BENJAMIN J. CAYETANO
GOVERNOR

SHARYN L. MIYASHIRO
ACTING EXECUTIVE DIRECTOR

ROBERT J. HALL
ACTING EXECUTIVE ASSISTANT

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
HOUSING AND COMMUNITY DEVELOPMENT CORPORATION OF HAWAII
677 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813
FAX (808) 587-0600

2001:FIN/370

February 13, 2001

'01 FEB 21 A11:48

OFC. OF ENVIRONMENTAL QUALITY CONTROL

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

RE: FINDING OF NO SIGNIFICANT IMPACT (FONSI)
Kaluanui Senior Apartments
TMK (1)3-9-08-46

The Housing and Community Development Corporation has reviewed the comments received during the 30-day public comment period which began on September 8, 2000. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the March 8, 2001 OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the final EA. Please call Lloyd Fukuoka at 587-0579 if you have any questions.

Sincerely,

Sharyn Miyashiro

SHARYN L. MIYASHIRO
Acting Executive Director

SLM:dp

Attachments:
1) Final Environmental Assessment (4 sets)
2) Completed Publication Form (ver. 6-98)
3) Disk containing project summary and publication form information

13

Final Environmental Assessment

2001-03-08-OA-FEA-

Kaluanui Senior Apartments

An Affordable Housing Project

Honolulu, Hawaii

Tax Map Key (1)3-9-08: Parcel 46

◆

◆

Accepting Agency

Housing and Community Development Corporation of Hawaii

◆

◆

Prepared For: Hawaii Intergenerational Community Development Association (HICDA)

Prepared By: Community 2010

◆

February 2001

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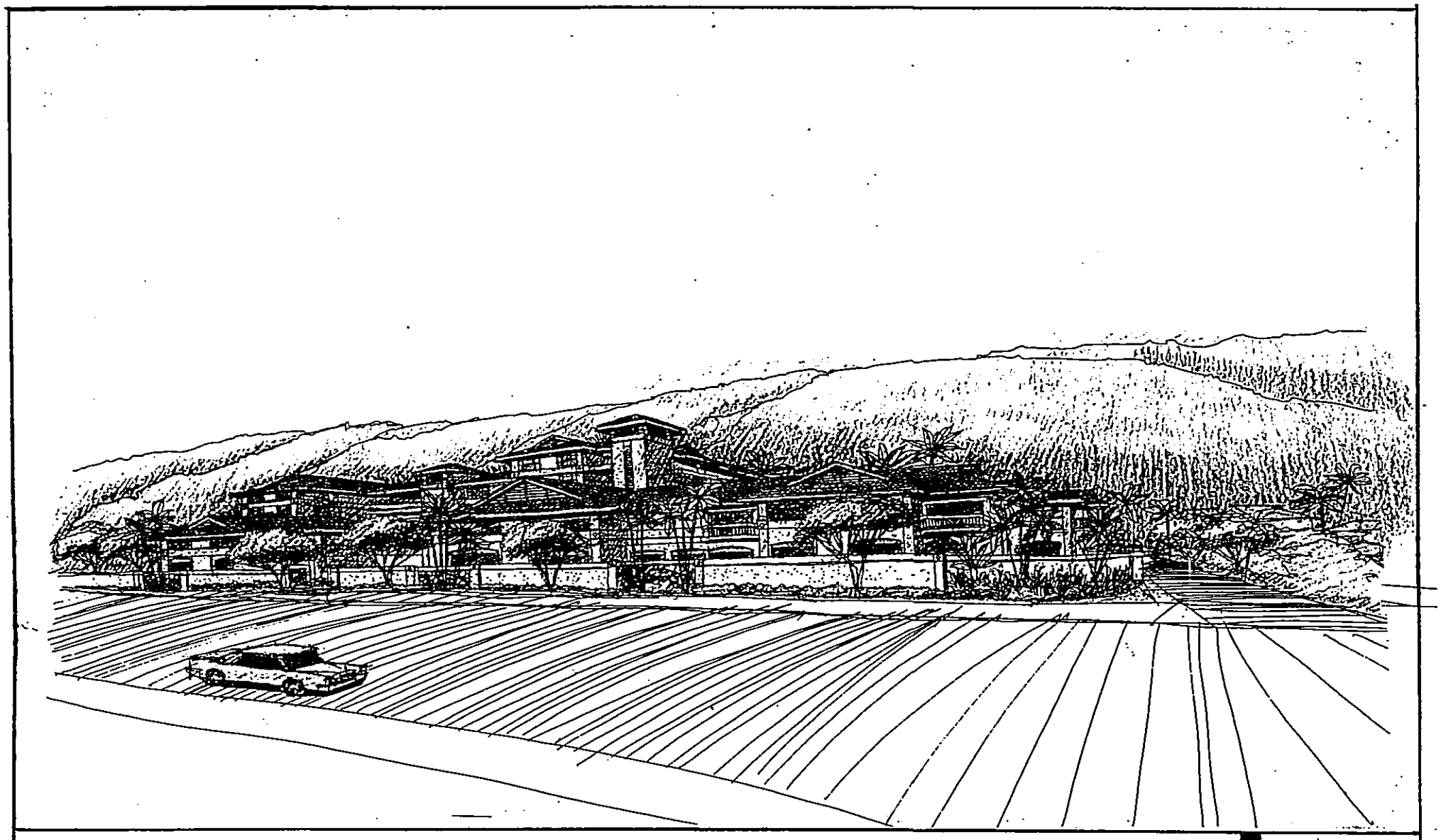


KALUANUI SENIOR APARTMENTS

AN AFFORDABLE SENIOR RESIDENTIAL DEVELOPMENT IN HAWAII KAI

miura & kuo

PREFACE

This Final Environmental Assessment (EA) is prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and the rules and regulations of the Office of Environmental Quality Control (OEQC). An application has been submitted to State of Hawaii, Housing and Community Development Corporation of Hawaii (HCDCH), for Rental Housing Trust Fund (RHTF) project award for the development of Phase I "Kaluanui Senior Apartments" consisting of 31 affordable rental units. If awarded, State of Hawaii funds would be used for construction and permanent financing of these units only. Consequently, the request for a project award from RHTF, which uses State funds, triggers this EA.

The proposed Phase I, "Kaluanui Senior Apartments", will be built on 29,606 Sq. Ft. or 0.680 acre of TMK: (1)3-9-08: parcel 46. One building would be built within these 31 one bedroom one bath and two bedroom one bath affordable apartment units. Each apartment would be approximately 504 square feet in size for a one bedroom and 598 square feet for a two bedroom. Each senior apartment would include one assigned parking stall along with four guest stalls for a total of 35 parking stalls. Rents for this apartment project will be rent restricted at or below 30% to 60% of the area median household income. All 31 apartment units will be constructed at one time with an anticipated construction starting date of March 2001 for Phase I.

The Kaluanui, Phase II will be built on 30,998 Sq. Ft. or 0.712 acre of TMK: (1)3-9-08: parcel 45. This phase will consist of one building with 35 one-bedroom and one-bath and two-bedroom and two-bath units. Each apartment would be approximately 599 square feet in size for a one-bedroom and 799 square feet for a two-bedroom. Each senior apartment would include one or two assigned parking stalls. Rents for this apartment project will be rent restricted at or below 100% of the area median household income. For sale units would be restricted between 115% to 120% of the area median household income. All 35 apartment units will be constructed at one time with an anticipated construction starting date of November 2001 for Phase II.

Phase I triggers the EA and Phase II is an affordable component that needs to be disclosed as part of this EA. Both Phase I and Phase II are part of a larger proposed 430 to 450 unit retirement community being built in Hawaii Kai. The retirement community is explained throughout this EA when its impacts relate to the topic disclosed.

SUMMARY SHEET

Applicant/ Developer:	Hawaii Intergenerational Community Development Association (HICDA) 1154 Fort St. Mall, Suite 412 Honolulu, HI 96813 Contact: Mike Allison/President Phone: 524-0552 or Direct 540-5913
Accepting Agency:	Housing and Community Development Corporation of Hawaii 677 Queen Street Suite 300 Honolulu, HI 96813 Contact: LLoyd Fukuoka Phone: 587-0567
EA Preparer:	Community 2010 1154 Fort Street, Suite 300 Honolulu, HI 96813 Contact: Mike Klein Phone: 371-2567
Tax Map Key:	(1)3-9-08: parcel 46
Location:	Hawaii Kai, Honolulu, Hawaii
Current Property Owner:	Hawaii Intergenerational Community Development Association
Area:	0.680 acres
Existing Land Use:	Vacant
State Land Use Classification:	Urban District
Development Plan Land Use Map:	Low & Medium Density Residential
Zoning:	A-2 with 150' Height Limit
Proposed Development Type:	Two-story (along Hawaii Kai Drive) & Four-story (in the back)
Number of Units:	Phase I, 31 Apartments Unit - Phase II, 35 Apartments & Condos Units

Type of Units:	Phase I	One Bedroom One Bath	504 Sq. Ft.
		Two Bedroom One Bath	598 Sq. Ft.
	Phase II	One Bedroom One Bath	599 Sq. Ft.
		One Bedroom Two Bath	799 Sq. Ft.

Anticipated Determination: Finding of No Significant Impact (FONSI)

Public Agencies, Private Companies & Residents Consulted in the Summary:

State of Hawaii
Department of Land and Natural Resources, State Historic Preservation Division
Department of Health, Office of Environmental Quality Control
Department of Education
Housing and Community Development Corporation of Hawaii
University of Hawaii, Environmental Center

City and County of Honolulu
Board of Water Supply
City Council, Councilmember John Henry Felix
Department of Planning and Permitting
Department of Transportation Services
Department of Parks and Recreation
Department of Public Works
Honolulu Police Department
Honolulu Fire Department
Neighborhood Board No. 1 (Hawaii Kai) c/o Neighborhood Board Commission

Private Companies, Agencies, or Residents of Hawaii Kai
American Savings Bank
Hawaii-American Water Company, Wastewater (sewer)
Hawaiian Electric Company, Inc.
Mr. Hawkins, Resident Mawaena Kai
Koko Head Seniors Club
Paradigm Senior Living
The Plaza Hawaii Kai Association
The Hawaii Kai Focus Group (several attended only one meeting)
- Shirley Asuega, President Lalea at Hawaii Kai Association
- David Baker, Hawaii Kai Neighborhood Board
- Roy Benham, President Kuapa Isle Association
- Dan Clement, Former City Council Member for Hawaii Kai
- Bob Fowler, Hawaii Kai Neighborhood Board
- Doug Frias, Hawaii Kai Neighborhood Board
- Katsumi Higa, Kamilonui Farmers Cooperative
- David Kennedy, Hawaii Kai Neighborhood Board

Alfred Kirchner, Hawaii Kai Neighborhood Board
John Kobayashi, President West Marina Association
Tom Ishii, President Mariner's Cove Association
Jaap Syderhoud, President Kealaula Kai Association
L.R. "Skip" Tracy, President Marine West Community Association
Lillie Wong, Kamilonui Farmers Cooperative

1. INTRODUCTION AND PROJECT DESCRIPTION

1.1 Introduction

Hawaii Intergenerational Community Development Association (HICDA), a Hawaii nonprofit and 501 (c) (3) corporation, proposes to construct Kaluanui Senior Apartments and Condominiums on vacant land that is master planned for a 430 to 450 senior retirement community in Hawaii Kai. The use of State funds for construction and permanent take-out financing for 31 senior apartments in Phase I of the proposed project triggers this Environmental Assessment. (Exhibit 1-1, Location Map, Exhibit 1-2, Zoning Map, and Exhibit 1-3, Overall Preliminary Concept Plan, Kaluanui 2 & 3)

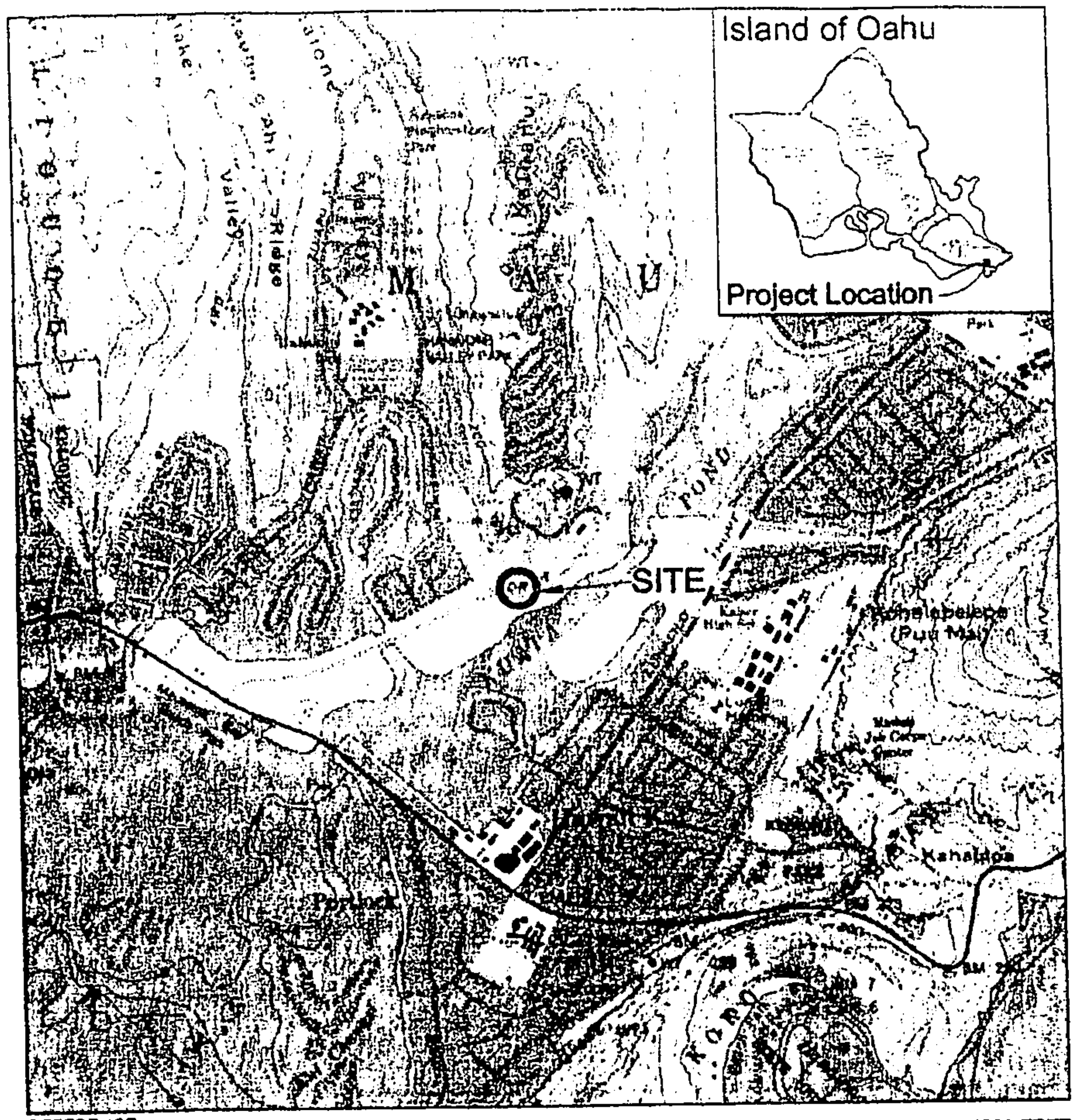
Phase I of Kaluanui Senior Apartments and Condominiums consists of 31 affordable rental units for persons age 62 years or older with incomes from 30% to 60% of the median income for the City and County of Honolulu. Access to the Phase I apartment complex will be provided by a driveway easement off of Hawaii Kai Drive. Construction of the Phase I apartment complex is anticipated to start in March 2001 with an estimated completion in November 2001.

Phase II of Kaluanui Senior Apartments and Condominium will consist of 35 units -- 8 rental apartment units and 27 for-sale condominium units. The Phase I units will be restricted to persons age 62 years or older for the rental units and 55 years or older for the for-sale condominium units. Construction of Phase II is anticipated to start in November 2001.

1.2 Project Description

The 31-unit senior rental apartment complex (Phase I of the Kaluanui Senior Apartment and Condominiums) has been preliminarily designed as part of a planned 430 and 450 unit senior retirement community. Other planned uses on the entire 13.859-acre parcel include the following: 35 senior apartment and condominium units in Phase II of the Kaluanui Senior Apartment and Condominiums; 115 assisted living units for frail seniors; 95 independent living apartment or condominiums; 40 to 51 independent living cottages; and 105 senior condominiums. Although the proposed development of Phase I triggers the EA, the larger retirement community will be addressed where applicable.

The Kaluanui, Phase I senior apartments consist of two and four-story concrete buildings with a stucco finish and monier tile or slate roofs. (Exhibit 1-7, Exterior Elevations, Phase I). Configured as flats, with all units designed on one floor, any apartment unit can be retrofitted for accessibility for persons with disabilities. Besides stairways, one elevator will service all of the upper units. (Exhibit 1-4, Site Plan Phase I; Exhibit 1-5, Site Plan Phase II). The Kaluanui, Phase I senior apartments will consist of 10 one-bedroom , one-bath units of approximately 504 square feet and 21 two-bedroom, two-bath units of approximately 598 square feet. Each unit features ceiling fans and window coverings or drapes. Kitchens will be equipped with a disposal, microwave oven and refrigerator. Lower apartment units will have a fenced in yard, while the upper two-bedroom units will have a balcony. All units will be able to accommodate an air conditioning unit that may be installed by the resident. There will be one laundry room within



REFERENCE:
Horizons Technology, Inc.
Sure Maps Raster
U.S.G.S. Topographic Map (1983)
Koko Head Quadrangle
Koko Head, Oahu, Hawaii

0 2000 4000 FEET

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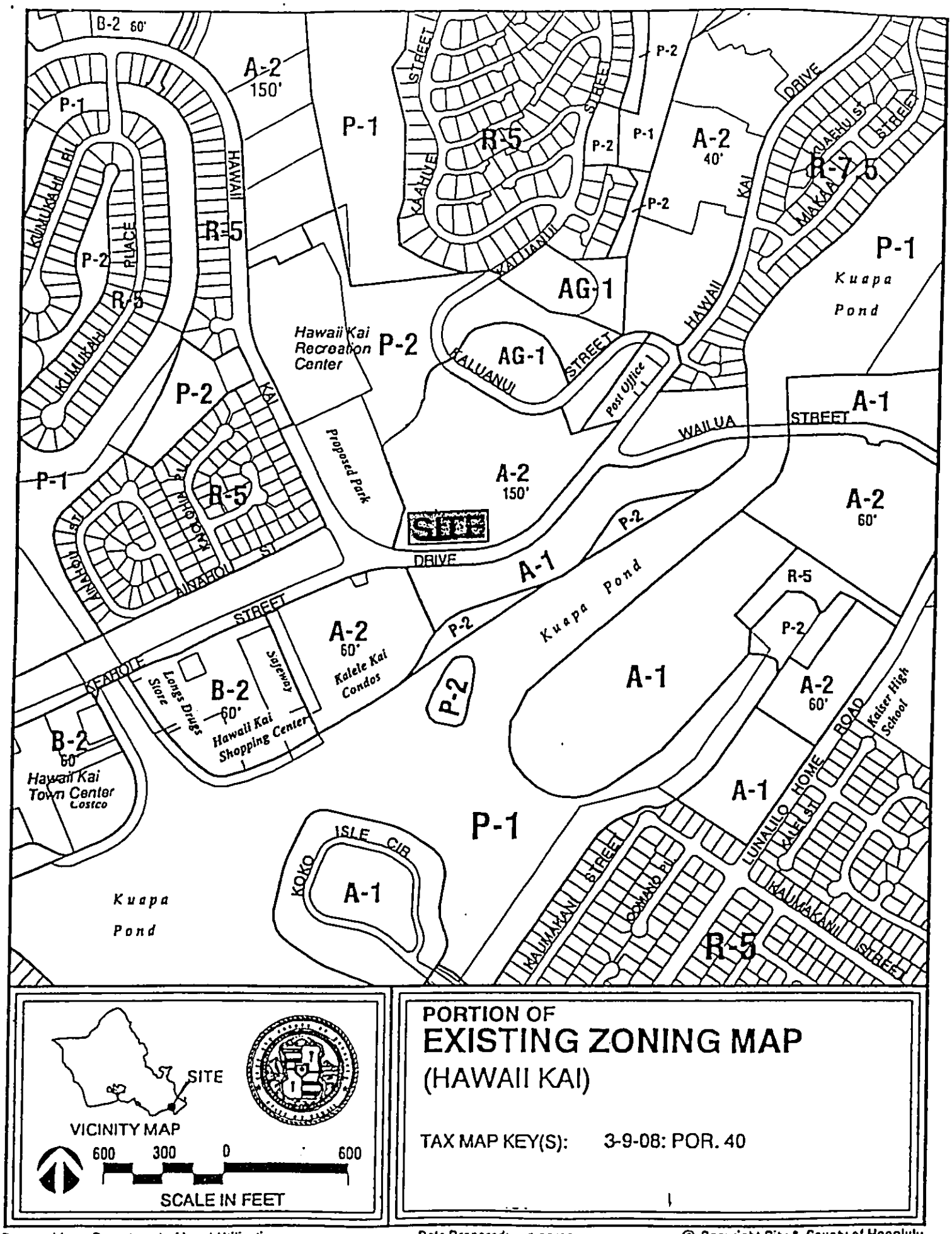
Exhibit 1-1 Location Map

LOCATION MAP

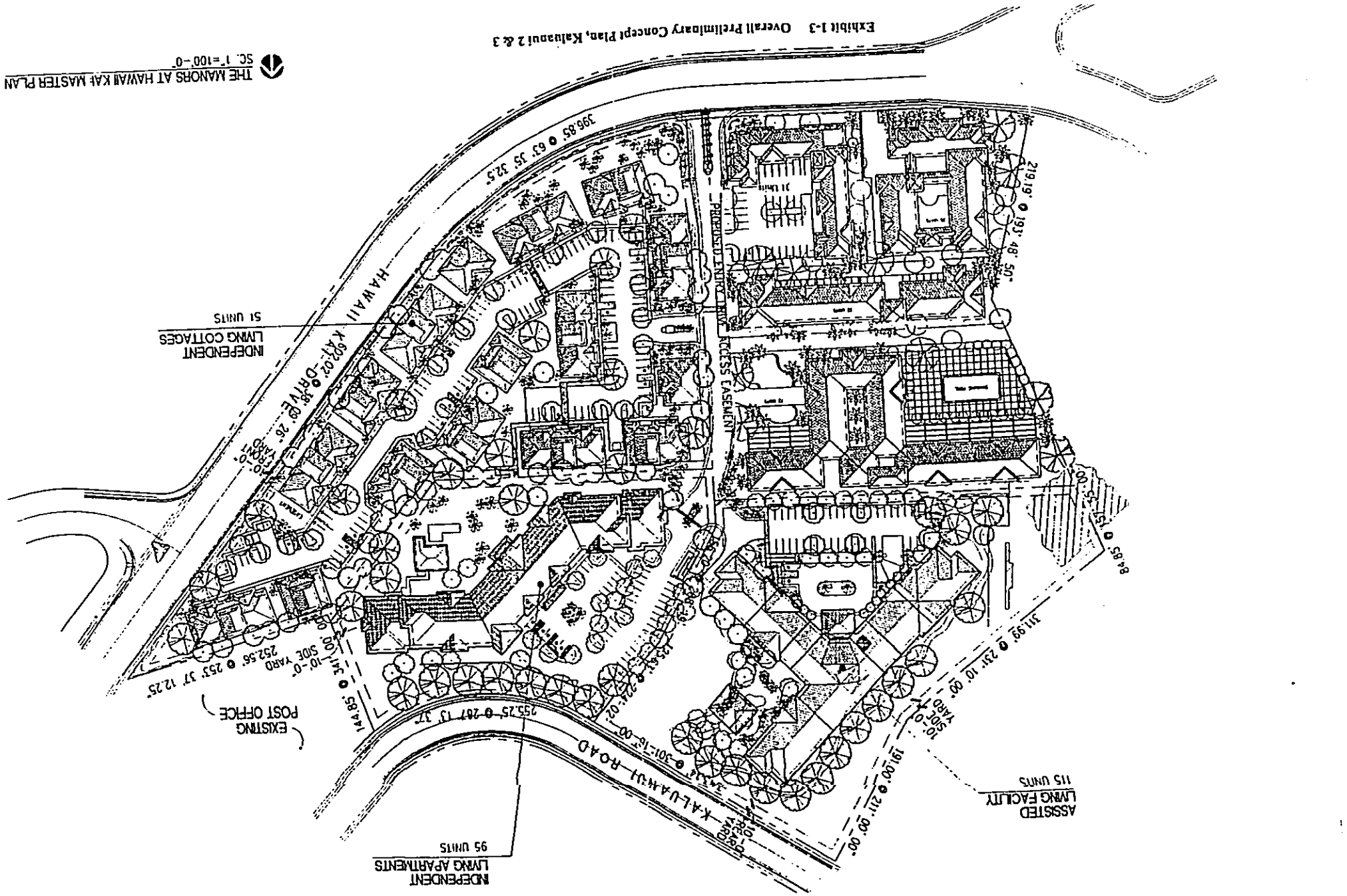
DAMES & MOORE
A DAMES & MOORE GROUP COMPANY



Prepared by: Department of Land Utilization
City and County of Honolulu

Date Prepared: 5/20/99

Exhibit 1-2 Existing Zoning Map



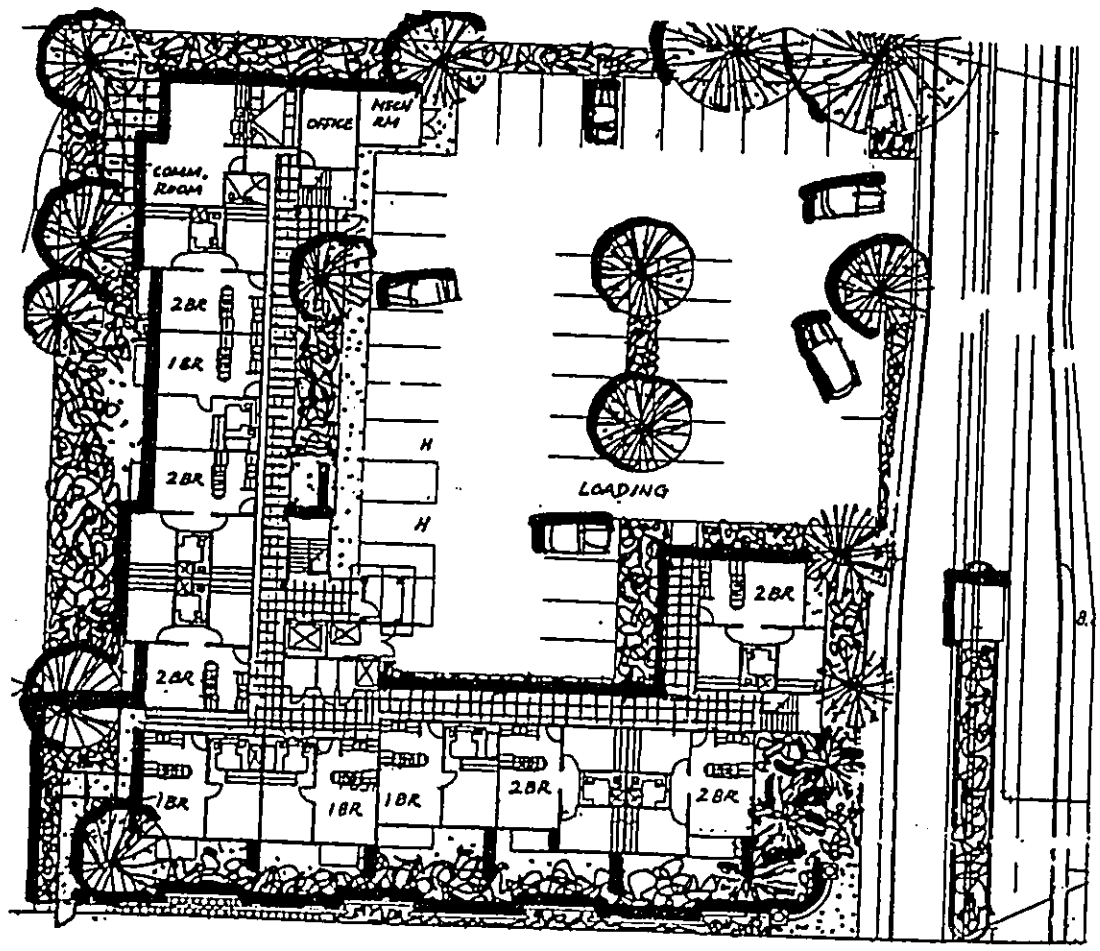
KALUANUI SENIOR APARTMENTS
PHASE I

FLOOR AREA TABULATION

FIRST FLOOR:		9,350 SF
COMMON AREA:	930 SF	
6 2BR UNITS @ 599 SF LIVING AREA + 49 SF LANAI	3,888 SF	
4 1BR UNITS @ 504 SF LIVING AREA	2,016 SF	
CIRCULATION:	2,516 SF	
SECOND FLOOR:		8,874 SF
7 2BR UNITS @ 599 SF LIVING AREA + 49 SF BALCONY	4,536 SF	
4 1BR UNITS @ 504 SF LIVING AREA	2,016 SF	
CIRCULATION:	2,322 SF	
THIRD FLOOR:		4,376 SF
4 2BR UNITS @ 599 SF LIVING AREA + 49 SF BALCONY	2,592 SF	
1 1BR UNITS @ 504 SF LIVING AREA	504 SF	
CIRCULATION:	1,280 SF	
FOURTH FLOOR:		4,376 SF
4 2BR UNITS @ 599 SF LIVING AREA + 49 SF BALCONY	2,592 SF	
1 1BR UNITS @ 504 SF LIVING AREA	504 SF	
CIRCULATION:	1,280 SF	
TOTAL FLOOR AREA:		26,976 SF

PROJECT DATA

T.M.K.:	3-9-08: 46
LAND AREA:	29,606 SF
ZONING:	A-2
MAX. DENSITY:	52,025 SF (F.A.R. = 1.709)
MAX. BUILDING AREA:	12,178 SF (40% OF ZONING LOT)
MAX. HEIGHT:	150 FT
TOTAL BUILDING FOOTPRINT:	9,350 SF (31% OF THE LOT)
TOTAL FLOOR AREA:	26,976 SF (INCLUDING 930 SF OF COMMON AREA)
NO. OF STORY:	4
BUILDING HEIGHT:	40 FT
TOTAL NO. OF UNITS:	31 10 1BEDROOM UNITS @ 504 SF 21 2BEDROOM UNITS @ 598 SF
PARKING REQUIRED:	34 STALLS
PARKING PROVIDED	35 STALLS (INCLUDING 2 ACCESSIBLE STALLS)
LOADING REQUIRED:	1
LOADING PROVIDED:	1
PARK DEDICATION:	SATISFIED



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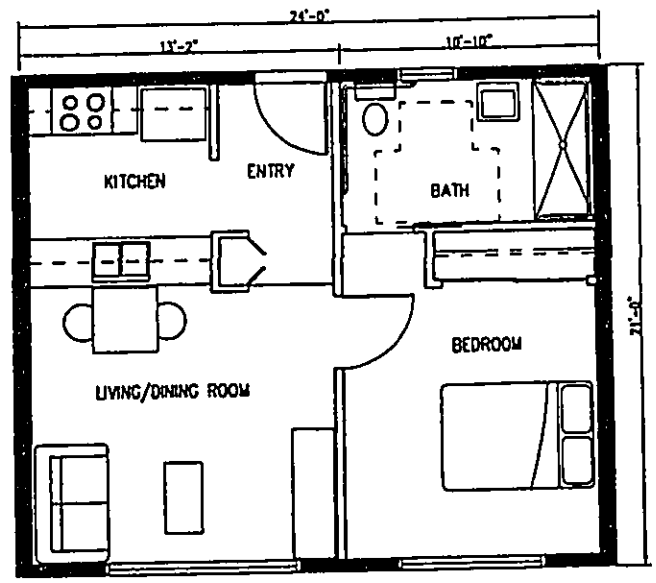
SITE PLAN

EXHIBIT 1 - 4

KALUANUI SENIOR APARTMENTS
PHASE I

1 BEDROOM UNIT
SCALE: 1/4" = 1'-0"



2 BEDROOM UNIT
SCALE: 1/4" = 1'-0"

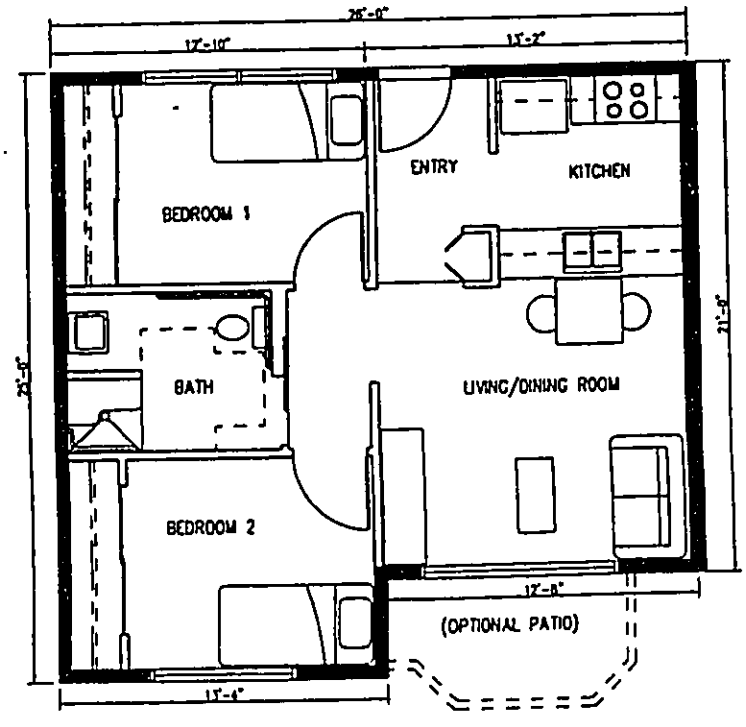
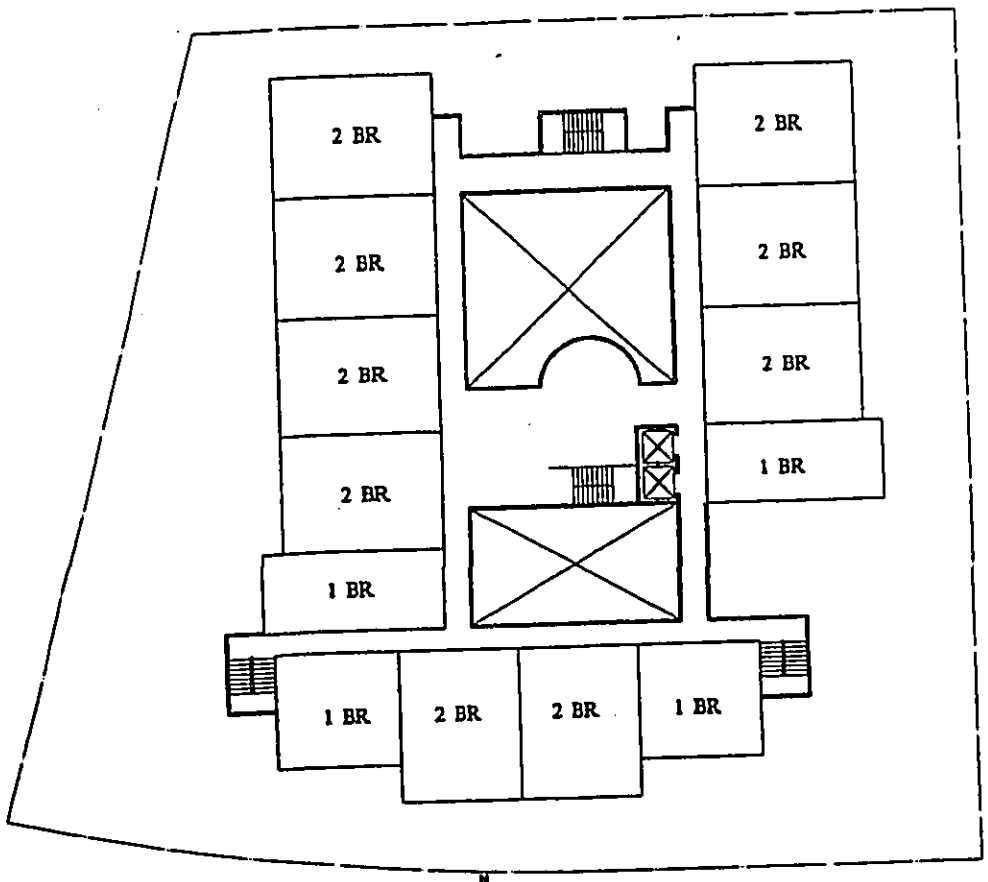
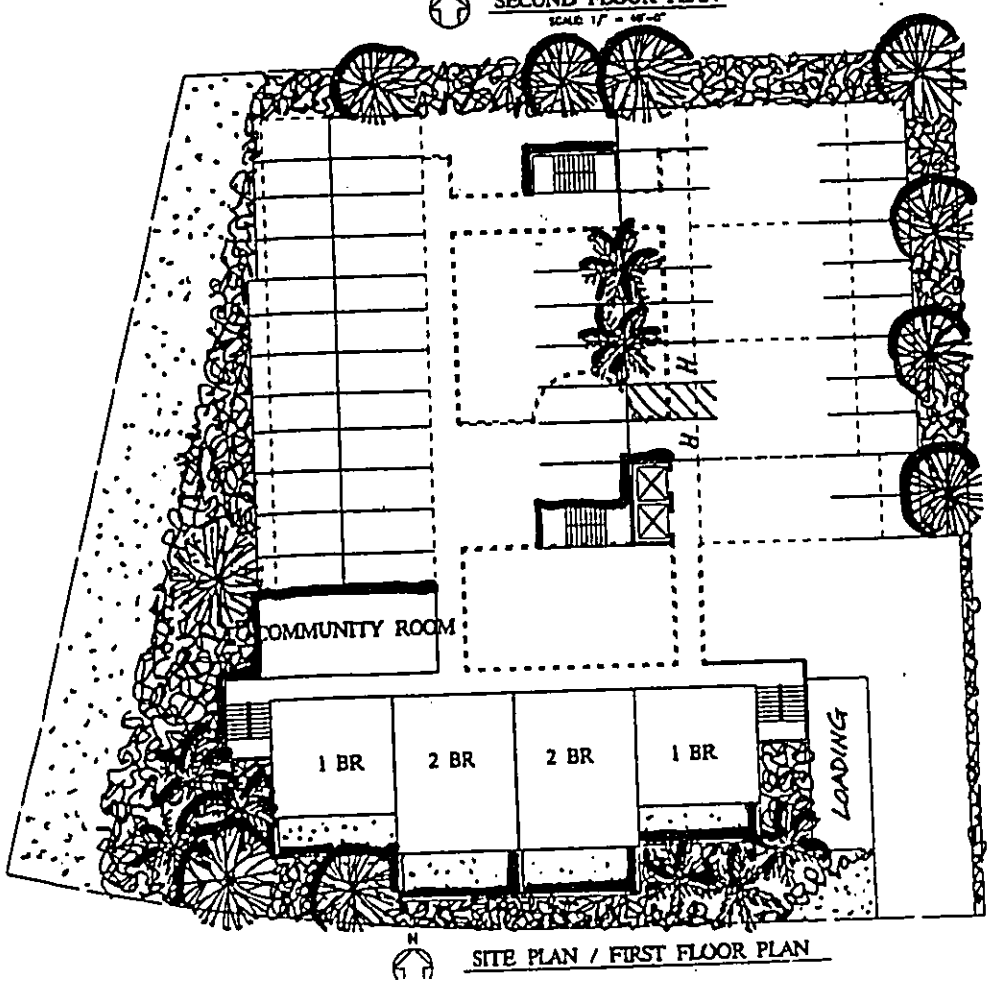


EXHIBIT 1 - 4

KALUANUI SENIOR APARTMENTS
PHASE II



SECOND FLOOR PLAN



SITE PLAN / FIRST FLOOR PLAN

PROJECT DATA

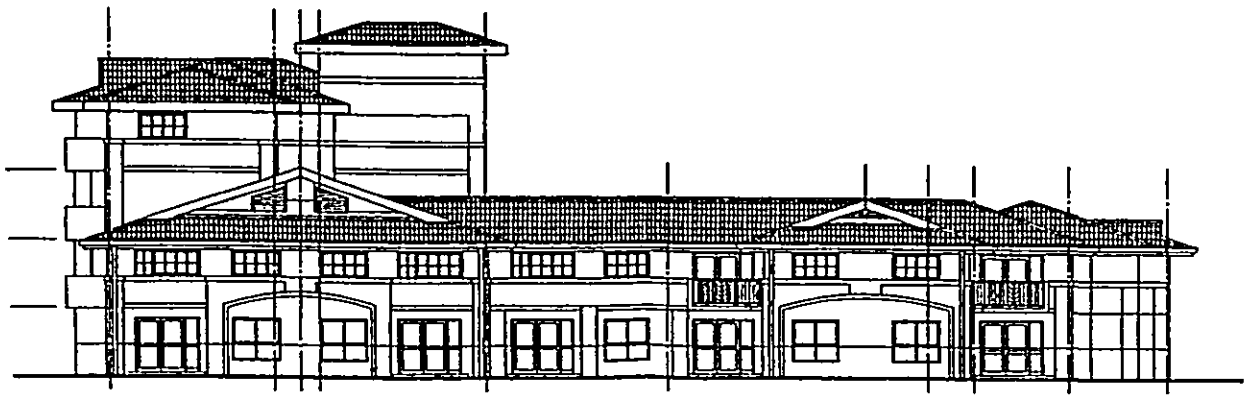
T.M.K.:	3-9-08: 45
LAND AREA:	30,998 SF
ZONING:	A-2
MAX. DENSITY:	53,311 SF (F.A.R. = 1.720)
MAX. BUILDING AREA:	12,398 SF (40% OF ZONING LOT)
MAX. HEIGHT:	150 FT
BUILDING FOOTPRINT:	13,241 SF (43% OF THE LOT)
FLOOR AREA:	36,901 SF (INCLUDING 594 SF COMMON AREA)
NO. OF STORY:	4
BUILDING HEIGHT:	40 FT
TOTAL NO. OF UNITS:	35 4 1BEDROOM UNITS @ 588 SF 6 1BEDROOM UNITS @ 594 SF 25 2BEDROOM UNITS @ 784 SF
PARKING REQUIRED:	51 STALLS
PARKING PROVIDED	51 STALLS (INCLUDING 2 ACCESSIBLE STALLS)
LOADING REQUIRED:	1
LOADING PROVIDED:	1
PARK DEDICATION:	SATISFIED

FLOOR AREA TABULATION

FIRST FLOOR:		4,614 SF
COMMON AREA:	594 SF	
2 2BR UNITS @ 784 SF	1,568 SF	
2 1BR UNITS @ 588 SF	1,176 SF	
CIRCULATION:	1,276 SF	
SECOND FLOOR:		13,241 SF
9 2BR UNITS @ 784 SF	7,056 SF	
2 1BR UNITS @ 588 SF	1,176 SF	
2 1BR UNITS @ 594 SF	1,188 SF	
CIRCULATION:	3,821 SF	
THIRD FLOOR:		9,523 SF
7 2BR UNITS @ 784 SF	5,488 SF	
2 1BR UNITS @ 594 SF	1,188 SF	
CIRCULATION:	2,847 SF	
FOURTH FLOOR:		9,523 SF
7 2BR UNITS @ 784 SF	5,488 SF	
2 1BR UNITS @ 594 SF	1,188 SF	
CIRCULATION:	2,847 SF	
TOTAL FLOOR AREA:		36,901 SF

EXHIBIT 1 - 5

WEST ELEVATION



SOUTH ELEVATION

KALUANUI SENIOR APARTMENTS

AN AFFORDABLE SENIOR RESIDENTIAL DEVELOPMENT IN HAWAII KAI

Exhibit 1-7 **Exterior Elevations**

miura & kuo

this apartment complex. Projected rents for these units are $363 for the 10 one-bedroom units, $436 to $726 for 20 of the two-bedroom units, and $871 for one two-bedroom unit. Thirty-one off-street parking stalls, one loading zone space, and four guest stalls are proposed on the site. A Resident Manager's Office and a small conference within community room will be located at the far end of the parking lot.

The Kaluanui, Phase II apartments and condominiums units will consist of 10 one-bedroom, one-bath units of approximately 599 square feet and 25 two-bedroom, two-bath units of approximately 799 square feet. The rental units in Phase II are targeted for households at 100% of the median income for the City and County of Honolulu. Project rents are $1,132 for the one-bedroom units and $1,359 for the two-bedroom units. Estimated sales prices for the Phase II condominium units are projected to range from $179,000 to $240,000, which are affordable to households with incomes from 115% to 120% of the median income for the City and County of Honolulu. Two elevators will serve the 35 apartment and condominium units. Walkways will connect the upper floors and make it accessible to persons with disabilities.

A Neighborhood Network Computer Learning Center, which will be accessible from the apartment units, is also proposed. Residents and individuals from the neighboring residential community will have access to the center. Basic training will be provided at no charge and additional training will be provided at a nominal charge depending on the individual's income.

1.3 Project Location

The proposed Kaluanui Senior Apartments and Condominiums is located in Hawaii Kai across from the Kalele Kai Condominiums on Hawaii Kai Drive, just passed the intersection and traffic light, of Keahole Street and Hawaii Kai Drive. The proposed site TMK: (1)3-9-08 parcel 46 is approximately 29,606 square feet for Phase I. This parcel was part of a 13.859 acre parcel known as Kaluanui 2 & 3 originally TMK: (1)3-9-08: parcel 40 which is 400' to 500' north of Kuapa Pond. Kaluanui 2 & 3 is generally bounded by Hawaii Kai Drive to the south and southeast, Kaluanui Road to the north and northeast and vacant land to the west.

The proposed Phase I senior apartments is located in proximity to Hawaii Kai Shopping Center and Hawaii Kai Towne Center, both located one and two blocks away on Keahole Street. Hawaii Kai Shopping Center has Safeway, Longs Drugs, Queen's Health Care Centers, Pizza Hut, Territorial Savings and other various shops. Hawaii Kai Towne Center is home to Costco, Kaiser Permanente Clinic, City Mill, Burger King, Fantastic Sams, General Nutrition Center, Young Laundry & Dry Cleaning along with several restaurants and other local shops. Also, the U.S. Post Office is located two blocks northeast from the shopping centers, which is within walking distance of the proposed development.

1.4 Project Need

Census data indicate that the 60+ population on Oahu was 128,490 or 15.4% of the overall residential population in 1990. The 60+ population is estimated to grow to 195,700 in 2010, representing 20% of Oahu's projected population. By 2020 the 60+ population is estimated to

grow even further to one in four. Hawaii Kai had an estimated 3,497 senior adults 60+ in 1990 that is projected to grow to over 6,451 by the year 2020. Mean retirement income for Hawaii Kai was $17,868 for the 1,555 individuals recorded by Census 1990, in 1989 dollars. During the same period the Social Security income for the Hawaii Kai senior adults was an average of $7,718. Ten years later, it is estimated that these same seniors might average roughly $22,500 in retirement income in 1998 dollars. (Reference Appendix A, "Plight of Oahu's Senior Adults")

From the same Census 1990, it was determined that approximately 631 Hawaii Kai senior residents age 55 to 75+ had income below 60% of the area median household income. Senior adults with incomes less than $14,999, represented 56.7% of the 631 low income in Hawaii Kai. Currently, there are no affordable rental housing projects for seniors in Hawaii Kai. The proposed 31 income and age restricted apartments will provide affordable housing opportunities for Oahu's low income seniors including those who currently reside in Hawaii Kai. Also, when built Kaluanui Senior Apartments, Phase I, is estimated to represent less than 5% of the overall Hawaii Kai low income senior adult market. Consequently, many lower income seniors will be unable to afford market rents for East Oahu, which averaged $875 for a one bedroom and $1,033 for a two bedroom rental unit in November 1998. (Reference Appendix B, Market Study Chaney, Brooks & Company, January 1999)

1.5 Public Agencies and Private Companies Contacted

Hawaii Intergenerational Community Development Association presented and worked with local Hawaii Kai residents at five Hawaii Focus Group meetings, two elderly club meetings and three Hawai'i Kai Neighborhood Board No. 1 meetings. On April 27, 1999 the neighborhood board unanimously supported the 450 unit development at Kaluanui 2/3 which included the affordable apartment and condominiums. (Reference, Appendix E Community Support & Comments, Exhibit 1-8 Hawai'i Kai Neighborhood Board No. 1, Unanimous Support)

State of Hawaii
Department of Land and Natural Resources, State Historic Preservation Division
Department of Health, Office of Environmental Quality Control
Department of Education
Housing and Community Development Corporation of Hawaii
University of Hawaii, Environmental Center

City and County of Honolulu
Board of Water Supply
City Council, Councilmember John Henry Felix
Department of Planning and Permitting
Department of Transportation Services
Department of Parks and Recreation
Department of Public Works
Honolulu Police Department
Honolulu Fire Department
Neighborhood Board No. 1 (Hawaii Kai) c/o Neighborhood Board Commission

Private Companies, Agencies, or Residents of Hawaii Kai
American Savings Bank
Hawaii-American Water Company, Wastewater (sewer)
Hawaiian Electric Company, Inc.
Mr. Hawkins, Resident Mawaena Kai
Koko Head Seniors Club
Paradigm Senior Living
The Plaza Hawaii Kai Association
The Hawaii Kai Focus Group (several attended only one meeting)
Shirley Asuega, President Lalea at Hawaii Kai Association
David Baker, Hawaii Kai Neighborhood Board
Roy Benham, President Kuapa Isle Association
Dan Clement, Former City Council Member for Hawaii Kai
Bob Fowler, Hawaii Kai Neighborhood Board
Doug Frias, Hawaii Kai Neighborhood Board
Katsumi Higa, Kamilonui Farmers Cooperative
David Kennedy, Hawaii Kai Neighborhood Board
Alfred Kirchner, Hawaii Kai Neighborhood Board
John Kobayashi, President West Marina Association
Tom Ishii, President Mariner's Cove Association
Jaap Syderhoud, President Kealaula Kai Association
L.R. "Skip" Tracy, President Marine West Community Association
Lillie Wong, Kamilonui Farmers Cooperative

1.6 Project Schedule and Cost

Preliminary financing commitments for Kaluanui Phase I was received in June of 2000 and final financing commitments is anticipated by March 2001. This would include required studies, this EA, the new General and Limited Partners agreement, Rental Housing Trust Fund Project Award, Syndication Underwriting, Subdivision of the parcel and working architectural plus civil drawings. Construction would commence in March 2001. Construction would continue for roughly eight months with occupancy anticipated to start for these apartment units in fourth quarter of the year 2001. Phase II presale of affordable condominium units is scheduled to start in March 2001 and construction is anticipated to start in November 2001. (Reference, Exhibit 1-6 Kaluanui (66) Senior Adult Low-Income Apartments, Proposed Financing & Construction Schedule)

Total project development costs for Phase I is estimated at $4,286,000, subject to working drawings or approximately $138,259 per unit. HICDA will be using $1,000,000 low interest loan from the State of Hawaii funds from the Rental Housing Trust Fund for Phase I. Also, HICDA was awarded low-income housing tax credits from Housing and Community Development Corporation of Hawaii in the amount of $3,015,670 in federal credits and $904,700 in State Credits over ten years. Central Pacific Bank will be providing the construction loan of approximately $3,000,000 for this apartment project.

Total project costs for Phase II, to build in its entirety, is estimated at $5,100,000, subject to working drawings. Consequently, each will average $145,714 in cost and average 750 square feet.

1.7 Permits and Approvals Required

HICDA submitted and completed a subdivision application for the 13.859 acres parcel in November 1999. This subdivision application did subdivide the two parcels from TMK: 3-9-08: Parcel 40, into Phase I which will be 29,606 sq. ft. and Phase II which will be 30,998 sq. ft. (Reference, Exhibit 1-3 Overall Preliminary Concept Plan, Kaluanui 2 & 3)

A grading permit and building permit will be required before construction can begin. No rezoning will be required for this parcel since it is zoned A-2 with a 150' height limit. (Reference, Exhibit 1-2 Existing Zoning Map) HICDA is aware of Bill 88 which will reduce the height limit to 40' across all of Kaluanui 2 & 3. HICDA has already taken this into consideration and has designed all 66 of these senior apartments and condominiums to fall within the 40' building envelope. An additional request for wastewater connection will be required from Hawaii-American Water Company. (Reference, Appendix E Community Support & Comments, Exhibit 2-1) Also, two water meters will have to be purchased from Board of Water Supply for these apartments and condominiums.

The proposed 115 unit assisted living facility, which is part of the larger retirement community, will require a Conditional Use Permit (CUP) Type 2 from the Department of Planning & Permitting (DPP). This CUP Type II has been submitted to DPP and DPP has completed its review and issued a CUP Type II for this facility on August 9, 1999. Department of Health will be reviewing plans and specifications for the assisted living facility and will determine if this project meets the Assisted Living Rules signed by the Governor on August 12, 1999. If this proposed facility meets Department of Health standards then it would issue an Assisted Living Facility's License to this facility.

2. DESCRIPTION OF THE EXISTING ENVIRONMENT, IMPACTS AND MITIGATION MEASURES

2.1 Geology and Soils

The geology of the proposed project site consists of post-erosional lavas, basalt and coral reef deposits. The site slopes approximately 1% from front to the back of the parcel. This project site is located at the southeastern end of Koolau and its geomorphology and subsurface conditions are directly related to glacio-eustatic fluctuations of sea levels during the Pleistocene Epoch. The base of the stratigraphic section in this area is Koolau Basalt.

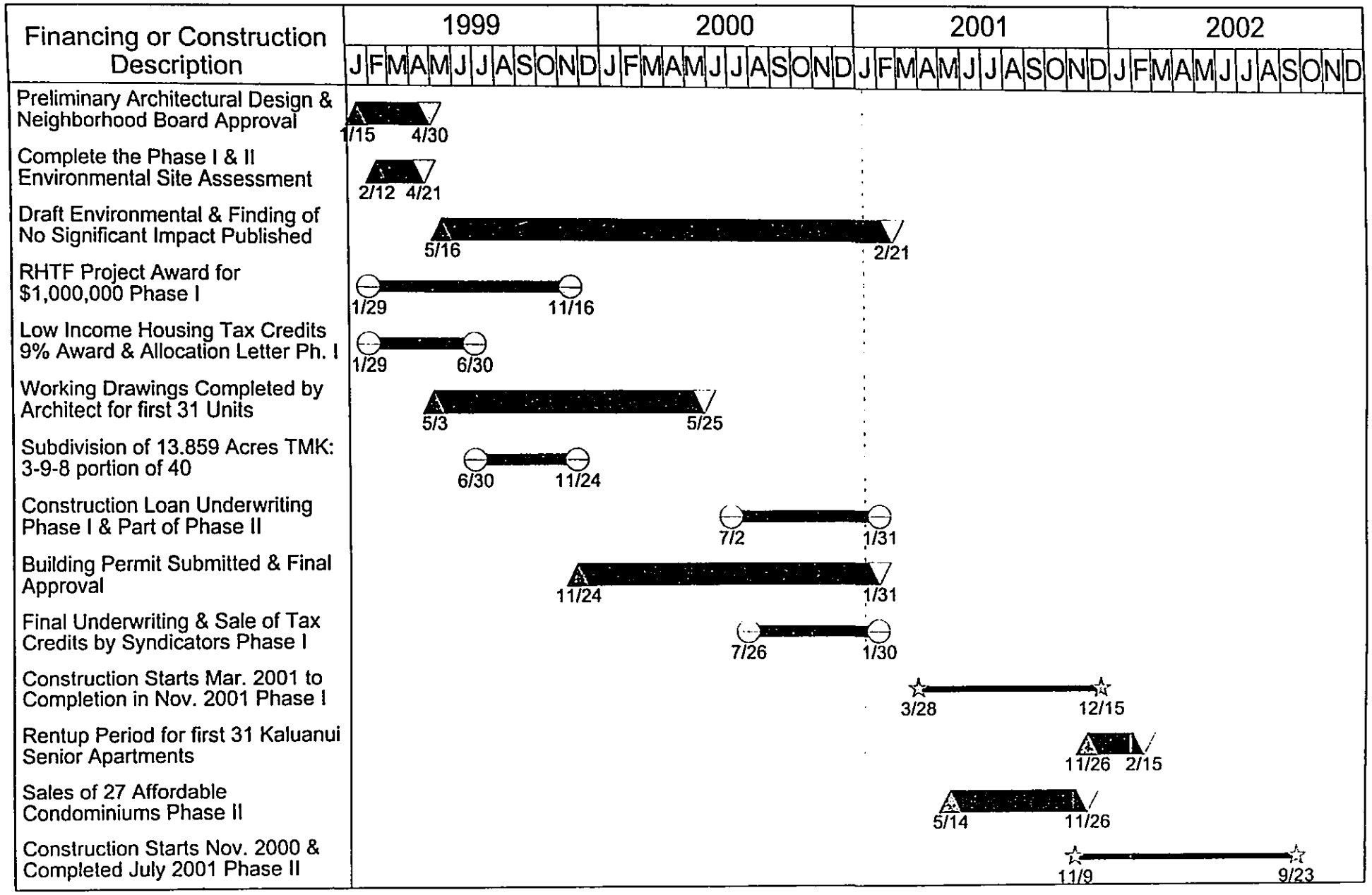
During the late Pleistocene Epoch, volcanic activity was renewed on Koolau with eruptions of the Honolulu Volcanic Series. In the vicinity of the site, eruptions along the Koko Fissure

Kaluanui (66) Senior Adult Low-Income Apartments & Condos

Proposed Financing & Construction Schedule

Exhibit 1 - 6

1/10/01



deposited pyroclastic materials consisting of tuff and cinder in portions of the valleys cut into the southeastern end of Koolau.

The site is situated at the mouth of Hahaione Valley and was formerly part of Kuapa Pond, a shallow estuary formed at the confluence of Hahaione, Kamilonui, and Kamiloiki Valleys. Land reclamation efforts filled portions of this estuary to create new land for development.

Based on the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii" by the United States Department of Agriculture, the predominant soil type in the project area is Koko series silt loam (KsB) as shown on the Soil Unit Map, Plate 3. This soil type is described as dark reddish brown or dark brown silt loam, or clay loam that has subangular blocky structure. The substratum consists of cinders and tuff at a depth of approximately 3 to 6 feet below the top of a typical soil profile. The substratum appears to correspond to the dense cemented silty sand and tuff deposits encountered during the Dames & Moore field exploration performed at the project site. This site is currently a vacant relatively flat property at approximately 7 feet about sea level.

A preliminary site assessment was done to determine if the former linear-shaped low pond area with water and soft soils measuring approximately 940 feet long, was properly filled. The report, done by Geolabs-Hawaii, indicated that the former low pond area has been filled to an elevation of about +9 feet Mean Sea Level (MSL). The report indicates that the former low pond area has been properly back filled with granular materials up to an elevation of +3 feet MSL. This report goes on to indicate, the remaining fill materials up to the existing grades appear to consist of low to moderate expansion soils placed with some amount of compaction efforts. In addition, the original soft mud at the former low pond area appears to have been removed prior to the pond filling operation. Laboratory swell tests were performed on the selected soil samples obtained from our field exploration to evaluate the swelling potential of the near-surface fill materials in this area. Based on our laboratory swell tests, the near-surface soils appear to be of low to moderate expansion when subject to fluctuations in moisture content. Mitigation measures used to reduce the potential for distress to future slab-on-grades resulting from swelling of the near-surface expansive soils would be concrete slabs-on-grade planned at the project site to be supported on a non-expansive select granular capping layer. In addition, proper slab subgrade preparation including scarification, moisture-conditioning, and recompaction should be observed and implemented prior to placement of slab concrete.

Based on the Dames & Moore report July 22, 1999, the Log of Boring B-10, which is in the center of the proposed Kaluanui Senior Apartments shows adequate strength, of the medium dense to dense brown clayey gravel, to support the proposed buildings. But, because of the weak material at elevation 7 to 15 feet, HICDA will be using standard piles below building foundations to supporting the foundation of these buildings from 10 to 20 feet. Also, all slabs-on-grades will have a minimum of 3 feet of non-expansive select granular fill. (Reference, Appendix D Preliminary Site Assessment & Soils Study, DAMES & MOORE, July 1999)

2.2 Climate

Hawaii Kai has a climate that is subtropical. The project site generally receives abundant sunshine during most of the year. Northeasterly trade winds are the prevailing winds during most of the year. Average annual rainfall for Oahu is approximately 24 inches while the average annual rainfall for this location is 30 inches. Average daily temperature ranges between the high 70's to the high 80's. This project will not be expected to alter the existing climatic conditions.

2.3 Flood Hazard

The entire 13.859 acre property, is currently designated D which is in an undetermined area, reference Flood Insurance Rate Map Panel 125 of 135, September 4, 1987, Community Panel Number 150001-0125B. A FEMA Map Zone change to X solid or shaded is not required for this project. After the project is built HICDA will insure these apartments with a flood insurance policy which is required by the low income tax credit investors.

2.4 Flora and Fauna or Feral Mammals

An inspection was made for the Hawaii Kai parcels (TMK: 3-9-08: 45, 46 on 29 December 2000 by Char & Associates, Botanical/Environmental Consultants. A more detailed letter report is included as Appendix G.

The vegetation on the site consists primarily of buffelgrass (Cenchrus ciliaris), 1 to 2 ft. tali, with scattered individuals of kiawe tree (Prosopis pallida), 10 to 20 ft. tall. Smaller patches of swollen fingergrass (Chloris barbata), carrion flower Stapelia gigantea), and Australian saltbush (Atriplex semibaccata) are scattered through the buffelgrass. Vegetation cover is about 80 to 90% Along the back edge of the parcels, the vegetation consists of kA haole (Leucaena leucocephala) scrub, 7 to 10 ft. tall, with scattered taller kiawe trees, up to 25 ft. tall. In this area, the ground cover consists of clumps of Guinea grass (Panicum maximum and Chinese violent (Asystasia gangetica).

This site has been bulldozed a number of times in the past and is level in most places. Dredged material from the marina was stored here at one time. Boulder piles are found along the back edge of the parcels. Piles of household trash (scrape lumber, paint cans, rusted appliances, etc.) and old cars can be also found in the denser koa haole/kiawe scrub.
The vegetation is dominated by introduced or alien species. Only four native species were observed on the project site; these are the 'ilima (Sida fallax), 'uhaloa (Waltheria indica), 'akulikuli (Sesuvium portulacastrum), and kipukai (Heliotropium curassavicum). All of the native plants are indigenous, that is, they are native to Hawaii and elsewhere. No threatened and endangered species or species of concern occur on the project site.

Further concerns about freshwater seeps into this site did not show up within the soil tests done. Also, HICDA will use a limited amount of fertilizer and pesticides on the property to reduce runoff into the nearby wetlands and marina.

2.5 Archaeological/Historic Resources

The proposed 1.4 acre site on which the Phase I Kaluanui Senior Apartments and Phase II Condominiums is located does not encompass any historic sites and neither are there any foreseeable impacts to historic sites located at the back of the 13.859 acre site.

According to the State Department of Land and Natural Resources (DLNR), State Historic Preservation Division, has identified several archeological sites which are located approximately 250 to 600 feet from the proposed apartment site Phase I and Phase II. These historic sites which include petroglyphics, a heiau site and several excavated caves in the hillside at approximately 70' in elevation. Mitigation measures have been worked out with DLNR, State Historic Preservation Division with Zane Development Group, Inc. Otherwise HICDA will contact State Historic Preservation Division in the event that historic sites, including human burials, are uncovered during routine construction activities and all work in the vicinity will stop. (Reference Appendix E, Exhibit 2-2 Letter, Department of Land and Natural Resources, Historic Preservation Division)

2.6 Energy and Conservation Resources

During design development of this proposed project it was determined that the reduction in energy resources was a prime concern for HICDA. Several alternative energy solutions have been adopted for this project, e.g. use of solar panels for hot water with a backup heat pump and the use of special efficient lighting. Additionally ultra-low flush toilets and flow restricted shower heads will be used for water conservation. HICDA will also be promoting monthly the use of all forms of energy conservation with the residents of these 66 apartments and condominiums.

2.7 Traffic and Traffic Mitigation Measures

Hawaii Kai Drive a seventy foot four lane roadway serves this project. Hawaii Kai Drive winds its way through Hawaii Kai and eventually connects to Kalanianaole Highway 1.5 miles from the proposed site. Access to Kalanianaole Highway is shorter by taking Keahole Street, one block from the proposed site, directly to the highway. From the Kalanianaole Highway it is approximately five miles to H-1. As mentioned below many roadway improvements have been implemented since the original rezoning. These improvements plus the widening of Kalanianaole Highway have decreased the time it takes to reach H-1 by 5 to 10 minutes from the proposed project site.

The 1990 Report on the Hawaii Kai Transportation Management Program, prepared by Wilbur Smith Associates, April 1991 indicated that a transportation improvement program was implemented to minimize impacts from the development of 1,200 housing units in the Marina area of Hawaii Kai. As indicated in this report, "All roadway modifications within Hawaii Kai required as part of the Unilateral Agreement have been completed for Hawaii Kai." These roadway modifications are listed below.

1. Widen and modify intersection of Keahole Street and Hawaii Kai Drive to establish these streets as through streets. Includes roadway widening and relocation of signal system.
2. Restripe and reconstruct the Wailua Street and Hawaii Kai Drive intersection, including modifying signal system.
3. Widen Keahole Street by constructing two left-turn storage lanes, one to serve the park-and-ride facility.
4. Interconnect the signal systems at; Wailua Street and Hawaii Kai Drive, Keahole Street and Hawaii Kai Drive, Hawaii Kai Shopping Center main entrance, and Keahole Street and Main park-and-ride entrance and Keahole Street.
5. Keahole Street deceleration lane at Gas Express.

Further implementation of several of the planned improvements along Kalanianaole Highway have been completed by actions of the City Department of Transportation Services (DTS) and State Department of Transportation (DOT). They are as follows:

1. Double left-turn lanes at Keahole Drive.
2. Bus pullout at East Halemaumau Street during the widening of Kalanianaole Highway.
3. The widening of Kalanianaole Highway from two lanes to three lanes starting at West Hind Drive in Aina Haina to Keahole in Hawaii Kai.

Therefore, all of the required traffic mitigation measures required under the unilateral agreement which allowed the rezoning for this 13.859 to A-2 have been met by earlier developers. Additional mitigation measures have been agreed to by HICDA to provide a 250 foot storage lane for a left turn into the main entrance into the 450 unit retirement community. Hawaii Kai Drive already has 75% of this turn lane allocated by a double yellow line in the center portion of the roadway which is unused. At the exit to this proposed retirement community the required line-of-sight has also been allocated for the speed limit traveled on Hawaii Kai Drive. In the original unilateral agreement, it was projected that most of the rezoned property would be family households. The proposed 430 to 450 unit retirement community would reduce the original traffic estimates dramatically since an estimated 200 of these units will have individual seniors who do not drive or own a car any more. Many of the remaining seniors who do drive might be partially or completely retired which means that they will not travel during peak hours. Consequently, this development's mitigation measures and the prior mitigation done by the State of Hawaii DOT and prior developers has culminated in a planned traffic mitigation program for this proposed project of 450 units which includes the 66 Kaluanui Senior Apartments.

2.8 Noise and Air Quality

Temporary adverse noise impacts on adjacent commercial and residential properties will also occur during the construction of the proposed project. Noise impacts created by construction equipment such as backhoes and dump trucks will be reduced through the use of approved mitigation measures. For example, the concrete piles required for the foundation will not be hammered into the ground, instead holes will be drilled for the piles to slide into. Larger

construction equipment will be used to reduce the construction time required for these types of vehicles.

As with noise impacts, temporary adverse impacts on air quality will occur during the utility system improvement construction period. Heavy construction equipment that will be used during the construction phase will emit exhaust and airborne particulates. The construction work will also produce dust. These impacts will be reduced through the use of approved mitigative measures, such as construction dust screens and watering the soil. After construction no significant adverse impacts on ambient air quality are anticipated for the occupancy phase.

2.9 Surface Water and Drainage

Surface flows for Kaluanui Phase I & II are currently handled as sheet flows into the Hawaii Kai Drive and the public drainage system. Toward the back of the lot, surface flows are currently directed into a drainage ditch that crosses the central portion of the 13.859 acre site and flows into a drainage system near Hawaii Kai Drive and Wailua Street Intersection. From there it flows by drainage pipes to the marina. Currently, the civil engineer for the project is designing a 56' drainage pipe at the very back of the 13.859 acre site to redirect surface flow to the same intersection mentioned above. The site for Kaluanui Phase I & II will be graded and finished to accommodate surface sheet flows to gutters along Hawaii Kai Drive.

The paved parking areas of the proposed project will increase the amount of impervious surface areas on the project site. As a result, there would be increased storm water runoff through the site as opposed to current surface waters partially infiltrating unimproved unpaved surfaces. The project site's storm runoff will then place a greater demand for accommodation by Hawaii Kai Drive as the receiving facility for the area's drainage facility. However, due to the relatively small scale of the proposed project, approximately 1.4 acres, the overall impact on the existing drainage facility is not expected to be significant. Also, all civil engineering is being coordinated on the 13.859 acre site to accommodate all anticipated potential runoff conditions.

2.95 Visual and Aesthetics Character

Kaluanui Senior Apartments will provide an open and residential feel as you observe this apartment complex from Hawaii Kai Drive. All three buildings will have a Hawaiian appearance with local vegetation surrounding these three-story buildings. (Reference Exhibit 1-7 Exterior Elevations, Phase I and Exhibit 1-4 Site Plan, Phase I) Comparing the existing six-story building located across Hawaii Kai Drive to this proposed project, you get a comparative product, therefore the character of Hawaii Kai will not be changed by the construction of these apartments. The overall 450 units will give a sense of less density or a substantially less crowded environment compared to the Kalele Kai Condominiums across Hawaii Kai Drive. Because of the 131 foot ridge directly behind Kaluanui Phase I & Phase II which tapers to 50 feet on the U.S. Post Office site of the site little or no scenic views will be violated. Residents descending from Mariners Ridge along Kaluanui Street will see the third-story and roof of the far end of the independent living facility. Their view will be obstructed for approximately 100 feet of their half mile trip down to Hawaii Kai Drive from the starting point of their single family

homes. In its current state, large brush obstructs almost all of the view plane on the right side of Kaluanui Street. Consequently, the impact to views are limited due to the surrounding ridges to the back of this proposed development. Note: A Phase I Environmental Site Assessment is included with this Environmental Assessment. (Reference, Appendix C Phase I Environmental Site Assessment, Dames & Moore, April 1999)

3. PUBLIC SERVICES AND FACILITIES IMPACT FROM THIS PROJECT

3.1 Site and Public Drainage

Water drainage flows with the grade from Mauka to Makai on this proposed site along an average slope of 1%. At the front of the property is Hawaii Kai Drive with two large drainage culverts, which removes the majority of overflow runoff. These drainage flows cross Hawaii Kai drive and feed into a 48" drainage main that runs between Kalele Kai Condominiums and Mawaena Kai town homes. This drainage main and storm drain empties into the Hawaii Kai Marina approximately 800' from the proposed site. An additional drainage main is located approximately 400' from the main entrance, on the post office side, of this 13.859 acre site. This drainage main runs across Hawaii Kai Drive through Mawaena Kai and empties into the Hawaii Kai Marina. Drainage can be constructed to meet all City & County of Honolulu requirements and will not be an issue for the proposed Kaluanui Senior Apartments and Condominiums, Phase I & II. Surface flows are currently directed from the back of the lot into a drainage ditch that crosses the central portion of the 13.859 acre site and flows into the public drainage system near Hawaii Kai Drive and Wailua Street Intersection. From there it flows by drainage pipes to the marina. Currently, the civil engineer for the project is designing a 56' drainage pipe at the very back of the entire 13.859 acre site to redirect surface flow to the same intersection and public drainage system that flows to Kuapa Pond. All other surface drainage will be redirected on the site.

3.2 Board of Water Supply (BWS)

Hawaii Kai Drive has a 12" water main that has the capacity to service these 66 senior apartments. Board of Water Supply will be charging an additional water resource charge of $5.95 per gallon for any new development in Hawaii Kai, which will include this project. These additional fees are included in our $85,452 permit costs for BWS. This 12" water line will be adequate to serve the complete 13.859 acre site which includes the proposed 66 unit apartments on 1.4 acres. Therefore, city water will be available to this proposed site.

3.3 Hawaii-American Water Company, Sewer System

Hawaii-American Water Company, the owner and operator of the Hawaii Kai sewer treatment facility, has indicated in writing on April 7, 1999, that the current sewer lines within Hawaii Kai Drive are adequate to serve the proposed project. (Reference Appendix E, Exhibit 2-1 Letter, Hawaii-American Water Company) Engineering Concepts, Inc. will be designing the sewer lines to accommodate all 13.859 acres which includes the proposed 66 unit apartment complex.

3.4 Solid Waste

All solid waste will be pickup by the City and County of Honolulu. HICDA will be working to make special arrangements for the trash to be picked up from a point on-site that is accessible by the new automated trucks. If this is not possible HICDA will contract with a private company to dispose of all solid wastes.

3.5 Hawaiian Electric Company and GTE Hawaiian Telephone

Underground electrical and telephone service is provided along Hawaii Kai Drive. Hawaiian Electric and GTE Hawaiian Telephone have sufficient power and telephone capacity to service the 66 apartment and condominium units. Also, there is sufficient power and telephone capacity to service the remaining 364 to 384 units proposed on Kaluanui 2 & 3.

3.6 Police, Fire Department, Hospitals and Health Care

The City and County of Honolulu Police Department will provide standard protection services to the general area. Adequate lighting, security camera and fences will enhance the overall security for these 66 apartments and condominiums. Additional steps will be taken, such as an evening roving security guard, when all 430 to 450 units are finally completed.

Commercial fire protection has been installed along Hawaii Kai Drive and will be installed along the access road. City and County Fire Department will provide fire protection for all 13.859 acres.

Kapiolani Medical for Women and Children, Straub Clinic & Hospital, Inc. and Queen's Medical Center are located approximately 10 to 12 miles from the proposed development. Queen's Health Care, Kaiser Permanente and Straub all have clinics within Hawaii Kai which are adequate to service the 66 senior apartments. Both the hospitals and clinics will be more than adequate for the 430 to 450 units eventually located on the 13.859 acre parcel.

3.7 Recreation and Facilities

Hawaii Kai and East Honolulu are home to some of the largest parks and recreational facilities on Oahu. Within two miles of the proposed development you have Kuliouou Beach Park, Paiko Lagoon Wildlife Sanctuary, Maunalua Bay Beach Park, Hanauma Bay Beach Park, Koko Head District Park, Sandy Beach, Sea Life Park and Makapua Point. There are many other smaller local parks throughout Hawaii Kai to serve these senior residents. Along with these parks are the marina facilities located at all three commercial centers. Boating, skiing, kayaking and fishing are all very plentiful and accessible in Hawaii Kai. HICDA will have park dedication requirements that will be satisfied with a cash payment to the City and County of Honolulu. Or optionally HICDA can build a 5-acre park facility at the intersection of Hawaii Kai Drive and Keohole Street, southwest of the Kaluanui Phase I & II. Development of the 5-acre park site will be under a joint use and development agreement with the Phase I & II parcels. However, it is subjected to park dedication requirements and review by the City and County of Honolulu and

must have their approval before this site can be used. Other sites were not considered because HICDA will make a cash payment if the proposed and preferred 5-acre park site is not approved.

3.8 State Schools and Library

Hawaii Kai has three elementary schools Koko Head, Hahaione and Kamilo Iki. On Lunalilo Home Road one half mile from the proposed development is Kaiser High School. There should be no impact from this 430 to 450 unit development since all of the residents are seniors.

The public library is located at Lunalilo Home Road and Koko Marina Shopping Center. This large facility will be impacted by the proposed development. The library will have more daily visitors from these senior residents. *At this time it is not possible to determine the number of senior individuals that will use this facility. The assisted living residents will not be as mobile and will have their own smaller library internal to their own facility to use. Subtracting out these residents would reduce the overall impact to the local library.*

4. SOCIO-ECONOMIC CONDITIONS AND PROJECT IMPACTS

4.1 Social Consideration

According to the 1990 Census, the Hawaii Kai Census Tracts 1.02 - 1.08 had a median household income of $66,861 versus $40,581 for the Honolulu County (1989 dollars). Even though Hawaii Kai represents a 39.31% increase over the Honolulu Census Tracts, during that same period the average retirement income for 1,555 Hawaii Kai seniors was $17,665, in 1989 dollars. Mean Social Security income for Hawaii Kai seniors was $7,718. Per the 1990 Census, Hawaii Kai had 631 low income senior residents. (Reference Appendix A, The Plight of Oahu's Senior Adults and other graphic slides) The proposed Kaluanui Phase I will provide affordable rental units for seniors below the median income to help offset their lower incomes after retirement. Seniors with incomes between $13,550 to $31,020 will find the $363 to $871 a month rents reasonable for their incomes. By providing more affordable rental units, Kaluanui Senior Apartment, Phase I, will not only help meet some of the income considerations of retired Hawaii Kai seniors, but provide a safe and secure living experience.

The revised East Honolulu Development Plan, Bill 75, was adopted in July 1999. This plan indicates that East Honolulu is aging and that more senior housing is necessary for this aging population. Population numbers have not grown as expected for this side of the island of Oahu. Therefore, the new plan has reduced population projections for the next ten years. The proposed 450 units will not exceed the development plan guidelines projected for the next ten years. Lifestyles and character of the community lends itself to a marina and an outdoor environment surrounded by the mountains on three corners opening to the open ocean. Retirement lifestyles fit well within this less congested community of Honolulu with its many parks and recreational facilities.

4.2 Economic Considerations

Kaluanui Senior Apartments will do more than provide a place to live. The Neighborhood Network Computer Learning Center will enable individual residents to improve there computer and job skills. Access will be provided to log on to other important services such as the educational and worldwide databases that can be used to further ones own goals and aspirations. Also, these apartments will create construction trade jobs initially and then provide a home to individuals with purchasing capacity. When the apartments condominiums are completed approximately three permanent full-time jobs will be created. The proposed project appears to have a positive impact on the economic conditions in Hawaii Kai. Therefore, when these apartments and condominiums are finished there will be no negative economic considerations.

5. LAND USE POLICIES

5.1 State Land Use

The Hawaii Land Use Law of Chapter 205, Hawaii Revised Statues (HRS), classifies all lands in the State into four land use districts: Urban, Agricultural, Conservation and Rural. This proposed project site is designated within the Urban District. Therefore, the proposed project is consistent with the Urban classification. All 13.859 acres are within the Urban District.

5.2 City and County of Honolulu - General Plan

Adopted in 1977 and amended by the City Council in 1992, the General Plan for the City and County of Honolulu represents a plan for the long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of Oahu. This proposed project is consistent with the objectives of the General Plan.

5.3 City and County of Honolulu - Development Plan

The Development Plan (DP) for the City and County of Honolulu provides a relatively detailed framework for implementing the objectives and policies of the General Plan on Oahu. Eight Development Plans have been adopted covering the entire island. Each Development Plan Ordinance consists of Common Provisions applicable to all Development Plan areas, Special Provisions for each area, Land Use Map, and Public Facilities Map. Consequently, DP Land Use Maps depict land use patterns which are consistent with the objectives and policies of the General Plan.

For this proposed site, the East Honolulu DP for Land Use Map designates this property as Low and Medium Density Residential. Therefore this proposed project is consistent with the East Honolulu Development Plan. All 13.859 acres are within the Low and Medium Density Residential designation on the DP Land Use Map.

5.4 City and County of Honolulu - Land Use Ordinance and Zoning

Land Use Ordinance (LUO) regulates land use in accordance with adopted land use policies for the City and County of Honolulu. These policies include Oahu's General Plan and Development Plans. Any changes to the LUO are done through the zoning ordinance which is included on zoning maps for the City. In 1986, this 13.859 acre parcel was rezoned to A-2 by ordinance 86-88 and Zoning Map 1, Hawaii Kai to Kahala was changed accordingly. Therefore, this proposed project is consistent with Zoning Map 1. All 13.859 acres are within the A-2 LUO and is designated on the Zoning Map 1. (Reference, Exhibit 1-2 Existing Zoning Map)

5.5 Special Management Area

This proposed project is not located within a Special Management Area (SMA), as defined by Chapter 205A, Hawaii Revised Statues. Therefore, no SMA permit is required by the Department of Land Utilization pursuant to Ordinance No. 84-4.

6. ALTERNATIVES TO THE PROPOSED ACTION

6.1 No Action Alternative

The "no action" alternative would mean that this land would remain vacant. Rentals units for senior adults with income restrictions are limited in Hawaii Kai. Many seniors, over 44%, over the age of 60+ live on fixed incomes. Therefore, the community would be well served by building these proposed 66 apartments and condominiums. The "no action" alternative will allow this parcel to go underutilized thereby resulting in a probable loss of economic benefit to the residents in the way of quality rentals. Other developers had made more dense proposals with increased height limits and units counts, which the Hawaii Kai community rejected. Consequently, none of these prior proposals were acted upon or implemented by the proposing parties concerned.

6.2 Alternative Concepts & Locations

No higher density or other types of development were explored for this 13.859 acres. No other locations were considered for this proposed project.

7. DETERMINATION WITH SUPPORTING FINDINGS & REASONS

7.1 Determination, Findings & Reasons Supporting Determination

Based on the Significance Criteria in section 11-200-12, items (1) to (13) are discussed for the proposed Phase I Kaluanui Senior Apartments, referred to as "Project".

(1) This Project does not involve an irrevocable commitment to loss or destruction of any natural or cultural resource. A spot assessment of flora and fauna, and historic and archaeological sites at and near the project area found no presence of natural or cultural resources that would be jeopardized by the proposed project. A preliminary review by the Department of Land and Natural Resources, State Historic Preservation Division has indicated that the proposed subdivision and subsequent development, as described, will have "no effect" on significant historic sites.

(2) The Project does not curtail the range of beneficial uses of the environment for the State of Hawaii residents. The proposed project site is part of a vacant 13.859 acre parcel of land. The site is currently unused and has some grass and small trees. Development of the site will not displace any structures or activities and will not detract from the function or use of the environment.

(3) The Project does not conflict with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders. This project proposal has been prepared according to State and County guidelines, plans, and policies and has been found to be in compliance with all relevant provisions.

(4) The Project does not substantially affect the economic or social welfare of the community or state. The proposed senior apartments and condominiums will provide senior citizens on restrictive incomes within East Honolulu a safe, well appointed, and affordable living environment. When completed these apartments will provide approximately two full-time jobs for Hawaii Kai and create another two jobs in related companies doing business with this complex. For senior citizens both the economic or social welfare of the community will be enhanced when Kaluanui is completed, consequently no adverse affects to the community are envisioned.

(5) The Project does not substantially affect public health. Factors affecting public health, including air quality, water quality, and noise levels, were assessed and determined to be only minimally affected or unaffected by the construction and use of the proposed senior project. Appropriate mitigation measures for short-term, construction related impacts to noise levels, air quality, and water quality will be followed by the project contractor.

(6) This Project does not involve substantial secondary impacts, such as population changes or effect on public facilities. The apartments and condominiums will not effect or create a strain on public facilities. Since most of these residents will have no children in grade school to high school there will be no impact to the local school system. It is anticipated that many of the individuals who will reside at the Project will live and come from the surrounding area of East Honolulu. Impacts on local streets and highways will be further mitigated by the driving patterns of these seniors which will typically be off peak hours. Hospitals will not be impacted by the change in location of these residents. Therefore, the only minor impact to the streets and roads will be mitigated by the age of the residents.

(7) The Project does not involve a substantial degradation of environmental quality. After reviewing the air and water quality, noise levels, and land use associated with the construction of this proposed retirement community, it has been determined that the proposed project will not substantially degrade environmental quality.

(8) The Project is not individually limited but cumulatively the overall project has considerable effect upon the environment or involves a commitment for larger actions. This proposed retirement community of 450 units, which include the 66 senior apartments and condominiums, is within the proposed uses of the City and County of Honolulu rezoning concluded in 1986. Also, a Conditional Use Permit, Type 2 was approved on August 9, 1999 for the Assisted Living Facility. This development is consistent with the recently revised East Honolulu Development Plan. Also, this development is consistent with the State of Hawaii land use adopted under a master plan for this area in the early 60's. It will not result in cumulative effects or involve commitment for larger actions that have not already been planned for.

(9) The Project does not substantially affect a rare, threatened, or endangered species, or its habitat. Site visits have identified no species that are listed as rare, threatened, or endangered by the State of Hawaii or the Federal government. Past activities included taro farming and fishing at the site but intensive modifications in the project area when the Marina was expanded have long since replaced native habitats.

(10) This Project does not detrimentally affect air or water quality or ambient noise levels other than slightly during construction. Short-term impacts to air quality and ambient noise levels will result from construction activities, however these effects would be minimal and would cease when construction is complete. No sources of surface water occur in the project area and development of the proposed site will not involve activities or future planned uses that would ordinarily impact ground water sources.

(11) This Project will not affect or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters. All structures proposed for this project will meet or exceed City and County of Honolulu, Department of Planning & Permitting, Building Division requirements for seismic, drainage on the site, and hurricane construction techniques.

(12) This Project will not substantially affect scenic vistas and view planes identified in county or state plans or studies. The developers of this site have reduced high levels from the allowed 150' to an average of 40'. Two buildings in the far back of this site will reach 52' and 60' in height per the building envelope allowed. All buildings along Hawaii Kai Drive will be two-stories or less. Under this development plan no scenic vistas and view planes will be substantially affected. This revised plan is well within the spirit of the reduced height reductions specified in the East Honolulu Development Plan.

(13) This Project will not require substantial energy consumption, but will require normal electric power from Hawaiian Electric Company. Energy consumption will be reduced at

this project since it will have low-flush toilets, flow resistors in shower heads, and solar water heating for hot water. Hawaiian Electric Company has sufficient capacity for the Kaluanui Senior Apartments and all 450 proposed units.

7.2 Findings & Determination

This Environmental Assessment (EA) was prepared for review in accordance with the Chapter 343, Hawaii Revised Statutes. Based on this review, it is anticipated that Phase I, Kaluanui Senior Apartments, will have no significant adverse impact on the environment. As such, a Finding of No Significant Impact (FONSI) for the proposed action is warranted.

7.3 Reason Supporting Determination

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, and the significance criteria in Section 12 of Title 11, Chapter 200, this assessment has determined that the Phase I, Kaluanui Senior Apartments, will have no significant adverse impact to water quality, existing utilities, noise levels, social welfare, archaeological sites, or wildlife habitats. Generally, the construction and operation of the 31 senior apartment units will not involve the loss or destruction of any natural or cultural resource. Also, the proposed 31 senior apartments units will not curtail the beneficial uses of the environment as the site is currently vacant and undeveloped. Also, the proposed project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawaii. Temporary impacts associated with the construction activity of the site can be adequately mitigated.

The proposed 31 senior apartment units will not affect public health or involve a substantial degradation of the environmental quality. Construction activities associated with the proposed 31 senior apartment units are anticipated to result in relatively insignificant short-term impacts to noise, air quality and traffic in the immediate area. No adverse affects on rare, threatened or endangered flora or fauna from the construction of this proposed project is anticipated. And finally, no substantial affect on the scenic vistas and view planes have been identified by the county or state plans or other studies done by the City and County of Honolulu.

Appendix A

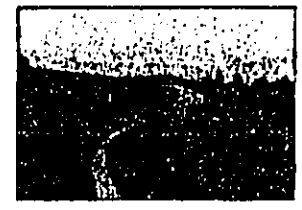
The Plight of Oahu's Senior Adults, Hawaii Kai Neighborhood Board

The Plight of Oahu's Senior Adults

Waialae-Kahala Neighborhood Board No. 3 - May 21, 1998

Presented By: Community 2010 & Hawaii Intergenerational Community Development Association (HICDA)

A Hawaii Nonprofit - Senior Adult Advocacy

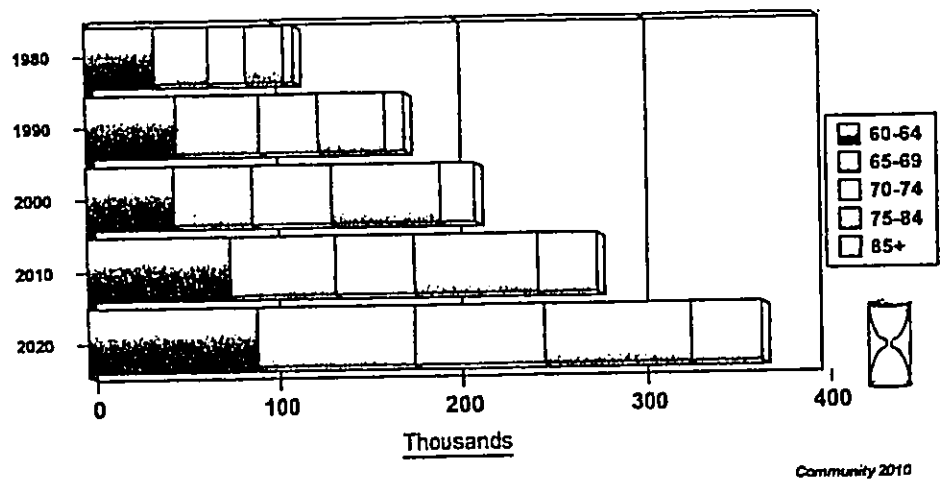


Senior Adult Growth Statistics and Issues

- Rapid Growth in the 60+ Population (Senior Adults) will create an alarming number of special self-care needs and assistance in care needs over the next 20 years, growing approximately 60% from 1990 to 2010.
  - State of Hawaii Senior Adult Population from age 75 to 85+ grows at an even faster rate of 113%, over doubling in size from 1990 to 2010 to an estimated 98,849 individuals.
  - Based on these projections, in the year 2020, the number of Senior Adults 75 to 85+ will outnumber all of 60+ population in the 1980 census.
- The plight or dangerous situation for Senior Adults will first be a lack of adequate facilities, then the overwhelming financial burden required to maintain a reasonable quality of life.
- Federal and State programs are currently strained and may not be sufficient in the future to cover the growing aging population.

State of Hawaii 60+ Resident Population Growth, Census 1980 & 1990 - Projections 2000 - 2010 - 2020

Census 1980 & 1990, Data Book 1996, DBEDT 2020 Series (May 1997)



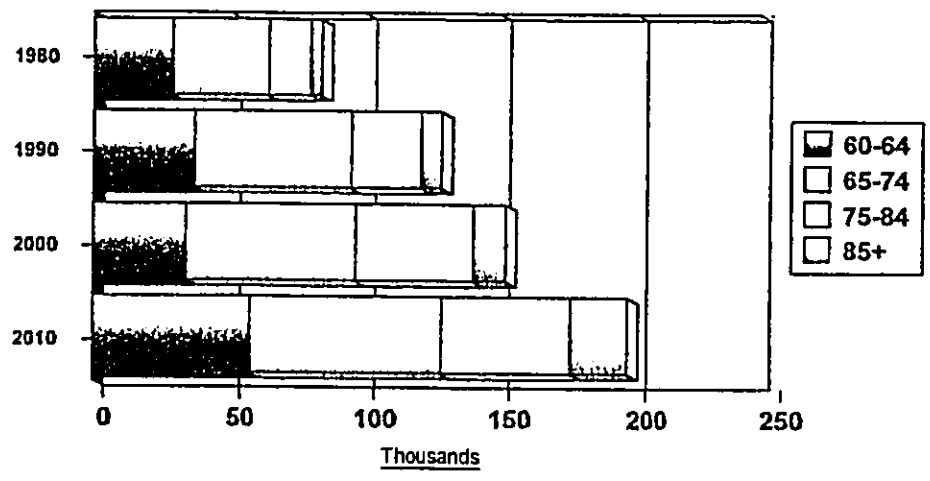
Community 2010

The Island of Oahu Senior Adults Growth Statistics and Issues

- Census data indicates that the 60+ population on Oahu was 128,490 or 15.4% of the overall residential population in 1990.
  - By the year 2010 these same Senior Adults age 60+ are estimated to grow to 195,700 or 20% of Oahu's projected population.
  - That means by the year 2010 one in five of Oahu's projected population will be a Senior Adult, it is estimated to grow even further by the year 2020 to, <u>one in four</u>.
- Today, it is estimated that 24% of Senior Adults age 75 to 85+ <u>will</u> require assistance with care on a daily basis.
  - Oahu's estimated demand model for Senior Adults age 75 to 85+ for these services by the year 2000 would exceed 13,000. Note, this does not mean all these Senior Adults are going to be living in a Nursing Home or an Assisted Living Facility. They might be receiving assistance from a family member or home care organization.

Island of Oahu 60+ Resident Population Growth, Census 1980 & 1990 - Projections 2000 & 2010

DBEDT Series M-K (Nov. 1988) City & County - Elderly Affairs Division, Four-Year Area Plan (Oct. 1993)



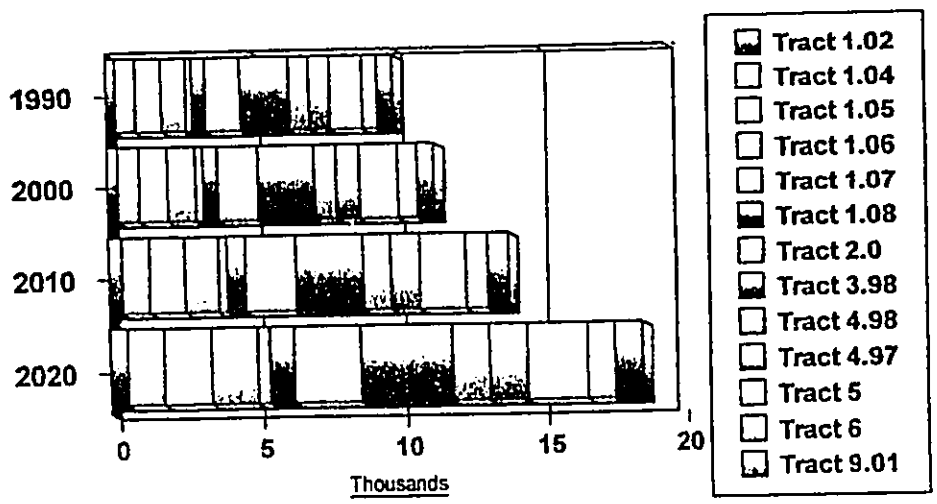
Community 2010

East Honolulu & Waialae-Kahala is Growing Older

- Based on the 1990, Census East Honolulu had approximately 39,000 residents of which 28% were 50-years of age or older.
  - Approximately, 17% of these residents were 65-years old or older. Waialae-Kahala had more 60+ Senior Adults within their 10,184 residents as a percentage, than the rest of East Honolulu, with an estimated 28.56% verse 16.85% for East Honolulu.
- Waialae-Kahala still has an estimated 2,900 Senior Adults in 1990 that are projected to grow to over 5,400 by the year 2020.
  - Combined with East Honolulu these numbers may reach an estimated 18,750 Senior Adults by the year 2020.
  - Over the same period Senior Adults who are disabled are estimated to reach over 455 within Waialae-Kahala and 1,850 for East Honolulu, for a total of approximately 2,305.
  - All of these Senior Adults have different needs that should be assessed and reviewed to make sure that the right facilities are available before the demand causes residents to relocate or be referred to other more progressive communities of Oahu.

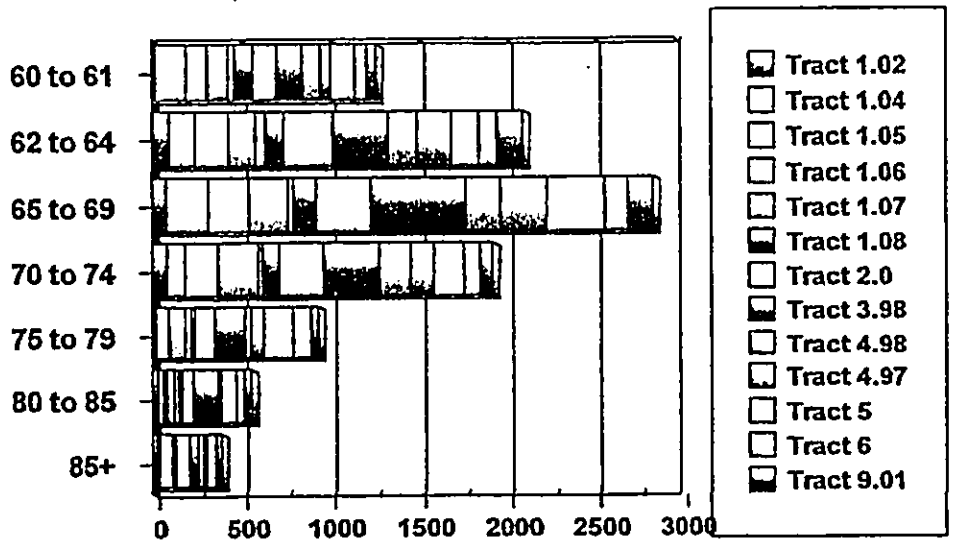
Walalae-Kahala & East Honolulu 60+ Resident Population Growth By Census Tract, Census 1990 - Projections 2000 - 2010 - 2020

Census 1990, City & County of Honolulu - Elderly Affairs Division, Four-Year Plan (Oct. 1995), DBEDT 2020 Series (May 1997)



Community 2010

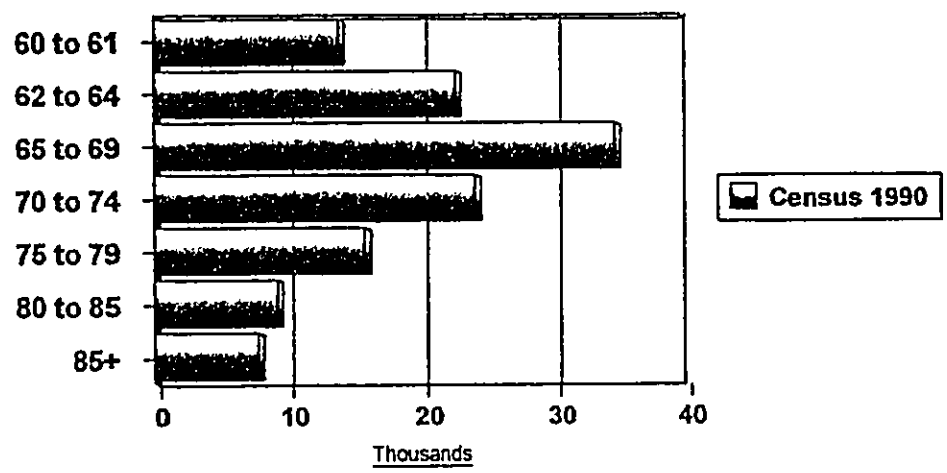
East Honolulu 60+ Resident Population by Age & Census Tract, Census 1990



Community 2010

Island of Oahu 60+ Resident Population by Age Census 1990

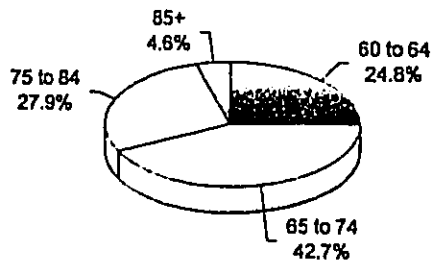
Census 1990, City & County of Honolulu - Elderly Affairs Division, Four-Year Plan (Oct. 1990)



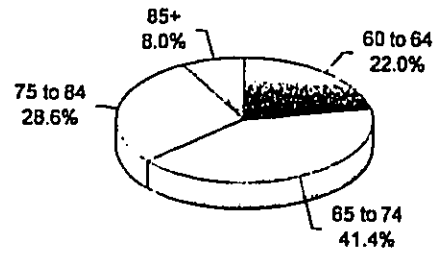
Community 2010

Waialae-Kahala Compared to the Island of Oahu 60+ Resident Population by Age Estimated for the Year 2000

Census 1990, City & County of Honolulu - Elderly Affairs Division, Four-Year Plan (Oct. 1995)



Waialae-Kahala in the Year 2000



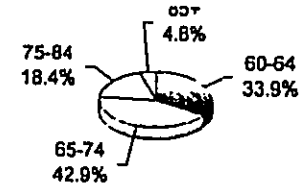
Oahu in the Year 2000

60 to 64 | 75 to 84
65 to 74 | 85+

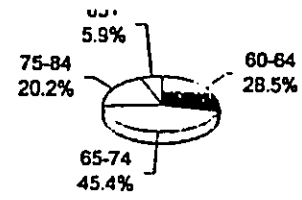
Community 2010

Island of Oahu 60+ Resident Population by Age Census 1980 & 1990 Estimated for the Year 2000 - 2010

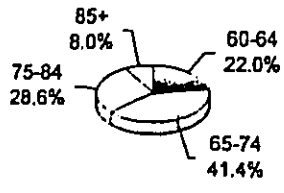
Census 1980 &1990, City & County of Honolulu - Elderly Affairs Division, Four-Year Plan (Oct. 1995)



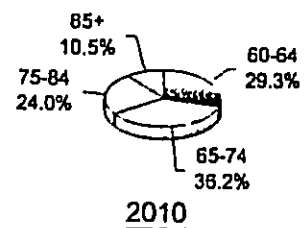
1980



1990



2000



2010

60-64
65-74
75-84
85+

Community 2010

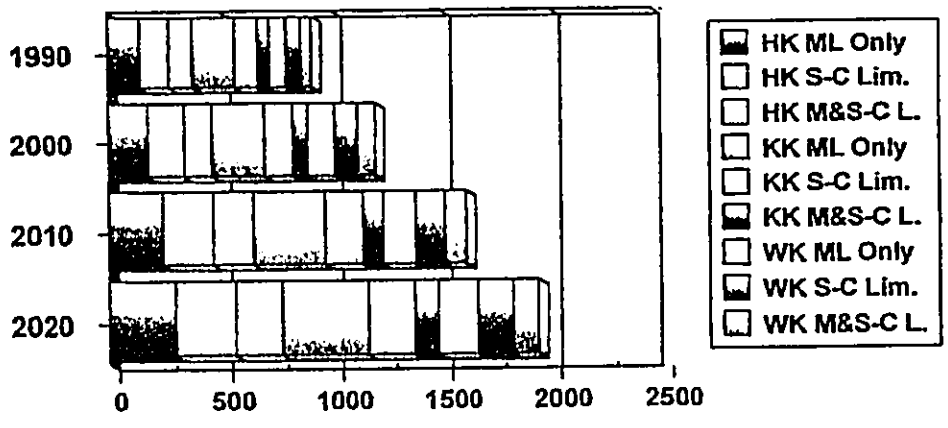
Demand for Senior Adult Care Services will Exceed Supply by the Year 2000 for East Honolulu and Waialae-Kahala

- Approximately, 311 Waialae-Kahala Senior Adults will have 1 to 3 or more ADL dependencies* by the year 2000.
  - By the year 2010 that number could increase to over 1,615 for East Honolulu and Waialae-Kahala.
- East Honolulu and Waialae-Kahala have only one planned facility of 75 Beds to serve an estimated 11,406 60+ Senior Adults by the year 2000.
  - Senior Adults are being served by other communities. Consequently, good jobs are being lost to other communities.
- It is projected that by the year 2000 nearly 160 Waialae-Kahala Senior Adults will be below the Low-Income Level or 115% of the federal poverty line set by the Office of Management and Budget.

* An ADL is an activity of daily living which include 5 personal care items (bathing, dressing, using the toilet, getting in and out of bed or chair, and eating), also mobility and continence. ADL and mobility dependency is defined when a person cannot perform the function only with the help of another person, or cannot perform the function.

Hawaii Kai, Kukiouou-Kalani Iki & Waialae Kahala 60+ Residents With Mobility Limitation Only, Self-Care Limitation Only, and With Both Mobility Limitation & Self-Care Limitation, Census 1990 - Projections Only - 2000 - 2010 - 2020, Actual Numbers May be Substantially Different

Census 1990, City & County of Honolulu - Elderly Affairs Division, Four-Year Plan (Oct. 1995), DBEDT 2020 Series (May 1997)



KK = Kuliouou-Kalani Iki
WK = Waialae Kahala
Community 2010

Emotional Issues for Senior Adults and the Caregivers Creates an Overwhelming Set of Obstacles to Confront

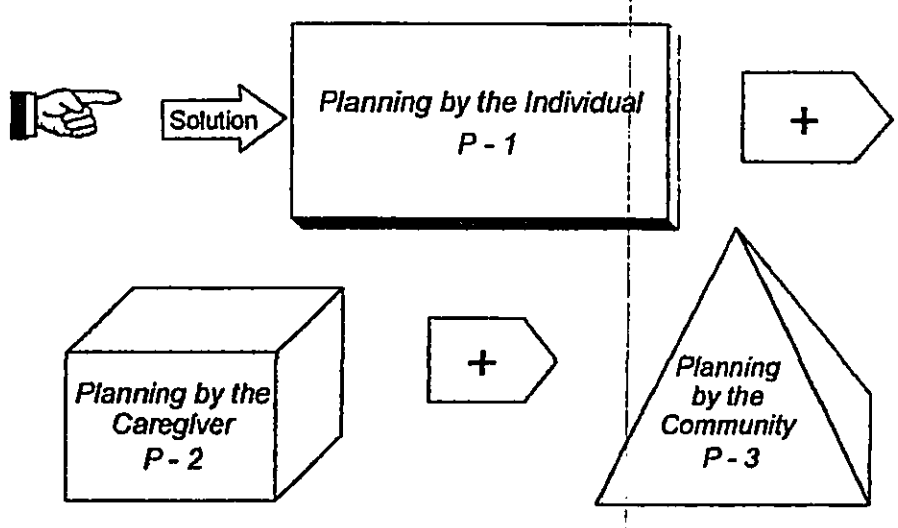
- Some of the Emotional Issues for the Senior Adults:
  - Fear of the Aging Process Itself.
  - Fear of the Body Passing on or Death.
  - Fear of Potential Financial Pressures Caused by the Aging Process.
  - Fear of the Aging Process Causing one or more Disabilities.
  - Fear of the Unknown.
- Fear many times creates greater emotional barriers than present time warrants, therefore causing a lack of reason which further causes less planning and or inappropriate decisions.
- Unfortunately, some of these fears are very real issues and these fears reduce the Senior Adults ability to face the current situation.
  - Emotional tension, financial burdens and health related problems create an overwhelming set of obstacles to be confronted by the Senior Adults.
- Community Planning is an absolute necessity in supporting our growing population of Senior Adults and their caregivers.

How Large is the Future Problem? Enormous!

- As Oahu's Senior Adult population grows, the number of resources required expands faster.
- It is clear that the demand on current health care services will need to expand to service this growth.
- Medicare will be constantly under pressure to reduce costs.
- When you include caregivers, e.g. family members, relatives and health care professionals within this expanding circle, the number of individuals involved is staggering.
- Education and planning represent positive steps that will reduce the speed and size of the expanding health care problem.

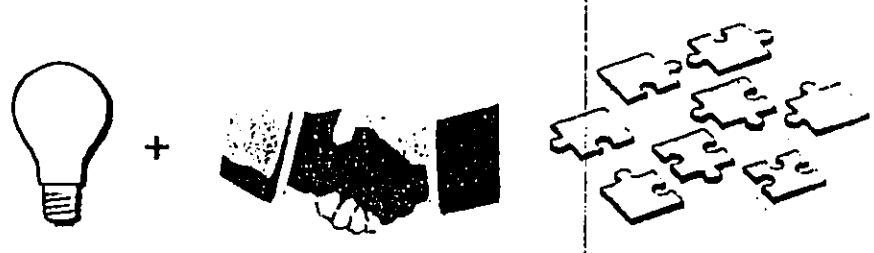
Community 2010

Educational Solutions for Adult Seniors are the 3 P's, Creating Successful Living Options



Community 2010

With Good Ideas and Cooperation, the Senior Adult Puzzle Can Be Pieced Together for the Benefit of All Community Members



Community 2010

Education & Planning Provided by Employers, Communties and Potenial Caregivers can Change Individuals Attitudes toward Senior Adult Health Care.

HIDCA, Hawaii Intergenerational Community Development Association

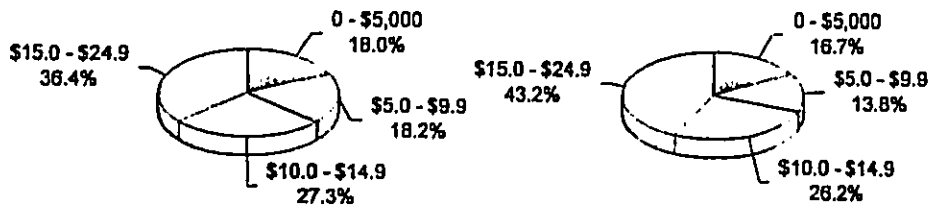
- Community Organizations & Neighborhood Boards:
  - Need to work with nonprofit organizations to help provide educational data about Senior Health Care Issues within their communities.
  - Need to develop a Health Care Facility Plan, for their community, that meets all of their individual community member needs.
  - Could understand the needs of Health Care Facility developers in order to facilitate better planning and development of the most effective facilities.
- The long-term Benefits, for a community organization or neighborhood board, implementing such a program are:
  - Lower costs and better health care for individual community members by having multiple options provided by either a for profit and or a nonprofit organization.
  - Community recongition, as a caring and progressive leader in the ever expanding senior adult market place .
  - Providing hope and help to the less fortunate senior adults in your community.
  - Better planned facilities that fit the needs of all community members.

Epilogue

- As all of us approach the Year 2001, the Twenty-first Century, many changes await our arrival. The Aging of America represents one of the most important events in the changing landscape of our future. Many will be affected by the aging process itself, many will become caregivers, therefore, their lifestyles will never be the same again. As with all major changes we can embrace it or ignore it, change its direction or be changed by it ourselves, meet the challenge or bury our heads deep in the sand. As the final approach nears and as the Autumn of Life arrives for many, please remember that you and I can brighten the day, both the young and old, and together make a difference. Please remember our Silver Citizens, they fought many prior battles we never saw, they gazed into a future and molded the present that we live today. So, please render a helping hand for those who laid the path and walked the walk, to make their future and ours a brighter day. *Mike Klein - HIDCA*

East Honolulu Compared to Hawaii Kai Low Income Senior Residents by Age 55 to 75+ Census 1990

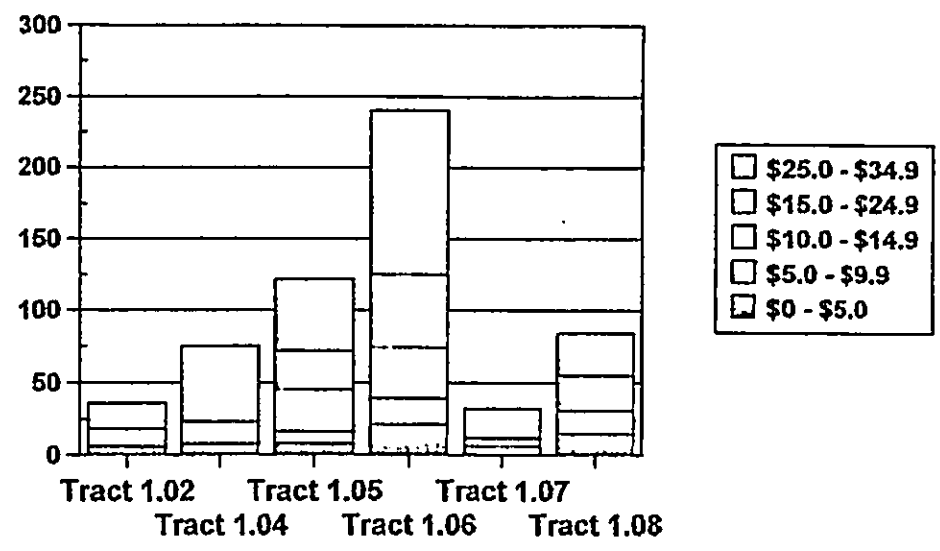
Census 1990, (In 1993 Dollars)



HICOA

Hawaii Kai Has 631 Low Income Senior Residents Age 55 to 75+ by Income and Census Tract

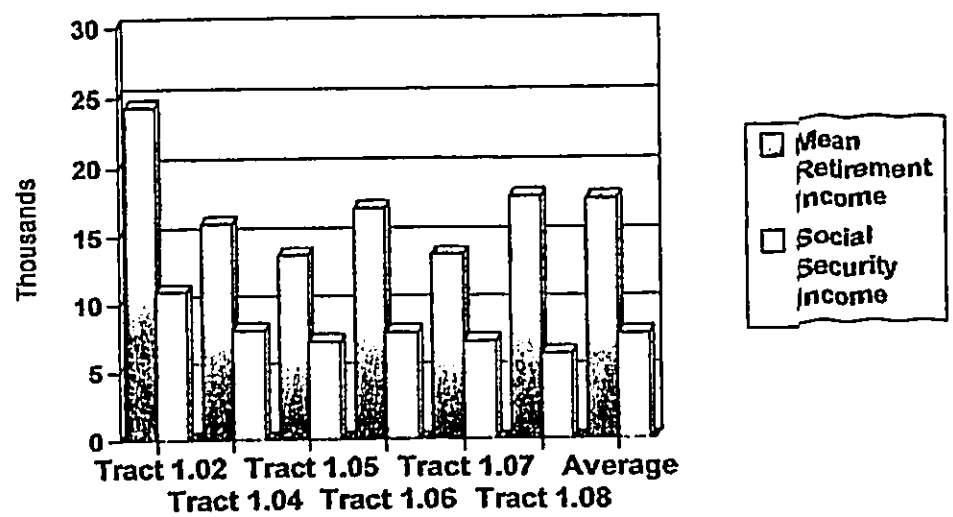
Census 1990, Income Type in 1993 Dollars



HICOA

Hawaii Kai Mean Retirement Income and Social Security Income by Census Tract

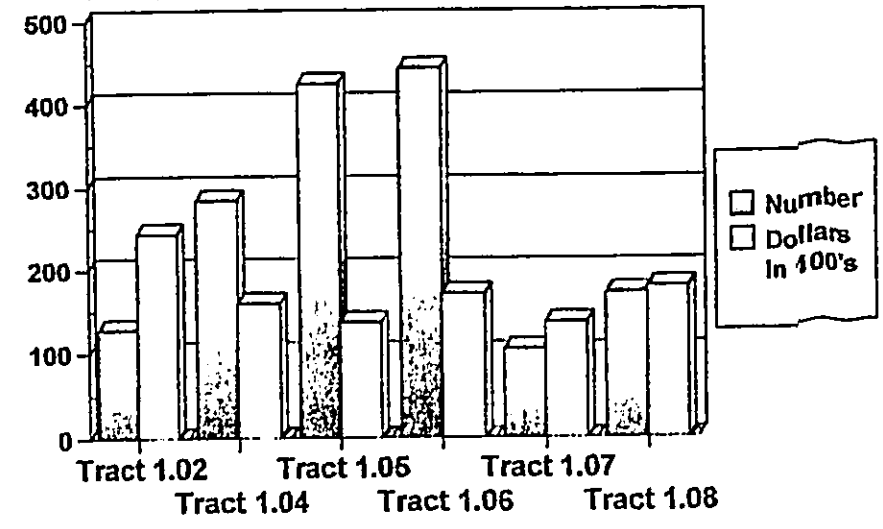
Census 1990, Income Type in 1989 Dollars



HICDA

Hawaii Kai Number of Retired Individuals & Mean Retirement Income in 100's of Dollars by Census Tract

Census 1990, Income Type in 1989 Dollars



HICDA

Appendix B

Market Study Chaney, Brooks & Company, January 1999

Chaney, Brooks
& COMPANY
DIVERSIFIED REAL ESTATE SERVICES
COMMERCIAL DIVISION

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PROPERTY MANAGEMENT
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REAL ESTATE CONSULTING

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fax (808) 322-3900

EXECUTIVE SUMMARY

Hawaii Intergenerational Community Development Association (HICDA) has requested Chaney, Brooks and Company to provide to them a market survey in order to possibly assist HICDA in the development and marketing of an independent care facility in the Hawaii Kai area located in Honolulu, Hawaii.

We understand HICDA's primary objective is to explore the feasibility of developing and marketing the property at this point in time. We also understand as part of this study, the importance to HICDA of identifying the broadest marketing opportunities available to lease this asset and see a profit. Lastly, we understand through our representation of other clients, that the marketing strategy must be sensitive to the Seller's financial goals and objectives.

Chaney, Brooks & Company
DIVERSIFIED REAL ESTATE SERVICES

Chaney, Brooks and Company is dedicated to identifying the market's strengths and weaknesses and evaluating the opportunities to ensure that HICDA receives the optimal rental for the property in a timely fashion. Our experience encompasses a wide variety of strategies utilized in managing properties. Therefore we recognize the importance of adhering to reporting procedures in order to keep HICDA well informed of every opportunity.

Following is a study and description of the market with regards to the senior population of Hawaii, the demographics of the area, and recommendations based on our findings. We have also included services that HICDA would receive should they choose Chaney, Brooks and Company as their Exclusive Property Management Team.

Chaney Brooks
&COMPANY
DIVERSIFIED REAL ESTATE SERVICES

HAWAII'S SENIOR POPULATION SURVEY

Within the past decade, the State of Hawaii's elders (60 years or older) rose by more than 52 percent whereas the general population only rose by 15 percent. Today's seniors represent 15.7 percent of Hawaii's total population (approximately 173,733 senior adults), therefore representing the fastest growing generation and it is predicted in the year 2010 this group shall reach 19 percent (approximately 265,900 senior residents)

According to a recent report by the Bureau of Census, 11 percent of Hawaii's senior population is currently at or below the State's poverty level ($9,260.00 per annum for a 1-person household and $12,480.00 per annum for a 2-person household). Almost 73 percent of these people are at the low-income minority; 14 percent have self-care or mobility limitations and nearly 7 percent are estimated to be severely disabled.

Survey of Buying Power

1990 Census Comparison

3, 5, 10 mile radii: Hawaii Kai Drive & Keahole Street, Honolulu, HI 96825 (Street match)

January 29, 1999

	3.0 Mile Radius	5.0 Mile Radius	10.0 Mile Radius
Population Characteristics			
Summary Data			
o Total Population	36,978	54,886	307,641
o % Male	49.9%	49.8%	49.1%
o % Female	50.1%	50.2%	50.9%
o Group Quarters Population	316	361	7,326
o Population Per Sq. Mile	1,919.35	1,613.73	3,513.92
% Population by Race			
o White	38.3%	35.9%	34.4%
o Black	0.6%	0.6%	0.9%
o American Indian	0.3%	0.2%	0.3%
o Asian/Pacific Islander	60.8%	63.3%	64.4%
o Hispanic Origin	3.3%	4.0%	4.1%
% Population by Age			
o Age 0 to 5	6.9%	7.0%	6.1%
o Age 6 to 11	7.9%	7.8%	6.0%
o Age 12 to 17	8.8%	8.7%	5.9%
o Age 18 to 24	9.3%	9.1%	9.8%
o Age 25 to 34	13.3%	13.4%	17.2%
o Age 35 to 44	18.3%	17.5%	16.9%
o Age 45 to 54	15.4%	14.3%	11.3%
o Age 55 to 64	10.5%	11.0%	10.7%
o Age 65 to 74	6.7%	7.9%	9.9%
o Age 75 to 84	2.3%	2.7%	4.7%
o Age 85 +	0.5%	0.6%	1.4%
Median Age Summary			
o Total Population	37.2	37.5	38.3
o Adult Population (18+)	43.7	44.4	43.9
Household Characteristics			
Summary Data			
o Total Households	11,532	16,955	117,823

o Household Population	36,452	54,497	300,284
o Avg. Household Size	3.15	3.20	2.53
o Average Household Income	$73,472	$79,930	$54,014
o Median Household Income	$65,102	$66,395	$43,676
o Per Capita Income	$23,107	$24,841	$20,848
o Total Area Income (000's)	$851,021	$1,353,407	$6,406,465
% of Households by Size			
o 1 Person	10.2%	10.3%	27.2%
o 2 Persons	29.4%	29.5%	32.9%
o 3 Persons	22.7%	21.9%	16.9%
o 4 Persons	21.9%	20.8%	12.7%
o 5 Persons	9.2%	9.5%	5.7%
o 6+ Persons	6.6%	7.9%	4.6%
% of Households by Income			
o Less than $10,000	3.1%	3.5%	8.6%
o $10,000 - $19,999	4.1%	5.0%	12.0%
o $20,000 - $29,999	6.2%	7.0%	14.1%
o $30,000 - $39,999	8.9%	9.1%	13.2%
o $40,000 - $49,999	10.3%	10.2%	11.4%
o $50,000 - $59,999	12.0%	10.5%	9.4%
o $60,000 - $74,999	18.0%	15.9%	11.0%
o $75,000 - $99,999	18.8%	17.6%	9.7%
o $100,000 - $124,999	9.4%	9.3%	4.8%
o $125,000 - $149,999	3.9%	4.1%	2.0%
o $150,000 Plus	5.9%	8.2%	3.7%

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DEVELOPMENT OF FACILITIES

As it has become increasingly recognized by the community to meet the needs of Hawaii's senior citizens, many developers have risen to the challenge. However, there are approximately 3,500 nursing home beds in the State of Hawaii to serve approximately 170,000 people over the age of 65. The ratio of beds for every 1,000 residents is half the national average according to a report submitted to the Legislation.

Assisted care living facilities (programs for seniors who require assistance in their day-to-day chores such as bathing or preparing meals, but not the constant care of a nursing home) are at the forefront of the demand for Hawaii's seniors. There are currently two on the Island of Oahu supporting this need: Hawaii Kai Retirement Residence with 42 units and The Ponds at Punaluu with 127 units with many more on the drawing board.

While qualified and more assisted living projects are in high demand, independent care living facilities (programs to meet the need of Hawaii's seniors who do not require any type of assistance in their daily activities) have not seen the same recognition as their counterpart. Currently, the majority of these seniors who do not require the services of a nursing home or assisted care facility, have had to rely on either living with relatives or paying market rent as the general population for housing.

Chaney, Brooks & COMPANY
DIVERSIFIED REAL ESTATE SERVICES

For market comparables, the three most recently developed and planned facilities that are equal in quality and size are the following:

Kulana Hale Senior Rental Project

This facility is available for seniors 62 year and older. Located at 1541 South Beretania, rental rates for studios, one- and two-bedroom units range from $499 to $872 per month.

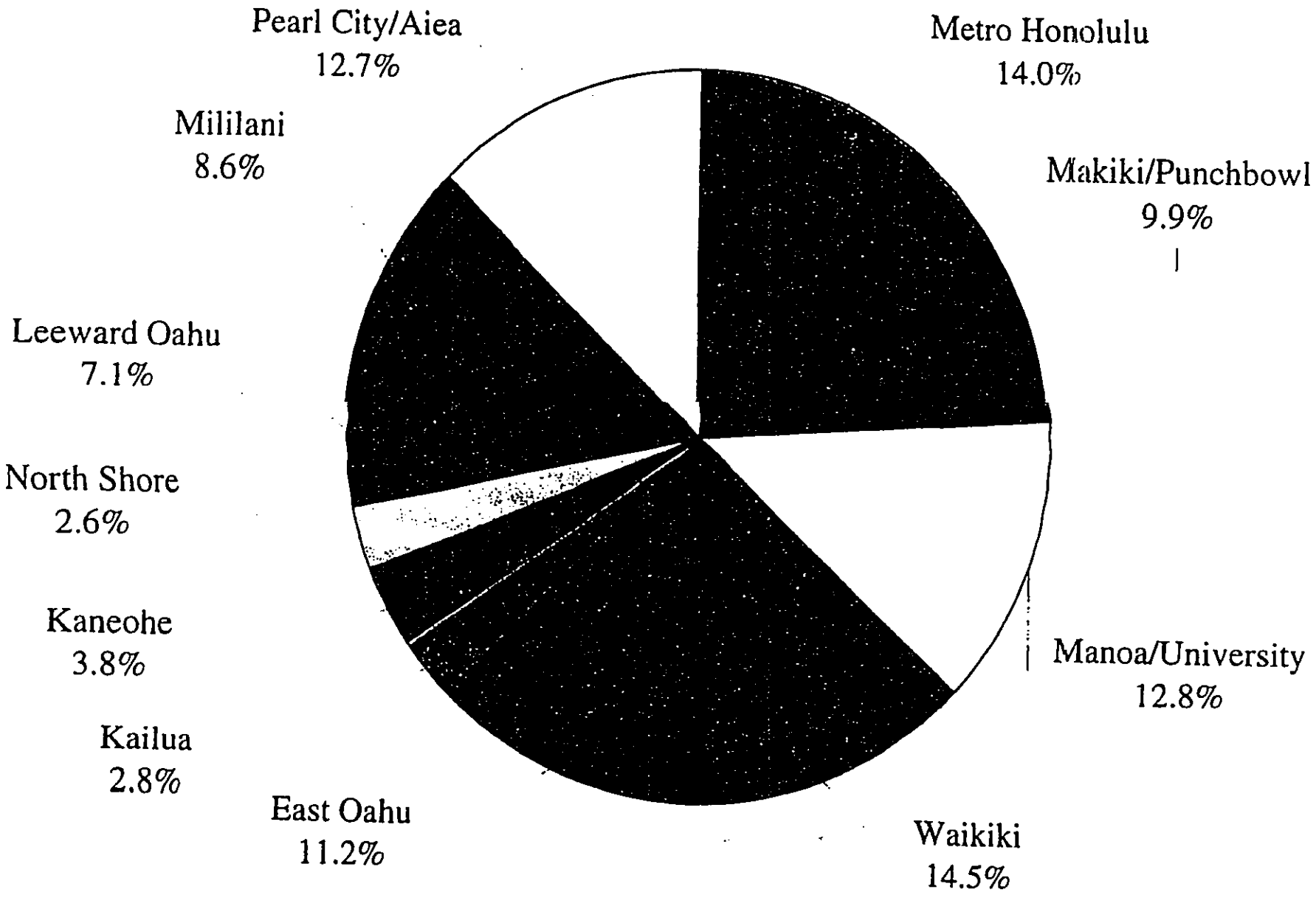
Royal Kinau

A rental project for seniors 62 years and older. Located at 728 Kinau Street in Honolulu, this 84-unit project is currently 95% occupied. Rental rates will range from $510 for one-bedroom units to $720 for two-bedroom units.

Birch Street Apartments

An upcoming family rental for families earning less than 60% of Oahu's median income. (As an example, the annual income limit for a family of three is $34,860). Located at 916 Birch Street, completion of this 52-unit project is expected early next year. Rental rates will be approximately $750 per month for two-bedroom units.

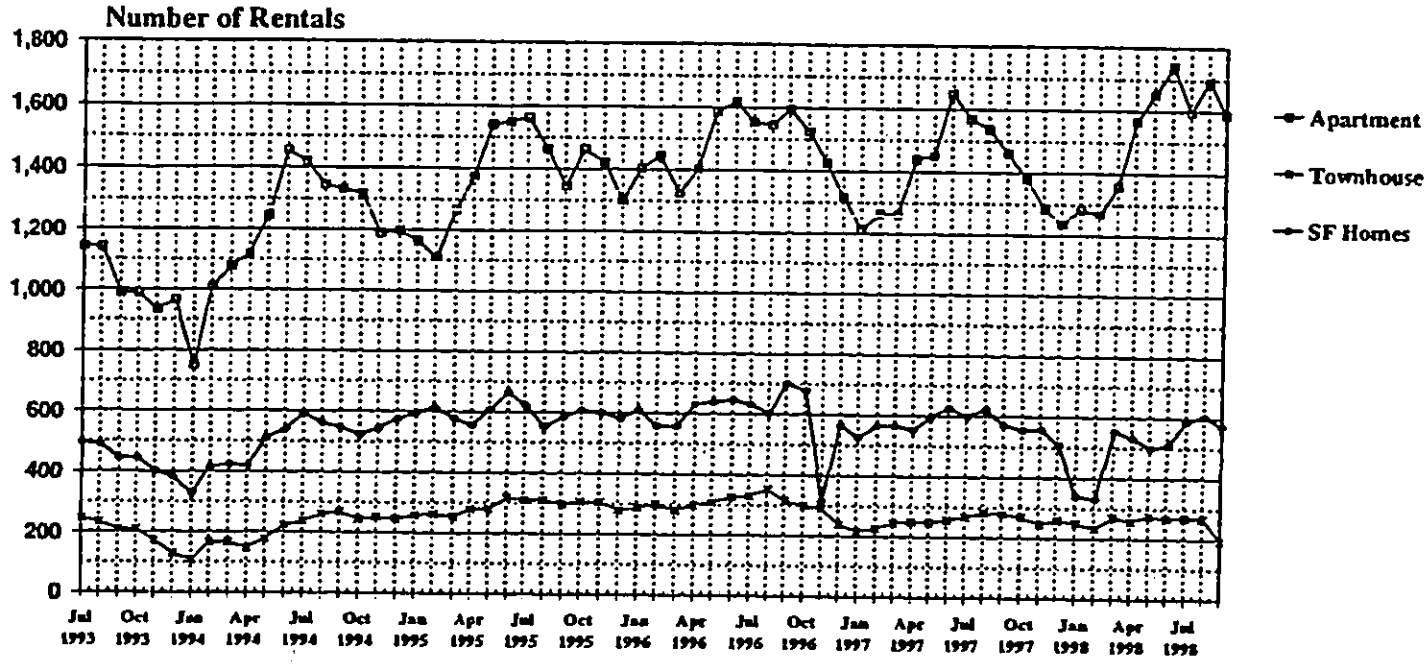
Market Share of Oahu Rentals - September, 1998



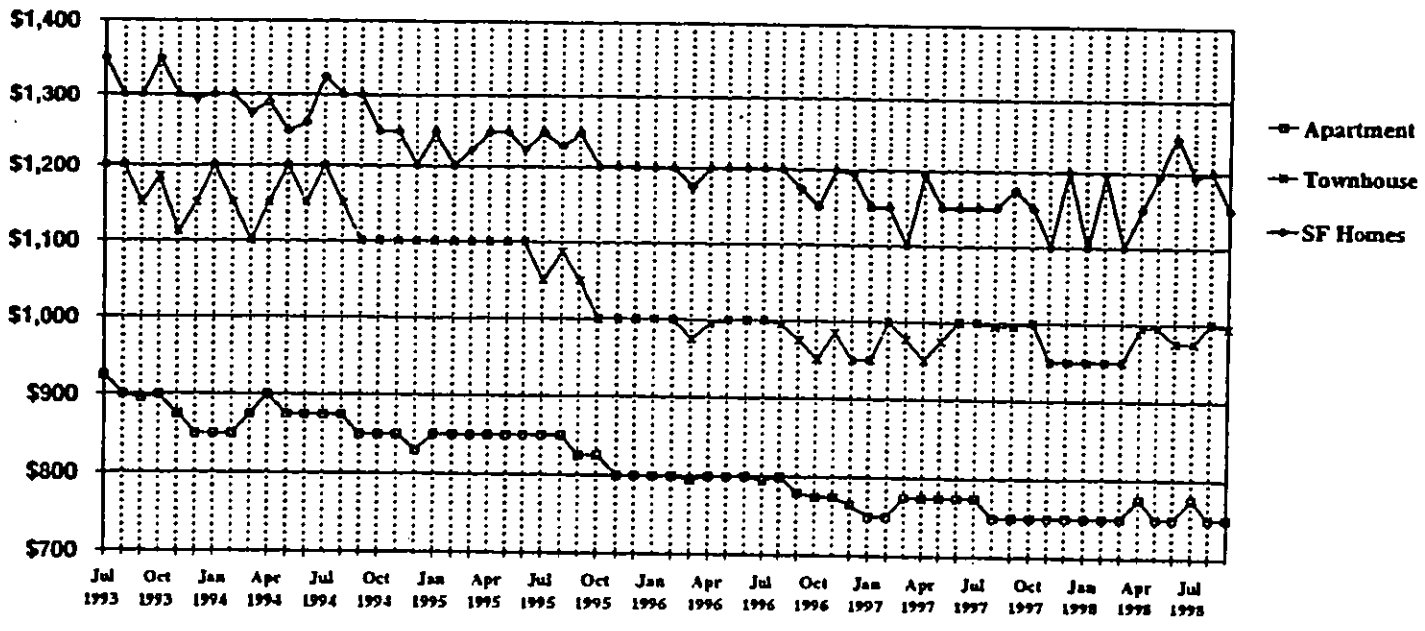
Source: Honolulu Board of REALTORS Research Department and Chaney, Brooks Company Data Analysis Department, compiled from classified ads in the Sunday *Honolulu Advertiser*

NUMBER OF AVAILABLE RENTALS ON OAHU

By Housing Type, Monthly, 1993-1998



MEDIAN ASKED RENTS FOR AVAILABLE RENTALS



Source: Honolulu Board of REALTORS® Research Department and Chaney, Brooks & Company Data Analysis Department, compiled from classified ads in the Sunday *Honolulu Advertiser*.

Date: 1/29/99

Honolulu Board of Realtors
Rental Report by Area
November 1998

Area	Bedrooms	Number	Average	Median
East Oahu	All Rentals	239	1,228	1,000
Kailua	All Rentals	59	1,265	995
Kaneohe	All Rentals	72	1,021	950
Leeward	All Rentals	177	944	850
Makiki	All Rentals	220	785	725
Mililani	All Rentals	202	886	875
North Shore	All Rentals	71	1,101	975
Pearl City	All Rentals	268	934	900
Town	All Rentals	268	988	800
Univ/Manoa	All Rentals	311	894	775
Waikiki	All Rentals	268	854	775

Date: 1/29/99

Honolulu Board of Realtors
Rental Report
November 1998

Rental Type	# Bedrooms	Number	Average	Median
Apartments	Studio	240	625	600
	1 Bedrooms	603	747	720
	2 Bedrooms	537	981	875
	3 Bedrooms	51	1,193	1,050
	4+ Bedrooms	4	1,669	1,350
	All	1,435	833	750
TownHouses	Studio	5	690	700
	1 Bedrooms	6	746	750
	2 Bedrooms	156	910	895
	3 Bedrooms	77	1,183	1,100
	4+ Bedrooms	7	1,246	1,300
	All	251	995	950
Single Family Homes	Studio	22	737	600
	1 Bedrooms	47	775	750
	2 Bedrooms	118	951	900
	3 Bedrooms	210	1,457	1,250
	4+ Bedrooms	72	2,020	1,600
	All	469	1,314	1,100
All Housing Types	Studio	267	636	600
	1 Bedrooms	656	749	720
	2 Bedrooms	811	963	875
	3 Bedrooms	338	1,355	1,200
	4+ Bedrooms	83	1,937	1,600
	All	2,155	956	825

Date: 1/29/99

Honolulu Board of Realtors
Rental Report by Area and Type
November 1998

Area	Type	Number	Average	Median
East Oahu				
	Apartments	107	929	800
	SF Homes	121	1,484	1,100
	Townhouses	11	1,320	1,400
Kailua				
	Apartments	22	817	650
	SF Homes	28	1,631	1,200
	Townhouses	9	1,223	1,200
Kaneohe				
	Apartments	29	846	800
	SF Homes	17	1,057	1,100
	Townhouses	26	1,193	1,200
Leeward				
	Apartments	30	547	550
	SF Homes	72	1,156	1,100
	Townhouses	75	900	850
Makiki				
	Apartments	207	770	725
	SF Homes	13	1,015	700
Mililani				
	Apartments	73	572	550
	SF Homes	55	1,221	1,200
	Townhouses	74	947	925
North Shore				
	Apartments	29	687	650
	SF Homes	40	1,405	1,295
	Townhouses	2	998	1,000
Pearl City				
	Apartments	154	816	800
	SF Homes	61	1,188	1,100
	Townhouses	53	985	995

Honolulu Board of Realtors
Rental Report by Area and Type
November 1998

Area	Type	Number	Average	Median
Town				
	Apartments	241	964	800
	SF Homes	27	1,206	1,100
Univ/Manoa				
	Apartments	275	831	750
	SF Homes	35	1,380	1,200
	Townhouses	1	1,400	1,400
Waikiki				
	Apartments	268	854	775

Date: 1/29/99

Honolulu Board of Realtors
Rental Report by Area and Bedrooms
November 1998

Area	Bedrooms	Number	Average	Median
East Oahu				
	Studio	25	647	565
	1 Br	57	875	790
	2 Br	80	1,033	975
	3 Br	60	1,730	1,350
	4+ Br	17	2,410	2,500
Kailua				
	Studio	11	635	650
	1 Br	13	818	750
	2 Br	15	1,020	1,075
	3 Br	14	1,601	1,495
	4+ Br	6	3,217	3,300
Kaneohe				
	Studio	2	600	625
	1 Br	9	771	785
	2 Br	32	914	875
	3 Br	25	1,223	1,250
	4+ Br	4	1,388	1,400
Leeward				
	Studio	9	488	500
	1 Br	14	538	550
	2 Br	77	795	800
	3 Br	61	1,151	1,100
	4+ Br	16	1,488	1,300
Makiki				
	Studio	20	590	600
	1 Br	108	684	675
	2 Br	87	896	800
	3 Br	4	1,450	1,600
	4+ Br	1	3,200	3,200

Area	Bedrooms	Number	Average	Median
Mililani				
	Studio	2	925	1,450
	1 Br	35	536	525
	2 Br	101	794	825
	3 Br	49	1,176	1,200
	4+ Br	15	1,372	1,450
North Shore				
	Studio	12	755	595
	1 Br	11	739	700
	2 Br	24	954	975
	3 Br	16	1,576	1,750
	4+ Br	8	1,606	1,400
Pearl City				
	Studio	20	611	600
	1 Br	60	740	750
	2 Br	113	910	900
	3 Br	69	1,157	1,100
	4+ Br	6	1,842	1,750
Town				
	Studio	32	623	600
	1 Br	106	804	750
	2 Br	105	1,148	980
	3 Br	22	1,418	1,300
	4+ Br	3	2,633	3,600
Univ/Manoa				
	Studio	45	641	650
	1 Br	121	713	675
	2 Br	121	968	895
	3 Br	17	1,787	1,800
	4+ Br	7	2,229	2,300

Honolulu Board of Realtors
Rental Report by Area and Bedrooms
November 1998

Area	Bedrooms	Number	Average	Median
Waikiki				
	Studio	89	643	625
	1 Br	122	817	800
	2 Br	56	1,269	1,175
	3 Br	1	800	800

Chaney, Brooks & COMPANY
DIVERSIFIED REAL ESTATE SERVICES

HAWAII KAI MARKETPLACE

To date, the majority of the senior care development has been centered around the Downtown to Waikiki areas of the Island with the developments of such facilities as: Alexander Manor, Aracadia Retirement Residence, Kulana Hale Senior Rental Project, Royal Kinau, Hale Ola Kino, and One Kalakaua Senior Living.

As stated before, the **only** facility being developed in Hawaii Kai meeting the needs of the seniors within the area is the Hawaii Kai Retirement Residence which will have 151 units designated for independent living with a rental range of $1,795 to $4,895 per month. At this time, the alternative for seniors choosing to reside in Hawaii Kai would again be to pay market rent as the general population which is currently within the range of $790 (median) for a one-bedroom per month to $975 (median) for two-bedroom per month.

Chaney, Brooks & COMPANY
COMMERCIAL DIVISION

ASSISTED/RETIRED LIVING FACILITIES

29-Jan-99

Area	Project Name	Address	Phone
Hauula	The Ponds at Punaluu	53-594 Kamehameha Highway	293-1100
Hawaii Kai	Hawaii Kai Retirement Community	428 Kawaihae Street	395-9599
Kakaako	Pohulani Elderly	626 Coral Street	528-3635
Kakaako	Na Lei Hulu Kupuna	619 Queen Street	544-1872
Kakaako	Honuakaha	545 Queen Street	544-1872
Kaneohe	Pohai Nani Good Samitaran Kauhale	45-090 Namoku	242-6211
Makiki	Alexander Manor	1559 Thurston Avenue	526-1559
Makiki	Aracadia Retirement Residence	1434 Punahou Street	941-0941
Makiki	Kulana Hale Senior Rental Project	1541 South Beretania Street	983-1551
Makiki	Royal Kinau	728 Kinau Street	544-1600
Wahiawa	Olaloa Retirement Community	95-1050 Makaikai	626-2323
Waikiki	Hale Ola Kino	1314 Kalakaua Avenue	983-4400
Waikiki	One Kalakaua Senior Living	1314 Kalakaua Avenue	983-4400
Waipahu	Kamalu Elderly	94-941 Kauolu Place	685-0099

Appendix C

Phase I Environmental Site Assessment, Dames & Moore, April 1999

DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

Final Report
Phase I Environmental Site Assessment
Undeveloped Property
Parcel: T.M.K. (1) 3-9-08:40 (portion)
Honolulu, Oahu, Hawaii
For Hawaii Intergenerational Community Development Association

Job Number 43022-001-011
April 23, 1999

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

615 Piikoi Street, Suite 900
Honolulu, Hawaii 96814-3141
808 593 1116 Tel
808 593 1198 Fax
hon@dames.com E-mail

April 23, 1999

Hawaii Intergenerational Community Development Association
1154 Fort Street, Suite 300
Honolulu, Hawaii 96813

Attn: Mr. Mike Klein

Re: Final Report
Phase I Environmental Site Assessment
Undeveloped Property
Parcel: T.M.K.: (1) 3-9-08:40
Honolulu, Oahu, Hawaii
Job Number 43022-001-011

Dear Mr. Klein;

Dames & Moore is pleased to provide Hawaii Intergenerational Community Development Association with three copies of our Phase I Environmental Site Assessment (ESA) Report prepared for the subject property.

We trust this report provides you with the information you require at this time. Should you have any questions regarding the information presented in this report, please contact us.

Sincerely,

DAMES & MOORE

Faith Caplan
Environmental Scientist

Mary Esper
Manager, Hawaii Geosciences Group

Attachment

(99HON-145.doc:43022-001-0106-011)

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APPENDIX

1.0 INTRODUCTION

Dames & Moore conducted a Phase I Environmental Site Assessment (ESA) of an undeveloped vacant parcel Tax Map Key (1) 3-9-08:40 portion that encompasses approximately 1.5 acres and is located in Honolulu, Oahu, Hawaii as shown on Figure 1. The site is naturally vegetated with grasses, brush, and a forest of haole koa and kiawe trees. A site plan is included as Figure 2. The general vicinity is characterized as residential with homes, townhomes, and condominium types of housing.

The scope of work was conducted at the request of Hawaii Intergenerational Community Development Association (HICDA), and was described in our proposal dated April 13, 1999.

2.0 PURPOSE AND SCOPE OF SERVICES

2.1 PURPOSE

The purpose of the ESA was to review past and present land use practices, site operations and conditions, and nearby offsite land use practices to evaluate the potential for significant contamination of soil, groundwater, or surface water by hazardous materials or petroleum products. Evidence of hazardous material and petroleum product treatment, storage or disposal is subsequently referred to in this ESA as a Recognized Environmental Condition (REC). This assessment was conducted in general accordance with the American Society of Testing and Materials (ASTM) Standard E-1527-97, which defines a REC as:

> The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimus* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

For the purposes of this study, hazardous materials are substances as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA); polychlorinated biphenyls (PCBs) and petroleum hydrocarbons.

2.2 SCOPE

Based on our discussions, and to meet your requirements for schedule and budget, the scope of services for the ESA included, and was limited to, the following:

- Prepared a summary of the physical setting of the site;

- Performed a reconnaissance survey of all accessible portions of the site for visual indications of possible use, storage and /or disposal of hazardous materials. A drive-by reconnaissance of the vicinity was conducted to evaluate contamination potential from offsite sources. Specific characteristics of interest include surface transformers, drums, surface spills or disposal areas, fill areas, stressed vegetation, and storage tanks;

- Reviewed historical aerial photographs of the site and vicinity for evidence of past environmental conditions and land uses that have potential to impact the site with hazardous materials;

- Photo-documented portions of the site that may be impacted with hazardous materials. Select photographs are attached to this report, and the remaining site photographs will be archived in the project file at Dames & Moore;

- Evaluated the site for the presence of electrical transformers (Hawaiian Electric Company (HECO) distribution and private) or hydraulic equipment that have the potential to contain PCB-type cooling oils;

- Reviewed federal, state, and local lists of known or potential hazardous waste sites or landfills, and sites currently under investigation for environmental violations, within a designated radius of the site (as indicated below). Dames & Moore queried the following regulatory list information from VISTA Starview database:

  - United States Environmental Protection Agency (U.S. EPA), Resource Conservation and Recovery Act (RCRA), Treatment Storage and Disposal Facilities (RCRA-TSD) Database (0.5-mile search radius);
  - U.S. EPA, National Priorities ("Federal Superfund") List (1-mile search radius);
  - U.S. EPA, Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) List (0.5-mile search radius);
  - Emergency Response Notification System (ERNS) Database (0.125-mile search radius);
  - RCRA Facilities Database, Small Generators List (0.125-mile search radius);
  - RCRA Facilities Database, Large Generators List (0.125-mile search radius);
  - State of Hawaii, Department of Health (DOH), Registered Underground Storage Tank (UST) List, (0.25-mile search radius);
  - DOH, leaking UST List, (0.5-mile search radius); and
  - State of Hawaii, Solid Waste Facilities, (0.5-mile search radius);

- Prepared this final report describing the research performed and presenting Dames & Moores findings to date and professional opinions regarding the potential for environmental contamination at the site.

2.3 EXCLUSIONS FROM THE SCOPE OF WORK

The following tasks were not included in the scope of work:

- Sampling or chemical testing of soil or groundwater;
- Evaluating for the presence of lead in drinking water or lead-based paint;
- Testing for the presence of radon gas;
- Sampling or testing for asbestos containing materials (ACM);
- Field surveying for archaeological, wetlands, or biological resources; or
- Identifying faults or other geological hazards in the site vicinity.

3.0 PHYSICAL SETTING

The 1.5-acre site is part of a larger undeveloped parcel. The site is bounded by Hawaii Kai Drive to the south. The northern, western, and eastern site boundaries were interpreted based on information provided by Mr. Mike Klein of HICDA. The southwestern corner was identified as a green Hawaiian Telephone Company switchbox fronting Hawaii Kai Drive. A Hawaiian Telephone Company manhole, was interpreted as the southeastern corner. The northern boundary was approximated based on a map provided by HICDA. The site plan is presented as Figure 2 and a more detailed description of the site is included in Section 5.1.

Pertinent maps and readily available literature were reviewed for information on the physiography and hydrogeology of the site.

3.1 PHYSIOGRAPHY

The site is located approximately 400 to 500 feet north of Kuapa Pond and within approximately 3,500 feet from the southeastern coast of Oahu. The topographic gradient at the site is interpreted to be generally in the southerly direction towards Kuapa Pond, which empties into Maunalua Bay and eventually into the Pacific Ocean (USGS, 1983). The site is located at the base of the southern end of Kaluanui Ridge. The elevation of the site is interpreted to range between 5 and 20 feet above mean sea level (MSL) (USGS, 1983). The general vicinity, inclusive of the site, was graded (Section 5.1).

During the site visit, the site appeared to be generally flat, with a gradual slope to the south. Although no surface water bodies (e.g. ponds, streams) were identified at the site, a dry manmade earthen drainage channel approximately 3 to 4 feet deep and 10 feet wide was observed in the northern portion of the site during the site visit (Figure 2). The channel terminates at a circular depression approximately 30 to 35 feet in diameter within the site. The Pacific Ocean is located approximately 800 feet southwest of the southern boundary of the site (USGS, 1983).

3.2 HYDROLOGY

There are two aquifers identified in the vicinity of the site. The uppermost aquifer is classified as the Oahu Honolulu Waialae basal (freshwater in contact with seawater), unconfined and sedimentary (non-volcanic lithology) aquifer. The deeper aquifer is classified as basal, confined and flanked

(horizontally extensive lavas). The upper aquifer is not valued as either a drinking water source or an ecological resource. The lower aquifer is valued as a drinking water source. The upper aquifer is considered to be replaceable, and to have a high vulnerability to contamination. The lower aquifer is considered to be irreplaceable, and to have a low vulnerability to contamination. The salinity of the upper aquifer is high, between 5,000 and 15,000 milligrams per liter (mg/L) chloride concentrations, and the deeper aquifer salinity is fresh (< 250 mg/L) (Mink and Lau, 1990).

Based on the most recent USGS (1983) topographic map, the depth to groundwater is interpreted to range from 5 to 20 feet below ground surface. The groundwater flow is interpreted to be generally to the south towards Kuapa Pond, which empties into Maunalua Bay and eventually the Pacific Ocean (USGS, 1983).

The site is located landward of the underground injection control (UIC) line as established by the State of Hawaii Department of Health (DOH). Three non-drinking water wells were identified in the vicinity of the site on the DOH UIC map. The wells are all located approximately 1,750 to 8,000 feet north (upgradient) of the site (DOH, 1984).

The average rainfall in the area is approximately 35 inches per year (University of Hawaii Hilo, 1990).

4.0 HISTORICAL LAND USE

4.1 AERIAL PHOTO REVIEW

Dames & Moore reviewed historical aerial photos and interviewed Mr. Mike Morita, Property Manager for Maunadua Associates, Inc., past users of the site. The results of this research are described below.

The aerial photos readily available for review are listed in the Section 10.0 of this report, and included the years 1950, 1966, 1970, 1974, 1984, and 1992. The aerial photos were reviewed monoscopically at R.M. Towill on April 20, 1999. The following discussion is an interpretation of the vicinity and site history based on these photos.

In the 1950 photo, the site appeared to be relatively level and graded. A major dirt road having a similar alignment to the present day Hawaii Kai Drive was observed to the south of the site.

Adjacent areas to the north and west appeared to be densely vegetated and undeveloped. Adjacent areas to the south and east appeared to be partially used for agriculture and partially undeveloped with densely vegetated trees. Smaller dirt access roads between agricultural plots were seen throughout the site. Structures (possibly residences) were observed approximately 1,000 feet southeast of the site, adjacent to the major dirt road (future Hawaii Kai Drive), and along the coastline.

In the 1966 photo, an earthen drainage channel approximately 30 to 40 feet wide, aligned between the site and Oahu Club and parallel to the future Hawaii Kai Drive, was observed. No structures were observed on the site and vegetation was sparse. Adjacent properties were vacant.

In the 1970 photo, the portion of the drainage channel observed within the site in the 1966 photo was not observed. A mound of construction fill was present partially within the site's northeastern boundaries. No structures were observed at the site. Hawaii Kai Drive was under construction and adjacent properties were vacant.

The site remained undeveloped in the 1974 photo, and Hawaii Kai Drive was completed. A portion of the site fronting Hawaii Kai Drive was cleared of vegetation. A small (apparently dry) earthern channel and a cleared circular area approximately 40 feet in diameter were observed at the site. The channel extended offsite to the west to an open (apparently wet) channel fronting Hawaii Kai Drive. No structures were observed on the site. Adjacent properties were undeveloped.

In the 1988 photo, the site remained undeveloped and vacant with dense vegetation. Residential subdivisions were either built or were being built in the general vicinity. No structures were observed on the site or adjacent properties.

The 1992 photo appeared similar to the conditions observed during the April 1999 site visit and in the 1984 aerial photo.

4.2 INTERVIEW

Mr. Morita has been familiar with the site for 29 years. No development was ever used for agriculture. No structures, septic systems, wells, or tanks (aboveground or underground) were ever constructed or installed at the site. Mr. Morita was not aware of any hazardous materials use or

disposal at the site. The portion of the site fronting Hawaii Kai Drive is regularly mowed by a private contractor who does not store equipment or materials onsite.

No RECs were identified during the historical review.

5.0 PRESENT SITE CONDITIONS

An unescorted site reconnaissance was conducted April 15, 1999, by Mr. Wray Kakugawa of Dames & Moore. The reconnaissance was conducted by vehicle and on foot. The present site conditions are shown on the Site Plan, Figure 2. Select photos taken at the time of the site visit are included in the Photos section of this report. Remaining site photos will be archived with the Dames & Moore job file.

5.1 SITE DESCRIPTION

The approximately 1.5-acre site was undeveloped and vacant during the site visit. The site was readily accessible from Hawaii Kai Drive. There was a dirt road from Hawaii Kai Drive that was generally aligned along the western boundary of the site, and branched into two easterly-tending dirt roads. To prevent unauthorized entry and dumping, the dirt road leading from Hawaii Kai Drive was chained and locked.

The site was relatively level and naturally vegetated with grasses, shrubs, and haole koa and kiawe trees. The vegetation was dense throughout most of the site with the exception of a 30- to 50-foot wide strip fronting Hawaii Kai Drive. The vegetation within this strip area appeared to be regularly mowed. The dense vegetation impeded observation of the ground surface. The vegetation at the site was uniformly stressed, likely due to the arid conditions of the area.

5.2 SOLID WASTE

Construction debris such as concrete pieces, bricks, concrete masonry blocks, lumber, and pipe were observed at numerous locations within the site (Photo 1). The larger construction materials consisted of three concrete piles each approximately 5 feet long, and four concrete pipes each approximately 5 feet long and 2 to 3 feet in diameter (Figure 2). An asphaltic concrete paved path approximately 2 feet wide and 40 feet long was also observed at the southwestern end of the property (Figure 2).

An electric range and washer, and miscellaneous household debris were located at the southern end of the site (Photo 2). A relatively clean, but rusty engine block, dishwasher, and piece of a bicycle were left near the entrance to the locked and chained dirt road (Photo 3). Tree cuttings were piled on the site near the central portion of the western property boundary, and some cuttings appeared partially charred. Minor amounts of windblown litter and some dumped trash were also observed.

The solid waste appeared to be on the surface of the site. There was no evidence observed that solid waste was buried onsite.

5.3 STORM DRAINAGE

No stormwater flow was observed during the site visit and there was no evidence of erosion, flooding or drainage problems on the site or from adjacent properties onto the site. No swamps or marshes were observed on the site.

A dry earthen drainage channel was observed on the northeast portion of the site, and it terminated at a circular depression, approximately 30 to 35 feet in diameter (Figure 2). Boulders approximately 2 to 4 feet in diameter surrounded the area around the circular depression and are scattered throughout the northern end of the site.

No evidence of RECs was identified during the site visit. Specifically, no transformers, wells, drums, hydraulic equipment, or discarded hazardous waste materials were identified on the site.

6.0 VICINITY SURVEY

The general vicinity is characterized as residential. The adjacent properties were vacant. No RECs were observed adjacent to or in the vicinity during the drive-by reconnaissance.

7.0 AGENCY LIST REVIEW

During the last 20 years, federal and state governments have developed legislation relating to environmental concerns. As a result of this legislation, laws and regulations, which govern hazardous and/or toxic wastes and materials, and the manufacture, generation, use, storage, release, and/or disposal of such materials has been promulgated. As a consequence of these laws and regulations, numerous agencies collect and disseminate information for use in evaluating RECs. As

a part of this ESA, Dames & Moore utilized VISTA Starview to search major federal, state and local regulatory agency lists. The VISTA report is included in its entirety as the Appendix and is summarized in this section.

7.1 UNMAPPED PROPERTIES

The VISTA report identified 17 properties that VISTA was unable to plot on the location map. Dames & Moore located all 17 of the properties. Ten of the properties were listed as having USTs, one of which was reported as a leaking UST (LUST). The other seven properties were listed as landfills, but were determined to be more than a half mile from the site. All the unmapped properties were determined to be located crossgradient or downgradient of the site, and are therefore unlikely to impact the site.

7.2 RCRA CORRECTIVE ACTIONS (CORRACTS)

The EPA maintains a database of RCRA facilities that are undergoing "corrective action". A corrective action order is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA. No CORRACTS properties were identified within the 1-mile search radius of the site.

7.3 NATIONAL PRIORITIES LIST

Under the Superfund Cleanup program, the U.S. EPA maintains a National Priorities List (NPL) of hazardous properties potentially posing the greatest long-term threat to public health and the environment. No NPL sites were identified by VISTA at the site, nor were any identified within a 1-mile radius of the site.

7.4 RCRA LISTS

The RCRA regulations were originally passed to identify and track hazardous wastes from generation to disposal. The various RCRA lists used by VISTA included facilities that generate, store, transport, treat, or dispose of hazardous wastes. No properties, including the site, were

identified as a RCRA treatment, storage, and disposal (TSD) facility within the 0.5-mile search radius of the site.

RCRA Small Quantity Generators (SQG) are facilities that generate less than 1,000 kilograms (kg) per month of non-acutely hazardous waste. No SQGs were identified within 0.125 miles of the site. Large Quantity Generators (LQG), are facilities that generate at least 1,000 kg/month of non-acutely hazardous waste. No LQGs were identified at or within 0.125 miles of the site.

7.5 COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION LIST

The Comprehensive Environmental Response Compensation And Liability Information (CERCLIS) List is a compilation by the EPA of the properties that the EPA has or is currently investigating for a release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund Act). No CERCLIS properties were identified at or within the 0.5- mile search radius.

7.6 EMERGENCY RESPONSE NOTIFICATION SYSTEM

The ERNS national database is a collection of information on reported releases of oil and hazardous substances. No ERNS incidents were reported by VISTA at or within 0.125 miles of the site.

7.7 UST LISTS

The DOH Registered Underground Storage Tank (UST) List identifies properties with USTs that are registered with the DOH. No USTs were identified at the site. No UST properties were identified within the 0.25-mile search radius.

7.8 LEAKING UST LIST

The DOH Solid and Hazardous Waste Branch (UST Section) maintains a list of properties where unauthorized releases from USTs have been reported to the agency. Two leaking USTs have been reported to the agency. Two leaking USTs were identified within the 0.5-mile search radius. The status of one property, Hawaii Kai Post office, was reported by VISTA as "site cleanup completed". The post office is located 0.29 miles northeast of the site.

The second leaking UST property is located 0.44 miles southeast and downgradient of the site. Cleanup at this property was initiated. The property is unlikely to impact the site based on distance from and location relative to the site.

7.9 SOLID WASTE DISPOSAL LISTS

The DOH maintains a list of active solid waste landfill (SWLF) facilities for the State of Hawaii. No SWLF facilities were identified by the VISTA report at the site or within 0.5 miles of the site.

7.10 STATE SPILLS LIST

The DOH Hazard Evaluation and Emergency Response program maintains a list of hazardous material spills. No spills were reported within the 0.125-mile radius of the site.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our site visit and review of historical information obtained during this ESA, Dames & Moore did not identify any direct evidence that hazardous materials significantly impacted soil or groundwater beneath the site. No RECs were identified at or adjacent to the site. No further environmental investigation at the site is recommended.

Dames & Moore does recommend that the solid waste identified at this site be removed from the site prior to executing the real estate transaction.

9.0 LIMITATIONS

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, as well as our interpretation of the available historical information and documents reviewed, as described in this report. They are intended exclusively for the purpose outlined herein and at the site location and project indicated. This report is intended for the sole use of HICDA. The scope of services performed during this investigation may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said users.

It should be recognized that this study was not intended to be a definitive investigation of the potential for contamination at the subject property. Given that the scope of services for this investigation and access to all areas of the site were limited and that exploratory borings, and soil, groundwater, or other types of sampling or analytical testing were not undertaken, it is possible that currently unidentified contamination may exist at the site and that the levels of such contamination may vary. Opinions or recommendations presented herein apply to the existing and reasonably foreseeable site conditions at the time of our investigation; they cannot necessarily apply to site changes of which Dames & Moore is unaware and has not had the opportunity to evaluate.

10.0 REFERENCES

DOH, Clean Water Branch, 1983, Underground Injection Control Map, 0-6.

Mink, John F. and L. Stephen Lau, 1990. Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii. Water Resources Research Center, No. 179. February.

Morita, Mike, 1999. Property Manager, Maunalua Associates, Inc., personal communication: telephone. April 22.

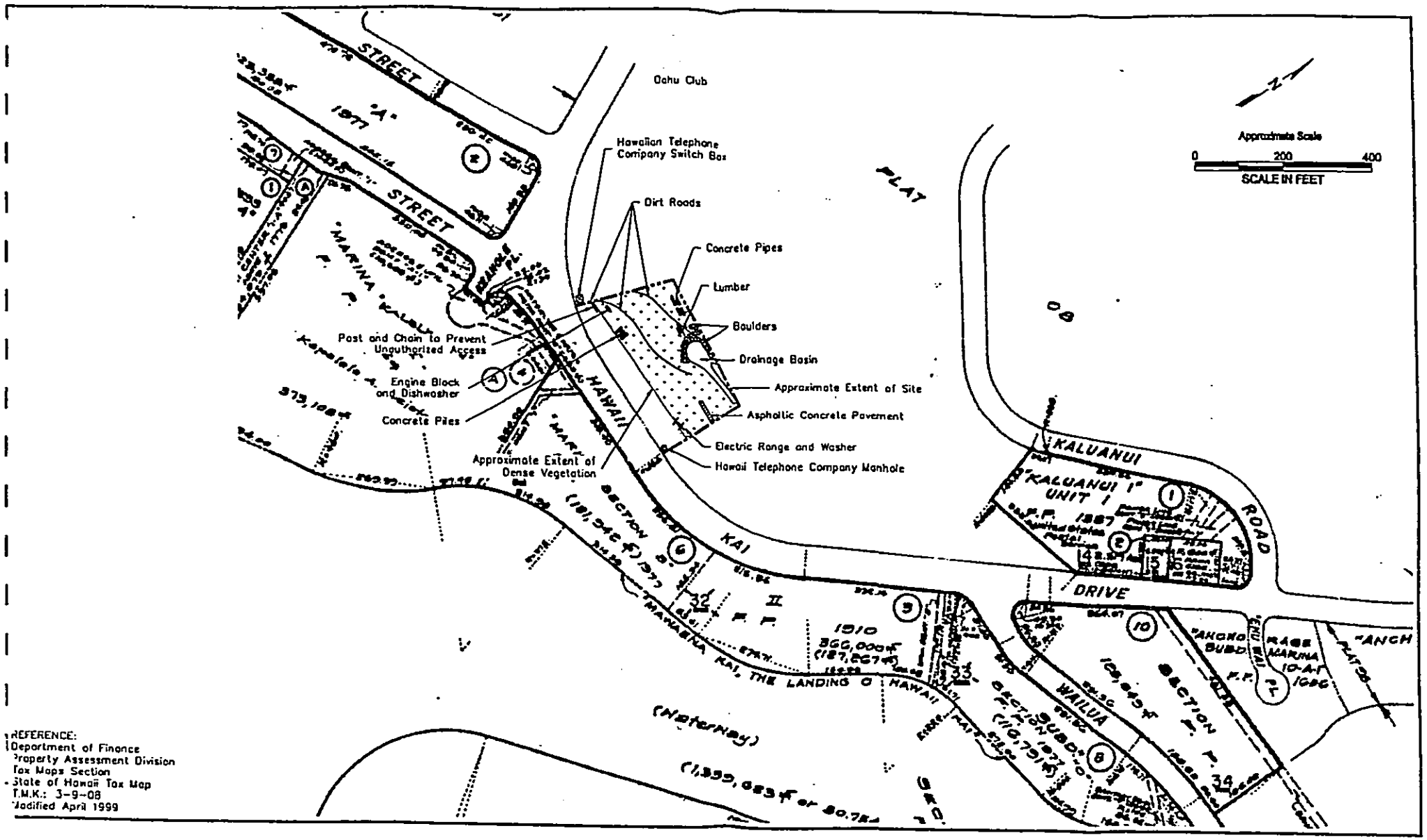
R.M Towill Corporation, 1999. Historical Aerial Photographs. Reviewed April 20, 1999:

Date	Flight Number	Approximate Scale
4-19-1950	326-2	1 inch = 2000 feet
1-14-1966	3559-1	1 inch = 1000 feet
1-7-1970	5251-51	1 inch = 1000 feet
1-3-1974	6509-1	1 inch = 2133 feet
12-5-1984	8350-84	1 inch = 1900 feet
10-31-1992	8842-5	1 inch = 969 feet

University of Hawaii Hilo, Department of Geography, 1998. Atlas of Hawaii, Third Edition, Sonia and James Juvik (ed.), University of Hawaii Press, Honolulu.

USGS (U.S. Department of the Interior, Geological Survey), 1983. Koko Head Quadrangle, Oahu, 7.5 Minute Topographic Map.

VISTA, 1999. Starview Search 00036-001. April 14, 1999. March 1999 CD database.



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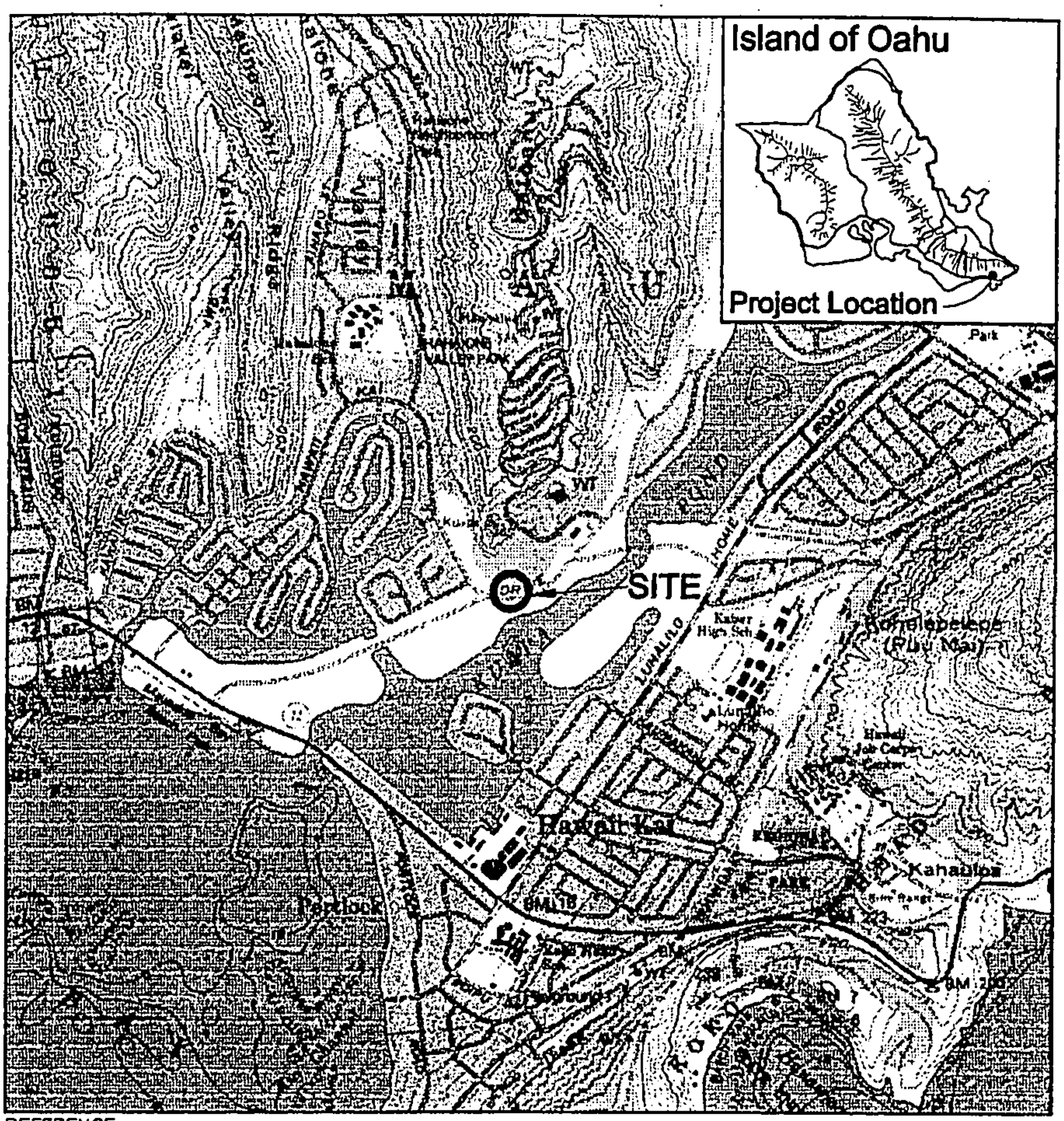
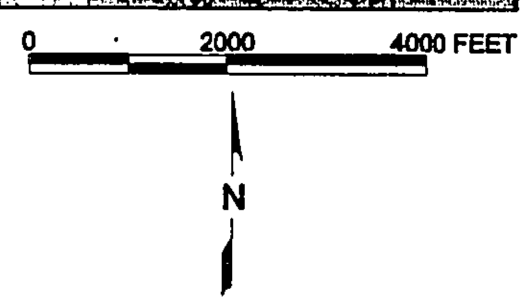
SITE MAP
Hawaii Intergenerational Community Development Association
Tax Map Key (1) 3-9-08: 40 (Portion)
Honolulu, Oahu, Hawaii
FIGURE 2



REFERENCE:
Horizons Technology, Inc.
Sure Maps Raster
U.S.G.S. Topographic Map (1983)
Koko Head Quadrangle
Koko Head, Oahu, Hawaii



LOCATION MAP

Hawaii Intergenerational Community
Development Association
Tax Map Key (1) 3-9-08: 40
Honolulu, Hawaii, Oahu

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43022-001-0105 jsb 0105a dwg 4/99

FIGURE 1

Photo 1: View west from the chained and locked entrance of dirt road, construction debris onsite.

Photo 2: View north of the electric range and washer and other household trash located at the southeastern end of the site.

Photo 3: View west of the engine block, dishwasher, bicycle, and rusting metal pipe located near the chained entrance to the dirt access road facing west.

APPENDIX
VISTA STARVIEW SEARCH

SITE ASSESSMENT REPORT

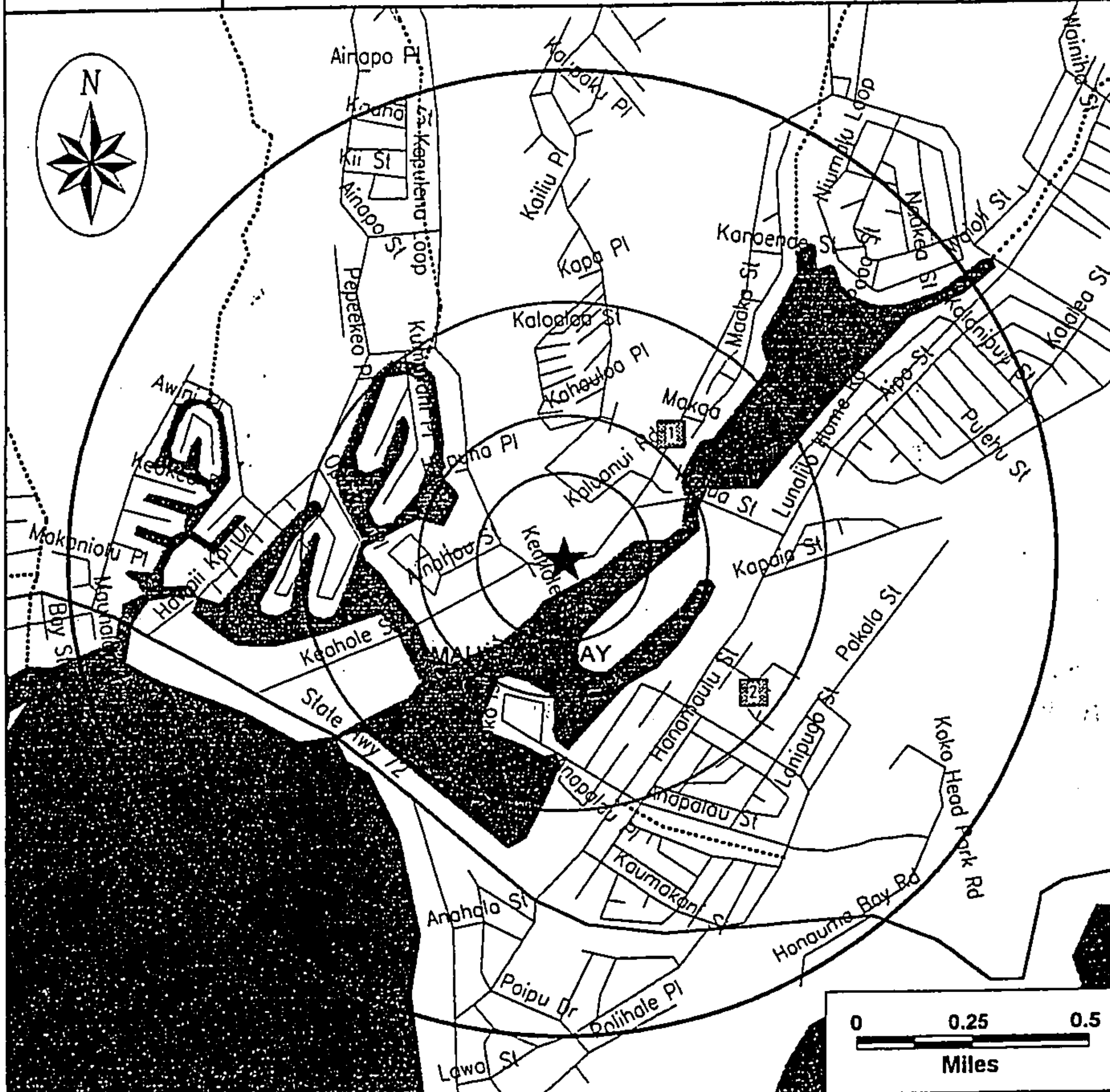
PROPERTY INFORMATION	CLIENT INFORMATION
Project Name/Ref #: HICDA Hawaii Kai Drive Hawaii Kai, HI 96825 Cross Street: no address assigned to parcel Latitude/Longitude: (21.290142, 157.706710)	

Site Distribution Summary Agency / Database - Type of Records			within 1/8 mile	1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
A) Databases searched to 1 mile:						
US EPA	NPL	National Priority List	0	0	0	0
US EPA	CORRACTS (TSD)	RCRA Corrective Actions and associated TSD	0	0	0	0
B) Databases searched to 1/2 mile:						
US EPA	CERCLIS / NFRAP	Sites currently or formerly under review by US EPA	0	0	0	-
US EPA	TSD	RCRA permitted treatment, storage, disposal facilities	0	0	0	-
STATE	LUST	Leaking Underground Storage Tanks	0	0	2	-
STATE	SWLF	Permitted as solid waste landfills, incinerators, or transfer stations	0	0	0	-
C) Databases searched to 1/4 mile:						
STATE	UST	Registered underground storage tanks	0	0	-	-
D) Databases searched to 1/8 mile:						
US EPA	ERNS	Emergency Response Notification System of spills	0	-	-	-
US EPA	LG GEN	RCRA registered large generators of hazardous waste	0	-	-	-
US EPA	SM GEN	RCRA registered small generators of hazardous waste	0	-	-	-
STATE	SPILLS	State spills list	0	-	-	-

This report meets the ASTM standard E-1527 for standard federal and state government database research in a Phase I environmental site assessment. A (-) indicates a distance not searched because it exceeds these ASTM search parameters.

SITE ASSESSMENT REPORT

Map of Sites within 1 Mile

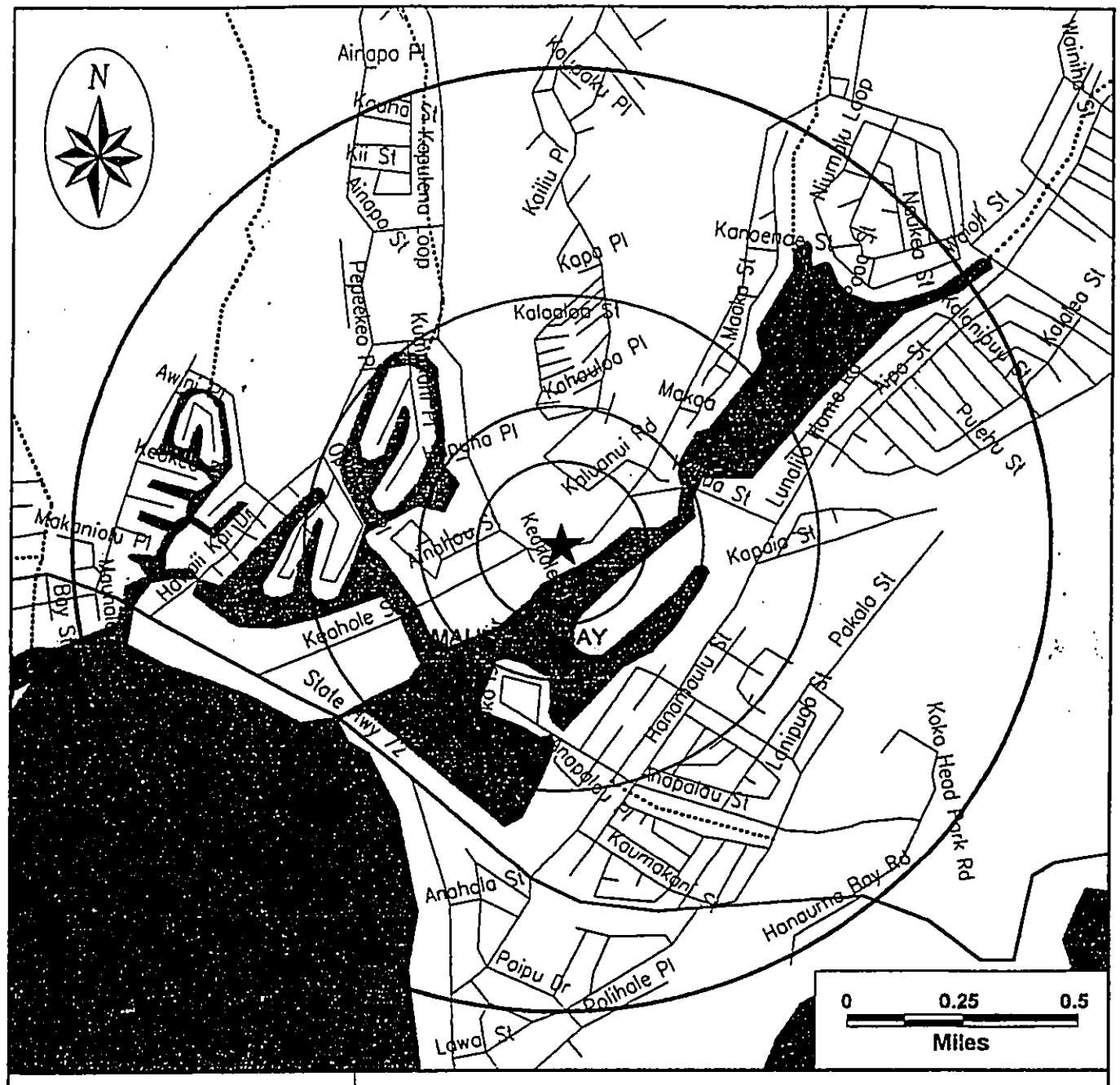


Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 mi.	1/2 mi.	1/4 mi.	1/8 mi.
	Single Sites	◆	▩	△	○
	Multiple Sites	◆	▩	△	○
		NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	UST	ERNS, GENERATORS

- Highways and Major Roads
- Roads
- Railroads
- Rivers or Water Bodies
- Utilities

SITE ASSESSMENT REPORT

Street Map



SITE ASSESSMENT REPORT

SITE INVENTORY

MAP ID	PROPERTY AND THE ADJACENT AREA (within 1/8 mile)	VISTA ID / DISTANCE / DIRECTION	A		B					C	D				
			NPL	CORRACTS(TSD)	CERCLIS/NFRAP	TSD	LUST	SWLF		UST	ERNS	LG GEN	SM GEN	SPILLS	
No Records Found															

MAP ID	SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)	VISTA ID / DISTANCE / DIRECTION	A		B					C	D				
			NPL	CORRACTS(TSD)	CERCLIS/NFRAP	TSD	LUST	SWLF		UST	ERNS	LG GEN	SM GEN	SPILLS	
No Records Found															

MAP ID	SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)	VISTA ID / DISTANCE / DIRECTION	A		B					C	D				
			NPL	CORRACTS(TSD)	CERCLIS/NFRAP	TSD	LUST	SWLF		UST	ERNS	LG GEN	SM GEN	SPILLS	
1	U.S. POSTAL SERVICE - HAWAII KAI 7040 HAWAII KAI DR HONOLULU, HI 96825	3430364 0.29 MI NE					X			•					
2	LUNALILO HOME DIESEL LEAK 501 KEKAULUOHI STREET HONOLULU, HI 96825	7256128 0.44 MI SE					X			•				•	

MAP ID	SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)	VISTA ID / DISTANCE / DIRECTION	A		B					C	D				
			NPL	CORRACTS(TSD)	CERCLIS/NFRAP	TSD	LUST	SWLF		UST	ERNS	LG GEN	SM GEN	SPILLS	
No Records Found															

X = search criteria; • = tag-along (beyond search criteria).

UNMAPPED SITES	VISTA ID	A		B				C	D			
		NPL	CORRACTS(TSD)	CERCLIS/NFRAP	TSD	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	SPILLS
FAA - HNL RTR HONOLULU INTERNATIONAL AIRPORT HONOLULU, HI 96825	11514310					X		X				
FAA - HNL VORTAC HONOLULU INTERNTIONAL AIRPORT HONOLULU, HI 96825	8471281							X				
KANEOHE MCBH LANDFILL HONOLULU, HI	6626678						X					
KAPAA LANDFILL HONOLULU, HI	6626679						X					
KALUAKOI LANDFILL HONOLULU, HI	6626676						X					
HANAUMA BAY CABLE TERMINAL BLDG BEACH ACCESS ROAD HONOLULU, HI 96841	11514279							X				
GOLDEN HARVEST RESTUARUANT ALA MOANA SHOPPING CENTER HONOLULU, HI 96800	6636080							X				
ECONOMY PLUMBING _SHEETMETAL, 410-B EKOLU WY / SAND ISLAND HONOLULU, HI 96809	6636114							X				
MUNICIPAL WELL 0919-03 HOKUALELE RD HONOLULU, HI 96805	6636142							X				
KOKO RADIO STATION KOKO HEAD CENTRAL OFFICE KOKO HEAD P HONOLULU, HI 96841	11514323							X				
JOHNSTON ATOLL PACIFIC OCEAN HONOLULU, HI 96800	6636431							X				
BARBERS POINT HONOLULU, HI	3852206						X					
KAPAA , HI	3852221						X					
WEST HAWAII LANDFILL HONOLULU, HI	4664297						X					
NANAKULI LANDFILL 8702929 FARRINGTON HWY, WAIANAE HONOLULU, HI	4664296						X					
WAKE BLDG 1403 HONOLULU, HI 96800	8552246							X				

UNMAPPED SITES VISTA ID	A		B				C	D			
	NPL	CORRACTS/TSD	CERCLIS/NFRAP	TSD	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	SPILLS
WAKE BLDG 1519 HONOLULU, HI 96800 8562246							X				

SITE ASSESSMENT REPORT

DETAILS

PROPERTY AND THE ADJACENT AREA (within 1/8 mile)

No Records Found

SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)

No Records Found

SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)

VISTA Address*:	U.S. POSTAL SERVICE - HAWAII KAI 7040 HAWAII KAI DR HONOLULU, HI 96825	VISTA ID#: Distance/Direction: Plotted as:	3430364 0.29 MI / NE Point	Map ID 1
STATE LUST - State Leaking Underground Storage Tank / SRC# 5568		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Facility ID:	*9-101769*
Leak ID#:	*920128*
Leak Date:	*12-MAR-98*
Remediation Status:	*SITE CLEANUP COMPLETED*

VISTA Address*:	LUNALILO HOME DIESEL LEAK 501 KEKAULUOHI STREET HONOLULU, HI 96825	VISTA ID#: Distance/Direction: Plotted as:	7255128 0.44 MI / SE Point	Map ID 2
STATE LUST - State Leaking Underground Storage Tank / SRC# 5568		EPA/Agency ID:	N/A	

Agency Address:	*LUNALILO HOME* *501 KEKAULUOHI ST* *HONOLULU, HI 96825*
Facility ID:	*9-103403*
Leak ID#:	*980118*
Leak Date:	*07-JUN-98*
Remediation Status:	*LUST CLEANUP INITIATED: PETROLEUM*

SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)

No Records Found

UNMAPPED SITES

VISTA Address*:	FAA - HNL RTR HONOLULU INTERNATIONAL AIRPORT HONOLULU, HI 96825	VISTA ID#:	11514310
STATE LUST - State Leaking Underground Storage Tank / SRC# 5568		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility ID:	9-100200		
Leak ID#:	980037		
Leak Date:	21-JAN-98		
Remediation Status:	CONFIRMED RELEASE		
STATE LUST - State Leaking Underground Storage Tank / SRC# 5568		EPA/Agency ID:	N/A
Agency Address:	FAA - HNL VORTAC HONOLULU INTERNTIONAL AIRPORT HONOLULU, HI 96825		
Facility ID:	9-100276		
Leak ID#:	980243		
Leak Date:	31-AUG-98		
Remediation Status:	CONFIRMED RELEASE		

VISTA Address*:	KANEOHE MCBH LANDFILL HONOLULU, HI	VISTA ID#:	6525678
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility Type:	SANITARY LANDFILL/LANDFILL		
Facility Status:	ACTIVE		
Permit Status:	NOT AVAILABLE		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility Type:	SANITARY LANDFILL/LANDFILL		
Facility Status:	ACTIVE		
Permit Status:	NOT AVAILABLE		

VISTA Address*:	KAPAA LANDFILL HONOLULU, HI	VISTA ID#:	6525679
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility Type:	SANITARY LANDFILL/LANDFILL		
Facility Status:	CLOSED		
Permit Status:	NOT AVAILABLE		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility Type:	SANITARY LANDFILL/LANDFILL		
Facility Status:	CLOSED		
Permit Status:	NOT AVAILABLE		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility Type:	SANITARY LANDFILL/LANDFILL		
Facility Status:	CLOSED		
Permit Status:	NOT AVAILABLE		

* VISTA address includes enhanced city and ZIP.

UNMAPPED SITES CONT.

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	ACTIVE
Permit Status:	NOT AVAILABLE

VISTA Address*:	KALUAKOI LANDFILL HONOLULU, HI	VISTA ID#:	6525676

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	ACTIVE
Permit Status:	NOT AVAILABLE

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	ACTIVE
Permit Status:	NOT AVAILABLE

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	ACTIVE
Permit Status:	NOT AVAILABLE

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	ACTIVE
Permit Status:	NOT AVAILABLE

VISTA Address*:	BARBERS POINT HONOLULU, HI	VISTA ID#:	3852205

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	SANITARY LANDFILL/LANDFILL
Facility Status:	NOT AVAILABLE
Permit Status:	APPROVED CESSATION

VISTA Address*:	KAPAA HI	VISTA ID#:	3852221

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	SAME AS ABOVE
Facility Type:	TRANSFER STATION
Facility Status:	NOT AVAILABLE
Permit Status:	APPROVED CESSATION

STATE SWLF - Solid Waste Landfill / SRC# 5570	EPA/Agency ID: N/A
Agency Address:	KAPAA HONOLULU, HI
Facility Type:	TRANSFER STATION
Facility Status:	NOT AVAILABLE
Permit Status:	APPROVED CESSATION

UNMAPPED SITES CONT.

VISTA Address*:	WEST HAWAII LANDFILL HONOLULU, HI	VISTA ID#:	4664297
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	*SAME AS ABOVE*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*NOT AVAILABLE*		
Permit Status:	*APPROVED CESSATION*		

VISTA Address*:	NANAKULI LANDFILL 8702929 FARRINGTON HWY, WAIANAE HONOLULU, HI	VISTA ID#:	4664296
STATE SWLF - Solid Waste Landfill / SRC# 5570		Agency ID:	LF-0021-94
Agency Address:	*SAME AS ABOVE*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*ACTIVE*		
Permit Status:	*NOT AVAILABLE*		
STATE SWLF - Solid Waste Landfill / SRC# 5570		Agency ID:	LF-0021-94
Agency Address:	*SAME AS ABOVE*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*ACTIVE*		
Permit Status:	*NOT AVAILABLE*		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	*NANAKULI LANDFILL HONOLULU, HI*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*ACTIVE*		
Permit Status:	*NOT AVAILABLE*		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	*NANAKULI LANDFILL HONOLULU, HI*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*ACTIVE*		
Permit Status:	*NOT AVAILABLE*		
STATE SWLF - Solid Waste Landfill / SRC# 5570		EPA/Agency ID:	N/A
Agency Address:	*SAME AS ABOVE*		
Facility Type:	*SANITARY LANDFILL/LANDFILL*		
Facility Status:	*NOT AVAILABLE*		
Permit Status:	*APPROVED CESSATION*		

SITE ASSESSMENT REPORT

DESCRIPTION OF DATABASES SEARCHED

A) DATABASES SEARCHED TO 1 MILE

NPL
SRC#: 5593

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for NPL was February, 1999.

The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the US Dept of Health and Human Services and the US EPA in order to become an NPL site.

CORRACTS
SRC#: 5596

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA maintains this database of RCRA facilities which are undergoing "corrective action". A "corrective action order" is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA.

B) DATABASES SEARCHED TO 1/2 MILE

CERCLIS
SRC#: 5594

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for CERCLIS was January, 1999.

The CERCLIS List contains sites which are either proposed to or on the National Priorities List(NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of all pre-remedial, remedial, removal and community relations activiies or events at the site, financial funding information for the events, and unrestricted enforcement activities.

NFRAP
SRC#: 5595

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for CERCLIS-NFRAP was January, 1999.

NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

RCRA-TSD
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities which treat, store and/or dispose of hazardous waste.

SWLF
SRC#: 5570

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Permitted Landfills, Transfer Station Incinerator Facilities Database was December, 1998.

This database is provided by the Department of Health, Solid Hazardous Waste Branch. The agency may be contacted at: 808-586-4243.

The Hawaii Permitted Landfill, Transfer Station Incinerator Facilities Database does not provide a facility street address, city, or zip code.

LUST
SRC#: 5568

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Active Leaking Underground Storage Tank List was January, 1999.

This database is provided by the Department of Health, Solid Hazardous Waste Branch. The agency may be contacted at: 808-586-4226.

The Hawaii Leak Report provides additional owner address information which is impossible to provide in this format. For the additional owner address information please contact 1-800-877-3824.

C) DATABASES SEARCHED TO 1/4 MILE

UST's
SRC#: 5569

VISTA conducts a database search to identify all sites within 1/4 mile of your property.
The agency release date for UST Section Database was January, 1999.

This database is provided by the Department of Health, Solid Hazardous Waste Branch. The agency may be contacted at: 808-586-4226; Caution-Many states do not require registration of heating oil tanks, especially those used for residential purposes.

D) DATABASES SEARCHED TO 1/8 MILE

ERNS
SRC#: 4939

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for was July, 1998.

The Emergency Response Notification System (ERNS) is a national database containing records from October 1986 to the release date above and is used to collect information for reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of Transportation. The ERNS hotline number is (202) 260-2342.

RCRA-LgGen
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Large Generators are facilities which generate at least 1000 kg./month of non-acutely hazardous waste (or 1 kg./month of acutely hazardous waste).

RCRA-SmGen
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Small and Very Small generators are facilities which generate less than 1000 kg./month of non-acutely hazardous waste.

SPILL
SRC#: 4450

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for Spill List was December, 1997.

This database is provided by the Department of Health, Hazard Evaluation Emergency Response Program. The agency may be contacted at: 808-586-4652.

The Department of Health Spills List provides a short description of the circumstances of each spill. For more information regarding these sites please contact 1-800-877-3824.

End of Report

Appendix D

Phase I & II Soils Study, DAMES & MOORE, July 1999

DCM GROUP

DAMES & MOORE

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Geotechnical Investigation Report
Proposed Kaluanui Development
Honolulu, Oahu, Hawaii
For Hawaii Intergenerational Community Development Association (HICDA)

Job Number 43022-003-011
July 22, 1999

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

615 Piikoi Street, Suite 900
Honolulu, Hawaii 96814-3141
808 593 1116 Tel
808 593 1198 Fax
hon@dames.com E-mail

July 22, 1999

HICDA
1154 Fort Street Mall, Suite #300
Honolulu, Hawaii 96813

Attn: Mr. Mike Klein

Re: Geotechnical Investigation Report
Proposed Kaluanui 30 and 35 Unit Development
Honolulu, Oahu, Hawaii
For HICDA
Job Number 43022-003-011

Dear Mr. Klein:

Five copies of our report, "Geotechnical Investigation Report, Proposed Kaluanui 30 and 35 Unit Development, Honolulu, Oahu, Hawaii for HICDA" are herewith submitted.

The scope of our work was defined in our revised proposal dated June 25, 1999 and this geotechnical investigation has generally conformed to the scope described in our proposal. During the field investigation, we saw a need to drill more borings. This work was done following your review and approval. Our findings and recommendations are presented in the body of the report.

Dames & Moore is qualified to provide the design of temporary erosion and sediment controls for this project. We would be pleased to provide a proposal for your consideration, if you desire.

Selected soil samples were used in the laboratory testing. The remaining samples will be kept for a period of time for possible inspection and examination. Unless requested otherwise, they will be discarded three months from the date of this report.

It has been a pleasure performing this assignment for you. If you have any questions concerning this report, please feel free to contact us for clarification.

Yours very truly,

DAMES & MOORE

Wray M. Kakugawa, P.E.
Project Engineer

Paul R. Weber, P.E.
Senior Engineer

PRW/WMK/agp

(99HON-241.doc:43022-003-0106-011)

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the results of our geotechnical investigation for the proposed approximately 1.5-acre Kaluanui Senior Apartment development in Hawaii Kai, Oahu, Hawaii. The proposed project site is presently undeveloped and vacant, and is part of a larger planned development parcel. The site is bounded by Hawaii Kai Drive to the south and undeveloped land to the north, south, west, and east. Hawaii Intergenerational Community Development Association (HICDA) proposes to construct two apartment complexes, one complex with 30 units and the other with 35 units along Hawaii Kai Drive. The approximate location of site is shown on the Map of Area, Figure 1.

Dames & Moore previously had conducted soils and foundation investigations for construction in Hawaii Kai in the vicinity of the project site. Boring logs along with other geologic information in the area were reviewed for the preparation of this report.

2.0 PROJECT DESCRIPTION

Based on information provided by HICDA, the proposed site is being constructed in two phases. Both phases will consist of two story buildings constructed of cast-in-place concrete. One phase will consist of 30 units in 3 buildings situated in a "U" shape, and the other phase will consist of 35 units in 2 buildings situated in a "L" shape. Currently, the grade of the site is relatively close in elevation to the grade of the proposed first floor.

According to the structural engineer, Baldridge & Associates Structural Engineering, preliminary wall loads on the footings will be a maximum of 14 to 15 kips per linear foot.

Other site improvements will likely include utilities, landscaping, and walkways. The project site is shown on the Plot Plan, Figure 2.

3.0 SCOPE OF WORK

The purpose of the investigation was to explore the subsurface conditions, evaluate the engineering characteristics of the materials encountered, and develop appropriate geotechnical recommendations for the design and construction of the proposed project. The scope of our

services presented herein was limited to a conventional geotechnical investigation and did not include environmental assessment, evaluation, or investigation. A Phase I Environmental Site Assessment (ESA) report, dated April 23, 1999, was submitted separately.

The following scope of services were provided in general accordance to our revised proposal dated June 25, 1999, as amended by subsequent approval.

- Reviewed available data from our files as well as published and unpublished reports and geologic maps of the area and correlated them to the project site;
- Drilled, logged, and sampled a total of eleven exploratory borings at the project site;
- Performed soil mechanics laboratory testing on selected soil samples for identification and to determine their engineering properties;
- Performed engineering analyses for the design of the foundations and parking lot pavements;
- Prepared this geotechnical investigation report to summarize our findings, conclusions, and recommendations.

4.0 FIELD EXPLORATION AND LABORATORY TESTING

4.1 FIELD EXPLORATION

To obtain the subsurface information, eleven geotechnical exploratory borings, B-1 through B-11, were drilled from July 6, 1999 through July 9, 1999. The boring depths ranged from 14.7 feet to 25.3 feet. The boring locations are shown on the Plot Plan, Plate 2. A more detailed description of the field exploration program and the Logs of Borings are presented in the Appendix of this report. The retrieved soil samples were packaged and transported back to the Dames & Moore soil mechanics laboratory in Honolulu for further examination and testing.

4.2 LABORATORY TESTING

A laboratory testing program was performed to verify visual field classifications and to determine pertinent soil engineering properties of the soil materials encountered in the borings. The tests performed included in-situ moisture and density determinations, consolidation tests,

and direct shear tests. A description of the laboratory test procedures and the results of the laboratory testing are presented in the Appendix.

5.0 SITE CONDITIONS

5.1 GENERAL GEOLOGY

Geologically, the site is located on the southern most slope of the Koolau Volcanic Range at the base of Kaluanui Ridge. The site is situated west of the Koko Crater tuff cone, and at the eastern edge of the mouth of Hahaione Valley leading to Kuapa Pond. The Koko Crater is part of the Honolulu Volcanic Series forming a northeast to southwest tending row of volcanic craters.

Stream valleys, such as Hahaione Valley, were cut during lower stands of the sea. When the sea levels rose, these valleys were drowned and embayments were formed where silts and sands were deposited. After several stands of the sea, the sea eventually rose to its present level, creating a marsh environment. Subsequent placement of man made and dredged fill has reclaimed the land.

5.2 SURFACE CONDITION

The proposed site is part of a larger currently undeveloped and vacant parcel fronting Hawaii Kai Drive. The relatively level site encompasses approximately 1.5 acres. The site mostly consists of low-lying grasses with occasional shrubs and keawe and haole koa trees. The northern 80- to 100-foot wide strip of the property consists of dense keawe and haole koa trees traversed by random dirt roads.

The project site gently slopes downward from the northeastern corner of the site towards the western and southwestern property boundaries. The ground surface elevations range from approximately +10.0 feet Mean Sea Level (MSL) to about +4.0 feet MSL. The ground surface features of the site as well as the proposed building footprints are shown on the Plot Plan, Figure 2.

5.3 SUBSURFACE CONDITION

Eleven borings were drilled at the site to observe the subsurface condition. Based on the results of the borings and the known geologic conditions, the subsurface soil conditions may be described as three major distinct layers; an upper compacted fill layer, underlain by a layer of lagoonal deposits, and a basaltic cinder sand layer. The borings indicate that approximately 2.5 to 6 feet of dark brown clayey silt fill is underlain by approximately 1 to 9 feet of lagoonal deposits before encountering very dense basaltic cinder sand and cemented cinder sand gravel.

Borings B-1, B-2, B-5, B-9, B-10, and B-11 encountered a thin 1.5- to 4.5-foot layer of very soft clayey silt with organic matter just above the layer of lagoonal deposits. Borings B-2, B-5, and B-8 encountered basaltic cinder and coralline sand below the layer of lagoonal deposits and above the layer of cemented basaltic cinder sand. Boring B-6 did not encounter fill or lagoonal material.

Ground water was encountered between 3 to 9 feet below the existing ground surface. Due to the proximity of the site to Kuapa Pond and Maunalua Bay, the groundwater level is expected to be affected by tidal fluctuations. Weather conditions and local hydrologic events, such as construction pumping activities, are also expected to affect the groundwater level. A higher groundwater level can be anticipated following a heavy rainstorm.

Subsurface conditions at the site are illustrated on the Generalized Subsurface Cross Section A-A', Figure 3. Also shown on the cross section is the approximate extent of the soft lagoonal soil beneath the site. The location of the cross section is shown on the Plot Plan, Figure 2. The profiles were generated by interpolation between boring locations. Because the borings were relatively widely spaced, subsurface conditions between borings may vary locally.

6.0 DISCUSSIONS AND RECOMMENDATIONS

Based on our investigation, we concluded from a geotechnical engineering standpoint that it is feasible to construct the proposed Kaluanui development at the subject site, provided the recommendations presented in this report are fully incorporated into the design and implemented during the construction.

6.1 FOUNDATIONS

Generally, low-rise residential structures can be supported on shallow spread footings. However, we found soft and compressible lagoonal soils under a crust of dense fill throughout most of the site. Dames & Moore considered four typical foundation design solutions for the subsurface conditions described here.

The first solution involves over excavation of the poor soils and recompaction of more stable backfill soil materials. This solution is not considered practical for this project site due to the depth of soft compressible soils (up to 25 feet deep) and the groundwater within this layer of soil. The combination of soft soils and the ground water table would make excavation difficult and expensive.

The second solution would be to pre-load the site. In pre-loading, a mass of soil is stacked up on the site to a height of several feet. The weight of this soil typically would be more than the weight of the proposed building. This would cause the subsoil to settle in advance of the building construction. While pre-loading may be technically feasible at this site, there are two difficulties. The first involves securing and hauling a considerable quantity of fill to the site, and then removing it after the pre-loading is finished. The second difficulty is the time for the pre-load settlement to take place, typically several months. Construction would be delayed while waiting for the settlement to dissipate. If the development project schedule would permit this delay, we will provide more specific geotechnical recommendations.

The third solution is to transfer the load to the dense basaltic cinder deposit found at a depth not greater than 25 feet below the existing surface. There are several ways of transferring the load. For a low-rise residential building, we favor 4-inch diameter pin piles or Titan 30/11 injection micropiles. Each would be capable of sustaining design vertical loads up to 12 kips per pile. The 4-inch diameter pin piles should be either schedule 40 steel, hot-dipped galvanized or schedule 80 uncoated steel. The pin piles should be driven open-ended to refusal then cleaned out and filled with 3,000 pounds per square inch (psi) cementitious grout. The criteria for "refusal" will depend on the choice of the driving apparatus. We will provide the refusal specification at the time this method and a driving system is selected. The anticipated depth of refusal is about 20 to 25 feet below the existing ground surface. Titan injection micropiles should be installed to practical contact with the basaltic cinder sand, and in accordance with the

manufacturer's literature (see Appendix B). The depth of penetration of the Titan micropiles shall be about 3 feet into the cinder sand or about 20 to 25 feet below the existing grade.

The fourth solution would be to use conventional 12-inch square precast-prestressed concrete piles to support the building in the dense basaltic cinder deposit. Allowable vertical downward load capacities of 40 tons (80 kips) may be used for preliminary design. Pile lengths are expected to vary approximately 20 to 25 feet below the existing grade.

6.2 SLABS-ON-GRADE

To limit differential settlement, floor slabs-on-grade should be designed as structural slabs-on-grade. A moisture barrier consisting of a 6-mil Visqueen plastic membrane should be provided between the slab and the crushed rock in areas where moisture susceptible floor coverings are used or where dampness in the slab is undesirable. We also recommend the use of a two-inch sand layer above the plastic membrane to protect it from puncturing and to provide for a more uniform concrete curing. The top six inches of the subgrade should be compacted to at least 95 percent relative compaction.

6.3 SEISMIC DESIGN

The proposed buildings should be designed for seismic conditions in accordance with the present City and County of Honolulu Building Code Zone 2A earthquake resistance requirements.

6.4 EARTHWORK

6.4.1 Clearing, Grubbing, and Stripping

Site preparation for this project will include clearing, grubbing, and stripping. The site should be cleared of abandoned utility lines, pavements, top soils, and any other miscellaneous debris. We recommend stripping all existing vegetation other than the designated trees and plants to be saved, removing roots, boulders, debris, and all deleterious materials from the project site. Any existing utility lines beneath the proposed building areas may need to be relocated prior to site demolition, and where appropriate, the abandoned utility pipes, if not removed should be grouted with concrete. In locations where existing manholes are removed, the excavation should be backfilled with compacted structural fill.

6.4.2 Site Grading

A select structural fill should be used for areas of proposed fill within the building area. Select structural fill material should not contain expansive soils, debris, rock greater than three inches in largest dimension, organic matter, and should satisfy the select borrow requirements of the City and County of Honolulu's Standard Specification for Public Works Construction. On-site clean basaltic cinder sands and gravels without any expansive clay or oversized boulders/cobbles may be used as structural fill. Lagoonal and silty clay soils should not be used as structural fill material.

Prior to fill placement, the ground surface should be scarified to a minimum of six inches and compacted to a minimum of 90 percent of the maximum dry density as determined by the ASTM D 1557-91 method. Fill should be moisture conditioned to within two percent of the optimum moisture content and placed in horizontal lifts not to exceed eight inches. Selected structural fill should be compacted to a minimum of 95 percent of the maximum dry density with a roller of enough weight to achieve the compaction.

6.4.3 Dust Control, Drainage, and Erosion Control

Dust control, temporary drainage, and erosion control measures should be specified by a licensed engineer and implemented by the grading contractor.

6.5 TEMPORARY EXCAVATIONS

The near surface on-site soils can be excavated with conventional earth moving equipment, although occasional cobbles, boulders, and buried debris may be encountered. All excavations should comply with Federal and local OSHA requirements. All excavations greater than 5 feet in depth should be sloped or shored. Temporary excavations should be sloped at 1 horizontal to 1 vertical (1H:1V) or flatter. During wet weather, runoff water entering excavations should be disposed of appropriately. To prevent runoff water from adjacent areas from entering the excavation, a perimeter berm may be constructed at the top of the excavation. Heavy construction equipment and building materials, excavated soils, and vehicle traffic should not be allowed within 5 feet of the top of the excavation.

6.6 DEWATERING

Deep excavations for removal of soft soils or grade beams are not anticipated. Should groundwater be encountered, construction dewatering by sump pumping or other means of water control may be required to keep the bottom of the excavation dry. Dewatering procedures should be specified by a licensed engineer and implemented by the excavation contractor.

6.7 RETAINING WALLS

Nonstructural retaining walls, three feet or less in height, may be designed for at rest pressure of 40 pounds per square foot per foot of depth. The recommended equivalent fluid pressure is only for level backfill behind the wall. To resist lateral forces, the foundation may be designed for a coefficient of base friction of 0.3 (between concrete and clayey silt soil) and a passive equivalent fluid pressure of 300 pounds per square foot per foot of depth for footings against the clayey silt soil.

Additional information should be provided to Dames & Moore for the design of structural retaining walls.

6.8 PAVEMENTS

Asphaltic concrete pavements for light automobile traffic and parking should be designed with 2-1/2 inches of asphaltic concrete supported on 6 inches of aggregate base course. Heavily trafficked pavements for trucks, if any, should be designed with 4 inches of asphaltic concrete supported on 6 inches of aggregate base course.

Trash bin or similar type areas should be designed with a minimum of 6 inches of concrete supported on a minimum of 4 inches of clean, free-draining crushed rock, such as locally available No. 3B-Fine rock aggregate (ASTM #67). As a minimum all concrete pavements should be reinforced with No. 3 rebars, placed at 18 inches on centers at the slab mid-height. Additional slab thickness and reinforcement may be required by the structural engineer.

All aggregate base course as well as the top 6 inches of the subgrade should be compacted to at least 95 percent relative compaction.

6.9 SURFACE DRAINAGE

Surface drainage around structures should be designed a licensed engineer. At a minimum, surface water should be directed away from the foundations and towards approved drainage devices. Minimum flow gradient should be two percent for unpaved areas and one percent for paved areas. Irrigation of landscaping should be controlled to maintain, as much as possible, a consistent moisture content sufficient to provide healthy plant growth without overwatering.

7.0 REVIEW OF PLANS AND SERVICES DURING CONSTRUCTION

The project foundation plans and specifications should be reviewed by Dames & Moore prior to finalization to see that the intent of these recommendations and design considerations are properly reflected in the final design. During construction, a qualified geotechnical engineer should be retained to provide the following construction monitoring services:

- After site clearing and grubbing;
- During foundation construction;
- During compaction of fill material;
- During construction of pavements; and
- When any unusual conditions are encountered.

8.0 LIMITATIONS

This report has been prepared for Hawaii Intergenerational Community Development Association and their designated architects and engineers for the purpose of designing the presently contemplated Kaluanui Development in Hawaii Kai, Honolulu, Oahu, Hawaii. Recommendations have been prepared in accordance with generally accepted soil engineering practices. No other warranty, expressed or implied, is made as to the professional advice contained in this report. This report has not been prepared for other parties and may not contain sufficient information for other purposes or other uses.

This report is written based on subsurface information obtained from borings drilled for the subject property. It does not reflect variations which may occur in the subsurface conditions between borings. The nature and extent of the variations of the subsurface conditions may not

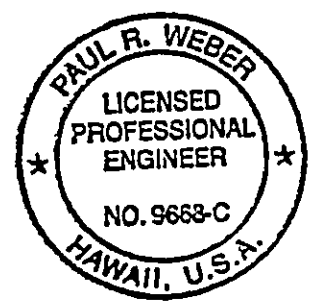
become evident until construction. Should subsurface conditions differ from those encountered during this study, Dames & Moore or the responsible geotechnical engineer during the construction should be notified immediately so that appropriate construction modifications can be developed and implemented, if necessary.

The following figures and appendix are attached to complete this report:

Figure 1	-	Location Map
Figure 2	-	Plot Plan
Appendix A	-	Field Exploration and Laboratory Testing
Appendix B	-	Ischebeck Titan Micropiles

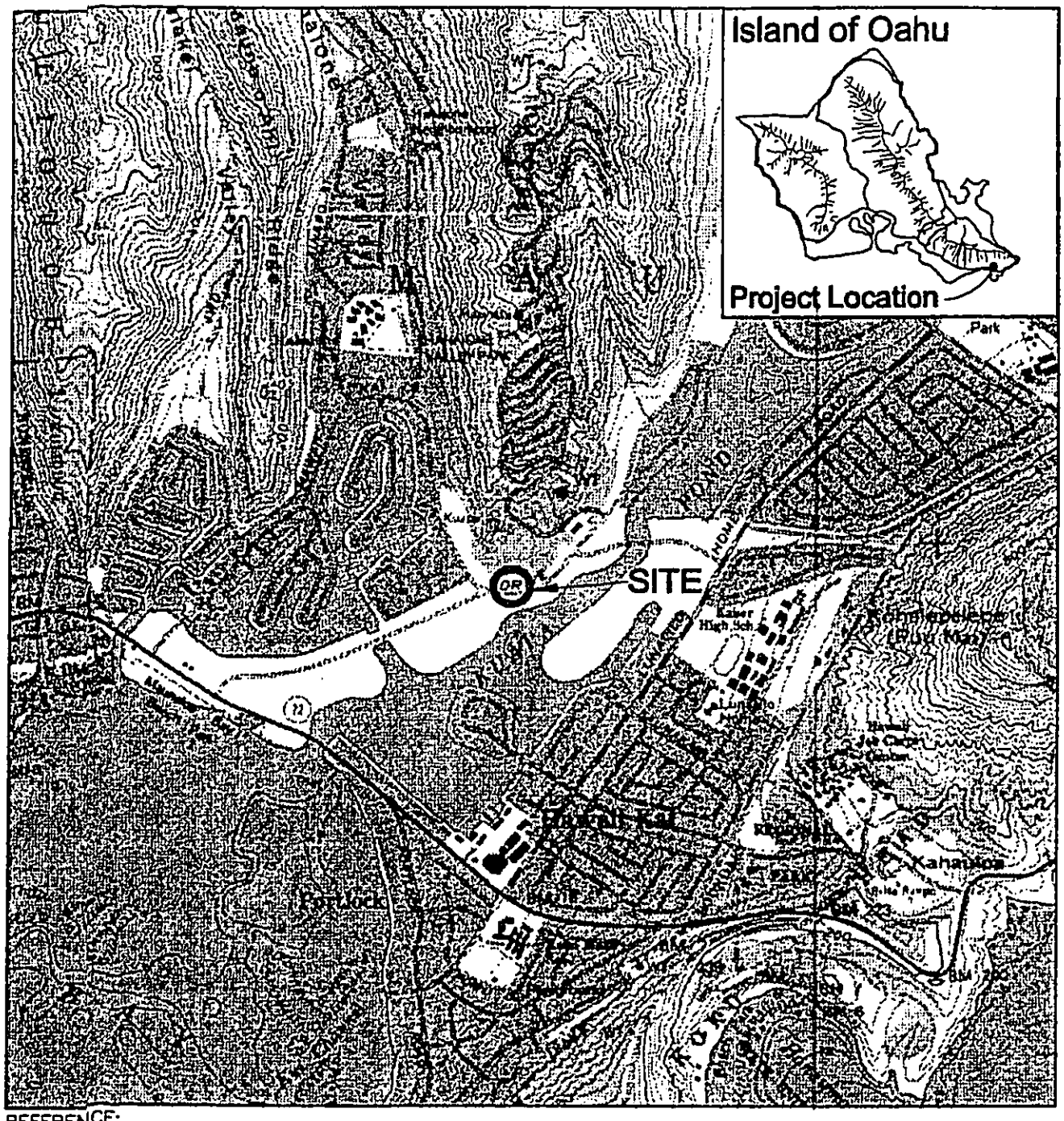
Respectfully Submitted,

DAMES & MOORE



Paul R. Weber, P.E.
Senior Engineer

PRW/WMK/agp

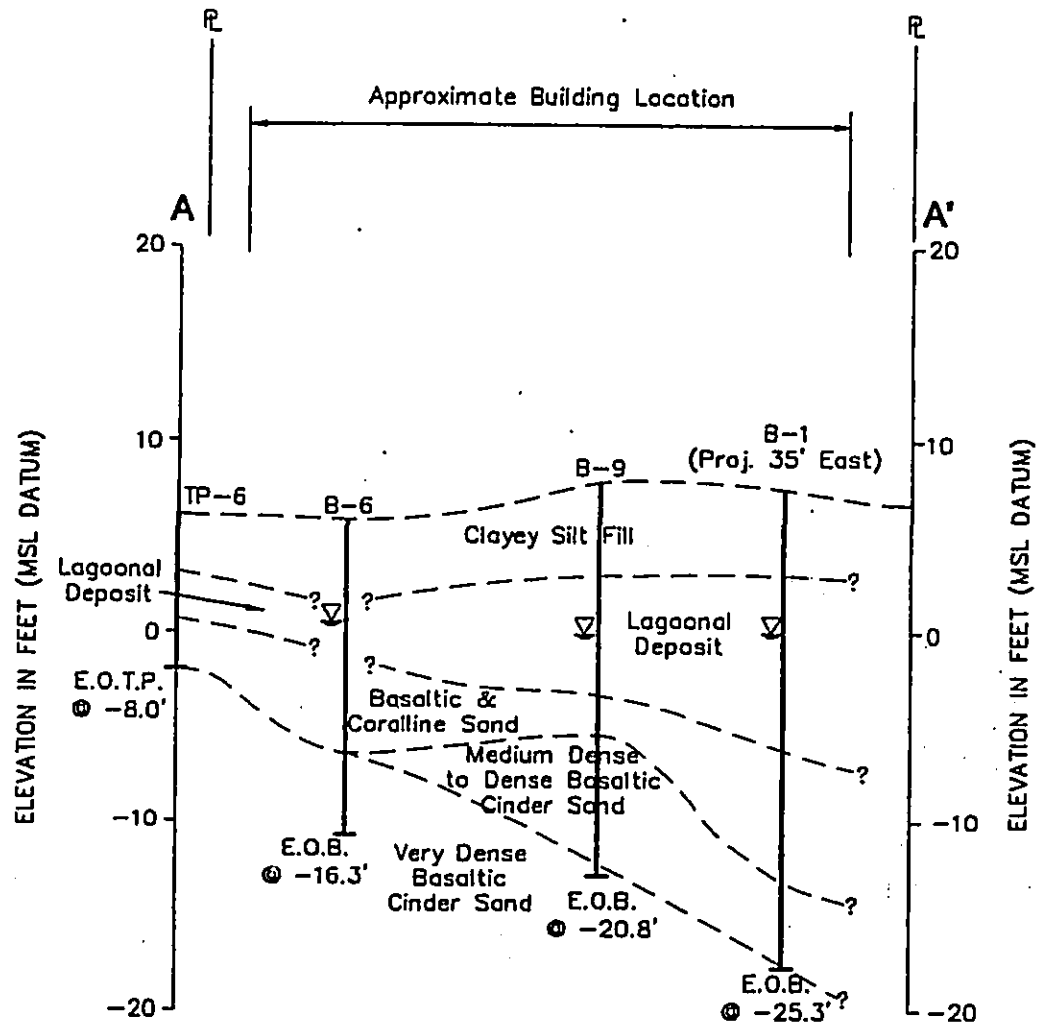


REFERENCE:
Horizons Technology, Inc.
Sure Maps Raster
U.S.G.S. Topographic Map (1983)
Koko Head Quadrangle
Koko Head, Oahu, Hawaii

LOCATION MAP

Hawaii Intergenerational Community
Development Association
Tax Map Key (1) 3-9-08: 40
Honolulu, Hawaii, Oahu

DAMES & MOORE



NOTE:
The conditions illustrated between borings are based on geological interpretations. While these are believed to be generally correct, the conditions may vary locally from those indicated.

Horizontal Scale 0 50 100
Vertical Scale 0 10 20
SCALE IN FEET

GENERALIZED SUBSURFACE CROSS SECTION A-A'

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

FIGURE 3

7/98 x-sect.dwg jb 43022-003-0105

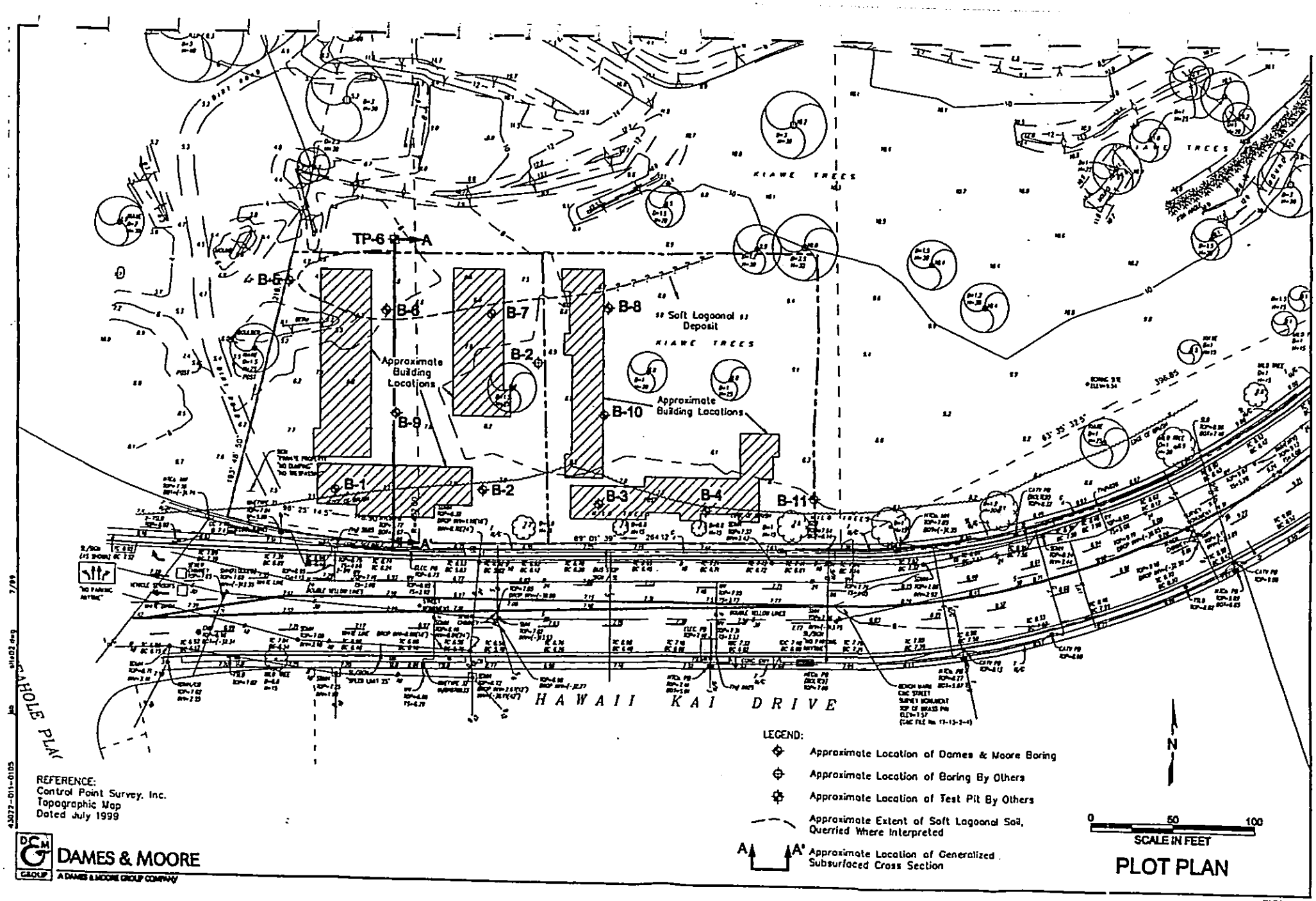
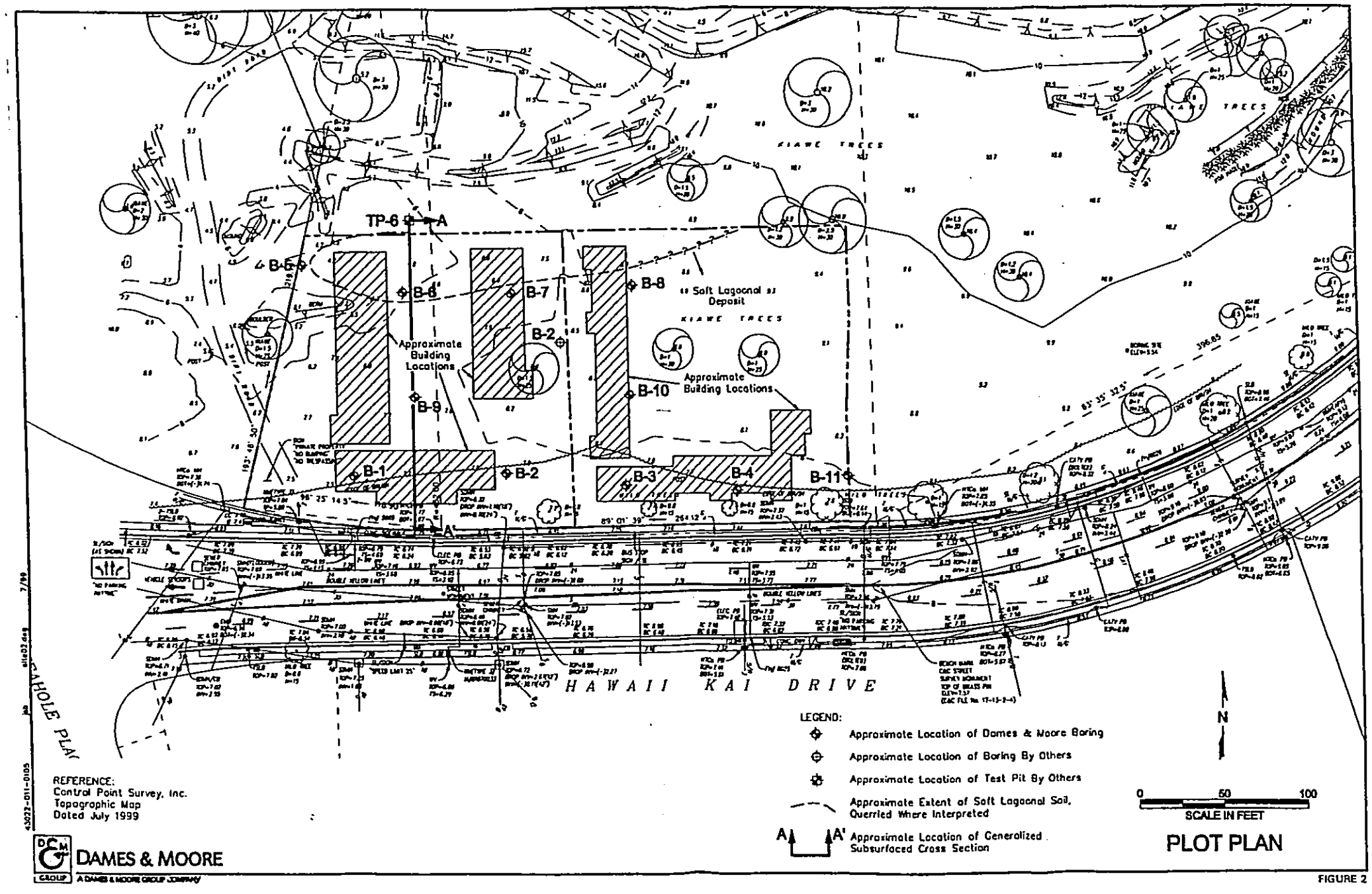

TP-6
A
A'
B-5
B-6
B-7
B-8
B-9
B-10
B-11
B-1
B-2
B-3
B-4
B-2
Soft Lagoonal Deposit
Approximate Building Locations
Approximate Building Locations
KIAWE TREES
KIAWE TREES
TREES
HAWAII KAI DRIVE
LEGEND:
Approximate Location of Dames & Moore Boring
Approximate Location of Boring By Others
Approximate Location of Test Pit By Others
Approximate Extent of Soft Lagoonal Soil, Queried Where Interpreted
Approximate Location of Generalized Subsurface Cross Section
N
0
50
100
SCALE IN FEET
REFERENCE:
Control Point Survey, Inc.
Topographic Map
Dated July 1999
DAMES & MOORE
A DAMES & MOORE GROUP COMPANY
PLOT PLAN

FIGURE 2


TP-6
A
A'
B-5
B-6
B-7
B-8
B-2
B-9
B-10
B-1
B-2
B-3
B-4
B-11
Soft Lagoonal Deposit
Approximate Building Locations
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SCALE IN FEET
REFERENCE:
Control Point Survey, Inc.
Topographic Map
Dated July 1999
DAMES & MOORE
GROUP
A DAMES & MOORE GROUP COMPANY
PLOT PLAN
FIGURE 2

APPENDIX A

FIELD INVESTIGATION AND LABORATORY TEST RESULTS

FIELD INVESTIGATION

To obtain the subsurface information, a total of eleven borings, B-1 through B-11, were drilled between July 6, 1999 and July 9, 1999. The borings were drilled to depths between 14.7 feet and 25.3 feet below the existing ground surface. The boring locations are shown on the Plot Plan, Figure 2.

The exploratory borings were drilled by Dames & Moore using a Mobile Drill B-53 truck mounted rig. Continuous flight solid stem augers were used to depth. Soil samples were obtained from the borings using a Dames & Moore "U" type sampler driven by a 140-pound drop hammer falling 30 inches per blow. The Dames & Moore "U" type sampler is shown in Exhibit A-1.

One of our field engineers observed the drilling operation and logged each boring. The retrieved soil samples were packaged and returned to our Honolulu laboratory for testing. All borings and were backfilled with in-situ and gravel material.

The Logs of Borings are presented in the Appendix on Figures A-1.1 through A-1.11. The soils encountered were classified according to the Unified Soil Classification System, Figure A-2.

LABORATORY TEST RESULTS

Selected soil samples were tested to evaluate pertinent classification and engineering properties. The tests included moisture content and dry density determinations, direct shear tests, and consolidation tests. All testing procedures were performed in accordance to the American Society for Testing Materials (ASTM) standards, unless otherwise noted. The results of the laboratory tests are presented in the following sections.

Moisture Content and Dry Density Determinations

Moisture content and dry density determinations (ASTM D 2216-92 and D 2937-94) were performed on selected soil samples. The results of these tests are presented on the Logs of Borings, Figures A-1.1 through A-1.11 in this Appendix.

Direct Shear Test

Direct shear tests (ASTM D 3080-90) were performed on selected undisturbed samples which were soaked for a minimum of 24 hours under a surcharge equal to the applied normal force during testing. After transferring the samples to the shear box, and reloading the samples, the pore pressures that set up in the samples due to the transfer were allowed to dissipate for a period of approximately one hour prior to the application of the shearing force. The samples were tested under various normal loads, a different specimen being used for each normal load. The samples were sheared in a motor-driven, strain-controlled, direct-shearing apparatus at strain rates of 0.050 inch per minute and 0.0020 inch per minute. The peak and residual shear values (relatively constant strength at large strains) were recorded. The method of performing the test is described on Exhibit A-2, Method of Performing Direct Shear and Friction Tests. The test results are presented on Figures A-3 through A-5, Direct Shear Test Report.

Consolidation Test

Two consolidation tests (ASTM D 2435-96) were performed on selected soil samples. The test results are presented on Figures A-6 and A-7 of the Appendix. The method of performing this test is presented on Exhibit A-3, Method of Performing Consolidation Tests.

The following Figures and Exhibits are attached to complete this Appendix:

Figures A-1.1 through A-1.11	-	Log of Borings B-1 through B-11
Figure A-2	-	Unified Soil Classification System
Figures A-3 through A-5	-	Direct Shear Test Report
Figures A-6 and A-7	-	Consolidation Test Data
Exhibit A-1	-	Dames & Moore Sampler Type U
Exhibit A-2	-	Method of Performing Direct Shear and Friction Tests
Exhibit A-3	-	Method of Performing Consolidation Tests

PROJECT *Kaluanui Development* JOB No. *43022-003-011*

LOCATION *Honolulu, Oahu, Hawaii* DRAWN BY *wmk (07-09-99)*

BORING B-1 (Page 1 of 1)

SURFACE ELEVATION *7.5* ± Feet

DATUM *Mean Sea Level*

LAB DATA		CORE INFO							
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					130	■			MH	Brown clayey fine to coarse grained coralline and basaltic sandy silt with fine to coarse angular to subangular coralline and basaltic gravel, trace rootlets, hard, moist (fill)
					25	■	5		MH	Brown and gray clayey fine to medium grained coralline and basaltic sandy silt, stiff, moist (estuary deposit)
					4	■			MH	Dark gray to black fine grained sandy clayey silt with trace wood fragments, stiff, moist (lagoonal deposit)
										grades dark gray to dark brown, no wood fragments, trace rootlets, soft, very moist
										(Water level at 1420 hours on 07-07-99)
					20	■	10		GM	grades greenish gray, no rootlets
										Greenish gray to gray silty clayey fine to coarse grained coralline sandy fine angular to subangular coralline gravel, loose, wet (lagoonal deposit)
					98	■	15		SM	Dark gray silty fine to coarse grained basaltic and coralline sand, slightly cemented in areas, dense, wet
					70	■	20		SM	Dark gray to dark brown silty fine to medium grained basaltic (cinder) sand, medium dense, wet
					120/3"	□	25			grades very dense
										(No recovery)
										Boring completed at 25.3 feet on 07-07-99.

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ☑ - Standard penetration test sample no recovery
- I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.1

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-2 (Page 1 of 1)

SURFACE ELEVATION 7.8 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
16.4	102				52	■			MH	Dark brown to yellowish red clayey fine to coarse grained sandy silt with some fine to coarse subangular basaltic and coralline gravel, very stiff, moist (fill)
24.1	98				22	■	5		GM	Dark brown silty clayey fine to coarse grained sandy fine subangular coralline gravel, loose, moist (estuary deposit)
98.6	49				6	■			MH	Dark brown and gray clayey silt with organic matter, soft, very moist (lagoonal deposit)
										(Water level at 1150 hours on 07-08-99)
					17	■	10		GM	grades no organic matter Gray silty fine to coarse grained coralline sandy fine subangular coralline gravel with trace shell fragements, loose, wet (lagoonal deposit)
41.3	84				22	■	15		SM	Dark brown silty fine to medium grained basaltic (cinder) sand, loose, wet
					190/9"	■	20		SM	Dark brown silty fine to medium grained basaltic (cinder) sand, cemented in areas, very dense, wet
										Boring completed at 21.3 feet on 07-08-99

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ⊠ - Standard penetration test sample no recovery
- I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.2

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-3 (Page 1 of 1)

SURFACE ELEVATION 7.5 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
16.9	110				71	■			MH	Dark brown clayey fine to coarse grained sandy silt with some fine to coarse subangular basaltic and coralline gravel, trace asphaltic concrete gravel, hard, moist (fill)
										Cobble (approximately 6 inches thick)
35.2	81				19	■	5		MH	Olive gray and brown clayey silt, stiff, moist (lagoonal deposit)
54.0	68				6	■				grades dark gray to black with some organic matter (peat), organic odor, soft, very moist
										(Water level at 1045 hours on 07/08/99)
43.5	79				9	■	10		SM	grades dark brown, less organic matter
										grades greenish gray, no organic matter
										Gray silty fine to medium grained coralline sand with trace shell and wood fragments, very loose, wet (lagoonal deposit)
					190	■	15		GM	Dark brown and brownish yellow silty fine to coarse grained basaltic sandy fine to coarse angular to subangular cemented basaltic (cinder) sand gravel, very dense, wet
										Boring completed at 16.0 feet on 07-08-99

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ⊠ - Standard penetration test sample no recovery
- I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.

PROJECT *Kaluanui Development* JOB No. *43022-003-011*

LOCATION *Honolulu, Oahu, Hawaii* DRAWN BY *wmk (07-09-99)*

BORING B-4 (Page 1 of 1)

SURFACE ELEVATION *7.5* ± Feet

DATUM *Mean Sea Level*

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
20.2	99				68	■			GM	Dark brown clayey silty fine to coarse grained sandy fine to coarse subangular coralline and basaltic gravel, medium dense, moist (fill)
49.8	75				11	■	5		MH	Dark brown and greenish gray clayey fine grained sandy silt, trace shell fragments, medium stiff, moist (lagoonal deposit)
111.9	44				5	■				grades gray, more clayey, some organic matter (peat), soft, very moist
										(Water level at 0900 hours on 07-08-99)
					7	■	10			grades trace fine subangular coralline gravel, very soft to soft, wet
35.5	86				15	■	15		SM	Dark brown silty fine to medium grained basaltic (cinder) sand, loose, wet
									GM	Dark brown to dark gray silty basaltic (cinder) sand, cemented in areas, dense to very dense, wet
					100/2"	▭	20			(No recovery)
										Boring completed at 20.2 feet on 07-08-99

NOTES:
- ■ – Relatively undisturbed sample
- ⊠ – Disturbed sample
- □ – Sample lost during extraction
- ◪ – Standard penetration test sample (split-spoon sampler)
- ⊘ – Standard penetration test sample no recovery
- I – Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.4

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-5 (Page 1 of 1)

SURFACE ELEVATION 4.0 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
									MH	Dark brown clayey fine to coarse grained basaltic and coralline sandy silt, stiff, moist (fill)
					17	■			MH	Dark brown clayey silt, stiff, very moist (estuary deposit)
										(Water level at 1205 hours on 07-07-99)
							5		CH	Gray silty fine grained coralline sandy clay with trace shell fragments and organic matter, very soft, very moist to wet (lagoonal deposit)
					38	■			GM SM	Gray silty clayey fine to coarse grained coralline sandy fine subangular coralline gravel, loose to medium dense, wet (lagoonal deposit)
					29	■				Dark gray fine to medium grained basaltic and coralline sand, loose to medium dense, wet
					66	■	10		SM	grades dark gray to brown, more silty
										Dark brown silty fine to medium grained basaltic (cinder) sand, medium dense, wet
										grades cemented in areas, very dense
					120/3"	⊠				Boring completed at 14.7 feet on 07-07-99

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ⊠ - Standard penetration test sample no recovery
- I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches

Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.5

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-6 (Page 1 of 1)

SURFACE ELEVATION 5.8 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					195	■	0		GM	Dark brown silty fine to coarse grained basaltic sandy fine to coarse angular basaltic gravel and cemented basaltic (cinder) sand gravel, very dense, moist
										Cobble (approximately 6 inches thick)
					33	■	5			grades dark gray, medium dense, wet (Water level at 0905 hours on 07-07-99)
					113	⊠				grades dense
					70	■	10			grades more sandy, medium dense
									SM	Approximate 1-inch thick layer of silty sandy coralline gravel, medium dense
					195/9"	■	15			Dark gray silty fine to medium grained basaltic (cinder) sand with trace fine angular basaltic gravel, slightly cemented in areas, very dense, wet
										Boring completed at 16.3 feet on 07-07-99

NOTES:

■ - Relatively undisturbed sample

⊠ - Disturbed sample

☐ - Sample lost during extraction

■ - Standard penetration test sample (split-spoon sampler)

▨ - Standard penetration test sample no recovery

I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches

Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.6

BORING B-7 (Page 1 of 1)

PROJECT *Kaluanui Development* JOB No. *43022-003-011*

LOCATION *Honolulu, Oahu, Hawaii* DRAWN BY *wmk (07-09-99)*

SURFACE ELEVATION *6.5* ± Feet

DATUM *Mean Sea Level*

LAB DATA		CORE INFO							
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
							0		MH	Yellowish red clayey fine to coarse grained coralline and basaltic sandy silt with trace fine subangular to angular basaltic and coralline gravel, medium dense, moist (fill)
					73	■			GM	Gray silty fine to medium grained coralline sandy fine subangular coralline gravel, medium dense, moist (lagoonal deposit)
									GM	Dark gray to dark brown silty fine to coarse grained basaltic sandy fine to coarse subangular cemented basaltic (cinder) sand gravel, trace rootlets, medium dense, moist
					53	■	5			(Water level at 1030 hours on 07-07-99)
					108	■				grades dark gray, more silty and clayey, dense, wet
					25	⊠	10			grades loose
					120/4"	⊠	15			grades very dense
										Boring completed at 15.3 feet on 07-07-99

NOTES:
- ■ – Relatively undisturbed sample
- ⊠ – Disturbed sample
- ☐ – Sample lost during extraction
- ◪ – Standard penetration test sample (split-spoon sampler)
- ⊠ – Standard penetration test sample no recovery
- I – Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches

Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-8 (Page 1 of 1)

SURFACE ELEVATION 9.0 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					132/9"	■			MH	Yellowish red clayey fine to coarse grained coralline and basaltic sandy silt with fine to coarse subangular coralline and basaltic gravel, very stiff, dry (fill)
										Cobble (approximately 6 inches thick)
									GM	Dark brown to gray clayey silty fine to coarse grained basaltic and coralline sandy fine subangular coralline gravel, trace shell fragments, medium dense, moist (lagoonal deposit)
					57	■	5		SM	Dark brown to yellowish red silty fine to medium grained basaltic sand, medium dense, moist (alluvium)
					108	⊠				grades with coarse angular basaltic gravel and cobbles
									GM	Greenish gray silty clayey fine to coarse grained sandy fine subangular to subrounded basaltic gravel, trace shell fragments, very loose, wet (lagoonal deposit)
					9	■	10			(Water level at 1024 hours on 07-08-99)
									MH	Dark brown and yellowish red clayey fine grained basaltic sandy silt, stiff, wet (alluvium)
					65	■	15		SM	Dark gray and brownish yellow silty clayey fine to medium grained basaltic (cinder) sand, cemented in areas, medium dense, wet
									GM	Dark gray silty fine to medium grained basaltic sandy fine to coarse subangular cemented basaltic (cinder) sand gravel, medium dense, wet
					120/3"	□	20			grades very dense
										(No recovery)
										Boring completed at 20.3 feet on 07-08-99

NOTES:
- ■ – Relatively undisturbed sample
- ⊠ – Disturbed sample
- □ – Sample lost during extraction
- ◪ – Standard penetration test sample (split-spoon sampler)
- ⊠ – Standard penetration test sample no recovery
- I – Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.8

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-9 (Page 1 of 1)

SURFACE ELEVATION 7.8 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					79	■			MH	Dark brown to yellowish red clayey fine to coarse grained coralline and basaltic sandy silt with some fine to coarse subangular basaltic and coralline gravel, hard, moist (fill)
					25	■	5		MH	Dark brown clayey silt with fine to coarse grained basaltic sand, trace rootlets, stiff, moist (alluvium)
					10	■				grades medium stiff, very moist (Water level at 0852 hours on 07-08-99)
					87	■	10		GM	grades dark brown and greenish gray Greenish gray to gray silty fine to medium grained coralline and basaltic sandy fine subangular basaltic and coralline gravel, loose, wet (lagoonal deposit)
									SP	Light brown and dark gray fine to coarse grained coralline and basaltic sand with silt, slightly cemented in areas, dense, wet
					37	■	15		SM	Dark brown to dark gray silty fine to medium grained basaltic (cinder) sand, medium dense, wet
					188/10"	■	20			grades cemented in areas, very dense Boring completed at 20.8 feet on 07-08-99

NOTES:
- ■ – Relatively undisturbed sample
- ⊠ – Disturbed sample
- ☐ – Sample lost during extraction
- ◪ – Standard penetration test sample (split-spoon sampler)
- ⊠ – Standard penetration test sample no recovery
- I – Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1

PROJECT *Kaluanui Development* JOB No. *43022-003-011*

LOCATION *Honolulu, Oahu, Hawaii* DRAWN BY *wmk (07-09-99)*

BORING B-10 (Page 1 of 1)

SURFACE ELEVATION *8.2* ± Feet

DATUM *Mean Sea Level*

LAB DATA		CORE INFO								
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					120/3"	□			MH	Dark brown to yellowish red clayey fine to coarse grained coralline and basaltic sandy silt with fine subangular coralline and basaltic gravel, medium stiff to stiff, dry (fill)
										(No recovery)
										Boulder (approximately 2.7 feet thick)
							5		MH	Dark brown clayey fine to coarse grained basaltic sandy silt with fine subangular basaltic gravel, very stiff to hard, moist (fill)
					70	■			MH	Dark brown clayey silt with trace rootlets, medium stiff to stiff, very moist (alluvium)
					13	■			MH	Greenish gray clayey silt with trace rootlets, medium stiff to stiff, very moist (lagoonal deposit)
										(Water level at 0908 hours on 07-08-99)
					5	■	10			grades soft, wet
									SM	Greenish gray silty clayey fine to medium grained coralline sand with shell fragments, very loose, wet (lagoonal deposit)
									MH	grades more fine subangular basaltic and coralline gravel
					33	■	15			Dark brown to dark olive gray clayey fine grained basaltic sandy silt, medium stiff to stiff, wet (lagoonal deposit)
									GM	Dark gray to dark brown silty clayey fine grained basaltic sandy fine subangular basaltic gravel and cemented basaltic (cinder) sand gravel, medium dense, wet
					120/3"	□	20			grades very dense
										(No recovery)
										Boring completed at 20.3 feet on 07-09-99

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ⊘ - Standard penetration test sample no recovery
- I - Core run

DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.10

PROJECT Kaluanui Development JOB No. 43022-003-011

LOCATION Honolulu, Oahu, Hawaii DRAWN BY wmk (07-09-99)

BORING B-11 (Page 1 of 1)

SURFACE ELEVATION 8.1 ± Feet

DATUM Mean Sea Level

LAB DATA		CORE INFO							
MOISTURE CONTENT %	DRY DENSITY (pcf)	RQD % or (RQI) %	RECOVERY %	CORE TYPE	BLOWS/FT.	SAMPLE	DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION
					61	■			MH	Yellowish red clayey fine to coarse grained coralline sandy silt with some fine subangular coralline gravel, very stiff, moist (fill)
										grades trace rootlets
					17	■	5		MH	Dark brown clayey fine to coarse grained basaltic sandy silt, trace rootlets, stiff, very moist (alluvium)
										grades dark brown and dark gray to black
					3	■			OH	Dark brown to black clayey (organic) silt with organic matter and shell fragments, organic odor, very soft, wet (lagoonal deposit)
									MH	grades greenish gray to olive gray, more fine to medium grained sand
					14	⊠	10			Dark gray clayey fine to medium grained sandy silt with trace fine subangular coralline and basaltic gravel, soft, wet (lagoonal deposit)
									SM	Dark brown to dark gray silty fine to medium grained basaltic (cinder) sand, loose, wet
					19	■	15			grades less silty
					120/2"	□	20			grades very dense
										(No recovery)
										Boring completed at 20.2 feet on 07-09-99

NOTES:
- ■ - Relatively undisturbed sample
- ⊠ - Disturbed sample
- □ - Sample lost during extraction
- ◪ - Standard penetration test sample (split-spoon sampler)
- ◪ - Standard penetration test sample no recovery
- I - Core run

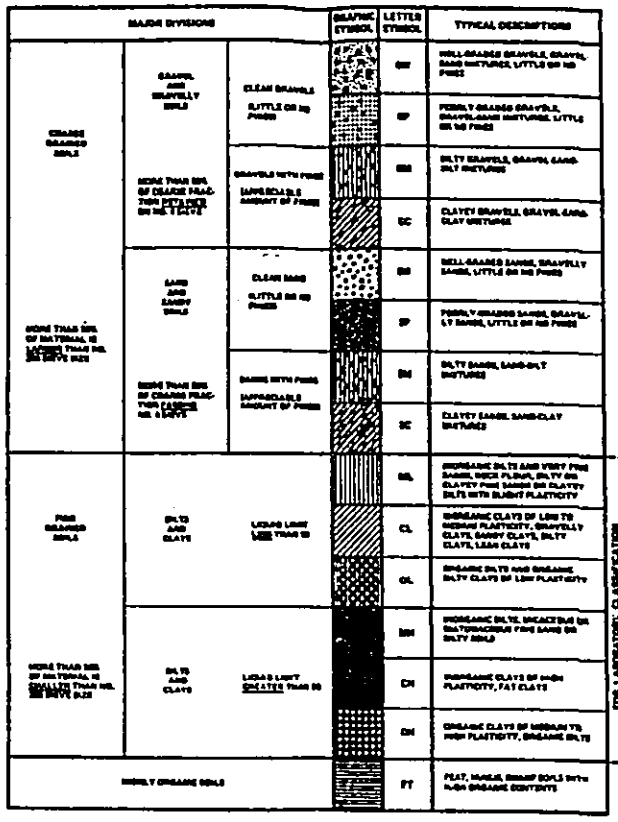
DRIVING ENERGY: 140-lb. weight dropping 30 inches
Soil Classification: Laboratory (L) or Visual (V)

LOG OF BORING

Dames & Moore

FIGURE A-1.1

SOIL CLASSIFICATION CHART

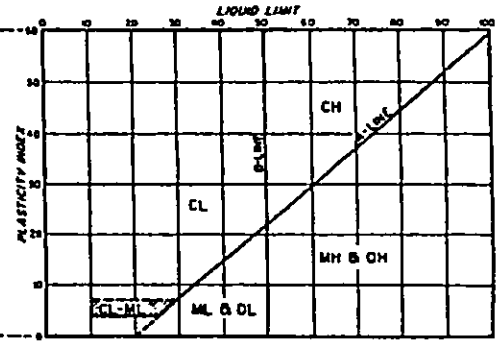


GRADATION CHART

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	SIEVE SIZE	MILLIMETERS	SIEVE SIZE
SAND				
FINE	.074	#200	.42	#40
MEDIUM	.42	#40	2.00	#10
COARSE	2.00	#10	4.76	#4
GRAVEL				
FINE	4.76	#4	19.1	3/4"
COARSE	19.1	3/4"	76.2	3"
COBBLES	76.2	3"	304.8	12"
BOULDERS	304.8	12"	914.4	36"

* U.S. STANDARD * CLEAR SQUARE OPENINGS

PLASTICITY CHART



NOTES:

1. DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE CLASSIFICATIONS.
2. WHEN SHOWN ON THE BORING LOGS, THE FOLLOWING TERMS ARE USED TO DESCRIBE THE CONSISTENCY OF COHESIVE SOILS AND THE RELATIVE COMPACTNESS OF COHESIONLESS SOILS:

COHESIVE SOILS	(APPROXIMATE SHEARING STRENGTH* IN KSF)	COHESIONLESS SOILS	
VERY SOFT	LESS THAN .25	VERY LOOSE	THESE ARE USUALLY BASED ON AN EXAMINATION OF DRIVE SAMPLES, PENETRATION RESISTANCE, AND DRILL CAPACITY DATA.
SOFT	0.25 TO 0.5	LOOSE	
MEDIUM STIFF	0.5 TO 1.0	MEDIUM DENSE	
STIFF	1.0 TO 2.0	DENSE	
VERY STIFF	2.0 TO 4.0	VERY DENSE	
HARD	GREATER THAN 4.0		

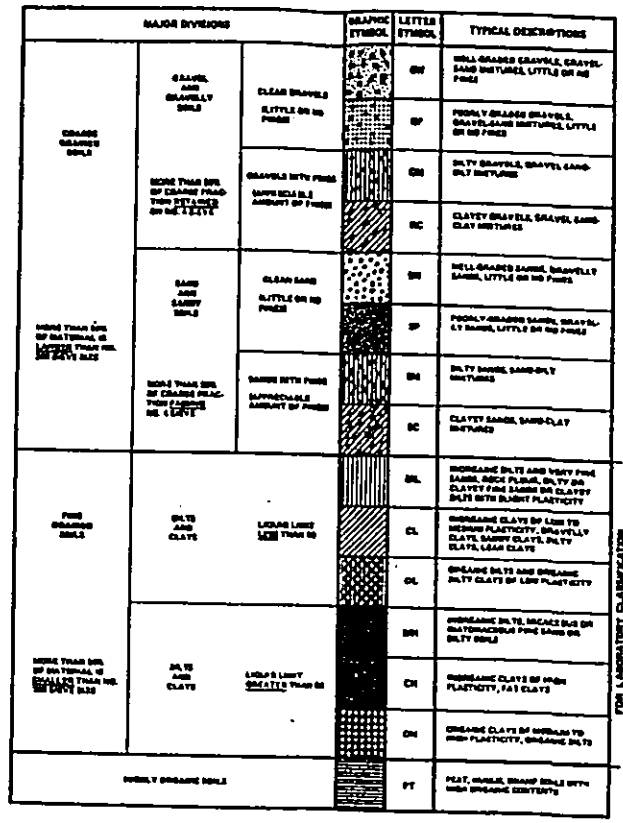
SAMPLES

- INDICATES UNDISTURBED SAMPLE
- INDICATES DISTURBED SAMPLE
- INDICATES SAMPLING ATTEMPT WITH NO RECOVERY
- INDICATES LENGTH OF CORING RUN

NOTE:
DEFINITIONS OF ANY ADDITIONAL DATA REGARDING SAMPLES ARE GIVEN ON THE FIRST LOG ON WHICH THE DATA APPEAR

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART



NOTES:

1. DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE CLASSIFICATIONS.
2. WHEN SHOWN ON THE BORING LOGS, THE FOLLOWING TERMS ARE USED TO DESCRIBE THE CONSISTENCY OF COHESIVE SOILS AND THE RELATIVE COMPACTNESS OF COHESIONLESS SOILS.

COHESIVE SOILS		COHESIONLESS SOILS	
	APPROXIMATE SHEARING STRENGTH IN KSF		
VERY SOFT	LESS THAN .25	VERY LOOSE	THESE ARE USUALLY BASED ON AN EXAMINATION OF SOIL SAMPLES, PENETRATION RESISTANCE, AND SOIL DENSITY DATA.
SOFT	0.25 TO 0.5	LOOSE	
MEDIUM STIFF	0.5 TO 1.0	MEDIUM DENSE	
STIFF	1.0 TO 2.0	DENSE	
VERY STIFF	2.0 TO 4.0	VERY DENSE	
HARD	GREATER THAN 4.0		

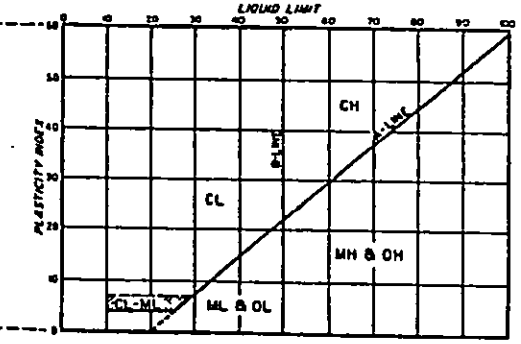
GRADATION CHART

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	SIEVE SIZE	MILLIMETERS	SIEVE SIZE
SAND				
FINE	.074	#200	.42	#40
MEDIUM	.42	#40	2.00	#10
COARSE	2.00	#10	4.76	#4
GRAVEL				
FINE	4.76	#4	19.1	3/4"
COARSE	19.1	3/4"	76.2	3"
COBBLES	76.2	3"	304.8	12"
BOULDERS	304.8	12"	914.4	36"

U.S. STANDARD

CLEAR SQUARE OPENINGS

PLASTICITY CHART

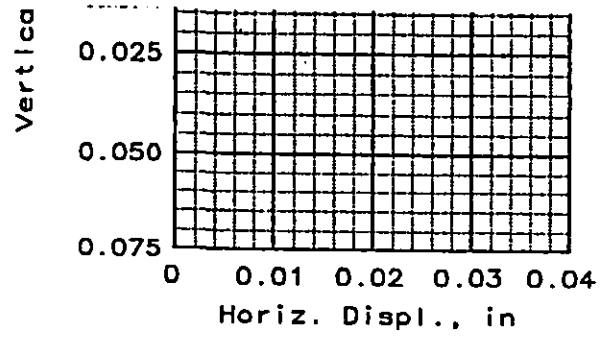


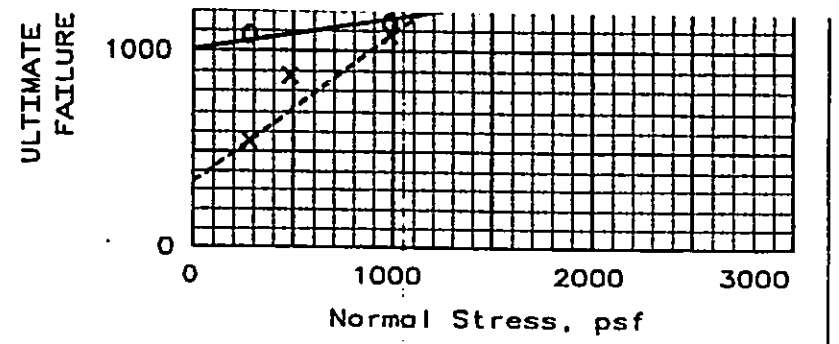
SAMPLES

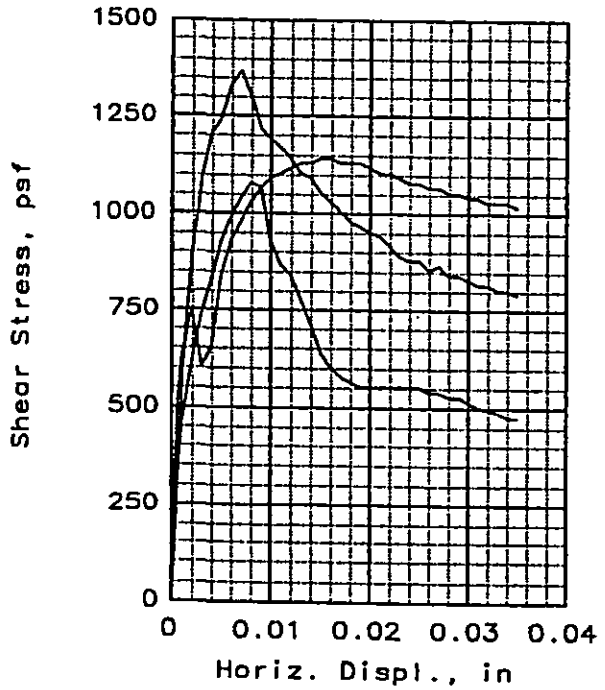
- INDICATES UNDISTURBED SAMPLE
- INDICATES DISTURBED SAMPLE
- INDICATES SAMPLING ATTEMPT WITH NO RECOVERY
- INDICATES LENGTH OF CORING RUN

NOTE:
DEFINITIONS OF ANY ADDITIONAL DATA REGARDING SAMPLES ARE ENTERED ON THE FIRST LOG ON WHICH THE DATA APPEAR

UNIFIED SOIL CLASSIFICATION SYSTEM







SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	20.6	20.6	20.6
	DRY DENSITY, pcf	99.2	99.2	99.2
	SATURATION, %	79.6	79.6	79.6
	VOID RATIO	0.699	0.699	0.699
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	33.6	33.6	33.6
	DRY DENSITY, pcf	99.6	109.6	109.6
	SATURATION, %	131.2	168.9	168.9
	VOID RATIO	0.692	0.538	0.537
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	1.00	0.91	0.90
NORMAL STRESS, psf		300	500	1000
FAILURE STRESS, psf		1080	1369	1143
DISPLACEMENT, in		0.01	0.01	0.02
ULTIMATE STRESS, psf		553	879	1080
DISPLACEMENT, in		0.02	0.02	0.02
Strain rate, in/min		0.0500	0.0500	0.0500

SAMPLE TYPE: UNDISTURBED
DESCRIPTION: GRAY BROWN CLAY
WITH TAN CORAL SAND

SPECIFIC GRAVITY= 2.7
REMARKS:

Fig. No.: 1

CLIENT: HICDA

PROJECT: KALUANUI

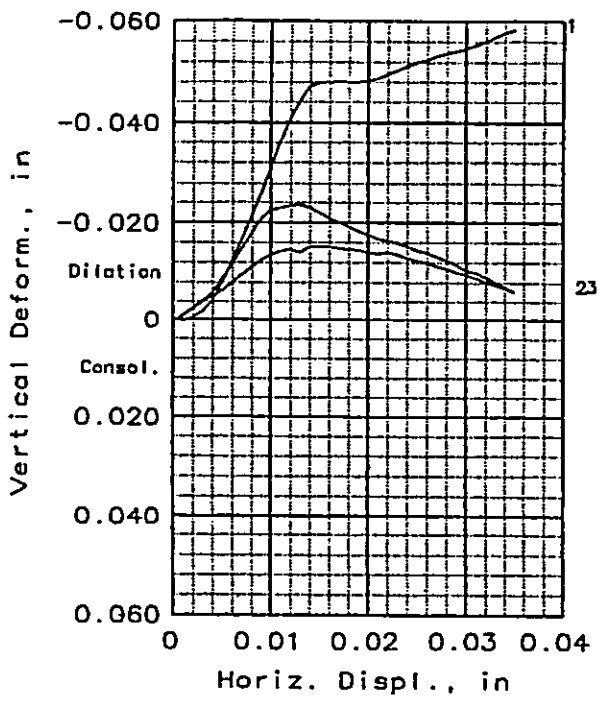
SAMPLE LOCATION: B-2, S-2 @ 5.5'

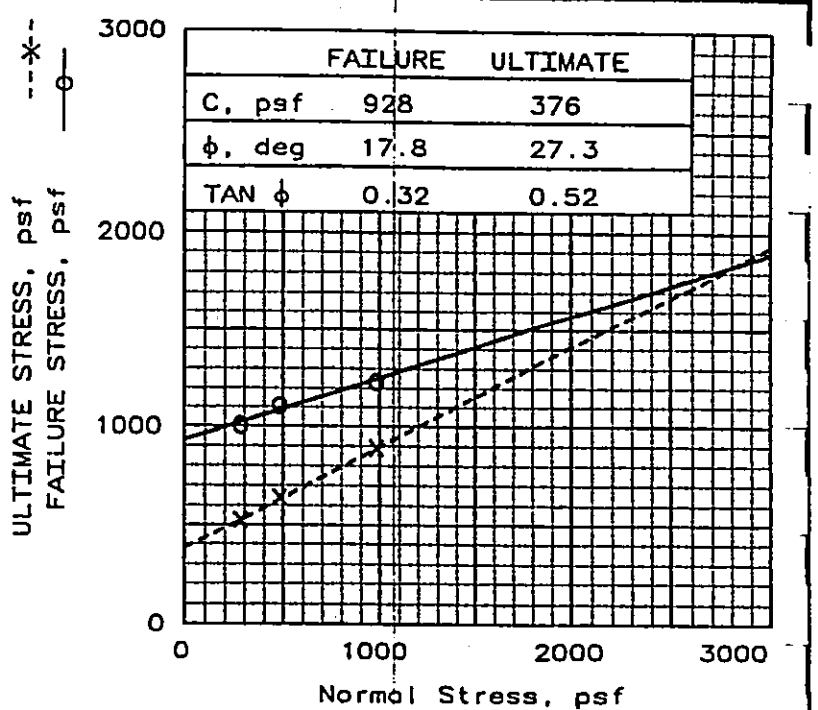
PROJ. NO.: 43022-003-011 DATE: 7/15/99

DIRECT SHEAR TEST REPORT

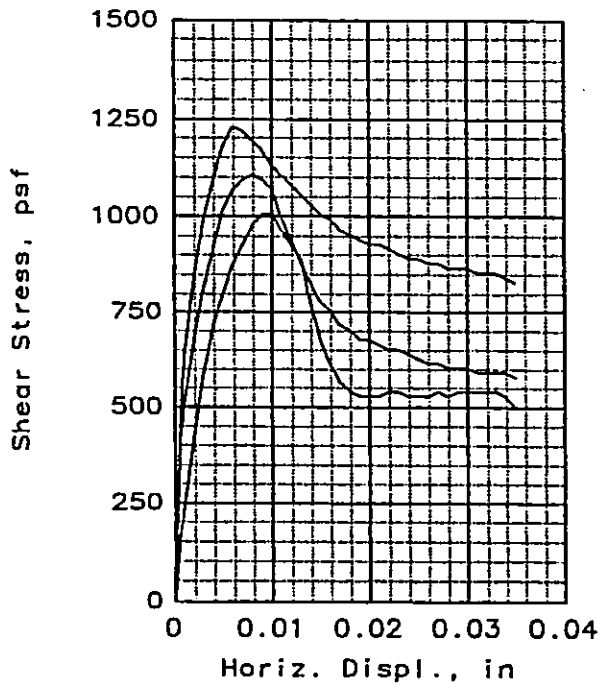
DAMES & MOORE

FIGURE A-

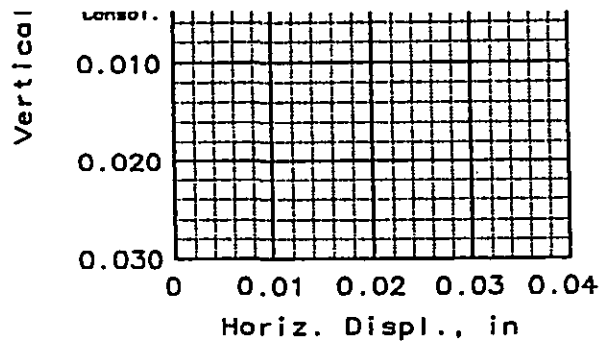


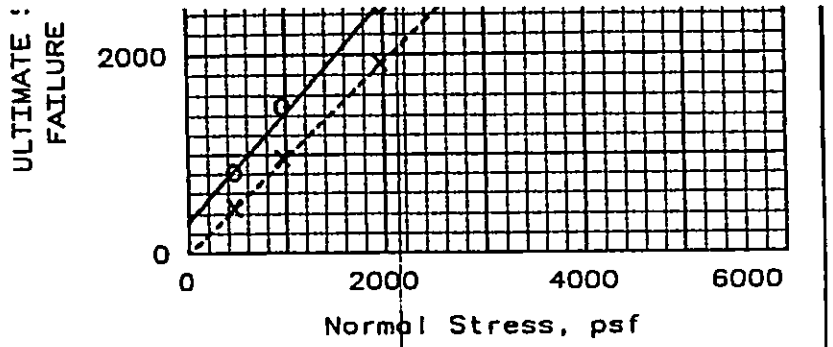


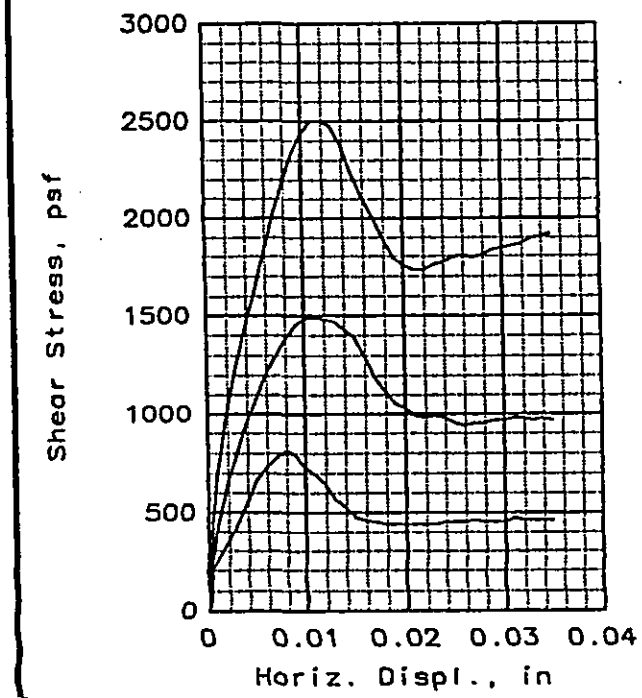
	FAILURE	ULTIMATE
C, psf	928	376
ϕ, deg	17.8	27.3
TAN ϕ	0.32	0.52



SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	41.9	46.0	51.0
	DRY DENSITY, pcf	73.2	71.7	67.9
	SATURATION, %	86.8	91.9	93.0
	VOID RATIO	1.303	1.352	1.481
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	59.2	59.7	661.4
	DRY DENSITY, pcf	73.5	71.3	68.7
	SATURATION, %	123.6	118.2	1228.3
	VOID RATIO	1.292	1.364	1.454
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	1.00	1.01	0.99
NORMAL STRESS, psf		300	500	1000
FAILURE STRESS, psf		1005	1105	1231
DISPLACEMENT, in		0.01	0.01	0.01
ULTIMATE STRESS, psf		527	640	892
DISPLACEMENT, in		0.02	0.02	0.02
Strain rate, in/min		0.0500	0.0500	0.0500







SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	30.7	32.5	25.6
	DRY DENSITY, pcf	90.5	88.7	96.6
	SATURATION, %	96.2	97.5	92.9
	VOID RATIO	0.862	0.901	0.744
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	36.8	38.6	33.2
	DRY DENSITY, pcf	91.7	103.1	98.9
	SATURATION, %	118.3	164.2	127.5
	VOID RATIO	0.838	0.635	0.704
	DIAMETER, in	2.42	2.42	2.42
	HEIGHT, in	0.99	0.86	0.98
NORMAL STRESS, psf		500	1000	2000
FAILURE STRESS, psf		816	1494	2499
DISPLACEMENT, in		0.01	0.01	0.01
ULTIMATE STRESS, psf		465	967	1921
DISPLACEMENT, in		0.04	0.04	0.04
Strain rate, in/min		0.0020	0.0020	0.0020

SAMPLE TYPE: UNDISTURBED
DESCRIPTION: DARK GRAY BASALTIC SAND

SPECIFIC GRAVITY= 2.7
REMARKS:

Fig. No.: 1

CLIENT: HICDA

PROJECT: KALUANUI

SAMPLE LOCATION: B-4, S-5 @ 15.5'

PROJ. NO.: 43022-003-011

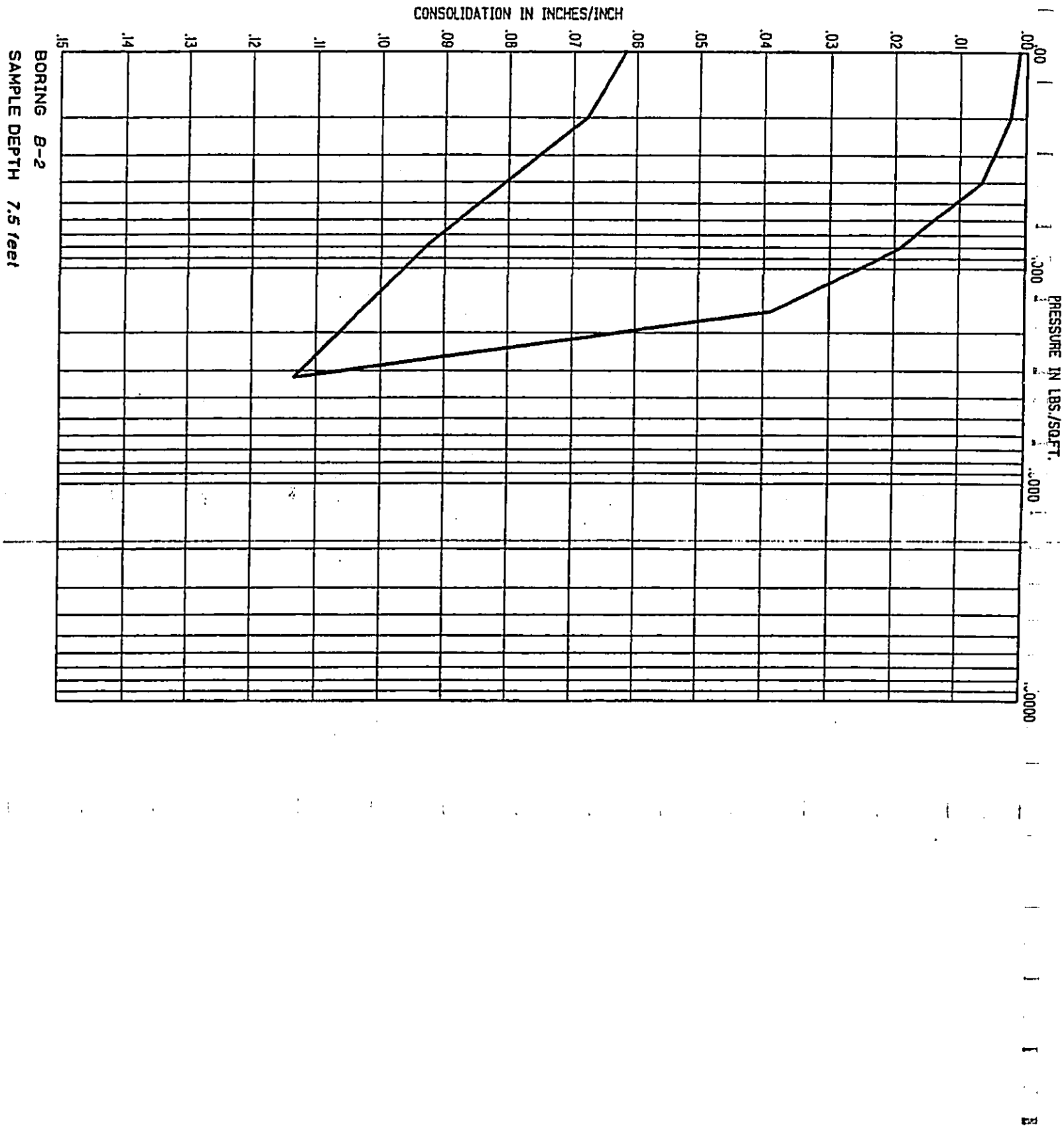
DATE: 7/15/99

DIRECT SHEAR TEST REPORT

DAMES & MOORE

F EA-

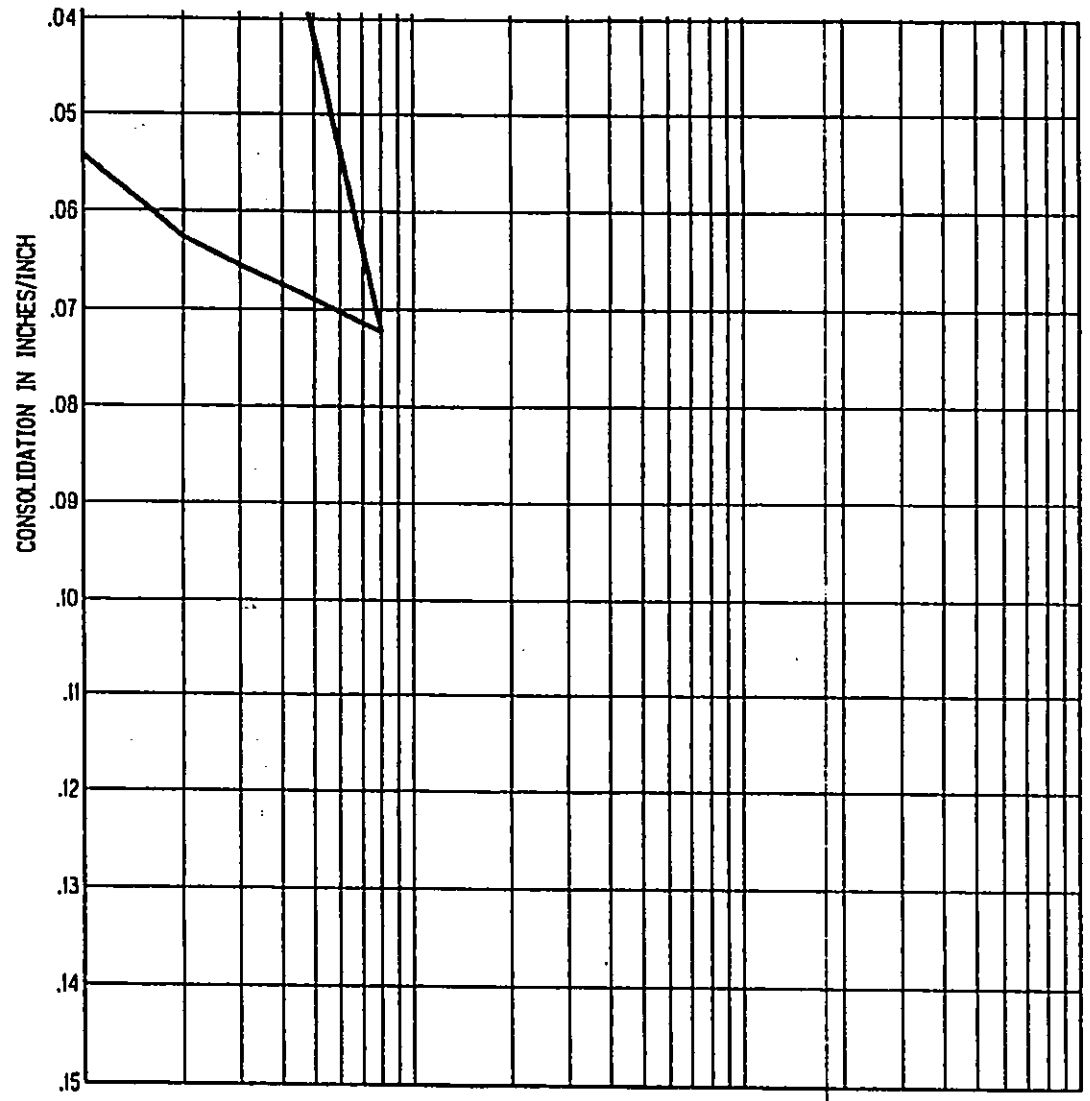
yanui Development JOB NUMBER 43022-003-011 DATE 07-19-99 DRAWN BY wak



PROJECT *Kakaako Development*

JOB NUMBER *43022-003-011*

DATE *07-19-99*



BORING *B-4*

SAMPLE DEPTH *7.5 feet*

SOIL DESCRIPTION *Clayey silt (MH)*

	BEFORE TEST	AFTER TEST
MOISTURE CONTENT (%)	112	109
DRY DENSITY (pcf)	41	44

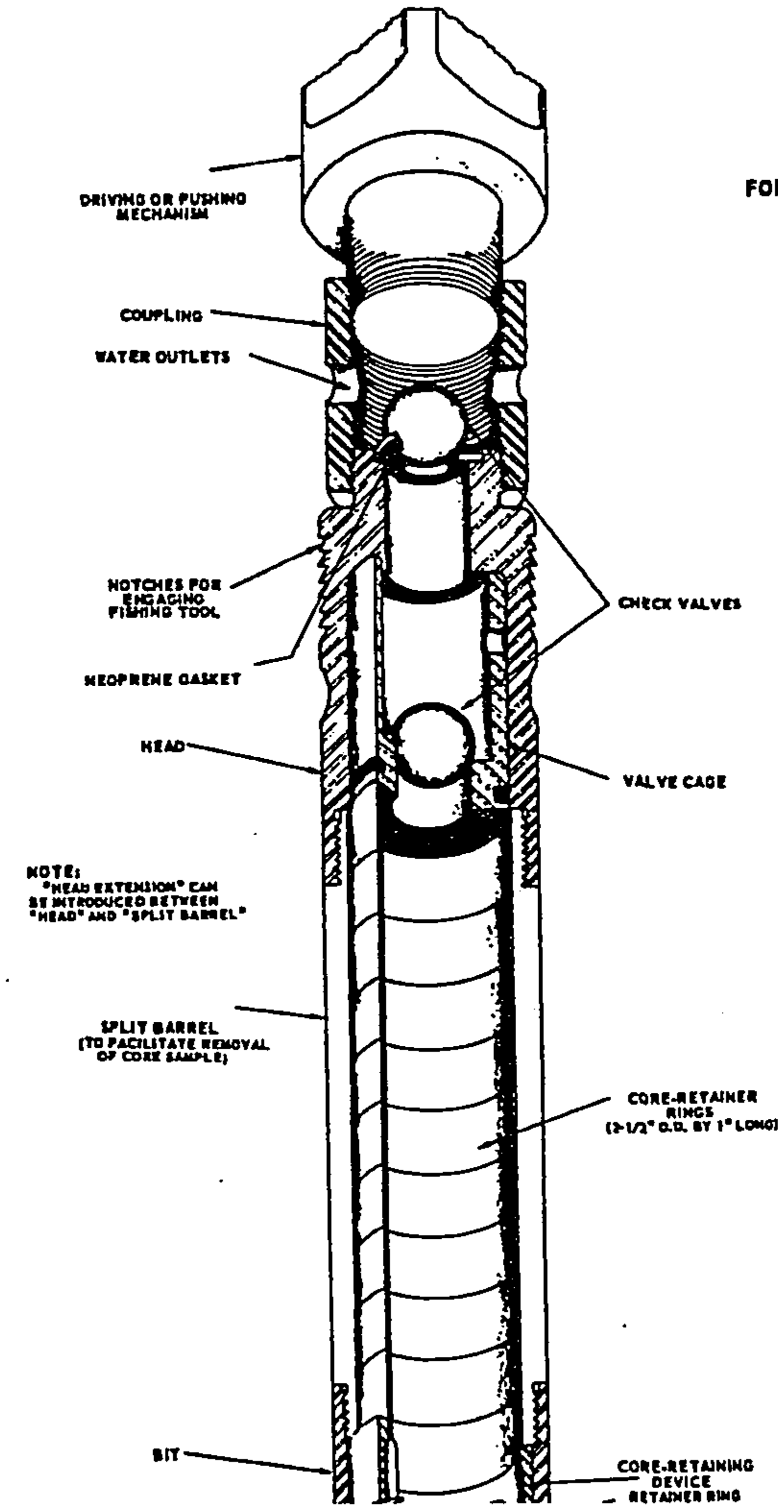
CONSOLIDATION TEST DATA

Dames & Moore

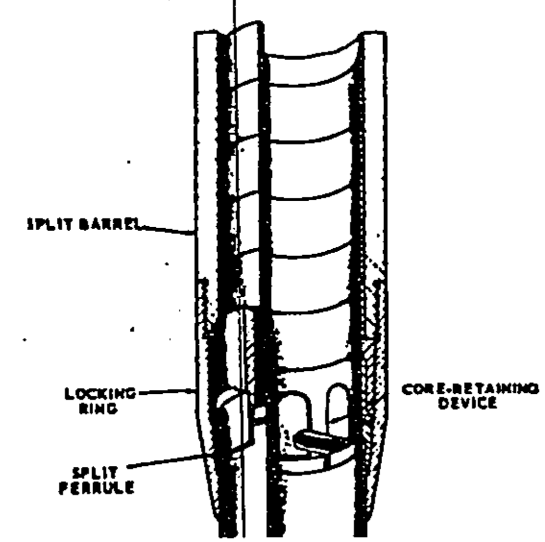
FIGURE A-7

SOIL SAMPLER TYPE U

FOR SOILS DIFFICULT TO RETAIN IN SAMPLER



ALTERNATE ATTACHMENTS



jsb type-u.dwg 7/99

DISTANCES BETWEEN SOILS AND VARIOUS OTHER MATERIALS SUCH AS WOOD, STEEL, OR CONCRETE. THE TESTS ARE PERFORMED IN THE LABORATORY TO SIMULATE ANTICIPATED FIELD CONDITIONS.

EACH SAMPLE IS TESTED IN A SPLIT SAMPLE HOLDER, TWO AND ONE-HALF INCHES IN DIAMETER AND ONE INCH HIGH. UNDISTURBED SAMPLES OF IN-PLACE SOILS ARE EXTRUDED FROM RINGS TAKEN FROM THE SAMPLING DEVICE IN WHICH THE SAMPLES WERE OBTAINED. LOOSE SAMPLES OF SOILS TO BE USED IN CONSTRUCTING EARTH FILLS ARE COMPACTED IN RINGS TO PREDETERMINED CONDITIONS AND TESTED.

Direct Shear Tests

A ONE-INCH LENGTH OF THE SAMPLE IS TESTED IN DIRECT SINGLE SHEAR. A CONSTANT PRESSURE, APPROPRIATE TO THE CONDITIONS OF THE PROBLEM FOR WHICH THE TEST IS BEING PERFORMED, IS APPLIED NORMAL TO THE ENDS OF THE SAMPLE THROUGH POROUS STONES. A SHEARING FAILURE OF THE SAMPLE IS CAUSED BY MOVING THE UPPER SAMPLE HOLDER IN A DIRECTION PERPENDICULAR TO THE AXIS OF THE SAMPLE. TRANSVERSE MOVEMENT OF THE LOWER SAMPLE HOLDER IS PREVENTED.

THE SHEARING FAILURE IS ACCOMPLISHED BY APPLYING TO THE UPPER SAMPLE HOLDER A CONSTANT RATE OF DEFLECTION. THE SHEARING LOAD AND THE DEFLECTIONS IN BOTH THE AXIAL AND TRANSVERSE DIRECTIONS ARE RECORDED AND PLOTTED. THE SHEARING STRENGTH OF THE SOILS IS DETERMINED FROM THE RESULTING LOAD-DEFLECTION CURVES.

Friction Tests

IN ORDER TO DETERMINE THE FRICTIONAL RESISTANCE BETWEEN SOIL AND THE SURFACES OF VARIOUS MATERIALS, THE LOWER SAMPLE HOLDER IN THE DIRECT SHEAR TEST IS REPLACED BY A DISK OF THE MATERIAL TO BE TESTED. THE TEST IS THEN PERFORMED IN THE SAME MANNER AS THE DIRECT SHEAR TEST BY FORCING THE SOIL OVER THE FRICTION MATERIAL SURFACE.

CORRECTION

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

SISTANCES BETWEEN SOILS AND VARIOUS OTHER MATERIALS SUCH AS WOOD, STEEL, OR CONCRETE. THE TESTS ARE PERFORMED IN THE LABORATORY TO SIMULATE ANTICIPATED FIELD CONDITIONS.

EACH SAMPLE IS TESTED IN A SPLIT SAMPLE HOLDER, TWO AND ONE-HALF INCHES IN DIAMETER AND ONE INCH HIGH. UNDISTURBED SAMPLES OF IN-PLACE SOILS ARE EXTRUDED FROM RINGS TAKEN FROM THE SAMPLING DEVICE IN WHICH THE SAMPLES WERE OBTAINED. LOOSE SAMPLES OF SOILS TO BE USED IN CONSTRUCTING EARTH FILLS ARE COMPACTED IN RINGS TO PREDETERMINED CONDITIONS AND TESTED.

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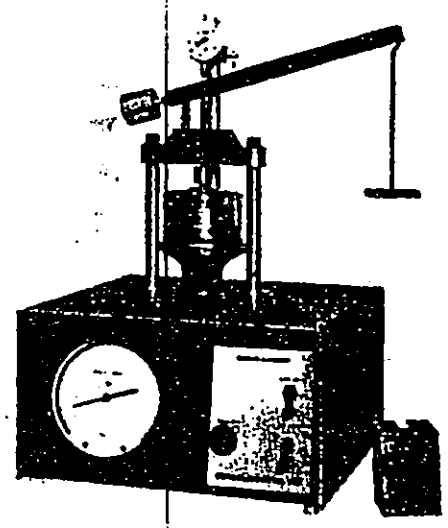
METHOD OF PERFORMING CONSOLIDATION TESTS

CONSOLIDATION TESTS ARE PERFORMED TO EVALUATE THE VOLUME CHANGES OF SOILS SUBJECTED TO INCREASED LOADS. TIME-CONSOLIDATION AND PRESSURE-CONSOLIDATION CURVES MAY BE PLOTTED FROM THE DATA OBTAINED IN THE TESTS. ENGINEERING ANALYSES BASED ON THESE CURVES PERMIT ESTIMATES TO BE MADE OF THE PROBABLE MAGNITUDE AND RATE OF SETTLEMENT OF THE TESTED SOILS UNDER APPLIED LOADS.

EACH SAMPLE IS TESTED WITHIN BRASS RINGS TWO AND ONE-HALF INCHES IN DIAMETER AND ONE INCH IN LENGTH. UNDISTURBED SAMPLES OF IN-PLACE SOILS ARE TESTED IN RINGS TAKEN FROM THE SAMPLING DEVICE IN WHICH THE SAMPLES WERE OBTAINED. LOOSE SAMPLES OF SOILS TO BE USED IN CONSTRUCTING EARTH FILLS ARE COMPACTED IN RINGS TO PREDETERMINED CONDITIONS AND TESTED.



DEAD LOAD-PNEUMATIC CONSOLIDOMETER

IN TESTING, THE SAMPLE IS RIGIDLY CONFINED LATERALLY BY THE BRASS RING. AXIAL LOADS ARE TRANSMITTED TO THE ENDS OF THE SAMPLE BY POROUS DISKS. THE DISKS ALLOW DRAINAGE OF THE LOADED SAMPLE. THE AXIAL COMPRESSION OR EXPANSION OF THE SAMPLE IS MEASURED BY A MICROMETER DIAL INDICATOR AT APPROPRIATE TIME INTERVALS AFTER EACH LOAD INCREMENT IS APPLIED. EACH LOAD IS ORDINARILY TWICE THE PRECEDING LOAD. THE IN-

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APPENDIX B

ISCHEBECK TITAN MICROPILES

MICRO PILES

ISCHEBECK®

TITAN

... injection anchors are ideally suitable for Micro Piles, sometimes called reinforced concrete piles or mini piles.

TITAN Micro Piles consist of a continuously threaded, hollow pipe as the load carrying steel member and a grout body of furnace (Portland) cement with a 25 N/mm² (3600 psi) strength which allows tension and compression from the reinforcing member to be transferred into the soil by surface friction.

The grout body takes care of the radial friction in the soil as well as bending stiffness and corrosion protection. By using spacers (centralizers) before each coupler, a minimum grout cover of 20 mm (¾") is achieved. The soil mechanics of the TITAN Micro Piles, in comparison to standard reinforced concrete piles (DIN 4014), shows very little settlement due to its very good soil friction (settlement less than 5 mm 3/16" under working load).

TITAN Micro Piles are installed using a standard, rotary–percussive drill rig in a one stage installation procedure. The TITAN Micro Piles are installed **WITHOUT CASING.**

Since the TITAN Micro Pile is both drill rod and reinforcing member at the same time, the following installation steps become obsolete:
- removal of drill rod
- removal of casing
- insertion of an anchor rod

The use of the TITAN Micro Pile - in comparison to the traditional methods of installation - clearly demonstrate an increase of productivity of at least 2 times, in most cases. An added benefit of inserting the TITAN Micro Pile using grout (w/c = 0,7) as the flushing fluid and pressures of 20 bars (300 psi) is an extreme infiltration friction between the grout body and the surrounding soil.

Therefore, the amount of friction area between the TITAN Micro Pile and the soil is drastically increased and pile settlement becomes much smaller. Such reduction in pile settlement should be achieved especially for those piles, which are subject to constantly changing load conditions, both on tension and on compression.

The calculation of the limiting load on TITAN Micro Piles were calculated based on the results achieved from extensive principle tests, which proved the grout bodies being equal to twice the drill bit diameter.

Since TITAN Micro Piles require far smaller bore holes to achieve equal loads, project productivity is greatly increased.

The continuous, coarse thread (to DIN 488) allows easy fixing with plates and nuts. TITAN Micro Piles can be cut and coupled - in any length - to fit any job requirement. TITAN Micro Piles offer a wide choice of screw-on as well as weld-on bits suitable for any soil requirement. The thread pitch of the TITAN Micro Pile is in the range of self-fastening which eliminates stop nuts. The tubular section is far superior to a non- tubular rod at the same cross section with respect to bending forces, shear forces and surface friction.

TITAN Micro Piles can be fixed to the pile cap or the foundation beam by:

- **pure friction to DIN 1045 table 19. As an example: 1,7 m (5½ ft) of friction length in concrete with a strenght of 25 N/mm² (3600 psi) for TITAN 73/53**
- **by means of a nut and a washer**
- **by means of reinforcement bars welded onto the TITAN Micro Pile**

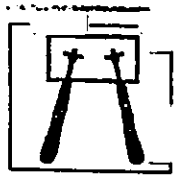
In special cases, to prevent fractures in the pile cap structure, additional shear reinforcing or spiral reinforcing - preventing a punch-through effect or extreme bending forces - may be required.

For TITAN Micro Piles which are used in compression only, a 20 mm (¾") grout cover is sufficient to protect the pile against corrosion.

For TITAN Micro Piles that are being used under tension however, such 20 mm (¾") grout cover is only sufficient if the steel stress of the pile stays below 0,33 times the yield stress and thereby limits the width of cracks in the grout body well below the tolerated level.

ISCHEBECK

TITAN Injection Anchors
TITAN Micro Piles



Dimensioning of TITAN Micro Piles

Normally test loads are put onto a minimum of 2 TITAN Micro Piles or a minimum of 3% of all piles. A simple test arrangement uses 2 neighboring piles to divert reaction loads.

Principle tests performed:

1. Prof. Steinfeld, soil laboratory Hamburg dd. 28th Oct, 1985
2. Dr. Heinz W. Haag, Laboratory for soil mechanics, Kornwestheim dd. 18th Nov, 1986
3. TRI State Testing USA in 1988
4. EMCC: Project no. 88.1288, February 1989
5. Prof. Dr. Ing. Floss, Technical University Munich (Institute Prof. Ostermeier) project no. 9941/13 dd. 23.10.1989
6. Prof. Dr. Ing. Floss, Technical University Munich (Institute Prof. Ostermeier) project no 9941b/12 dd. 30.10.1990
7. Prof. Dr. Ing. W. Blümel, Technical University Hannover, Institute for soil construction, dd. 20.6.1991

acc. to these principle test we can do the following calculations on soil friction limits for TITAN Micro Piles

in gravel 200 to 250 kN/m² (9,5 to 11,9 lbs/ft²) **in sand** 150 kN/m² (7 lbs/ft²) **in cohesive soils** 100 kN/m² (5 lbs/ft²)

The diameter (D) of the grout body (pile diameter) is calculated

D = 2 times the diameter of the drill bit

Example TITAN 30/11 with cross-cut drill bit 75 mm Ø in sand.

D = 2 x 75 = 150 mm (0,15 m)

limit of surface friktion F_K of the grout body

$F_K = \pi \times 0{,}15\ m \times 150\ kN = 70\ kN/m$

safety factor S = 2, load case 1 to DIN 1054

at a permissible load of 150 kN the pile length is calculated $L = 150 \times \frac{2}{70} = 4{,}30$ m

Difficult soils for TITAN micropiles are: loam and clay w a angle of friction incl. cohesoin < 30°

with a shear strength C_U < 10 kN/m² (0,5 lbs/ft²)
with a penetration of < 20 SPT

If tests are not being carried out, the limits for soil friction to DIN 4128 will apply which are for piles on

compression	in gravel 200 kN/m² (9,5 lbs/ft²)	in sand 150 kN/m² (7 lbs/ft²)	in cohesive soils 100 kN/m² (5,0 lbs/ft²)
on tension	in gravel 100 kN/m² (5,0 lbs/ft²)	in sand 80 kN/m² (4 lbs/ft²)	in cohesive soils 50 kN/m² (2,5 lbs/)

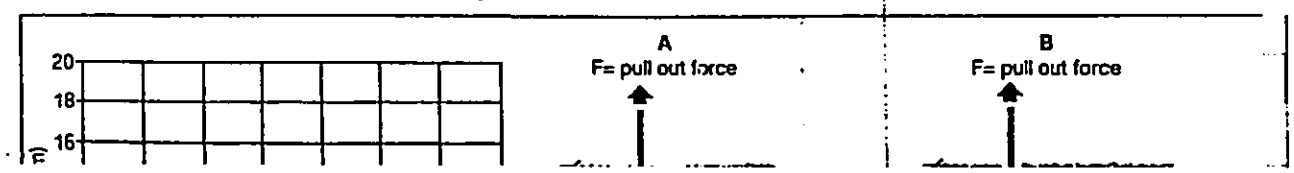
The calculation for bending for slender TITAN Micro Piles needs to be carried out only; if the shear strength of the non-dewatered soil is below 10 kN/m² (0,5 lbs/ft²). This, actually, is not very often the case.

Load/settlement diagram of 7 m (23 ft) long grouted piles

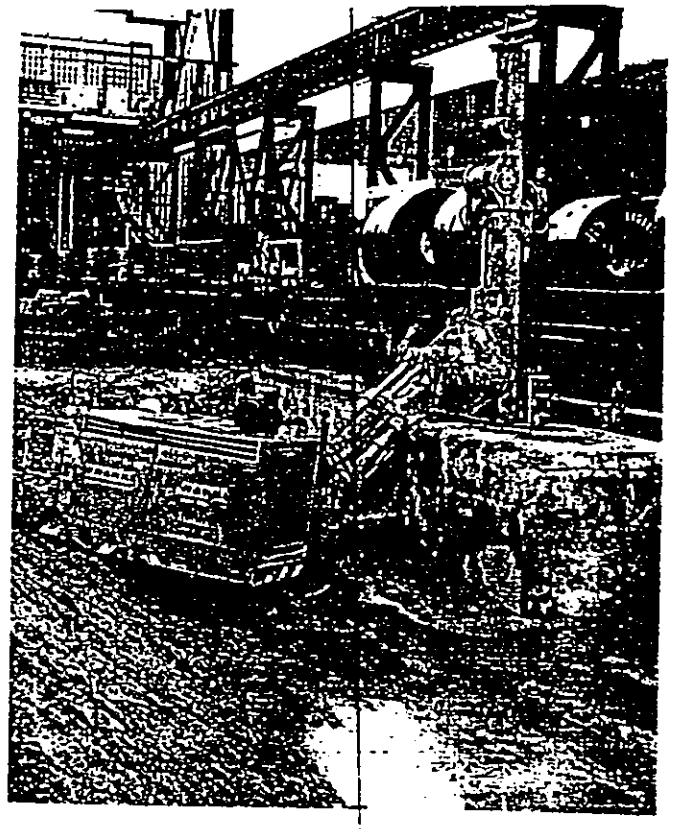
both were tested in the same area in silty sand (SPT 20)

A. Composite pile (steel rod 40 mm ø) (1-⁹/₁₆") filled with grout al low pressures compared to

B. TITAN 73/53 pile with flushing grout at a W/C ratio of approx. 0,7 and grout at a W/C ratio of approx 0,4 grouting pressure: 60 Bars (870 psi).



- very short installation times
- small, inexpensive rigs are sufficient for installation
- short sections - which are mady by cutting the TITAN Micro piles to size - can easily be installed in areas with limited headroom or in other cramped quarters
- all TITAN Micro Piles can be used as compression or as tension pile, *or a combination of both.*



Installation of 18 m long TITAN 103/78 Micro Piles while steel mill is still operating. Average productivity: 8 piles per day with a 3 men crew.

Adding a 40 mm Ø (1-9/16") rebar into the hollow TITAN pile increases the 900 kN (198 kips) working load by 360 kN (79 kips) to a total working load of 1260 kN (277 kips).

Appendix E

Community Support & Comments

Houghton withdrew her motion, Fisher seconded it.

The motion to end discussion carried 10-2-0. Nays: Baker, Kirchner.

Fisher moved and Rodgers seconded the motion that the Board take the position that the City Council defer any action on Bill 18 until more discussion and studies are done. The motion carried 11-1-0. Nay: Kirchner.

Chair Rodgers called for a recess at 8:42 p.m.

Chair Rodgers called the meeting to order at 8:50 p.m.

KOKO HEAD RIFLE RANGE (DISCUSSION ONLY): Mariners Ridge resident Scott Klein had a concern about the use of the Koko Head Rifle Range after normal business hours. An example he raised that the rifle range is supposed to close at 4:00 p.m. but still hears firing until 6:00 p.m. His complaint is that firing starts too early and ends too late. Also that the facility restricts the general public from using this facility for target practice. Another concern Klein raised is that they practice with military style weapons that is deemed not appropriate in residential areas. Klein suggests that these military style training practices should be in military installations or in areas around Central Oahu. Another member of the audience Dorothy McCollum shed some light on the issue and stated to the Board that the Koko Head Rifle Range has been in existence since 1939. She stated that law enforcement agencies like the Honolulu Police Department (HPD), Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA), and the military use these facilities for practice.

Questions, comments, and concerns followed: Speck asked fellow Board member Kirchner who lives in the Mariners Ridge area about his input of the Koko Head Rifle Range. Kircher responded that he does not hear those firing shots. Fowler asked William Balfour, City Director of Parks and Recreation about why the hours are not enforced. Balfour responded that HPD and other law enforcement agencies need to use the facility for night practice. Houghton inquired why HPD, FBI, CIA, and other law enforcement agencies do not utilize any of the military installations on Oahu for practice. Balfour responded that the military has made it difficult by not granting access to its bases for HPD to practice.

HAWAII KAI NEIGHBORHOOD BOARD NO. 1 SUPPORTS PROPOSED KALUANUI DEVELOPMENT PLAN FOR 450 UNIT CONTINUUM CARE RETIREMENT COMMUNITY: Mike Klein of HICDA spoke to express his support for the Board to take action in supporting the Kaluanui Development Plan. Klein added that there are three elements for this plan: 1) residents of the facility need to be 65 years of age or older and on fixed income; 2) to sell the units at market price ranging from $125,000 to $140,000; and 3) if there is not enough room to develop affordable retirement community in Hawaii Kai, it can be built elsewhere on Oahu. Houghton moved and Fisher seconded for the Hawaii Kai Neighborhood Board No. 1 to support this proposed development of the Kaluanui Continuum Care Retirement Community. retirement community facility. The motion carried unanimously.

HAWAII KAI NEIGHBORHOOD BOARD NO. 1 POSITION ON DRAFT ENVIRONMENTAL IMPACT STUDY (EIS) FOR PROPOSED KOKO HEAD REGIONAL PARK: Carter summarized the rationale for the proposed changes of the Environmental Impact Study (EIS) on the Koko Head Regional Park & Nature Preserve to conserve and prevent further deterioration of Hanauma Bay's ecological resources. The goal of educating both residents and visitors of the fragile ecology of the Bay and the surrounding terrestrial areas is a noble endeavor for those who love and use the Bay can agree. Spending an additional $13-20 million in making Hanauma Bay a tourist attraction without residents' input is not appropriate in these tough economic times. Major changes as reflected in the current EIS must be done with greater community input. At the Neighborhood Board's Parks and Recreations Committee meeting on Monday, April 26, 1999, there were many residents who use Hanauma Bay for a variety of purposes, thus there was no consensus is supporting the current City proposal. Carter further stated that the many ideas that were brought out in the open by the affected residents along with the Hanauma Bay carrying capacity, the Mayor's Vision 2000 designating the need for a community center, the bikeway/hiking trails greenbelt linking all the community park destinations, parks along the Kahiwi coastline, construction of a community pool at Koko Head District Park along with much needed capital improvements of the equestrian center, botanical gardens, and the rifle range at Koko Head along with the various plans to be put in tandem in hoping for a better plan in service and benefit to the Hawaii Kai community.

Exhibit 1-8 Hawai'i Kai Neighborhood Board No. 1 Unanimous Support

Hawaii-American Water Company

6700 Kalanianaole Highway, Suite 205 • P.O. Box 25010 • Honolulu, HI 96825
(808) 394-1280 • FAX (808) 395-5023

April 7, 1999

Hawaii Intergenerational Community Development Association
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813
ATTN: Mike Klein

Re: Wastewater Services to Kaluanui 2/3

Dear Mr. Klein:

This is in response to your April 1, 1999 letter inquiring about wastewater (sewer) service to the property known as Kaluanui 2/3 located along Hawaii Kai Drive ("the Development").

The wastewater treatment plant has sufficient sewer treatment capacity to accommodate the Development. Also, the sewer line which will be serving the Development has sufficient capacity to handle the wastewater discharged from the 65 residential dwelling units.

We have not provided discounts on the monthly sewer usage charges to nonprofit organizations within our service territory.

The following is provided for your information.

In addition to the monthly sewer usage charges, the Development will be subject to a one time contribution in aid of construction (CIAC) charge which is payable at time of connection into the Company's sewer system. The CIAC charge will be based upon the estimated quantity of wastewater to be discharged from the property. The monthly usage and CIAC rates are authorized by the Hawaii Public Utilities Commission.

A Development Sewer Connection Agreement must be executed by the owner to obtain a wastewater treatment service commitment from the Company. The Agreement outlines the terms and conditions for the connection.

Should you have any additional questions, please call me at 394-1284.

Sincerely,

Gordon Mori

Gordon Mori
Business Manager

Exhibit 2-1

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWELO

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

May 4, 1999

Mr. Mike Klein
Hawaii Intergenerational Community Development Association
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

LOG NO: 23323 ✓
DOC NO: 9904SC13

Dear Mr. Klein:

SUBJECT: **Chapter 6E-42 Historic Preservation Review of the Proposed Kaluanui 2/3 Affordable Senior Apartments**
Maunalua, Kona, O'ahu
TMK: 3-9-008: 042

Thank you for your letter of April 5, 1999, requesting an assessment of the status of historic sites on the subject parcel. According to information you included with your letter, there will be two phases to the planned development of the senior apartment complex: Phase I will consist of a 30-unit, 3-story building of affordable senior apartments; Phase II will consist of a 31-unit, 3-story building of affordable senior apartments. In addition, you state that a new subdivision will be done in order to create two new parcels which will be located next to Hawaii Kai Drive in the front of the subject parcel. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel.

According to our records, the subject parcel underwent an archaeological survey in 1985 with a total of six historic sites reported (*Archaeological Reconnaissance of the Proposed Marina Zoning Project, Kaluanui 1, 2, and 3, Hawaii Kai.* 1985. Price-Beggerly & McNeill). The identified historic sites included the following: SIHP No. 50-80-15-42 (two terrace features attributed to Hawea Heiau); -2900 (multiple terraces); -2902 (a small cave); -2903 (a wall with a possible platform); -2904 (a small platform); -2905 (a small cave). The 1985 report recommended further work, including test excavations, at all of these sites.

Subsequently, Ogden Environmental conducted an assessment of the subject parcel after the landowner had grubbed a portion of the property, preparatory to carrying out soils testing (*Archaeological Assessment and Evaluation of Kaluanui Parcel I and Kaluanui Parcels 2 & 3, and an Evaluation of the Impact of Previously Recorded*

Exhibit 2-2 Letter, Department of Land and Natural Resources, Historic Preservation Division

Archaeological Sites by Grubbing in Kaluanui Parcels 2 & 3, Hawaii Kai, Oahu. 1994. Ogden). Ogden Environmental found that the two terrace features originally designated as Site -42, and the entire site area of Site -2904 were destroyed by the grubbing which also partially damaged Sites -2900 and 2903. Site -2903 was historic in age while the grubbed features of Site -2900 were also historic.

Ogden's (1994) research indicated that the features attributed to Hawea Heiau (Site -42), were not, in fact, Hawea Heiau. Comparison of the described features with historic maps and other data indicated that the *heiau* was on and to the north of what is now Kaluanui Road, and was probably destroyed by construction of that road. Consequently, our office assigned the destroyed terrace features the SIHP No. 50-80-15-4865.

Sites -2902 and -2905 lie outside the subject parcel; consequently, any proposed development will have "no effect" on these sites. The remaining historic sites (-2900 and -2903) lie outside the boundaries of your proposed subdivision. Mitigation needs to be completed for Site -2900, and Site -2903 has been deemed "no longer significant" since sufficient information was collected from it during an archaeological inventory survey of the property in 1993 (*Archaeological Survey for the Proposed 5-Acre Kaluanui Park Development at Maunalua, Kona District, O'ahu [TMK 3-9-08: por. 13]*. 1993. CSH). Therefore, in view of these facts, we believe that your proposed subdivision and subsequent development, as described, will have "no effect" on significant historic sites.

Should you have any questions, please feel free to call Sara Collins at 692-8026.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

SC:jk

to cost $13 million and why it will cost another $6.3 million. Councilmember Felix says that in his capacity as Budget and Public Works Committee Chair will help hold the line in spending. Baker thanked Councilmember Felix for his support of the East Honolulu Development PLan.

Mayor's Representative: Georgina Yuen reported: 1) Ballots for the Neighborhood Board Elections are being accepted now. 2) Mayor Harris has submitted a balanced budget to the City Council for its consideration. 3) Despite the budgetary constraints on the City due to tough economic times, the City is still offering more services like Handicapped Parking Permits to be at all available Satellite City Hall locations except the two shopping center locations at Ala Moana and Pearlridge. 3) The CityExpress! bus service has 14 bus stops between Kalihi and the University of Hawaii (half that of normal buses).

Questions, comments and concerns: Speck asked if the mayor's budget included pay raises for city workers. Yuen answered that the Mayor's budget does not include pay raises. Nishimoto raised concerns about cutbacks on funding the Honolulu Zoo & city golf courses. Yuen responded that each City Department must submit a 2% budget cut.

Chair Rodgers calls for a short recess at 8:24 p.m.

Chair Rodgers resumes the Board meeting at 8:32 p.m.

Governor's Office: Eric Uchihara distributed a handout and reported the following: Governor Cayetano led a State delegation to Silicon Valley, California to attract high-technology firms to do business in the Islands.

PRESENTATION

Kaluanui 2/3 Proposed Development Plan for 450 Continuum Care Retirement Community Primary Developer - Zane Development Group Incorporated, Presented by Garrett P. Chun and Mike Klein of HICDA: Chun reported: 1) The purpose of this project is to enhance the ability of Senior citizens to age gracefully with a recreational lifestyle. 2) The location of this proposed development is located on Hawaii Kai Drive adjacent to the post office. The area about 14 acres. 3) The two factors that were used as a criteria in the land site; first, Topography - Hawaii Kai is 10 feet above sea level and rises on the plateau to 70 feet above sea level and second, residential style community that blends in with the surrounding environment. 4) There are three components of this project; first component, Independent Living Townhouses: 1 & 2 Story Buildings - Rental Units. There are a total of 54 units, 32 three bedroom units and 22 two bedroom units; second component, Independent Living Facility: 4 Story Buildings - Rental Units. There are a total of 110 units, 90 - Phase I, 20 - Phase II; and third component, Assisted Living Facility: 4 Story Buildings - Rental Units. There are a total of 114 Units, 84 - Phase I and 30 - Phase II. There will also be 35 affordable units for those with low incomes. 5) Klein stated to the Board that most of the residents must be 62 years and older on a fixed income with no assets. 6) There will be 33 parking stalls inside the center of Kaluanui 2/3.

Residents raised concerns about the potential of heavy on street parking which would adversely affect traffic in the Hawaii Kai Drive area. 1) Sheldon Zane of Zane Development Group reassured the public that many of the elderly residents do not own cars and that the parking stalls are for the visitors, staff, and other providers. 2) Several residents supported this development because it is needed for this rapidly aging community.

The speakers were thanked for their presentation.

21st Century Oahu Vision Team Plan: Houghton announced that this matter will be deferred to the next Neighborhood Board Meeting on April 27, 1999.

UNFINISHED BUSINESS

East Honolulu Development Plan: Baker moved to take this motion to support off the table. Discussion followed. 1) Kaneshiro expressed his opposition to this plan to limit the height at 40 foot which too arbritary and restrictive. 2) Fowler explained that this plan has been discussed and debated for three years with three drafts, the first draft in September 1997; the second draft in May 1998; and the third draft in March 1999. 3) Speck spoke for himself and on behalf of the Spinnaker Isle Homeowners Association of his opposition to this plan because it would be anti-

HAWAII KAI NEIGHBORHOOD BOARD NO. 1

c/o NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 400 • HONOLULU, HAWAII 96813

REGULAR MEETING AGENDA

TUESDAY, APRIL 27, 1999
HAHAIONE ELEMENTARY SCHOOL
595 PEPEEKEO STREET
7:00 P.M.

I. CALL TO ORDER AND INTRODUCTION

II. APPROVAL OF MINUTES FOR THE MARCH 30, 1999 REGULAR MEETING

III. TREASURER'S REPORT

IV. SECRETARY'S REPORT

V. STATUS REPORTS

- A. HONOLULU FIRE DEPARTMENT
- B. HONOLULU POLICE DEPARTMENT
- C. DEPARTMENT OF PARKS AND RECREATION
- D. BOARD ANNOUNCEMENTS
- E. CHAIR ANNOUNCEMENTS

VI. PUBLIC GENERATED ISSUES

VII. REPORTS FROM ELECTED OFFICIALS

- A. MAYOR'S REPRESENTATIVE
- B. COUNCILMEMBER JOHN HENRY FELIX
- C. SENATOR SAM SLOM
- D. REPRESENTATIVE BERTHA LEONG
- E. REPRESENTATIVE DAVID STEGMAIER
- F. GOVERNOR'S REPRESENTATIVE

VIII. PRESENTATIONS

- A. 21ST CENTURY OAHU VISION TEAM 2000 PLAN
  - Support for Vision Team 2000 East Honolulu Plan

IX. NEW BUSINESS

- A. NEIGHBORHOOD BOARD SUPPORT FOR THE VISION TEAM 2000 EAST HONOLULU PLAN
- B. KOKO HEAD RIFLE RANGE (DISCUSSION ONLY)
- C. HAWAII KAI NEIGHBORHOOD BOARD NO. 1 SUPPORTS PROPOSED KALUANUI DEVELOPMENT PLAN FOR 450 CONTINUUM CARE RETIREMENT COMMUNITY.
- D. HAWAII KAI NEIGHBORHOOD BOARD NO. 1 POSITION ON DRAFT ENVIRONMENTAL IMPACT STUDY (EIS) FOR PROPOSED KOKO HEAD REGIONAL PARK (Comments must be received by May 7, 1999).

HAWAII KAI NEIGHBORHOOD BOARD NO. 1

c/o NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 400 • HONOLULU, HAWAII 96813

REGULAR MEETING AGENDA

TUESDAY, JULY 27, 1999
HAHAIONE ELEMENTARY SCHOOL
595 PEPEEKEO STREET
7:00 P.M.

I. CALL TO ORDER AND INTRODUCTION

II. APPROVAL OF MINUTES FOR THE JUNE 29, 1999 REGULAR MEETING

III. TREASURER'S REPORT

IV. SECRETARY'S REPORT

V. STATUS REPORTS

- A. HONOLULU FIRE DEPARTMENT
- B. HONOLULU POLICE DEPARTMENT
- C. DEPARTMENT OF PARKS AND RECREATION
- D. BOARD ANNOUNCEMENTS
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- C. SENATOR SAM SLOM
- D. REPRESENTATIVE DAVID STEGMAIER
- E. REPRESENTATIVE BERTHA LEONG
- F. GOVERNOR'S REPRESENTATIVE

VIII. PRESENTATION

- A. DEPARTMENT OF LAND AND NATURAL RESOURCES: JAVA JO'S AND THE FUTURE OF MAUNALUA BAY

IX. NEW BUSINESS

- A. KALUANUI 2/3, 450 UNIT CONTINUUM CARE RETIREMENT COMMUNITY FOR APPROVAL OF VARIOUS HEIGHT LIMIT CHANGES ON THE PROPOSED BUILDINGS LOCATED ON TMK (TAX MAP KEY): 3-9-08: PARCEL 40.
- B. ELIMINATION OF SIGNS FROM HANAUMA BAY TO SANDY BEACH
- C. DISCUSSION OF PARKING AT KOKO MARINA SHOPPING CENTER

Paradise Malasadas - a lunchwagon establishment that has set up shop on the parking lot in Hawaii Kai Towne Center (across Burger King and Panda Express). Chair Rodgers asked if there were no objections, that the Board send a letter to Governor Benjamin Cayetano and Timothy E. Johns, Director of the Hawaii State Department of Land and Natural Resources (DLNR) to clearly reiterate this Board's support of Dredging Maunalua Bay Beach Park. There were no objections. Houghton noted that Java Jo's waited for six months of permits and paperwork to get rental space on Maunalua Bay Beach Park from DLNR and did it legally which was one of the reasons why the Board (as individials) applauded their efforts.

NEW BUSINESS

KALUANUI 2/3, 450 UNIT CONTINUUM CARE RETIREMENT COMMUNITY FOR APPROVAL OF VARIOUS HEIGHT LIMIT CHANGES ON THE PROPOSED BUILDINGS LOCATED ON TMK (TAX MAP KEY): 3-9-08: PARCEL 40: Mike Klein representing Hawaii Intergenerational Community Development Association (HICDA) - reported to the Board that Bill 75 - relating to the 40' height limit across all the above 13.859 acres was signed by Mayor Harris for the East Honolulu Development Plan. HICDA voluntarily agreed to lower the height of their proposed affordable senior apartments, at the entrance of Kaluanui 2/3 facing Hawaii Kai Drive, to two stories with a blue roof. This parcel is currently zoned A-2 with a 150' height limit. The first 30 apartment units are fully funded. HICDA is looking forward to the construction phase once the permitting process is completed in an expedited manner once the paperwork is complete. In Phase IV, HICDA is asking the Hawaii Kai Neighborhood Board to support a variance request to change the height limit to 80' so that they can construct the back building by adding two stories.

White moved and Wallace seconded that the Hawaii Kai Neighborhood Board support the height limit changes at Kaluanui 2/3, 450 Continuum Care Retirement Community.

Discussion followed. Kaneshiro expressed concern about the new intersection at the Hawaii Kai Drive entrance of the Kaluanui Continuum Care Center. This becomes a traffic hazard for motorists briving on a blind curve to Keahole Street. He suggested that the City consider building a decelleration lane for motorists to turn right into the project, but also those turning left (also right) to exit the project. He stated that there may be signage in prohibiting taking left turns to enter the project, but reality is sich that there are those who will break the law regardless of the consequences. He noted that there is a similar situation at Mawaena Kai. Carter was impressed with the aesthetics but was concerned about raising the height limit that might block the view of Koko Crater. Some Board members quickly reminded Carter that the location of Kaluanui is not very close to Koko Crater, thus raising the proposed building's height itself will not obstruct the view of Koko Crater. Houghton inquired how many units will be constructed in this proposed development. Klein answered 450 units and added that the affordable senior apartments would be completed within the year 2000. He noted that due to the number of changes that have been incorporated in this project, there have been additional costs to the project. Marion Grey, Hawaii Kai resident inquired about parking space in the proposed building. Klein answered people to parking ratio 1:1 in the front, while it is 1:2.25 in the back. Fowler commented about this project and shared Carter's sentiments.

The motion carried 9-2-0. Yeas: Clark, Houghton, Kaneshiro, Kirchner, Rodgers, Speck, Wallace, Welhouse, White. Nays: Carter, Geimer.

ELIMINATION OF SIGNS FROM HANAUMA BAY TO SANDY BEACH: Kaneshiro distributed a letter for the Board's approval to be sent to Kazu Hayashida, Director of the State Department of Transportation (DOT) urging them to remove the excess number of signs, including no parking on Kalanianaole Highway (between Hanauma Bay and Sandy Beach) which obstructs the scenic view toward the Ka Iwi coastline.

Kaneshiro moved and Wallace seconded that the Hawaii Kai Neighborhood Board urges the State Department of Transportation to remove excess signage on Kalanianaole Highway located between Hanauma Bay and Sandy Beach, except for health and safety signs.

Discussion followed. Kirchner opposed the last paragraph of the letter. Welhouse commented that Highways like Kalanianaole have to meet certain guidelines and requirements in terms of signages.

HAWAII KAI NEIGHBORHOOD BOARD NO. 1
c/o NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 406 • HONOLULU, HAWAII 96813

April 29, 1999

Councilmember John DeSoto
Chair; Committee on Planning
Honolulu City Council
Honolulu Hale
530 South King Street
Honolulu, HI 96813

Subject: East Honolulu Sustainable Communities Plan and Proposed Development on Kaluanui 2 & 3 Parcel (TMK 3-9-8:40).

Dear Councilmember DeSoto:

The Hawaii Kai Neighborhood Board in its meeting on April 27, 1999 voted to support the proposed 450 Continuum Care Retirement Community which would include a 114 unit assisted living facility and 65 affordable senior apartments. This project would be built jointly by the Zane Development Group, Inc. and the Non-profit Hawaii Intergenerational Community Development Association (HICDA). Significantly; this project as presented to our Board would conform with all of the provisions of the East Honolulu Sustainable Communities Plan presently contained in Bill 75, C.D.- 2.

It is contemplated that the affordable living requirement called for in the unilateral agreement contained in Bill 86-88 would be met by including 65 Units in this project and the balance elsewhere on Oahu. If additional affordable "for sale" units are required; above and beyond the 65 units referred to; it is contemplated by HICDA that they would be sold at 120% to 140% of the median household income or built elsewhere on Oahu.

The Board appreciates the expressed willingness of the developers to work with the community towards accommodating the concerns and interests expressed by them with respect to the project.

Very truly yours,

Charlie Rodgers J.S.

Charlie Rodgers, Chair
Hawaii Kai Neighborhood Board

cc: Jan Naoe Sullivan, Director of the Department of Planning and Permitting
Members, Honolulu City Council
Mayor Jeremy Harris

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813-3065 / TELEPHONE 547-7000

JOHN HENRY FELIX
VICE CHAIR

May 7, 1999

Sheldon Zane
Zane Development Group, Inc.
Pauahi Tower
1001 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

Dear Mr. Zane:

Your proposed Continuum Care Retirement Community, as presented to the Hawaii Kai Neighborhood Board No.1 on March 30, 1999, has been well received by the residents and board members.

I believe that your proposed development will provide senior citizens with several facilities for East Oahu. An assisted living facility of 114 units that was proposed, which also conforms to the 40 foot height limit, will create employment opportunities while offering more affordable "aging in place" for our local residents. Hawaii Kai seniors on limited incomes will find this proposed project an affordable alternative versus having to move to other communities on Oahu.

I commend you on your ability to meet the concerns of the area residents in keeping the development within the desired height limit to 40 feet while providing a service for the community's elderly citizens.

Sincerely,

JOHN HENRY FELIX

JHF/by
LB99-022

East Oahu Realty
HAWAII KAI CORPORATE PLAZA • 6600 KALANIANAOLE HIGHWAY, SUITE 114 • HONOLULU, HI 96825-1280
TELEPHONE: (808) 396-2000 • FAX: (808) 396-2020

March 23, 1999

Mr. Mike Klein
HICDA
1154 Fort St. Mall, Suite 300
Honolulu, HI 96813

Dear Mr. Mike Klein:

This letter is in regards to Kaluanui Senior Apartments and the Affordable Housing Plan Agreement related to the Unilateral Agreement made by Kaiser Development Company and Bishop Estate dated July 3, 1986, which was made part of Ordinance No. 86-88 adopted by City Council and City & County of Honolulu effective, July 21, 1986.

As a Hawaii Kai resident, Realtor, and former City Council Member for this district I am opposed to For Sale townhouses or condominiums at (80%) of the current median household income. All townhouses or condominiums should be sold at the (120% to 140%) of the current median household income or at market whichever is higher. Selling affordable units at (80%) will unnecessarily impact condominiums sales prices located within one mile of the proposed site called Kaluanui 2/3.

Hawaii Intergenerational Community Development Association (HICDA), which is a Hawaii nonprofit 501(c)(3) corporation, has proposed (30) to (65) affordable apartments in Hawaii Kai. These rental units would support senior citizens age 62 years and older, living in Hawaii Kai, who have lower retirement incomes. This type of housing will fill a need and not reduce the sales price of neighboring condominium units. Also, its appearance will be more conducive to the general feel of the local real estate market in Hawaii Kai.

I support both the senior apartments and Continuum Care Retirement Community being built on the property next to the Post Office in Hawaii Kai. If you need to contact me please call 396-2000.

Sincerely,

Dan Clement

Dan Clement

March 29, 1999

Mr. Mike Klein
Hawaii Intergenerational Community Development Association
1154 Fort St. Mall, Suite 300
Honolulu, HI 96813

Dear Mike Klein:

Earlier in March, at the Hawaii Kai Focus Group, presented by Herb Lee for Maunalua Associates, Inc. I reviewed your proposed Continuum Care Retirement Community.

Speaking as a long-term Hawaii Kai senior resident your proposed development provides many lacking facilities for East Oahu. By offering affordable "aging in place" our seniors in Hawaii Kai will be able to continue to live here even when their incomes drop when they retire. Your rental units that are age and income restricted represent a great opportunity for the community to "give back" to those whom originally paved the way for this unique community known as Hawaii Kai.

Please keep up the good work, I will be happy to assist you with this project in the future.

Aloha,

Roy Benham

Roy Benham

7538 Nakalele St.
Honolulu HI 96825
(808)396-4835

March 9, 1999

Hawaii Intergenerational Community Development Association
1154 Fort Street Mall, Suite 300
Honolulu HI 96813
Attn.: Mike Klein

Dear Mr. Klein:

I am very pleased to hear about your proposed development of affordable housing for seniors in Hawaii Kai. This proposal is long overdue.

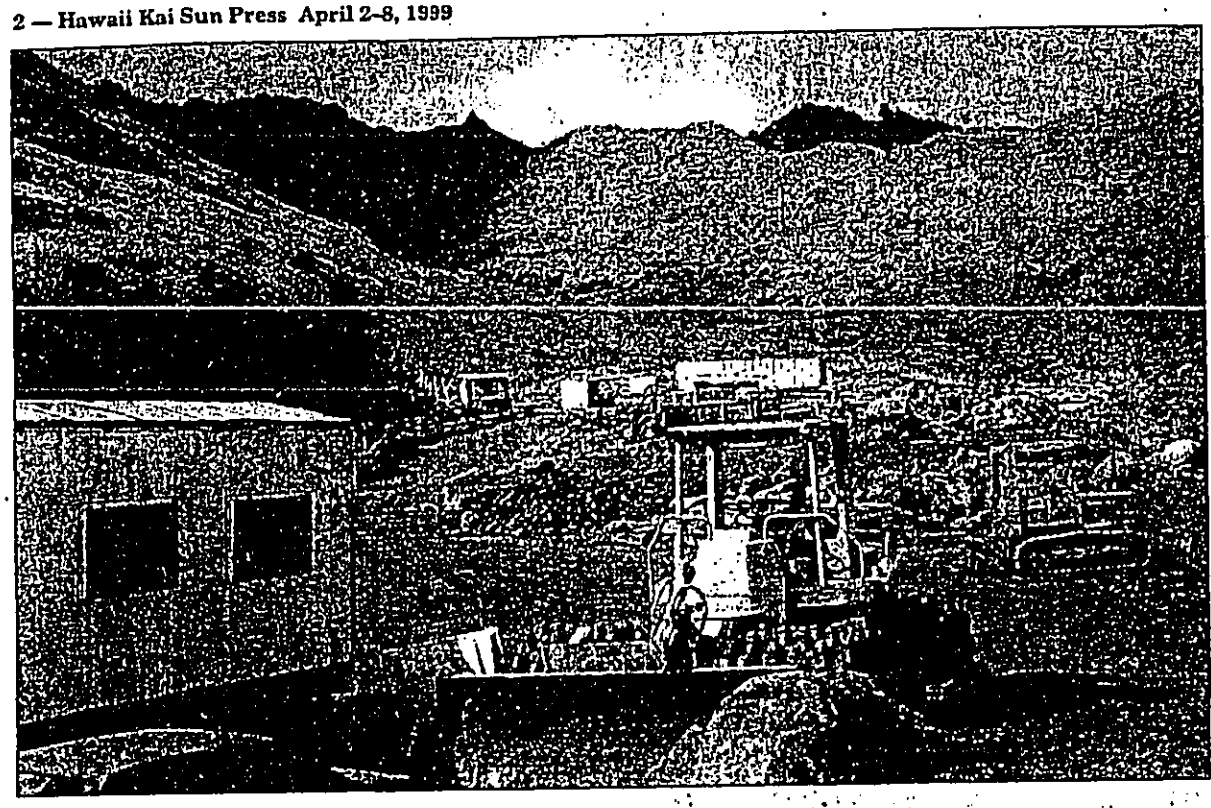
My mother currently lives in Hawaii Kai and due to the recent passing of my father her income is very limited. Because there are no affordable rentals in Hawaii Kai, she will either move away from her family in Hawaii Kai or possibly to the mainland. Although we would love to have her stay with us, our house does not support multigenerational living. If she has to move away, she will miss out on being close to her grandchildren for her remaining years.

Hopefully , however, she will be able to stay with us until the proposed rental apartments are available. Then, my mother will be able to live within her budget and be near enough to her family, yet able to maintain her own household and have the privacy and freedoms she deserves.

Please keep us informed of further developments with the project. Also, let us know what we can do to ensure my mother a rental unit.

Sincerely,

Rick Conroy



The Hawaii Kai Retirement Community, owned and operated by Holiday Retirement Corp., expects to open Phase II in June of next year. Meanwhile, Sheldon S.H. Zane Development Group Inc. has proposed to build a senior-living project for the Kaluanui II and III land.

F. L. Morris photo

Hawaii Kai the place to be for retirees

By Carol Chang
Staff Writer

HAWAII KAI — Well-heeled people are rushing to retire in Hawaii Kai, according to industry sources, and the lesser-heeled are not far behind.

The Hawaii Kai Retirement Community, which opened 192 units less than a year ago, is nearly full and has broken ground on a multimillion-dollar second phase that will add 177 more apartments, duplexes and assisted-living units to the complex.

"We're at 95 percent and filling fairly well," said Janet Johnston, administrator for Holiday Retirement Corp.'s facility at the back of Kawaihae Street. Rent ranges from $1,700 to $4,000 a month and includes congregate dining, housekeeping, social activities and on-call medical service. Holiday, based in Oregon, is one of the world's largest developers of retirement communities.

Building supervisor Gary Bernet said he expects Phase II to open June next year. Ground work is under way on a $16 million main residence, as well as duplex units and other improvements costing an additional $487,000.

Meanwhile, Sheldon S.H. Zane Development Group Inc. has proposed a 450-unit, mixed-use senior living project for the Kaluanui II and III land, located along Hawaii Kai Drive, between The Oahu Club and the post office.

(A plan for a four-story senior residence at The Oahu Club itself also was promoted two years ago by another Mainland-based firm, Pan Pacific Medical Development Co. of Seattle, which built The Ponds at Punaluu.)

Hawaii Kai is a good bet for retiree housing, because of national trends as well as local income levels, said Zane's project manager, Garrett Chun. Hawaii also has one of the nation's fastest-growing populations of senior citizens, he added.

"Demographics show that Hawaii Kai is No. 2 for median income in the state," Chun said. "The residents have a more affluent portfolio. Only Waialae-Kahala is higher. Also, the age of families there is conducive to support of projects like this."

He gave the example of his own uncle, an 80-plus Hawaii Kai resident who would be a perfect candidate for an independent-living unit.

"Independent living is a new thing to Hawaii, but it really caught on about six years ago on the Mainland," Chun explained." Zane's partner on the Kaluanui project would be Paradigm Senior Living of Oregon.

Chun was to present Zane's plans March 30 at the Hawaii Kai Neighborhood Board meeting. The board heard a similar proposal in 1997 from Coastal Rim Properties Inc. for 503 units on the same site.

Landowner Maunalua Associates is interesting in selling, Chun added.

Meanwhile, there's a plug in for "the little guy" from the Hawaii Intergenerational Community Development Association. Mike Klein, representing the non-profit group, is working with Zane on its market and affordable units. Klein said HICDA is focusing on about 65 apartment units in two buildings for those with low retirement income.

"The reality is, there a people out there who are wealthy, who don't drive Jaguars and have a little pension," Klein said. "Th paid for a big house Hawaii Kai, but now th can't keep it, and can't afford the $1,000 rent of the 'higher end' retireme market."

Another advantage retirees in Hawaii Kai is the easy access for relatives and the closeness to sh ping centers. When th move into retirement uni Klein said, seniors tend to give up their cars and take the bus. It also helps their visitors don't have to drive.

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Hawaii's Leader in Local News Coverage

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Appendix F

Comments and Responses to the Draft EA

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

September 19, 2000

Mr. Mike Klein
Community 2010
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

Dear Mr. Klein:

Subject: Draft Environmental Assessment Dated August 30, 2000 Regarding the Kahumui Senior Apartments in Hawaii Kai, Honolulu, Hawaii, TMK: 3-9-08: 46

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed project.

We have the following comments:

1. There is no existing water service to the proposed project site.
2. The existing water system is presently adequate to accommodate the proposed project.
3. 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.
4. 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.
5. The proposed project is subject to Board of Water Supply cross-connection control requirements prior to the issuance of the building permit application.

If you have any questions, please contact Kathryn Kami at 527-5221.

Very truly yours,

FOR CLIFFORD S. JAMILE
Manager and Chief Engineer

Pure Water . . our greatest need – use it wisely

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

SEP 19 2000

REF:HP-JK

Mr. Mike Klein
Hawaii Intergenerational Community
Development Association
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

LOG NO: 26177
DOC NO: 0009SC06

Dear Mr. Klein:

SUBJECT: Chapter 6E-42 Historic Preservation Review of a Draft Environmental Assessment (DEA) Prepared for the Proposed Senior Apartment Project, Phases I and II in Hawaii Kai
Maunalua, Kona, O`ahu
TMK: 3-9-008: 042

Thank you for the opportunity to comment on the DEA prepared for the proposed senior apartment project in Hawaii Kai, O`ahu. Our review is based on historic maps, aerials photographs, records, and reports maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel.

The DEA correctly summarizes the available information on historic preservation issues, and incorporates our previous comments. After the completion of archaeological inventory surveys in 1985 and 1994, it was determined that no historic sites were present on the subject parcel. Therefore, we believe that the proposed senior apartment development would have "no effect" on significant historic sites.

Should you have any questions, please feel free to contact Sara Collins at 692-8026.

Aloha,

for TIMOTHY E. JOHNS, Chairperson and
State Historic Preservation Officer

SC:jk

BENJAMIN J. CAYETANO
GOVERNOR

PAUL G. LeMAHIEU, Ph.D.
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

September 22, 2000

Mr. Mike Klein
Community 2010
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

Dear Mr. Klein:

Subject: Kaluanui Senior Apartments
Draft Environmental Assessment

The Department of Education has no comment on the proposed project.

Thank you for the opportunity to respond.

Very truly yours,

Paul G. LeMahieu, Ph.D.
Superintendent of Education

PLeM:hy

cc: P. Yoshioka, DAS

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
236 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

September 25, 2000

Sharyn Miyashiro, Acting Director
Housing & Community Development Corporation of HI
677 Queen Street, #300
Honolulu, Hawaii 96813

Attention:Lloyd Fukuoka

Dear Ms. Miyashiro:

Subject: Draft Environmental Assessment (EA) for Kaluanui Senior Apartments (TMK 3-9-8:46)

We have the following comments to offer:

1. TMKs: Several different TMKs are referenced throughout the draft EA. The draft EA text lists parcels 45 and 46 as the project site, while the attached letter from State Historic Preservation Division references parcel 42. Did SHPD inspect the actual project site or an adjacent one? The environmental site assessment lists parcel 40. Please clarify this in the final EA and, if required, attach a clearance letter from SHPD for the actual project site.

2. Emergencies: Will the complex include a backup generator to operate elevators during a power outage and to pump water to the upper floors? If not, how will such emergencies be handled, given that the residents are seniors and some may require assistance?

3. Rental Housing Trust Fund: Will these funds be applicable to phase II of the project?

4. Continuum Care Retirement Community: What is the status of this? The draft EA refers to the CCRC as a future complex, but the photo in the newsclipping in appendix E shows that ground was broken in early 1999.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

c: Mike Klein, Community 2010
Mike Allison, HI Intergenerational Community Development Assn.

Hawaii Intergenerational Community Development Association
1154 Fort St. Mall, Suite 300
Honolulu, HI 96813
(808) 524-0552

September 10, 2000

Ms. Genevieve Salmonson
Director
Office of Environmental Quality Control
236 South Beretania Street, Suite 702
Honolulu, HI 96813

Dear Ms. Genevieve Salmonson:

Thank you for your letter dated September 25, 2000, regarding the Draft Environmental Assessment (EA) for Kalunanui Senior Apartments (TMK: 3-9-8: 46). Below are the answers to your four questions from that letter.

1. The original report is referenced by an adjacent TMK:. Since the majority of the survey's find involved TMK: 42 at the time and additional TMKs are added due to subdivision actions, the State Historic Preservation Division (SHPD) will refer to the original study's TMK. When you read the original May 4, 1999 letter not only does this report refer to Kalunaui 2 & 3 but to Kalunaui 1. Kaluanui 1 includes a 21 acre site where Lalea at Hawaii Kai townhouses were built next to Kaluanui Road. This archaeological reconnaissance covers ground extending beyond the property lines and reaches up into the higher elevations above both Kalunaui 1, 2 & 3. Please reference the attached response letter from SHPD, dated September 19, 2000.

2. The developer has been working with the elevator manufacture and anticipates installing a backup generator. This item has been added in italic to the EA for Kaluanui Senior Apartments.

3. Rental Housing Trust Fund funds are only used for Phase I, no State of Hawaii funds are used in Phase II.

4. In the April 2-8, 1999 Sun Press article the report talks about several developments in Hawaii Kai. The Hawaii Kai Retirement Community is locate in a valley near Mount Terrace on Kawaihae St., which is approximately one mile and a half from the proposed low-income apartment project located at Kalunaui 2/3. In the photo Phase II of this luxury complex is being started. Holiday Retirement Corporation, the owners of the project, are the largest developers of congregate facilities in the mainland. They have over 40,000 units that are primarily rental retirement communities designed for independent living. The facility in Hawaii Kai provides meals, housekeeping and community activities starting at $2,000 a month for a one bedroom unit. Both phases have additional care available for seniors

Another Great HICDA Project

who need an assisted living environment. This care cost more and is limited to approximately 75 units out of the 400 units in Phase I and II.

Attached to this letter are the comments received regarding the Draft EA for Kaluanui Senior Apartments. Before I complete the Final EA I will make an appointment to meet with your staff to cover any questions on the responses to the Draft EA. After which, the Final EA for Kaluanui Senior Apartments will bopefully be forwarded to your agency for publication.

If you have any further comments or questions please call me at 371-2567.

Sincerely,

Mike Klein

Mike Klein

cc: Mr. Lloyd Fukuoka, Housing & Community Development Corporation of Hawaii

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111
http://www.honolulupd.org
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JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

MICHAEL CARVALHO
ROBERT AU
DEPUTY CHIEFS

OUR REFERENCE CS-TL

October 5, 2000

Mr. Mike Klein
Hawaii Intergenerational Community
Development Association
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

Dear Mr. Klein:

Thank you for the opportunity to review the Draft Environmental Assessment for Kaluanui Senior Apartments in Hawaii Kai.

We would like to recommend that the concept of crime prevention through environmental design be observed. Otherwise, we do not anticipate any negative impact on police services as a result of this proposal.

If there are any questions, please call Carol Sodetani of the Support Services Bureau at 529-3658.

Sincerely,

LEE D. DONOHUE
Chief of Police

By
EUGENE UEMURA, Assistant Chief
Support Services Bureau

University of Hawai'i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
2550 Campus Road • Crawford 317 • Honolulu, Hawai'i 96822
Telephone: (808) 956-7361 • Facsimile: (808) 956-3980

October 9, 2000
EA: 0246

Mr. Mike Klein
Community 2010
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

Dear Mr. Klein:

Kaluanui Senior Apartments
Draft Environmental Assessment
An Affordable Housing Project

The Hawaii Intergenerational Community Development Association is proposing to develop a 430 to 450 unit Continuum Care Retirement Community. Sixty-six of the units will be set aside for low-income seniors with rents restricted to 30% to 60% of the areas median household income for 31 of the apartments. The low income apartments will be 504 sq. ft. for a one-bedroom and 578 sq. ft. for a two bedroom unit.

This review was conducted with the assistance of Karl Kim, Urban and Regional Planning, and Khal Spencer, Geology and Geophysics. Additional comments were provided by Jacquelin Miller, Environmental Center.

General Comments

Hawaii Kai has a growing population of residents over 60 years of age that need to have access to housing designed for their needs. The project also promotes a compact form of development that ultimately conserves open space.

The scope of this DEA is deficient. The entire project should have been subject to the assessment and not just the portion of the project that applies to the thirty-one affordable units. If part of a development "triggers" an environmental review the whole development must be considered in that review. Section §11-200-7 HAR states that *A group of actions proposed by an agency or an applicant shall be treated as a single action when: (1) The component actions are phases or increments of a larger total undertaking; (3)An individual project represents a commitment to a larger project.*

Parts of this DEA are confusing and contain editorial errors. Some of the information presented is imprecise and tends to include self-serving statements. The final EA should be revised to reflect a more objective analysis. For example, The logic of the statement on page 3 that "*many*" of the 631 low income seniors would be assisted by this project, when only 31 units are designated for low income, is highly questionable. Comments such as "Within phase I, architecture has been well designed" and "Unit design is ample and surprisingly spacious" and "very spacious kitchen" sound more like promotion than explanation.

We note that the one and two bedroom units have 504 and 578 sq. ft. respectively. How do these low income units compare in size to other units in this facility. How do they compare to other low income units in other developments in Honolulu?

Flora and Fauna

This section was very general without enough detail to really assist the decision making process. The comment "various native vegetation" growing in this site is an error. Kiawe bush for example is not native to Hawaii. The grasses and palms growing on the site may also be alien. "Apparently, there are no known rare, Hawaiian plants or endangered wildlife" lacks the usual precision found in these documents. We recommend that this section be rewritten with the assistance of a biologist familiar with Hawaiian plants and animals.

This complex is located near Kuapa pond (Hawaii Kai Marina) and the Oahu Club. There are fresh water seeps in the area feeding into the pond and into the wetland area just mauka of the pond on the site of the former Hawaii Kai Recreation Center now owned by the Oahu Club. Are there any fresh water seeps on site? The maintenance of the landscaped areas will likely require the use of fertilizers and pesticides. What provisions will be made to minimize impacts to the nearby marina and wetland areas?

Geology and Soils

In general we concur with the Dames and Moore study on the appropriate steps for guarding against land shifting. We do, however, have several questions. The early housing in Hawaii Kai using masonry construction has been subject to significant structural cracks due to the general instability of the clay soils. Hence, construction in this area should be undertaken with maximum attention to foundations on base rock below lagoonal deposits. Since only 11 test borings were made to study subsurface stratigraphy, it may be important to have additional geophysical soundings at locations between borings. The basis for deciding that there is no further occurrence of mushy lagoonal deposits deeper than the borings should be presented. Has the use of geophysical mapping with a small seismic array been considered?

Energy Resources

Toilets and showers are not energy resource devices. Perhaps this section should be retitled 'Conservation of Resources' or something similar instead of its present title.

Traffic Mitigation Measures

The DEA implies on page 18 that there will be little driving by residents. Yet, each unit will be assigned a parking stall indicating that driving may be an important activity, though not at rush hour. Some mention of the bus stop locations, schedules, and services offered by the bus and Handi-van would be appropriate for this section.

Recreational Facilities

How does HICDA plan to meet the city's park dedication requirement? Will it be by a cash payment or by building a park nearby? The map labeled Exhibit 1-2, Existing Zoning Map, seems to indicate that there will be a park built adjacent to the senior housing. What type of park would be developed to be used by seniors? What is HICDA's preferred alternative?

State Schools and Library

The DEA states on page 13 that the Hawaii Kai public library will have more daily visits from senior residents, but it fails to estimate how many more people will use it. There is also no information given on the number of people now using the library. This would be useful in determining the impact of the development on this service. The library is located on Lunalilo Home Road "*across*" from Koko Marina Shopping Center.

Social Considerations

There is a lack of any attention to walking, bicycling, or other activities which would allow the seniors better mobility in their neighborhood. The area has sidewalks, but the roads are wide and traffic on the surrounding roads (Hawaii Kai Drive, Keahole, Wailua) is at times heavy and fast. The final EA should provide some discussion of walking, bicycling and traffic calming so the senior citizens would be assured of safe access to parks, shopping, the post office, and basic moving through Hawaii Kai.

Conclusion

This project addresses the need for more affordable housing in Hawaii. However, the Draft EA needs considerable revision to improve the substantive content for the Final EA. Thank you for the opportunity to review this document.

Sincerely,

Jacquelin N. Miller for

Peter Rappa
Environmental Review Coordinator

cc: Karl Kim
Khui Spencer
OEQC
James Moncur, WRRC
Jacquelin Miller

Community 2010
1154 Fort St. Mall, Suite 300
Honolulu, HI 96813
(808) 524-5414

October 20, 2000

Mr. Peter Rappa
University of Hawaii at Manoa
Environmental Center
2550 Campus Road, Crawford 317
Honolulu, HI 96822

Dear Mr. Peter Rappa:

Thank you for your letter dated October 9, 2000 regarding the Draft Environmental Assessment for Kaluanui Senior Apartments. Comments to this letter will be faxed to the Environmental Center on October 23, 2000 for your review. I would like to meet with your department and discuss the responses to your letter. Please call me at 371-2567 at your earliest convenience to schedule an appointment.

Extensive care was taken to make sure that this DEA conformed to Section 11-200-7 HAR and that it was properly met. Office of Environmental Quality Control (OEQC) was contacted and several meetings were held on this issue before the final draft was turned into the Housing and Community Development Corporation of Hawaii (HCDCH). HCDCH required additional changes to further comply with the condition of; "a group of actions proposed by an agency or an applicant shall be treated as single action when: (1) The component actions are phases or increments of a larger total undertaking: (3) An individual project represents a commitment to a larger project.

I apologize for any editorial errors and statements that might have offended your organization. The logic behind the "many" of the 631 low income seniors would be assisted by this project, refers to a large number of seniors within this low income group who might be able to make use of this project in Hawaii Kai. It was not meant to be a statement literally taken to mean all 631 of the Hawaii Kai low income seniors would be assisted by this project of 31 apartment units. Currently, Hawaii Intergenerational Community Development Association (HICDA) has over 200 seniors who have called to rent the Kaluanui Senior Apartments after one newspaper article about the project in Spring 2000. Approximately 50% of these seniors are currently living in East Honolulu and or Hawaii Kai. Demand has been so high that HICDA will not be formally advertising additional rental applications for this project. When you talk to these seniors many are very disparate to get into cheaper housing. In some cases the spouse has died and the remaining partner has only a limited social security check. This becomes especially serious when the spouses retirement does not transfer to the surviving senior. Another serious condition occurs when the senior individual is not Medicaid eligible and insurance does not cover a major surgery or drugs for one or the other senior. Many times one major surgery can leave a senior or senior couple without any savings at all. HICDA will reword this section on page 3 in the DEA.

Unit sizes at the Kaluanui Senior Apartments are well within range of the other afford senior projects within the City and County of Honolulu. Royal Kinua, located on Kinua Street and built in 1998, has one bedroom units at approximately 500 square feet and two bedroom units from 700 to 727 square feet. Wisteria Vista completed this year on South King Street has one bedroom units at approximately 432 square feet. And the proposed Kalakaua Vista, scheduled to be built next year will have one bedroom units from 432 to 450 square feet. All three projects are senior low-income housing tax credit projects which have an age restriction of 62 years and older.

As to the vegetation on Phase I & Phase II, it has been completely cut to the ground on two occasions over the last year because of repeated community requests to keep the area clean looking. The only plants left were the Kiawe trees. Kiawe trees are not known to be rare. HICDA has removed the word native in the DEA.

HICDA might be the owner of the 5 acre site located next to the Oahu Club. This site does have a pond on it that continues from the Oahu Club property adjacent to 5 acre site. It is our opinion that a flora and fauna study might be done on the untouched portion of this property before the park is completed. There is approximately 1 acre in the front which has no vegetation on it along Hawaii Kai Drive. The assistance of a biologist familiar with Hawaiian plants and animals would be used to review the 5 acre park area. This study will not be done until the property is conveyed to HICDA and a development plan for the park is completed. This 5 acre parcel will not be touched during development of the proposed senior apartments or condominiums. Earlier test pits, borings and ground samples where done by Geo-labs did not locate any fresh water seeps on the site. A large drainage system has been designed by Concepts Engineering to remove the majority of the water sheeting on Kaluanui 2/3, the 13.859 site, toward the Post Office side of the site and away from the pond. This will help with the fertilizers and pesticides that would eventually reach the wetland area but it will not eliminate this problem. HICDA will work with our landscape architect and try to reduce the amount of fertilizers and pesticides required by using the correct vegetation around our apartment buildings.

The soils test by Dames and Moore were done with 11 test borings under the location of the proposed foundations. Additional load testing of preliminary 12" piles will be done in January 2001 to determine if any movement will occur under the 100 to 195 blow substrata, or very solid medium grained basaltic sand and coral. HICDA decided to use 12" piles versus the 4" pin piles recommended by Dames and Moore. Foundations International has reviewed our

soils report and pile plan and agrees with the foundation plan including the load testing of the preliminary piles.

Energy Resources was changed to Energy and Conservation Resources within the Final EA, thank you for your suggestion.

City and County of Honolulu, Department of Planning and Permitting requires that HICDA provide one parking stall for every unit under 600 square feet. Many of the potential senior residents that have talked to about our apartment complex do not have cars and therefore will be riding the bus. There is a bus stop in front of Kaluanui 2/3 which can take residents into town or Ala Moana shopping center. Also, the park and ride facility is located two blocks away which would provide alternative bus routes for these seniors. Handi-van would be available to the senior residents but they would have to schedule an appointment for pickup.

The Department of Park and Recreation will require a dedicated park or payment in-lieu of a park. HICDA might use the 5 acre park if it is conveyed to the nonprofit organization and the use does not violate any of the restrictions within the deed passed on to HICDA from Kamehameha Schools Bishop Estate. HICDA's preference is to use part of the 5 acre park.

The section about the State Schools and Library section has been amended to reflect your comments on the subject. HICDA indicates that it does not know how many additional senior individuals will use the Hawaii Kai library.

The Department of Transportation Services did not want to calm Hawaii Kai Drive or Keahole Street. The traffic signal and improved intersection at Hawaii Kai Drive and Keahole Street were considered sufficient. The left hand storage lane at the common entrance to the proposed project on Hawaii Kai Drive was considered necessary and acceptable to the department. Many seniors, adults, and children use Hawaii Kai Drive and Keahole Street and very few accidents involving pedestrians has occurred since 1960s. Safe access to the parks, shopping centers, post office, and other areas of Hawaii Kai exists today without additional mitigation measures being required. HICDA is looking into providing a solid concrete wall fronting Hawaii Kai Drive to protect the senior apartments located on the ground floor of the 31 Senior Apartments.

HICDA's President and I would like to meet with your staff to discuss the DEA and this response letter.

Sincerely,

Mike Klein

cc: QEQC

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
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FAXED 10-10-00

JEREMY HARRIS
MAYOR

ABELINA MADRID SHAW
DIRECTOR

MANUEL T. VALBUENA
DEPUTY DIRECTOR

October 9, 2000

Mr. Mike Klein
Hawaii Intergenerational Community Development Association
1154 Fort Street Mall, Suite 300
Honolulu, Hawaii 96813

Dear Mr. Klein:

Thank you for requesting the Department of Community Services (DCS) of the City and County of Honolulu to review and comment on the Draft Environmental Assessment (DEA) for the proposed project, Kaluanui Senior Apartments in Hawaii Kai, part of a larger 430 - 450 unit Continuum of Care Retirement Community slated for future development. The Elderly Affairs Division (EAD), as the Area Agency on Aging (AAA), has been asked to comment for DCS.

We concur that projects of this type are needed in the City and County of Honolulu. In addition to the more than 1,750 elderly currently on state and county housing wait lists on the island of Oahu, over the next 5 years it is anticipated that 2,000 of the 3,274 existing Section 8 units statewide may be converted to market rate housing units as their Section 8 rental agreements with the federal government expire. We strongly support that a portion of this project be reserved for low-income individuals in the Hawaii Kai area.

Additionally, the 60 and over population is the fastest growing population segment in the nation. From 2000 to 2010 we expect to see our state's overall senior population rise by 31%. Seniors in the state of Hawaii also enjoy the longest life expectancy of any seniors in the United States, 6 years longer on average than seniors in the rest of the nation. This segment of our senior population, those 85 and older, will see the most dramatic increases in numbers, more than 75% during that same 10 year period.

We strongly concur with HICDA's desire to provide for the continuum of care of Honolulu's seniors with the inclusion of assisted living facilities in later phases of the project. However, the DEA did not address your organization, its principals, or its past experience development housing of any type in any location. We would like to be provided with this information, especially as it pertains to projects of this nature in Hawaii.

We suggest that an Environmental Assessment be completed for the entire planned Continuum of Care project as it is envisioned prior to beginning the construction of either Phase I or II. The cumulative environmental effect of the project on existing systems should be considered, not just each individual piece as it is built. The project may require the completion of all components in a timely fashion in order for any one component to be profitable. We would also like to see how the developer plans to complete the project should State Rental Housing Trust Funds be unavailable. Additionally, in addition to the licensing indicated, would the assisted living portion of your facility require a Certificate of Need from the State Health Planning and Development Agency?

This particular site is appropriate for the development of elderly housing because of its close proximity to the Hawaii Kai Town Center and existing healthcare services for the elderly such as doctor's offices, area hospitals and long-term care facilities. Convenient shopping and bus lines are within walking distance. As additional development of the Hawaii Kai area continues, even more facilities should become available to service the needs of the seniors living in this project. However, we would like to suggest that the developers and operators consider inclusion of a transportation component that would allow the residents, especially those who are mobility restricted, to get out of their apartments on a regular basis to attend to chores such as grocery shopping, doctor's appointments, and filling of prescriptions in the local Hawaii Kai area.

We also suggest the developer provide the availability of healthcare support services on site to all residents, not just those in the assisted living facility. Disability increases with age. While only 5% of those 60 and older have a mobility and self-care limitation, almost 12% of those 75 and older and 22% of those 85 and older have such limitations. This makes the need for support and assisted living services much more critical as our seniors age. The inclusion of on-site case management would be most beneficial to the residents, considering the anticipated large concentration of seniors in one location in the near future. A Case Manager, in addition to a Resident Manager, would provide needed assistance for those low-income seniors who need minimal assistance with such services as meals, chore and housekeeping, personal care, and transportation. Some of these services may be available at little or no charge through existing service providers to those low-income residents who qualify. The assistance of a Case Manager can relieve the Resident Manager of the burden of such care coordination while allowing the residents to continue to age in place, which is the stated goal of the Kaluanui project.

While the DEA discloses that the minimum age for the rental apartments in Phase I is 62 years of age and 55 for the for sale condominiums, it made no mention of whether persons younger than the minimum age, such as spouses, children or caregivers, would be allowed to live in the unit of a qualifying individual. Please address this issue.

The projected rents proposed for Phase I for the low-income component, appear to be satisfactory. The Department of Housing and Urban Development (HUD) allows those who are very, very low income (30% of median income), very low (50%), and low (80%) to pay up to 30% of their income for housing and associated costs. The market determines all other market rents. Currently, HUD states that the Fair Market Rent in Honolulu is $723 for one-bedroom units and $851 for two bedroom units. Your own research shows that the East Oahu average for one bedroom units is $875 and $1,033 for two bedroom units. However, your proposal indicates your average rent for the one bedroom unit would be $1,132 and $1,359 for a two bedroom unit. We therefore think your estimates of rents for this project is optimistic and suggest that you reconsider your rental income projections.

Your discussion also includes the disclosure that the target group for purchase of the Phase II condominiums is those earning between 115% and 120% of median income. Your discussion does not include the purchase price of those units, whether they are intended for fee simple or leasehold sale, what the association fees would include, or how much the fees would be. We feel that discussion of these items is warranted prior to the finalizing the DEA. We would like to see the Condominium Report which should include a sample sale and lease agreement. It is also unclear if these units will require the owner to be the occupant. Additionally, what restrictions are placed on the resale of these units. Should an eligible purchaser die, and their heirs and/or assigns not satisfy the minimum age requirements, must they sell the unit or may it be rented to someone who is eligible. Will the developer have the right of first refusal? Are there other buyback provisions? It is our goal to foster development of affordable housing for our current residents of this state and county, not for purchasers who will not occupy the premises as their principal place of residence.

It should be noted that if the sale of these units is intended to be leasehold, under the City and County of Honolulu's existing ordinance, 91-95, codified as Chapter 38 Revised Ordinances of Honolulu, owners of condominium leasehold units are allowed to apply for the purchase of the fee simple portion provided that certain requirements are met. Please contact the Leasehold Administrator, Ms. Sally Cravalho at 527-5990 for details. Does Chapter 38 apply to this property. If so, what provision has the developer made for this possibility ?

While the DEA indicates that two water meters will be purchased from the Board of Water Supply, it was not indicated whether individual residential units will be metered. Additionally, it was not indicated whether rents will include utilities and parking spaces. If these fees are to be charged on an individual unit basis, what is the anticipated cost to the tenant or purchaser?

Finally, we would like to make some "senior friendly" suggestions concerning the design which we hope you pass on as information to those involved in the actual design and construction of the project.

All areas should be handicap accessible as well as adaptable, not just those areas specifically designated as units built to comply with the Americans with Disability Act (ADA) requirements. With the current focus that public health services be provided in non-institutional settings, seniors are being encouraged to remain at home for as long a practicable. As they grow older, it can be reasonably anticipated that most of the seniors occupying the project will have mobility or vision impairments at some time during their residency.

We recommend that consideration be given to:

1. **Flooring**

   As seniors become older they may find it more difficult to lift their feet or to maintain balance. Irregularly surfaced carpet in both private as well as common areas, such as Berber, or floor tiles, such as Sautillo, may cause seniors to trip and/or fall which can lead to broken bones.

2. **Lighting**

   As seniors lose visual acuity, small differences, such as the labeling of floors or doors, becomes critical to their ability to remain independent. Contrast is very important, as is size and shape of lettering. Glare and low or uneven lighting are also problematic with increasing age.

3. **Adaptability**

   Residential Units

   While there are specific requirements as to the number of units that will require ADA accessability, we recommend that all units in your project be adaptable. It makes sense to take the time in the design of the project and to spend what will amount to a few extra dollars in the construction in order to provide adaptability in the future. Items to be considered should include blocking in bathroom walls adjacent to tubs and toilets which allow the future installation of grab bars (or install grab bars to begin with); higher toilets which aid in the ability of the senior to transfer from a wheelchair, and help those who have difficulty raising themselves from a sitting position; adequate clearance for wheelchairs in doorways, bathrooms, and kitchens; thresholds through doorways and to areas such as lanais or porches that allow easy walker and wheelchair access (often, those in wheelchairs have difficulty getting the chair over a threshold even though that threshold meets ADA requirements); height of appliances, cabinets, counters, mirrors, switches, and outlets adjusted for limited range of motion; adequate

counter space to allow for transfer of dishes and cooking utensils from appliances; elimination of controls on appliances which require a senior to reach over a flame or burner; adjustability of cabinet shelves; use of lever-action closures for doors and cabinets; use of rocker wall switches; and ease of use of things such as window latches, drapery and blind closures.

Common Areas

For common areas, we suggest the elimination of low furniture which seniors find difficult to lower themselves into or raise themselves from such as sofas; elimination of furniture which seniors may trip over such as low stools and coffee tables; inclusion of front loading washers/dryers and lower folding tables in the common laundry areas; trash chutes on each floor; areas which promote socialization rather than isolation such as a community garden, meeting rooms, and lanai areas; a system of floor monitoring or buddy system so that management as well as neighbors are more aware if a senior is ill or having other difficulties; and funding for on-site case management services to coordinate the needs of seniors so they may continue living in the facility for as long as possible.

The Honolulu Committee on Aging, as well as the Mayor's Committee For People With Disabilities (MCPD), are active organizations within the City and County of Honolulu, which are able and willing to assist with further discussions concerning the design, function, and furnishing of the building. Please feel free to contact either Mark Au, staff person for the MCPD at 523-4959, or Pat Tompkins of my office at 523-4546, should you require additional assistance.

Additionally, both the State Executive Office on Aging (EOA), and Catholic Charities Housing Assistance Program (CCES-HAP) have expressed interest in this project through their committee which recently updated *A Guide to Housing Options for Elders in Hawaii*. They have asked to be included in future requests for comments. Kiyoko Nitz of EOA can be reached at 586-7315 and Betty Lou Larson, CCES-HAP at 595-0077.

We look forward to your response to our comments.

Sincerely,

Karen K. Miyake
County Executive on Aging
Elderly Affairs Division

PT:ab

Hawaii Intergenerational Community Development Association
1154 Fort St. Mall, Suite 300
Honolulu, HI 96813
(808) 524-0552

October 30, 2000

Ms. Karen K. Miyake
County Executive on Aging
Elderly Affairs Division
Department of Community Services
City and County of Honolulu
715 South King Street, Suite 200
Honolulu, HI 96813

Dear Ms. Karen K. Miyake:

Thank you for your response letter to the Draft Environmental Assessment (DEA) for Kaluanui Senior Apartments dated October 9, 2000. Hawaii Intergenerational Community Development Association (HICDA) appreciates your comments and recommendations in the letter.

This DEA was for Phase I which is Kaluanui Senior Apartments and represents 31 independent senior living units. The State of Hawaii Rental Housing Trust Fund (RHTF) will only be used on Phase I. The $1.0 million dollar RHTF loan was awarded in June 1999, therefore this loan is considered committed funds to the project. All other phases within these projects will be financed privately and are independent of Phase I.

Extensive care was taken to make sure that this DEA conformed to Section 11-200-7 HAR and that it was properly met. Office of Environmental Quality Control (OEQC) was contacted and several meetings were held on this issue before the final draft was turned into the Housing and Community Development Corporation of Hawaii (HCDCH). HCDCH required additional changes to further comply with the condition of; "a group of actions proposed by an agency or an applicant shall be treated as single action when: (1) The component actions are phases or increments of a larger total undertaking: (3) An individual project represents a commitment to a larger project. HICDA was asked to clarify and differentiate between the 31 senior apartments and the overall development. Also, within the discussions on the overall development or group of actions, I was asked to only discuss the overall development in the categories where there was an impact versus a specific discussion in every category.

Hawaii Elder Care through Zane Developemnt Group (Zane) is developing the assisted living facility and the overall Continuum Care project. Each component of the development of Kaluanui 2/3, the larger 13.8 acre parcel, will be developed independently and stand on their own. As indicated within the DEA a Conditional Use Permit was approved for the assisted living facility in August 1999 by the Department of Planning and Permitting. A Certificate of Need would only be required by the State

Health Planning and Development if Zane was building a skilled nursing or adult day health facility on site. Since neither will be built on the proposed site no Certificate of Need is required. Zane would be required to be licensed by the Department of Health as an Assisted Living Facility. Zane has requested a copy of the license information and he will comply with all requirements under the State of Hawaii regulations.

HICDA might include a transportation component through Catholic Charities Elderly Services (CCES), if possible, or work with other nonprofit organizations. Mr. Tom Baty works for CCES as an administrator and is HICDA's Vice President. Services from CCES are restricted and Mr. Baty has indicated that it might be necessary to request additional funds for servicing Hawaii Kai. Additional discussions have been held and it appears that CCES will need to receive more funds before servicing this area. HICDA has a very tight budget at this project and the tenants served do not have high incomes, but both CCES and HICDA will continue discussing this matter. HICDA might have to write a separate grant that provides cash to CCES or create a new type of transportation service that is in the form of a partnership between both organizations or another nonprofit. Ms. Betty Lou Larson from CCES and I are directors for Assisted Living Options Hawaii. Ms. Betty Lou Larson has offered to provide case management services from CCES. HICDA is looking into providing these services to help with the "aging in place" of seniors residing at the 31 apartments. Under Fair Housing HICDA can not refuse to rent to spouses of the lessor under the age of 55 or 62. Caregivers will be allowed to stay at the 31 apartments subject to a written note from a qualified doctor and review by a case manager.

The rental rates for the apartments, not in Phase I, at 100% of median area household income are at or below the current rental rates within East Oahu. HUD and RHTF income limits dated 3/9/200 set the maximum tenant contribution, including utilities, for 100% of the median household income for a one bedroom at $1,141 and for a two bedroom at $1,370. Also, the report in the DEA is now one year nine months old. Rents have increased in East Oahu, especially in Hawaii Kai, where rents are now averaging $1,500 plus for a Two Bedroom unit. By the end of 2001 when the first phase is completed rental rates might be averaging $1,800 a month in Hawaii Kai for a Two Bedroom unit. Based on the current and future Hawaii Kai rental rates any units at 100% of the median household income would be very helpful for those seniors on limited or restrictive incomes.

All units sold as part of Phase II will be fee simple therefore, Chapter 38 does not apply to Phase II. The developer of Phase II is not allowed to discuss pricing on Phase II until a Condominium Report is completed. The Condominium Report will not be complete until March 2001 at the earliest All units sold under within the affordable category will be required to meet City and County of Honolulu affordable guidelines. The buyback provision under these guidelines are currently three years based on the last approved City Council bill.

Board of Water will provide one water meter for Phase I and one water meter for Phase II. Residents in Phase I will not be charged for utilities as it is included in their rent. There will be a separate charge to the residents in Phase I for the installation of an optional A/C unit if that charge does not exceed the maximum allowed within each median area household income (MHI). If it does exceed the MHI there will be no charge for the A/C unit. Within Phase II the water bill will be included within the monthly maintenance charge to each owner of the condominium. This monthly maintenance charge has to be included within the figures used to compute the MHI under the City and County of Honolulu's affordable guidelines. Therefore, the water bill will be included within the calculations for affordability because the owners are required to pay that bill. The anticipated water cost for the condominiums would be approximately $35.00 a month.

Another Great HICDA Project

Based on recommendations from our ADA consultant and the State of Hawaii's, Disability and Communication Access Board, HICDA will be making most units adaptable within Kaluanui Senior Apartments. Your comments on Flooring, Lighting, and Adaptability have been reviewed and represent recommendations that have for the most part been included within the 31 senior apartments.

Attached to this letter are our organization's principles and past experience for HICDA and Paradigm Senior Living. Please call me if you have any questions regarding this letter or the project in the future.

Sincerely,

Mike Klein

Mike Klein

Suite 1400 Pauahi Tower
1001 Bishop Street
Honolulu, HI 96813

Sheldon Sin Hee Zane
P.E., Esq.

Ph. (808) 524-4595 #11
Fax (808) 537-4211
EMail: SZane64@aol.com

CURICULUM VITAE

Employment:

1998-Present: Managing Member, Mahinui ElderCare, LLC

1984-Present: Attorney in private practice with emphasis on construction litigation, real estate development and plaintiff's personal injury.

1977-Present: Chairman, Zane Development Group, Inc., A real estate development company inc: developing the following as principal partner:

1978	78 Unit Maalaea Banyan Condominium on Maui
1979	116 Unit Queen's Gate Subdivision, Hawaii Kai
1980	9 Unit Queen's Point Cluster, Hawaii Kai
1981	27 Unit Queen's Gate South Subdivision, HI Kai
1982	18 Unit Napua Point Condominium, Hawaii Kai
1983	44 Unit Kapiolani Banyan Condo, Honolulu
1986	36 Unit Hale Nani Subdivision, Hawaii Kai
1987	18 Unit Cross Court Subdivision, Waipahu
1987	18 Unit Hanamaulu Subdivision, Kauai
1988	36 Unit Pheasant Ridge Subdivision, Waikoki, HI
1989	593 Unit West Loch Estates Subdivision, Waipahu
1991	700 Unit West Loch Fairway Subdivision, Waipahu
1991	100 Lot Honokaa Knolls Subdivision, Honokaa, HI
1995	20 Lot Kauai Cocoa Plantation Subdivision and Visitor Center, Kauai, HI
Construction to Start in 2001	1997 80Unit Elderly Assisted, Mahinui Manor, Kaneohe
Construction to Start in 2001	1998 90 Unit Elderly Assisted, Kapolei, Oahu, Hawaii
	200 Unit Elderly Campus, Kona, Hawaii

1973-1977: Vice President and General Manager, Property Development Division, Kaiser-Aetna, a Joint Venture of Kaiser Aluminum and Aetna Life Insurance, responsible for developing the following:

1973	18 Hole Hawaii Kai Championship Golf Course
1975	200 Unit Crater View Subdivision, Hawaii Kai

1975 126 Unit Mount Terrace Condominium, Hawaii Kai
1975 78 Unit Kawaihae Crescent Condo, Hawaii Kai
1975 433 Unit Manoa Luan Twin Towers Condo, HI Kai
1976 300 Unit Kihei Condominium, Maui

1973-1973: Executive Vice President and RME of Ideal and Imperial Construction Companies involved in site work, grading, paving, installation of utilities and construction of roadways.

1964-1972: Naval Officer, Civil Engineer Corps, U.S. Navy
1964 Graduate U.S. Naval Academy, Annapolis, MD
1964-65 Public Works Officer, Mare Island Shipyard
1965-67 Graduate Student, Stanford University
1967-69 Republic of Vietnam as
Alpha (Equipment) Company Commander,
Battalion S-3 (Operations Officer),
Mobile Construction Battalion FIVE (Seabees)
1969-71 Washington, D.C. as
Staff of Chief of Civil Engineers, addnl duty as
Head of Officer Graduate Education & Training,
Staff of Chief, Bureau of Naval Personnel
1971-72 Navy Resident Officer in Charge of
Construction, San Diego Area, CA

Personal, combat, unit and campaign military awarded from the Department of the Navy and Republic of Vietnam

Education:

1984: Richardson School of Law, Univ. of Hawaii
Juris Doctorate
1971: Graduate School of Business and Administration
George Washington University
M.B.A., Business Finance
1967: Stanford University
M.S.C.E., Construction Management
1964: U.S. Naval Academy
B.S. with Distinction, General Engineering

Professional Registration:

Registered Professional Civil Engineer	HI & CA
Licensed General Contractor, A&B	HI & CA
Licensed Real Estate Broker	Hawaii
Member of the Bar	Hawaii

MICHAEL W. ALLISON
1636 Piikoi Street Apt 303
Honolulu, Hawaii 96822-2728
(808) 533-0370

PROFESSIONAL EXPERIENCE

December 1996 to Present. Senior Loan Officer, Commercial Real Estate, First Federal Savings and Loan, Honolulu, HI. Responsibilities include real estate loan underwriting, portfolio management, and business development.

May 1993 to November 1997. Account officer, Commercial Real Estate, Bank of America, Honolulu, HI. Responsibilities included real estate loan underwriting, portfolio management, and business development.

August 1990 to June 1992. Vice President Development, Hawthorn Realty Group (Hawaii), Inc., Honolulu, HI. Responsibilities included identifying and evaluating development opportunities, performing due diligence, deal structure, project financing, monitoring permit applications, and property management. Projects included a 400-room hotel, leasing and managing warehouse property, and acquisition / renovation of downtown office building.

November 1988 to July 1990. Commercial loan officer and Assistant Branch Manager, First Hawaiian Bank, Honolulu, HI. Responsibilities included underwriting business loans, portfolio management, and business development. Appointed to special committee by the chairman of the bank to review and propose revisions to the bank's lending policies and procedures.

September 1984 to October 1988. Commercial loan officer and Assistant Vice President, American Security Bank, Washington, D.C. Responsibilities included underwriting business loans, team leader, and managing a portfolio of thirty corporate clients with credit availability in excess of $30 million. Prepared and presented cash management plans and advised clients on short-term investment of excess cash. Achieved position of assistant vice president loan officer in three years with no prior experience.

July 1982 to August 1984. Vice President, Operations and Chartering, Colocotronis-Allison. Responsible for the employment and provisioning of ocean-going dry bulk cargo vessels. Duties included selecting and negotiating charter agreements and managing operations. Acted as agent for buyers and sellers of ships.

February 1970 to June 1982. Commissioned Officer, United States Air Force. Highest rank, captain. Positions held included squadron section commander of 500 person squadron; officer-in-charge of large passenger terminal, fleet service unit, and freight terminal; logistics staff officer at major supply depot with positions in distribution and weapons system management; and logistics plans staff officer at Headquarters, Pacific Air Forces. Overseas assignments include combat tour in Viet Nam.

EDUCATION

Masters of Business Administration	University of Tennessee	1976
Bachelor of Arts	University of Oregon	1969

THOMAS N BATY
627-A N. School St.
HONOLULU, HI 96817
PH. 524-6284

RESUME OF EXPERIENCE

I. WORK EXPERIENCE

1988-Present
Administrative Liaison
Housing Specialist/Counselor
A Non Profit Social Service Agency
Honolulu, Hawaii

1986-1990
Educational Outreach Counselor
Susannah Wesley Community Center
Honolulu, Hawaii

1982-1985
Teacher: Art, Photography, and History
Hawaii School for Girls
Honolulu, Hawaii

1982
Training Coordinator/Field Representative
Service Employees International, Local 556
Honolulu, Hawaii

1976-1981
Recipient: Artist-In-Resident Grant
National Endowment for the Arts
Insular Arts Council
Office of the Governor, Agana, Guam

1974-1975
Assistant Manager, Music Store
Music Center Pacific
Agana, Guam

1972-1974
Chief Negotiator/Field Representative
American Fed. of Government Employees
Local 1581, Agana, Guam

1971-1972
Teacher: Art (Painting)
Dept. of the Navy, Commander Marianas
Consolidated Recreation
Agana, Guam

1964-1971
Teacher: History (American, World, Guam)
Govt. of Guam, Dept. of Education
Agana, Guam

II. EDUCATION

1976
Graduated Masters of Art in Art
University of Guam, Agana, Guam
Painting, Printing

1964
Received Iowa Teaching Certificate
Drake University, Des Moines, Iowa

1963
Graduated Bachelor of Liberal Arts
Grinnell College, Grinnell, Iowa
History, Literature

Statement of Experience Working With Low Income Housing

I, Thomas Baty, have worked at Catholic Charities Elderly Services (CCSE) since July 1988. This social service agency provides services to individuals 60 years and older, giving preference to persons who are low-income minority. The agency serves the entire island of Oahu (including the Waianae Coast area where the Hawaii Intergenerational Community Development Association will be developing its first project).

This For the first four years I worked with the Housing Assistance Program assisting Oahu's elders with their housing search and social service needs.

During that time, I also was assigned to work with the unit's six group homes that were intended for low income elders. These homes were detached houses capable of housing four to five low income elders in locations all over Honolulu. With this assignment were the following responsibilities:

1. Determination of immediate and long term repair needs. Writing of job orders for the unit's maintenance staff, and inspection of work when completed.
2. Consultation with unit's administration on long range budget considerations to cover immediate and long term repairs, upkeep and renovations.
3. Soliciting of bids from private contractors for repair or renovation projects that were too big for the agency's maintenance staff.
4. Locating replacement homes suitable for low income elders, who may be disabled and in need of special design, site and geographical considerations, when necessary.
5. Work/consult with the Property Management Branch of the C & C of Honolulu Department of Housing and Community Development when new homes had to be purchased, or when major repairs or renovations had to be made.
6. Consult with outside developers seeking advice on feasibility of affordable housing for elders, and the design considerations.

For the last six years, I have been working with the Comprehensive Individualized Services Unit as an administrator for Catholic Charities Elderly Services. Although, many of my duties and responsibilities have changed, I still, from time to time continue to provide the same services to the group homes mentioned above, with the addition that I am now responsible for all of CCES's buildings and offices that serve our clients.

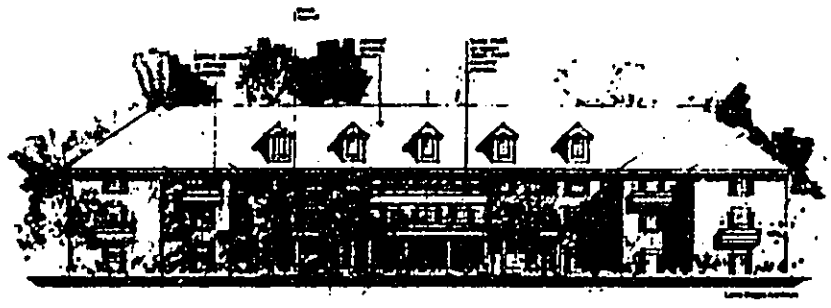
Thomas N. Baty
Administrative Liaison

Paradigm Senior Living

Paradigm Senior Living is committed to providing housing, personal care, and comprehensive senior services that are responsive to the individual and collective needs and preferences of residents and their families. In fulfilling this vision, Paradigm strives to create a rewarding work environment that requires, recognizes, and rewards personal accountability, and promotes respect, understanding, teamwork, flexibility, good humor and caring among employees. Paradigm aims to promote a cooperative spirit of partnership and respect with the communities, public agencies and others with whom they interact.

Paradigm Senior Living

The Name to Trust in Seniors Housing



Portland Office
503-222-6868
800 N.W. Sixth Avenue

PARADIGM SENIOR LIVING, PORTLAND, OREGON
PROJECT LIST - SINCE INCEPTION 1994

Fred Lind Manor (95-98) Seattle, Washington 82 Assisted Living Units	Corcoran House (96-99) Clinton, MA 42 Assisted Living Units
St. Aidan's Place. 96 through Present) Portland, Oregon 40 Alzheimer's Care Units	Bridgeport Place (Sold'99) University Place , Tacoma, WA 60 Assisted Living Units 17 Alzheimers Units
Hearthstone of Beaverton (95-97) Beaverton, Oregon 57 Assisted Living Units	Trinity Life Gardens (Under construction) Pueblo Colorado 42 Assisted Living Units
Glendoveer Villa (96-98) Portland, OR 52 Congregate Units 70 Assisted Living Units 18 Alzheimer's Care	Golden Manor Senior Living (In Development) 30 Independent Apartments 60 Assisted Living Units 24 Alzheimers Units
Evergreen Retirement Inn (Present Engagement) Pasco, Washington 42 Assisted Living Units	

Total Units:	Congregate Living Units	82
	Assisted Living Units	455
	Alzheimer's Care Units	99
Grand Total		**636 units**

Professional Services for
- Developers
- Lenders & Investors
- Industry Partners
- Owners/ Operators

Company Information

Contact Information

Home

Paradigm Senior Living

The Name to Trust in Seniors Housing

Since its inception 1995 PSL has served both for profit and not-for-profit clients across the US.

The following is a partial list of clients that PSL has provided management, marketing and development services.

- Arbor Manor Care, Jackson MI
- Basic American Industries, Indianapolis IN
- Chancellor HealthCare, Santa Rosa, CA
- Compass Health, Seattle, WA
- Carnage Inc. Seattle, WA
- Baptist Rest Home, Seattle, WA
- Life Center Church, Tacoma, WA
- Glendoveer Retirement Villa, Portland, OR
- Hearthstone Assisted Beaverton, OR
- Hilltop House, Seattle, WA
- Hilo Bay Assisted Living, Hilo, HI
- Hood River Memorial Hospital, Hood River OR
- Cedar Steel Park, Portland, OR
- Evergreen Retirement Inn, Pasco, WA
- Hollenbeck Home, Los Angeles, CA
- Foundation House
- Village Concepts, Inc. Federal Way WA
- Southern California Presbyterian Homes, Glendale,CA
- Transcon Builders, Cleveland, OH
- Legacy Health System , Portland, OR
- META Associates, Louisville KY
- ME Jensen Development, Agoura Hills CA
- Millennium Foundation, Bowling Green, KY
- Northwest Care Development, Tacoma, WA
- Pacific Homes, Woodland Hills, CA
- Powell Homes, Des Moines, WA
- R.D.A. Development, Oak Harbor, WA
- Slidell Memorial Hospital, Slidell LA
- St. Anthony Village Archdiocese of Portland,OR
- St. Francis Healthcare System, Honolulu, HI
- PenPac Inc. Bellevue, WA
- Corcoran Home -Baron Company- Boston MA
- McBroom Development, Denver CO
- Trinity Life Gardens,Pueblo CO
- Volunteers of America, Portland, OR
- Zane Development Group, Honolulu HI
- Sunbridge Assisted Living, Albuquerque, NM
- Stratton and Associates, Denver CO

VITA

Lee E. Cory- President
Paradigm Senior Living, Inc.
Professional Seniors Housing Management
800 NW Sixth Ave #252
Portland, OR 97209-3715

Telephone : (503)-222-6868
Fax: (503)-224-0679
Email : Leecory@aol.com

RELATED PROFESSIONAL EXPERIENCE:

PARADIGM SENIOR LIVING
PSL was formed in 1994 to meet the growing demand for development, self-management and third-party management of assisted living and special needs units. The firm has capabilities in programmatic design and development, as well as he day-to-day operational and marketing expertise. Instrumental in the development and management of over 20 successful senior and assisted living communities, totaling over 3,000 living units throughout the United States. Within the first twelve months of operations, PSL was managing four assisted living and senior housing communities. Clients include Hospital Based Healthcare providers, not for profit sponsors, and for profit developers.

1-91 TO 1-95

BOWEN SENIOR LIVING
PORTLAND OR.
PRESIDENT
One of the Northwest's most established owner-operator of Assisted Living Communities. Directly responsible for the management, marketing and overall profitability of free standing Assisted Living, Alzheimer's Care, and Retirement Communities.

9-86 TO 1-1-91

LEGAN INC. DENVER ,CO
VICE PRESIDENT -OPERATIONS
Rocky Mountain Regions largest owner-operator of for profit, first class continuum of care retirement communities (CCRCs). Responsible for Corporate and Facilities Operations Management with significant responsibilities in development, acquisition, and occupancy development.

1983 to 1986

LEISURE CARE INC.
BELLEVUE, WASHINGTON
GENERAL MANAGER
Responsible for the day to day operations, marketing and management of congregate care facilities with significant responsibilities and involvement in development,

1981 to 1983

VANCE HOTELS
SEATTLE WASHINGTON
FOOD AND BEVERAGE MANAGER

EDUCATION:

1979

B.S. Resource Development
Michigan State University
East Lansing, Michigan

1974-1975

Aalborg Karedralskole,
Aalborg, Denmark
Foreign Languages, History,

Professional Licenses:
1993 - 1994

RCFE Administrator - California

1990 - 1995

Nursing Home Administrator Colorado
(current and transferable)

Professional Affiliations
1986 to Present

National Association of Senior Living Industries

1986 to Present

American Association of Homes for The Aging

1991 to Present

Assisted Living Facilities Association of America
Faculty Member : ALFAA Assisted Living Institute

1991 to Present

Oregon Assisted Living Facilities Association

1991 to Present

American Seniors Housing Association -
National Multi-Housing Council

Articles Published In The Following:

NASLI Spectrum
Urban Land Institute Journal
Contemporary Long Term Care
Assisted Living Today
Journal of Property Management
National Real Estate Investor
Retirement Community Business

PROJECT LIST
(Experience Prior to the Formation of Paradigm Senior Living)

BOWEN (REGENT) SENIOR LIVING, PORTLAND OREGON

Sunshine Villa Assisted Living
Santa Cruz, California (3)
144 Assisted Living Units
12 Alzheimer's Care Units

Regency Park Living Center (1)
Portland, Oregon
102 Assisted Living Units
40 Alzheimer's Care Units

Park Place Living Center (2)
Portland, Oregon
112 Assisted Living Units

Sterling Park Living Center (1)
Redmond, Washington
122 Assisted Living Units
76 Alzheimer's Care Units

Town Center Terrace (1)
Portland, Oregon
157 Congregate Care Units

Vineyard Place (2)
Milwaukie, Oregon
131 Congregate Care Units

Queen Anne Manor (4)
Seattle Washington
104 Assisted Living Units

LEGAN, INC., DENVER COLORADO

Westland Meridian (2)
Lakewood Colorado
133 Congregate Living Units
19 Assisted Living Units

Arvada Meridian (2)
Arvada Colorado
108 Congregate Living Units
16 Assisted Living Units

LEGAN, INC., DENVER COLORADO (CONTINUED)

The Country Club (4)
Overland Park , Kansas
275 Congregate Living Units

Viewpoint (3)
Colorado Springs, Colorado
126 Congregate Living Units

Temple Meridian (2)
Temple Texas
155 Congregate Living Units
16 Assisted Living Units
60 Skilled Nursing Beds

The Corona (3)
Englewood, Colorado
226 Congregate Living Units

Boulder Meridian (1)
Boulder Colorado
81 Congregate Units
15 Assisted Living Units.

Lakewood Meridian, (1)
Lakewood, Colorado
101 Congregate Living Units,
14 Assisted Living Units
60 Skilled Nursing Beds.

LEISURE CARE INC. , BELLEVUE, WA

Bend Villa Court (2)
Bend Oregon
70 Congregate Living Units
16 Assisted Living Units

Hawthorne Court (1)
Kennewick Washington
72 Congregate Living Units

Footnotes :
(1) Company Developed, Owned, and Managed
(2) Company Owned (through Acquisition) and Managed
(3) Fee Managed for Congregate Owner
(4) Court Appointed Receiver

Total Units:	Congregate Living Units	1,635
	Assisted Living Units	680
	Alzheimer's Care Units	128
	Skilled Nursing Beds	120
Grand Total		2563 units

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

October 19, 2000

Scott W.H. Seu, P.E.
Manager
Environmental Department

Mr. Mike Klein
Community 2010
1154 Fort Street Mall, Suite 300
Honolulu, HI 96813

Dear Mr. Klein:

Subject: Kaluanui Senior Apartments

Thank you for the opportunity to comment on the August 2000 Draft EA for the Kaluanui Senior Apartments, as proposed by the Hawaii Intergenerational Community Development Association. We have reviewed the subject document and have no comments at this time.

HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this Draft EA.

Sincerely,

Appendix G

Botanical Study

CHAR & ASSOCIATES
Botanical/Environmental Consultants
4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

FAX TRANSMITTAL

TO	Mike Klein	FAX NO.	528-5591
FROM	Winona P. Char	NO. OF PAGES	1
DATE	29 December 2000		
SUBJECT	Hawaii Kai Parcels		

An inspection was made for the Hawaii Kai parcels (TMK:3-9-08: 45, 46) on 29 December 2000. Following is a brief summary of the botanical resources found on the project site. A more detailed letter report will follow later.

The vegetation on the site consists primarily of buffelgrass (Cenchrus ciliaris), 1 to 2 ft. tall, with scattered individuals of kiawe trees (Prosopis pallida), 10 to 20 ft. tall. Smaller patches of swollen fingergrass (Chloris barbata), carrion flower (Stapelia gigantea), and Australian saltbush (Atriplex semibaccata) are scattered through the buffelgrass. Vegetation cover is about 80 to 90%. Along the back edge of the parcels, the vegetation consists of koa haole (Leucaena leucocephala) scrub, 7 to 10 ft. tall, with scattered taller kiawe trees, up to 25 ft. tall. In this area, the ground cover consists of clumps of Guinea grass (Panicum maximum) and Chinese violet (Asystasia gangetica).

The site has been bulldozed a number of times in the past and is level in most places. Dredged material from the marina was stored here at one time. Boulder piles are found along the back edge of the parcels. Piles of household trash (scrape lumber, paint cans, rusted appliances, etc.) and old cars can be also be found in the denser koa haole/kiawe scrub.

The vegetation is dominated by introduced or alien species. Only four native species were observed on the project site; these area the 'ilima (Sida fallax), 'uhaloa (Waltheria indica), 'akulikuli (Sesuvium portulacastrum), and kipukai (Heliotropium curassavicum). All of the native plants are indigenous, that is, they are native to Hawaii and elsewhere. No threatened and endangered species or species of concern occur on the project site.

TOTAL P.01

CHAR & ASSOCIATES
Botanical/Environmental Consultants
4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

02 January 2000

Hawaii Intergenerational Community
Development Association
1154 Fort Street Mall, Suite 412
Honolulu, Hawai'i 96813

Attention: Mike Klein

SUBJECT Hawaii Kai Parcels
Botanical Resources Assessment

Dear Mr. Klein:

An assessment of the botanical resources was made for the Hawaii Kai parcels (TMK: 3-9-08: 45, 46) planned for development. The field studies were conducted on 29 December 2000. The primary objectives of the survey were to:

1) provide a general description of the vegetation on the project site;
2) search for threatened and endangered species as well as species of concern; and
3) identify areas of potential environmental problems or concerns and propose appropriate mitigation measures.

The plant names used in the discussion follow Wagner et al. (1990). The few recent name changes follow those reported in the Hawaii Biological Survey series (Evenhuis and Miller 1995-1998; Evenhuis and Eldredge 1999-2000).

Description of the Vegetation

The vegetation on the site consists primarily of buffelgrass (Cenchrus ciliaris), 1 to 2 ft. tall, with scattered individuals of kiawe trees (Prosopis pallida), 10 to 20 ft. tall. Smaller patches of swollen fingergrass (Chloris barbata), carrion flower (Stapelia gigantea), and Australian saltbush (Atriplex semibaccata) are scattered throughout the buffelgrass. Plant cover varies from 80 to 90%.

Along the back edge of the parcels, the vegetation consists of

koa haole (Leucaena leucocephala) scrub, 7 to 10 ft. tall, with scattered taller kiawe trees, up to 25 ft. tall. In this area, the ground cover consists of clumps of Guinea grass (Panicum maximum) and Chinese violet (Asystasia gangetica). In places, wild basil (Ocimum gratissimum) is locally common. Other plants found here include virgate mimosa (Desmanthus virgatus), 'ilima (Sida fallax), Indian pluchea (Pluchea indica), and 'uhaloa (Waltheria indica).

The site has been bulldozed a number of times in the past and is level in most places. Dredged material from the marina was stored here at one time. Boulder piles are found along the back edge of the parcels. Piles of household trash (scrape lumber, paint cans, rusted appliances, etc.) and old cars can also be found in the denser koa haole/kiawe scrub.

Discussion

The vegetation on the project site is composed almost exclusively of introduced plants such as koa haole, kiawe, buffelgrass, etc. Introduced or alien plants are all those plants which were brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact, that is, Cook's arrival in the islands in 1778. Only four native species were observed on the project site; these are the 'ilima, 'uhaloa, 'akulikuli (Sesuvium portulacastrum), and kipukai (Heliotropium curassavicum). All of these native plants are indigenous, that is, they are native to the Hawaiian Islands and elsewhere.

None of the plants observed during the field studies is a threatened and endangered species or a species of concern (U.S. Fish and Wildlife Service 1999). All of the plants can be found in similar disturbed, lowland habitats throughout the islands. No wetlands or wetland vegetation (Reed 1988) occur within the areas to be developed.

Given the findings above, the proposed development of the site is not expected to have a significant negative impact on the botanical resources.

Please do not hesitate to contact me should you have any questions regarding the findings in this letter report.

Sincerely,

Winona P. Char

References

Evenhuis, N.L. and S.E. Miller, editors. 1995-1998. Records of the Hawaii Biological Survey. Bishop Museum Occasional Papers Nos. 41-56.

Evenhuis, N.L. and L.G. Eldredge, editors. 1999-2000. Records of the Hawaii Biological Survey. Bishop Museum Occasional Papers Nos. 58-64.

Reed, P.B., Jr. 1988. National list of plant species that occur in wetlands: Hawaii (Region H). U.S. Fish and Wildlife Service Biological Report 88(26.13).

U.S. Fish and Wildlife Service. 1999. U.S. Fish and Wildlife Service species list, plants. March 23, 1999. Pacific Islands Ecoregin Office, Honolulu, HI.

Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. Bishop Museum Special Publication 83.