BOARD OF WATER SUPPLY

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Deputy Manager and Chief Engineer

August 30, 2002

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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
220 South King Street
Central Pacific Plaza, 4th Floor
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact for the Board of Water Supply's Proposed Diamond Head Water System Improvements Projects, Honolulu, Oahu, Hawaii

The Board of Water Supply has reviewed the comments received during the public comment period which began on April 8, 2002. We have determined that the environmental impacts of this project have been adequately addressed as discussed in the final environmental assessment (EA) and are therefore, issuing a Finding of No Significant Impact. We request that the proposed project and our issuance be published in the next OEQC Bulletin.

Attached are the completed OEQC bulletin publication form and four copies of the final EA for your review.

If you have any questions, please contact Scot Muraoka at 527-5221.

Very truly yours,

CLIFFORD S. JAMILE
Manager and Chief Engineer

Attachments

cc: Leslie Kurisaki, Kimura International

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FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Diamond Head Water System Improvements

Kapahulu Avenue: Kanaina Avenue to Diamond Head
Booster Pump, Herbert Street to Campbell Avenue,
Campbell Avenue to Kaunaoa Street

Prepared for:

BOARD OF WATER SUPPLY
City and County of Honolulu

Prepared by:

KIMURA INTERNATIONAL INC.

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ENVIRONMENTAL ASSESSMENT
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August 2002

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1 INTRODUCTION

1.1 PROPOSING AGENCY AND ACTION

The Board of Water Supply (BWS), City and County of Honolulu, proposes to install a 24-inch water main and an 8-inch water line in the public rights-of-way through a section of Kapahulu. The proposed alignment extends along a portion of Kapahulu Avenue from the Diamond Head Booster Pump Station to Kanaina Avenue, and then follows Herbert Street, Campbell Avenue and ends at Kaunaoa Street. The new 24-inch pipeline will measure just over 3,600 linear feet or 0.68 mile. In addition, a new 8-inch water line is proposed for Kaunaoa Street from Campbell Avenue to Leahi Street, for a distance of 1,300 linear feet or about 0.24 mile.

1.2 PURPOSE OF THE ENVIRONMENTAL ASSESSMENT

Under Chapter 343, Hawaii Revised Statutes (HRS), Act 241, Session Laws of Hawaii (SLH) 1992, and Chapter 200 of Title 11, Department of Health (DOH) Administrative rules, "Environmental Impact Statement Rules," the proposed project involves the use of public funds and is therefore subject to the environmental review process. The BWS is a semi-autonomous agency of the City and County of Honolulu and will fund the project through its Capital Improvement Program.

This environmental assessment (EA) was prepared to address potential impacts that may occur during construction and/or operation of the proposed 24-inch main and 8-inch water line. Findings of the assessment were used to determine that the project will have no significant impact, and an Environmental Impact Statement is not required.

This Final Environmental Assessment and accompanying Finding of No Significant Impact (FONSI) has been filed with the State Office of Environmental Quality Control (OEQC) in accordance with Chapter 343, HRS.

1.3 PERMITS REQUIRED OR POTENTIALLY REQUIRED

Governmental permits needed to implement the proposed action are listed in Table 1.

Table 1: Potential Government Permits and Approvals

Type	Agency
National Pollutant Discharge Elimination System (NPDES) Notice of Intent for hydrotesting (Form F) and dewatering (Form G)	State Department of Health, Clean Water Branch
Construction permit/trenching permit	City and County of Honolulu, Department of Planning and Permitting, Civil Engineering Branch
Noise permit	State Department of Health, Noise, Radiation, and Indoor Air Quality Branch
Review of construction drawings and request for right-of-entry for portions of proposed project within City highway right-of-way, Review and approval of a traffic control plan, Street usage permits	City and County of Honolulu Department of Planning and Permitting

2. PROPOSED ACTION

2.1 PROJECT DESCRIPTION AND LOCATION

The BWS proposes to install a 24-inch water transmission main and replace a 6-inch water line with an 8-inch water line in the district of Kapahulu (see Figure 1). Properties contiguous with the proposed alignment are identified as TMK: 2-7-36; 3-1-12 to 19, 24 & 25 (see Figure 2).

Figure 3 shows a site diagram of the proposed action. The new 24-inch main will be located within Kapahulu Avenue from the Diamond Head Booster Pump Station to the intersection of Kapahulu Avenue, Castle Street and Kanaina Avenue, roughly 440 linear feet. At the intersection, the water main will cut across Kapahulu Avenue into the bike path area adjacent to the Ala Wai Golf Course for approximately 150 linear feet, and then back out into Kapahulu Avenue to connect to the existing 24-inch main. The purpose of this diversion into the bike path area is to minimize the traffic impact on Kapahulu Avenue for the water main crossing under two existing large concrete box drains.

From the intersection of Kapahulu Avenue and Herbert Street, the pipeline will extend along Herbert Street, a segment measuring approximately 400 linear feet, and then extend along Campbell Avenue to Kaunaoa Street, a distance of 2,650 linear feet. The project also includes replacement of an existing 6-inch water line with a new 8-inch main. The 6-inch main is located in Kaunaoa Street from Campbell Avenue to Leahi Avenue, a distance of approximately 1,300 linear feet.

All of the streets involved are under the jurisdiction of the City and County of Honolulu and all construction will occur in the public right-of-way, with the exception of the 150-foot portion in the bike path area. The land in this area is owned by the State of Hawaii Department of Land and Natural Resources (DLNR), and an easement agreement will be required for the new pipeline. In addition, the new water main will cross near an existing Hawaiian Electric Company (HECO) power pole and guy, which will require a temporary guy pole and permanent relocation of the guy pole. Tentative approval was given by the State DLNR, City and County Department of Parks and Recreation, and HECO, subject to final construction plan review and approvals.

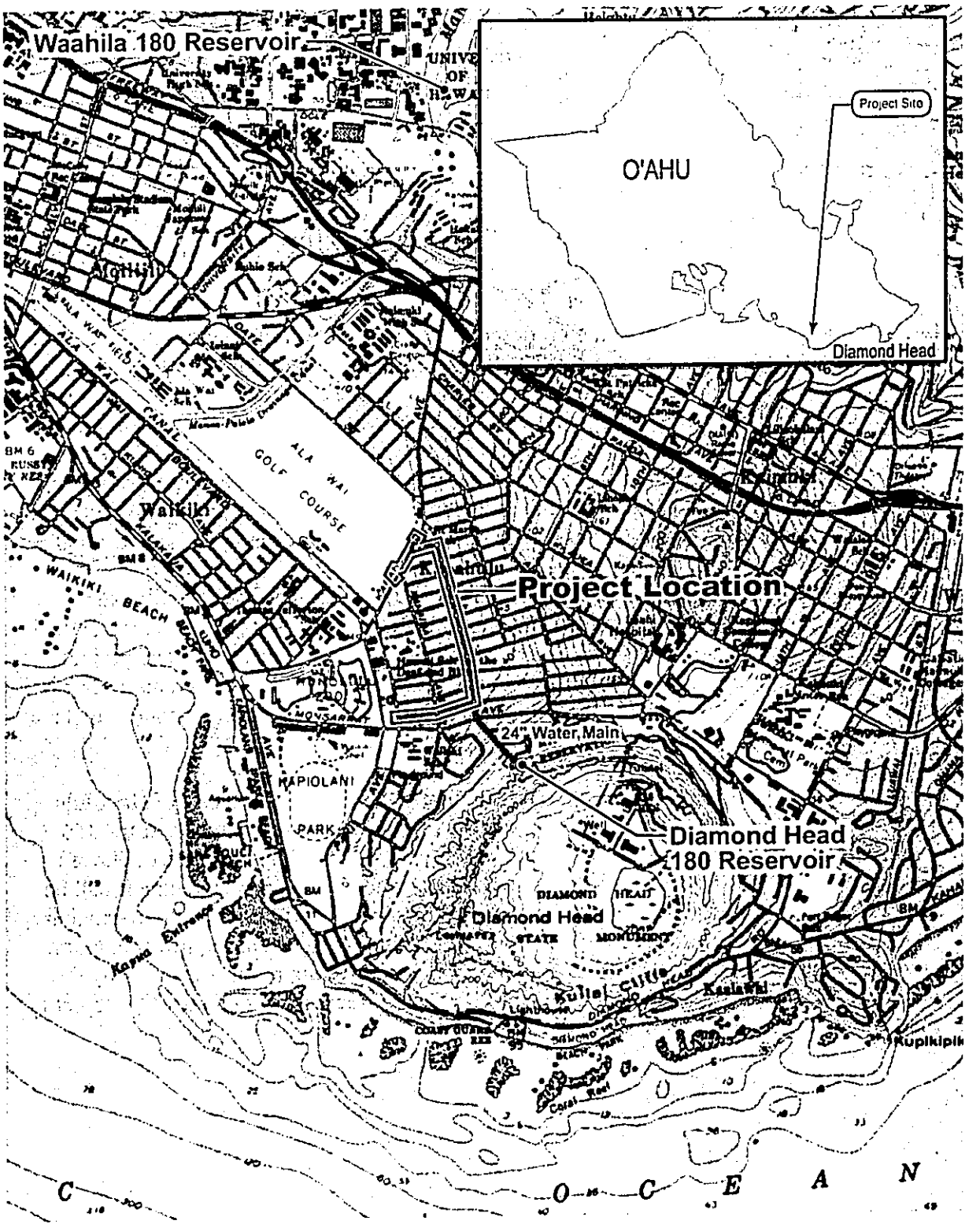


Figure 1
Location Map

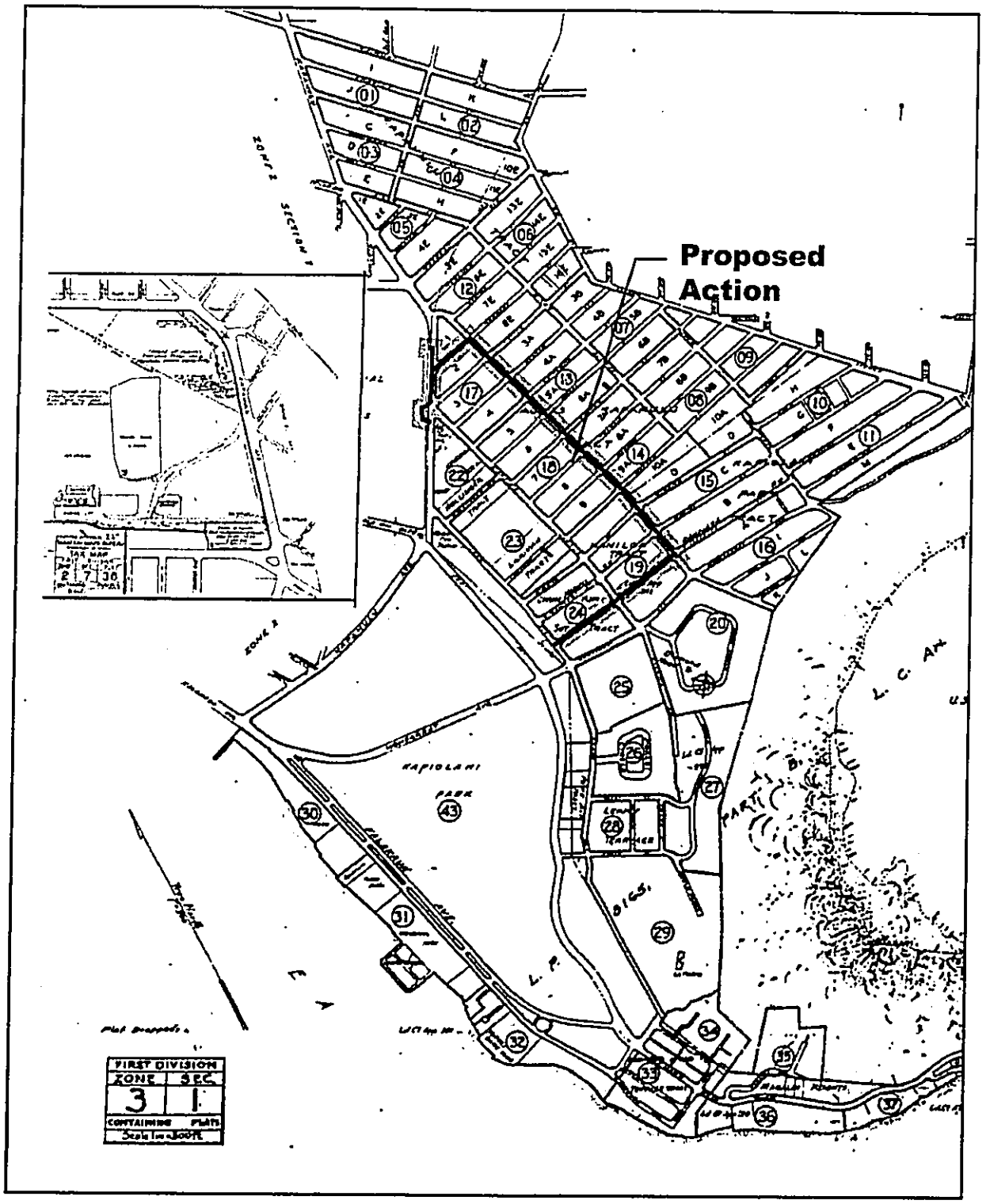


Figure 2
Tax Map Keys

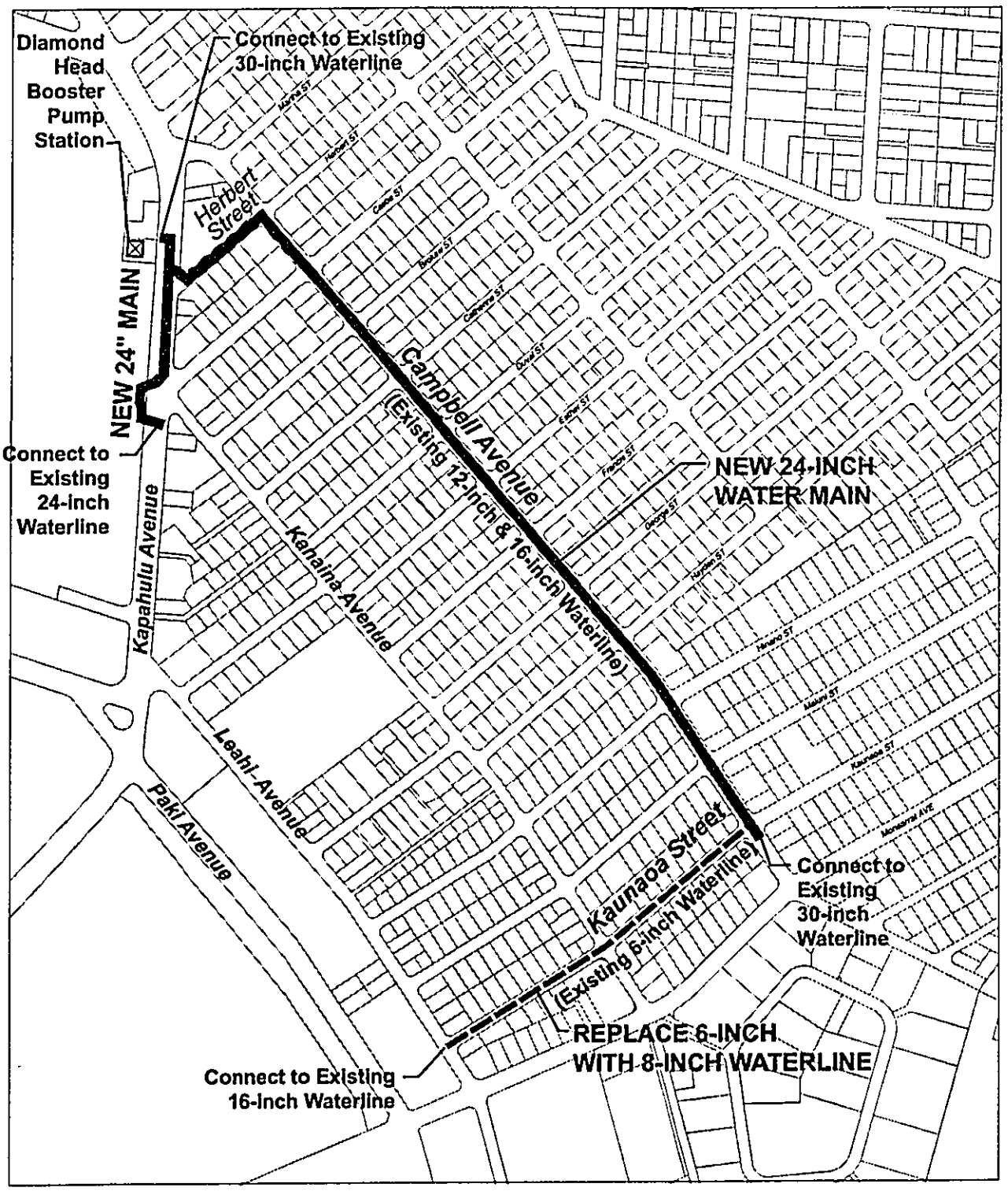


Figure 3
Site Diagram

Roadway segments directly affected by the proposed project are shown below:

Roadway	Improvement	Affected Segment (approx. in feet)
Kapahulu Avenue	New 24" main	440
Diversion into bike path area *(State-owned land)*	New 24" main	150
Herbert Street	New 24" main	400
Campbell Avenue	New 24" main	2,650
Kaunaoa Street	Replace 6" with 8" line	1,300

The proposed action is located in a mixed commercial and residential area. The commercial uses range from single- and two-story convenience and specialty stores, a Japanese language school, churches, Laundromat, and restaurants. Some of the commercial establishments pre-date the 1960s. The residential uses consist of a mixture of small single-family residences with occasional 1-, 2- and 3-story walk up apartments. These residential uses were built during the 1950s and 1960s; however, some have been recently reconstructed.

2.2 PROJECT PURPOSE

The new 24-inch water main is needed to improve system operation and reliability of water transmission to East Honolulu. The proposed water main will provide a separate influent/effluent line from the Diamond Head 180 Reservoir to the suction side of the Diamond Head line booster on Kalakaua Avenue. It will enable the Diamond Head line booster to draw water from the Diamond Head 180 Reservoir. At the same time, the Diamond Head 180 Reservoir will continue to serve the Kapahulu-Waikiki area distribution demands.

The new waterline will also enable the existing Honolulu 180' well sources and future Beretania line booster to fill the Diamond Head 180 Reservoir.

2.3 TECHNICAL DESCRIPTION OF THE PROJECT

The project scope includes the installation of a 24-inch main from the Diamond Head Booster Pump running parallel to Kapahulu Avenue to Kanaina Avenue. In this area, the majority of the water main will be located within the Kapahulu Avenue right-of-way, with a small portion diverted into State-owned land near the bike path adjacent to the Ala Wai Golf Course. This relatively small portion of the water main alignment (150 feet) was relocated off Kapahulu Avenue to avoid major traffic congestion during the deep trenching operations required to cross under two existing large concrete box drain culverts.

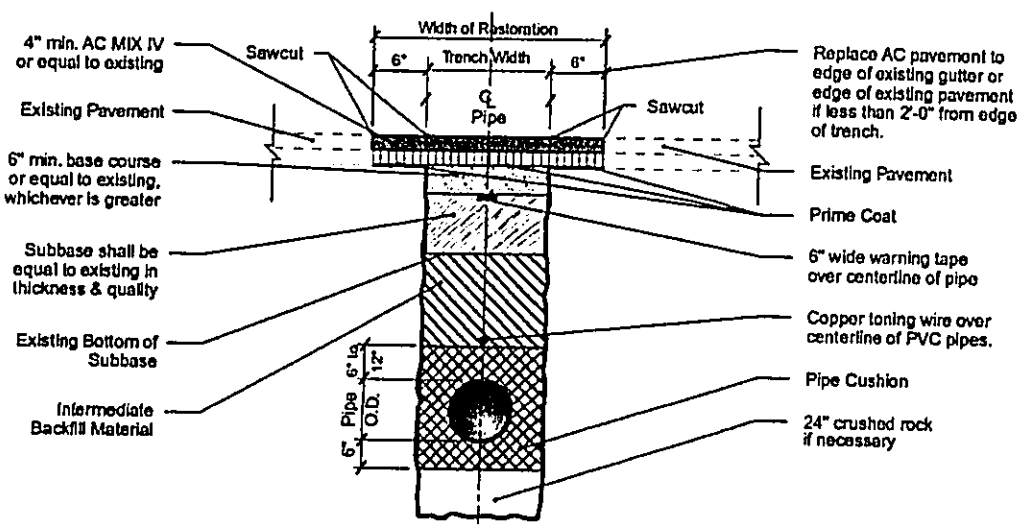
From the intersection of Kapahulu Avenue and Herbert Street, the new 24-inch waterline will extend the length of Herbert Street until it reaches the Campbell Avenue intersection. From this point, the 24-inch waterline will continue along Campbell Avenue where it will connect to an existing 30-inch water line just past the Kaunaoa Street intersection. There are existing waterlines within these street right-of-ways. An existing 30-inch line is located in Kapahulu Avenue; a 12-inch and a 16-inch line are located in Campbell Avenue, plus an 8-inch Army water line that has been abandoned in place, and an 8-inch line is located in Herbert Street. The new 24-inch main will be either ductile iron, PVC or CCP (concrete cylinder pipe).

An 8-inch distribution line will be installed in Kauanoa Street to replace the existing 6-inch line. The new line will improve fire fighting flow and meet current Board of Water Supply standards. Either ductile iron or PVC piping will be utilized. The existing 6-inch line, which is at least 70 years old, will be abandoned in place. Work in this segment also involves laterals and reconnection to fire hydrants.

The project scope also includes constructing curb ramps at intersections along the alignment that are currently noncompliant with the Americans with Disabilities Act (ADA). The project will repave the portion of the street where the water line will be installed.

Installation of the water main will follow commonly used construction methods including saw-cutting and trenching of the roadways. Trench work will be done in increments, typically 150-400 feet at a time. When completed, the water main will be buried in the roadways with a minimum cover of three feet throughout its length. A typical cross-section view of the trench for the water main is shown in Figure 4.

Figure 4: Typical Trench Cross Section



Typical Trench Detail for City Right-of-Way
Not to Scale

There are no streams along the proposed alignment. After each increment is completed, the main must undergo hydrostatic testing and chlorination to disinfect the line. These procedures will be conducted according to the BWS's specifications (*Water System Standards, Volume I,* BWS, 1985) and applicable State and County requirements. If effluent discharge into receiving waters is proposed, the contractor will prepare a plan indicating the locations and amounts of effluents to be discharged and submit it to the State Department of Health for review and approval prior to construction. If effluent (e.g., hydrotesting discharge) is to be discharged into a City storm drain, a Permit to Discharge Effluent into the Municipal Storm Sewer System will also be obtained from the City and County of Honolulu Department of Environmental Services.

The contractor will schedule work activity during normal work hours. At least one lane of traffic will be open during periods of construction in accordance with an approved traffic control plan. Trenches will be covered during non-working hours with safe, non-skid bridging material to accommodate all types of vehicular traffic. Safety of the bridging material will be met by ensuring that no more than the maximum permissible trenching width and length required for structural support will be exposed at any one time. In addition, the contractor will provide adequate access to and from driveways and public streets. The construction contractor will submit a Traffic Control Plan to the City and County Department of Planning and Permitting for approval.

The contractor will perform all applicable construction work in accordance with the Board of Water Supply System Standards and the Standard Specifications for Public Works Construction (September, 1986) of the City and County of Honolulu, and the Revised Ordinances of Honolulu (ROH), 1978 as amended. Construction and restoration of the existing roadway will be performed in accordance with all applicable sections of the

"Standard Specifications for Road and Bridge Construction" (1994) and "Standard Specifications for Public Works Construction" (1986). All work will also conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites On or Adjacent to Public Streets and Highways" and the Manual of Uniform Traffic Control Devices for Street Maintenance Operation."

2.4 PROJECT SCHEDULE AND COST

The construction period is expected to begin in September, 2002 and last approximately 13 months. Construction costs are estimated to be $1,230,000 for the water transmission lines and $300,000 for ADA improvements and repaving. Funds will be budgeted through the BWS's Capital Improvement Program.

2.5 PROJECT SUMMARY

Table 2 contains a description of the project and applicable land-use restrictions.

Table 2: Project Summary

Item	Data
Tax Map Keys	2-7-36; 3-1-12 to 19, 24 & 25
State Land Use Designations	Urban
Primary Urban Center Development Plan Land Use Designations	Residential, Commercial, Public Facility
Zoning Designations	R-3.5 Residential and B-2, Community Business District; Diamond Head Special District
Flood Insurance Rate Map	Zone X, Flood hazards are outside the 500-year floodplain.
Length and Diameter of Water Line	3,600 feet long; 24 inches in diameter 1,300 feet long; 8 inches in diameter
Landowner	City and County of Honolulu

3 AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

3.1.1 Geology and Topography

The geology of the Kapahulu area consists mainly of dense and vesicular jointed *pahoehoe* and *a`a* lava flows originating from the Honolulu Volcanic Series, overlain by coral reef rock and manmade fill placed for residential, commercial, and infrastructure development.

Subsurface conditions near the intersection of Kapahulu Avenue and Herbert Street, generally consist of 2.5 inches of asphaltic concrete (AC) pavement underlain by approximately 3.5 feet of a silty gravel and fat clay fill on the surface. The fill is underlain by highly fractured, medium hard coral reef rock to a depth of approximately 9.5 feet. The coral ledge is underlain by approximately 3.5 feet of medium dense silty coralline gravel, followed by hard basaltic rock to 24 feet. Ground water is encountered at a depth of 10.4 feet below existing grade.

Subsurface conditions located near the intersection of Castle Street and Campbell Avenue generally consist of 3 inches of AC pavement underlain by approximately 4 feet of a silty gravel and elastic silt fill on the surface. The fill is underlain by medium-hard cemented coralline sand to a depth of approximately 5 feet. The coral is underlain by hard basaltic rock to a depth of approximately 15 feet. The rock appears more weathered and soft in consistency between depths of approximately 15 and 17 feet. The rock is hard from 17 to 22 feet. Ground water is encountered at a depth of 14.9 feet below existing grade.

Subsurface conditions near the intersection of Brokaw Street and Campbell Avenue generally consist of 4 inches of AC pavement underlain by approximately one foot of a silty gravel and elastic silt fill on the surface. The fill is underlain by medium hard to hard coral reef rock to a depth of approximately 7 feet, followed by hard basaltic rock to 22.5 feet. A boring at this location encountered ground water at a depth of 16.8 feet below existing grade.

Subsurface conditions near the intersection of Makini Street and Campbell Avenue generally consist of 3 inches of AC pavement underlain by approximately one foot of a silty gravel fill on the surface. This fill is underlain by approximately 2.5 feet of an elastic silt alluvial layer, followed by medium hard cemented coralline sand to a depth of approximately 12 feet. The coralline sand is underlain by hard coral reef rock to a depth of approximately 15.5 feet, followed by medium dense silty coralline sand to a depth of approximately 17 feet. The sand is underlain by hard basaltic rock at 22 feet. Ground water is encountered at a depth of 17.1 feet below existing grade. This water level may have been affected by the drilling process and may not reflect actual groundwater conditions in this area.

The topography of the area is generally flat with a slight incline in the Diamond Head direction. At the intersection of Kapahulu Avenue and Herbert Street, the elevation is approximately 11 feet above Mean Sea Level (MSL). Along Campbell Avenue from Herbert Street to Kaunaoa Street, the elevation rises from approximately 15 feet to approximately 37 feet over a distance of about 2,600 linear feet. This translates to a slope of less than 1%. The elevation of Kaunaoa Street ranges from approximately 36 feet MSL at the Campbell Avenue intersection to approximately 13 feet MSL at the Leahi Street intersection over a distance of about 1,250 feet, resulting in a slope of less than 2%.

Potential Impacts and Mitigation Measures

The installation of the 24-inch transmission main and the replacement of the 6-inch water line with the 8-inch line will typically involve excavation to depths of 4.5 to 5 feet. During construction, the proposed water main and water line will run along existing streets containing numerous existing underground utility lines and underground structures. Installing the new main and line under these existing lines and structures is anticipated to be difficult due to the presence of old trenches and old excavations, well-cemented coral reef rock and hard basaltic rock at shallow depths, and a need to excavate below the groundwater table at select locations.

Potential geotechnical concerns during construction include:

- Need to excavate well-cemented coral reef rock and hard basaltic rock at major utility crossings. Excavation of the coral reef rock and basaltic rock is anticipated to be difficult and will likely require appropriate rock excavation equipment, such as a hydraulic hoe ram, rock breaker, or other suitable rock excavating equipment. Excavation of the reef rock and basaltic rock may cause vibrations, and potential disturbance in existing underground lines and nearby existing residences, buildings, and structures;

- Presence of relatively shallow groundwater table. The coral reef rock and basaltic rock are anticipated to be relatively permeable. During the drilling in this material, loss of circulation water was encountered in borings at various depths.

- Presence of numerous underground utilities and underground structures. The condition of the old trench backfills and their bedding material are unknown and may affect the planned excavations at the major utility crossings;

- Need to perform the major utility crossings along busy streets and intersections. Herbert Street and Campbell Avenue are bordered by existing houses, apartment buildings, and commercial structures. Campbell Avenue is also a bus route; and

- Potential for voids or cavities in the coral reef rock, and lava tubes in the basaltic rock. Although no voids, cavities, or tubes were readily apparent in borings, based

on the geology of the area, these features may be present in the reef rock and lava flow deposits. If these features are encountered in the trenches and excavations below the groundwater table, potentially high volumes of water inflow may occur, thus requiring special treatment if encountered at the pipe invert.

It is anticipated that the excavations to the major transmission main crossings along Campbell Avenue may encounter mainly coral reef rock and basaltic rock. The excavations for the major utility crossings along Kapahulu Avenue near Kanaina Street may encounter mainly cemented coralline sand underlain by medium dense to dense sand and gravel.

From a pipeline foundation support standpoint, the coral reef rock and hard basaltic rock will provide good support for the planned water main and water line at the major utility crossings. However, excavation of the coral reef rock and basaltic rock are anticipated to be difficult, and will likely require suitable rock excavation equipment. The excavations of the major utility crossings along Kapahulu Avenue near Kanaina Street will be below the ground water table and into submerged granular materials. These excavations will likely need to be properly sheeted and shored. Ground improvement may need to be performed in combination with the sheeting because of numerous obstructions and loose deposits.

Dewatering flows from the temporary excavations are expected to vary depending on such factors as subsurface conditions, depth of excavation below the water table, length, width, and depth of excavation, and excavation shoring and dewatering methods employed by the contractor. All pumped water from the construction dewatering operations will be filtered and treated in accordance with applicable State Department of Health discharge regulations before being discharged. Dewatering permits will be obtained. If the pumped water is discharged into unbackfilled trenches and open excavations, it will be properly filtered to reduce the potential for silting-up of the bedding material for the new water main and/or water line.

3.1.2 Soils

There are two soil types in the project area, as identified by the U.S. Department of Agriculture Soil Conservation Service. Figure 5 shows the general locations of various soils along the route of the proposed transmission main. Soil types in the area of the proposed alignment include the following:

Ewa silty clay loam, 0 to 2% slopes, (EmA)

This soil has a profile like that of Ewa silty clay loam, 3 to 6 percent slopes, (the surface layer is dark reddish-brown silty clay loam that has subangular blocky structure with a substratum consisting of coral limestone, sand, or gravelly alluvium) except runoff is very slow, and the erosion hazard is no more than slight. The surface layer is about 20 inches thick. The sub-soil, about 42 inches thick, is dark reddish-brown and dark red silty clay loam that has subangular blocky structure. The substratum consists of coral limestone, sand, or gravelly alluvium.

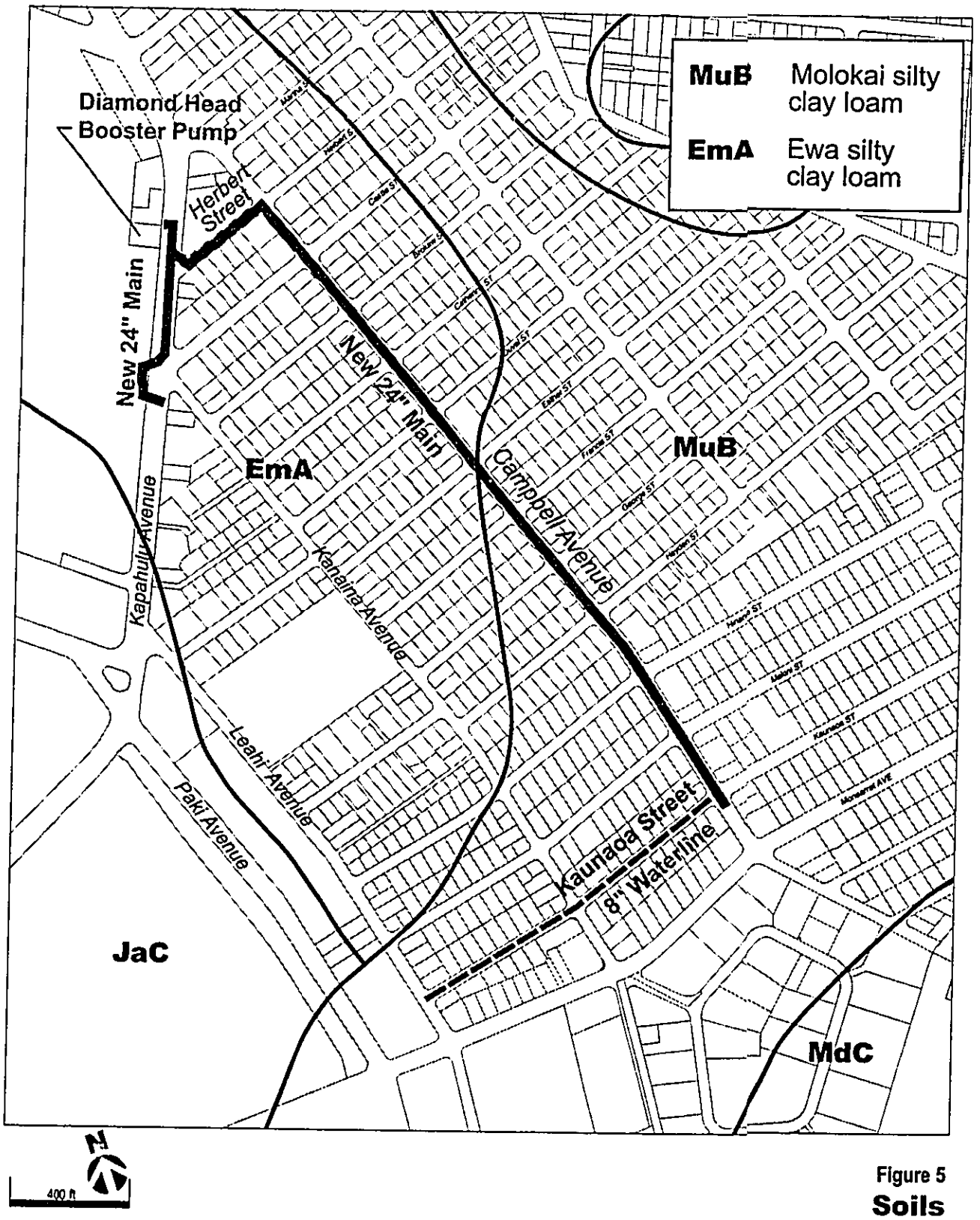


Figure 5
Soils

Molokai silty clay loam, 3 to 7 percent slopes (MuB)

In a representative profile, the profile of the surface layer is dark reddish-brown silty clay loam about 15 inches thick. The subsoil, about 57 inches thick, is dark reddish-brown silty clay loam that has a prismatic structure. The material at depths between 35 and 64 inches is moderately compact in place. The substratum is soft, weathered rock. Runoff is slow to medium and the erosion hazard is slight to moderate.

Potential Impacts and Mitigation Measures

Significant adverse impacts on soils in the project area are not anticipated. All construction will occur in paved areas; therefore soil exposure will be limited to sections that are cut open or trenched for installation of the new pipeline. After appropriate material is used to backfill the trenches, the roadway will be restored to preexisting conditions.

Any impact of construction activities on soils will be mitigated by several measures, as outlined in the following regulations:

- City and County of Honolulu's Grading, Grubbing and Stockpiling Ordinance No. 3968, (1972);
- Department of Planning and Permitting, Rules relating to Soil Erosion Standards and Guidelines, (1999);
- USDA Soil Conservation Services Erosion and Sediment Control Guide for Hawaii, (1968).

Best construction management practices restrict stockpiling of construction material and call for proper disposal of construction debris. Regular watering is recommended as a means of reducing the amount of fugitive dust in the air. During periods of excessively high winds or rains, trenching might have to be curtailed to minimize the potential for erosion.

3.1.3 Climate and Air Quality

The Kapahulu area has a semi-arid climate with an annual average rainfall of 26 inches, as reflected by the Waikiki National Oceanic and Atmospheric weather station. Most of the rain falls in winter storms from November through January while summer months are dry with normal average rainfall between 1 to 2 inches per month. Temperatures in the Waikiki area range between a normal annual high of 84.8 degrees Fahrenheit and a minimum of 68.5 degrees Fahrenheit.

Prevailing winds are northeasterly trade winds, which occur approximately 70 percent of the time. Trade wind frequency ranges from about 45 percent in January to more than 90 percent in July. Normal trade winds tend to break down in the fall, giving way to more light, variable wind conditions through the winter and into early spring.

The State Department of Health operates a network of air quality monitoring stations located at various locations on Oahu. According to the Air Quality Study for the Proposed Diamond Head State Monument Master Plan Update, air quality data from nearby monitoring stations indicate it is likely that all national ambient air quality standards are currently being met in the project area. Vehicular traffic is the major source of air pollutants; however, the vehicular traffic levels through the area are not high enough to significantly degrade air quality levels in the area. Prevailing northeast trade winds also help to keep pollution levels low.

Potential Impacts and Mitigation Measures

Climatic conditions are not expected to have a significant affect on the project. Temporary and localized negative impacts on air quality will occur in areas adjacent to the construction site. Equipment used during the construction phase will emit exhaust and airborne particulates, and construction work will produce dust. Due to the close proximity of existing residences and commercial uses along the project alignment, appropriate mitigation measures will be employed to reduce the potential for fugitive dust during construction activities. These mitigation measures include the following:

- Construction will be phased to minimize the amount of excavation and exposed time of excavated/trench areas.
- Clearing and excavation/trenching will be held to the minimum necessary for site access and equipment.
- Stockpiles will be covered with appropriate materials. Construction debris and excavated materials that will not be used for construction will be disposed of at permitted facilities.

- The contractor will sprinkle water, as necessary, to control dust.
- Steel plates will cover exposed trench areas during weekends and after hours.
- The contractor will use vehicles that are properly maintained.

Construction activities will employ fugitive dust emission control measures in compliance with provisions of the State DOH Rules and Regulations (Chapter 43, Section 10), and Hawaii Administrative Rules (HAR), Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33 on Fugitive Dust.

3.1.4 Natural Hazards

Flood Zone

The State of Hawaii Civil Defense Tsunami Evacuation Zone Map and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) indicate that the project site is not vulnerable to tsunami or flood inundation.

The Tsunami Evacuation Zone Map shows the project site to be outside the tsunami hazard zone. The nearest evacuation areas are at Jefferson Elementary School and Waikiki Elementary School, which are adjacent to the project site.

According to the Federal Emergency Management Agency (FEMA)–Flood Insurance Rate Map (FIRM), the proposed action is located in Zone X, which is defined as areas *determined to be outside the 500-year flood plain* (Figure 6).

Seismic Activity

The Uniform Building Code (UBC) provides minimum design criteria to address potential for damages due to seismic disturbances. The UBC scale is rated from Seismic Zone 1 through Zone 4, with 1 the lowest level for potential seismic induced ground movement. Oahu has a Seismic Zone 1 designation. In the interest of public health and safety, the BWS has adopted UBC Seismic Zone 3 standards for all its structures and projects, including this project.

Potential Impacts and Mitigation Measures

Flooding is not anticipated to affect the proposed project. During construction, the potential for impacts due to storm runoff will be addressed by use of erosion control measures in accordance with City and County of Honolulu, Rules relating to Soil Erosion Standards and Guidelines, 1999, and Erosion and Sediment Control Guide for Hawaii, Soil conservation Service, 1968. Following construction, the water main will have a minimum cover of three feet. Fill over the water main will be properly compacted and restored to preexisting conditions. Although seismic risk is minimal for Oahu, the water main will be installed in accordance with higher UBC Seismic Zone 3 standards.

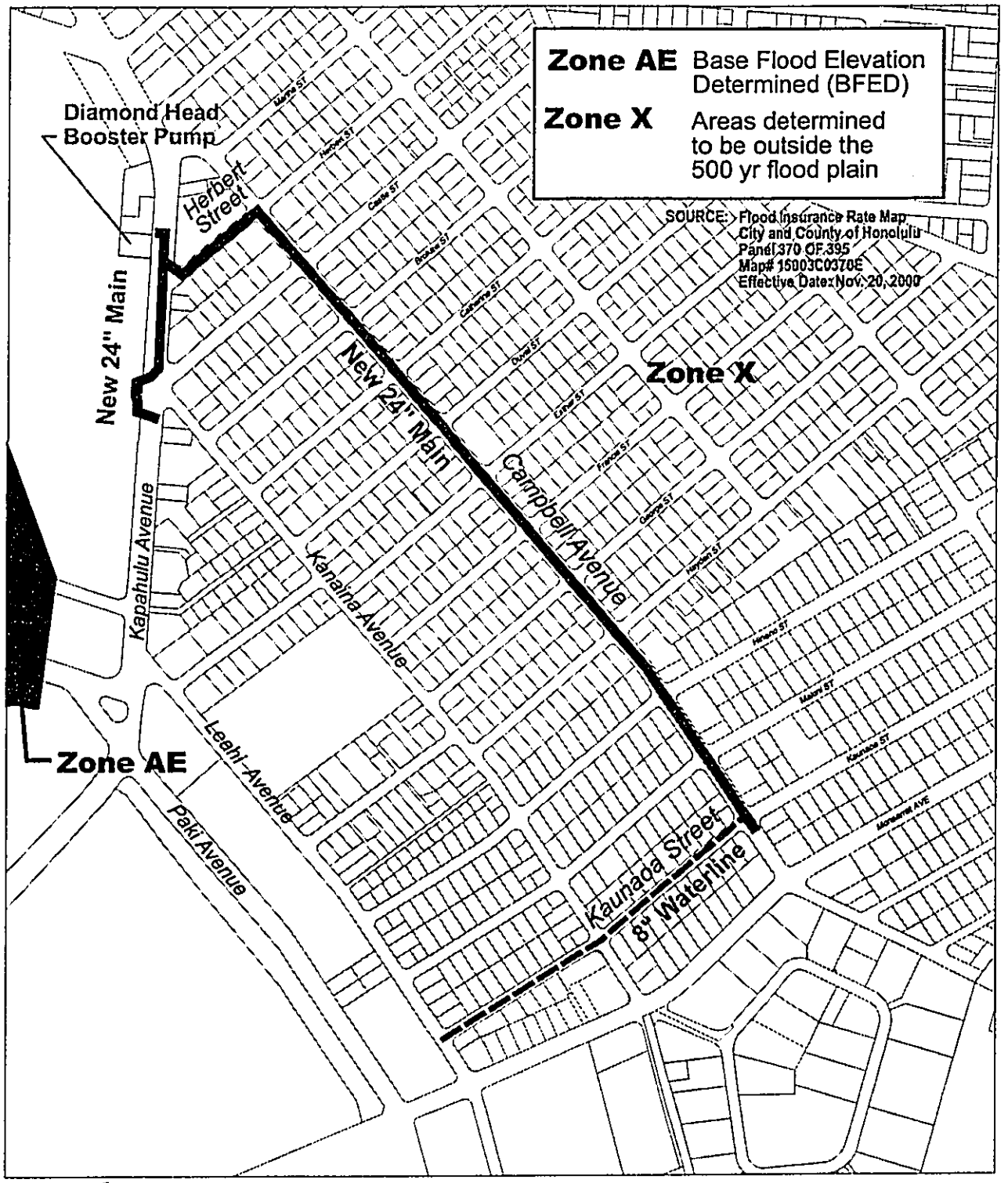


Figure 6
Flood Zone Map

3.1.5 Hydrology

Surface Water

There are no perennial streams in the project area. The closest body of water is the Ala Wai Canal, about 1,580 feet from the Kapahulu/Castle intersection, the closest location where construction activity would occur.

Groundwater

The underlying rock unit in the project area consists mainly of dense and vesicular jointed *pahoehoe* and *a`a* lava flows originating from the Honolulu Volcanic Series. Borings at four locations encountered ground water at depths of 10.4, 14.9, 16.8 and 17.1 feet below existing grade. According to the Oahu Water Management Plan, January 1998, the project falls within the Palolo Aquifer System. There are 11 different wells within this system, but only four are being used for potable wells by the Board of Water Supply. The closest well is at the Kaimuki Station, located about 3/4 miles from the project site. Non-potable wells used by the City and County of Honolulu, Department of Parks and Recreation in the vicinity include three wells at the Honolulu Zoo and one well at the Ala Wai Golf Course.

Hydrotesting Discharge

The water main will be disinfected with chlorine at a concentration of 50 milligrams per liter (mg/L) after being hydrostatically tested and checked for leaks. The chlorinated water will be retained in the pipeline long enough for disinfection. Disposal of the effluent will be in accordance with applicable Federal, State, and City requirements. All hydrotesting, preflushing, and chlorination will be undertaken using potable source water. Prior to construction, the contractor will submit a plan indicating the locations and amounts of chlorinated water to be discharged for review and approval by the appropriate authorities. Hydrotesting and disinfection of the water main will be coordinated following installation of each phase as determined appropriate by the contractor. The State Department of Health, NPDES Permit, Notice of Intent (NOI) for Discharges and Hydrotesting Waters, and City and County of Honolulu permit to discharge effluent into the municipal storm sewer system, are required for this project. Best management practices will be followed in monitoring, treating, and disposing of hydrotesting effluents.

Potential Impacts and Mitigation Measures

The proposed action will not permanently alter the land surface or increase the amount of impervious surfaces; therefore, it is not expected to increase the amount of surface runoff.

There are no potable groundwater sources in the vicinity of the project site. Groundwater contamination would not be a problem.

3.1.6 Noise Quality

Existing noise levels in the project area are consistent with similar urban environments located near major travel arterials or collector streets. Commercial establishments along Kapahulu and Campbell Avenues experience Leq's in the range of 60 to 65 dBA due primarily to vehicular traffic noise. Kaunaoa Street is a local residential street. During the day, residences experience Leq's of approximately 44 to 48 dBA. The dominant noise sources include wind in foliage, local traffic, occasional distant aircraft flyovers, and barking dogs.

The Department of Health's (DOH) maximum permissible noise levels for construction equipment during nighttime hours in residential areas is 45 dBA and 55 dBA during daytime hours or the ambient noise level—whichever is higher.

Potential Impacts and Mitigation Measures

Construction may generate significant amounts of noise which may have a short-term impact on nearby residential and commercial areas. Typical ranges of construction equipment noise vary between 70 and 95 dBA.

All project activities will comply with the DOH Administrative Rules Chapter 11-46 on Community Noise Control. In cases where construction noise exceeds, or is expected to exceed the DOH's "maximum permissible" property line noise levels, a permit will be obtained from the DOH to operate vehicles, construction equipment, power tools, etc. that emit noise levels in excess of "maximum permissible" levels. To reduce the noise impact of construction activities, all work should be conducted during the daytime hours.

Required permit conditions for construction activities are:

- No permit shall allow construction activities creating excessive noise...before 7:00 am and after 6:00 pm of the same day.
- No permit shall allow construction activities which emit noise in excess of 95 dB(A)...except between 9:00 am and 5:30 pm of the same day.
- No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on ...[certain] holidays. Activities exceeding 95 dB(A) shall [also] be prohibited on Saturdays.

Construction equipment and on-site vehicles that exhaust gas or air must be equipped with mufflers. Construction vehicles using roadways are also required to satisfy the DOH's vehicular noise requirements.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Flora and Fauna

Vegetation along the proposed alignment consists primarily of introduced trees, ornamental shrubs and plants, and grass lawns. Vegetation is limited to privately owned landscaped yards and only a handful of street trees owned and maintained by the City and County of Honolulu can be found along Kapahulu and Campbell Avenues. Herbert Street is the only street with kou haole trees uniformly planted along the St. Marks Episcopal Church side of the street. There are no rare, endangered, or threatened species of plants in the project corridor.

Fauna in the project area would most likely include naturalized introduced species that have adapted readily to the human environment. Among the species commonly found in residential and commercial areas are rats (*Rattus sp.*), house mouse (*Mus musculus*), domesticated cats (*Felis catus*) and domesticated dogs (*Canis familiaris familiaris*). Avian species should include common Mynas (*Acridotheres tristis*), Spotted dove (*Steptopelia chinensis*) and Zebra dove (*Geopelia striata*), House finch (*Carpodacus mexicanus*), English sparrow (*Passer domesticus*), Java sparrows (*Padda oryzivora*), and pigeons (*Columba livia*).

Potential Impacts and Mitigation Measures

The proposed improvements are planned along streets in a long established commercial area and residential subdivision. The area does not support native plant communities, wetlands, or native wildlife. The project is not likely to have any adverse impact on wildlife resources in the area.

3.3 SOCIO-ECONOMIC ENVIRONMENT

3.3.1 Population and Employment

The study area is located in the Kapahulu District on the Island of Oahu. The U.S. Census Bureau has designated the area as Census Tracts (CT) 15 and 16[1]. According to just-released data from the 2000 census, CT 15 contained 3,471 persons and CT 16 contained 3,564 persons. Both tracts experienced a decline in population since 1990 (see Table 3).

[1] Data from the U.S. Census Bureau website at www.census.gov.

Table 3: Population of Kapahulu, Oahu, and Hawaii, 1990 and 2000

	1990	2000	Net Change	% Change
CT 15 Upper Kapahulu	3,664	3,471	-247	-6.7%
CT 16 Lower Kapahulu	3,911	3,564	-594	-15.2%
Oahu	836,231	876,156	+39,925	+4.8%
Hawaii	1,108,229	1,211,537	+103,308	+9.3%

Kapahulu is an older, well-established community just outside the Waikiki resort area. According to the 1990 Census, nearly 20 percent of Kapahulu's population was 65 years of age or over, compared to about 11 percent for the island as a whole. Over half of the homes were built before 1960 and about one-fourth of the commercial buildings were constructed during the 1940s.

Potential Impacts and Mitigation Measures

The proposed project, in itself, will not affect population levels. The proposed water main is intended to improve reliability for long-term service of potable water for existing and future customers.

As standard procedure, the construction contract will be bid by BWS to a contractor who will be responsible for all aspects of the project, including supplying a construction crew. The contractor and construction crew will most likely come from all areas of Oahu.

3.3.2 Surrounding Land Uses

Within the project area, the built environment consists of single-family residential homes along Campbell Avenue from the intersection of Brokaw Street and on to the Kaunaoa Street end of the project. One-, two- and three-story walk up apartments are found along Campbell Avenue near Kapahulu Avenue, and strip commercial business establishments predominate along Kapahulu Avenue. The residential community consists primarily of older, single-family homes built on small lots. Most of the homes were built prior to 1960 although many have undergone complete renovation within recent years. Commercial establishments include a broad range of enterprises ranging from fast food drive-ins to upscale sit-down restaurants, gas stations, laundromats, bakeries, and specialty retail stores such as bike shops, art galleries, and pet shops. Businesses along Kapahulu Avenue offer a mix of stores, restaurants, and services whose clientele reaches beyond neighborhood residents to Waikiki-based tourists and island residents who frequent the nearby Ala Wai Golf Course, Honolulu Zoo, Kapiolani Park, and other nearby attractions and

entertainment. Several community facilities are located along the alignment, including churches and daycare centers.

Potential Impacts and Mitigation Measures

Motorists who customarily travel on the streets in the project area will face inconveniences during construction. Disruptions will be temporary and will last only as long as it takes to install each section of the transmission main. In many cases, the availability of alternate routes will enable residents to drive around the construction. A traffic control plan will be prepared by the contractor to mitigate project impacts to surrounding land uses and owners.

Photo 1. View of Kapahulu Avenue looking mauka toward the Diamond Head Booster Pump.

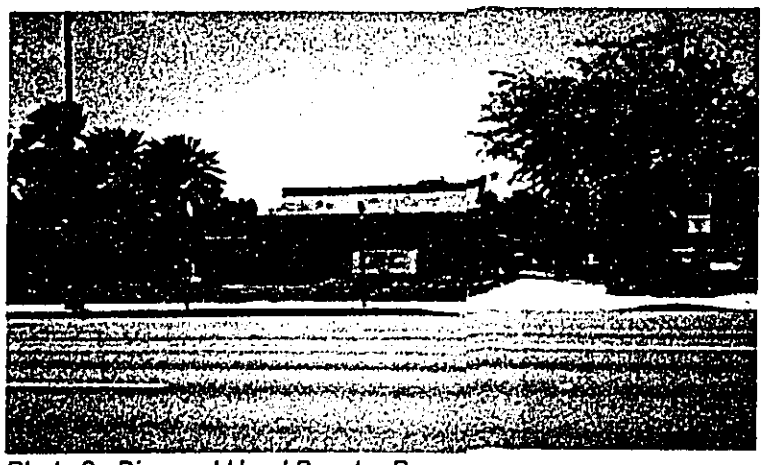


Photo 2. Diamond Head Booster Pump.

Photo 3. View of Herbert Street, looking makai

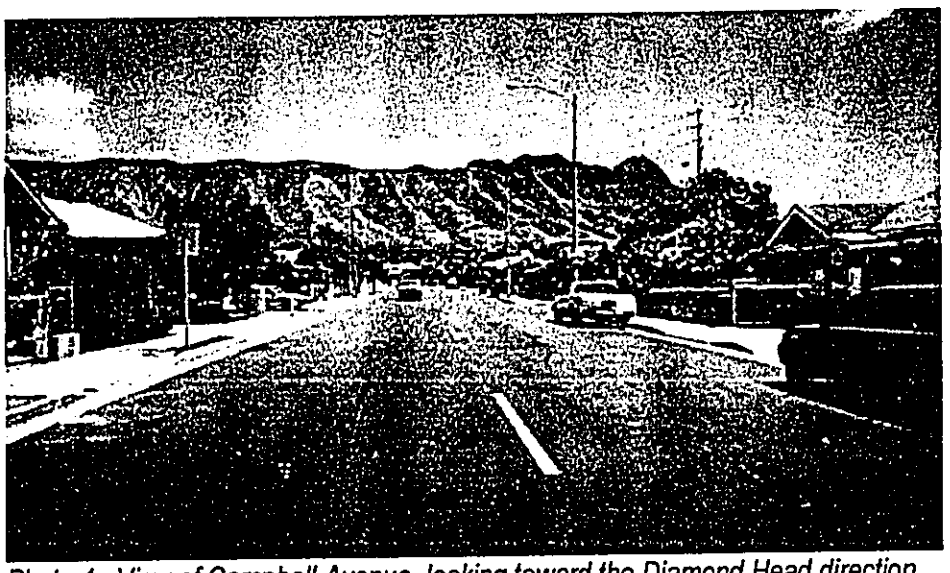


Photo 4. View of Campbell Avenue, looking toward the Diamond Head direction.

Photo 5. View of Kaunaoa Street, looking mauka.

3.3.3 Scenic and Visual Resources

The most significant visual resource in the project area is the Diamond Head State Monument. This visual resource is seen from various vantage points along Campbell Avenue. However, because the view of Diamond Head is from a close vantage point, the entire profile of the crater is not visible. Other scenic resources include the open spaces of the Ala Wai Golf Course as seen along Kapahulu Avenue and the Queen Kapiolani Rose Garden at the foot of Kaunaoa Street. See Photo 4, above.

Potential Impacts and Mitigation Measures

The underground transmission main will have no adverse impacts on existing views, view planes, or aesthetic resources. There will be a short-term visual impact during construction. However, the proposed action does not include any permanent aboveground structures; therefore, long-term impacts to scenic and visual resources are not expected.

3.3.4 Archaeological, Historic, and Cultural Resources

The project site is located within the public right-of-way which has been disturbed for roadway construction and installation of various utility lines, and is not expected to contain artifacts of archaeological or historic value.

Potential Impacts and Mitigation Measures

The proposed action is not expected to result in an impact to archaeological, historical or cultural resources. In a letter dated December 24, 2001 (see Appendix), the Department of Land and Natural Resources Historic Preservation Division indicated that a review of their records shows that there are no known surface or subsurface historic sites within the project corridor. The project area is underlain by soils of terrigenous origin and it is unlikely that the proposed work corridors—within existing roadways—still contain significant historic sites. The State Historic Preservation Division indicated that they believe that the project will have "no effect" on significant historic sites.

As a precaution, the following construction note will be added to all plans prepared for the project:

"Should historic remains such as artifacts, burials, trash pits with bottles, or concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary."

Act 50 requires that a proposed action's impact(s) on the cultural practices of a community be disclosed in the environmental review process. In this case, the project site is confined

to existing public roadways that are periodically subjected to construction and repair activities. The proposed action itself will not impede or obstruct public access or use of the corridor in which the pipeline will be installed.

3.4 TRAFFIC AND CIRCULATION

Existing Roadway System

The proposed project will be constructed within the following rights-of-way :

- Kapahulu Avenue between Kanaina Avenue and the Diamond Head Booster Pump
- Herbert Street between Kapahulu Avenue and Campbell Avenue
- Campbell Avenue between Herbert Street and Kaunaoa Street
- Kaunaoa Street between Campbell Avenue and Leahi Avenue

All streets have a posted speed limit of 25 miles per hour and are owned by the City and County of Honolulu.

The proposed project, which begins near the intersection of Kanaina Avenue and Kapahulu Avenue, would construct a new 24-inch water line along the Diamond Head (east) side of the four-lane road. The new water line will extend for a distance of approximately 550 feet to the Diamond Head Booster Pump Station. A new 24-inch line will be connected to the Kapahulu line and extend beneath the centerline of Herbert Street (approximately 400 feet), then extend along Campbell Avenue, primarily along the west side of the street until it connects to an existing 30-inch water line just past the Kaunaoa Street intersection (a distance of approximately 2,650 feet).

Kapahulu Avenue is a major four-lane arterial that moves traffic from Waikiki to the H-1 Freeway. Herbert Street is a local street and one of several residential streets that form a gridiron pattern in the district. Campbell Avenue is a collector street that carries traffic from Kapahulu to Monsarrat Avenue. Kaunaoa Street is a local, residential street that extends to Leahi Avenue. In Kaunaoa Street, an existing 6-inch line will be removed and replaced by an 8-inch pipeline. This new line will be located along the south side of the roadway, covering a distance of approximately 1,300 feet.

All roadways are improved with curbs, sidewalks, and storm drains. Street parking is allowed on all streets within the project corridor. However, Kapahulu Avenue imposes parking restrictions during peak traffic hours.

None of the intersections within the project area are signalized. The Campbell Avenue/Kapahulu Avenue intersection, which is outside the project corridor, is signalized.

Public Transportation

The Kapahulu and Campbell Avenue segments of the proposed alignment coincide with Bus Route 13. Route 13 runs between Liliha and Kapahulu, and during the daytime arrives at 13-minute intervals. The eastbound portion travels along Campbell Avenue. Because

most of the construction will occur on the west side of Campbell Avenue, bus travel lanes will be affected. Route 13 forms a loop through Kapahulu with the westbound running along Leahi Avenue—this segment of the bus route will not be directly affected by the project.

Traffic Conditions

Table 4 shows estimates of AM peak hour volumes for Kapahulu Street. The AM peak traffic count provides the most accurate picture of maximum traffic levels through the area. PM peak traffic tends to be more diffuse than and not as concentrated as the AM peak. By far, the heaviest traffic occurs on Kapahulu Avenue.

Table 4: Kapahulu Avenue Traffic Estimates (at Herbert Street)

Kapahulu Ave.	@Herbert St.			@Campbell Ave.		
	N bound	S bound	W bound	N bound	S bound	W bound
AM Peak						
7:00 to 7:15	139	195	12	131	217	120
7:15 to 7:30	184	230	18	181	286	145
7:30 to 7:45	187	252	27	178	427	157
7:45 to 8:00	227	320	16	185	343	126
8:00 to 8:15	232	276	17	209	267	115
8:15 to 8:30	228	246	12	197	290	99
Total vehicles	1,197	1,519	102	1,081	1,830	762

Campbell Ave.	@Kaunaoa St.		@Duval St.	
	N bound	S bound	N bound	S bound
AM Peak				
7:00 to 7:15			92	40
7:15 to 7:30	25	44	69	49
7:30 to 7:45	28	59	61	46
7:45 to 8:00	51	47	76	55
8:00 to 8:15	30	36	69	34
8:15 to 8:30	45	29	55	30
Total vehicles	179	215	422	254

The *Highway Capacity Manual*[2] describes a "Level of Service" rating of traffic conditions. Levels of service are based on densities in roadway segments and average delays at intersections. Conditions on local two-lane streets, where flows are generally

[2] *Highway Capacity Manual, Third Edition*, Updated October 1994, Table 10-3.

uninterrupted and speed limits of 25 miles per hour are posted, are best described by vehicular densities. For a volume of 300 vehicles per hour (vph), the average density would be 12 vehicles per mile, which would be within the range for Level of Service A. Estimated peak hour volumes on all residential streets within the project area are well below 300 vph. Campbell Avenue's AM peak traffic reaches the 300 vph threshold level, but daytime traffic levels are lower.

At the unsignalized intersections, delays to traffic approaching the intersection from side streets controlled by a stop sign determine the levels of service. Stopped traffic must wait for a gap in the other traffic in order to cross or enter the intersection. Analyses of unsignalized intersections indicate that the maximum average delays would be between 10 and 20 seconds, or Level of Service C. (Roadway conditions are considered acceptable to Level of Service D, for which average delays are up to 30 seconds.)

Potential Impacts and Mitigation Measures

The proposed project will not affect traffic volumes after its completion. However, since the water line is located within portions of a major arterial, major collector, and local streets, the ability of these roadways to carry traffic will be affected during construction. Trenching and other excavation will affect pavement areas normally used by traffic. Construction-related inconveniences can be expected because of high traffic volumes on the major roads. As water line construction proceeds along the roadway, traffic movements on cross streets and across driveways may be affected.

In particular, Kapahulu Avenue bears high volumes of traffic, as does Herbert Street which provides the connection between Kapahulu and Campbell Avenues. Kapahulu Avenue has sufficient width and laneage so that traffic can be diverted around construction while the 550-foot segment is being installed. Herbert Street is a two-lane curved street, but this segment of the project is also relatively short (400 feet), so disruptions will be limited in duration. Construction impacts on traffic can be reduced further with temporary restrictions on street parking, and possible diversion of some traffic to either Castle Street or Martha Street.

Plans have been submitted to the Department of Planning and Permitting, Traffic Review Branch, and all review comments have been addressed. The construction contractor will prepare and submit a Traffic Control Plan to the Traffic Review Branch for review and approval. The Traffic Control Plan will ensure that access to adjoining properties will be maintained and access through the construction site will be provided for emergency vehicles for the duration of the project. Construction will be phased so that only a limited length of roadway will be affected at any one time. Any excavation within roadway areas would be covered with steel plates during non-working hours. Some drivers may seek to avoid construction areas by taking alternative routes.

Work will be performed during off-peak work hours from 8:30 am to 3:00 pm and not on weekends or holidays. The construction contractor will notify the Department of Transportation Services, and Oahu Transit Services, Inc., Paratransit Services, two weeks

prior to any road construction, providing information on the location, scope of work and proposed closure of any street or traffic lanes. Prior to construction, residents along the project route, as well as the area Neighborhood Board will be notified of the project schedule and of any lane closures and detours.

Construction and restoration of the existing roadway will be performed in accordance with all applicable sections of the "Standard Specifications for Road and Bridge Construction" (1994). All work will also conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" and the Manual of Uniform Traffic Control Devices for Street Maintenance Operation."

3.5 PUBLIC UTILITIES

Drainage System

Streets through the project site have underground storm drain lines which eventually empty into the Ala Wai Canal. This channel empties into a major concrete-lined channel that flows into the ocean at the near shore off Kuhio Beach. The existing concrete drainage channels are owned and maintained by the City.

Water System

The Kapahulu-Waikiki water system consists of one water service level identified as the "180" service level. The number refers to a common spillway elevation. The 180 service system is the largest and stretches from Waialae Iki to Moanalua and serves customers in the lower elevations. It is the dominant service system in Kapahulu-Waikiki and includes two storage reservoirs at sites designated as the Diamond Head 180 Reservoir (3.5 million gallons) and Waahila 180 Reservoir (4.0 million gallons).

A 24/30-inch water main running along Kapahulu Avenue, Kanaina Avenue, Kaunaoa Street, and Campbell Avenue transmits water from the Diamond Head Booster Station to the Diamond Head 180 Reservoir and is then conveyed by transmission mains to distribution lines that service individual households and business establishments.

Wastewater System

Figure 7 illustrates the location of existing sewer lines in relation to the proposed water system improvements. Project plans have been submitted to the City Environmental Services Department's Wastewater Branch for review and comment. The proposed project will have no direct impact on existing sewer lines and laterals. Required horizontal and vertical clearances between the existing sewer lines and proposed water lines will be provided.

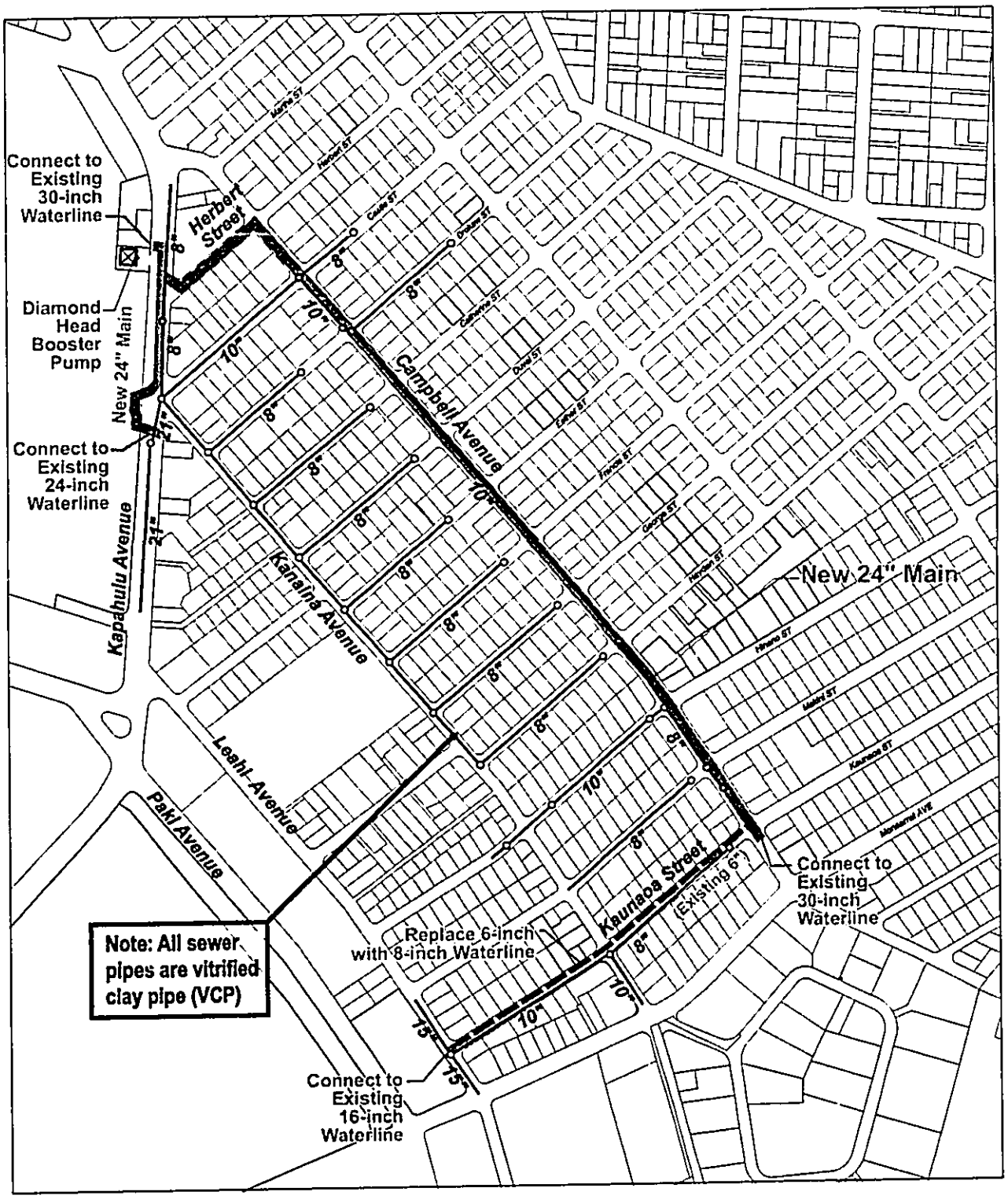


Figure 7
Wastewater System

Electrical and Telecommunications Systems

Existing utility systems in the project area include electric power facilities, CATV cables, and telephone facilities. Utility lines in the project corridor are located underground, i.e., primarily under sidewalks and streets. Prior to the start of excavation, all agencies and utility companies will be contacted to verify locations and coordinate construction.

Potential Impacts and Mitigation Measures

All existing utilities in the project area will remain in service and in place. The project design will be consistent with the engineering requirements specified by Hawaiian Electric Co., Verizon Hawaii and other utility companies. The water main alignment and grade may be changed if there are conflicts with or insufficient spacing between existing underground utilities.

3.6 PUBLIC HEALTH AND SAFETY

Police Services

Kapahulu falls under the jurisdiction of the Honolulu Police Department's District 7 command which covers the area from Punahou Street to Makapuu. Police officers serving the area operate out of the departmental headquarters on Beretania Street. The Waikiki Station falls under District 6. District 6 covers the Waikiki peninsula and extends eastward to the slopes of Diamond Head. The district's administrative offices operate out of the Alapai Headquarters. The boundaries of District 6 were expanded in 1999 to include all of Kapiolani Park along with the Queen Kapiolani Rose Garden and adjacent areas on Paki Avenue.

Fire Services

The Honolulu Fire Department consists of four battalions with Battalion 2 servicing the east Honolulu District. The Waikiki Fire Station (Station 7) is located at the intersection of Kapahulu Avenue and Paki Avenue, about two blocks from the southern end of the project area. About twelve firefighters are on duty per shift. The station has an engine and a ladder company. The next nearest station is the Kaimuki Fire Station (Station 5), located about 3 miles away on Kokohead and Pahoa Avenues is equipped with an engine company.

Potential Impacts and Mitigation Measures

Necessary measures to assure public health and safety will be provided throughout construction. The contractor will provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other safety facilities. These safety precautions will conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways," as adopted by the Highway Safety Coordinator and the U.S. Federal Highway Administration.

The contractor will also maintain access by emergency vehicles through the construction site for the duration of the project. The Fire Communication Center will be notified of any interruption in the existing fire hydrant system during the project. This project will improve fire flow pressure in Kaunaoa Street.

There is a potential for citizen complaints to the Police Department regarding construction-related dust and noise. Such complaints could have a negative impact on overall police service to the area. Construction period dust and noise will be minimized, thereby reducing the likelihood of community complaints to the police department.

A Traffic Control Plan will be prepared to address disruption to vehicular and pedestrian traffic. The police department will be consulted during preparation of the Traffic Control Plan.

4 LAND USE PLANS, POLICIES, AND CONTROLS

4.1 HAWAII STATE PLAN

The Hawaii State Plan, Chapter 226, HRS, serves as a written guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities and by providing a basis for determining priorities and allocating limited resources, such as public funds, services, manpower, land, energy, water, and other resources. Relevant State Plan goals, objectives, policies and priority guidelines are noted below.

The proposed project would be in conformance with State Plan objectives and policies for facility systems – in general,

> "(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives."
>
> "(b) To achieve the general facility systems objective, it shall be the policy of this State to: (1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans...: and "(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user." (Section 22-14, HRS).

The project also conforms to Section 22-6-16, Water, HRS,

> "(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities" (Section 226-16, HRS).

4.2 STATE LAND USE CLASSIFICATION

The State Land Use Commission, pursuant to Chapter 205 and 205A, HRS and Chapter 15-15, Hawaii Administrative Rules, is empowered to classify all lands in the State into one of four land use districts: urban, rural, agricultural and conservation. The entire alignment falls within the "Urban" classification. Activities or uses that fall within the Urban classification are regulated by the City (see Figure 8).

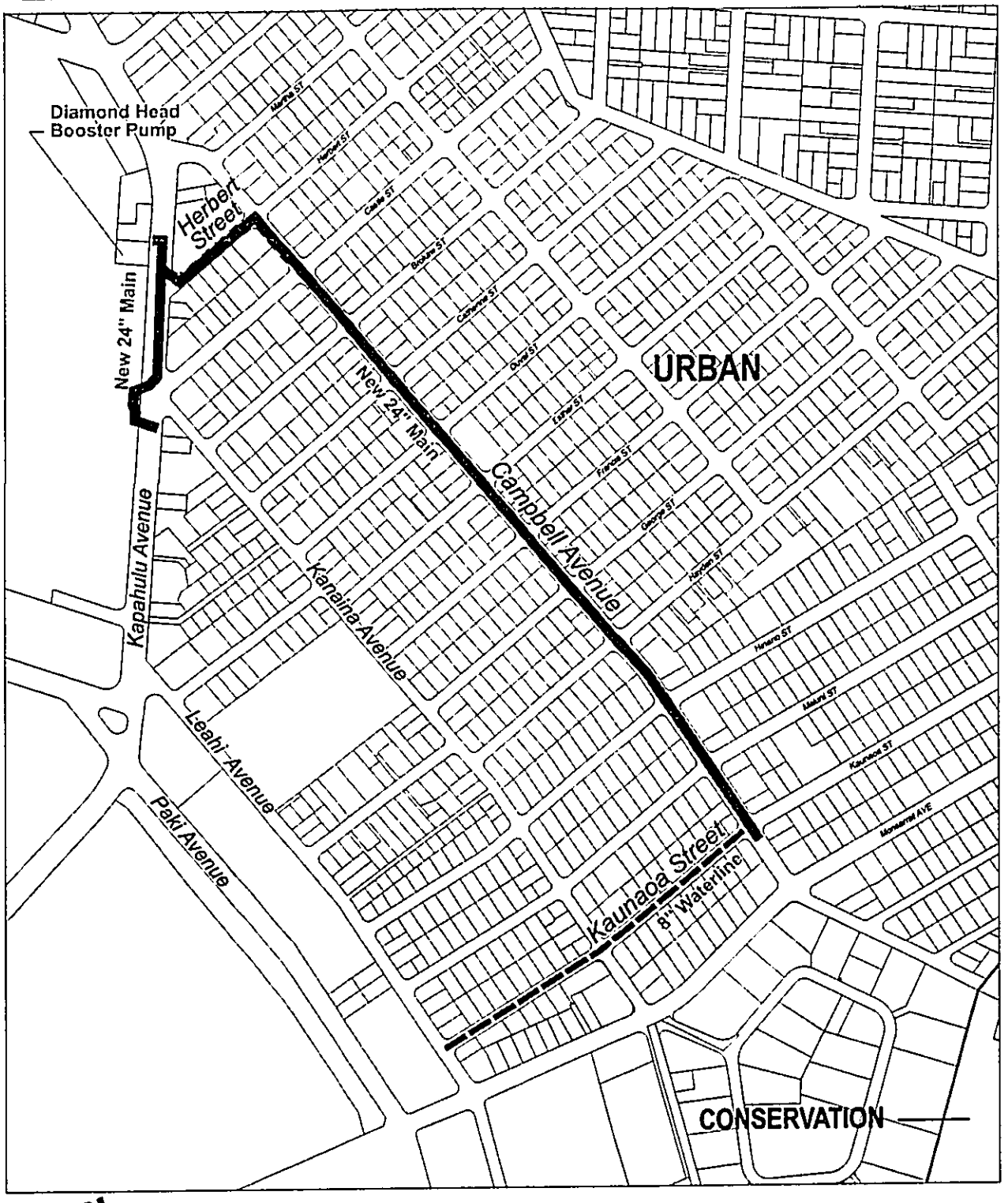


Figure 8
State Land Use Districts

4.3 CITY AND COUNTY OF HONOLULU LAND USE REGULATIONS

General Plan

The General Plan for the City and County of Honolulu (1992) is a comprehensive statement of long-term objectives and policies for Oahu over a 20 year period. The General Plan addresses eleven areas of concern, including population; economic activity; the natural environment; housing; transportation and utilities; energy; physical development and urban design; public safety; health and education; culture and recreation; and government operations and fiscal management.

The proposed project is consistent with the following policies and guidelines of the 1992 General Plan Objectives and Policies, Chapter V, Transportation and Utilities:

Objective B: To meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal.

> Policy 1: Develop and maintain an adequate supply of water for both residents and visitors.

Objective C: To maintain a high level of service for all utilities.

> Policy 1: Maintain existing utility systems in order to avoid major breakdowns.
>
> Policy 2: Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.

Primary Urban Center Development Plan

Development Plans, a mandate of the City Charter, have been adopted by ordinance for eight geographic regions of the island since 1985. Development Plans provide general guidelines and policies for development by identifying permissible land uses on the Development Plan Land Use Map, and various public facilities and improvements on the Development Plan Public Facilities Map.

The proposed project falls within the Primary Urban Center planning area.

Primary Urban Center Development Plan: Land Use Map

According to the Development Plan (DP) Land Use Map, land uses in the project corridor include Residential and Commercial, with some Public Facility (PF) uses in the vicinity (see Figure 9).

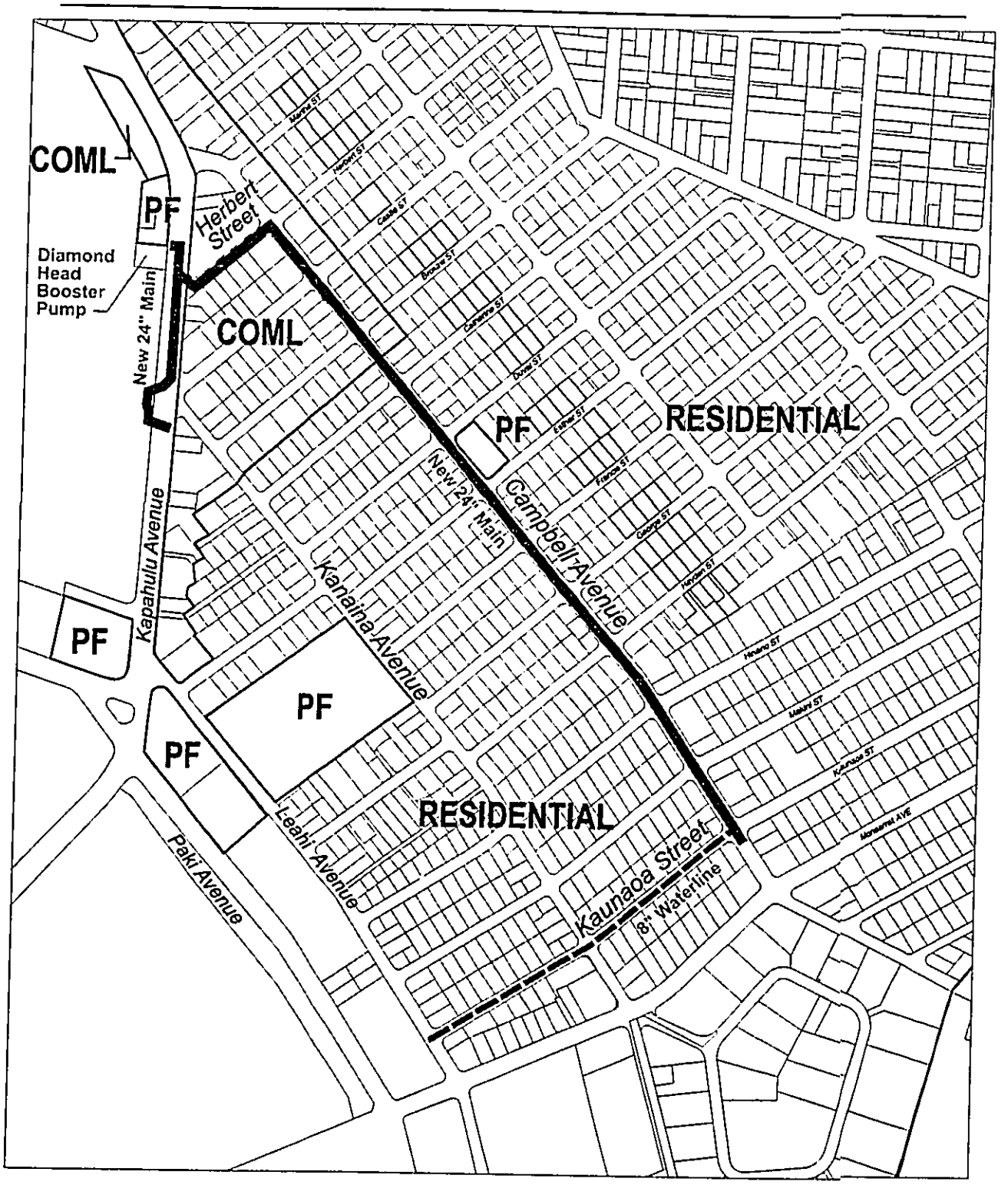


Figure 9
DP Land Use Map

Primary Urban Center Development Plan: Public Facilities

The Development Plan (DP) Public Facilities Map has traditionally functioned as a planning tool that identified all publicly funded capital improvement projects and the general time frame for construction—whether short-term (within 6 years) or long-term (beyond 6 years). The plan does not identify any planned public utility projects for the project corridor.

In July 2001, the Department of Planning and Permitting reviewed the BWS Draft Six Year Capital Improvement Program Budget, and noted that the proposed water system improvements would need a DP Public Facilities Map amendment because "it would increase system capacity". However, further discussions have clarified that the proposed project will not increase system capacity or accommodate new growth. As a result, the Department of Planning and Permitting has reversed its earlier decision, and concluded that the project will not require an amendment to the DP Public Facilities Map.

The proposed water system improvements will not affect any proposed projects on the Primary Urban Center DP Public Facilities Map. A site adjacent to the BWS Diamond Head Booster Pump Station is designated Public Facility (PF) on the DP Land Use Map, and a publicly funded "government building" symbol on the DP Public Facilities Map. This site was formerly proposed as a neighborhood parking facility and was placed on the DP Public Facilities Map in 1987. Although the City has no immediate plans to develop a parking facility, the proposed water system improvements will not affect or constrain future use of the site.

County Zoning

Zoning districts along the proposed project corridor are shown in Figure 10 and include:

- R-3.5 Residential
- B-2 Community Business Commercial

Water transmission mains are classified as Utility Installation, Type A, defined as those utility installations with minor impact on adjacent land uses. Utility installations, Type A, are an unconditional permitted use for each of the zoning districts listed above and are, therefore, consistent with the Land Use Ordinance.

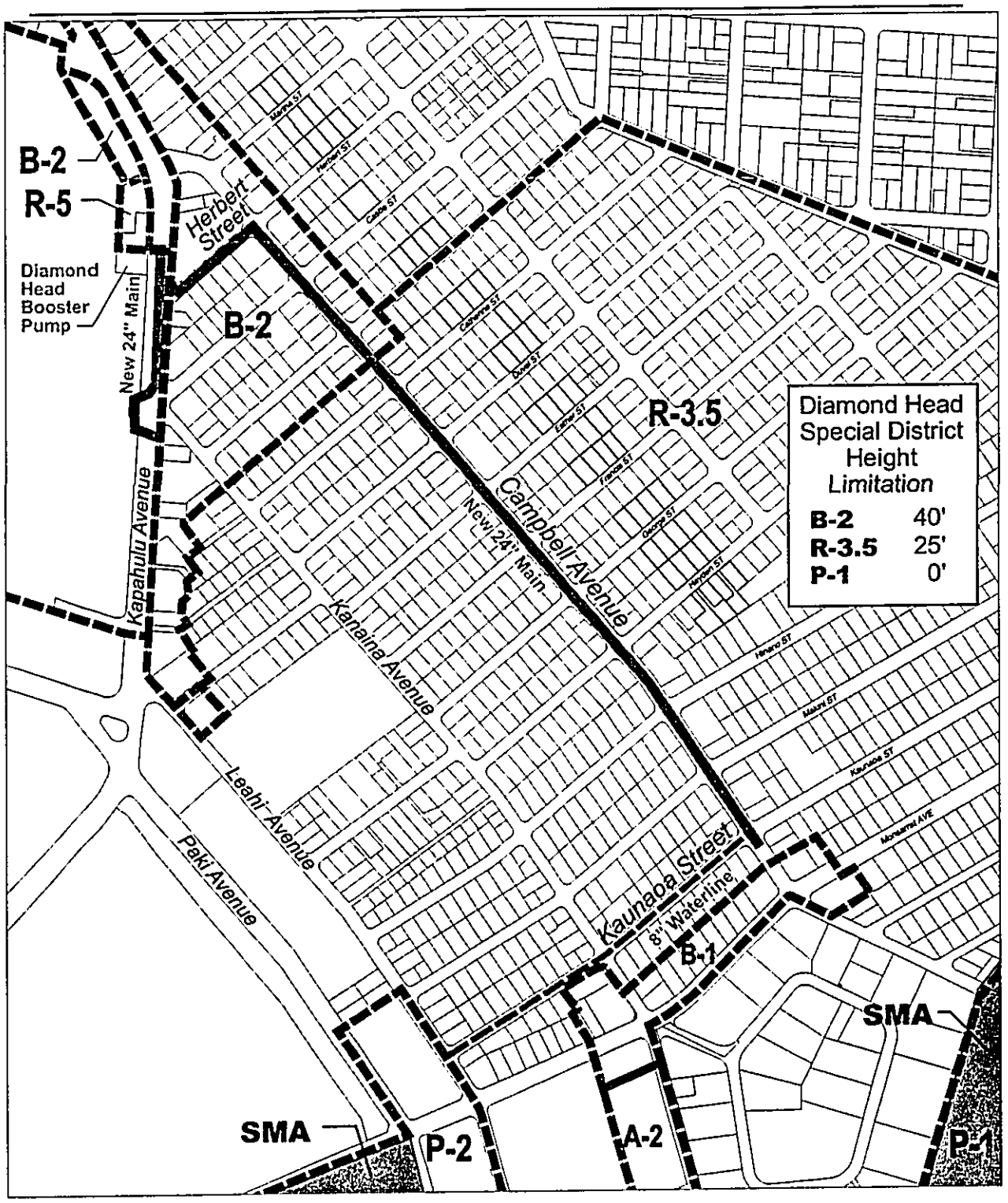


Figure 10
Zoning, SMA & Diamond Head Special District

Kapahulu Community Plan

The Kapahulu Community Plan (Plan Pacific, 2001) was a product of the City's island wide visioning process, and was developed by the Waikiki-Kapahulu-Diamond Head Vision Team. The Kapahulu Community Plan provides direction for the Kapahulu area, with the primary objective of strengthening the physical character, appearance and identity of the community. The plan has three main themes: 1) improving and sustaining Kapahulu's residential community, 2) enhancing the makai end of Kapahulu as a cultural and recreational gateway, and preserving and improving views of Diamond Head.

The Kapahulu Community Plan recommends several projects in support of these three themes. Several of the projects are located in the vicinity of the proposed water system improvements. For example, development of a new Kapahulu Community Center is planned for the former Kapahulu Health Center lot on Kapahulu Avenue near its intersection with Campbell Avenue. The site is adjacent to the Board of Water Supply's Diamond Head Booster Pump station.

The Kapahulu Community Plan also proposes crosswalk and sidewalk improvements on portions of Kapahulu and Campbell Avenues. Raised or special-pavement crosswalks and pedestrian-level lighting are proposed on Kapahulu Avenue at the intersection with Campbell Avenue, where water system improvements are proposed. Street trees are proposed along both sides of Campbell Avenue from Kapahulu Avenue to Brokaw Street.

The proposed water system improvements will not directly impact any of the proposed projects or improvements in the Kapahulu Community Plan. The water system improvements are scheduled to begin construction in late 2002, with construction completed toward the end of 2003. Given this construction schedule, the improvements will be completed prior to the construction of a new community center, sidewalk and landscaping improvements in the project vicinity. Therefore, the trenching required along Kapahulu Avenue, Herbert Street and Campbell Avenue will not disrupt or interfere with these other planned improvements. The BWS will coordinate its sidewalk repaving component with the City Department of Design and Construction to ensure consistency with future Kapahulu Community Plan sidewalk and landscaping improvements.

The water system improvements will improve water system operation, but will not increase system capacity. Therefore, it will not directly cause or encourage future growth or land use changes. The project supports the Community Plan's objective of improving and sustaining Kapahulu's residential community.

4.4 SPECIAL MANAGEMENT AREA

As shown in Figure 10, the proposed action lies outside the boundaries of the Special Management Area (SMA).

4.5 DIAMOND HEAD SPECIAL DISTRICT

As shown in Figure 10, the proposed action falls within the boundaries of the Diamond Head Special District. The Diamond Head special district recognizes this volcanic crater as a state and national monument. Controls are designed to preserve existing prominent public views and the natural appearance of Diamond Head. Campbell Avenue from Kapahulu Avenue to Monsarrat Avenue is identified as a public street that offers prominent public vantage points of Diamond Head. Within the project area, the B-2 Community Business district is limited to a height of 40 feet and the R-3.5 Residential district is limited to 25 feet. In addition, all overhead utility lines within the project corridor were placed underground in compliance with this ordinance. The proposed action is a utility improvement project that will be placed underground. Streetscape improvements, including street furniture and other elements within the public rights-of-way are exempt from permit requirements.

5 POSSIBLE ALTERNATIVES

5.1 NO ACTION

The "no action" alternative assumes the status quo, i.e., continued reliance on the existing 12-inch and 16-inch water lines in the project area. The two lines which serves both transmission and distribution functions lowers the efficiency for the overall water system. Moreover, any break in the existing main may cause major disruption of service in the area. Such breakages are unpredictable. The existing 6-inch line in Kaunaoa Street does not meet fire flow requirements.

5.2 DELAYED ACTION

To delay the project will mean continued reliance on the existing transmission system until the action is initiated. Delaying the project would not significantly alter the environmental consequences of the project. In the interim, water users could experience service disruptions and associated inconveniences if a break occurs. In addition, project costs are likely to increase because of inflation and changes in economic and labor supply conditions.

5.3 ALTERNATIVE ALIGNMENTS

Two alternatives to the proposed alignment were initially considered for the new water main. The first alternative was construction of a line on Kapahulu Avenue, then along Campbell Avenue (bypassing the Herbert Street connection). Although very similar to the preferred alternative, the proposed Herbert Street routing was determined to be more accessible than continuing the line on Kapahulu Avenue until Campbell Avenue.

Another alternative was to install the 24-inch main along Kanaina Avenue instead of Campbell Avenue. Kanaina Avenue runs parallel to Campbell Avenue, and located one block makai. However, due to the heavy concentration of utilities at the intersection of Kapahulu and Kanaina Avenues, it would be infeasible to maneuver a 24-inch line through this area. In addition, Kanaina Avenue is congested with existing utilities, including a 30-inch water main, 18-inch drain, 8-inch sewer line, 6-inch water line (to be abandoned), in addition to the proposed 8-inch water line.

6 DETERMINATION

Based on the information described in this document, the proposed project is not expected to result in significant social, economic, cultural, or environmental impacts. Consequently, a finding of no significant impact has been determined pursuant to the provisions of Subchapter 6 of Chapter 200, Title 11, Hawaii Administrative Rules of the Department of Health.

7 FINDINGS AND REASONS SUPPORTING THE DETERMINATION

This Environmental Assessment, prepared in accordance with Chapter 343, HRS, as amended, has found that the potential for impacts associated with the proposed action will not be significant, with the exception of unavoidable traffic disruptions. Potential environmental impacts will be temporary and are not expected to adversely impact the long-term environmental quality of the area.

The potential effects of the proposed project were evaluated based on the significance criteria in Section 11-200-12 (Hawaii Administrative Rules, revised in 1996). The following is a summary of potential effects of the action.

Significance Criteria

1. Irrevocable commitment to loss or destruction of natural or cultural resources.

The proposed project is not anticipated to adversely impact natural or cultural resources. The project is located within the rights-of-way of existing public streets that have been disturbed repeatedly by roadwork and installation of other utilities.

2. Curtailment of the range of beneficial uses of the environment.

The use of public streets for public infrastructure is an appropriate, beneficial use of the man-made environment. Utility lines are commonly found under or alongside roadways, which also facilitates access for maintenance and repair operations.

3. Conflicts 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.

The proposed project is consistent with the environmental policies, goals, and guidelines defined in Chapter 344, HRS. The project is associated with resource conservation and quality of life for the people of Hawaii since an efficient, well-designed network of pipelines is an integral part of managing, distributing, and consuming a valuable natural resource.

4. Substantially affects the economic or social welfare of the community or state.

The project is intended to ensure the long-term transmission of clean, potable water through an upgraded and reliable distribution system. Short-term negative impacts are associated with traffic disruptions and construction noise and dust to residents in the immediate vicinity of construction. Exposure will be limited to relatively short intervals since the project will be completed in increments.

5. Substantially affects public health.

The proposed project will be completed in accordance with Federal, State and City and County of Honolulu rules and regulations governing public safety and health. Primary public health concerns involve air quality, noise, traffic, and water quality impacts. However, it is expected that these impacts can be minimized or brought to negligible levels by appropriate use of the mitigation measures described in this document. Additionally, the contractor will be obligated to meet the environmental standards and procedures of various governmental agencies in the course of obtaining necessary permits.

At the same time, the project itself is expected to strengthen the community's position with regard to public health by helping to ensure the continued flow of potable water.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities.

The proposed project is part of a BWS program to improve its transmission and distribution system. Although the improvements are designed to serve the present population and to assist the BWS in meeting future demand, the project itself will not generate new population growth.

7. Involves substantial degradation of environmental quality.

As public roadways, the project area has been disturbed repeatedly in the past. All anticipated impacts will be temporary. Upon completion of the installation, the environmental quality of the area will return to pre-construction condition.

8. Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for large actions.

The proposed project is supplemental to the existing water system and one part of the BWS's long-range water master plan. The project is not expected to have significant effects on local, regional, and island-wide land use and/or population. It does not involve a commitment to larger actions.

9. Substantially affects a rare, threatened, or endangered species, or its habitat.

The project area is a long established urban community with no rare, threatened, or endangered species.

10. Detrimentally affects air or water quality or ambient noise levels.

There will be short-term impacts on the air quality and noise levels inside of and adjacent to the construction area. Mitigation measures will be implemented to minimize construction-related impacts.

11. 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, freshwater, or coastal waters.

The project area is not at high risk for tsunami inundation or flooding, and is away from the Special Management Area and coastal resources.

12. Substantially affects scenic vistas and view planes identified in county or state plans or studies

The water transmission main will be installed underground in the public right-of-way. There will be little visual evidence of the project when completed.

13. Requires substantial energy consumption.

Installation of the water main will require energy levels that are typical for a construction project of this type; no extraordinary energy consumption is anticipated.

The analysis contained in this Environmental Assessment has determined that the project will not have significant adverse impacts. The Board of Water Supply has filed a Finding of No Significant Impact (FONSI) with the State Office of Environmental Quality Control. Anticipated impacts will be temporary and will not adversely impact environmental quality in the area.

8 BIBLIOGRAPHY

Board of Water Supply. January 1998. *Oahu Water Management Plan: Initial Revision to the Technical Reference Document.*

Board of Water Supply. March 1995. *Oahu Water Plan.*

City and County of Honolulu, Department of General Planning. *General Plan: Objectives and Policies.* 1992.

Federal Emergency Management Agency. Flood Insurance Rate Map #15003C0395E. Effective date November 20, 2000.

Pacific Geotechnical Engineers, Inc. *Draft Letter Report, Geotechnical Exploration, Diamond Head Water System Improvements, Honolulu, Oahu, Hawaii.* January 18, 2002

PlanPacific, Inc. *Kapahulu Community Plan.* Prepared for City and County of Honolulu, Department of Design and Construction. February 2001.

_____. *Kapahulu Community Plan, Phase I Improvements, Final Environmental Assessment and Finding of No Significant Impact.* Prepared for City and County of Honolulu, Department of Design and Construction. October 2001.

State of Hawaii, Department of Land and Natural Resources, *Diamond Head State Monument Master Plan Update, Final Environmental Impact Statement.* October 2000.

United States Department of Agriculture, Soil Conservation Service, In Cooperation with the University of Hawaii Agriculture Experiment Station. August 1972. *Soil Survey of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii.*

Wagner, W. L., D. R. Herbst, and S. H. Sohmer. 1990. *Manual of the Flowering Plants of Hawaii* (in Two Volumes). University of Hawaii Press and Bishop Museum Press, Special Publication 83.

Wagner, W. L. and D. R. Herbst. 1999. "Supplement to the Manual of the Flowering Plants of Hawaii" in Wagner, W. L. et al. *Manual of the Flowering Plants of Hawaii, Revised Edition* (in Two Volumes). University of Hawaii Press and Bishop Museum Press, pp. 1855-1918.

9 ORGANIZATIONS AND AGENCIES CONSULTED IN PREPARATION OF THE FINAL ENVIRONMENTAL ASSESSMENT

9.1 Organizations Contacted during Preparation of the Draft and Final EA

City and County Department of Planning and Permitting
Department of Land and Natural Resources, State Historic Preservation Division

9.2 Organizations Contacted during the DEA Comment Period

The organizations and agencies listed below were contacted during the 30-day comment period for the Draft Environmental Assessment. A copy of the DEA was placed at the Waikiki-Kapahulu Public Library for public review.

State Agencies
Department of Business, Economic Development & Tourism, Office of Planning
Department of Hawaiian Home Lands
Department of Land and Natural Resources
Department of Land and Natural Resources, State Historic Preservation Division
Department of Health, Environmental Management Division
Office of Environmental Quality Control
Office of Hawaiian Affairs
University of Hawaii, Environmental Center
Waikiki-Kapahulu Public Library

City and County of Honolulu
Department of Design and Construction
Department of Environmental Services
Department of Planning and Permitting
Department of Transportation Services
Department of Parks and Recreation
Department of Facility Maintenance
Fire Department
Police Department

Private and Community Organizations and Elected Officials
Councilmember Duke Bainum, District 4
Diamond Head/Kapahulu/St. Louis Heights Neighborhood Board No. 5
State Representative Scott Saiki, 20th District
State Representative Mindy Jaffe, 19th District
State Senator Les Ihara, Jr., 10th District
Hawaiian Electric Company
Verizon Hawaii

9.3 Comments Received During the DEA Comment Period

The following comments were received during the DEA comment period.

BENJAMIN A. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

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

April 12, 2002

Scot Muraoka
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96813

RECEIVED
APR 23 2002

LOG NO: 29595
DOC NO: 0204EJ09

Dear Mr. Muraoka:

SUBJECT: Chapter 6E-8 Historic Preservation Review – Draft Environmental Assessment for the Diamond Head Water System Improvements in the Kapahulu Area, Honolulu, O`ahu
Kapahulu, Kona, O`ahu
TMK: 2-7-036: 3-1-012 to 019, 24& 25

Thank you for the opportunity to review the DEA for the water line improvements in the Kapahulu area.

The DEA correctly incorporates, in the Appendix , our earlier comments that it is unlikely that the proposed work corridors – within existing roadways –still contain significant historic sites and that we believe that the water system improvements will have "no effect" on significant historic sites.

As a precaution, the following construction note will be added to all plans prepared for these undertakings.

> Should historic remains such as artifacts, burials, trash pits with bottles, or concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

EJ:jk

c: Glenn Kimura, Kimura Int'l, 1600 Kapiolani Blvd. Suite 1610, Honolulu, HI 96814
OEQC

KIMURA INTERNATIONAL

June 5, 2002

Mr. Don Hibbard, Administrator
State Historic Preservation Division
State of Hawaii
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Mr. Hibbard:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Letter dated April 12, 2002
LOG NO: 29595
DOC NO: 0204EJ09

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

In response to your comments dated April 12, 2002, all plans shall include the construction note you cite in your letter *("Should historic remains such as artifacts, burials, trash pits with bottles, or concentrations of shell or charcoal be encountered during construction activities...")*. A copy of your letter will also be forwarded to the construction contractor.

If you have any questions, please contact me Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8648 • Fax (808) 941-8399

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

RECEIVED
MAY 02 2002

BRUCE S. ANDERSON, Ph.D., R.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
01-084/cpo

April 30, 2002

Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Draft Environmental Assessment (DEA)
Diamond Head Water System Improvements Project
Tax Map Key: 2-7-036; 3-1-012 to 019, 024 and 025.

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments

Clean Air Branch (CAB)

As indicated in the report, construction activities would occur in close proximity to existing residential and commercial establishments. Provided that the mitigative measures proposed in the report are adequate for compliance with Hawaii Administrative Rules §11-60.1-33 on Fugitive Dust, the Clean Air Branch has no further comments.

If you have any questions on fugitive dust issues, please contact Mr. Timothy Carvalho of the Clean Air Branch at (808) 586-4200.

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

c: CAB
NRIAQ

KIMURA INTERNATIONAL

June 5, 2002

Mr. Gary Gill, Deputy Director
Environmental Health Administration
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Gill:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Letter dated April 30, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

In response to your comments dated April 30, 2002, the Board of Water Supply currently requires all construction work to comply with dust and noise limits set forth by the State Department of Health.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8468 • Fax (808) 941-8899

BENJAMIN J. CAYETANO
GOVERNOR

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

GENEVIEVE SALMONSON
DIRECTOR

APR 27 2002

April 25, 2002

Mr. Clifford Jamile, Manager and Chief Engineer
Board of Water Supply, City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Jamile:

Subject: Draft EA for the Diamond Head Water System Improvements Project, Oahu

Thank you for the opportunity to review the subject document. We do not have any comments. Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

c: Kimura International Inc

BOARD OF WATER SUPPLY

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

RECEIVED
MAY 24 2002

May 21, 2002

JEREMY HARRIS, Mayor
EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
JAN ALL Y. AHE
HERBERT S.K. KAOPUA, SR.
BRIAN K. MINAI, Ex-Officio
ROSS S. SASAMURA, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

COPY

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

Dear Ms. Salmonson:

Subject: Your Letter of April 25, 2002 Regarding the Draft Environmental Assessment for the Diamond Head Water System Improvements Project

Thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We acknowledge that you have no comments on this project.

If you have any questions, please contact Scot Muraoka at 527-5221.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Glenn Kimura, Kimura International, Inc.

Pure Water . . . our greatest need - use it wisely

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4384 FAX: (808) 523-4567

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
DIRECTOR
ERIC E. CRISPIN, AIA
DEPUTY DIRECTOR
GEORGE TAMAMOTO, P.E.
ASSISTANT DIRECTOR

CDEP 01-0129

May 8, 2002

MEMORANDUM

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASESSMENT (DEA)
DIAMOND HEAD WATER SYSTEM IMPROVEMENTS (KAPAHULU AVENUE: KANAINA AVENUE TO DIAMOND HEAD BOOSTER PUMP, HERBERT STREET TO CAMPBELL AVENUE, CAMPBELL AVENUE, TMK: 2-7-26; 2-1-12 TO 19, 24 AND 25

We have reviewed the DEA and have the following comments:

Civil Division:

1. Page 7, Section 2.3 Technical Description of the Project, 4th Paragraph, 3rd Sentence

   A minimum cover of three feet is mentioned. However, on page 17, Potential Impacts and Mitigation Measures, the maximum cover is two feet. Also, on page 12, the depth of excavation is expected to be 4.5 feet which makes maintaining a 3-foot cover for a 24-inch line difficult. Please clarify.

2. Page 11, Section 3.1.1 Geology and Topography, 3rd Paragraph, 1st Sentence

   The word "fat" in describing the clay fill appears to be error.

3. Page 29, Section 3.5 Public Utilities, Drainage System

We recommend the paragraph should be rewritten. The drain lines within the project site empty into the Ala Wai Canal through various drain systems.

4. Page 37, Section 5.3 Alternative Alignments, Paragraph 2

   In the second sentence, substitute "infeasible" for "impossible". The last sentence refers to a proposed 8-inch water line. Is this another project?

If there are any questions, please contact Gregory Sue at 527-6304

Wastewater Division:

1. The proposed water main and line may affect the existing sewer lines along the project alignment. Plans and specifications to the proposed project should be submitted to the Wastewater Division for review.

2. These comments are directed toward Section 2.1 Project Description and Location on page 3.

   The new 24-inch water main is approximately 3600 linear feet. It is our understanding in our discussion with the consultant engineer that the 24-inch water transmission main is a bypass line and not a replacement. What is planned for the existing 24-inch water main? Concern is that if the existing 24-inch water main is abandoned-in-place, any utility improvements, such as sewer line replacement/rehabilitation, will be affected by this large water main along the utility corridor. Please clarify which lines are to be abandoned-in-place. Consider showing existing and new pipe alignment on a site map.

If there are any questions, please contact Richard Leong of our Planning Branch at 527-5863.

GS:dk

KIMURA INTERNATIONAL

June 27, 2002

Ms. Rae M. Loui, P.E., Director
City and County of Honolulu
Department of Design and Construction
650 S. King Street
Honolulu, Hawaii 96813

Dear Ms. Loui:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated May 8, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We have received a copy of your memorandum to BWS dated May 8, 2002, and have the following response to your comments:

Civil Division

1. The minimum soil cover will be three feet, but may be deeper in some areas. The reference on Page 17 to two feet will be corrected. Regarding the discussion on Page 12, excavation for a 24-inch line will be deep enough to maintain a three-foot cover.

2. The reference to "fat clay fill" is from the Geotechnical Letter Report (Pacific Geotechnical Engineers, Inc., January 2002).

3. The discussion on drainage on Page 29, Section 3.5 will be corrected to state that the drain lines within the project site empty into the Ala Wai Canal.

4. On page 37, Section 5.3, the word "infeasible" will be substituted for "impossible." The proposed 8-inch water line referred to in the last sentence is now a part of this project.

Wastewater Division

1. The contractor will submit plans and specifications to the Wastewater Division for review.

1630 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 941-8845 • Fax (808) 941-8999

2. The existing 24-inch water main will be abandoned in-place. The Final EA will include a graphic showing existing and new pipe alignments.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

DEPARTMENT
MAY 24 2002
RECEIVED

JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K. C. CHEE
DEPUTY DIRECTOR

2002/ELOG-953 (TH)

May 24, 2002

TO: CLIFFORD JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: RANDALL K. FUJIKI, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIKIKI WATER SYSTEM IMPROVEMENTS (KAPAHULU AVENUE: KANAINA AVENUE TO DIAMOND HEAD BOOSTER PUMP, HERBERT STREET TO CAMPBELL AVENUE, CAMPBELL AVENUE TO KAUNAOA STREET), HONOLULU, TAX MAP KEY: 2-7-36: 3-1-12 TO 19, 24 AND 25

We have reviewed the Draft Environmental Assessment (DEA) and offer the following comments.

1. Though the proposed project does not run through any planned projects identified on the Primary Urban Center DP Public Facilities Map, there is a publicly funded "government building" symbol (Ordinance 87-12) on property (TMK 2-7-36:004) adjacent to the Board of Water Supply's (BWS) Diamond Head Booster Pump Station. The symbol was requested by the city's Department of Transportation Services (DTS) for a neighborhood parking facility and placed on our Primary Urban Center DP Public Facilities Map in 1987. You may want to consult with DTS on whether they still intend to pursue this project.

   The Waikiki/Kapahulu/Diamond Head Vision Team No. 17 selected the parcel next to the Diamond Head Booster Pump Station (TMK: 2-7-36: 004) for a future Kapahulu Community Center. Selection of this parcel and its proposed use are discussed in Section 4.3 of the "Kapahulu Community Plan" prepared for the Department of Design and Construction in February 2001 by Plan Pacific, Inc.

   Section 4.3.4 of the Kapahulu Community Plan also proposes crosswalk and sidewalk improvements that involve portions of Kapahulu and Campbell Avenues. For instance, raised or special-pavement crosswalks and pedestrian-level lighting are proposed on

Kapahulu Avenue at the intersection with Campbell Avenue. Also, street trees are proposed along both sides of Campbell Avenue from Kapahulu Avenue to Brokaw Street.

We recommend that Section 4 of the final EA include a brief discussion about the Kapahulu Community Plan. Although development of a future community center and other improvements are not imminent, the final EA should discuss whether the proposed water system improvements could potentially impact any of the community's proposed projects.

2. The Diamond Head Booster Pump Station and the adjacent parcel (TMK: 2-7-36: 004), are currently designated "Public and Quasi-Public" on the Primary Urban Center DP Land Use Map. Therefore, Figure 8 in the final EA should be revised to identify these parcels as "PP."

3. In July 2001, we reviewed the BWS' Draft Six Year Capital Improvement Program Budget. In our July 25, 2001 memorandum to the BWS, the proposed project was identified as needing a DP Public Facilities Map amendment because it would increase system capacity. However, Section 2.2 of the DEA states that the proposed project is needed to improve system operation and reliability of water transmission to East Honolulu. After discussing the proposed project with BWS staff while reviewing this DEA, we have determined that the proposed improvements will not increase system capacity or accommodate new growth. Therefore, we reverse our earlier decision and conclude that the proposed project will not need a DP Public Facilities Map amendment.

4. The municipal wastewater system is not included in Section 3.5 (Public Utilities). Wastewater lines are located throughout the proposed project's route and will need to be identified along with the project's potential impacts on existing sewer lines and laterals in the final EA.

5. Section 4.3 of the DEA does not include a discussion about the relevance of the city's General Plan. Normally, the section of an EA that discusses "Land Use Plans, Policies and Controls" should contain a brief discussion about how the proposed project would conform to the General Plan. As such, we recommend that the final EA include a brief discussion about the General Plan, and which objectives and policies would be furthered by the proposed project.

6. Construction plans for all work within or affecting public streets should be submitted to our Traffic Review Branch (TRB) for review and comment. Traffic Control Plans (TCP) should be submitted to the TRB for review and approval. The TCPs should be scaled drawings and prepared by a licensed engineer.

Due to the project's potential to impact traffic, a construction phasing plan should be prepared to establish the intended sequencing and increments of work. This phasing plan should be used to identify the work area, or lane closures needed for each increment, and the TCPs should be prepared accordingly. Extended lane closures on Kapahulu Avenue and Campbell Avenue should be minimized.

For the duration of the construction phase, we recommend that the contractor be available at the Diamond Head/Kapahulu/Saint Louis Heights Neighborhood Board No. 5 meetings to provide progress reports/schedules and to answer questions.

7. The EA should include a location of the Diamond Head 180 Reservoir discussed in Section 2.2 and the transmission line connection to the proposed project.

Thank you for the opportunity to comment on this matter, should you have any questions, please contact Tim Hata of our staff at 527-6070

RKF:js

cc: Office of Environmental Quality Control
Mr. Glenn Kimura, Kimura International, Inc.

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KIMURA INTERNATIONAL

June 21, 2002

Mr. Randall K. Fujiki, AIA, Director
City and County of Honolulu
Department of Planning and Permitting
650 S. King Street
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated May 24, 2002
2002/ELOG-953 (TH)

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We have received a copy of your memorandum to BWS dated May 24, 2002 and have the following response to your comments:

1. The "government building" symbol which is adjacent to the Board of Water Supply's Diamond Head Booster Pumping Station of the Primary Urban Center DP Public Facilities Map will be coordinated with the Department of Transportation Services.

   Section 4 of the final EA will include a brief discussion about the Kapahulu Community Plan.

2. Figure 8 will be revised to identify the Diamond Head Booster Pump Station and the adjacent parcel as "PF."

3. The EA will be revised to include a statement that the project will not require a DP Public Facilities Map amendment.

4. Section 3.5 will be revised to include a discussion of the municipal wastewater system. A graphic will be added to show existing sewer lines in the area.

5. Section 4.3 will be revised to include a brief discussion about the city's General Plan, and how the General Plan objectives will be furthered by the project.

6. Construction plans will be submitted to the Traffic Review Branch for review and comment. The construction contractor will prepare and submit a Traffic Control Plan for review and approval. This plan will include a construction phasing plan.

1600 Kapiolani Blvd., Suite 1612
Honolulu, Hawaii 96814
Tel (808) 944-8645 • Fax (808) 941-0799

The Board of Water Supply and/or contractor will be available to provide project updates at the neighborhood board meetings as requested by the neighborhood board.

7. Figure 1, which shows the location of the Diamond Head 180 reservoir, will be revised to show the transmission line connection to the proposed project.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4525 • FAX: (808) 523-4730 • INTERNET: www.co.honolulu.hi.us

RECEIVED
MAY 08 2002

JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

GEORGE "KEALI'I" MYAMOTO
DEPUTY DIRECTOR

May 5, 2002

TPD02-00238
TP4/02-01362

MEMORANDUM

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: DIAMOND HEAD WATER SYSTEM IMPROVEMENTS

In response to the April 4, 2001 letter from Kimura International, Inc., we reviewed the draft environmental assessment for the subject project. The following comments are the result of this review:

1. The last sentence on Page 8 should be corrected to state that the Traffic Control Plan would be submitted for approval to the Department of Planning and Permitting rather than to this department.

2. The contractor shall notify this department and Oahu Transit Services, Inc. – Paratransit Services, Art Loebl (454-5080) or John Black (454-5041), two weeks prior to any road construction, of the location, scope of work and proposed closure of any street or traffic lanes. This would facilitate the awareness (and any operational adjustments) of construction activities for transit operations.

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation Planning Division at Local 6976.

Cheryl D. Soon
CHERYL D. SOON

cc: Ms. Genevieve Salmonson, Office of Environmental Quality Control
Mr. Glenn Kimura, Kimura International, Inc.

KIMURA INTERNATIONAL

June 5, 2002

Ms. Cheryl D. Soon, Director
City and County of Honolulu
Department of Transportation Services
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

Dear Ms. Soon:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated May 5, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We have received a copy of your memorandum to BWS dated May 5, 2002 and have the following response to your comments:

1. The last sentence on Page 8 will be corrected to state that the Traffic Control Plan will be submitted for approval to the Department of Planning and Permitting, rather than to the DTS.

2. The contractor will notify DTS and Oahu Transit Services, Inc.-Paratransit Services two weeks prior to any road construction, providing information on the location, scope of work and proposed closure of any street or traffic lanes.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8993

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 309, KAPOLEI, HAWAII 96707
PHONE: (808) 692-5601 • FAX: 692-5131 • INTERNET: www.co.honolulu.hi.us

RECEIVED
MAY 01 2002
BOARD OF WATER SUPPLY

JEREMY HARRIS
MAYOR

WILLIAM D. BALFOUR, JR.
DIRECTOR

EDWARD T. "BUMPY" DIAZ
DEPUTY DIRECTOR

April 26, 2002

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTENTION: SCOT MURAOKA

FROM: WILLIAM D. BALFOUR, JR., DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
DIAMOND HEAD WATER SYSTEM IMPROVEMENTS
(KAPAHULU AVENUE: KANAINA AVENUE TO DIAMOND HEAD BOOSTER PUMP, HERBERT STREET TO CAMPBELL AVENUE, CAMPBELL AVENUE TO KAUNAOA STREET)

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to the Diamond Head Water System Improvements.

The Department of Parks and Recreation has no comment on this project.

Should you have any questions, please contact Mr. John Reid, Planner, at 692-5454.

W. D. Balfour Jr.

WILLIAM D. BALFOUR, JR.
Director

WDB:cu (10351)

cc: ✓Mr. Glenn Kimura, Kimura International, Inc.
Office of Environmental Quality Control
Mr. Don Griffin, Department of Design and Construction

MAY 01 2002

KIMURA INTERNATIONAL

'02 APR -9 P3:32

DEPT. OF PARKS
& RECREATION
C & C OF HONOLULU

April 4, 2001

Mr. William Balfour, Jr., Director
Dept. of Parks & Recreation
650 South King Street
Honolulu, HI 96813

Dear Mr. Balfour:

Attached for your review is a Draft Environmental Assessment (DEA) that was prepared pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative rules, Title 11, Chapter 200).

Title of the Project: Diamond Head Water System Improvements (Kapahulu Avenue Keanuu Ave. to Diamond Head Booster Pump, Herbert Street to Campbell Ave., Campbell Ave. to Keanuu Street)
Location: Oahu, Honolulu District
Tax Map Key Numbers: 2-7-36; 3-1-12 to 19, 24 and 25
Agency Action: __X__ Applicant Action: _____

Your comments must be received or postmarked by May 8, 2002 (30-day comment period)

Please send original comments to the:

Applicant: Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843
Contact: Scot Muraoka Phone: 527-5221

Copies of the comments should be sent to OEQC and the following:

Consultant: Kimura International, Inc
1600 Kapiolani Boulevard, Suite 1616
Honolulu, HI 96814
Contact: Glenn Kimura Phone: 944-8848

If you no longer need this EA, please recycle it. Thank you for your participation in the environmental review process.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn Kimura

1600 Kapiolani Blvd., Suite 1616
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-9599

BOARD OF WATER SUPPLY

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

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STEO, Vice-Chairman
JAN M.L.Y. AHN
HERBERT S.K. KAOPUA, SR

BRIAN K. MINAAI, Ex-Officio
ROSS S. SASAMURA, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

May 10, 2002

MAY 13 2002

TO: WILLIAM D. BALFOUR, JR., DIRECTOR
DEPARTMENT OF PARKS AND RECREATION

FROM: CLIFFORD S. JAMILE

SUBJECT: YOUR MEMORANDUM OF APRIL 26, 2002 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR THE DIAMOND HEAD WATER SYSTEM IMPROVEMENTS PROJECT

Thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We acknowledge that you have no comments on this project.

If you have any questions, please contact Scot Muraoka at 527-5221.

pc: Glenn Kimura, Kimura International, Inc.

SM:js

May-29-02 08:52am From-DEPARTMENT OF FACILITY MAINTENANCE 808-527-5857 T-738 P 01/01 F-265

02-0637
TO: PKD

RECEIVED
DEPARTMENT OF
FACILITY MAINTENANCE
MAY 9 2 23 PM '02

KIMURA INTERNATIONAL

April 4, 2001

Mr. Ross Sasamura, PE, Director
Dept. of Facility Maintenance
650 South King Street
Honolulu, HI 96813

Dear Mr. Sasamura:

Attached for your review is a Draft Environmental Assessment (DEA) that was prepared pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative rules, Title 11, Chapter 200).

Title of the Project: Diamond Head Water System Improvements (Kapahulu Avenue, Kanaina Ave. to Diamond Head Booster Pump, Herbert Street to Campbell Ave., Campbell Ave. to Kamaaoa Street)
Location: Oahu, Honolulu District
Tax Map Key Numbers: 2-7-36, 3-1-12 to 19, 24 and 25
Agency Action: __X__ Applicant Action: _____

Your comments must be received or postmarked by May 8, 2002 (30-day comment period)

Please send original comments to the:

Applicant: Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843
Contact: Scot Muraoka Phone: 527-5221

Copies of the comments should be sent to OEQC and the following:

Consultant: Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814
Contact: Glenn Kimura Phone: 944-8848

If you no longer need this EA, please recycle it. Thank you for your participation in the environmental review process.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn Kimura

April 24, 2002
We do not have any comments. If you have any questions, please call Laverne Higa at 527-6246.

ROSS S. SASAMURA, Director and Chief Engineer
Department of Facility Maintenance

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8948

KIMURA INTERNATIONAL

June 5, 2002

Mr. Ross Sasamura, P.E., Director
Department of Facility Maintenance
650 S. King Street
Honolulu, Hawaii 96813

Dear Mr. Sasamura:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated April 24, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project. We have received a copy of your memorandum to BWS dated April 24, 2002, and acknowledge that you have no comments on this project.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8948

FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

RECEIVED APR 23 2002

April 18, 2002

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
DIAMOND HEAD WATER SYSTEM IMPROVEMENTS
TAX MAP KEYS: 2-7-36; 3-1-12 TO 19, 24, AND 25

We received a letter from Mr. Glenn Kimura of Kimura International, Inc., dated April 4, 2002, requesting our comments for the above-mentioned project.

The Honolulu Fire Department requests that the following be complied with:

1. Maintain fire apparatus access throughout the construction site for the duration of the project.

2. Notify the Fire Communication Center (523-4411) of any interruption in the existing fire hydrant system during the project.

Should you have any questions, please call Battalion Chief Kenneth Silva of our Fire Prevention Bureau at 831-7778.

ATTILIO K. LEONARDI
Fire Chief

AKL/DL:jl

cc: Office of Environmental Quality Control
Glenn Kimura, Kimura International, Inc.

BOARD OF WATER SUPPLY

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

RECEIVED MAY 24 2002

May 22, 2002

COPY

TO: ATTILIO K. LEONARDI, FIRE CHIEF
FIRE DEPARTMENT

FROM: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR MEMORANDUM OF APRIL 18, 2002 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR THE DIAMOND HEAD WATER SYSTEM IMPROVEMENTS PROJECT

Thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We acknowledge that fire apparatus access is required to be maintained throughout the construction site for the duration of the project. In addition, we note that the Fire Communication Center is required to be notified of any interruption in the existing fire hydrant system during the project.

If you have any questions, please contact Scot Muraoka at 527-5221.

cc: Glenn Kimura, Kimura International, Inc.

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 • AREA CODE (808) 529-3111
http://www.honolulupd.org
www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

ROBERT AU
GLEN KAJIYAMA
DEPUTY CHIEFS

OUR REFERENCE CS-KP

May 2, 2002

RECEIVED
MAY 08 2002
BOARD OF WATER SUPPLY

TO: CLIFFORD S. JAMILE, DIRECTOR
BOARD OF WATER SUPPLY

ATTENTION: SCOT MURAOKA

FROM: LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
DIAMOND HEAD WATER SYSTEM IMPROVEMENTS
TAX MAP KEY NUMBERS: 2-7-36; 3-1-12 TO 19, 24, AND 25

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

Complaints relative to construction-related dust and noise are likely to have a negative impact on calls for service to the area.

Further, we are concerned that vehicular and pedestrian traffic flow will be impeded and will generate complaint calls which will also have a negative impact on police services. We have noted that the contractor will be required to prepare a traffic control plan to mitigate impacts. We would, therefore, like to recommend that the contractor call Captain Marie McCauley of District 7 at 529-3362 so that this plan can be coordinated with police operations.

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

LEE D. DONOHUE
Chief of Police

By
KARL GODSEY
Assistant Chief of Police
Support Services Bureau

cc: OEQC
Mr. Glenn Kimura, Kimura International, Inc.

Serving and Protecting with Aloha

KIMURA INTERNATIONAL

HONOLULU POLICE DEPT.
CHIEF'S OFFICE
02 APR -9 11 28

April 4, 2001

Lee D. Donohue, Chief
Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

Dear Chief Donohue:

Attached for your review is a Draft Environmental Assessment (DEA) that was prepared pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative rules, Title 11, Chapter 200).

Title of the Project: Diamond Head Water System Improvements (Kapahulu Avenue: Kanaina Ave. to Diamond Head Booster Pump, Herbert Street to Campbell Ave., Campbell Ave. to Kamaoa Street)
Location: Oahu, Honolulu District
Tax Map Key Numbers: 2-7-36; 3-1-12 to 19, 24 and 25
Agency Action: __X__ **Applicant Action:** _____

Your comments must be received or postmarked by **May 8, 2002** (30-day comment period)

Please send original comments to the:

Applicant: Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843
Contact: Scot Muraoka **Phone:** 527-5221

Copies of the comments should be sent to OEQC and the following:

Consultant: Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814
Contact: Glenn Kimura **Phone:** 944-8848

If you no longer need this EA, please recycle it. Thank you for your participation in the environmental review process.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn Kimura

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-5999

KIMURA INTERNATIONAL

June 5, 2002

Chief Lee D. Donohue
Honolulu Police Department
801 S. Beretania Street
Honolulu, Hawaii 96813

Dear Chief Donohue:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated May 2, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We have received a copy of your memorandum to BWS dated May 2, 2002 and have the following response to your comments:

1. The Board of Water Supply currently requires all construction work to comply with dust and noise limits set forth by the State Department of Health.

2. Temporary traffic impacts during construction will be mitigated through an approved traffic control plan prepared by the construction contractor.

3. The construction contractor will contact Captain Marie McCauley of District 7 to ensure adequate coordination with the Police Department for the duration of the project.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8899

Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001

GEN-6 (EIS/EA)

RECEIVED
JUN 13 2002

June 7, 2002

Mr. Scot Nakamura
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Nakamura:

Re: Diamond Head Water System Improvements

Thank you for the opportunity to comment on the March 2002 draft EA for the Diamond Head Water System Improvements at Kapahulu, as proposed by the Board of Water Supply, City and County of Honolulu. We have reviewed the subject document and have no comments at this time.

HECO reserves the opportunity to further comment on 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,

Kirk S. Tomita
Senior Environmental Scientist

cc: OEQC
Mr. Glenn Kimura
(Kimura Int'l, Inc.)

WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP

KIMURA INTERNATIONAL

June 14, 2002

Mr. Kirk S. Tomita
Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Mr. Tomita:

Subject: **Board of Water Supply, Diamond Head Water System Improvements**
Draft Environmental Assessment
Your Comments dated June 7, 2002

On behalf of the Board of Water Supply, we thank you for reviewing the Draft Environmental Assessment for the proposed Diamond Head Water System Improvements project.

We have received a copy of your letter to BWS dated June 7, 2002 and acknowledge that you have no comments at this time.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,

KIMURA INTERNATIONAL, Inc.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1612
Honolulu, Hawaii 96814
Tel (808) 944-8040 • Fax (808) 941-0990

APPENDIX

Letter from Department of Land & Natural Resources,
Historic Preservation Division, December 24, 2001

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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

December 24, 2001

LOG NO: 28861 ✓
DOC NO: 0112EJ31

Ms. Nancy Nishikawa
Kimura International
1600 Kapiolani Blvd. Suite 1610
Honolulu, Hawaii 96814

Dear Ms. Nishikawa:

SUBJECT: **Chapter 6E-8 Historic Preservation Review – Diamond Head Water System Improvements in the Kapahulu Area, Honolulu, O`ahu**
Kapahulu, Kona, O`ahu
TMK: 2-7-036; 3-1-012 to 019, 22, 24; 3-1-043

Thank you for the opportunity to provide comment during the preparation of an environmental assessment for water line improvements in the Kapahulu area. The BWS is proposing to install a 24-inch water transmission main and to replace a 6-inch water line with an 8-inch line. All construction will occur within the public right of way along Kapahulu Avenue, Campbell Avenue and Kaunaoa Street.

A review of our records shows that there are no known surface or subsurface historic sites within the project corridor. The project area is underlain by soils of terrigenous origin and it is unlikely that the proposed work corridors – within existing roadways –s till contain significant historic sites. We therefore believe that the water system improvements will have "no effect" on significant historic sits. As a precaution, we recommend that the following construction note be added to all plans prepared for these undertakings.

> Should historic remains such as artifacts, burials, trash pits with bottles, or concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

Should you have any questions, please feel free to contact Elaine Jourdane at 692-8027 or Sara Collins at 692-8026.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

EJ:amk