District Park about 2 miles away.

Overall, the seniors who will reside in the project will have many resources available to them. They will not have to travel a great distance to shop for food or other amenities. It's comforting to know that the police and fire departments are less than 5 minutes away in case of emergencies and even more comforting knowing that medical facilities and public health nurses are nearby. Daily activities are at the seniors' disposal as long as they are able and willing to travel the 0.7 mile to the Kaneohe Community Center, or travel 2 miles in the other direction to participate in group dining at the Kaneohe Community Park.
February 8, 1995

TO:       RONALD S. LIM, DIRECTOR
            DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

VIA:      RAE GEE

FROM:     RUSSELL W. MIYAKE, DIRECTOR
            DEPARTMENT OF FINANCE

SUBJECT:  ENVIRONMENT ASSESSMENT
            KANEHOE ELDERLY HOUSING PROJECT
            TAX MAP KEY:  4-5-50:  39

In response to your February 3, 1995 memorandum on the above subject, please be advised that the Department of Finance does not have any comment to make on the Kanehoе Elderly Housing Project.

If you have any question on this response, please contact Victor Guillermo, Deputy Director of Finance at extension 4841.

[Signature]
RUSSELL W. MIYAKE
Director of Finance

RWM:df
April 18, 1995

Mr. Ronald S. Lim
Director
Department of Housing and Community Development
650 South King Street, 5th Floor
Honolulu, Hawaii  96813

Dear Mr. Lim:

Subject: Environmental Assessment
Kaneohe Elderly Housing Project
Tax Map Key: 4-5-50: 39

Several members of the Kaneohe Neighborhood Board #30 have participated in the site selection process and dissemination of information regarding land use, funding and the proposed construction of 70 to 90 affordable rental units for the elderly in Kaneohe over the past several months.

The Housing Department presented project information at the Kaneohe Neighborhood Meeting on August 18, 1994. The Board did not pass a formal motion at that meeting, however, the Planning Committee Report recommended that the project be supported in concept. This report is part of the approved board minutes.

Subsequent elderly housing community committee meetings have included discussions regarding facility access for elderly; i.e., shopping, medical facilities and recreation. Specific to the site were concerns about possible traffic impact as vehicles turned into the facility from Kamehameha Highway or were departing the selected site. Kamehameha Highway is a divided roadway at this location. Residents and guests of this facility will wish to initiate u-turns to gain access to their desired direction on the highway.
April 18, 1995
Kaneohe Elderly Housing

April 1995 discussions focused on the conceptual design, amenities, sewage capacity with existing infrastructure, height and density of the structure. Concerns of the immediate neighbors to the project, included the restriction of trade-winds and air circulation, barriers or fences between properties, project density, covered parking stalls and security.

Thank you for this opportunity to comment on the project.

Sincerely,

Elaine Murphy
Chair
The Senate
The Eighteenth Legislature
of the
State of Hawaii
STATE CAPITOL
HONOLULU, HAWAII 96813

March 15, 1995

Ronald S. Lim, Director
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, HI 96813

DEPT. OF HOUSING & COMM. DEVELOPMENT:

In Re: Kaneohe Elderly Housing Project

Dear Mr. Lim:

This letter is in response for further input on the design suggestions of the Kaneohe Elderly Housing Project on the Kanehameha Highway site.

I do not have any further input to add to the current site selection or design suggestions at this time. I would appreciate that the project design fit into the architectural skyline of Kaneohe.

Please keep my office informed as to when the next advisory committee meeting will be held.

Sincerely,

Mike McCartney
State Senator
23rd Senatorial District
March 13, 1995

Mr. Ronald S. Lim
Director
Department of Housing
and Community Development
HMB
650 S. King St., 5th Floor
Honolulu, HI 96813

Dear Mr. Lim,

Thank you for providing me an opportunity to provide comments regarding the proposed Kane‘ohe Elderly Housing project. I have been involved with this worthwhile project since its inception and at the present time I have no further comments to make regarding an Environmental Assessment.

Should you have any further questions regarding the Kane‘ohe Elderly Housing project, please call me or Andrew Ezer, my community aide, at 527-5814.

Sincerely,

STEVE HOLMES
Councilmember, District II

SH:ae
March 7, 1995

Kaneohe Elderly Housing Project
Phone: 527-5088 (Rae)  
FAX: 527-5498

re: Community Advisory Meeting of Feb. 13, 1995

Having heard testimony (including the evaluation criteria) concerning the various sites being considered for the Elderly Housing Project in Kaneohe, the Kaneohe Business Group, at this point in time, favors the Kamahameha Site owned by Pacific Atlas.

It appears to be the best site in terms of availability, close proximity to other services, accessible to public transportation, and feasible to build in the near future.

We hope this project moves forward.

Sincerely,

[Signature]

Jania Y Chua
NOISE STUDY

APPENDIX B
NOISE STUDY
FOR THE
KANEHOE ELDERLY HOUSING PROJECT
KANEHOE, OAHU, HAWAII

Prepared for:
THE TRAFFIC MANAGEMENT CONSULTANT

Prepared by:
Y. EBISU & ASSOCIATES
1126 12th Avenue, Room 305
Honolulu, Hawaii 96816

JULY 1995
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CHAPTER I. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed Kaneohe Elderly Housing Project on the windward side of Oahu were evaluated for their potential impacts and their relationship to current FHA/HUD (Federal Housing Administration/Housing and Urban Development) noise standards. The traffic noise level increases along the primary access roadways to the project site were calculated. These roadways were: Kamehameha Highway; Likiliki Highway; and Kaneohe Bay Drive. Following project build-out by calendar year (CY) 1997, increases in traffic noise of 0.1 Ldn (Day-Night Average Sound Level) units are predicted to occur as a result of project plus non-project traffic. By CY 2005, increases in traffic noise of 0.4 Ldn units are predicted to occur, primarily as a result of non-project traffic.

Project traffic should not cause any noticeable increase in traffic noise or adverse traffic noise impacts along the roadways servicing the project. The forecasted increases in traffic noise levels by CY 1997 and CY 2005 are considered to be insignificant, will be difficult to measure, and are not expected to generate adverse noise impacts.

It should be possible to locate the project's living units as proposed and meet the 65 Ldn FHA/HUD noise standard. Predicted noise levels at all of the planned living units of the project are expected to be less than 65 Ldn by CY 1997 and through CY 2005. Because of this, adverse impacts from traffic noise are not anticipated at the proposed project dwelling units in the future, and special noise mitigation measures are not required.

Unavoidable, but temporary, noise impacts may occur during the construction of the proposed project, particularly during the excavation and pile driving activities on the project site. Because construction activities are predicted to be audible within the project and at adjoining properties, the quality of the acoustic environment may be degraded to unacceptable levels during pa-
riods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment and the implementation of the State Department of Health construction noise permit procedures are recommended as mitigation measures.
CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future traffic noise environment in the environs of the proposed Kaneohe Elderly Housing Project on the windward side of the island of Oahu. Traffic noise level increases and impacts associated with the proposed development were to be determined within the project site as well as along the public roadways expected to service the project traffic. A specific objective was to determine future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases. Assessments of possible future impacts from short term construction noise at the project site were also included as noise study objectives. Recommendations for minimizing identified noise impacts were also to be provided as required.
CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies (such as FHA/HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the Ldn descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the Ldn descriptor. A more complete list of noise descriptors is provided in APPENDIX B to this report.

TABLE 1, derived from Reference 1, presents current federal noise standards and acceptability criteria for residential land uses. Land use compatibility guidelines for various levels of environmental noise as measured by the Ldn descriptor system are shown in FIGURE 1. As a general rule, noise levels of 55 Ldn or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, Ldn levels generally range from 55 to 65 Ldn, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 Ldn, and as high as 75 Ldn when the roadway is a high speed freeway. In the project area, traffic noise levels are greater than 65 Ldn along the project property line fronting Kamehameha Highway due to the moderately high volume of traffic along Kamehameha Highway. At the interior (seaward) sections of the project site, traffic noise levels are less than 65 Ldn.

For the purposes of determining noise acceptability for funding assistance from federal agencies (HUD/FHA and VA), an exterior noise level of 65 Ldn or lower is considered acceptable. This standard is applied nationally (Reference 2), including Hawaii. Because of our open-living conditions, the predominant use of nat-
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<thead>
<tr>
<th>NOISE EXPOSURE CLASS</th>
<th>DAY–NIGHT SOUND LEVEL</th>
<th>EQUIVALENT SOUND LEVEL</th>
<th>FEDERAL (1) STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Exposure</td>
<td>Not Exceeding 55 Ldn</td>
<td>Not Exceeding 55 Leq</td>
<td>Unconditionally Acceptable</td>
</tr>
<tr>
<td>Moderate Exposure</td>
<td>Above 55 Ldn But Not Above 65 Ldn</td>
<td>Above 55 Leq But Not Above 65 Leq</td>
<td>Acceptable(2)</td>
</tr>
<tr>
<td>Significant Exposure</td>
<td>Above 65 Ldn But Not Above 75 Ldn</td>
<td>Above 65 Leq But Not Above 75 Leq</td>
<td>Normally Unacceptable</td>
</tr>
<tr>
<td>Severe Exposure</td>
<td>Above 75 Ldn</td>
<td>Above 75 Leq</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

Notes: (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation.

(2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours. The noise mitigation threshold used by FHWA for residences is 67 Leq.
<table>
<thead>
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<th>LAND USE</th>
<th>YEARLY DAY-NIGHT AVERAGE SOUND LEVEL IN DECIBELS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Residential – Single Family, Extensive Outdoor Use</td>
<td></td>
</tr>
<tr>
<td>Residential – Multiple Family, Moderate Outdoor Use</td>
<td></td>
</tr>
<tr>
<td>Residential – Multi-Story Limited Outdoor Use</td>
<td></td>
</tr>
<tr>
<td>Transient Lodging</td>
<td></td>
</tr>
<tr>
<td>School Classrooms, Libraries, Religious Facilities</td>
<td></td>
</tr>
<tr>
<td>Hospitals, Clinics, Nursing Homes, Health Related Facilities</td>
<td></td>
</tr>
<tr>
<td>Auditoriums, Concert Halls</td>
<td></td>
</tr>
<tr>
<td>Music Studios</td>
<td></td>
</tr>
<tr>
<td>Sports Arenas, Outdoor Spectator Sports</td>
<td></td>
</tr>
<tr>
<td>Neighborhood Parks</td>
<td></td>
</tr>
<tr>
<td>Playgrounds, Golf Courses, Riding Stables, Water Rec., Cemeteries</td>
<td></td>
</tr>
<tr>
<td>Office Buildings, Personal Services, Business and Professional</td>
<td></td>
</tr>
<tr>
<td>Commercial – Retail, Movie Theaters, Restaurants</td>
<td></td>
</tr>
<tr>
<td>Commercial – Wholesale, Some Retail, Inc., Mfg., Utilities</td>
<td></td>
</tr>
<tr>
<td>Livestock Farming, Animal Breeding</td>
<td></td>
</tr>
<tr>
<td>Agriculture (Except Livestock)</td>
<td></td>
</tr>
<tr>
<td>Extensive Natural Wildlife and Recreation Areas</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- Compatible
- With Insulation per Section A.3
- Marginally Compatible
- Incompatible

LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVEL AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED (Source: American National Standards Institute S12.40–1990)

FIGURE 1
tions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 Ldn does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 3, a lower level of 55 Ldn is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise. However, after considering the cost and feasibility of applying the lower level of 55 Ldn, government agencies such as FHA/HUD and VA have selected 65 Ldn as a more appropriate regulatory standard.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 Ldn are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 Ldn.

On the island of Oahu, the State Department of Health (DOH) regulates noise from construction activities, through the issuance of permits for allowing excessive noise during limited time periods. State DOH noise regulations are expressed in maximum allowable property line noise limits rather than Ldn (see Reference 4). Although they are not directly comparable to noise criteria expressed in Ldn, State DOH noise limits for residential, commercial, and industrial lands equate to approximately 55, 60, and 76 Ldn, respectively.

It should be noted that the noise compatibility guidelines and relationships to the Ldn noise descriptor may not be applicable to impulsive noise sources such as pile drivers. The use of penalty factors (such as adding 10 dB to measured sound levels or the use of C-Weighting filters) have been proposed. However, the relationships between levels of impulsive noise sources and land use compatibility have not been as firmly established as have the relationships for non-impulsive sources. The State DOH limits for impulsive sounds which exceed 120 impulses in any 20 minute period are 10 dB above the limits for non-impulsive sounds. If impulsive
sounds do not exceed 120 impulses in any 20 minute time period, there are no regulatory limits on their sound levels under the State DOH regulations.
CHAPTER IV. GENERAL STUDY METHODOLOGY

Existing traffic noise levels were measured at five locations in the project environs to provide a basis for developing the project's traffic noise contributions along the roadways which will service the proposed development, and to determine the minimum setback distances from Kamahameha Highway which are required to not exceed the FHWA/HEU noise standard of 65 Ldn at future dwelling units on the project site. The locations of the noise measurement sites are shown in FIGURE 2. Noise measurements were performed during the month of July 1995. The results of the traffic noise measurements were compared with calculations of existing traffic noise levels to validate the computer model used.

Traffic noise calculations for the existing conditions as well as noise predictions for the Year 2005 were performed using the Federal Highway Administration (FHWA) Noise Prediction Model (Reference 3). Traffic data entered into the noise prediction model were: hourly traffic volumes, average vehicle speeds, estimates of traffic mix; and soft ground propagation loss factor. The traffic assignments for the project (Reference 6), plus Hawaii State Department of Transportation traffic counts at the intersection of Kamahameha Highway and Likelike Highway (Reference 7) were the primary sources of data inputs to the model. For existing and future traffic on Kamahameha Highway, it was assumed that the average noise levels, or Leq(h), during the PM peak hour were 1.0 dB less than the 24-hour Ldn along the highway. This assumption was based on computations of both the hourly Leq and the 24-hour Ldn of traffic noise along Kamahameha Highway near the project site (see FIGURE 3).

Traffic noise calculations for both the existing and future conditions in the project environs were developed for ground level and elevated receptors with and without the benefit of shielding effects. Traffic noise levels were calculated for future conditions with and without the proposed elderly housing project. The
FIGURE 3
HOURLY VARIATIONS OF TRAFFIC NOISE AT 100 FT SETBACK DISTANCE FROM THE CENTERLINE OF KAMEHAMEHA HIGHWAY AT LIKELIKE HIGHWAY (SEPTEMBER 20–21, 1993)

TIME OF DAY (HOURS)

0300 0600 0900 1200 1500 1800 2100 2400

HOURLY EQUIVALENT NOISE LEVEL (dBA)

50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

□ 100 FT from Roadway Centerline (55.5 Ldn)
forecasted changes in traffic noise levels over existing levels were calculated for both future scenarios, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned dwellings. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed. Potential noise impacts from pile driving operations were also discussed, and mitigation measures recommended.
CHAPTER V. EXISTING NOISE ENVIRONMENT

The traffic noise measurement results are summarized in Table 2, with measurement locations shown in Figure 1. At measurement Locations "A" and "B" thru "D", a microphone elevated 16 ft above the ground was used to compare traffic noise at the higher elevation (to simulate a mid-rise apartment) with traffic noise at ground level conditions at Location "A1". From these measurements at Locations "A1" thru "D", the difference in noise levels between ground level and elevated receptor locations was estimated to be 5 dB.

The existing traffic noise levels at ground level locations on the project site and within 100 ft from the centerline of Kamehameha Highway are in the "Significant Exposure, Normally Unacceptable" category. Beyond 100 ft from the centerline, ground level locations on the project site are in the "Moderate Exposure, Acceptable" category at 55 to 65 Ldn. At ground level, the FHA/HUD standard of 65 Ldn is not exceeded at the proposed elderly housing units due to adequate setbacks from Kamehameha Highway.

At mid-rise receptor elevations (15 to 30 ft) on the project site, existing traffic noise levels exceed 65 Ldn at 165 ft setback distance from the centerline of Kamehameha Highway. Adequate setbacks have also been provided for the mid-rise units so as to not encroach into the existing 65 Ldn traffic noise contour for mid-rise receptors.

Existing aircraft noise levels resulting from operations at Kaneohe Marine Corps Air Station are less than 55 Ldn on the project site (Reference 8). As such, traffic noise, and not aircraft noise, is the major noise source on the project site which could exceed the FHA/HUD standard of 65 Ldn.
# TABLE 2

## RESULTS OF NOISE MEASUREMENTS

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<tr>
<th>LOCATION</th>
<th>Time of Day (HRS)</th>
<th>Ave. Speed (MPH)</th>
<th>--- Hourly Traffic Volume ---</th>
<th>Measured Leq (dB)</th>
</tr>
</thead>
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<tr>
<td>A2. 75 FT from the Center-line of Kamehameha Hwy. (7/21/95)</td>
<td>1523 TO 1608</td>
<td>40</td>
<td>2,781 AUTO 16 M.TRUCK 39 H.TRUCK</td>
<td>66.5</td>
</tr>
<tr>
<td>A2. 75 FT from the Center-line of Kamehameha Hwy. (7/21/95)</td>
<td>1609 TO 1709</td>
<td>40</td>
<td>2,935 AUTO 5 M.TRUCK 27 H.TRUCK</td>
<td>66.3</td>
</tr>
<tr>
<td>A1. 75 FT from the Center-line of Kamehameha Hwy. (7/20/95)</td>
<td>1555 TO 1600</td>
<td>40</td>
<td>2,935 AUTO 5 M.TRUCK 27 H.TRUCK</td>
<td>63.2* 68.1**</td>
</tr>
<tr>
<td>B. 125 FT from the Center-line of Kamehameha Hwy. (7/20/95)</td>
<td>1549 TO 1554</td>
<td>40</td>
<td>2,935 AUTO 5 M.TRUCK 27 H.TRUCK</td>
<td>64.4* 63.9**</td>
</tr>
<tr>
<td>C. 200 FT from the Center-line of Kamehameha Hwy. (7/20/95)</td>
<td>1532 TO 1547</td>
<td>40</td>
<td>2,935 AUTO 5 M.TRUCK 27 H.TRUCK</td>
<td>63.5* 57.6**</td>
</tr>
<tr>
<td>D. 300 FT from the Center-line of Kamehameha Hwy. (7/20/95)</td>
<td>1512 TO 1527</td>
<td>40</td>
<td>2,935 AUTO 5 M.TRUCK 27 H.TRUCK</td>
<td>62.9* 55.6**</td>
</tr>
</tbody>
</table>

**Notes:**

* Measurement microphone located 5 FT above ground level at LOCATION A1.
** Measurement microphone located 16 FT above ground level.
CHAPTER VI. FUTURE TRAFFIC NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for both CY 1997 and CY 2005 with and without the proposed project. The future projections of project and non-project traffic noise levels on the roadways which would service the project indicate that very small (0.4 dB or less) increases in traffic noise levels are expected in CY 1997 and CY 2005 with or without the project. These predictions assume that average vehicle speeds and traffic mixes will not change from current conditions. These forecasted increases in traffic noise levels are not significant and will be difficult to measure. For this reason, adverse traffic noise impacts resulting from project-related traffic are not expected to occur.

Future traffic noise levels along Kamahameha Highway fronting the project site are expected to increase by 0.4 Ldn by CY 2005, primarily as a result of non-project traffic. The future distances to the 65 Ldn traffic noise contours are predicted to be 106 FT and 175 FT from the centerline of Kamahameha Highway for ground level and mid-rise receptors, respectively, by CY 2005. The proposed dwelling units of the project are located beyond 175 FT setback distance from the centerline of Kamahameha Highway, so future traffic noise levels should not exceed the 65 Ldn FHA/HUD noise standard. All of the proposed dwelling units should be clear (or outside) the CY 2005 65 Ldn traffic noise contour, and should be in the "Moderate Exposure, Acceptable" category with traffic noise levels less than 65 Ldn.
CHAPTER VII. DISCUSSION OF PROJECT RELATED NOISE IMPACTS AND POSSIBLE MITIGATION MEASURES

Traffic Noise. Project traffic should not cause adverse traffic noise impacts along the access roadways to the project site, due to the very small increases (less than 0.1 Ldn) in traffic noise levels attributable to project traffic. For this reason, traffic noise mitigation measures should not be required along these roadways.

Traffic noise levels at the project's proposed dwelling units under the original concept study dated 3/30/95 are not expected to exceed the 65 Ldn FHA/HUD standard by CY 2005. The necessity for special sound attenuation measures can be avoided if all dwelling units of the project remain beyond 175 FT from the centerline of Kahalama Highway.

Aircraft Noise. Aircraft noise over the project site is not expected to exceed 65 Ldn in the foreseeable future, and will probably remain at levels below 55 Ldn as indicated by the 1990 AICUZ for Kaneohe Marine Corps Air Station. For these reasons, special aircraft noise mitigation measures are not required.

General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction is unknown, but it is anticipated that the actual work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. Typical levels of exterior noise from construction activity (excluding pile driving activity) are shown in FIGURE 4. The impulsive noise levels of impact pile drivers are approximately 15 dB higher than the levels shown in FIGURE 4, while the intermittent noise levels of vibratory pile drivers are at the
CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 4
upper end of the noise level ranges depicted in the figure. Typical levels of construction noise inside naturally ventilated and air conditioned structures are approximately 10 and 20 dB less, respectively, than the levels shown in FIGURE 4. The existing residential and apartment units on the neighboring properties surrounding the project site are predicted to experience the highest noise levels during construction activities due to their close proximity to the construction site. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 ft distance), and due to the exterior nature of the work (pile driving, grading and earth moving, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable on the island of Oahu (Reference 4), is another noise mitigation measure which is normally applied to construction activities, primarily to minimize construction noise impacts on residences. TABLE 3 depicts the allowed hours of construction for normal construction noise (levels which do not exceed 95 dB at the project's property line) and for construction noise which exceeds 95 dB at the project's property line. Noisy construction activities are not allowed on holidays, Saturdays, Sundays, during the early morning, and during the late evening periods under the DOH permit procedures.

Parking Lot and Other On-Site Sources. The parking lots,
TABLE 3
AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

a. DOH PERMIT FOR NOISE EMISSIONS ≤95 dBA.

<table>
<thead>
<tr>
<th>Wkdy</th>
<th>Sat/Sun</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Permit</td>
<td>55.0</td>
<td>11/0</td>
</tr>
</tbody>
</table>

b. DOH PERMIT FOR NOISE EMISSIONS >95 dBA.

<table>
<thead>
<tr>
<th>Wkdy</th>
<th>Sat/Sun</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Permit</td>
<td>42.5</td>
<td>0/0</td>
</tr>
</tbody>
</table>
Community Room, and Mechanical Equipment Room are expected to be separated from the project dwelling units by buffer space and the project structures. This vertical or horizontal separation should be adequate to minimize potential noise conflicts at the dwelling units of the project. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled though the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a mitigation measure.

Mechanical equipment, such as air conditioning chillers or cooling towers, exhaust fans, and garage ventilation fans are the primary on-site noise sources which may be located on the project site. This equipment, singly or together, has the potential of exceeding the allowable property line noise limits of the State DOH noise regulations (Reference 4). The State DOH noise limits which apply along the boundaries of adjacent residential properties are 55 dB and 45 dB during the daytime and nighttime periods, respectively. Typical noise levels of untreated mechanical equipment can be significantly higher (by at least 10 dB) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment may be required for compliance with DOH regulations. Compliance with the DOH noise limits should minimize risks of adverse noise impacts on neighboring properties and within the project area.
APPENDIX A. REFERENCES

(1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.


(3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.

(4) "Title 11, Administrative Rules, Chapter 43, Community Noise Control for Oahu;" Hawaii State Department of Health; November 6, 1981.


(7) September 20–21, 1993, 24-Hour Traffic Counts: Station 31, Kamahana Highway at Kaneohe Bay Drive and Likelike Highway; Hawaii State Department of Transportation, Highways Division.

(8) 1990 Air Installations Compatible Use Zones (AICUZ) Map for Marine Corps Air Station, Kaneohe Bay, Oahu.
APPENDIX B
EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than A-weighting and measurements other than sound pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E, ...). If no weighting network is specified, A-weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the A-weighting be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the non-A. For example, a report on blast noise might wish to contrast the LGAH with the LGAH.

Although not included in the table, it is also recommended that "Lpm" and "Lpm" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq is designated the equivalent sound level. For Leq, Ldn, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, DBN, and DLB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB, Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., dec). Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NI) and "Population Weighted Loss of Hearing" (PWL) shall be used consistent with CHAB Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).
APPENDIX B (CONTINUED)

TABLE I

A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

<table>
<thead>
<tr>
<th>TERM</th>
<th>SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A-Weighted Sound Level</td>
<td>$L_A$</td>
</tr>
<tr>
<td>2. A-Weighted Sound Power Level</td>
<td>$L_{WA}$</td>
</tr>
<tr>
<td>3. Maximum A-Weighted Sound Level</td>
<td>$L_{\text{max}}$</td>
</tr>
<tr>
<td>4. Peak A-Weighted Sound Level</td>
<td>$L_{\text{Apk}}$</td>
</tr>
<tr>
<td>5. Level Exceeded x% of the Time</td>
<td>$L_x$</td>
</tr>
<tr>
<td>6. Equivalent Sound Level</td>
<td>$L_{\text{eq}}$</td>
</tr>
<tr>
<td>7. Equivalent Sound Level over Time (T) (1)</td>
<td>$L_{\text{eq}(T)}$</td>
</tr>
<tr>
<td>8. Day Sound Level</td>
<td>$L_d$</td>
</tr>
<tr>
<td>9. Night Sound Level</td>
<td>$L_n$</td>
</tr>
<tr>
<td>10. Day-Night Sound Level</td>
<td>$L_{dn}$</td>
</tr>
<tr>
<td>11. Yearly Day-Night Sound Level</td>
<td>$L_{dn(Y)}$</td>
</tr>
<tr>
<td>12. Sound Exposure Level</td>
<td>$L_{SE}$</td>
</tr>
</tbody>
</table>

(1) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is $L_{\text{eq}(T)}$). Time may be specified in non-quantitative terms (e.g., could be specified a $L_{\text{eq}(WASH)}$ to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78, NOISE REGULATION REPORTER.
### APPENDIX B (CONTINUED)

#### TABLE II
**RECOMMENDED DESCRIPTOR LIST**

<table>
<thead>
<tr>
<th>TERM</th>
<th>A-WEIGHTING</th>
<th>ALTERNATIVE(1)</th>
<th>OTHER(2)</th>
<th>UNWEIGHTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sound (Pressure) Level</td>
<td>$L_A$</td>
<td>$L_{pA}$</td>
<td>$L_B$, $L_{pB}$</td>
<td>$L_p$</td>
</tr>
<tr>
<td>2. Sound Power Level</td>
<td>$L_{WA}$</td>
<td>$L_{WB}$</td>
<td>$L_W$</td>
<td></td>
</tr>
<tr>
<td>3. Max. Sound Level</td>
<td>$L_{\text{max}}$</td>
<td>$L_{\text{Amax}}$</td>
<td>$L_{\text{Bmax}}$, $L_{\text{pmax}}$</td>
<td></td>
</tr>
<tr>
<td>4. Peak Sound (Pressure) Level</td>
<td>$L_{Apk}$</td>
<td>$L_{Bpk}$</td>
<td>$L_{pk}$</td>
<td></td>
</tr>
<tr>
<td>5. Level Exceeded x% of the time</td>
<td>$L_x$</td>
<td>$L_{Ax}$</td>
<td>$L_{Bx}$</td>
<td>$L_{px}$</td>
</tr>
<tr>
<td>6. Equivalent Sound Level</td>
<td>$L_{eq}$</td>
<td>$L_{Aeq}$</td>
<td>$L_{Beq}$</td>
<td>$L_{peq}$</td>
</tr>
<tr>
<td>7. Equivalent Sound Level Over Time</td>
<td>$L_{eq(T)}$</td>
<td>$L_{Aeq(T)}$</td>
<td>$L_{Beq(T)}$</td>
<td>$L_{peq(T)}$</td>
</tr>
<tr>
<td>8. Day Sound Level</td>
<td>$L_d$</td>
<td>$L_{Ad}$</td>
<td>$L_{Bd}$</td>
<td>$L_{pd}$</td>
</tr>
<tr>
<td>9. Night Sound Level</td>
<td>$L_n$</td>
<td>$L_{An}$</td>
<td>$L_{Bn}$</td>
<td>$L_{pn}$</td>
</tr>
<tr>
<td>10. Day-Night Sound Level</td>
<td>$L_{dn}$</td>
<td>$L_{Adn}$</td>
<td>$L_{Bdn}$</td>
<td>$L_{pdn}$</td>
</tr>
<tr>
<td>11. Yearly Day-Night Sound Level</td>
<td>$L_{dn(Y)}$</td>
<td>$L_{Adn(Y)}$</td>
<td>$L_{Bdn(Y)}$</td>
<td>$L_{pdn(Y)}$</td>
</tr>
<tr>
<td>12. Sound Exposure Level</td>
<td>$L_S$</td>
<td>$L_{SA}$</td>
<td>$L_{SB}$</td>
<td>$L_{Sp}$</td>
</tr>
<tr>
<td>13. Energy Average value over (non-time domain) set of observations</td>
<td>$L_{eq(e)}$</td>
<td>$L_{Aeq(e)}$</td>
<td>$L_{Beq(e)}$</td>
<td>$L_{peq(e)}$</td>
</tr>
<tr>
<td>14. Level exceeded x% of the total set of (non-time domain) observations</td>
<td>$L_x(e)$</td>
<td>$L_{Ax(e)}$</td>
<td>$L_{Bx(e)}$</td>
<td>$L_{px(e)}$</td>
</tr>
<tr>
<td>15. Average $L_x$ value</td>
<td>$L_x$</td>
<td>$L_{Ax}$</td>
<td>$L_{Bx}$</td>
<td>$L_{px}$</td>
</tr>
</tbody>
</table>

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E-...weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is $L_{eq(T)}$). Time may be specified in non-quantitative terms (e.g., could be specified as $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine.

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August 23, 1995

Mr. Randall S. Okaneke, P.E.
The Traffic Management Consultant
1188 Bishop Street, Suite 1907
Honolulu, Hawaii 96813

Subject: Kaneohe Elderly Housing Project
Air Quality Impact Assessment (Rev. 1)

Dear Mr. Okaneke:

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

Existing Conditions

Air quality in the vicinity of the proposed project is currently mostly affected by emissions from motor vehicles. Distant industrial, agricultural and/or natural sources of air pollution may also affect the air quality of the site on occasion. The state Department of Health operates a network of air quality monitoring stations located at various sites around Oahu and elsewhere in the state. On Oahu, concentrations of particulate matter are monitored at Barbers Point, Pearl City, Liliha and Waimanalo. Sulfur dioxide is monitored at Barbers Point and in downtown Honolulu, while carbon monoxide is monitored at Waikiki and in downtown Honolulu. Ozone is measured at Sand Island, and lead is monitored at Liliha and in downtown Honolulu. Based on data from these stations, it appears likely that both state and national ambient air quality standards are currently being met in the project area except possibly for occasional exceedances of the more stringent state standards pertaining to ambient ozone and carbon monoxide concentrations.

Short-Term Impacts

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

The emission rate for fugitive dust emissions from construction activities is difficult to estimate accurately because of its elusive nature of emission and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The U.S. EPA has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50. Uncontrolled fugitive dust emissions in the project area would likely be somewhere near this level. In any case, State of Hawaii Air Pollution Control Regulations require that fugitive dust emissions be controlled to such an extent that any such emissions will not be visible at the property line. Thus, an effective dust control plan for the project construction phase is essential.

Adequate fugitive dust control of active construction areas can usually be accomplished by the establishment of a frequent watering program. In sensitive or dust-prone areas, limiting the area that can be disturbed at any given time and/or using wind screens may also be required. Wind erosion of inactive areas can be controlled by mulching or by the use of chemical soil stabilizers. Haul trucks tracking dirt onto paved streets from unpaved areas is often times a significant source of dust in construction areas. Some means to alleviate this problem, such as tire washing or road cleaning, may be appropriate. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting wind-erodible materials. Paving of parking areas and/or establishment of landscaping as early in the construction schedule as possible can also lower the potential for fugitive dust emissions.

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

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

Long-Term Impacts

After construction, long-term impacts on air quality from motor vehicle exhausts can potentially occur at or near any facility that attracts large volumes of vehicular traffic as a result of day-to-day operations and use. Public areas near traffic-congested intersections are the main problem. For this project, the proposed driveway intersection on Kamahameha Highway and Kamahameha Highway intersections with Kapalai Road and with Likikiki Highway are of most concern. Traffic projections indicate that this project will generate at most a net increase of only about 15 to 20 vehicles during peak traffic hours at each of these intersections. Based on our experience in assessing traffic-related air quality impacts, traffic volume increases of less than about 5 percent or about 100 vehicles per hour or traffic approach volumes of less than about 1000 vehicles per hour do not cause any significant impacts on air quality if adequate level-of-service is provided. Level-of-service estimates for intersections near the project indicate that traffic volumes currently are and will continue to be well within capacity with or without the project during peak traffic periods.

Based on the small predicted net change in peak-hour traffic volumes and the good level-of-service at nearby intersections forecast with or without the project, the proposed project should have no significant long-term impacts on maximum air pollution levels in the area. Although a detailed air quality modeling
study could be performed to predict project impacts, in this case such an analysis is unwarranted in our opinion.

Very truly yours,

Barry D. Neal
Certified Consulting Meteorologist
TRAFFIC IMPACT ANALYSIS REPORT

APPENDIX D
TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
KANEHOE ELDERLY HOUSING PROJECT

PREPARED FOR
DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT
CITY & COUNTY OF HONOLULU
AUGUST 24, 1995

PREPARED BY
THE TRAFFIC MANAGEMENT CONSULTANT
RANDALL S. OKANEKU, P.E., PRINCIPAL • 1180 BISHOP STREET, SUITE 1007 • HONOLULU, HAWAII 96813
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<td>Figure 8</td>
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TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
KANEHOE ELDERLY HOUSING PROJECT

I. Introduction

A. Purpose of Study

The purpose of this study is to identify and analyze the traffic impacts resulting from the development of an elderly housing project by the City and County of Honolulu Department of Housing and Community Development in Kaneohe, Oahu, Hawaii. This report presents the findings and recommendations of this study.

B. Scope of Study

The scope of this study includes:

1. Conducting a field investigation during the morning and afternoon peak periods of weekday traffic in the vicinity of the project to establish the existing conditions.

2. Evaluating existing roadway and traffic conditions.

3. Developing trip generation characteristics of the proposed project, using generally accepted techniques developed by the Institute of Transportation Engineers.

4. Estimating future traffic conditions and analyzing traffic operations without the proposed project.

5. Analyzing site-generated traffic superimposed over the projected traffic conditions.

6. Assessing the traffic impacts resulting from the site-generated traffic.

7. Recommending improvements that would mitigate the traffic impacts identified in this study.
II. Project Description

A. Location and Access

The proposed elderly housing project is located on the makai (east) side of Kamehameha Highway, north of its intersection with Likelike Highway/Kaneohe Bay Drive. The proposed project would be constructed on a 1.512 acre site, identified as Tax Map Key 1-4-5-50-39. Figure 1 depicts the project vicinity.

B. Land Use Intensity

The proposed housing project would consist of between 70 and 90 rental dwelling units for elderly residents. About 48 parking stalls are planned for the site. For the purpose of the traffic study, the development of 90 rental dwelling units is analyzed. The proposed project is expected to be fully built-out and occupied by late 1997. Primary access would be provided by a single driveway on Kamehameha Highway. Figure 2 illustrates the site plan.

III. Existing Conditions

A. Existing Land Uses

The property is currently undeveloped. A vacant, dilapated structure remains at the rear of the site. Surrounding land uses consist of single-family and low-rise apartment residential dwelling units. Commercial uses are located on Kamehameha Highway, south of the project site.

B. Site Accessability

1. Area Roadway System

Kamehameha Highway is a two-way, four-lane arterial highway in the vicinity of the project site. A wide landscaped median separates the northbound and southbound directions of traffic. U-turns are permitted at median breaks located to the north and to the south of the project site. Kamehameha Highway proceeds northward through Kaneohe Town and continues along the Windward coast and North Shore of Oahu. To the south, Kamehameha Highway terminates at Kalanianaole Highway/Pali Highway intersection. Kamehameha Highway is signalized at its intersection with Likelike Highway/Kaneohe Bay Drive.
Likely Highway is a four lane divided arterial highway, which provides access between Honolulu and Windward Oahu through the Wilson Tunnel. East of Kamehameha Highway, Likely Highway continues as Kaneohe Bay Drive.

2. Transit Service

The project vicinity is well served by public transit. TheBus routes run along Kamehameha Highway, including both local and express bus routes. HandiVan service is also available in the area.

C. Existing Traffic Volumes and Conditions

1. General

   a. Field Investigation

   A manual traffic count survey was conducted in May, 1995 during the peak periods of traffic from 6:00 AM to 8:30 AM and from 4:00 PM to 6:00 PM. The study area for this traffic impact analysis is defined along Kamehameha Highway, between Likely Highway/Kaneohe Bay Drive and a median break located immediately north of the project site. The traffic survey was conducted at the intersections of Kamehameha Highway and Likely Highway/Kaneohe Bay Drive, Kamehameha Highway and Kapalai Road, and Kamehameha Highway, immediately north of the project site.

   b. Capacity Analysis Methodology

   The highway capacity analysis performed for this study is based upon procedures presented in the "Highway Capacity Manual" (HCM), Special Report 209, Transportation Research Board, as amended and the "Highway Capacity Software", Federal Highways Administration.

   Level of Service (LOS) is "defined as a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS such as: speed, delay, vehicle density, freedom to maneuver, traffic interruptions, driver comfort, and safety. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS
"D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition and LOS "F" is an unacceptable condition.

2. Existing AM Peak Hour Traffic

The AM peak hour of traffic generally occurs from 7:15 AM to 8:15 AM. During the AM peak hour, Kamehameha Highway carries approximately 2,600 vehicles per hour (vph), total for both directions. The intersection of Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive operates at an overall LOS "E" during the existing AM peak hour of traffic. All left turn movements at this intersection operate at LOS "F". The through movements in both directions on Kamehameha Highway and on mauka bound Kaneohe Bay Drive operate at LOS "E", during the AM peak hour.

Kapalai Road operates at LOS "E" at Kamehameha Highway. Figure 3 depicts the existing AM peak hour traffic and the results of the Level of Service analysis.

3. Existing PM Peak Hour Traffic

The PM peak hour of traffic generally occurs from 4:00 PM to 5:00 PM. Kamehameha Highway carries about 2,800 vph during the PM peak hour of traffic. The Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive intersection operates at LOS "E" during the PM peak hour of traffic. All left turn and through movements at this intersection operate at LOS "E", during the PM peak hour.

Kapalai Road continues to operate at LOS "E" during the PM peak hour of traffic. Figure 4 depicts the existing PM peak hour traffic and the results of the Level of Service analysis.

IV. Projected Traffic

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation", 5th Edition, 1991. The
Figure 3 - Existing AM Peak Hour Traffic
Figure 4 - Existing PM Peak Hour Traffic
ITE trip rates for an elderly housing project are developed by correlating the vehicle trip generation data with various land use characteristics, such as vehicle trips per dwelling unit.

2. Trip Generation Characteristics

The trip generation analysis is based upon a total of 90 elderly housing units. Because of the wide variation in trip generation rates for elderly housing developments, presented by ITE, a conservative approach is taken in this analysis by using the maximum peak hour trip rates in this analysis, thereby overstating potential traffic impacts.

The proposed elderly housing project is expected to generate a total of 24 vph during the AM peak hour of traffic, 12 vph entering the site and 12 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate 23 vph, 14 vph entering the site and 9 vph exiting the site. Table 1 summarizes the trip generation characteristics of the proposed elderly housing project.

<table>
<thead>
<tr>
<th>Table 1. Trip Generation Characteristics</th>
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<tr>
<td><strong>Unit Total = 90 Dwelling Units</strong></td>
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<tr>
<td><strong>ITE Trip Rate</strong></td>
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<tr>
<td><strong>Vehicle Trips</strong></td>
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<td><strong>Peak Hour of Adjacent Street Traffic</strong></td>
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B. External Traffic

Preliminary travel forecasts developed in the Oahu Regional Transportation Plan (ORTP) indicate that the increase in daily traffic across the Trans-Koolau corridor, which includes Likelike Highway and Pali Highway, is expected to increase at a rate of less than one percent per year to the Year 2020. The daily
traffic on the Likelye corridor, which includes Kahekili Highway and Kamehameha Highway, is expected increase at rate of just over one half of one percent per year to the Year 2020. Historical traffic count data, obtained from the State Department of Transportation, indicate that traffic on Kamehameha Highway has increased an average of less than one percent per year since 1989. For the purpose of this analysis, an annual growth rate of one percent per year is used to estimate the Year 1997 traffic conditions from the Base Year 1995.

C. Total Traffic Volumes Without Project

1. Year 1997 AM Peak Hour Traffic Without Project

The Year 1997 AM peak hour traffic operations, without the proposed project, are not significantly affected by the background growth in traffic. The AM peak hour traffic on Kamehameha Highway increases to about 2,700 vph by the Year 1997. The intersection of Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive continues to operate at an overall LOS "E" during the AM peak hour without project. Kapalai Road at Kamehameha Highway also continues to operate at LOS "E". Figure 5 depicts the Year 1997 AM peak hour traffic, without the proposed project, and the results of the Level of Service analysis.

2. Year 1997 PM Peak Hour Traffic Without Project

The Year 1997 PM peak hour traffic operations, without the proposed project, are not significantly affected by the background growth in traffic. By the Year 1997, the PM peak hour traffic on Kamehameha Highway increases to about 2,900 vph. The intersection of Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive continues to operate at an overall LOS "E". Kapalai Road at Kamehameha Highway also continues to operate at LOS "E" during the AM peak hour without project. Figure 6 depicts the Year 1997 PM peak hour traffic, without the proposed project, and the results of the Level of Service analysis, respectively.
Figure 6 - 1997 PM Peak Hour Traffic W/O Project
V. Traffic Impact Analysis

A. Traffic Impacts

1. General

The project access driveway is expected to be restricted to right-turn-in and right-turn-out movements only. The relatively low site traffic does not warrant an exclusive left turn lane on Kamehameha Highway. Motorists, entering the site from the north, must make a U-turn on Kamehameha Highway at Kapalai Road. Southbound motorists, exiting the site, must turn right onto Kamehameha Highway and make a U-turn at the existing median break located immediately to the north of the site.

2. Cumulative AM Peak Hour Traffic With Project

The traffic operations, within the study area, are not significantly affected by the increase in traffic generated by the proposed elderly housing development during the AM peak hour of traffic. The proposed project adds 24 vph during the AM peak hour traffic. Kapalai Road at Kamehameha Highway continues to operate at LOS "E" during the AM peak hour with project. The traffic operations at the intersection of Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive could be improved from overall LOS "E" conditions to LOS "D" conditions during AM peak hour of traffic by adjusting the traffic signal timing, more specifically by reducing the signal cycle length from about 180 seconds per cycle to 100 seconds per cycle. Figure 7 depicts the cumulative Year 1997 AM peak hour traffic with the proposed project. The results of the Level of Service analysis, shown on Figure 7, are based upon the adjusted traffic signal timing.

3. Cumulative PM Peak Hour Traffic With Project

The traffic operations are not significantly affected by the increase in traffic generated by the proposed elderly housing development during the PM peak hour of traffic. The proposed project increases PM peak hour traffic by 23 vph. Kapalai Road at Kamehameha Highway operates at LOS "E" during the PM peak hour with project. The traffic operations at the intersection of Kamehameha Highway and Likelike Highway/Kaneohe Bay Drive could be improved from overall LOS "E" conditions to LOS "D" conditions during PM peak hour of traffic by adjusting the traffic signal timing. Figure 8 depicts the
Figure 7 - Cumulative AM Peak Hour Traffic With Project
Figure 8 - Cumulative PM Peak Hour Traffic With Project
cumulative Year 1997 PM peak hour traffic with the proposed project, and the results of the Level of Service analysis, based upon the adjusted traffic signal timing.

B. Parking Impacts

The proposed 48 parking stalls are well in excess of the one stall per six dwelling units parking ratio successfully used in other City and County of Honolulu elderly housing projects.

VI. Conclusions

The proposed elderly housing project in Kaneohe is not considered a significant traffic generator. The proposed project would increase peak hour traffic on Kamehameha Highway by less than one percent during both the AM and PM peak hours of traffic. The existing Levels of Service of the intersections, within the study area, remain the same in the Year 1997 without the project, and are unaffected by site traffic, generated by the proposed project. The traffic impacts, resulting from the development of the elderly housing project, are not considered to be significant.
DRAFT ENVIRONMENT ASSESSMENT COMMENTS

APPENDIX E
MEMORANDUM

TO: ROLAND D. LIBBY, ACTING DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: CHERYL D. SOON, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

SUBJECT: KANEHOE ELDERLY HOUSING PROJECT DRAFT ENVIRONMENTAL ASSESSMENT. TAX MAP KEY: 4-5-50: 39

We have reviewed the subject Draft Environmental Assessment and do not have any comments beyond those in our previous memorandum of February 22, 1995, which has been included in APPENDIX A. We also concur with your determination that the proposed action will have no significant impact on the environment and an Environmental Impact Statement is not required.

Thank you for the opportunity to comment. Should you have any questions, please contact Matthew Higashida of our staff at 527-6056.

CHERYL D. SOON
Chief Planning Officer

CDS:js
MEMORANDUM

TO: ROLAND D. LIBBY, JR., ACTING DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: CHERYL D. SOON, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

SUBJECT: ACCEPTING AGENCY FOR ENVIRONMENTAL ASSESSMENTS

The Department of Housing and Community Development (DHCD) recently issued environmental assessments and published notices within the OEQC Bulletin for projects sponsored by the Department: The Hausten Street Elderly Housing Development, Chinatown Community Service Center, and Kanohe Elderly Housing Project. These notices designated the Planning Department as the Approving Agency for the Environmental Assessments.

According to OEQC rules, the DHCD should be the agency to issue a Notice of Determination for Environmental Assessments on these projects not the Planning Department.

The Planning Department and the Department of Land Utilization are designated as the accepting City agencies for Environmental Impact Statements (EISs) and Environmental Assessments (EAs) for the following:

Planning Department
- General and Development Plan Land Use Map changes;
- EISs prepared by other city agencies (except BWS);

Department of Land Utilization
- applicant actions associated with permit applications for development actions associated with historic sites and the Waikiki Special District; and
- changes within the shoreline areas.
Ms. Rae Gee, Urban Planner  
Department of Housing and Community Development  
Planning and Analysis Division  
650 South King Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Ms. Gee:

SUBJECT: 45-705 KAMEHAMEHA HIGHWAY SITE, TMK: 1-4-5-50:39

In response to your fax on August 28, 1995 requesting any information on the above-mentioned site, at the time we have no information on this site on both the Spill Reports Database and Comprehensive, Environmental Response, Compensation, and Liability Information System (CERCLIS).

Please be advised that the absence of information on reports of spills or releases does not absolve the owner from future clean up liabilities under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the Hawaii Environmental Response Law, as amended, or any other applicable state or federal regulations.

If you have any questions, please contact us at 586-4249.

Sincerely,

[Signature]

STEVE ARMANN  
Acting Manager
Mr. Roland D. Libby, Jr., Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Libby,

Subject: Draft Environmental Assessment for the Kaneohe Elderly Housing Project, Kaneohe

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

1. This project will be requesting exemptions from the Land Use Ordinance relating to building height, setbacks and parking requirements. How does this project compare to the existing standards in the Land Use Ordinance?

2. Residents of this project may experience difficulty in crossing Kamahameha Highway to access the bus stop on the mauka side of the highway. What mitigation measures are proposed to minimize this impact?

3. Analysis of "Unique Natural Features" is not included in this document. Please include this information in the final environmental assessment.

If you have any questions, please call Jeyan Thirugnanam at 586-4185. Mahalo.

Sincerely,

[Signature]
Gary Gill
Director
Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Response to Comments on the Draft Environmental Assessment for the Kaneohe Elderly Housing Project, Kaneohe, Oahu, Hawaii

We are responding to the following comments for the Draft Environmental Assessment for the Kaneohe Elderly Housing project. Many of the answers are stated in the draft environmental assessment and we are reiterating the answers for clarification.

Q1. This project will be requesting exemptions from the Land Use Ordinance (LUD) relating to building height, setbacks and parking requirements. How does this project compare to the existing standards in the LUD?

A1. The City will request exemptions from the LUD pursuant to Section 201E-210, Hawaii Revised Statutes, to permit A-2 Medium Density Apartment development with a 60-foot height limit on a site designated for R-7.5 single family residential use. The City will further require exemptions from A-2 development standards to allow the provision of 1 parking stall per 2.5 residential units instead of 1 stall per unit required under the LUD. Exemptions from A-2 height and yard setback requirements may also be requested. All Chapter 201E-210 exemptions are subject to the approval of the City Council.

Q2. Residents of this project may experience difficulty in crossing Kamehameha Highway to access the bus stop on the mauka side of the highway. What mitigation measures are proposed to minimize this impact?

A2: Seniors may utilize the crosswalks at the intersection of Waikalua Road and Kamehameha Highway where the Kaneohe Civic Center is located.

There are alternative transportation measures which the elderly tenants may access. The Catholic Services to the Elderly provides transportation...
by van to the elderly for no charge, however, coverage for such services must be under their medical care plan. The elderly tenants may also utilize the bus and the City's Handi Van services.

The State Department of Human Services provides medi-cab, however, the user's private insurance company must cover these services and a nominal fee is assessed to the user. Handicabs of the Pacific provides the elderly with wheelchair curbside service for $9.00 one-way.

Q3: Analysis of "Unique Natural Features" is not included in this document. Please include this information in the final environmental assessment.

A3: We have combined "Unique Natural Features" and "Vegetation and Animal Life" together in this document. There is only one existing dilapidated structure on the property and there are no unique natural features on the site. We do not have any other comments on this category to include at this time.

If you have any questions, please call Rae Gee at 527-5088.

Sincerely,

[Signature]

ROLAND D. LIBBY, JR.
Acting Director