

BOARD OF WATER SUPPLY

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



June 1, 2004

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CLIFFORD S. JAMILE
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

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OFFICE OF ENVIRONMENTAL QUALITY CONTROL

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

Dear Ms. Salmonson:

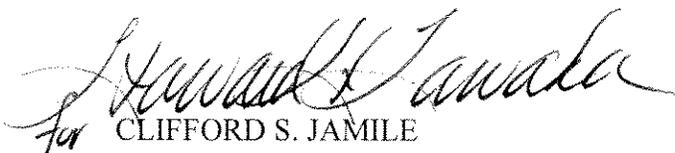
Subject: Finding Of No Significant Impact (FONSI) for the Board of Water Supply's Proposed
Kalaeloa Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii,
TMK:9-1-13, 16, 32 & 75

The Honolulu Board of Water Supply has reviewed the comments received during the 30-day public comment period which began on January 8, 2004. The agency has determined that this project will not have significant environmental effects, and has issued a FONSI. Please publish this notice in the June 23, 2004 OEQC Environmental Notice. Enclosed are the following items:

- Four copies of the FONSI
- The completed OEQC Publication form

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,


for CLIFFORD S. JAMILE
Manager and Chief Engineer

Enclosures

cc: J. DuBois (KFC Engineering Management)

2004-06-23 FONSI
KALAELOA REDEVELOPMENT AREA
TRANSMISSION MAINS

JUN 23 2004
FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

Kalaeloa Redevelopment Area
Transmission Mains

TMK: 9-1-13, 16, 32 & 75

Proposing Agency:

**BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 South Beretania Street
Honolulu, Hawaii 96843**

Prepared by:

KFC Engineering Management, Inc.

PROJECT MANAGEMENT CONSULTANTS * ARCHITECTURAL/ENGINEERING DESIGN * CONSTRUCTION MANAGEMENT
3375 KOAPAKA ST., SUITE F220-50, HONOLULU, HI 96818 PHONE (808) 836-7787 FAX (808) 834-4833

June 2004

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CHAPTER 1 - INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

The purpose of a Draft Environmental Assessment (DEA) is to address all potential environmental impacts, which may result from the construction of the proposed project, and to identify mitigation measures to minimize any effects identified. Following the public review of the DEA for the Kalaeloa Redevelopment Area Transmission Mains, public comments and agency responses were incorporated into this document - the Final Environmental Assessment (EA).

1.2 BACKGROUND

Upon the July 1, 1999 closure of the Barber's Point Naval Air Station (BPNAS), over 2,000 acres of land were declared surplus to the Federal Government's needs and were conveyed to various other Federal, State and city entities and renamed the "Kalaeloa Community Development District (KCDD)." As part of the conveyance, the City and County of Honolulu Board of Water Supply (BWS) assumed responsibility for operating, maintaining and repairing the water system serving the released areas of the former BPNAS. The released area water system infrastructure (pipes, fire hydrants, valves, etc.) remains the property of the Department of the Navy, and the water for the system is currently provided from their Barbers Point Shaft. The BWS is proposing to construct two (2) 16-inch transmission mains into Kalaeloa to interconnect the existing system with the BWS system, thereby relieving the Navy of the need to supply water to outside agencies.

1.3 OBJECTIVES

The BWS is responsible for the management, operation and distribution of Oahu's municipal water system. To fulfill this responsibility, the BWS has the following objectives for this project:

- To ensure reliable water service to KCDD by integrating the existing network with that of the BWS;
- To eliminate KCDD reliance on the Navy owned water supply; and
- To minimize project construction impact on KCDD.

1.4 DESCRIPTION OF THE PROPOSED PROJECT

The BWS is proposing to construct two (2) 16-inch transmission mains to interconnect the existing Kalaeloa water system with the BWS system. The project is made up of two segments, with one segment (Alignment #1) located in Kalaeloa near Kapolei and the second segment (Alignment #2) located in Campbell Industrial Park (see Figure 1-1). The first section will be constructed fully within existing public roads, along Fort Barrette Road and Enterprise Avenue, from Kapolei Parkway to Saratoga Avenue (approx. 3,850 linear feet). The second section will be constructed within public roads, roads belonging to the U.S. Navy and private land belonging to the Estate of James Campbell. This alignment will run along Malakole Street from Komohana Street to Saratoga Avenue/West Perimeter Road, then south along West Perimeter Road to Lake Champlain Street, then 400 feet east on Lake Champlain Street (approx. 4,000 linear feet). The total project is 7,850 linear feet.

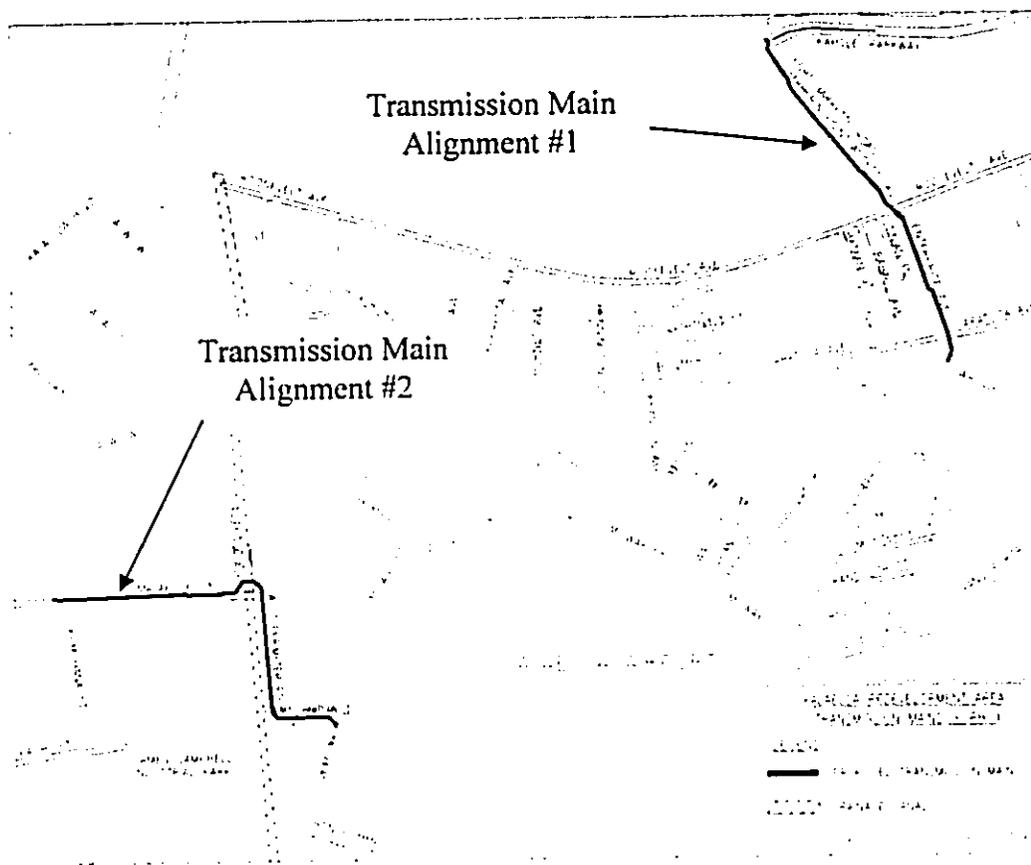


FIGURE 1-1- PROPOSED TRANSMISSION MAINS

CHAPTER 1 - INTRODUCTION

1.5 PERMITTING

The following agencies may require notification or permits:

- Federal Aviation Administration (Notice of proposed construction or alteration);
- State of Hawaii Department of Health (Water quality certification, NPDES permit for discharge of storm water associated with construction activity, NPDES permit authorizing discharge of hydro-testing waters, community noise permit for construction activities, noise variance for night work);
- State of Hawaii Department of Transportation (Street usage permit, Discharge permit, plan approval);
- City and County of Honolulu Department of Design and Construction (Construction plan approval);
- City and County of Honolulu Department of Environmental Services (Construction plan approval);
- City and County of Honolulu Department of Planning and Permitting (Trenching permit, construction plan approval, traffic control plan approval, subdivision application to create easements);
- City and County of Honolulu Department of Transportation Services (Street usage permit);
- U.S. Department of the Navy (Pacific Division), Public Works Center (coordination with Navy retained utilities and properties).

The project site is not located in a Special Management Area or Conservation District.

1.6 SUMMARY OF POTENTIAL IMPACTS AND MITIGATION MEASURES

Topography

This project consists solely of underground construction, and will have no effect on surface topography.

Geology & Soils

The removal of existing protective vegetation during trenching operations may cause a short term increase to localized erosion, however, due to the arid nature of the project area, this impact will be negligible. The contractor will be required to submit and follow a "Best Management Practices" plan to the Department of Health, and comply with the "Best Management Practices Manual for Construction Sites in Honolulu" as prepared by the City and County of Honolulu Department of Environmental Services.

CHAPTER 1 - INTRODUCTION

Ground Water Quality and Resources

No impact due to construction activity is expected.

Air Quality

Short-term impacts to the air quality include the possibility of construction equipment emissions and fugitive dust from trench excavation. The contractor will be required to comply with all Department of Health regulations.

Archeological, Historical & Cultural Sites

No anticipated impact is expected on archeological, historical or cultural sites. Several surveys have been completed in this area, and no known sites were found within the limits of this project.

Botanical Resources

No adverse impacts are expected. A botanical survey was conducted, and no endangered plants were found in the project area.

Infrastructure

With the exception of the section along Fort Barrette Road, the transmission main alignments cross very few existing utilities. Where it does encounter existing utilities, coordination during the planning and design phases will minimize adverse impacts. During the construction phase, the contractor will be responsible for the protection of existing utilities, and will be liable for any damages.

Regional Impact

Short term regional impacts include increased traffic, dust and noise during construction (see mitigation measures proposed in individual sections). Long-term impacts include relief of dependence on the Navy water supply, and improved water system reliability due to upgraded infrastructure.

Noise

Construction equipment and methods will generate a short-term negative noise impact. The contractor will be required to comply with all Department of Health regulations. A Community Noise Permit for Construction Activities will be obtained by the Contractor, and if night work is approved, a noise variance will also be obtained by the Contractor.

CHAPTER 1 - INTRODUCTION

Traffic

The traffic impact will be minimal during the work period within Campbell Industrial Park. Traffic may be heavily impacted along Fort Barrette Road between Kapolei Parkway and the Kalaeloa entrance, and may include temporary lane detours and increased traffic congestion. Mitigation measures will include an approved traffic control plan, scheduling construction to avoid peak traffic hours, and the possibility of night work.

Land Use & Ownership

As transmission mains are considered a principal land use in all zoning districts, no land use change is needed. Easements will be required from one private and one public landowner: the Estate of James Campbell and the United States Government - Department of the Navy. The transmission main alignment will be coordinated with the affected landowners to minimize negative impacts on future development.

1.7 ALTERNATIVES CONSIDERED

Due to the limited possible points of connection between the existing Kalaeloa system and the existing BWS system, the only alternative considered was the "no action" alternative.

The "no action" alternative to the proposed action would maintain a status quo for the existing water system, i.e. the existing Kalaeloa System would continue to be supplied by the Navy water supply system. There are several deficiencies in the existing system:

- It is over 50 years old;
- Is of unknown condition;
- The water is fluorinated;
- The water is chlorinated to levels above those considered acceptable by the City and County of Honolulu, and
- May be unable to continue providing service due to other Navy requirements.

As the impacts from the construction of the proposed transmission mains will be minimal, the "no action" alternative is rejected.

CHAPTER 2 - PROJECT DESCRIPTION

2.1 PROJECT PURPOSE AND NEED

On July 1, 1999, the Barbers Point Naval Air Station (BPNAS) was closed and the Navy released portions of the land to various Federal, State and city agencies. The BWS had intended to assume control of the existing Navy water system, however, due to the age of the system, and its non-conformance with the BWS infrastructure standards, the BWS declined complete ownership. Currently, under the License for Nonfederal Use of Real Property, the BWS is only responsible for operating, maintaining and repairing the water system serving the released areas of the former BPNAS. The released area water system infrastructure (pipes, fire hydrants, valves, etc.) remains the property of the Department of the Navy. Under the license, BWS is also responsible for billing and providing water service to the end-users, which includes the areas to which the Navy retained ownership. The Navy agreed to provide water to released area end-users via BWS from their Barbers Point Shaft. In return, BWS will return a like amount of water to the Navy to feed the Coast Guard's Kiai Kai Housing above Red Hill.

If BWS does not connect the released area water system to its surrounding water systems in the Leeward area, any increase in water demand in the released area will be limited by the capacity of the Navy's Barbers Point Shaft. The continued outside dependence on the shaft as a water source may impact the Navy's ability to serve its other needs, and ultimately, lead to a shortage for non-Navy users.

2.2 DESCRIPTION OF THE PROPOSED ACTION

The Navy-owned water system is serviced by a pressure system at an approximate elevation of 215-feet. This system is comprised of a deep well pumping station, a chlorination treatment facility, two underground storage reservoirs and a transmission system extending from Farrington Highway to Kalaeloa. The pump station consists of two deep well turbine pumps with a combined capacity of 6,000 gallons per minute. The water from this well is chlorinated and fluoridated at the pumps, prior to transmission to the storage reservoirs.

The primary transmission main, which carries water from the reservoirs to Kalaeloa, consists of 24-inch cast iron and ductile iron pipes (a map of the existing water system is provided on Figure 2-1.) The pipeline is located within an easement along Farrington Highway as well as along the eastern boundary of the Villages of Kapolei. The segment along the Villages of Kapolei was constructed in 1991 as a water line relocation project and is constructed to BWS standards. A 12-inch water line along Geiger Road serves as a secondary supply source, and an emergency connection between the 12-inch Navy line and the BWS water system exists at

CHAPTER 2 - PROJECT DESCRIPTION

the intersection of Fort Weaver Road and Geiger Road. With the exception of this connection, the Navy water system operates independently of the regional BWS water system.

The regional BWS water system consists of 30-inch and 36-inch transmission mains along Farrington Highway connecting a series of 215-foot and 228-foot reservoirs. The existing system is estimated to be adequate in supplying water to the proposed UH West Oahu campus, East Kapolei, and NAS Barbers Point developments.

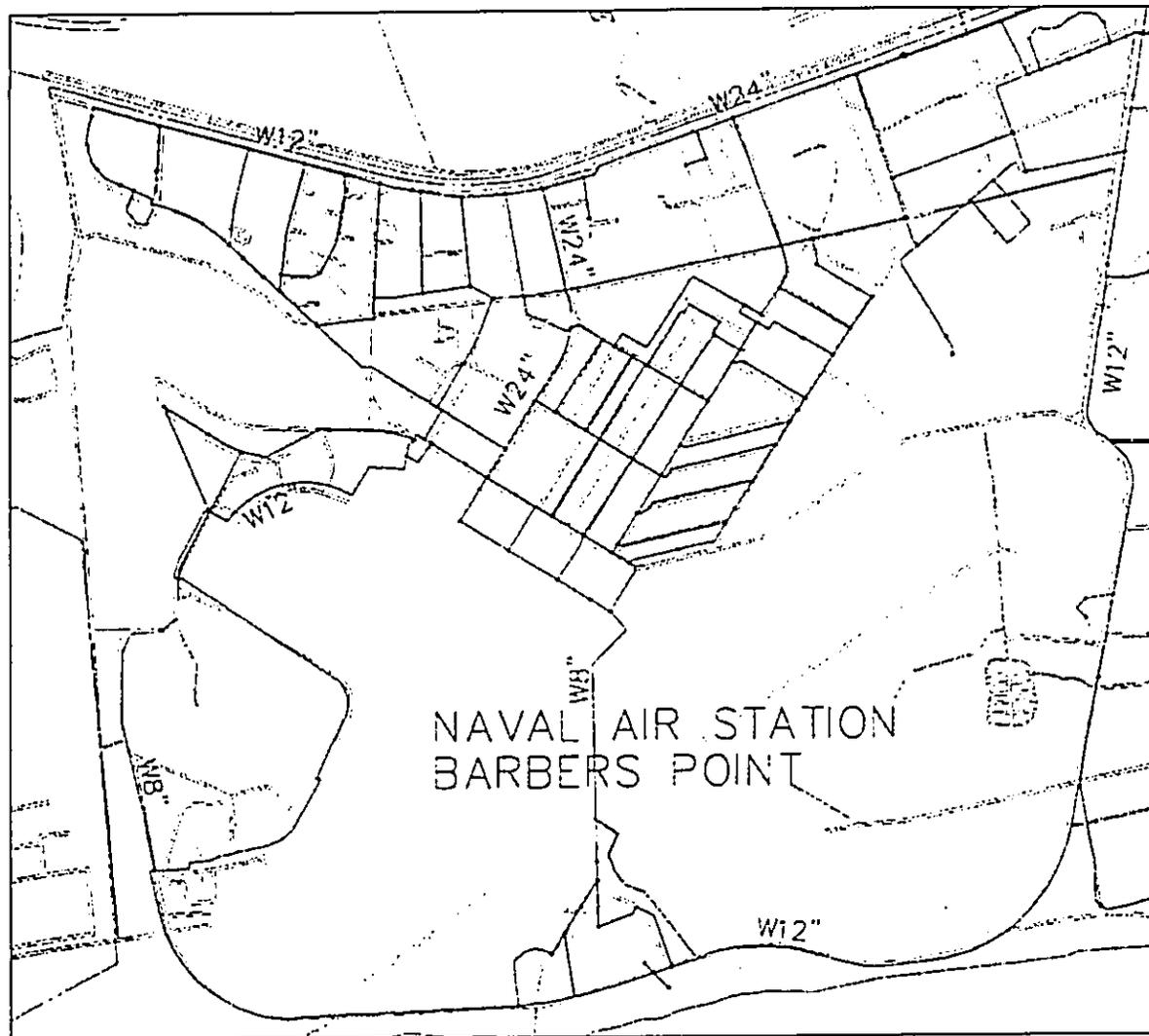


FIGURE 2-1- EXISTING WATER SYSTEM
(Final Environmental Impact Statement for the Disposal and Re-Use of BPNAS, Feb 1999)

CHAPTER 2 - PROJECT DESCRIPTION

The Kalaeloa potable water distribution system consists of over 50 miles of pipe, ranging in size from 6-inches to 24-inches in diameter. Much of the system is over 50-years old and of unknown condition. The *Utility Systems Assessment* (Fukunaga & Associates 1992) noted several deficiencies in the system, including inadequate pipe sizes to handle fire flows and little or no remaining useful life. The existing Navy potable water system was designed and constructed according to Navy design standards, which differ from the BWS's design standards. Given the system's uncertain condition, it was not acceptable for dedication to the City. Under the License for Nonfederal Use of Real Property, BWS is only responsible for operating, maintaining and repairing the water system serving the released areas of the former BPNAS. The released area water system infrastructure (pipes, fire hydrants, valves, etc.) remains the property of the Department of the Navy.

According to the *Barbers Point Naval Air Station Community Redevelopment Plan Infrastructure Master Plan* (R.M. Towill Corporation, 2000), a new water system in Kalaeloa will need to be constructed in order to service the proposed future land uses. The ultimate goal of the BWS is to construct new water facilities, which parallel the existing Navy water system and serve the non-retained areas. This system will be interconnected with the existing system currently servicing the Ewa plains.

To this end, the BWS is proposing to construct two (2) 16-inch transmission mains to interconnect the existing system with the BWS system.

The first section, designated as Alignment # 1, will be constructed fully within existing public roads, along Fort Barrette Road and Enterprise Avenue, from Kapolei Parkway to Saratoga Avenue (approx. 3,850 linear feet). The second section, designated as Alignment # 2, will be constructed within public roads and private lands belonging to the Estate of James Campbell. This alignment will run along Malakole Street from Komohana Street to Saratoga Avenue/West Perimeter Road, then south along West Perimeter Road to Lake Champlain Street, then 400 linear feet east on Lake Champlain Street (approx. 4,000 linear feet).

2.2.1 Construction within Public Rights-of-Way

Fort Barrette Road, Enterprise Avenue, and West Perimeter Road are public roads under the jurisdiction of the State of Hawaii Department of Transportation. Malakole Street from Komohana Street to the fence line is under the jurisdiction of the City and County of Honolulu. Construction within the right-of-ways of these roads would require maintaining set clearances from existing utility lines. Trench excavation for the 16-inch transmission mains would be approximately 30 inches wide, with a minimum depth of five feet. Due to the dry environment in the area, no dewatering is expected. A trenching permit will be required for work along Malakole Street.

CHAPTER 2 - PROJECT DESCRIPTION

2.2.2 Construction Requiring Easements

A portion of the transmission main alignment crosses over lands that will require 20-foot wide easements. These are areas previously owned by the Navy that either have already been conveyed, or whose conveyance is anticipated in the near future, and include:

- Drainage channel and adjacent land (Estate of James Campbell), and
- Lake Champlain Street (U.S. Government – Department of the Navy).

Though the presence of an easement may limit the development potential of affected land, every effort was made to align the proposed transmission main to maximize the future potential of the properties.

2.2.3 Ditch Crossing

The proposed transmission main crosses a drainage channel owned by the Estate of James Campbell in an area east of the Malakole Street/West Perimeter Road intersection. The transmission main alignment crossing the channel will be mauka of the bridge and adjacent to the existing recycled water lines. The design intent is to cross beneath the drainage channel, encasing in a concrete jacket and placing grouted rubble paving on the surface as protection. The trench depth required for this crossing will be approximately five feet.

2.2.4 Railroad Crossing

The proposed transmission main will cross the railway line used by the Hawaii Railway Society in an area just mauka of the Fort Barrette Road/Enterprise Avenue transition. The Society currently operates a work train on Saturdays, and two recreational trips on Sundays. The Contractor will be directed to coordinate his construction efforts to ensure continued use of the track.

2.3 PROJECT SCHEDULE AND COST

This project is tentatively scheduled for construction in the BWS fiscal year 2005-2006. The construction costs are currently indeterminable, as the project is in the preliminary design phase. As the design evolves, an estimate will be generated.

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

3.1 TOPOGRAPHY

Kalaeloa, the area formerly occupied by BPNAS, is approximately 3 miles long and 2 miles wide, encompassing 3,700 acres along the southwestern shore of Oahu. It is on the Ewa plain, approximately 16 miles west of downtown Honolulu, and just south of the City of Kapolei. Elevations within this area vary from sea level along its southern coastal boundary, to over 50 feet above sea level at its northern end. The majority of Kalaeloa is relatively flat, with an average slope of about 0.5 percent.

3.2 GEOLOGY AND SOILS

Kalaeloa is located on the southern coastal plain of Oahu, a relatively flat area. The average slope across the area is about 0.5 percent in the southward direction.

According to the 1972 Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai (U.S. Department of Agriculture), the project site is located within the Lualualei-Fill land-Ewa Association, which is described as consisting of "well-drained, fine textured and moderately fine textured soils on coastal plains, alluvial fans, and drainage ways." The proposed transmission main alignment passes thru both coral outcrop (CR) and Mamala stony silty clay loam (MnC). According to the Flood Insurance Rate Map (FIRM) the project site is located in Flood Zone D.

3.3 GROUND WATER QUALITY AND RESOURCES

Kalaeloa is near both the Honouliuli and Ewa Beach watersheds. The Honouliuli watershed consists mainly of agricultural and forested land and drains to the Honouliuli Stream and eventually discharges into the West Loch of Pearl Harbor. Surface water from the Ewa Beach watershed also drains into Pearl Harbor.

The only perennial surface water feature at Kalaeloa is Ordy Pond, a sinkhole located southeast of the Alignment # 1. The pond hydraulically connects to the Pacific Ocean, and its water surface level fluctuates with the tide.

There are no natural streams found in Kalaeloa, and the permeable soil and rock allow storm water to infiltrate easily. Because of its flat topography, runoff often collects in man-made detention basins, dry wells, natural sinkholes, or pits, infiltrating in the subsurface. Under extreme precipitation, storm water will overflow from these storage sinks creating sheet flows into the ocean.

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

Groundwater underlying the Kalaeloa area generally occurs under unconfined conditions within caprock material. It is in direct hydraulic contact with the ocean. While this aquifer qualifies as a source of drinking water under the Federal Safe Drinking Water Act (SDWA), the State of Hawaii utilizes a more stringent standard for salinity and does not recognize it for potable use.

As part of the Regional Groundwater Study, collection of groundwater samples occurred from wells around BPNAS for six quarters between January 1995 and September 1996. Analysis of the samples found that pesticides, herbicides, and metals are present at low levels, though they pose no significant risks to humans or the environment. Annual monitoring conducted in 1997, 1998, 1999, and 2000 confirmed the findings of the study. Monitoring conducted in 2002 resulted in negative findings.

3.4 AIR QUALITY

The air in Hawaii is relatively clean and low in pollutants. Hawaii complies with the standards of the Clean Air Act of 1970, as well as the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, particulate matter, and lead. The U.S. Environmental Protection Agency (EPA) has classified Oahu as being in attainment of the Federal standards. In addition, pollutant levels within Hawaii, and specifically within Kalaeloa, fall within State standards, which are more stringent than NAAQS.

Existing emissions at Kalaeloa consist of mobile and stationary-type sources. These include aircraft and vehicle engines, boilers, and generators. Just west of Kalaeloa is Campbell Industrial Park (CIP), the largest industrial park in the State of Hawaii. Although stationary-source air pollutant emissions are concentrated in this area, the Department of Health (DOH) Clean Air Branch determined that the facilities meet Federal and State standards for this region. In addition, CIP lies downwind of Kalaeloa during typical trade wind conditions, dispersing air pollution rapidly away from the site.

3.5 ARCHEOLOGICAL, CULTURAL AND HISTORIC SITES

The National Historic Preservation Act (NHPA) defines cultural resources as any prehistoric or historic district, site, building or object included in, or eligible for inclusion in the National Register of Historic Places.

Several regional and specific archaeological building surveys of the area identified eligible pre-contact Hawaiian archaeological sites, including sinkholes in the area having paleontological remains related to pre-contact Native Hawaiian bird hunting activity. None

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

of the archeological sites were within the limits of this proposed project. A cultural survey was conducted for the proposed project and is provided in Appendix B.

The Oahu Rail & Land Right of Way is a significant historic site listed on the National Register of Historic Places. This site is made up of qualifying older sections of the railway, in addition to the depot. Although Alignment # 1 of the proposed transmission main will be crossing the railway tracks near the entrance to Kalaeloa, it is undetermined at this time if the crossing point qualifies as historic for preservation purposes.

3.6 BOTANICAL AND BIOLOGICAL RESOURCES

A botanical survey was conducted for the proposed project site, and is provided in Appendix A. The proposed alignment is along paved roads, with the adjacent vegetation consisting mainly of buffelgrass and koa haole shrubs. No threatened or endangered plants were found within the project limits during the botanical survey.

Birds are the dominant wildlife at Kalaeloa. A 1984 survey identified 23 bird species, including two endangered species. The Federal-listed endangered Hawaiian black-necked stilt (*Himantopus mexicanus knudseni*) and the State-listed endangered Hawaiian short-eared owl (*Asio flammeus sandwichensis*) inhabit areas around Ordy Pond and the coastal salt flats, areas outside of the proposed site. The Hawaiian black-necked stilt was observed at Ordy Pond during November and December 1993 site visits by U.S. Fish and Wildlife Service natural resources personnel. Other wildlife at Kalaeloa includes feral dogs and cats, rodents, and mongooses.

3.7 INFRASTRUCTURE

3.7.1 Water System

The Navy-owned water system is serviced by a pressure system at an approximate elevation of 215-feet. This system is comprised of a deep well pumping station, a chlorination treatment facility, two underground storage reservoirs and a transmission system extending from just Farrington Highway to Kalaeloa. The water from this well is chlorinated and fluoridated at the pumps, prior to transmission to the storage reservoirs. According to the 1992 *Utility Systems Assessment*, pre-1991 test results for the Navy well show that the chloride levels in the system occasionally exceeded 250 milligrams per liter (mg/l). The BWS maximum allowable chloride level is around 170 mg/l. It is unknown if recent water quality tests have been conducted.

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

Within Kalaeloa, a series of 6 to 24-inch diameter pipes support the existing potable water distribution system. Lateral pipes connect the fire hydrants to the water distribution system.

3.7.2 Wastewater System

The Kalaeloa wastewater collection system consists of approximately 15.3 miles of gravity sewers, 7.3 miles of sewer force mains, and 12 sewage pump stations. Gravity sewers collect the wastewater generated at Kalaeloa and a number of lift stations and force mains convey it to the City and County of Honolulu's Honouliuli Wastewater Treatment Plant, which has a primary treatment design capacity of 38 million gallons per day (MGD). Currently, wastewater undergoes advanced primary treatment and is ocean-discharged.

3.7.3 Electrical and Telephone Systems

The Hawaiian Electric Company (HECO) is a public utility that provides electricity to homes and businesses island-wide. Specifically, the Kahe Power Plant is the primary power generating facility for the island of Oahu and is located approximately 4 miles northwest of Kalaeloa.

The main island-wide telephone company is Verizon. Both Verizon and the Federal Oahu telephone system lines serve the existing telephone system at Kalaeloa. The U.S. Navy owns the majority of the on-base infrastructure; however, Verizon is responsible for maintenance of the entire telephone system.

3.8 REGIONAL IMPACT

Kalaeloa is in the Ewa district on the island of Oahu. In 1995, the Ewa neighborhood area had approximately 42,967 residents. The average household size was 3.65, slightly higher than the island average of 3.02. There were 15.9 percent college graduates (Oahu average: 24.6). The median household income was \$40,679 (Oahu average: \$40,581). (State of Hawaii, DBEDT, 1999).

Oahu's economic activity is concentrated in the primary urban center of Honolulu. It contains about three-quarters of the jobs on the island and about half of the population. The county's general plan has designated the city of Kapolei, just north of Kalaeloa, as the secondary urban center. The City and County of Honolulu Department of Planning and Permitting projections anticipate Kapolei to be a major employment center for the Ewa region, increasing from 3 percent of island jobs in 1990 to 10 percent in 2020 (U.S. Department of the Navy, 1999). Other employment areas near Kalaeloa include CIP, Ko Olina Resort, and Barbers Point Harbor.

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

Diverse recreational opportunities are available in the Ewa region. Recreational facilities in close proximity to Kalaeloa include Ko Olina Resort, Ewa Beach Park, Oneula Beach Park, Barbers Point Beach Park, and numerous other beach parks along the Waianae Coastline. Shoreline recreation includes swimming, fishing, picnicking, snorkeling, and surfing.

3.9 NOISE

Although BPNAS closed in 1999, the U.S. Navy, Coast Guard, and private individuals still use the airfield. Thus, aircraft takeoffs and landings at the airfield remain the primary source of noise in the area. According to the most recent noise survey performed in 1987, baseline noise levels ranged from over 80 "average day/night sound levels" (DNL) on and immediately adjacent to the runways, to 55 DNL approximately 8,000 feet (1.5 miles) from the perimeter of the runway. From 1987 to 1993, the number of aircraft operations declined 24 percent (U.S. Department of the Navy, 1999). Noise measurements outside the boundaries of Kalaeloa indicate levels compatible with surrounding land use, including school and residential areas.

3.10 TRAFFIC

Six major regional roadways serve Kalaeloa. Fort Barrette and Geiger Roads are the two main access points that connect Kalaeloa to the adjacent communities of Kapolei and Ewa Beach. Fort Weaver Road and Kalaeloa Boulevard are the most widely traveled roadways south of the freeway in the Ewa area. The H-1 Freeway is a major east-west corridor connecting the Ewa area to central Honolulu and other areas of Oahu. It accommodates peak-hour and peak-direction volumes of about 2,800 vehicles (U.S. Department of the Navy, 1999). Farrington Highway is another east-west connector that sustains large volumes of traffic in the Kapolei area and farther west between the H-1 Freeway terminus and the Waianae coast.

Enterprise Avenue and Franklin D. Roosevelt Avenue are the two main arterial roads at Kalaeloa. Enterprise Avenue is a three to four-lane road that is an extension of Fort Barrette Road. Franklin D. Roosevelt Avenue runs east to west along the northern BPNAS boundary and is the most direct east-west route across the entire station. Other roadways at Kalaeloa are local roads that contain two lanes.

Levels of service (LOS) ranging from A to F typically describe traffic conditions. LOS A represents excellent conditions while LOS E and F represent unacceptable conditions (greater than a 40.1 second delay per vehicle, or a volume to capacity (v/c) ratio greater than 0.91) (Earth Tech, 1998).

CHAPTER 3 - DESCRIPTION OF AFFECTED ENVIRONMENT

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Traffic conditions assessed in 1995 described the v/c ratio at Fort Weaver and Geiger Roads as being greater than 0.83 during morning and afternoon peak hours, resulting in a LOS D. During the morning peak hour the intersection of Enterprise Avenue and Franklin D. Roosevelt Avenue had a v/c ratio of 1.10, equating to an LOS F. During the afternoon peak hours, the intersection of Enterprise Avenue and Saratoga Street had short delays averaging 29.2 seconds resulting in LOS D (Earth Tech, 1998).

3.11 LAND USE AND OWNERSHIP

During the 19th and early 20th centuries, agricultural activities dominated the area now occupied by Kalaeloa. By 1941, the U.S. Navy acquired about 3,700 acres from the Estate of James Campbell and commissioned the area BPNAS. The Navy used the station to support a variety of aviation operations including industrial activities, aircraft servicing and maintenance, training, fuel transfer and storage, and waste handling and disposal.

In June 1993, the Base Realignment and Closure (BRAC) Commission recommended the closure of BPNAS to President Clinton, and it was subsequently closed in 1999. Presently, the Navy and other Federal agencies retain about 1,563 acres. State and county government agencies, social service programs, and private organizations will eventually redevelop the remaining land on Kalaeloa.

Current land uses surrounding Kalaeloa include urban, industrial and residential. Kapolei, a rapidly growing urban center just north of Kalaeloa, provides government offices, public facilities (parks, bus terminal, civic center, police station, library) and retail businesses. Other nearby industrial developments include Campbell Industrial Park (CIP), Ko Olina Resort, Barbers Point Harbor, and Ewa Marina. Housing communities in the region include Ewa Beach, Ewa Villages, Ewa by Gentry, Makakilo, and the Villages of Kapolei.

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

4.1 TOPOGRAPHY

Impact to the existing topography will be minimal. The proposed transmission main will be laid in an excavated trench with a minimum of three feet of cover over the pipe, with the only above ground structures being valve box covers, fire hydrants and backflow preventors.

4.2 GEOLOGY AND SOILS

It is anticipated that there will be a short-term increase in soil erosion during construction. Removal of existing vegetation and trenching will result in bare soil, which is subject to erosion. Mitigation measures will be implemented during construction to minimize soil erosion and offsite sediment transport. The contractor will be required to implement control measures in accordance with the "Best Management Practices Manual for Construction Sites in Honolulu," May 1999 edition. These control measures will include:

- The installation of silt fences or erosion control berms to protect areas downstream of trenched areas;
- Coordination of the construction schedule to minimize exposure of trenched areas;
- Timely re-vegetation of cleared areas, and
- Regular monitoring of construction to ensure no additional measures is required.

4.3 GROUND WATER QUALITY AND RESOURCES

The proposed action will have little or no effect on water resources.

4.4 AIR QUALITY

During construction, generation of fugitive dust and exhaust emissions from equipment may result in a temporary impact on air quality.

The contractor will be required to comply with the provisions of Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33 on Fugitive Dust. To ensure compliance with State air pollution control regulations, the contractor must implement an effective dust control plan. The following mitigation measures will be implemented:

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

- An adequate water source will be provided prior to the start-up of construction activities.
- Bare areas, including slopes, will be stabilized by the Contractor during construction.
- Affected and adjacent roadways will be kept clean.
- Open-bodied trucks will be covered when hauling material and/or debris.

In addition, the contractor will be required to implement measures to minimize air quality degradation by other sources, including vehicle exhaust emissions. Exhaust emissions may be minimized by inspecting construction vehicles, and minimizing movement of construction vehicles.

The BWS requires all construction work to comply with dust and exhaust emission limits set forth by the State Department of Health. Should these limits be exceeded, the contractor's work will be stopped until corrective measures are taken.

There will be no long-term impact on air quality associated with the proposed project.

4.5 ARCHEOLOGICAL, CULTURAL AND HISTORIC SITES

A cultural survey was conducted for the proposed project site, and is provided in Appendix B. The excavation will consist of a 3-foot wide trench, 5-foot deep, directly adjacent to existing pavement. Although this proximity to existing improvements decreases the likelihood of finding previously undiscovered remains, the work will be closely monitored. In the unlikely event that inadvertent discoveries of human remains or other cultural deposits are made during construction, work will be halted in the immediate area and the State Historic Preservation Department (SHPD) shall be immediately contacted and a mitigation plan developed.

Construction within the Oahu Rail & Land Right of Way will conform to historic conservation requirements, and will be scheduled to ensure weekend train operations are uninterrupted. A detail of the proposed railroad track reconstruction at the railway crossing is shown in Figure 4-1.

4.6 BOTANICAL AND BIOLOGICAL RESOURCES

There are several sensitive habitats and endangered species of flora and fauna adjacent to the project areas; however, none are on the proposed site. The closest sensitive area is a buried wetland in the vicinity of Saratoga Avenue. As the discharge of fill materials into the limits of the wetland are regulated by Section 404 of the Clean Water Act, the plans will stipulate that the Contractor must dispose of all excess fill off-site.

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

The proposed transmission main alignment will closely follow the existing edge of pavement, and will not impact any significant trees.

4.7 INFRASTRUCTURE

The Kalaeloa Community Development District's June 2001 status report states: "obtaining the future water allocations and reservations to accommodate the proposed Kalaeloa projects remains as one of the key issues to be addressed. While there are a number of issues still to be resolved, the transfer of the Kalaeloa water system to the BWS should simplify the coordination needed for requesting water use permits for Kalaeloa."

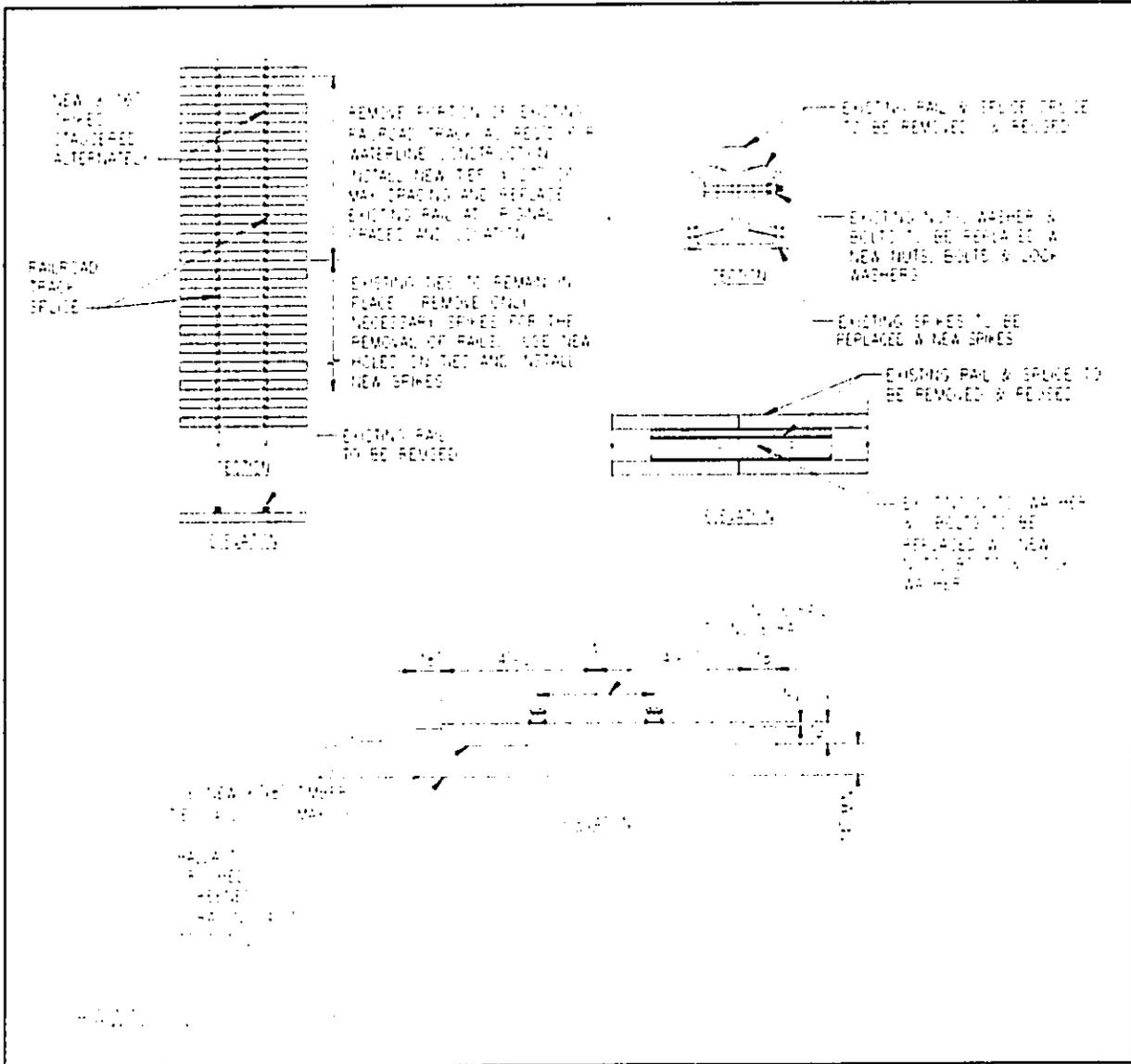


FIGURE 4-1- RAILROAD TRACK RECONSTRUCTION DETAIL

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

Due to the fact that the Navy may already be at its maximum allocation from its Barbers Point Shaft well source, the only viable alternative source is from the City BWS. The Navy will continue to supply the water source, storage and transmission for the non-retained area until the water system can be transferred to the BWS, and a new water source, storage, and transmission system is constructed for the non-retained area.

The BWS will provide source, storage and transmission by connecting the non-retained area water system to its 228-foot elevation water system in Ewa and the 215-foot elevation system in Kapolei. This can be accomplished by connecting the non-retained water system to the existing 12-inch main along Geiger Road and the existing 12-inch main along Kapolei Parkway."

The proposed work covered by this environmental assessment project is that which connects the non-retained area to the 12-inch main along Kapolei Parkway. Implementation of this project will also relieve the Kalaeloa water system of its current dependence on the Navy for its water needs.

As planning and design proceeds, to minimize impacts on existing utilities the proposed project will be coordinated with various government and private agencies, including but not limited to:

- State of Hawaii;
- City and County of Honolulu;
- Hawaii Community Development Authority;
- U.S. Army Corps of Engineers;
- U.S. Department of the Navy (Pacific Division), Public Works Center;
- Department of Land and Natural Resources;
- Gas Company, and
- Hawaiian Electric Company.

The contractor will be required to verify the location of all existing utilities prior to excavation, and will be responsible for protecting existing utilities during construction. Any resulting damage to existing utilities will be repaired and paid for by the contractor.

4.8 REGIONAL IMPACT

The proposed project will have a positive long-term impact on the region by improving the reliability of the municipal water system presently serving Kalaeloa. The proposed project is not expected to stimulate population growth in the region. Moreover, the transmission main will be installed underground, and therefore is not anticipated to impact cultural resources or have a long-term visual impact on the surrounding landscape.

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

Short-term regional impacts will be associated with construction activities, including increased traffic on regional roads, and increased dust and noise in the general vicinity of the project.

4.9 NOISE

Noise generated by construction activities will be a short-term impact. The actual levels would be dependent on the methods employed by the contractor.

The noise generated by the construction equipment may exceed the allowable limits set by the State of Hawaii. Consequently, the Contractor will obtain a Community Noise Permit for Construction Activities from the State Department of Health. The permit will specify the allowable conditions under which noise-producing operations can occur (i.e. restricted time periods of the day, restricted days, etc.). Construction equipment that emits exhaust gas, or air and roadway transit vehicles will be equipped with mufflers. The BWS requires all construction work to comply with noise limits set forth by the State Department of Health. Should these limits be exceeded, the contractor's work will be stopped until corrective measures are taken.

In the event that night work is performed, a Noise Variance will also be obtained by the Contractor from the State Department of Health.

4.10 TRAFFIC

The proposed project will have a short-term impact on traffic along the affected roadways limited to the period of construction only. Alignment # 1 of the transmission main will run along Fort Barrette Road and Enterprise Avenue, and from Kapolei Parkway to Saratoga Avenue (approx. 3,850 linear feet). Fort Barrette Road is one of the major regional roadways connecting Kalaeloa to the adjacent community of Kapolei, and fronts Kapolei High School. Classes run from 7:50 AM to 3:00 PM, with student activities and athletics extending later into the afternoon.

During the morning peak hour, the intersection of Enterprise Avenue and Franklin D. Roosevelt Avenue had a volume to capacity (v/c) ratio of 1.10, an already unacceptable condition (Earth Tech, 1998). Construction during this peak period would exacerbate an already chronic condition. In order to minimize the traffic impact to the driving public, one lane in each direction of travel along Fort Barrette Road from the Kalaeloa entrance to the Kapolei Parkway will be open at all times. The turn lane into Kapolei High School west entrance will remain open until 8:30 AM, after which it will be used to supplement the traffic

CHAPTER 4 - POTENTIAL IMPACTS & MITIGATION MEASURES

lanes to maintain the traffic flow.

A bid alternate allowing this portion of the project to be done at night may be included in the construction proposal.

Additional potential impacts may include a temporary increase in construction-related traffic along the affected roads and neighboring roads due to commuting workers, trucks and other construction equipment, and temporary closure of one lane of Kapolei Parkway while working in the intersection.

These short-term impacts will be mitigated by implementation of the following measures:

- The BWS will notify the Makakilo/Kapolei/Honokai Hale Neighborhood Board and area residents prior to the onset of construction activities.
- Traffic control plans will be prepared by the design consultant and submitted to the State Department of Transportation and the City and County of Honolulu Department of Planning and Permitting for approval during the design process. The traffic control plans will include measures to safely route traffic around the proposed construction area.
- The contractor will be required to notify emergency services (fire, ambulance, police); Oahu Transit Services, Inc.; The Handi-Van, and Kapolei High School of any lane closures or detours.
- Construction operations will be scheduled to avoid peak traffic conditions.

There are no long-term impacts on traffic or parking associated with this proposed project.

4.11 LAND USE AND OWNERSHIP

The original "Basewide Redevelopment Plan," included a general aviation airport, large areas devoted to a heritage park, public park and recreational uses on the eastern and southern portions of the site, commercial and industrial uses west of the airport, and light industrial uses in the northwest adjacent to the Navy lands formerly used for housing. The "Downtown Area Redevelopment Plan" contains residential, commercial, and public facility uses as infill between retained parcels in an urban environment. A full list of the current landowners and their intended property usages may be found in the "Kalaehoa Community Redevelopment Plan, Revision and Status Report," dated June 2001.

All of the intended land uses, both existing and proposed, will be enhanced by connection to, and service from, the BWS water system. Failure to connect to the BWS system may result in reduced options or services for the non-retained parcels.

CHAPTER 5 - FINDINGS AND DETERMINATION

5.1 DETERMINATION

The proposed project does not have the potential to generate significant environmental impacts and the need to prepare an environmental impact statement is not evident. This Final Environmental Assessment anticipates a Finding of No Significant Impact (FONSI) determination.

5.2 FINDINGS AND REASONS SUPPORTING DETERMINATION

The overall and cumulative impacts of the proposed action were evaluated with respect to Hawaii Administrative Rules (HAR) Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-12 "Significance Criteria" and the City and County of Honolulu's plans and policies. The following findings and conclusions can be made in support of a FONSI determination:

- 1) The proposed action will not involve an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The limits of the proposed transmission main alignments will be located within or adjacent to existing roads. The central portions will be located within previously developed lands. No natural or cultural resources were identified along the proposed transmission main alignments.

- 2) The proposed action will not curtail the range of beneficial uses of the environment.*

The proposed transmission mains will be constructed underground and should not curtail other above ground uses. However, establishment of the associated 20-foot wide water easement through private lands may limit the landowner's plans for the property.

- 3) The proposed action will not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

Construction of the proposed transmission mains will comply with the environmental policies, goals and guidelines of Chapter 344, HRS.

CHAPTER 5 - FINDINGS AND DETERMINATION

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- 4) *The proposed action will not have a substantial negative effect on the economic or social welfare of the community or State.*

Construction of the proposed transmission mains will positively affect the community of Kalaeloa. The proposed action will strengthen the water distribution network to ensure transmission of municipal water for domestic consumption and fire protection.

- 5) *The proposed action will not have a substantial negative effect on public health.*

Construction activities may temporarily increase noise, fugitive dust and vehicular air emissions in the project vicinity. However, these impacts will cease upon completion of construction. No long-term negative impact on public health is foreseen. Rather, the long-term impact will be a positive effect on public health by strengthening the water distribution network.

- 6) *The proposed action will not involve substantial secondary impacts, such as population changes or effects on public facilities.*

The proposed transmission main interconnection is not anticipated to incite population growth or changes. The project will have a positive impact on existing water facilities.

- 7) *The proposed action does not involve substantial degradation of environmental quality.*

There are no long-term impacts anticipated. Construction activities will temporarily increase dust, noise and traffic. However, upon completion of construction, these impacts will cease. Mitigation measures to minimize these construction-related impacts have been described in Chapter 4.

- 8) *The proposed action will not have a considerable cumulative effect upon the environment or involve a commitment for larger actions.*

The proposed action is limited to construction of transmission mains to strengthen the existing municipal water system serving Kalaeloa.

- 9) *The proposed action will not substantially affect a rare, threatened, or endangered species or its habitat.*

There were no rare, threatened or endangered species evident during the botanical field investigations. In addition, there was no indication from previous studies that the project site ever provided habitat for a rare, threatened or endangered species in the past.

CHAPTER 5 - FINDINGS AND DETERMINATION

10) The proposed action will not affect air or water quality or ambient noise levels.

Construction activities will have a short-term impact on air quality, water quality and ambient noise levels. However, these impacts will be mitigated as described in Chapter 4. No long-term impacts to air quality, water quality or ambient noise levels are foreseen.

11) The proposed action will not affect, nor is it likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal water.

Trenching will be required for the duration of the project. Areas disturbed by trenching will have vegetation reestablished as soon as possible to minimize erosion.

12) The proposed action will not substantially affect scenic vistas or view planes identified in county or State plans or studies.

The proposed transmission mains will be installed underground and will not affect scenic vistas or view planes.

13) The proposed action will not require substantial energy consumption.

The proposed transmission mains will connect to the existing BWS service zone. There will be no long-term increase in energy consumption associated with the proposed transmission mains.

In addition, the proposed project is consistent with the City and County of Honolulu's General Plan and the City and County of Honolulu's Development:

City and County of Honolulu General Plan

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

This project will improve the reliability of water service to residents by connecting the Kalaeloa community to the BWS infrastructure. This will ensure a continuous supply of water for domestic consumption and fire protection.

City and County of Honolulu Development Plan

Common Provisions (Section 24-1.9): Priority in the programming will be given to those capital improvement projects that will improve or replace public facilities in unsound condition.

CHAPTER 5 - FINDINGS AND DETERMINATION

The existing Navy transmission main is over 50 years old and provides the only source of potable water to Kalaeloa. A major break along the existing water main would sever water service to the Kalaeloa community. Implementation of this project will ensure continued water service.

CHAPTER 6 - METHODOLOGY AND REFERENCES

6.1 DETERMINATION

This Environmental Assessment (EA) was prepared for the City and County of Honolulu Board of Water Supply by KFC Engineering Management, Inc. The following consultants were also involved in preparation of this document:

<u>Consultant</u>	<u>Area of Expertise</u>
Char & Associates	Botanical Resources
Cultural Surveys Hawaii, Inc.	Archaeological / Historic Resources

6.2 PARTIES CONSULTED DURING EA PREPARATION

Preliminary consultation with agencies was conducted during preparation of the Draft EA. Contacted directly were:

- DOT Highways (telephone);
- The Estate of James Campbell (telephone, e-mail)
- Department of Hawaiian Homelands (telephone, personal interview)
- Hawaiian Railway Society (telephone)
- DLNR Historic Preservation Department
- Department of the Navy (telephone, e-mail)

A preliminary letter with a project description and location map was mailed to individuals or parties identified as potentially affected by the project. Copies of the correspondence, and responses received, are included in Appendix C.

Copies of the Draft EA were distributed to agencies, organizations and other interested parties. A complete listing of these parties is included in Appendix D. Comment letters were received as a result of public review of the Draft EA. Copies of the comments and their responses are appended to Appendix D.

6.3 REFERENCES

R.M. Towill Corporation, Barber's Point Naval Air Station Community Redevelopment Plan: Infrastructure Master Plan, December 2000.

CHAPTER 6 - METHODOLOGY AND REFERENCES

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Department of the Navy, Final Environmental Impact Statement for the Disposal and Reuse of Naval Air Station, Barbers Point, Hawaii, February 1999.

Aries Consultants Ltd., Kalaeloa Airport Master Plan, November 1998.

State of Hawaii Barber's Point Naval Air Station Redevelopment Commission, Kalaeloa Community Redevelopment Plan Revision and Status Report, June 2001.

State of Hawaii Department of Defense Facility Management Office, Final Environmental Assessment for The Relocation and Consolidation of the Hawaii Army National Guard to Kalaeloa, Oahu, Hawaii, April 2003.

City and County of Honolulu Department of Environmental Services, Best Management Practices Manual for Construction Sites in Honolulu, May 1999.

State of Hawaii Office of Environmental Quality Control, A Guidebook for the Hawaii State Environmental Review Process, October 1997.

APPENDIX A – BOTANICAL SURVEY

CHAR & ASSOCIATES

Botanical/Environmental Consultants

4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

August 2003

BOTANICAL RESOURCES ASSESSMENT STUDY KALAELOA REDEVELOPMENT AREA TRANSMISSION MAINS KALAELOA, EWA DISTRICT, OAHU

INTRODUCTION

The City and County of Honolulu Board of Water Supply plans to install 7,850 LF of 16 inch water main and appurtenances in the Kalaeloa Redevelopment Area; this is located within the former Barber's Point Naval Air Station. The first water main alignment runs along Barber's Point Access Road from Kapolei Parkway to Roosevelt Avenue, and along Enterprise Avenue from Roosevelt Avenue to 150 ft. south of Saratoga Avenue. This is identified as "Alignment 1" in this report. Low, weedy patches are usually associated with the right-of-way bordering the paved roads. The second water main alignment runs along Malakole Street from Komohana Street to Saratoga Avenue, along Saratoga Avenue from Malakole Street to Lake Champlain Street, and then along Lake Champlain Street from Saratoga Avenue to Coral Sea Road. This is identified as "Alignment 2" in this report.

Field studies to assess the botanical resources along the right-of-way of the proposed water main alignments were conducted on 06 August 2003. The primary objectives of the field study were to (1) prepare a general description of the vegetation on the alignments, and (2) search for threatened and endangered species as well as species of concern.

Prior to the field studies, the project map was examined to familiarize the principal investigator with the layout of the streets and the location of the proposed transmission mains. In the field, notes were made on plant associations and distribution, disturbances, substrate types, topography, exposure, etc

RESULTS

The plant names used in this report follow Wagner *et al.* (1990) and Wagner and Herbst (1999). The few recent name changes are those reported in the Hawaii Biological Survey series (Evenhuis and Eldredge, editors, 1999-2002).

Alignment 1

Along Barber's Point Access Road, the vegetation tends to be patchy with large areas of barren, exposed crushed coral and thin soil. Plant cover is about 10 to 20% in most places with Sida ciliaris forming fairly large patches. Other plants found here include false mallow (Malvastrum coromandelianum), swollen fingergrass, saltbush, 'uhaloa, buffelgrass, 'ilima (Sida fallax), slender mimosa (Desmanthus pernambucanus), and khaki weed (Alternanthera pungens). A few woody components border the right-of-way along the west side of the road, these are koa haole, sourbush (Pluchea carolinensis), kiawe, 'opiuma, and klu (Acacia farnesiana).

Where the right-of-way passes Kapolei High School, a newly planted Bermuda grass lawn is found. A few weeds are found here; these include Sida ciliaris, field bindweed (Ipomoea obscura), and wiregrass (Eleusine indica). At the former main gate to the Naval Air Station, a patch of koa haole shrubs and buffelgrass along with a number of weedy species are found.

Along Enterprise Avenue, the vegetation along the right-of-way consists of buffelgrass on the east side. Open kiawe forest with a dense layer of buffelgrass borders the right-of-way. An old quarry, now overgrown with kiawe and 'opiuma trees, is also found on this side of the road, but is outside of the alignment.

On the west side of Enterprise Avenue, the right-of-way is mowed grass (primarily buffelgrass) with patches of bare soil. Koa haole shrubs and remnant landscape plantings of coconut (Cocos nucifera), oleander (Nerium oleander), and a large Chinese banyan (Ficus microcarpa) occur here. Part of this area was recently burned.

Alignment 2

Along Malakole Street, the vegetation within the right-of-way is periodically maintained where it adjoins developed lots within the Campbell Industrial Park. Low, grassy mats of buffelgrass (Cenchrus ciliaris) and Bermuda grass (Cynodon dactylon) are trimmed on a regular basis. A few weedy patches of Sida ciliaris and coatbuttons (Tridax procumbens) are scattered here and there. Where the right-of-way fronts undeveloped lots, the vegetation consists of dense clumps of buffelgrass, 1 to 2 ft. tall, with scattered koa haole shrubs (Leucaena leucocephala). Other roadside plants found here include golden crown-beard (Verbesina encelioides) and saltbush (Atriplex suberecta). Kiawe (Prosopis pallida) forest borders the right-of-way on the mauka (north) side of the street.

Where Malakole Street crosses over a large drainage canal by Access Gate #6 to Saratoga Avenue, the vegetation is a mixture of many weedy, mostly annual species. Flaveria trinervia and saltbush are locally abundant, forming large patches. Other plants found here in fairly large numbers are Sida ciliaris, coatbuttons, golden crown-beard, stinkgrass (Eragrostis ciliaris), swollen fingergrass (Chloris barbata), and 'uhaloa (Waltheria indica).

Along Saratoga Avenue a chainlink fence runs along the west side. The vegetation here consists of scattered koa haole shrubs, 5 to 7 ft. tall, and dense clumps of buffelgrass, 2 to 3 ft.

tall. On the east side of Saratoga Avenue and on to Lake Champlain Street is open scrub vegetation composed of buffelgrass, 2 to 3 ft tall, with scattered koa haole shrubs, 3 to 7 ft tall, and a few young 'opiuma trees (Pithecellobium dulce). Woody cover is about 20 to 30%. The substrate is weathered coralline material and a very thin layer of soil which has been bulldozed in the past. Where the grass cover is sparse, lovegrass (Eragrostis amabilis), prickly sida (Sida spinosa), graceful spurge (Chamaesyce hypericifolia), saltbush, 'uhaloa, and swollen fingergrass are common. Locally abundant along the roadside are patches of Sida ciliaris and Heliotropium procumbens.

DISCUSSION

The proposed transmission mains are located in an urbanized setting along paved roads. The right-of-way along the roads, for the most part, are periodically maintained. The vegetation consists primarily of buffelgrass along with a number of weedy species; patches of Sida ciliaris are abundant in many places. Only two native species were observed during the field studies. These are the 'ilima (Sida fallax) and 'uhaloa (Waltheria indica) both are indigenous, that is, they are native to the Hawaiian Islands and elsewhere. None of the plants observed during the field studies is threatened and endangered species or a species of concern (U.S. Fish and Wildlife Service 1999a, 1999b; Wagner *et al.* 1999). All of the plants can be found in similar dry, lowland, disturbed environments throughout the Hawaiian Islands.

Two endangered species, protected by Federal and State endangered species laws, are known from Barber's Point Naval Air Station, but are not located anywhere near the transmission main alignments. The Ewa plains 'akoko (Chamaesyce skottsbergii var. kalaeloana) is found in the area between Coral Sea Road and the golf course. Achyranthes splendens var. rotundata is located on the seaward end of one of the runways.

Given these findings, the proposed transmission mains project is not expected to have a significant negative impact on the botanical resources. There are no botanical reasons to impose any restrictions, conditions, or impediments to the proposed project.

References

- Evenhuis, N.L. and L.G. Eldredge, editors. 1999-2002. Records of the Hawaii Biological Survey. Bishop Museum Occasional Papers Nos. 58-70.
- U S Fish and Wildlife Service 1999a U S Fish and Wildlife Service species list, plants. March 23, 1999. Pacific Islands Office, Honolulu, HI.
- U.S. Fish and Wildlife Service. 1999b. Endangered and threatened wildlife and plants. 50 CFR 17.11 and 17.12. December 31, 1999.
- Wagner, W.L., M.M. Brueggmann, D.R. Herbst, and J. Q.C. Lau. 1999. Hawaiian vascular plants at risk: 1999. Bishop Museum Occasional Papers 60.
- Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University of Hawai'i Press and Bishop Museum Press, Honolulu. Bishop Museum Special Publication 83.
- Wagner, W.L. and D.R. Herbst. 1999. Supplement to the Manual of the flowering plants of Hawai'i, pp. 1855-1918. In: Wagner, W.L., D.R. Herbst, and S.H. Sohmer, Manual of the flowering plants of Hawai'i. Revised edition. 2 vols. University of Hawaii Press and Bishop Museum Press, Honolulu.

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APPENDIX B – CULTURAL SURVEY

**CULTURAL IMPACT ASSESSMENT
OF THE PROPOSED KALAELOA REDEVELOPMENT AREA
BOARD OF WATER SUPPLY TRANSMISSION MAIN**

(TMK:9-1-13)

**Auli'i Mitchell
and
Hallett H. Hammatt, PhD**

**Prepared for
KFC Engineering Management, Inc.
3375 Koapaka St. F220-50
Honolulu, HI 96819**

**by
Cultural Surveys Hawai'i, Inc.**

October 2003

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I. INTRODUCTION

A. Project Background

Cultural Surveys Hawai'i, Inc. was contracted by KFC Engineering Management, Inc. to conduct a Cultural Impact Assessment for the Kalaeloa Redevelopment Area Board of Water Supply Transmission Main at Honouliuli, 'Ewa district, Island of O'ahu (TMK: 9-1-13' (Figures 1 & 2).

The function of this Cultural Impact Assessment is to document and evaluate the effects the planned redevelopment may have on native Hawaiians or any other concerned ethnic group in terms of their culture and their rights to practice traditional customs. The State Constitution, state laws and courts "require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups" (in Office of Environmental Quality Control, *Guidelines for Assessing Cultural Impacts*, Adopted by the Environmental Council, State of Hawai'i, November 19, 1997).

Under Act 50, Chapter 343, Hawai'i Revised Statutes, 2000, the following protocol are encouraged when preparing a cultural Impact Assessment (*Ibid*).

- 1) Identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or *ahupua'a*;
- 2) Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
- 3) Receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
- 4) Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
- 5) Identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
- 6) Assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

This project involves plans to install 7,850 LF of 16-inch water main and appurtenances in two areas of the Kalaeloa Redevelopment Area, located within the former Barber's Point Naval Air Station. The western water main alignment runs within the existing road right-of-ways of Malakole Street east from Komohana Street to Saratoga Avenue/West Perimeter Road, south along West Perimeter Road to Lake Champlain Street, and then west along Lake Champlain Street from West Perimeter Road to Coral Sea Road. The eastern water main alignment runs within the Barber's Point Access Road from Kapolei Parkway southeast to Roosevelt Avenue, and then continues southeast along Enterprise Avenue from Roosevelt Avenue to a point approximately 150 ft. south of Saratoga Avenue (see Figure.2).

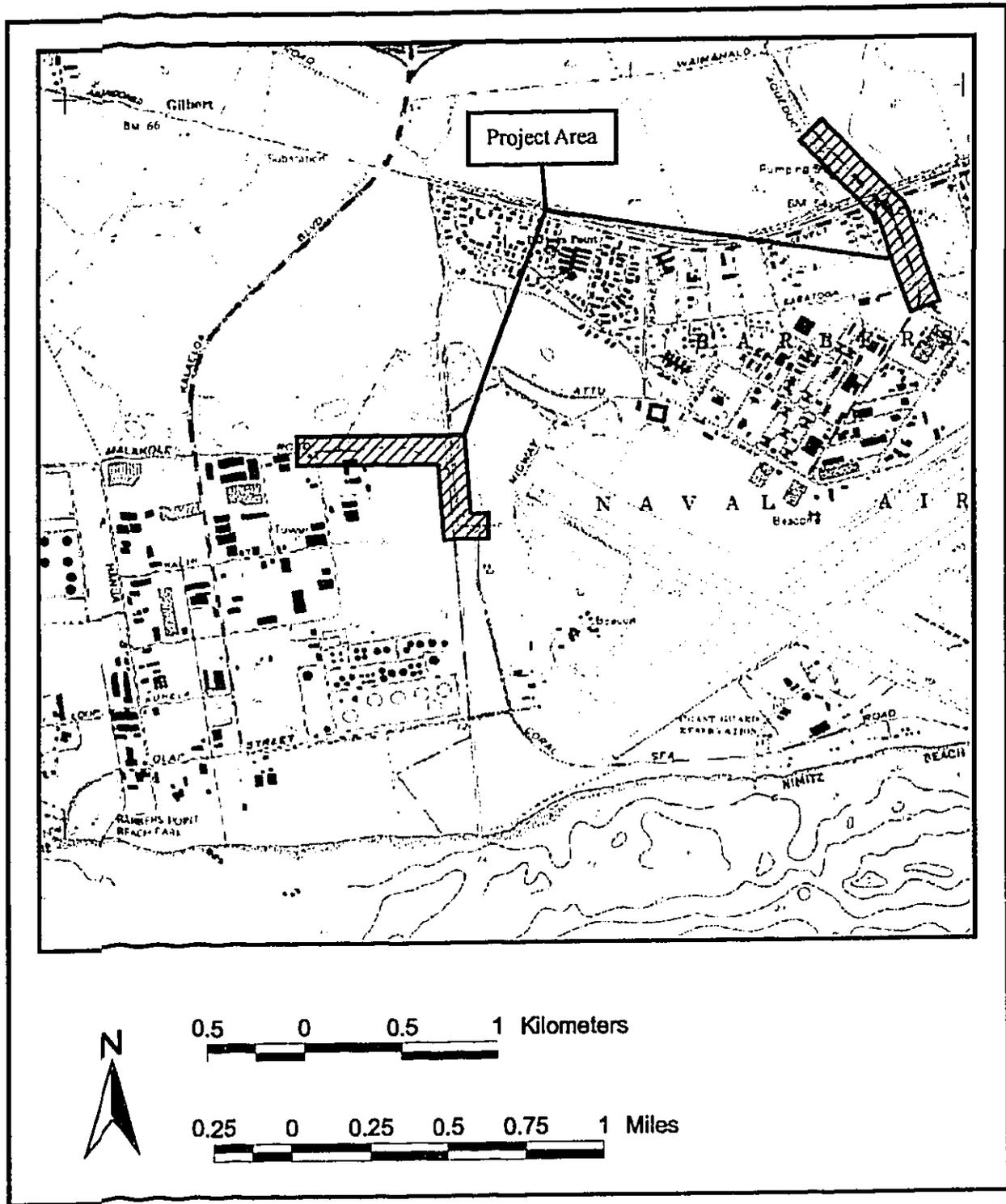


Figure 1 USGS 'Ewa Quad Map (1984) Showing Location of Project Area(s)

B. Scope of Work

Because of the subsurface nature of the project within existing paved streets and the previous impact of development in the immediate vicinity, a recommendation was agreed upon of a relatively modest scope of work. This scope of work is suggested to be appropriate.

The scope of work includes:

- 1) Examination of historical documents, Land commission Awards, and historic maps, with specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal and other resources or agricultural pursuits as may be indicated in the historic record to develop a Cultural landscape background study.
- 2) A review of the existing archaeological information pertaining to the sites in the vicinity as they may allow us to reconstruct traditional land use activities and identify and describe the cultural resources, practices and beliefs associated with the parcel and identify present uses, if appropriate.
- 3) Limited consultations with *kūpuna* knowledgeable regarding the project area vicinity.
- 4) Preparation of a report on items 1-3 summarizing the information gathered related to traditional practices and land use. The report will assess the impact of the proposed action on the cultural practices and features identified.

C. Methods

Historical documents, maps and existing archaeological information pertaining to the sites in the vicinity of this project were researched at the State Historic Preservation Division library, Cultural Surveys Hawai'i library, and the University of Hawai'i's Hamilton library. The Office of Hawaiian Affairs, O'ahu Island Burial Council, Hui Mālama O Nā Kūpuna, and members of other community organizations were contacted in order to identify potentially knowledgeable individuals with cultural expertise and or knowledge of the study area and the surrounding vicinity. A discussion of the consultation process can be found in the following section on "Community Consultations". Please refer to Table 1 for a complete list of individuals and organizations contacted. A cultural walk through with Shad Kane of the 'Ahahui Siwila Hawai'i O Kapolei Hawaiian Civic Club was conducted on September 4, 2003.

II. STUDY AREA DESCRIPTION

The proposed transmission mains are located in an urbanized setting along paved roads within the Kalaeloa Redevelopment Area within the former Barber's Point Naval Station in the 'Ewa Plains. The western water main alignment here referred to as segment A, runs within the existing road right-of-ways of Malakole Street east from Komohana Street to Saratoga Avenue, south along Saratoga Avenue to Lake Champlain Street, and then west along Lake Champlain Street from Saratoga Avenue to Coral Sea Road. The eastern water main alignment here referred to as segment B, runs within the Barber's Point Access Road from Kapolei Parkway southeast to Roosevelt Avenue, and then continues southeast along Enterprise Avenue from Roosevelt Avenue to a point approximately 150 ft. south of Saratoga Avenue.

The subject properties lie within an area of low topographic relief in the 'Ewa Plains. Elevations range from approximately five feet above mean sea level (MSL) to approximately 75 feet above MSL near the intersection of Kapolei Parkway and Roosevelt Avenue. According to the Soil Survey by the U.S. Department of Agriculture Soil Conservation Service soils within the project areas are primarily Malama stony silty clay loam (McN) with an average slope of one to twelve percent. The annual rainfall averages 10-30 inches, most falling between November and April.

The rights-of-way along the roads, for the most part, are periodically maintained. The vegetation in the vicinity consists primarily of Buffelgrass along with a number of weedy species; patches of *Sida ciliaris* are abundant in many places. Only two native species are known within the project areas; 'ilima (*Sida fallax*) and 'uhaloa (*Waltheria indica*). Both species are indigenous, that is, native to the Hawaiian Islands but also found elsewhere.

Honouliuli *Ahupua'a*, as a traditional land unit had tremendous and varied resources available for exploitation by early Hawaiians. The "karstic desert" and marginal characterization of the limestone plain, which is the most readably visible terrain does not do justice to the *ahupua'a* as a whole. The richness of this land unit is marked by the following available resources:

1. Twelve miles of coastline with continuous shallow fringing reef this offered rich marine resources.
2. Four miles of frontage on the waters of West Loch which offered extensive fisheries (mullet, *awa*, shellfish), as well as frontage suitable for development of fishponds (for example, Laulaunui).
3. The lower portion of Honouliuli Valley in the 'Ewa Plain offered rich level alluvial soils with plentiful water for irrigation from the stream as well as abundant springs. This land would have stretched well up the valley.
4. A broad limestone plain which because of innumerable limestone sinkholes offered a nesting home for a large population of avifauna. This resource may have been one of the early attractions to human settlement.
5. An extensive upland forest zone extending as much as twelve miles in land from the edge of the coastal plain. As Handy and Handy have pointed out, the forest was much more distant from the lowlands here than it was on the windward side, but on the

leeward side was more extensive (1972:469). Much of the upper reaches of the *ahupua'a* would have had species-diverse forest with *kukui*, *'ōhi'a*, sandalwood, *hau*, *ki*, banana, etc.

6. A network of trails giving access to Lualualei and Wai'anae coastal beaches.

Not only does Honouliuli *Ahupua'a*, include a long coastline fronting the normally calm water of leeward O'ahu but there is also four miles of waterfront along the west side of West Loch. The land immediately *mauka* (inland) of the Pacific coast consists of a flat karstic raised limestone reef forming a level nearly featureless "desert" plain marked in pre-contact times (previous to illuviation caused by sugar cultivation) by a thin or non-existent soil mantle. The micro-topography is notable in containing countless sinkholes caused by chemical weathering (dissolution) of the limestone shelf. Proceeding *mauka* from this limestone plain, this shelf is overlain by alluvium deposited through a series of gulches draining the Wai'anae Mountains. The largest of these is Honouliuli Gulch, towards the east side of the plain that drains into West Loch. To the west are fairly steep gradient gulches forming a more linear than dendritic drainage pattern. The major gulches are, from east to west: Awanui, Pālailai, Makaīwa, Waimānalo and Lumaloa. These gulches are steep-sided in the uplands and generally of a high gradient until they emerge onto the flat 'Ewa Plain. The alluvium they have carried has spread out in delta fashion over the *mauka* portions of the plain, which comprises a dramatic depositional environment at the stream gradient change. These gulches are generally dry, but during seasonal Kona storms carry immense quantities of runoff onto the plain and into the ocean.

III. CULTURAL SETTING

Both Segment A and Segment B are situated in the *ahupua'a* of Honouliuli in the *moku* or district of 'Ewa. The *ahupua'a* of Honouliuli is the largest traditional *ahupua'a* land unit on the island of O'ahu. Honouliuli includes all the land from the western boundary of Pearl Harbor (West Loch or Kaihuopala'ai) westward around the southwest corner of O'ahu to the 'Ewa/Wai'anae District Boundary with the exception of the west side of the harbor entrance which is in the *ahupua'a* of Pu'u'loa (the 'Ewa Beach/Iroquois Point area). Honouliuli *Ahupua'a* includes approximately nineteen kilometers (twelve miles) of open coastline from One'ula westward to the boundary known as Pili o Kahe. The *ahupua'a* extends *mauka* (almost pie-shaped) from West Loch nearly to Schofield Barracks in Wahiawā; the western boundary is the Wai'anae Mountain crest running north as far as Pu'u Hapapa (or to the top of Ka'ala Mountain according to some).

A. Mythological and Traditional Accounts

The traditions of the 'Ewa plains have been compiled and summarized numerous times, in studies by Sterling and Summers (1978), Hammatt and Folk (1981), Kelly (1991), Charvet-Pond and Davis (1992), Maly (1992), and Tuggle & Tuggle (1997). Some of the themes of these traditions, include connections with Kahiki (the traditional homeland of Hawaiians, probably in reference to central Polynesia) and the special character and relationship of the places known as Pu'uokapolei and Kualaka'i.

Connections with Kahiki are found in numerous place names, traditional events, and with the beings associated with Honouliuli. There are several versions of Kaha'i leaving from Kalaeloa for a trip to Kahiki to bring breadfruit back to 'Ewa (e.g. Kamakau 1991:110). There are several stories that associate places in the region with Kamapua'a and the Hina family, as well as with Pele's sisters, all of whom have strong connections with Kahiki (cf. Kamakau 1991:111; Pukui et al. 1974:200).

Pu'uokapolei was, perhaps one of the most sacred places, in Honouliuli (cf. Sterling and Summers 1978:33). Pu'uokapolei's connections with Kahiki are emphasized when it is noted that the hill was the home of Kamapua'a's grandmother, Kamaunuanoho, the Kahiki ancestor to the people of O'ahu (Fornander 1916-20, V: 318; Kahiolo 1978:81, 107; Charlot 1987:62). By name, Kapolei is associated with the goddess Kapo, another connection with the Pele and Kamapua'a stories (Kamakau 1976:14).

McAllister (1933:108) records that a *heiau* or temple was located on Pu'uokapolei, but was destroyed before his survey of the early 1930's. No remains were found in a recent field study of the area (Kennedy 1991). The *heiau* may have been associated with the sun (Fornander 1916-20, III: 292). The hill was used as a point of solar reference or as a place where such observations were made. Pu'uokapolei might have been understood as the gate of the setting sun. It is notable that the rising sun at the eastern gate of Kumukahi in Puna is associated with the Hawaiian goddess Kapo (Emerson 1978:41). There is little specific information for Pu'uokapolei, but the place name itself ("hill of beloved Kapo") is hard to ignore. It is mentioned in some cosmologies, Kū was the god of the rising sun, and Hina should be associated with the setting sun (Hina is the mother of Kamapua'a). Fornander (1916-20, III; 292) states, Pu'uokapolei may have been a jumping off place (also connected with the setting sun) and associated with the dead who roamed the adjacent Plain of Kaupe'a.

Pu'uokapolei was also the primary landmark for travelers between Pearl Harbor and the west O'ahu coast, with a main trail running just inland of it ('Ī'ī 1959:27, 29; also see map ('Ī'ī 1959:96). Pu'uokapolei was probably the most common name used as a reference for the area of the 'Ewa Plain including the present project area(s) in traditional Hawai'i (cf. Nakuina 1990:54; Fornander 1916-20, II: 318; E.M. Nakuina 1904, in Sterling and Summers 1978:34).

B. Traditional Hawaiian Times

A reconstruction of Hawaiian political history (Cordy 1996) indicates that in the early 1300s, 'Ewa was a dominant political entity that was joined with Wai'anae and Waialua under a king named Keaunui, son of Maweke and part of the Maweke-Kumuhonua line. O'ahu unification is understood as having occurred by A.D. 1400 under the King La'akona, also identified with 'Ewa (Cordy 1996). Cordy suggests that at least one royal center for 'Ewa was at Līhu'e in upland Honouliuli. There were several shifts of power from the 1500s until the early 1700s when Kūali'i achieved control of all of O'ahu, a process which included defeating 'Ewa chiefs in at least two battles. Peleiholani, a son of Kūali'i, took control of O'ahu as regent in 1740, and remained ruler of O'ahu until after 1778 when Kahahana (from the 'Ewa line of chiefs but raised in Kahekili's Maui court) took control of O'ahu.

The archaeological research of the 'Ewa Plain and associated areas suggests that there was some Hawaiian occupation within the early time range of A.D. 200-600 at several sites on the western side of the 'Ewa Plain (Davis et al. 1896:20:22; Charvet-Pond and Davis 1992:163-168, Goodfellow 1992) and one site adjacent to Honouliuli Stream, near Pearl Harbor (Dicks et al. 1987:45, 60-66). The early 'Ewa Plain occupations are interpreted as temporary camps for fishermen and bird hunters (Davis et al. 1986:25, Charvet-Pond and Davis 1992:75). The relationship of these earliest dates to the beginnings of early permanent settlement along the leeward coast is unclear (Charvet-Pond and Davis 1992:302). On the eastern side of Honouliuli, permanent occupation associated with taro fields and fishponds is certain by the A.D. mid-1500's (Dicks et al. 1987).

The early written accounts of the 'Ewa Plain generally describe this area as barren and unpopulated (Vancouver 1798[3]:361-363; Ellis 1989:11). However at the time of contact, the *ahupua'a* of Honouliuli was the largest on O'ahu, and in the first census taken in the 1831-32, it had the highest population of any *ahupua'a* on the island, at 1,026 people (Schmitt 1973:19).

The political center of the district of 'Ewa has been given little attention, but McAllister (1933:106) records a place named Lēpau on the Waipi'o Peninsula, as "a dwelling place of the *ali'i*." Handy and Handy (1972:470) believe this to have been the *ali'i* "stronghold" of 'Ewa, based on the productive strength of Pearl Harbor. There is also an account of Kamehameha II having a royal residence and resort at Pu'uoloa (Silva 1987:A-2).

After Kamehameha's O'ahu victory, he gave the *ahupua'a* of Honouliuli to Kalanimoku as part of *panalā'au*, or conquered lands, with the right to pass the land on to his heirs rather than having it revert to Kamehameha (Kame'eiehiwa 1992:58, 112). Kalanimoku subsequently gave the *ahupua'a* to his sister, Wahinepi'o.

C. Early to Late 1800s

Ten missionary schools were present within Honouliuli Ahupua'a during the early historical period, but later closed due to the lack of students (Kamakau 1961:424). Malden's 1825 map labels all of the central area of the 'Ewa Plain as "Low uncultivated Plain," broken only by a single "Cocoa-Nut Tree." Honouliuli village is the only significant community on the Plain, although there are small clusters of houses along the coast. In 1839, Hall (quoted in Kelly 1991:150) referred to crossing the "barren desolate plain" of 'Ewa. The road passing by Pu'uokapolei would have been active during this period ('I'i 1959:27; see Figure 3); but there was no recorded habitation between the towns of Honouliuli and Waimānalo (of Honouliuli). By the mid-1800s, cattle were well-established on the 'Ewa Plain, with an estimated 12,000 total head on O'ahu at this time (Cuddihy and Stone 1990:59).

According to (Souza 2003:21), during the Māhele of 1848, ninety-nine individual land claims in the *ahupua'a* of Honouliuli were registered and awarded by King Kamehameha III. Within the project area however, there were no *kuleana* land claims awarded to commoners. Almost all of the commoner *kuleana* claims were located in the lower portions of Honouliuli *Ahupua'a* near Pearl Harbor. Kekau'onohi, one of the wives of Kamehameha II, acquired a deed to all unclaimed land within the *ahupua'a*, (including the present project area) which totaled 43,250 acres. After Kamehameha II's death Kekau'onohi became the wife of Chief Levi Ha'alelea. Upon her death on June 2, 1851, all her property was passed on to her husband and his heirs. When Levi Ha'alelea died the property (including the current project area) went to his surviving wife, who in turn leased it to James Dowsett and John Meek in 1871 for stock running and grazing.

In the 1860's ownership of Honouliuli was transferred to John Coney (Yoklavich et al 1995:16) who then rented it to James Dowsett and John Meek in 1871 for the purpose of cattle ranching. In 1877, the land was sold to James Campbell.

Campbell initiated a variety of enterprises on his new holding. He fenced much of it for grazing, converted 10,000 acres to agriculture, and began drilling artesian wells. He also leased land for rice farming and fishing rights to Pearl Harbor. Campbell leased a large portion of Honouliuli Gluch (around West Loch) to Chinese rice farmers. In 1886, Campbell and B. F. Dillingham put together the "Great Land Colonization Scheme," which was an attempt to sell Honouliuli land to homesteaders (*Hawaiian Annual* 1886:74).

In 1890, Dillingham subleased all the land below 200ft ASL to 'Ewa Plantation Company for sugar cultivation. At this same time, Dillingham's main focus was his O'ahu Railway and Land Company, whose line eventually ran across the center of the 'Ewa Plain at the lower boundary of the sugar fields. Various lease documents from this period describe rice lands, pasture, a wood lot at Waimānalo, bee-keeping, and garden crops (Frierson 1973:15).

During this same period of agricultural activity, sisal (*Agave sisalana*) was being cultivated in the vicinity of the present project area(s). The plant was imported from Florida in 1893 and an area southeast of Pu'uokapolei was experimentally planted in 1894 (Kelly 1991:162, 165). Records show that the Hawaiian Fiber Company was established in 1898, with a roughly 300 acre plantation at Sisal (at the experiment farm) and at Waipahu (MacCaughy and Weinrich 1918:43, in Kelly 1991:165). The combined plantation output was between 130 and 140 tons by 1903, with expectations to double in the following year (Kelly 1991:165).

Commercial *kiawe* cutting was another local endeavor, producing an excellent charcoal. It began on the 'Ewa Plain in the 1870s and has continued in some areas up to the present. Gathering *Kiawe* pods for cattle fodder was another off shoot of this business.

The first government presence on the 'Ewa Plains came in the form of the Barber's Point Lighthouse, built by the Hawaiian Government in 1888 (Thrum 1889:89).

D. 1900's

In the early 20th century, the 'Ewa Plantation Company instituted an effort to bring arable soils to the coral plain (Frierson 1973:17). Drainage ditches were dug from the lower slopes of the Wai'anae range onto the lowlands and the adjacent slopes were plowed in vertical furrows just before the rainy season to induce erosion.

In 1902, a Magnetic Observatory was established by the U.S. Coast and Geodetic Survey (USCGS) near what is now the center of Naval Air Station Barbers Point (Kelly 1991:170). Also known as the Honolulu Observatory, the observatory measured earth movement and magnetic fields. After the 1946 tsunami, construction of the Hawai'i Tsunami Warning Center in 'Ewa Beach was initiated, and was completed in 1948. By the 1970s, its function had expanded to include weather monitoring and in 1973, responsibility for the Tsunami Warning System was turned over to the National Weather Service.)

By 1920, the lands of Honouliuli were used primarily for sugar cultivation and ranching (Frierson 1973:18). In the later 1920s, the main communities were at the northeast edge of the 'Ewa Plain. The largest community was still at Honouliuli. 'Ewa was primarily a plantation town, focused around the mill with a public school as well as a Japanese School.

Major land use changes came to the 'Ewa Plain from the 1930s, when the U.S. Military began development in the area. The 1930s and early 1940s saw Army, Navy, and Marine facilities constructed the most massive and lasting of which was NAS Barbers Point, initial development of Barber's Point Deep Draft Harbor, and development of Campbell Industrial Park. The paved roads of segment A are understood to date from this time,

During the 1970's and early 1980's, there was a relative abundance of industrial land available for development near to the bulk of population as well as at Campbell Industrial Park (Wanket 1991). A national economic slowdown occurred during the early 1980's and high interest rates curtailed demand for industrial and commercial development in areas like the Campbell Industrial Park.

IV. PREVIOUS ARCHAEOLOGICAL RESEARCH

The history of the 'Ewa Plain left a material record of overlapping events until the last 100 years of modern large-scale land modification. Sugar cultivation, military bases, and recent development have now destroyed much of this record. Intensive work in archaeology began after much of the modification had taken place from cultivation and military use, but was initiated before the modern development phase, so that at least some part of this past has now been salvaged in the cultural resource archaeology of the last 25 years. It is also fortunate that at NAS Barbers Point, after the initial base construction, large areas have been left undisturbed, providing the possibility of significant site and data preservation.

The 'Ewa Plain is now famous as a place where so little archaeology was done before 1970 and so much after this date. The first known reference to a site on the 'Ewa Plain is in (Nakuina 1904:50, brackets added):

A very short time ago the foundations of Kamaunuanoho's [Kamapua'a's grandmother] house could still be seen at Pu'uokapolei; also the remains of the stone wall surrounding her home. It has even been said that her grave could be identified, but since the extension of the cane and sisal planting to the pase of Pu'uokapolei, it is possible that the stones may have been removed for wall-making.

Thrum noted that a temple had been at Pu'uokapolei (Thrum 1907:46), and McAllister (1933:108) remarks that the stones of the temple "supplied the rock crusher" located nearby. Stokes (1909) and McAllister (1933:29) recorded fish traps, fishponds, and fishing shrines along the Pearl Harbor coast of the 'Ewa Plain. McAllister (1933:109) also noted "many sites" on the 'Ewa Plain, but it is not clear if he is referring primarily to stone walls of the ranching period or if he also visited many Hawaiian sites. As summarized by Davis (1990b:142-153), only a few other brief field visits were made by archaeologists from the time of McAllister's fieldwork until 1970; this included recording of structures by Kenneth Emory in 1933, burial removal by William Kikuchi in 1959, burial removal from NAS Barbers Point by Lloyd Soehren in 1962, partial excavation of a fishing shrine by Lloyd Soehren in 1966, and collection of artifacts from a beach deposit in 1969 by Roger Green.

In 1970, the first formal survey of an area of the 'Ewa Plain was undertaken (Lewis 1970) north of Kalaeloa (Barbers Point) on the western side of the plain, revealing numerous stone walled structure, most of which appeared to be house sites. In 1972, Patrick McCoy surveyed an area of the 'ili or land section of Pu'uoloa on the eastern side of the Plain, also revealing stone structures. Following additional survey by Barrera (1975) in the general area of the 1970 Lewis work, Aki Sinoto (1976) conducted detailed mapping and test excavations that would further define the nature of the archaeology of the 'Ewa Plain. The surveys of the 1970s made it clear that there was an extensive archaeological landscape over areas of the Plain that had not been destroyed by bulldozing, construction, or cultivation. Hawaiian habitation sites included C-shapes, small house enclosures, and modified sinkholes. Sinoto's excavations revealed habitation deposits associated with the houses, cultural deposits in the sinkholes, and the presence of bone of extinct species of birds.

Archaeological sites previously identified in the immediate vicinity of the present project area(s) (Figure 4) are listed in the following table:

Table 2 Archaeological Sites Identified in the Vicinity (Within 300 m)

Site #	Nature of Site	Location	Source
1721	Habitation Complex including a surface deposit, enclosure, c-shape & cultural sink	Approx. 200 m NE of corner of Malakole & Saratoga	Haun 1991
1722	Habitation & agricultural site incl. 2 enclosures, c-shape & 5+ mounds	Approx. 250 m NE of corner of Malakole & Saratoga	Haun 1991
1725	Habitation Complex including: 4 enclosures, 5 c-shapes & a mound	Approx. 30 m N of E end of Malakole	Haun 1991
1727	Cultural Sink/cave	Approx. 100 m NE of corner of Malakole & Saratoga	Haun 1991
1757	Cultural Sink	Approx. 30 m S of Lake Champlain Street	Tuggle & Tomonari-Tuggle 1997
4650	Habitation & agricultural site incl. an enclosure, 2 cultural sinks & a mound	Approx. 250 m W of S end of Enterprise Avenue	Landrum 1993

To our knowledge, no sites have been identified within the project area(s) per se. A buried wetland has been noted in the vicinity of Lake Champlain Street (Figure 4). A substantial complex of agricultural, habitation and burial sites was documented northeast of the corner of Malakole & Saratoga roads (Figure 4).

V. SUMMARY OF LAND USE

In late pre-contact times portions of Honouliuli had a relatively low population density. The central part of the *ahupua'a*, was probably an area of relatively low site density that was, dry and hot, and removed from the marine resources of the coast, streams, the fertile stream deltas around West Loch, and the eastern slopes of the Wai'anae Range. The Pu'uokapolei vicinity is located in the middle of this barren zone. Despite the lack of nearby settlements, Pu'uokapolei, a peak dominating the surrounding flat plain, was important to the Hawaiians as a *heiau* site, a place mentioned in chants and legends, and a place of geographical reference.

Mid 19th century Māhele documents indicates ninety nine individual land claims in the *ahupua'a* of Honouliuli. Almost all of the *kuleana* claims were located in the eastern portions of Honouliuli *Ahupua'a* near Pearl Harbor.

By the end of the 19th century, Honouliuli, a land use pattern was established which largely remained the same until the recent urban and industrial expansion. In 1890 Dillingham subleased land to the 'Ewa Plantation Company for sugar cultivation at the same time focusing on his O'ahu Railway and Land Company. During this same period of agricultural activity, sisal was being cultivated. The Hawaiian Fiber Company was established in 1898 and utilized lands in the vicinity of the present project areas.

In the 1900s, the lands of Honouliuli were used primarily for the cultivation of sugar and sisal. The largest community was the village of Honouliuli next to Pearl Harbor. Major land use changes began when the U.S. Military developed large portions of Honouliuli. By the 1950's Army, Navy, and Marine facilities were constructed, the most massive and lasting of which was NAS Barbers Point. Land modifications in the vicinity of the project area included; commercial cultivation of sisal and sugar, and the establishment of Barber's Point NAS, Campbell Industrial Park, and modern roadways.

Systematic archaeological research began after substantial land modification associated with commercial agriculture and military activity had already taken place. While at least some part of this past has now been salvaged in the cultural resource archaeology of the last 25 years much of the heritage on the land was obliterated before it was recorded.

VI. COMMUNITY CONSULTATION

Throughout the course of this study, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of and/or concerns about traditional cultural practices specifically related to the project area. This effort was made by letter, e-mail, telephone or in-person contact. In the majority of cases, letters along with a map of the project area were mailed with the following text:

In collaboration with KFC Engineering Management, Inc., Cultural Surveys Hawai'i is conducting a Cultural Impact Assessment for the proposed Board of Water Supply Kalaeloa Redevelopment Area Transmission Main. The Board of Water Supply is planning to install water mains in two discrete areas (Malakole St. – Saratoga Ave. and Barber's Point/Ft. Barrette Rd. – Enterprise Avenue, see 4). The purpose of the cultural study is to assess potential impacts to traditional cultural practices as a result of the subsurface work.

We are seeking your input regarding the following issues:

General history and present and past land use of the study area.

- Knowledge of cultural sites which may be impacted by the project, e.g., historic sites, archaeological sites, burials, etc...
- Knowledge of traditional gathering practices in the study area-both past and present.
- Cultural associations with the study area through legends, traditional use or otherwise.
- Referrals of *kūpuna* who might be willing to share their cultural knowledge of the study area in general.
- Any other cultural concerns the community might have related to Hawaiian or other cultural practices in the area of Kalaeloa, Barber's Point.

The individuals, organizations, and agencies we attempted to contact and the results of any consultation are presented in Table 1. The two individuals listed who were interviewed for this study were both recommended by others on the contact list as having some personal knowledge whether through residence, professional association, or cultural association. Cultural Surveys Hawai'i starts out with a list of community contacts and then follows up on their referrals.

Table 1 Community Contacts and Comments**Key:**

Y= Yes

N= No

A= Attempted (at least 3 attempts were made to contact individual, with no response)

S= Some knowledge of project area

D= Declined to comment

U= Unable to contact, i.e., no phone or forwarding address, phone number unknown

OHA= Office of Hawaiian Affairs

OIBC= O'ahu Island Burial Council

SHPD= State Historic Preservation Department

Name	Affiliation	Contacted	Personal Knowledge (Y/N/S)	Comments
Aiu, Pua	OHA	Y	N	-
Balfour, William D. Jr.	Department of Parks and Recreation City and County of Honolulu	Y	N	No information
Cayan, Phyllis Coochie	OIBC	Y	N	Referred to Shad Kane and Nettie Tiffany
Diamond, Van Horn	OIBC	Y	N	Referred to Arlene Eaton involved in 'Ewa Hawaiian Civic Club
Diaz, Skippa	Hawai'i State Capitol	A	-	-
Epspero, Willie	Hawai'i State Capitol	A	-	-
Gabbard, Michael	Honolulu City Council District 1	A	-	-
Kane, Shad	'Ahahui Siwila Hawai'i O Kapolei Hawaiian Civic Club	Y	Y	Comment: He is familiar with both locations.
Kapeliela, Kana'i	SHPD Burials Director	A	-	-

Community Consultation

Keala, Jalna	'Ahahui Siwila Hawai'i O Kapolei Hawaiian Civic Club	A	-	-
Lenchanko, Thomas	Native Hawaiian Historic Preservation	Y	S	-
Malama, Tesha	'Ewa Neighborhood Board No. 23	A	-	-
Markell, Ka'iana	SHPD Burial Site Programs	A	-	-
Mindo, Roomy	Hawai'i State Capitol	A	-	-
Napoka, Nathan	SHPD Cultural and History Branch	Y		Referred to Shan Kāne and the Archaeological Reports by Tuggle and Tuggle.
Nihipali, Kūnani	Hui Malama O Nā Kūpuna	A	-	-
Robert, Normand	'Ewa Neighborhood Board No. 23 (Chair)	A	-	-
Tiffany, Nettie Pualani	OIBC	Y	Y	Nettie is familiar with the area. She would visit the area with her grandmother.
Yee, Peter L.	Native Hawaiian Historic Preservation Council	Y		Referred contacting a Mr. Thomas Lenchanko, Native Hawaiian Historic Preservation Council.

VII. SUMMARIES OF KAMA'ĀINA INTERVIEWS

Two *Kama'āina* and *kūpuna* with knowledge of the planned project area were interviewed for this assessment. Nettie Pualani Tiffany and Shad Kane participated in informal face-to-face interview "talk story" sessions.

Nettie Tiffany

Interview Summary:

Nettie Tiffany was interviewed by Cultural Surveys Hawai'i on August 26, 2003. Ms. Tiffany is employed by the Campbell Estate as the supervisor for the Lanikūhonua cultural center located on the grounds of the resort complex at Ko'olina. Ms. Tiffany is known amongst the community as the *kahu* or caretaker of the *āina* or the lands in the vicinity of Ko'olina, of the past, present and the future. Prior to Ms. Tiffany's taking responsibility her mother, Leilani Fernandez was *kahu* going back to the days when Mrs. Alice Kamokila Campbell was living.

Ms. Tiffany noted that she and her brother were taken down to the 'Ewa Coral Plains around the planned project areas for medical attention. She specially commented:

When we were young children, my brother and I were taken there by our mother. There were still people living there during the 1950s. The people there were Hawaiian and had the powers of healing and they were very black people. Both my brother and I were healed by those people. I do not remember any kind of gathering only that my mother brought things to exchange with the people of Honouliuli. I remember being shown some cultural sites further south of Malakole Street. My mother did tell me that most of this area was the dry plain and later cultivated for sugar cane. I know my mother knew the medicines and what grew close to the beach of Kalaeloa, like the morning glory, and what they gathered from the mountains.

My main concern is that when the project has been started those involved should be very careful when bulldozing, it should be monitored. I also feel that they should take soil samples of that area. The soils used to cultivate sweet potato in the ancient times were also the same soil used in burials and are very rich in nutrients. The soil was taken from various sinkholes in the *āina*. Just be very careful.

Shad Kane

A cultural walk through and an informal interview was conducted with Shad Kane by Cultural Surveys Hawai'i on September 4, 2003.

Interview Summary:

Shad Kane was born in Honolulu on February 23, 1945 to Hattie and Tazoni Kane. He was raised on the Pearl City Peninsula and currently resides in Makakilo. Now retired from the Honolulu Police Department, he is active as a community leader and volunteer. He is a member of a number of community groups including: The Nature Conservancy, the 'Ahahui Sivila Hawai'i O Kapolei Hawaiian Civic Club, and the Makakilo/Kapolei/Honokai Hale Neighborhood Board. Mr. Kane is an avid hiker and an accomplished horseman who often visits

the mountain ranges above the project area. He is presently working with the noted Kumu Hula John Kaimikaua on the up coming cultural center below Pu'uokapolei.

Mr. Kane noted that there are a large number of cultural sites around the project area of Malakole. He specifically commented:

I am very familiar with both locations of the proposed actions. The Malakole project is fairly close to a number of documented large rectangular enclosures, several platforms, several cultural mounds, and a cultural sinkhole (Rosendahl and Ziegler 1988:3). This area has been identified as a habitation site which would make it likely that bones may be found in close proximity to this site. There are undocumented cultural structures in the area of Enterprise and within an old sisal plantation site. There is *mo'olelo* [traditions] associated with the region referred to as "Kanehili".

Both Shad Kane and Cultural Surveys Hawai'i visited Site B. Mr. Kane related some sad news that he came out to the site on the day prior to the interview to find that the cultural structures in the area south of Site B had been bulldozed. There was also evidence of a recent fire in the area. Mr. Kane remembered there was a small rectangular structure made of coral which is now gone.

VIII. RECOMMENDATION

Based on the preceding historic and archaeological research Cultural Surveys Hawai'i suggests that no further cultural impact assessment study is appropriate for either transmission main corridor segment. Information gathered from individuals contacted or interviewed indicated that the vicinity of the project area(s) was used by cultural practitioners prior to the development of these lands. Traditional practices included; healing, exchange, and native gathering rights. Some of these cultural traditions were still practiced as recently as the 1950s but no cultural practices appear to be on-going at the present.

A concern was expressed by the informants for monitoring during the initial bulldozing process. The concern expressed was that prior archaeological documentation of cultural sites within the 'Ewa Plains indicated to the informants that there may still be a possibility that burials could be discovered. We recommend that this concern be considered, possibly including further consultation with the State Historic Preservation Division archaeology, burials and/or culture and history branches. Certainly in the event of any discovery of human remains or any other significant finds all work in the immediate area should cease and the State historic Preservation Division should be promptly notified.

IX. BIBLIOGRAPHY

- Barrera, William
1975 A Report on the Archaeological Reconnaissance Survey of the Proposed Barbers Point Harbor Area. Department of Anthropology, Bishop Museum, Honolulu.
- Charlot, John
1987 *The Kamapua'a Literature*. The Institute for Polynesian Studies, Monograph Series No. 6. Brigham Young University-Hawai'i. Lā'ie.
- Charvet-Pond, A. and B.D. Davis
1992 West Beach Data Recovery Program, Phase 4, Archaeology and Paleontological Excavations, 2 vols. Report for West Beach Estates. Paul H. Rosendahl, Ph. D., Inc., Hilo.
- Cordy, Ross
1996 The Rise and Fall of the O'ahu Kingdom: A Brief Overview of O'ahu's History. In J.M. Davidson, G. Irwin, B.F. Leach, A. Pauley, and D. Brown (editors) *Oceanic Culture History: Essays in Honor of Roger Green*. New Zealand Journal of Archaeology Special Publication, pp. 591-613.
- Cuddihy, L.W. and C.P. Stone
1990 Alteration of Native Hawaiian Vegetation: Effects of Humans, Their Activities, and Introductions. University of Hawai'i Cooperative National Park Resources Studies Unit, Honolulu
- Damon, Frank
1882 Tours Among the Chinese, No. 1. *The Friend*. April.
- Davis, B.D., A. Haun, and P. H. Rosendahl
1986 Phase I-Research Design for Intensive Survey and Test Excavations, West Beach Data Recovery Program. Paul H. Rosendahl, Ph.D., In., Hilo.
1990b Human Settlement in Pristine Insular Environments: A Hawaiian Case Study from Barbers Point, Southwestern O'ahu. Ph.D. Dissertation, Department of Anthropology, University of Hawai'i, Honolulu.
- Dicks, A. Merrill, Alan Haun, and Paul H. Rosendahl
1987 Archaeological Reconnaissance Survey for Environmental Impact Statement, West Loch Estates - Golf Course and Parks. Prepared for R.M. Towill Corporation. Paul H. Rosendahl, Ph. D., Inc., Honolulu.
- Ellis, William
1969 *Polynesian Researches: Hawai'i*. Originally published 1842. Charles e. Tuttle, Rutland, Virginia.
- Emerson, N.B.
1978 *Pele and Hi'iaka: a Myth from Hawai'i*. Originally published 1915. Charles E. Tuttle, Rutland, Virginia.

- Formander, Abraham
1916-20 *Formander Collection of Hawaiian antiquities and Folk-lore*. Memoirs of the B.P. Bishop Museum, Vols. 4-6. Originally published 1870's. Bishop Museum Press, Honolulu.
- Frierson, Barbara
1973 A study of Land Use and Vegetation Change: Honouliuli, 1790-1925. MS. On file, Department of Geography, University of Hawai'i, Honolulu.
- Goodfellow, Susan T.
1992 Data Analysis. In A. Charvet-Pond and B. Davis, *West Beach Data Recovery Program, Phase 4-Archaeological and Paleontological Investigations, Ko Olina Resort, Land of Honouliuli, 'Ewa, Island of O'ahu*, Appendix I. Paul H. Rosendahl, Ph. D., Inc., Hilo.
- Hammatt, Hallett H., Ph. D., and Bushnell, K. W. Bushnell, B.A.
2002 *Cultural Impact Assessment of the Proposed Middle Street Transit Center Kalihi Ahupua'a, kona District, O'ahu*. Cultural Surveys Hawai'i, Inc.
- Hammatt, Hallett H., Ph. D., and Souza, Kēhaulani E., B.A., and Shideler, David, M.A.
2003 A Cultural Impact Assessment of An Approximately 250-Acre Parcel for the Proposed Kunia Land Fill Project, Honouliuli Ahupua'a, 'Ewa District, Island of O'ahu, (TMK: 9-2-04: por. 5). Cultural Surveys Hawai'i, Inc.
- Hammatt, H.H. and W.H. Folk
1981 Archaeological and Paleontological Investigation at Kalaeloa (Barber's Point), Honouliuli, 'Ewa, O'ahu, Federal Study Areas 1a and 1b, and State of Hawai'i Optional Area 1. Prepared for U.S. Army Corps of Engineers. Archaeological Research Center Hawai'i, Inc., Lawa'i.
- Handy, E.S.C. and E.G. Handy
1972 *Native Planter in Old Hawai'i, Their Life, Lore, and Environment*. B. P. Bishop Museum Bulletin 233. Bishop Museum Press, Honolulu.
- Haun, Alan E.
1991 *An Archaeological Survey of the Naval Air Station, Barber's Point, O'ahu Hawai'i*. Applied Research Group, B. P. Bishop Museum, Honolulu.
- Hawaiian Annual
1986 Great Land Colonization Scheme. *The Hawaiian Annual for 1886*. Thos. G. Thrum, Honolulu.
- 'Ī'i, Johan Papa
1959 *Fragments of Hawaiian History*. Originally printed 1869. Bishop Museum Press, Honolulu.
- Kahiolo, G. W.
1978 *He Mo'olelo No Kamapua'a; the Story of Kamapua'a*. Hawaiian Studies Program, University of Hawai'i, Honolulu.
- Kamakau, S.M.
1991 *Tales and Traditions of the People of Old; Nā Mo'olelo a Ka Po'e Kahiko*. Originally published 1865-1869. Bishop Museum Press, Honolulu.

Bibliography

- 1976 *The Works of the People of Old, Nā Hana a Ka Po'e Kahiko*. B.P. Museum Special Publication 61. Originally published 1869-1870. Bishop Museum Press, Honolulu.
- 1961 *Ruling Chiefs of Hawai'i*. Originally published 1868-1870. The Kamehameha Schools Press, Honolulu.
- Kame'eleihiwa, Lilikala
1992 *Native land and Foreign Desires. Pehea La E Pono Ai?* Bishop Museum Press, Honolulu.
- Kelly, M.
1991 *Notes on the History of Honouliuli*. In A.E. Haun, *Archaeological Survey of the Naval Air Station, Barber's Point O'ahu, Hawai'i*, Appendix A. Prepared for Commander, Pacific Division, Naval Facilities Engineering Command, Pearl Harbor. Applied Research Group, Bishop Museum, Honolulu.
- Kennedy, Joseph
1991 *Subsurface Testing at the Proposed Kapolei Park/Fort Barrette, Pu'u Kapolei, Island of O'ahu*. Archaeological Consultant of Hawai'i, Haleiwa.
- Landrum, James
1993 *Archaeological Reconnaissance and Limited Subsurface Testing at the Proposed Family Housing Construction Area, Project No. 34863, Barber's Point Naval Air Station, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island*. Ogden Environmental and Energy Services Co. Honolulu
- Lewis, Ernest
1970 *The Campbell Project: A Preliminary Report*. Typescript, Department of Anthropology, University of Hawai'i, Honolulu.
- Maly, Kepā
1992 *Historical Documentary Research*. In B. Burgett and P.H. Rosendahl *Archaeological Inventory Survey, Contaminated Soil Stockpile/Remediation Facility*, Appendix E. Report submitted to Halber Hastert & Fee, Honolulu. Paul H. Rosendahl, Ph. D., Inc., Hilo.
- McAllister, J. G.
1933 *Archaeology of O'ahu*. Bishop Museum Bulletin 104. Bishop Museum Press, Honolulu.
- Nakuina, M.E.
1904 *Hawai'i Its People, Their Legends*. [no publisher] Honolulu.
1990 *The Wind Gourd of La'amaomao*. Translated by E.T. Mo'okini and S. Nakoā. Originally published 1869-1871. Kalamakū Press, Honolulu.
- Pukui, M.K., S.H. Elbert, and E. Mo'okini
1974 *Place Names of Old Hawai'i*. University Press of Hawai'i, Honolulu.

- Rosendahl, P. H., Siegler, A.C.
1988 *Interim Report: Summary of Findings.* Sinkhole Test Excavations Camp Malakole Industrial Subdivision Site, Land of Honouliuli, Ewa District, Island of O'ahu. Prepared for Cook Inlet.
- Schmitt, R. C.
1973 *The Missionary Censuses of Hawai'i.* Pacific Anthropological Records No. 20. Department of Anthropology, Bishop Museum, Honolulu.
- Silva, Carol L.
1987 *Historical Documentary Research-West Loch Estates Project Area.* In A.M. Dicks, A.E. Haun, and P.H. Rosendahl, *Archaeological Reconnaissance Survey for Environmental Impact Statement, West Loch Estates-Golf Course and Park, Appendix A.* Prepared for City and County of Honolulu, Hawai'i . Paul H. Rosendahl, Ph.D., Inc., Hilo.
- Sinoto, Aki
1976 *A Report on Cultural Resources Survey at Barbers Point, Island of O'ahu.* Prepared for Department of the Army, Corps of Engineers, Pacific Ocean Division. Department of Anthropology, Bishop Museum, Honolulu.
- Sterling, E.P. and C.C. Summers
1978 *Sites of O'ahu.* Bishop Museum Press, Honolulu.
- Stokes, John F.
1909 *Walled Fish Traps of Pearl Harbor.* Occasional Papers of the Bishop Museum 4(3):199-212.
- Thrum, T.G.
1907 Heiaus and Heiau Sites Throughout the Hawaiian Islands. *The Hawaiian Annual for 1908.* Thos. G. Thrum, Honolulu.
- Tuggle H. David, Ph. D. and M. J. Tomonari Tuggle, M. A.
1997 *Synthesis Of Cultural Research Studies of the 'Ewa Plain*
Task 1a: Archaeological Research Services for the Proposed Clean up, Disposal and Refuse of Naval Air Station Barbers Point, O'ahu, Hawai'i.
- Vancouver, G.
1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World...3* Volumes. Robinson and Edwards, London.
- Wanket, William E.
1991 *Proposal for Development Plan Amendment/Environmental Assessment, Kapolei Business Park,* The Estate of James Campbell.
- Yoklavich, A.K., R. Drolet and P. Drolet
1995 *Preliminary Report Cultural Resources Management Overview Survey Naval Air Station, Barbers Point, O'ahu Hawai'i.* Ogden Environmental and Energy Services Co., Inc., Honolulu

Bibliography

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APPENDIX C – PRELIMINARY CONSULTATIONS

PRELIMINARY LETTER

Community input on the proposed project was solicited as part of the environmental assessment process. A preliminary letter was sent to government agencies, businesses and civic organizations that may be impacted by this project. Letters were sent to the following:

1. US Army Corps of Engineers, Honolulu District, ATTN: CEPOH-EC-R
2. Department of Transportation, Rodney K. Haraga, Director
3. Department of Land and Natural Resources, Peter T. Young, Chairperson
4. DLNR State Historic Preservation Division, Don Hibbard, Ph.D., Administrator
5. DLNR Commission on Water Resource Management, Ernest Y. W. Lau, Deputy Director
6. Department of Health, Environmental Planning Office
7. Department of Health, Noise, Radiation and Indoor Air Quality Branch
8. City and County of Honolulu, Department of Planning and Permitting, Civil Engineering Branch
9. City and County of Honolulu, Department of Planning and Permitting, Traffic Review Branch
10. City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch
11. City and County of Honolulu, Department of Planning and Permitting, Urban Design Branch
12. City and County of Honolulu, Department of Planning and Permitting, Subdivision Branch
13. City and County of Honolulu, Facility Maintenance Department, Larry J. Leopardi, P.E., Director
14. City and County of Honolulu, Design and Construction Department, Tim Steinberger, P.E., Director
15. City and County of Honolulu, Environmental Services Department, Frank J. Doyle, P.E., Director
16. Department of Accounting and General Services, Russ K. Saito, Comptroller
17. Disability and Communication Access Board, Francine Wai, Executive Director
18. Hawaii Community Development Authority
19. Department of the Navy, Commander, Navy Region, Hawaii
20. US Fish & Wildlife Service, O'ahu National Wildlife Refuge
21. Federal Aviation Administration, Honolulu Flight Standards District Office
22. Department of Agriculture, Earl J. Yamamoto, Planner
23. Honolulu Fire Department, Attilio Leonardi, Chief

-
24. Department of Business, Economic Development and Tourism, Energy, Resources and Technology Division
 25. The Gas Company
 26. Verizon Hawaii
 27. Hawaiian Electric Co., Inc.
 28. AT & T Company
 29. Chevron Products Company
 30. The Estate of James Campbell, Henry Eng
 31. Oceanic Time Warner Cable
 32. Department of Hawaiian Homelands, Hawaiian Homes Com., Micah A. Kane, Chair
 33. Office of Hawaiian Affairs, Housing, Finance & Development Corporation
 34. Office of Hawaiian Affairs, Administrator
 35. Office of Hawaiian Affairs, Office of Planning
 36. 40th Representative District, Mark S. Moses
 37. 19th Senatorial District, Brian Kanno
 38. University of Hawaii Environmental Center
 39. Kapolei Hawaiian Civic Club, Shad Kane
 40. Makakilo/ Kapolei/ Honokai Hale Neighborhood Board, Maeda C. Timson, Chairperson
 41. Department of Defense, Maj Gen Robert G. F. Lee, Adjutant General
 42. Hawaii Water Environment Association
 43. The Outdoor Circle

The following pages include a copy of the correspondence, with copies of the responses received.



KFC ENGINEERING MANAGEMENT, Inc.

PROJECT MANAGEMENT CONSULTANTS * ARCHITECTURAL/ENGINEERING DESIGN * CONSTRUCTION MANAGEMENT

August 27, 2003

US Army Corps of Engineers, Honolulu District
ATTN: CEPOH-EC-R
Building 230, Ft. Shafter
Honolulu, HI 96858-5440

The City and County of Honolulu Board of Water Supply (BWS) is proposing to construct two (2) 16-inch water mains to interconnect the Kalaeloa water system with the BWS water system. One of the proposed water main alignments requires crossing of the drainage channel that runs perpendicularly to the end of Malakole Street in Campbell Industrial Park.

The purpose of this correspondence is to:

1. acquaint you with this proposed project;
2. solicit any concerns or comments you may have to ensure that they will be addressed in the environmental assessment;
3. determine if any permits are required from your office, and
4. establish a point of contact for future correspondence.

A brief description of the proposed project is attached, along with a map showing the transmission main layouts.

For your convenience, a fax response cover sheet is attached. Should you have any questions or require additional information, please call me at 833-1841, or e-mail me at: jdubois@kfcinc.com.

Sincerely,

Joelle Dubois, P.E.
Project Manager



KFC ENGINEERING MANAGEMENT, Inc.

PROJECT MANAGEMENT CONSULTANTS * ARCHITECTURAL/ENGINEERING DESIGN * CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

To: KFC Engineering Management, Inc.
Attn: Joelle Dubois

Fax No.: (808) 834-4833

From: US Army Corps of Engineers, Honolulu District
ATTN: CEPOH-EC-R
Building 230, Ft. Shafter
Honolulu, HI 96858-5440

Re: BWS Kalaeloa Redevelopment Area Transmission Mains

Please Check One:

- There is no need to include us in any further correspondence.
- Please keep us informed on this project. The point of contact is:

Name: _____

Telephone No.: _____

Fax No.: _____

- Comments are attached:

Number of Pages: _____

BWS KALAELOA REDEVELOPMENT AREA TRANSMISSION MAIN

Project Background

Upon the July 1, 1999 closure of the Barber's Point Naval Air Station, over 2,000 acres of land were declared surplus to the Federal Government's needs and were conveyed to various other Federal, State and city entities (named the "Kalaeloa Community Development District"). In order to maintain the regional water supply, the City and County of Honolulu Board of Water Supply (BWS) is proposing to construct two (2) 16-inch water mains to interconnect the existing system with the BWS system (see attached layout).

The first section will be constructed fully within existing public roads, along Barber's Point Access Road and Enterprise Avenue, from Kapolei Parkway to Saratoga Street (approx. 3,850 LF). The second section will be constructed within public roads, private lands belonging to the Campbell Estate, and public undeveloped lands belonging to the Department of Hawaiian Homelands. This alignment will run along Komohana Street from Malakole Street to Saratoga Avenue, then south along Saratoga Avenue to Lake Champlain Street, then 400 LF east on Lake Champlain Street (approx. 4,000 LF).

Railroad Crossing

Immediately prior to the Barber's Point Access Road / Enterprise Avenue transition, the water main will cross the railway line used by the Hawaii Railway Society. The design team will consult with Hawaii Railway Society representatives to minimize the impact to their operations.

Drainage Channel Crossing

Immediately prior to the Malakole Street / Saratoga Avenue intersection, the water main crosses a drainage channel owned by the Campbell Estate. Design intent is to cross beneath the drainage channel, encasing the water main in concrete. The trench required for this crossing will be approximately five feet deep.

RECEIVED AS FOLLOWS

SEP 23 11:37 AM 9/23/04 FAX 808-431-4060

RECEIVED

SEP 23 2004



KFC ENGINEERING MANAGEMENT, INC.

REGULATORY BRANCH, HONOLULU DISTRICT, CENTRAL, HAWAII

FAX MEMORANDUM

To: KFC Engineering Management, Inc.
 Attn: Juliette Dubois

From: City and County of Honolulu
 Facility Maintenance Department
 1000 Uluohia Street, Suite 215
 Kapolei, HI 96707

Re: BWS Kalaheoa Redevelopment Area Transmission Mains

Please Check One:

- There is no need to include us in any further correspondence. DRN 03-693
- Please keep us informed on this project. The point of contact is:

Name: _____
 Telephone No: _____
 Fax No: _____
 Comments are attached
 Number of Pages: _____

RECEIVED
 SEP - 3 2004
 KFC

Dear Requester:

We have received your request for jurisdictional determination, review comments on SEP - 2 - 4003. This is not an indication of acceptance or approval of your request. Further details will be provided to you in writing within 15 days.

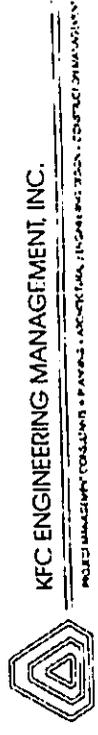
Your Project Name: BWS KALAHEOA 15' TRANSMISSION MAIN
 File No. (): 200300876 has been assigned to
 Mr. Frank Wasmuth, Project Manager at 808-431-2701.

Thank you
 Regulatory Branch, Honolulu District
 U.S. Army Corps of Engineers
 Phone: 808-431-2723 Ext: 908-431-4060

RECEIVED AS FOLLOWS

09:21:03 THU 12:15 FAX 808 8825113 KFC ENVIRONMENTAL SVCS

SEP 09 09 00 07:27Z WUN333K RALPH 5227-6130



KFC ENGINEERING MANAGEMENT, INC.

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PROJECT MANAGEMENT CONSULTING SERVICES • ENVIRONMENTAL ENGINEERING • DESIGN • CONSTRUCTION MANAGEMENT

PROJECT MANAGEMENT CONSULTING SERVICES • ENVIRONMENTAL ENGINEERING • DESIGN • CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

FAX MEMORANDUM

To: KFC Engineering Management, Inc.
Attn: Joelle Dabois

Fax No: (808) 834-4833

From: City and County of Honolulu
Environmental Services Department
1000 Uluohia Street, Suite 308
Kapolei, HI 96707

Re: BWS Kalaheoa Redevelopment Area Transmission Mains

To: KFC Engineering Management, Inc.
Attn: Joelle Dabois

Fax No: (808) 834-4833

From: City and County of Honolulu
Design and Construction Department
650 S. King Street
Honolulu, HI 96813

Re: BWS Kalaheoa Redevelopment Area Transmission Mains

Please Check One:

Please Check One:

There is no need to include us in any further correspondence.

There is no need to include us in any further correspondence.

Please keep us informed on this project. The point of contact is:

Please keep us informed on this project. The point of contact is:

Name: Jackie Pokuk, Program Coordinator

Name: _____

Telephone No.: 692-5727

Telephone No.: _____

Fax No.: 692-5713

Fax No.: _____

Comments attached: Looks O.K. in U.S.

Comments attached: _____

Number of Pages: 1

Number of Pages: _____

Please Standards in regards to Separation of water + Sewer lines.

Thank you
Jackie

Postmaster	2071	2071
City	Ala Moana	Ala Moana
State	Hawaii	Hawaii
Zip	96813	96813

WUN333K RALPH 5227-6130

RECEIVED AS FOLLOWS

Joelle Dubois, P. E.
Page Two

If you have any questions about archeology, please feel free to call Sara Collins at 692-8626 or Elaine Jourdain at 692-5027. Should you have any questions about the NLE, please feel free to contact Haiman Napoa at 587-1192.

Mahe

Haiman Napoa, Branch Chief, History & Culture
State Historic Preservation Division

EJN

Haiman Napoa, Branch Chief, History & Culture
Ben Schlapak, Hawaiian Railway Society, P.O. Box 60369, Ewa Station, Ewa
Mahe at 56706

RECEIVED



KFC

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
1000 Kalia Road, Room 215
Honolulu, Hawaii 96813

Joelle Dubois, P. E.
Project Manager
KFC Engineering Management, Inc.
3375 Kapiolani St., Suite P-210, #4
Honolulu, Hawaii 96815

LOG NO. 2003.1911
DOC NO. 0309EJ39

Dear Ms. Dubois

SUBJECT Chapter 6E-8 Historic Preservation Review - Board of Water Supply
Construction of Two 16-Inch Water Mains for Kalaheo
Redevelopment Area Transmission Mains Phase II
Honolulu, Ewa, Oahu
IMK-1119-1-013-001

Thank you for the opportunity to comment on the proposed installation of two (2) 16-inch water mains to interconnect the Kalaheo water system with the BWS water system. Our review is based on historic maps and aerial photographs maintained at the State Historic Preservation Division, no field inspection was made of the proposed areas. We received notification of this undertaking from your office on September 2, 2003, and provide the following comment:

One of the alignments for the proposed water main will be within existing public roads along the Barber's Point Access Road and Ericson Street from Kapa'e Parkway to Saratoga Street. The second alignment crosses the drainage channel that separates Campbell Industrial Park from Barber's Point HAS and runs along Mahoe St. from Kapa'e Parkway to Saratoga Avenue to Labo Charpin Street. The alignment is designed to cross beneath the existing drainage channel.

Several archaeological surveys have been conducted for Campbell Industrial Park and Barber's Point HAS. No significant historic sites have been recorded for the proposed alignment except for the Oahu Railroad Right of Way, a significant historic site listed on the National Register of Historic Places (Site 50-80-12-5714), at the Barber's Point Access Road Enterprise Avenue alignment crossing. Thus, this project has the potential to have an adverse effect on the Right-of-Way. We understand that you will be consulting with the Hawaiian Railway Society to minimize this potential adverse effect. We also request that you contact Haiman Napoa of our office to discuss the potential impact to the OR&L ROW.

RECEIVED AS FOLLOWS

BWS Kalaheo Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page C-9

JP -

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
1155 Punchbowl Street, Honolulu, Hawaii 96814



RECEIVED
SEP 11 2003
KFC

September 4, 2003

Regulatory Branch

Ms. Joslin Dabson, P.E.
Project Manager
3375 Koaopaka Street, Suite F 220-50
Honolulu, Hawaii 96819

Dear Ms. Dabson:

As requested in your letter regarding your client's proposed activity to reconstruct the Kalaheo and Board of Water Supply water systems at Barber's Point, Oahu Island. Based on the information submitted, it appears that the 16-inch water main crossing from Melrose Street to Lake Champlain Street will be adjacent to a wetland in the vicinity of Saratoga Avenue. The discharge of fill material into the limits of that wetland is regulated under Section 404 of the Clean Water Act and the Corps may exercise its jurisdiction and may require an application for a Department of the Army permit be submitted before the activity begins. The location of, and potential impacts to, that wetland should also be addressed in any environmental assessment that you prepare for the City and County of Honolulu Board of Water Supply.

Thank you for your diligence in ensuring the protection and conservation of Hawaii's water resources. If you require additional information or have further questions, you may call Mr. George P. Young, P.E. at (808)438-7201 or by fax at (808)438-4160. Please refer to File Number 20030805 in any future correspondence with us.

Sincerely,

George P. Young, P.E.
George P. Young, P.E.
Chief, Regulatory Branch

Copy furnished
Commission on Water Resource Management, Department of Land and Natural Resources,
1155 Punchbowl Street, Honolulu, Hawaii 96814
Office of Planning, Coastal Zone Management Program, P.O. Box 2139, Honolulu, Hawaii 96814
Coastal Water Branch, Department of Health, P.O. Box 2375, Honolulu, Hawaii 96814-3380

RECEIVED
SEP 11 2003
KFC



STATE OF HAWAII
COMMISSION ON WATER RESOURCE MANAGEMENT
HONOLULU, HAWAII 96819

September 9, 2003

Ms. Joslin Dabson, P.E.
KFC Engineering Management, Inc.
3375 Koaopaka Street, Suite F 220-50
Honolulu, Hawaii 96819

Dear Ms. Dabson:

Stream Channel Alteration Permit Application
Install two 16-inch Waterlines at Campbell Industrial Park

This is in response to your letter dated August 27, 2003, regarding a stream channel alteration permit is required for construction of two Board of Water Supply 16-inch water mains at two sites in Campbell Industrial Park. The first location is a portion of Mahalo Street & Saratoga Avenue, the second section is on a section of Barber's Point Access Road and Enterprise Street.

Previous field inspections in this vicinity did not observe any natural watercourses with sufficient flows of water to support instream uses such as riparian pools, aquatic life, etc. No streams would be affected by the proposed construction; therefore, a stream channel alteration permit would not be required.

Thank you for consulting with us on our permit requirements. If you have any questions, please call David Higa at 587-0249.

Sincerely,

Ernesty B. Lau
ERNESTY B. LAU
Deputy Director

U. WONG READ LATE. TEMPORARY. SEP 10 2003. BWS. 16. RECEIVED 04:46

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CITY AND COUNTY OF HONOLULU



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SEP 21 2004

KFC

September 17, 2004

Ms. Joelle Dubois, P.E.
KFC Engineering Management, Inc.
2215 Koolaloa Street, Suite F220-50
Honolulu, Hawaii 96819

Re: Subject: Inquiry
Kalaeloa Water System Improvements
KWS-2004, EWR, Oahu

This is in response to your inquiry letter dated 10/14/04 regarding the construction of a new 18-inch water main.

We request that your environmental assessment and final details of the project be submitted as an appendix to the drainage channel of the road at the intersection of Koolaloa Street and Industrial Park, or wherever the water main is installed, to allow for a more thorough review. Any significant trees which may be affected by the proposed water main construction shall be protected and preserved to the maximum extent practicable. An arborist may need to be consulted in such instances.

If you have any further assistance, please contact Joyce Zhou at our Office of Water Quality Branch at 527-5515.

Sincerely,

Joyce Zhou
Joyce Zhou, P.E.
Director of Planning and Permitting

cc: [redacted]



STATE OF HAWAII
COMMISSION ON WATER RESOURCE MANAGEMENT
1001 Kalia Road, Suite 200
Honolulu, Hawaii 96813
OCT 21 2004

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KFC

Ms. Joelle Dubois, P.E.
Project Manager
KFC Engineering Management, Inc.
2215 Koolaloa Street, Suite F220-50
Honolulu, Hawaii 96819

Dear Ms. Dubois:

Two Board of Water Supply Branch Water Main-
Koolaloa Street to Saratoga Ave. and Berner's Point
Access Road to Intersective Street

Thank you for your August 27, 2004 letter describing the project. Your letter indicates the water main will cross a drainage channel near the Koolaloa Street/Saratoga Avenue intersection. This channel is not considered to be a stream. Therefore a stream channel alteration permit pursuant to Hawaii Revised Statutes §174C-71 will not be required for this crossing.

If you have any questions regarding this letter, please do not hesitate to call D.D. at 527-4020.

Sincerely,

Ernest Y. Lau
ERNEST Y. LAU
Deputy Director

DH J
Attachment

cc: [redacted]

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 SEP 15 2003
 KFC

STATE OF HAWAII
 DEPARTMENT OF HEALTH
 2003 HONOLULU 213

September 17, 2003

RECEIVED
 SEP 16 2003
 KFC

STATE OF HAWAII
 DEPARTMENT OF HEALTH
 2003 HONOLULU 213

September 16, 2003

Ms. Nicole Dubois, PE
 Project Manager
 3375 Koa'opaka Street, Suite F220-50
 Honolulu, Hawaii 96819

Dear Ms. Dubois:

Ms. Nicole Dubois, PE
 Project Manager
 3375 Koa'opaka Street, Suite F220-50
 Honolulu, Hawaii 96819

Dear Ms. Dubois:

Kalaheo Water System Project, Kalaheo, IMK 04-017

This is in response to your August 27, 2003 draft environmental assessment report on noise to our Civil Engineering Branch requesting their comments to the subject project. The project will require a trenching permit where work is being done within a City Right-of-Way and comments that are maintained by the City.

Please include our department on your list of agencies consulted during the draft environmental assessment review period. If there are any questions, please contact ME Dept 1 unit of our Site Development Division at 247-5730.

Subject: Section 401 Water Quality Certification (WQC) Application Requirement for 16" Water Main Crossing from Malakole Street to Lake Champlain Street, Harbor Point, Island of Oahu
 Army File No. 2003000575

Reference is made to a letter (dated September 4, 2003) from Mr. George P. Young, Chief of the Regulatory Branch of the Honolulu Engineer District (HED) of the U.S. Army Corps of Engineers (ACEC) regarding the potential Department of the Army permit requirement for the subject project.

Pursuant to Subsection 401(e)(1) of the Federal Clean Water Act (CWA), a Section 401 Water Quality Certification (WQC) is required for "every applicant for Federal actions or permits to conduct any activity including, but not limited to, the construction or operation of facilities which may result in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsection 502(16), 502(12) and 502(6).

Sincerely Yours,
 TRIC G. CRISPIN, MA
 Director of Planning and Permitting

The Department of Health, Clean Water Branch (CWB), is responsible of processing the Section 401 WQC application. The Section 401 WQC Application Form and Section 401 WQC Application Guidelines are available at the CWB's web site: <http://www.state.hawaii.gov/health/cwb/signs/index.html>.

Please be informed that Subsection 142D-5(a) of the Hawaii Revised Statutes (HRS) requires that "no person, including any public body, shall discharge any water pollutants into state waters, or cause or allow any water pollutant to enter state waters except in compliance with this chapter, rules adopted pursuant to this chapter, or a permit or variance issued by the director."

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KFC
September 16, 2003



STATE OF HAWAII
DEPARTMENT OF HEALTH
20 P. 207
1635 ALI'OLE DRIVE, 2ND FLOOR
HONOLULU, HAWAII 96819

Ms. Jeville Dubois, P.E.
Project Manager
3375 Keapuka Street, Suite F220-69
Honolulu, Hawaii 96819

Dear Ms. Dubois:

Subject: Section 401 Water Quality Certification (WQC) Application Requirement for
10" Water Main Crossing from Alaiahole Street to Lake Champlain Street,
Barbers Point, Island of Oahu
Army File No. 2003000575

Reference is made to a letter (dated September 4, 2003) from Mr. George P. Young, Chief of the
Regulatory Branch of the Honolulu Engineer District (HED) of the U.S. Army Corps of
Engineers (ACE) regarding the potential Department of the Army permit requirement for the
Source project.

Pursuant to Subsection 401(6)(1) of the Federal Clean Water Act (CWA), a Section 401 Water
Quality Certification (WQC) is required for "any applicant for Federal license or permit to
conduct any activity including, but not limited to, the construction or operation of facilities,
which may result in any discharge into the navigable waters..." (Emphasis added). The term
"discharge" is defined in CWA, Subsection 502(16), 502(12) and 502(b).

The Department of Health, Clean Water Branch (CWB), is responsible of processing the
Section 401 WQC application. The Section 401 WQC Application Form and Section 401 WQC
Application Guidelines are available at the CWB's web site:
<http://www.state.hawaii.gov/health/permits/water.html>

Please be informed that Subsection 342D (4)(a) of the Hawaii Revised Statutes (HRS) requires
that "No person, including any public body, shall discharge any water pollutants into state
waters or cause or allow any water pollutant to enter state waters except in compliance with this
chapter, rules adopted pursuant to this chapter, or a permit or variance issued by the director."

Ms. Jeville Dubois, P.E.
September 16, 2003
Page 2

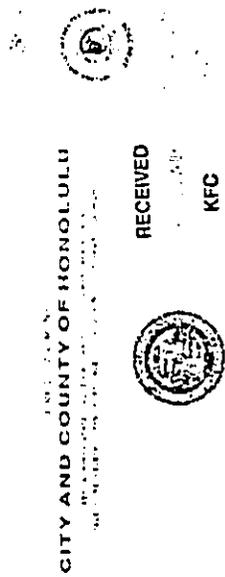
Should you have any questions regarding the Section 401 WQC application, you may
contact Mr. Edward Chen of the Engineering Section, CWB, at (808) 586-4169.

Sincerely,

[Signature]
DENISE CAU, P.E., CHIEF
Clean Water Branch

Regulatory Branch, HED COE
C/W Program, Office of Planning State DBEDD
CWRM State DLNR

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CITY AND COUNTY OF HONOLULU



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KFC

September 18, 2004

Mr. Joe DeWain, PE
Project Manager
KFC Engineering Management, Inc.
1775 Kaula Street, Suite 1220-50
Honolulu, Hawaii 96819

Dear Mr. DeWain:

Subject: Board of Water Supply Redesign of Area Transmission Plan

We received your letter dated August 27, 2004, requesting our comments on the above mentioned project.

The Honolulu Fire Department does not require permits for this project; however, we require that the following be completed with:

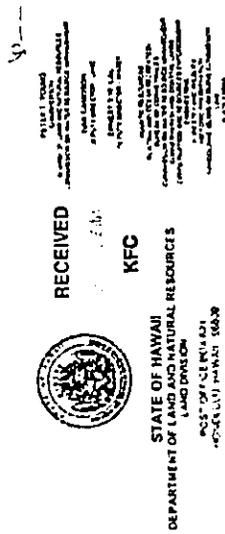
- 1. Main can fire apparatus access that is consistent with the duration of the project.
- 2. Notify the Fire Communication Center at 527-4411 of any interruption of the existing fire hydrant system during the project.

Should you have any questions, please call Battalion Chief Lloyd Rogers of the Fire Prevention Bureau at 831-7774.

Sincerely,

[Signature]
JOHN CLARK,
Acting Fire Chief

JCSX:lh



RECEIVED



KFC

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 2091
HONOLULU, HAWAII 96820

September 18, 2004

Mr. Joe DeWain, PE
Project Manager
KFC Engineering Management, Inc.
1775 Kaula Street, Suite 1220-50
Honolulu, Hawaii 96819

Dear Mr. DeWain:

Subject: Board of Water Supply Redesign of Area Transmission Plan

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The Honolulu Fire Department does not require permits for this project; however, we require that the following be completed with:

- 1. Main can fire apparatus access that is consistent with the duration of the project.
- 2. Notify the Fire Communication Center at 527-4411 of any interruption of the existing fire hydrant system during the project.

Should you have any questions, please call Battalion Chief Lloyd Rogers of the Fire Prevention Bureau at 831-7774.

Sincerely,

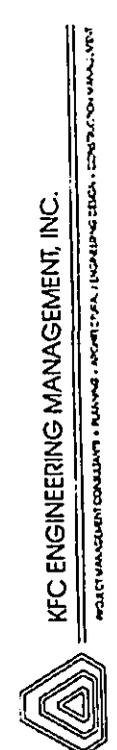
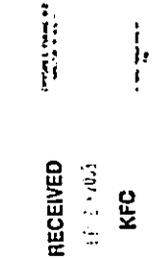
[Signature]
JOHN CLARK,
Acting Fire Chief

JCSX:lh

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1D -



PROJECT MANAGEMENT CONSULTING • PLANNING • ARCHITECTURE • ENGINEERING DESIGN • CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

To: KFC Engineering Management, Inc.
Attn: Jodie Daboin
Fax No.: (808) 816-4833
From: US Fish & Wildlife Service
O'ahu National Wildlife Refuge
66-590 Kuan Highway, Room 2C
Haleiwa, HI 96712
Re: BWS Kalaheo Redevelopment Area Transmission Mains

September 22, 2004
Mr. Jodie Daboin, P.E.
Project Manager
KFC Engineering Management, Inc.
3375 Koaopaka Street, Ste F220-50
Haleiwa, HI 96719
Dear Mr. Daboin:

SUBJECT: Comments to the BWS Kalaheo Redevelopment Area Transmission Mains

Our comments should be printed as follows:

* Project activities shall comply with the Administrative Rules of the Department of Health

- Chapter 11.40, Community Noise Control

Should there be any questions, please contact me at 936-4701.

Sincerely,

Jodie Daboin
Jodie Daboin
Program Manager
Noise, Radiation & IAQ Branch

Please Check One:

There is no need to include us in any further correspondence

Please keep us informed on this project. The point of contact is:

Name: Nancy Hoffman
Telephone No.: 637-6330 ext. 27
Fax No.: 637-3578

Comments are attached:

Number of Pages: _____

Will you include re-claimed water or RI water in your Channel crossing? RI water would be very helpful for restoration efforts at the Kalaheo unit of the Pearl Harbor National Wildlife Refuge. Please contact Ken Kawahara (932-5377) from City/County Envs. Services for further information.

3375 Koaopaka Street, Suite F220-50 • Haleiwa, Hawaii 96719 • Phone (808) 833-1841 • Telefax (808) 834-2333



Form 100-1
Page 1 of 2



RECEIVED
JAN 23 2004
KFC
STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOMELANDS
1605 ALI'OLE DRIVE
HONOLULU, HAWAII 96813
January 20, 2004

05-3691

Mr. Clifford S. Jamile,
Manager and Chief Engineer,
Board of Water Supply,
City and County of Honolulu,
910 South Beretania Street,
Honolulu, Hawaii 96813

Dear Mr. Jamile:

Subject: Draft Environmental Assessment (EA) for the Kalahele
Redevelopment Area Transmission Main
TRM-2-1-11, 16, 32 & 75, Papalei, Oahu

The Land Management Division (LMD) of the Department of Hawaiian
Home Lands (DHHL) has reviewed the Draft EA for the Kalahele
Redevelopment Area Transmission Main. In general, DHHL supports the
location of the transmission main by the Board of Water Supply
(BWS). However, the draft EA does not provide sufficient detail on
the new transmission main alignment so that we can fully assess how
the project will impact Hawaiian home lands at Kalahele.

As stated on page 7 of Chapter 1, BWS will coordinate such
alignment with affected landowners at which time we assure DHHL will
be given the opportunity to resolve any concerns it may have.

In reviewing what was presented in the draft EA, it does not
appear that Hawaiian home lands will be negatively affected by
Alignment 41, from Kapaeha Parkway to Saratoga Avenue. However,
Alignment 42 shows that the transmission main will run on or adjacent
to several DHHL parcels and will likely tie into the existing water
main easement on Coral Sea Road which traverses Hawaiian home lands
identified by TRM 2-1-11-51. Our initial concern regarding Alignment
42 is not with the location of the transmission main, but with the
easement for the transmission main.

We believe that there is sufficient land along Malakole Street
and Saratoga Avenue in which to install the new main without using
Hawaiian home lands. The transfer of land (TRM 2-1-11-91) along
Malakole Street from the Hwy to DHHL excluded a strip (Lot 2189-B-21)
approximately 10-12 feet wide, Saratoga Avenue, in the vicinity of

Mr. Clifford S. Jamile
January 20, 2004
Page 2

Malakole Street, is an 80-foot right-of-way. Although we are not
certain who has title to Lot 2488-B-2 or the Saratoga Avenue right-of-
way, it may be possible for BWS to install its transmission main
within this parcels thereby avoiding installation on Hawaiian home
lands.

Please keep us informed as the alignment plans progress. We look
forward to water system improvements at Kalahele that will enhance our
opportunities to develop much of the lands we will receive there.

If you have questions, you may contact me at 587-6434 or have
your staff contact Hael Alamu, LWD Land Agent for Kalahele at 587-
6429.

Aloha and mahalo,

[Signature]
Linda Chubb, Acting Administrator
Land Management Division

C: Office of Environmental Quality Control, Ms. Genevieve Salzonson
KFC Engineering Management, Inc., Ms. Soelle Dubois

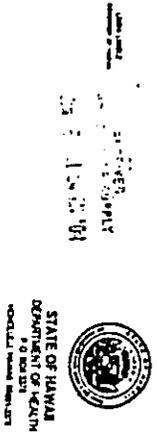
BWS Kalahele Redevelopment Area
Transmission Main
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-1

BWS Kalahele Redevelopment Area
Transmission Main
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-5

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STATE OF HAWAII
DEPARTMENT OF HEALTH
OFFICE OF RADIATION PROTECTION AND CONTROL

December 31, 2003

040013
LUR
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MWE /h/av

TO: Clifford S. Jamile, Manager & Chief Engineer
Board of Water Supply
City & County of Honolulu

FROM: Russell S. Takata, Program Manager
Department of Health
Noise, Radiation & Indoor Air Quality Branch

SUBJECT: Comments to Draft Environmental Assessment (EA) for the
Kalihiwa Redevelopment Area Transmission Mains
Kapolei, Oahu
Tax Map Key 9-1-013, 16, 32 & 75

Thank you for the opportunity to review and comment on the subject proposal. We have no comments at this time.
Should there be any questions, please contact Russell S. Takata, Environmental Health Program Manager, Noise, Radiation and Indoor Air Quality Branch, at 586-4701."

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
100 SOUTH BERTHOUD STREET
HONOLULU, HI 96813



March 2, 2004

Mr. Russell S. Takata, Program Manager
Department of Health
State of Hawaii
Noise, Radiation & Indoor Air Quality Branch
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Mr. Takata:

Subject: Your letter dated December 31, 2003 regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalihiwa Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii
ITC Map Key 9-1-013 09 AND 0118 03

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalihiwa Redevelopment Area Transmission Mains project.
We acknowledge that the Department of Health, Noise, Radiation & Indoor Air Quality Branch does not have any comments on the proposed project.
If you have any questions, please contact Gregory Lee at 748-5716.
Very truly yours,

Clifford S. Jamile
Clifford S. Jamile
Manager and Chief Engineer
cc: J. Dabbs, NRC Engineering Management

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APPENDIX D – COMMENTS AND RESPONSES TO THE DRAFT EA

Copies of the Draft EA were sent to the following government agencies, businesses and civic organizations that may be impacted by this project. Comment letters were received from the the agencies and businesses listed in boldface:

1. US Army Corps of Engineers, Honolulu District, ATTN: CEPOH-EC-R
2. **Department of Transportation, Rodney K. Haraga, Director**
3. **Department of Land and Natural Resources, Peter T. Young, Chairperson**
4. **DLNR State Historic Preservation Division, Don Hibbard, Ph.D., Administrator**
5. **DLNR Commission on Water Resource Management, Ernest Y. W. Lau, Deputy Director**
6. **Department of Health, Office of Environmental Quality Control**
7. **Department of Health, Noise, Radiation and Indoor Air Quality Branch**
8. **City and County of Honolulu, Department of Planning and Permitting, Civil Engineering Branch**
9. City and County of Honolulu, Department of Planning and Permitting, Traffic Review Branch
10. City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch
11. City and County of Honolulu, Department of Planning and Permitting, Urban Design Branch
12. City and County of Honolulu, Department of Planning and Permitting, Subdivision Branch
13. City and County of Honolulu, Environmental Services Department, Frank J. Doyle, P.E., Director
14. Honolulu Municipal Library, Department of Customer Services
15. Ewa Beach Public and School Library
16. **Department of Accounting and General Services, Russ K. Saito, Comptroller**
17. **Department of Education, Patricia Hamamoto, Superintendent**
18. Disability and Communication Access Board, Francine Wai, Executive Director
19. Hawaii Community Development Authority
20. Department of the Navy, Commander, Navy Region, Hawaii
21. US Fish & Wildlife Service, O'ahu National Wildlife Refuge
22. Federal Aviation Administration, Honolulu Flight Standards District Office
23. Department of Agriculture, Earl J. Yamamoto, Planner
24. **Honolulu Fire Department, Attilio Leonardi, Chief**
25. Department of Business, Economic Development and Tourism, Energy, Resources and Technology Division
26. **The Gas Company**
27. **Hawaiian Electric Co., Inc.**

-
28. AT & T Company
 29. Chevron Products Company
 30. The Estate of James Campbell
 31. Oceanic Time Warner Cable
 - 32. Department of Hawaiian Homelands, Hawaiian Homes Com., Micah A. Kane,
Chair**
 33. Office of Hawaiian Affairs, Office of Planning
 34. Office of Hawaiian Affairs, Jose Villa, Lead Advocate
 35. 40th Representative District, Mark S. Moses
 36. 19th Senatorial District, Brian Kanno
 37. Honolulu City Council, Mike Gabbard
 38. University of Hawaii Environmental Center
 39. Kapolei Hawaiian Civic Club, Shad Kane
 40. Makakilo/ Kapolei/ Honokai Hale Neighborhood Board, Maeda C. Timson,
Chairperson
 - 41. Department of Defense, Maj Gen Robert G. F. Lee, Adjutant General**
 42. Hawaii Water Environment Association
 43. The Outdoor Circle
 - 44. Hawaiian Railway Society**

SEP 08 '03 12:06PM OCEANIC CABLE EXCHANGE (NY) 250/01

03



RECEIVED
SEP 11 2003
KFC

PROJECT MANAGER: CORDELL WATTS • RAINIER • 400 PINE AVE, SUITE 200, OAKLAND, CA 94612-3000

REPLY TO: HAWAII

SEP 08 2003
KFC

FAX MEMORANDUM

RECEIVED

SEP 11 2003
KFC

To: KFC Engineering Management, Inc.
Attn: Jodie Dabous

From: Oceanic Time Warner Cable
200 Alameda Street
Milpitas, HI 96789-3999

Subject: BWS Kalaheoa Redevelopment Area Transmission Mains

Fax No.: (808) 834-4833

Fax No.: (808) 834-4833

Re: BWS Kalaheoa Redevelopment Area Transmission Mains

Please Check One:

0

0

There is no need to include us in any further correspondence.

0

Please keep us informed on this project. The point of contact is:

Name: DAPEL OSAO

Name: DAPEL OSAO

Telephone No.: 625-8458

Fax No.: 625-5888

Fax No.: 625-5888

Comments are attached:

Comments are attached:

Number of Pages: _____

Number of Pages: _____

Mr. Jodie Dabous
KFC Engineering Management, Inc.
3375 Kaeopaka Street, Suite 1220-50
Honolulu, HI 96819

Paul K. Hoshino
OSP Field Service

03

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JUN 25 01:52P CHEVRON 10081847 2275 P.1 10081882-2275 CHEVRON P.2



KFC ENGINEERING MANAGEMENT, INC.

10081882-2275 P.1

FAX MEMORANDUM

To: KFC Engineering Management, Inc.
 Attn: Joelle Dibals

From: Chevron Products Company
 1601 Bishop Street
 Suite 1100
 Honolulu, HI 96813

Re: BWS Kalaheo Redevelopment Area Transmission Mains

Reliability Pipeline study
 Chevron Products Co
 91-430 Maunaloa Street
 Kapolei, Hawaii 96707

Gentlemen

We have reviewed and understand your "Guidelines For Work Near Chevron Products Company Pipelines". We, or our authorized contractor, will conform to your guidelines. We will post a copy of your guidelines at the job site.

The following is provided for your information:

Please Check the

There is no need to attach us any further correspondence.

Please copy us informed on this project. The point of contact is:

Name: Wilson Rivera

Telephone No: 682-2259

Fax No: 682-2275

Documents attached

Number of Pages: 4

Date Work is scheduled to begin: _____
 Very truly yours,

 Company Representative

*PROJECT will AFFECT Chevron's Line
 ON BARBERS POINT ACCESS RD.
 PIPELINE GUIDELINES ARE ATTACHED
 Will Run*

SEP 09 09 06:55P chevron (internal) 2275 P.3 18001007-2275 chevron P.4

CHEVRON PRODUCTS COMPANY
CONSTRUCTION WORKS/CHEVRON PRODUK TISSO PHILIPPINE

Chevron Hawaiian Refinery has one or more petroleum product pipelines in an easement that runs through or immediately adjacent to Contractor's project. These pipelines are used for the transmission of petroleum products at high temperatures and pressures. The pipelines are owned and carefully protected. They require frequent inspection and maintenance.

It is absolutely necessary that Chevron be provided access to these buried pipelines at all times, 24 hours a day, seven days a week. Therefore, Contractor's proposed project must adhere to the following guidelines:

1. If the easement area is fenced or walled in, Chevron must have a gate key unless the area is attended on a 24-hour basis.
2. Stripes of material on the easement shall be avoided. This includes parking lots.
3. A minimum overhead clearance of 15 feet must be maintained within the easement.
4. Heavy landscaping (trees, shrubs, spinners, etc.) should be kept off the easement.
5. Heavy construction shall be kept off the easement (e.g. buildings, walls, equipment pads, etc.).
6. No topsoil, bottomsoil, or other materials shall be deposited on the easement (e.g. power poles, power manholes, tower clear cuts, bridge abutments, etc.).
7. Light obstructions (e.g. grass, paving (except concrete), curb curbstops, etc.) are considered unacceptable. Graded areas must be suitable for all-weather vehicular travel.
8. Chevron's Company Representative will make the pipelines at Contractor's expense. Determination of pipeline elevations shall be Contractor's responsibility and at Contractor's expense.
9. The pipeline easement access road must be kept open at all times. Authorization to block access roads at any time during your construction period must be obtained from Chevron Pipeline Company.

10. Avoid running any steel, fence, spooler lines, pipe lines, cables, walls, etc. within the easement in a parallel orientation to the easement center line. Crossings are permitted but must be held to a minimum of 45 degrees to easement centerline.
11. Sewer and electrical conduit crossings should be kept a minimum of four feet clear below Chevron's pipelines for the full easement width. If this condition cannot be met, the crossings should be enclosed in a trench of concrete with a minimum two feet clear below Chevron's pipelines.
12. Except for Item 11 above, all crossing facilities should be at least 24 inches clear below Chevron's pipelines for the full easement width. Clearings above Chevron's pipelines are not permitted.
13. Removal of fill from the easement should not result in there being less than three feet minimum cover over the lines.
14. Trenches across the pipelines shall be limited to a maximum width of five feet less unless the lines are supported in a manner accepted in advance by Chevron Pipeline Company.
15. All excavations and backfilling operations in Chevron's easement must be witnessed by a Chevron Company Representative. Contractor shall provide Chevron with 48 hours notice prior to beginning work within Chevron's easement. All backfill material within a 10-foot radius of our pipelines must be of finely graded dirt or sand. All excavations within two feet of our pipelines must be accurately marked by hand-dug rods. Work shall be halted in an expedient manner in order to keep Chevron's pipelines uncovered at all short a period as possible.
16. All Chevron's easements should be limited to four feet maximum cover over Chevron's pipelines. Chevron will make the pipelines upon request so that Contractor can evaluate to determine the depth of the pipelines.
17. Regulating of adjacent property shall not adversely affect drainage of the easement area or pose a hazard to the easement such as land slides or erosion.
18. The slope must be kept reasonably level across the easement. Maximum slope shall be 3:1 to provide for backhoe operation.
19. All cases pertaining to damage of Chevron's pipelines (e.g. coating, or the cathodic protection devices, or damage of property and injury to persons caused directly or indirectly by this work, will be to Contractor's account. Any repair work on the lines resulting from Contractor's project shall be performed by Chevron Pipeline Company and billed to Contractor.

H:\01\REVISED 3 00175 2 of 2

RECEIVED AS FOLLOWS

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KFC

Ref No: PL-KA1A10A1711

September 9, 2003



Ms. Joelle Dubois, P.E.
Project Manager
KFC Engineering Management, Inc.
3375 Koa'ala Street, Suite 1220 50
Honolulu, Hawaii 96819

Dear Ms. Dubois:

Thank you for your letter of August 27, 2003 informing us of the plans of the City and County of Honolulu (Board of Water Supply (BWS)) to construct a 16-inch water main to connect the Kalaheo water system with the BWS water system. In your letter you requested about a couple of different matters including: (1) any concerns or comments we may have with regard to the proposed project, (2) whether any permits are required from the Hawaii Community Development Authority (HCDA) for the proposed project, and (3) who would be the point of contact for future correspondence.

We do have a couple of comments and concerns with regard to the proposed project. First, we wanted to mention to you that it may be prudent to solicit comments from the Navy because the second section of the project appears that it will be constructed within lands that are slated to be conveyed to the Department of Hawaiian Home Lands, but which are still owned by the Navy. Second, we have some concerns with regard to how the first section of the project may impact traffic in the area. Fort Barrett Road (Barrett Point Access Road) is a major thoroughfare for people traveling between Ewa and Kapehu, and the main point of access for people entering Kalaheo. Please coordinate with the Highways Division of the Department of Transportation (DOT) regarding traffic impacts as a result of work on Fort Barrett Road. DOT approvals will be required. Finally, we are interested to know the timetable for the proposed project.

Regarding permitting, HCDA inherited redevelopment responsibility for the Kalaheo Community Development District in July 2002, but HCDA's regulatory function in Kalaheo is limited to land use designations. All necessary permitting within Kalaheo is conducted by the City and County of Honolulu. As such, please check with the City and County Department of Planning and Permitting to determine whether any permits for the proposed project are required.

SSP:CMD jga
Enc.

Ms. Joelle Dubois, P.E.
September 9, 2003
Page 2

At the present time, our contact person for Kalaheo is Mike Dugitz-Hallett. She can be reached at 587-8172.

We hope this information has been helpful. Please contact us if you have any further questions. We appreciate your keeping us informed of plans in Kalaheo, and hope that you will keep us apprised as the project evolves.

Sincerely,

Sandra S. Pflanz
Sandra S. Pflanz
Interim Executive Director

RECEIVED AS FOLLOWS

Page 1 of 1



Subject: BWS Kalaheo Redevelopment Area
Date: Wed, 10 Sep 2003 14:43:10
From: "Joelle Dubois" <joelle@kfc.com>
To: alex@atkt.com

AT&T
95-1405 Waialua Place
Pearl City Hawaii, 96782

Alex M. Dubois
I received your Aug. 27, 2003 on the subject project. The letter was mailed, addressed to
KCOCH at 6:17 Oct 03.

September 4, 2003
Joelle Dubois
KFC ENGINEERING MANAGEMENT, INC

I handle all housing issues for OHA. My name, address and phone are listed below.

Subject: BWS Kalaheo Redevelopment Area Transmission Mains

Thank you.
Alex M. Dubois
Executive Director
Office of Public Affairs
711 Kapuni Road, 5th Fl.
Honolulu, HI 96813
Tel: 524-1944
Fax: 524-1625

Dear MIB Joelle Dubois
This is in response to your inquiry of September 4, 2003 regarding the above referenced
project.
After reviewing your construction plan, it appears that AT&T has no conflict with the
proposed project. AT&T has no underground facility in the area of the project and has no
plan of any construction in the area within the next 10-15 years.
Should you have anymore question or concerns, please contact me at 808-145-1010

Alex M. Dubois

Alex M. Dubois
AT&T Outside Plant Operation Technician

RECEIVED AS FOLLOWS

1-877-531-0174 FROM: 231 0247

1-877-531-0174

1-877-531-0174



KFC ENGINEERING MANAGEMENT, INC.
PROJECT MANAGEMENT • PLANNING • DESIGN • CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

RECEIVED
KFC

To: KFC Engineering Management, Inc.
Attn: Joelle Dubois
Fax No: (808) 834-4833
From: The Gas Company
515 Kamaole Street
Honolulu, HI 96814
Re: BWS Kalaheo Redevelopment Area Transmission Mains

Please Check One:

- There is no need to include us in any further correspondence.
- Please keep us informed on this project. The point of contact is:

Name: Charles Calvert
Telephone No: 594-5570
Fax No: 594-5671
 Comments are attached: _____
Number of Pages: _____

KFC ENGINEERING MANAGEMENT, INC.
PROJECT MANAGEMENT • PLANNING • DESIGN • CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

RECEIVED
KFC

To: KFC Engineering Management, Inc.
Attn: Joelle Dubois
Fax No: (808) 834-4833
From: Hawaiian Electric Co., Inc.
PO Box 2750
Honolulu, HI 96840
Re: BWS Kalaheo Redevelopment Area Transmission Mains

Please Check One:

- There is no need to include us in any further correspondence.
- Please keep us informed on this project. The point of contact is:

Name: Kirk Iwata
Telephone No: 543-4322
Fax No: 543-4511
 Comments are attached: None at this time.
Number of Pages: n/a

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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
135 SOUTH BERETANIA STREET
HONOLULU, HI 96813



March 19, 2004

RECEIVED
MAR 25 2004
KFC

Ms. Linda Chinn
Admin. Administrator
Land Management Division
Department of Hawaiian Home Lands
P.O. Box 15279
Honolulu, Hawaii 96815

Dear Ms. Chinn

Subject: Your letter of January 30, 2004 regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheo Redevelopment Area Transmission Main, Kapahe, Oahu, Hawaii, EA Map Nos. 9-1-13-09 and 9-1-16-01

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheo Redevelopment Area Transmission Mains project. We acknowledge that the DEA did not provide sufficient detail on the new transmission main alignment to allow a full assessment of how the project will impact Hawaiian Home Lands at Kalaheo.

As was discussed during the March 3rd, 2004 meeting between Noel Akamuli, the LMD Land Agency, Kalaheo, and the project designer, Myra Masuda, the alignment has been revised such that no longer crosses any DHHH property. The final Environmental Assessment will be revised to reflect this change.

If you have any questions, please contact Gregory Lee at 748-5716

Very truly yours,

Gregory Lee
GREGORY LEE
Manager and Chief Engineer

cc: J. Oulou, KFC Engineering Management

After making sure
LOCAL OFFICE OF CHIEF ENGINEER
CANDACE STEVENS-JACKSON
REBERTS LUCAS, JR.
645-7411000
Office: 645-7411000
Fax: 645-7411000
KFC
135 SOUTH BERETANIA STREET
HONOLULU, HI 96813

STATE OF HAWAII
DEPARTMENT OF EDUCATION
150 SOUTH KING STREET
HONOLULU, HAWAII 96813



STATE OF HAWAII
DEPARTMENT OF EDUCATION
150 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
JAN 27 2004
KFC

KFC 3D
150 SOUTH KING STREET
HONOLULU, HI 96813

January 22, 2004

Mr. Clifford S. Jamille
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Attn: Mr. Gregory Lee

Dear Mr. Jamille:

Subject: Draft Environmental Assessment (DEA) for
Construction of Transmission Water Mains into Kalaheo,
Kauai, Oahu, IIRK 9-1-13-10, 32 & 73

The State of Hawaii Department of Education (DOE) has reviewed the DEA for the construction of two 18-inch transmission mains to interconnect the Kalaheo system with the Honolulu Board of Water Supply system.

The DOE has no comment at this time. If you have any questions, please call Rae M. Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

Patricia Hamamoto
Patricia Hamamoto
Superintendent

PH:hy (C/We)

C: OBS
CAS/Leeward District
OEOC
KFC Engineering Management, Inc.

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

RECEIVED AS FOLLOWS

03-303

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96814



March 2, 2004

RECEIVED
KFC ENGINEERING MANAGEMENT, INC.
ATTENTION: J. DUBOIS
1000 KALANOA ROAD
HONOLULU, HI 96814

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawaii
P.O. Box 2280
Honolulu, Hawaii 96814

Dear Ms. Hamamoto:

Subject: Your Letter Dated January 22, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaeloa Redevelopment Area
Transmission Mains, Kapolei, Oahu, Hawaii
Tax Map Key 9-1-13-09 and 9-1-16-01

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaeloa Redevelopment Area Transmission Mains Project.

We acknowledge that the Department of Education does not have any comments on the proposed project.

If you have any questions, please contact Gregory Lee at 748-5716

Very truly yours,

Gregory Lee
GREGORY S. LEE
CLIFFORD S. JAMILE
Manager and Chief Engineer

c/ J Dubois, KFC Engineering Management

BWS Kalaeloa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc
June 2004
Page D-8



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
PO BOX 118, HONOLULU, HAWAII 96810

JAN 22 2004

RECEIVED
JAN 23 2004
KFC

Mr. Clifford S. Jamile
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96814

Attention: Mr. Gregory Lee

Dear Mr. Jamile:

Subject: Kalaeloa Redevelopment Area Transmission Mains
Draft Environmental Assessment (EA)
TMK: 9-1-13, 16, 32 & 75
Kapolei, Oahu

Thank you for the opportunity to review the information regarding the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities. We do not have any comments to offer.

If there are any questions regarding the above, please have your staff call Mr. Bruce Beckett at 586-0491 or Mr. Jodee Mirchandani at 586-0490 of the Planning Branch.

Sincerely,

Harold Sonomura
HAROLD SONOMURA
Acting Public Works Administrator

Immo

c/ Ms. Genevieve Salmonson, Office of Environmental Quality Control
Ms. Jodee DuBois, KFC Engineering Management, Inc.

BWS Kalaeloa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc
June 2004
Page D-9

RECEIVED AS FOLLOWS

JD
63 7071

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
150 ALI'OLE STREET
HONOLULU, HI 96813



March 2, 2004

ANNETTE HARRIS, MAJOR
EXECUTIVE DIRECTOR
600 SOUTH BERTHOUD ST
HONOLULU, HI 96813
ROBERT A. WATSON, ECONOMIC
LAWYER, LEGISLATIVE COUNSEL
OFFICE OF THE ATTORNEY GENERAL
MANAGER AND CHIEF OF STAFF
2000 KALANOAU AVE, SUITE 200
HONOLULU, HI 96815
DIRECTOR, MANAGER AND CHIEF OF STAFF

Mr. Harold Sonomura, Acting Public Works Administrator
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810
Dear Mr. Sonomura:

Subject: Your Letter Dated January 22, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheoa Redevelopment Area Transmission Mains, Kapaolei, Oahu, Hawaii
Tax Map Key: 01-1-1-1-19 and 01-1-1-16-01

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheoa Redevelopment Area Transmission Mains project.
We acknowledge that the Department of Accounting and General Services does not have any comments on the proposed project.

If you have any questions, please contact Gregory Lee at 738-5716

Very truly yours,

Gregory Lee
GREGORY LEE
Manager and Chief Engineer

cc: J DuBois, KFC Engineering Management

BWS Kalaheoa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-10



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
100 SOUTH BERTHOUD STREET
HONOLULU, HI 96813
PHONE: (808) 586-1100
FAX: (808) 586-1100

RECEIVED
JAN 27 2004
KFC

January 27, 2004

Clifford Jamile
Board of Water Supply
670 South Beretania St
Honolulu, HI 96813
Attn: Gregory Lee

Dear Mr. Jamile:

Subject: Kalaheoa Redevelopment Area Transmission Mains

We have no comments to offer at this time. If you have any questions call Nancy Herrlich at 586-4185

Sincerely,

Genevieve Salmonson
GENEVIEVE SALMONSON
Director

c: Joelle DuBois, KFC Engineering

BWS Kalaheoa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
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RECEIVED AS FOLLOWS

03 3131

CITY AND COUNTY OF HONOLULU
2315 KALANOA STREET, SUITE 200, HONOLULU, HAWAII 96819-1041
TELEPHONE: (808) 521-7111 FAX: (808) 521-7115

RECEIVED

FEB - 2 2004

KFC

PREDEPARTMENT



January 21, 2004

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

ATTENTION: GREGORY LEE, ENGINEER
DESIGN SECTION

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KALAELOA REDEVELOPMENT AREA TRANSMISSION MAINS
TAX MAP KEYS: 9-1-013, 016, 032, AND 075
KAPOLEI OAHU

We received a letter from KFC Engineering Management, Inc., dated December 21, 2003, requesting our comments on the above-referenced project.

The Honolulu Fire Department requires that the following be complied with for the duration of the project.

1. Maintain fire apparatus access throughout the construction site.
2. Notify the Fire Communication Center at 523-4411 of any interruption in the existing fire hydrant system.

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

Attilio K. Leonard
ATTILIO K. LEONARDI
Fire Chief

AKJ/SK/bh

cc: Genevieve Salimanson, Director, Office of Environmental Quality Control
Jocelle DuBois, P.E., Project Manager, KFC Engineering Management, Inc.

ATTENTION: NAME
1500 HIKES BLVD
CHIEF'S OFFICE
HONOLULU, HI 96819
DASH 7781100



March 2, 2004

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
335 SOUTH BERETANIA STREET
HONOLULU, HI 96813

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

Dear Ms. Salimanson:

Subject: Your Letter Dated January 27, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaeloa Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii Tax Map Keys 9-1-113, 09 and 9-1-116, 01

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaeloa Redevelopment Area Transmission Mains project.

We acknowledge that the Office of Environmental Quality Control does not have any comments on the proposal project.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

Clifford S. Jamble
CLIFFORD S. JAMBLE
Manager and Chief Engineer

cc: J. Dubois, KFC Engineering Management

DW'S Kalaeloa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
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DW'S Kalaeloa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-13

RECEIVED AS FOLLOWS

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
331 SOUTH BERKELEY STREET
HONOLULU, HAWAII



March 2, 2004

APRIL 16, 2004
EDWIN P. J. CHAN
331 SOUTH BERKELEY STREET
HONOLULU, HAWAII 96813
PHONE: 808-525-1100
FAX: 808-525-1100
WWW.BWS.HAWAII.GOV

TO: VITO R. LEONARDI, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

FROM: JEFF CLIFFORD, JAMSHI

SUBJECT: YOUR LETTER DATED JANUARY 29, 2004 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE BOARD OF WATER SUPPLY'S PROPOSED KAI-AELOA REDEVELOPMENT AREA TRANSMISSION MAINS, KAPOLEI, OAHU, HAWAII
TAX MAP KEY 9-1-13-09 AND 9-1-16-09

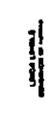
Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheo Redevelopment Area Transmission Mains project.

In accordance with your comments, the construction plans will require that:

- 1. Access to fire apparatus is maintained throughout the construction site, and
- 2. The Fire Communication Center (526-1411) shall be notified of any interruption in the existing fire hydrant system.

If you have any questions, please contact Gregory Lee at 748-5716.

cc: J Dallas, KFC Engineering Management



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 671
HONOLULU, HAWAII 96809

January 23, 2004

DISPATCHED: RCHZ
23-NAV

Joelle Dabola, PE
Project Manager
KFC Engineering Management, Inc.
1715 Kapiolani Street, Suite 722D-5C
Honolulu, Hawaii 96813

Dear Mr. Dabola:

SUBJECT: Review: Draft Environmental Assessment
Project: Kalaheo Redevelopment Area Transmission Mains
Applicant: C/COH Board of Water Supply
Location: Island of Oahu, Hawaii
Consultant: KFC Engineering Management, Inc.
TMS: 1) 9-1-13-09, 616, 038 and 07

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

A copy of the document pertaining to the proposed project was transmitted for review to the following Department of Land and Natural Resources Division for their review and comment:

- Division of Aquatic Resources - Division of Forestry & Wildlife
- Division of State Parks - Engineering Division - Commission on Water Resource Management - Conservation and Coastal Land-Oahu District Land Office

Enclosed please find a copy of the Engineering Division comment.

Based on the attached response, the Department of Land and Natural Resources has no other comment to offer at this time.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 585-0384.

Very truly yours,

DIERDRA S. MANITA
Administrator

C: 0310

RECEIVED
FEB - 2 2004
KFC



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 671
HONOLULU, HAWAII 96809

January 23, 2004

DISPATCHED: RCHZ
23-NAV

Joelle Dabola, PE
Project Manager
KFC Engineering Management, Inc.
1715 Kapiolani Street, Suite 722D-5C
Honolulu, Hawaii 96813

Dear Mr. Dabola:

SUBJECT: Review: Draft Environmental Assessment
Project: Kalaheo Redevelopment Area Transmission Mains
Applicant: C/COH Board of Water Supply
Location: Island of Oahu, Hawaii
Consultant: KFC Engineering Management, Inc.
TMS: 1) 9-1-13-09, 616, 038 and 07

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A copy of the document pertaining to the proposed project was transmitted for review to the following Department of Land and Natural Resources Division for their review and comment:

- Division of Aquatic Resources - Division of Forestry & Wildlife
- Water Resource Management - Engineering Division - Commission on Land-Oahu District Land Office

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Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 585-0384.

Very truly yours,

DIERDRA S. MANITA
Administrator

C: 0310

RECEIVED
FEB - 2 2004
KFC



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 671
HONOLULU, HAWAII 96809

January 23, 2004

DISPATCHED: RCHZ
23-NAV

Joelle Dabola, PE
Project Manager
KFC Engineering Management, Inc.
1715 Kapiolani Street, Suite 722D-5C
Honolulu, Hawaii 96813

Dear Mr. Dabola:

SUBJECT: Review: Draft Environmental Assessment
Project: Kalaheo Redevelopment Area Transmission Mains
Applicant: C/COH Board of Water Supply
Location: Island of Oahu, Hawaii
Consultant: KFC Engineering Management, Inc.
TMS: 1) 9-1-13-09, 616, 038 and 07

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

A copy of the document pertaining to the proposed project was transmitted for review to the following Department of Land and Natural Resources Division for their review and comment:

- Division of Aquatic Resources - Division of Forestry & Wildlife
- Water Resource Management - Engineering Division - Commission on Land-Oahu District Land Office

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Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 585-0384.

Very truly yours,

DIERDRA S. MANITA
Administrator

C: 0310

RECEIVED AS FOLLOWS

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
100 COLUANA STREET
HONOLULU, HI 96813



March 2, 2004

ANNE HANDEE, Mayor
BOB ADRIAN, Deputy Mayor
CHIEF OF POLICE
CANDACE K. KAMAKA, Mayor Pro Tem
ROBERTE HANAU, Mayor Pro Tem
LARRY LEE, Mayor Pro Tem
CLIFFORD S. MOORE, Mayor Pro Tem
Mayor and Chief Executive
City and County of Honolulu
City Center and Civic Center

Ms. Dierdre S. Mamiya, Administrator
Department of Land and Natural Resources
State of Hawaii
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Mamiya:

Subject: Your Letter Dated January 28, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheo Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii
[EAS Map No. 9.1-13.09.2003.9.1.16.01]

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheo Redevelopment Area Transmission Mains project.

In accordance with the comment from your Engineering Division, the Environmental Assessment will reflect that the project site is located in Zone "D" of the Flood Insurance Rate Map.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

Gregory Lee
GREGORY S. MOORE
Manager and Chief Engineer

cc: J. Dubois, KFC Engineering Management

BWS Kalaheo Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-17

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LANSAY
Re: BWS KALAHEO REDEVELOPMENT AREA

COMMENTS

- We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone D.
- Please note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D.
- Please note that the correct Flood Zone Description for the project site according to the Flood Insurance Rate Map (FIRM) is _____.
- Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tye-Burns, of the Department of Land and Natural Resources, Engineering Division at (808) 337-4267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and than the provisions over the minimum NFIP standards. If there are questions regarding the local flood ordinance, please contact the applicable County NFIP Coordinator below:

- Mr. Robert Semmens at (808) 333-3354 or Mr. Marcus Ma'ili at (808) 533-4347 of the City and County of Honolulu, Department of Planning and Permitting.
- Mr. Lady O'Brien at (808) 941-4337 (025) or Mr. Kevin Baker at (808) 337-3330 (Kona) of the County of Hawaii, Department of Public Works.
- Mr. Thomas Caruso at (808) 939-7771 of the County of Maui, Department of Planning.
- Mr. Victor Antonio at (808) 341-6420 of the County of Lanai, Department of Public Works.

- The applicant should include project water demands and hydrology required to meet water demands. Please note that the implementation of any stormwater project requiring water service from the Honolulu Board of Water Supply must first obtain water allocation credit from the Engineering Division before it can receive a building permit or other water service.
- The applicant should provide the water demands and calculations to the Engineering Division as it can be included in the State Water Project Plan System.
- Additional Comments: _____
- Other: _____

Should you have any questions, please call Mr. Eric Yonem of the Planning Branch at 547-4254.

Eric Yonem
ERIC T. YONEM, CHIEF ENGINEER
Date: 1/5/04

BWS Kalaheo Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
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RECEIVED AS FOLLOWS

Mr. Clifford S. Jamale
Page 2

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 892-8015.

Should you have any questions about archeology, please feel free to call Sara Collins at 892-8026 or Elaine Jourdain at 892-8027. Should you have any questions about the OR&L, please feel free to contact Nathan Napoka at 587-0192.

Aloha,

Ms. Holly M. McDowney

P. Holly McDowney, Administrator
State Historic Preservation Division

El/jen

Joelle Dubois, P. E., Project Manager, KFC Engineering Management, Inc.,
3375 Koaepuka St, Suite F220-50, Honolulu, HI 96819
Ms. Genevieve Salmonson, Dr. OECC, 235 S. Beretania St., Ste 702, Hon., HI 96813
Nathan Napoka, Branch Chief, History & Culture
Ben Schlaepke, Hawaiian Railway Society, P.O. Box 60069, Ewa Station, Ewa, HI 93706

RECEIVED
FEB -2 2004
KFC

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
100 SOUTH BERTANIA STREET
HONOLULU, HAWAII 96813

LOG NO. 2004.0012
DOC NO. 0401E02

January 28, 2004

Mr. Clifford S. Jamale
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Jamale:

SUBJECT: Chapter 4E-8 Historic Preservation Review - Draft Environmental Assessment Kalahele Redevelopment Area Transmission Main
[COUNTY/BWS]
Honolulu, Ewa, Oahu
TRK: (1) 8-1-013-001

Thank you for the opportunity to comment on the DEA for the proposed installation of two (2) 18-inch water mains to interconnect the Kalahele water system with the BWS water system. We previously commented on this project during the pre-EA phase. Our comments are included in A-1 on page C-15 of the DEA.

Archaeology Comments

We reiterate that several archaeological surveys have been conducted for Campbell Industrial Park and for Barber's Point NAS. However, no significant historic sites have been recorded within the proposed alignments except for the Oahu Rail & Land Right of Way, a significant historic site listed on the National Register of Historic Places (Site 50-50-12-8714), at the Barber's Point Access Road/Enterprise Avenue alignment crossing. Thus, this project has the potential to have an adverse effect on the Right-of-Way.

Culture and Military Comments

On January 6, 2004 Nathan Napoka and Joelle Dubois of KFC Engineering Management, Inc. discussed the potential adverse effect that this project will have on the OR&L Right of Way. After the discussion it is our understanding that KFC Engineering, Inc. will be soliciting input from the Hawaiian Railway Society and the Department of Transportation. After these two organizations' concerns have been addressed and documented, KFC Engineering, Inc. will notify our office and at that time we will submit our written response concerning this undertaking.

RECEIVED AS FOLLOWS

03-5451 JP

PC No. 200
Project No. 04-02-200
Phone: 808-535-5311
Fax: 808-535-5344

RECEIVED
FEB -2 2004
KFC



January 30, 2004

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

Attention: Mr. Gregory Lee

Gentlemen:

Subject: Draft Environmental Assessment (EA) for the
Kalaheala Redevelopment Area Transmission Mains

Please be advised that The Gas Company, LLC, maintains underground utility gas mains in the project vicinity, which serves commercial and residential customers in the area and is interconnected with the utility network in Kapa'ala. We would appreciate your consideration during the project planning and design process to minimize any potential conflicts with the existing gas facilities in the project area.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Should there be any questions, or if additional information is desired, please call Chris Anderson at 594-5364.

Sincerely,

Charles E. Calvert, P.E.
Manager, Engineering

CEC:cm
04-190

cc: Ms. Genevieve Salmonson, Director, Office of Environmental Quality Control
Mrs. Jocelle DuBois, KFC Engineering Management, Inc.

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March 2, 2004

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

Mr. P. Holly McElwainery, Administrator
Department of Land and Natural Resources
State of Hawaii
State Historic Preservation Division
Kalaheala Building, Room 555
601 Kamehaha Boulevard
Kapa'ala, Hawaii 96707

Dear Mr. McElwainery:

Subject: Your letter dated January 28, 2004 regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheala Redevelopment Area Transmission Mains, Kapa'ala, Oahu, Hawaii.
EA No. 04-02-200 and 04-02-190

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheala Redevelopment Area Transmission Mains project.

We acknowledge that the Department of Land and Natural Resources, Historic Preservation Division, intends to submit a written response after input from the Hawaiian Railway Society and the Department of Transportation have been received and responded to by our consultant, KFC Engineering Management, Inc. The Hawaiian Railway Society submitted comments dated February 13, 2004, with a copy to Mr. Nathan Njopka of DLNR. Attached is our response to these comments.

Though the deadline for comments on the Draft Environmental Assessment expired on February 1, 2004, we are still attempting to obtain comments from the Department of Transportation. If we are successful in this regard, we will respond to those comments and forward you a copy of the comments with our response.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

CLIFFORD S. JAMILE
Manager and Chief Engineer

Attachment
cc: J. DuBois, KFC Engineering Management

BWS Kalaheala Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
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BWS Kalaheala Redevelopment Area
Transmission Mains
Final Environmental Assessment

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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
510 KUALAIALEA STREET
HONOLULU HI 96813



March 2, 2004

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DANIEL M. HARRIS, Deputy Executive Director
DORIS WATSON, Chief of Staff

Mr. Charles F. Culvet, P.E.
Manager, Engineering
The Gas Company
P.O. Box 3699
Honolulu, Hawaii 96802-3699

Dear Mr. Culvet:

Subject: Your letter dated January 30, 2004 regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheoa Redevelopment Area Transmission Main, Kalaheoa, Oahu, Hawaii.
[a.s. Main Key 9-1-13, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 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2851, 2853, 2855, 2857, 2859, 2861, 2863, 2865, 2867, 2869, 2871, 2873, 2875, 2877, 2879, 2881, 2883, 2885, 2887, 2889, 2891, 2893, 2895, 2897, 2899, 2901, 2903, 2905, 2907, 2909, 2911, 2913, 2915, 2917, 2919, 2921, 2923, 2925, 2927, 2929, 2931, 2933, 2935, 2937, 2939, 2941, 2943, 2945, 2947, 2949, 2951, 2953, 2955, 2957, 2959, 2961, 2963, 2965, 2967, 2969, 2971, 2973, 2975, 2977, 2979, 2981, 2983, 2985, 2987, 2989, 2991, 2993, 2995, 2997, 2999, 3001, 3003, 3005, 3007, 3009, 3011, 3013, 3015, 3017, 3019, 3021, 3023, 3025, 3027, 3029, 3031, 3033, 3035, 3037, 3039, 3041, 3043, 3045, 3047, 3049, 3051, 3053, 3055, 3057, 3059, 3061, 3063, 3065, 3067, 3069, 3071, 3073, 3075, 3077, 3079, 3081, 3083, 3085, 3087, 3089, 3091, 3093, 3095, 3097, 3099, 3101, 3103, 3105, 3107, 3109, 3111, 3113, 3115, 3117, 3119, 3121, 3123, 3125, 3127, 3129, 3131, 3133, 3135, 3137, 3139, 3141, 3143, 3145, 3147, 3149, 3151, 3153, 3155, 3157, 3159, 3161, 3163, 3165, 3167, 3169, 3171, 3173, 3175, 3177, 3179, 3181, 3183, 3185, 3187, 3189, 3191, 3193, 3195, 3197, 3199, 3201, 3203, 3205, 3207, 3209, 3211, 3213, 3215, 3217, 3219, 3221, 3223, 3225, 3227, 3229, 3231, 3233, 3235, 3237, 3239, 3241, 3243, 3245, 3247, 3249, 3251, 3253, 3255, 3257, 3259, 3261, 3263, 3265, 3267, 3269, 3271, 3273, 3275, 3277, 3279, 3281, 3283, 3285, 3287, 3289, 3291, 3293, 3295, 3297, 3299, 3301, 3303, 3305, 3307, 3309, 3311, 3313, 3315, 3317, 3319, 3321, 3323, 3325, 3327, 3329, 3331, 3333, 3335, 3337, 3339, 3341, 3343, 3345, 3347, 3349, 3351, 3353, 3355, 3357, 3359, 3361, 3363, 3365, 3367, 3369, 3371, 3373, 3375, 3377, 3379, 3381, 3383, 3385, 3387, 3389, 3391, 3393, 3395, 3397, 3399, 3401, 3403, 3405, 3407, 3409, 3411, 3413, 3415, 3417, 3419, 3421, 3423, 3425, 3427, 3429, 3431, 3433, 3435, 3437, 3439, 3441, 3443, 3445, 3447, 3449, 3451, 3453, 3455, 3457, 3459, 3461, 3463, 3465, 3467, 3469, 3471, 3473, 3475, 3477, 3479, 3481, 3483, 3485, 3487, 3489, 3491, 3493, 3495, 3497, 3499, 3501, 3503, 3505, 3507, 3509, 3511, 3513, 3515, 3517, 3519, 3521, 3523, 3525, 3527, 3529, 3531, 3533, 3535, 3537, 3539, 3541, 3543, 3545, 3547, 3549, 3551, 3553, 3555, 3557, 3559, 3561, 3563, 3565, 3567, 3569, 3571, 3573, 3575, 3577, 3579, 3581, 3583, 3585, 3587, 3589, 3591, 3593, 3595, 3597, 3599, 3601, 3603, 3605, 3607, 3609, 3611, 3613, 3615, 3617, 3619, 3621, 3623, 3625, 3627, 3629, 3631, 3633, 3635, 3637, 3639, 3641, 3643, 3645, 3647, 3649, 3651, 3653, 3655, 3657, 3659, 3661, 3663, 3665, 3667, 3669, 3671, 3673, 3675, 3677, 3679, 3681, 3683, 3685, 3687, 3689, 3691, 3693, 3695, 3697, 3699, 3701, 3703, 3705, 3707, 3709, 3711, 3713, 3715, 3717, 3719, 3721, 3723, 3725, 3727, 3729, 3731, 3733, 3735, 3737, 3739, 3741, 3743, 3745, 3747, 3749, 3751, 3753, 3755, 3757, 3759, 3761, 3763, 3765, 3767, 3769, 3771, 3773, 3775, 3777, 3779, 3781, 3783, 3785, 3787, 3789, 3791, 3793, 3795, 3797, 3799, 3801, 3803, 3805, 3807, 3809, 3811, 3813, 3815, 3817, 3819, 3821, 3823, 3825, 3827, 3829, 3831, 3833, 3835, 3837, 3839, 3841, 3843, 3845, 3847, 3849, 3851, 3853, 3855, 3857, 3859, 3861, 3863, 3865, 3867, 3869, 3871, 3873, 3875, 3877, 3879, 3881, 3883, 3885, 3887, 3889, 3891, 3893, 3895, 3897, 3899, 3901, 3903, 3905, 3907, 3909, 3911, 3913, 3915, 3917, 3919, 3921, 3923, 3925, 3927, 3929, 3931, 3933, 3935, 3937, 3939, 3941, 3943, 3945, 3947, 3949, 3951, 3953, 3955, 3957, 3959, 3961, 3963, 3965, 3967, 3969, 3971, 3973, 3975, 3977, 3979, 3981, 3983, 3985, 3987, 3989, 3991, 3993, 3995, 3997, 3999, 4001, 4003, 4005, 4007, 4009, 4011, 4013, 4015, 4017, 4019, 4021, 4023, 4025, 4027, 4029, 4031, 4033, 4035, 4037, 4039, 4041, 4043, 4045, 4047, 4049, 4051, 4053, 4055, 4057, 4059, 4061, 4063, 4065, 4067, 4069, 4071, 4073, 4075, 4077, 4079, 4081, 4083, 4085, 4087, 4089, 4091, 4093, 4095, 4097, 4099, 4101, 4103, 4105, 4107, 4109, 4111, 4113, 4115, 4117, 4119, 4121, 4123, 4125, 4127,

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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
830 SOUTH BERTANAMA STREET
HONOLULU HI 96813



ARBITRATORS NAME
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Mr. Ernest Y. W. Lau, Deputy Director
Department of Land and Natural Resources
State of Hawaii
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Lau:

Subject: Your Letter Dated February 4, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheo Redevelopment Area Transmission Main, Kapehu, Oahu, Hawaii
TR. Main No. 9-1-13-09 304 9-1-13-09

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheo Redevelopment Area Transmission Main project.

Upon completion of the construction plans, a set will be forwarded to the City and County of Honolulu for review, comment, and incorporation into the County's Water Use and Development Plan.

No new water source is planned at this time. Should future plans require the development of a new water source, all required permits would be obtained from the Commission.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

Gregory Lee
GREGORY S. YAMILE
Manager and Chief Engineer

cc: J. DuBois, KFC Engineering Management

BWS Kalaheo Redevelopment Area
Transmission Main
Final Environmental Assessment

KFC Engineering Management, Inc.
June 2004
Page D-25

040122

APPROVED FOR THE BOARD OF WATER SUPPLY
BY: [Signature]
DATE: [Date]



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
Honolulu, Hawaii

February 4, 2004

Re: Kalaheo Redevelopment DEA #

TO: Mr. Clifford Jamda, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu

FROM: Ernest Y. W. Lau, Deputy Director
Commission on Water Resource Management (CWVRM)

SUBJECT: Draft Environmental Assessment (EA) for the Kalaheo Redevelopment Area Transmission Main, TRM 9-1-13, 16, 32 & 75, Kapehu, Oahu

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below:

In general, the CWVRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWVRM encourages the protection of water recharge areas, which are important for the maintenance of streams and the replenishment of aquifers.

- (1) We encourage coordination with the county government to incorporate the project into the county's Water Use and Conservation Plan.
- (1) We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to review the project and the State Water Project Plan.
- (1) We are concerned about the potential for ground water contamination and recommend that the project be designed to prevent ground water contamination and that the project be designed to prevent ground water contamination.
- (1) A Water Conservation Permit under a Pump Installation Permit from the Commission should be required before ground water is developed as a source of supply for the project.
- (1) The proposed water supply system for the project is located in a designated water management area. A Water Use Permit from the Commission should be required prior to use of the source.
- (1) Groundwater withdrawals from the project may affect streamflow, which may require an upstream flow reduction agreement.
- (1) We are concerned about the potential for degradation of stream water from development on highly erodible slopes adjacent to streams, which may affect the project. We recommend that appropriate erosion control measures be implemented to prevent erosion.
- (1) If the proposed project includes construction of a stream diversion, the project may require a stream diversion work permit and should be designed to prevent erosion of the stream channel.
- (1) If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.
- (1) OTHER:

The allocation of municipal water from the BWS water system is not subject to the Commission's oversight. However, should the development of a new water source to serve the released areas be required, then water conservation, pump installation, and water use permits from the Commission are required.

If there are any questions, please contact Lenore Y. Nakama at 587-0218.

BWS Kalaheo Redevelopment Area
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DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU



2003/ELOG-38711(y)

February 6, 2004

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

ATTN: GREGORY JEFF
FROM: ERIC G. CRISPIN, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) - KALAELOA
REDEVELOPMENT AREA TRANSMISSION MAINS FOR BOARD OF
WATER SUPPLY
TAX MAP KEY 9-1-11-16, 22, & 23, KALAELOA, EWA, OAHU

We have reviewed the subject draft environmental assessment and have the following comments:

1. Qual Enclosures
 - a. Section 1.5 (Permitting): Grading and grubbing permits are not required since there appears to be no grading or grubbing work associated with this project.
 - b. Section 2.2.1 (Construction within Public Right-of-Way): Verify the locations of all City rights-of-way and easements affected by this project with the Department of Design and Construction, Division of Land Survey and Acquisition at 523-4244.
 - c. Section 4.2 (Geology and Soils): There appears to be no grading work associated with this project. The appropriate terminology that should be used is "trenched" rather than "graded".
2. Plannings
 4. The Final Environmental Assessment should expand on the impact to the water quality of the Board of Water Supply system after connection to the Navy's water

.....
KFC's Kalaeloa Redevelopment Area
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Clifford S. Jamile, Manager and Chief Engineer
Page 2
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system. What measures will be employed to prevent the backflow of Navy water into the BWS system?

- b. The Ewa Development Plan calls for dual transmission lines to conserve potable water use and use of non-potable water for irrigation and other appropriate uses. The Final Environmental Assessment should include information as to what measure are being employed to address a dual water system and whether this project will be included as part of a dual system. If so, what contingencies are being proposed to accommodate the construction of a non-potable system for the Kalaeloa District?
- c. The proposal should be compared with the relevant section of the Kalaeloa Redevelopment Plan Special Area Plan (SAP). In Section 5.2 of the SAP describes connecting the Navy system to existing 12-inch mains along Kapi'olei Parkway and Geiger Road. Please provide updated information with respect to the changes being proposed under the current project and its basis for 16-inch mains. Perhaps further investigations of the existing system resulting in an upsizing of the proposed system. If so, this or any other explanation should be provided.

If you have any questions, please contact Raymond Young of our staff at 527-5839.

EGC:lh
cc: OEQC
KFC Engineering
Doc 377811

.....
BWS Kalaeloa Redevelopment Area
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Final Environmental Assessment
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June 2004
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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
1225 KALANOA STREET
HONOLULU, HI 96813



March 15, 2004

AGENCY: BOARD OF WATER SUPPLY
DATE: MARCH 15, 2004
TO: HONOLULU BOARD OF WATER SUPPLY
FROM: MR. ERIC CRISPIN, DIRECTOR
SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE BOARD OF WATER SUPPLY'S PROPOSED KALAELOA REDEVELOPMENT AREA TRANSMISSION MAINS, KAPOLEI, OAHU, HAWAII, TRK. 0-1413.09 AND 0-1413.07

TO: MR. ERIC CRISPIN, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: CLIFFORD S. JAMIESON
SUBJECT: YOUR MEMORANDUM DATED FEBRUARY 6, 2004 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE BOARD OF WATER SUPPLY'S PROPOSED KALAELOA REDEVELOPMENT AREA TRANSMISSION MAINS, KAPOLEI, OAHU, HAWAII, TRK. 0-1413.09 AND 0-1413.07

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaeloa Redevelopment Area Transmission Mains project.

We offer the following responses to your comments:

1. Construction:

- a. Section 1.5 (Permitting). Requirements for grading and grubbing permits will be eliminated from the EA.
- b. Section 2.2.1 (Construction within Public Right-of-Way). A set of construction plans will be provided to the Department of Design and Construction, Division of Land Survey and Acquisition for verification of all City rights-of-way, and
- c. Section 4.2 (Geology and Soils). The term "trenched" shall replace "graded".

2. Planning:

- a. The BWS will be installing backflow prevention assemblies prior to the connection points of the new transmission mains into the Kalaeloa Redevelopment Area. This should prevent any movement of water from within Kalaeloa Redevelopment Area, including the Navy Water System, to the surrounding BWS water system.

Mr. Eric Crispin
March 15, 2004
Page 2

- b. This project is for the development of transmission mains to transport potable water to the Kalaeloa Redevelopment Area. The BWS encourages the use of nonpotable water wherever possible to conserve our potable water resources. However, this project does not involve recycled water and is not part of a dual water system. In the future, if there is system capacity in our recycled water system and available uses within Kalaeloa Redevelopment Area, we will examine expansion of the recycled water system. The BWS has recycled water mains on the North and West side of the Kalaeloa Redevelopment Area.
- c. The sizing of the 16-inch transmission mains was based upon a hydraulic analysis of the projected demands of the Navy retained and non-Navy end-users in the Kalaeloa Redevelopment Area. The BWS is in the process of acquiring the water system (distribution pipelines, fire hydrants, valves and meters) serving the Kalaeloa Redevelopment Area. The housing areas generally along the northern border of the base and the golf course at the northeast corner of the base will be retained by the Navy and served by the Navy's water source and transmission/distribution system.

If you have any questions, please contact Gregory Lee at 748-5716.

cc: J. DuBois, KFC Engineering Management

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Transmission Mains
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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
433 SOUTH BERTANZAKI STREET
HONOLULU HI 96843

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
433 SOUTH BERTANZAKI STREET
HONOLULU HI 96843

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March 2, 2004
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Mr. Kirk S. Tomita, Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Mr. Tomita

Subject: Your Letter Dated February 12, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheba Redevelopment Area Transmission Main, Kapolei, Oahu, Hawaii
EAM Mfg. No. 9-1-13.09 and 9-1-16.03

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheba Redevelopment Area Transmission Mains project. We offer the following responses to the concerns addressed in your letter:

1. Any underground HECO facilities in the project vicinity have been included in the topographic survey and will be shown on the construction plans. It is not anticipated that construction of the transmission mains will affect access to existing facilities.
2. Once the plans are finalized, HECO will be provided with a set for review and comment. The transmission main design will be in full compliance with the clearances required by the 2002 Board of Water Supply "Water System Standards," and the construction plans will include the latest HECO notes.
3. It is not anticipated that construction of the transmission mains will require any relocation of HECO facilities. In the event relocation is required, a written request will be submitted.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

Gregory Lee
GREGORY LEE
Manager and Chief Engineer

cc: J. Dubois, KFC Engineering Management

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

February 12, 2004

RECEIVED
FEB 18 2004
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Attn: Mr. Gregory Lee
Mr. Clifford S. Jamies - Manager & Chief Engineer
Board of Water Supply - City & County of Honolulu
630 South Beretana Street
Honolulu, HI 96843

Dear Mr. Jamies:

Re: Draft Environmental Assessment for the
Kalaheba Redevelopment Area Transmission Mains
Kapolei, Oahu (TMK: 9-1-13, 16, 32 & 75)

Thank you for the opportunity to comment on the above-referenced project. We have reviewed the draft EA, and have the following comments:

- (1) HECO has existing facilities in the area of the project and we need continued access for maintenance purposes. In addition, we reserve the opportunity to further comment on the protection of existing powerlines and electric power facilities that may be affected by the project.
- (2) As construction plans are finalized, please continue to keep us informed. We would appreciate receiving two (2) sets of pre-final plans for review, from which we will be better able to evaluate any effects of the project on our system facilities. Please show all affected HECO facilities on the construction plans and address any conflicts between the proposed plans and HECO's existing facilities.
- (3) In the event that relocation of our facilities is determined to be necessary, please notify us immediately and forward a written request to proceed. We will work with you to find construction methods that will ensure the safety and as expeditiously as possible to minimize any delay or impact on the project schedule. All costs associated with any relocation or modification, either temporary or permanent, for the convenience of the contractor (e.g. temporary bracing, de-energizing of lines, etc.), or that enables the contractor to fulfill his contractual obligations shall be borne by the contractor. Please note that the requestor may also incur costs and experience delays associated with relocation and/or re-energization.

Our point of contact for this project, and the originator of these comments, is Paul Nakagawa, Principal Engineer, Transmission & Distribution Division (543-7092). I suggest your staff and consultant deal directly with Paul to coordinate HECO's continuing input in this project.

Sincerely,
Kirk S. Tomita
Kirk S. Tomita
Senior Environmental Scientist

cc: OEOC
KFC Engr/1g1



WINNER OF THE EDISON AWARD

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Ms. Myra Masuda
February 13, 2004
Page 2

- Hawaiian Railways operates trains from Ewa Station to Kane Point on Sundays, a work train on Saturdays and charters during the week. Emplacement of the water line under the railroad tracks should be done overnight or the excavation should be shored so that railroad operations are not interrupted.

We appreciate the opportunity to comment on the project. If you have any questions, please contact Ben Schlapak at 836-6533.

Sincerely,

Robert Yatchmenoff
ROBERT YATCHMENOFF
President

c: Nathan Napoka, D.I.N.R.-SIFPD

SD

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KFC



February 13, 2004

Ms. Myra Masuda
KFC Engineering Management, Inc.
1375 Kapiolani Street, Suite F220-50
Honolulu, Hawaii 96818

Dear Ms. Masuda:

Subject: DRAFT ENVIRONMENTAL ASSESSMENT
KALAELOA TRANSMISSION MAINS
JANUARY 2004

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

- Figure 1-1 should show which side of Fort Barrett Road will carry the 16-inch water line. We understand that the line will be placed on the east (Diamond Head) side of the road. If this is so, depth of placement will be important to avoid non-potable water lines and sewer lines which already exist in the vicinity of the railroad crossing along with a Chevron fuel line.
- The discussion of road traffic on page 16 cite a 1995 Navy study showing volume/capacity ratio at Roosevelt and Enterprise of 1.10 at afternoon peak hour. Since DPVAS was closed in July 1999 and Roosevelt Boulevard became available to the public, the traffic has greatly increased during day and night hours. The intersection at Fort Barrett Road/Enterprise Avenue and Roosevelt Boulevard is very busy and the railroad crossing is deteriorating and needs replacement.
- The asphaltic concrete grade crossing shown on page 20 implies that part of the crossing will be removed during the construction of the water line. The existing crossing is in such poor condition that we recommend that it be replaced with pre-cast concrete such as those done by HDOT-HHWY at Kalaeloa Boulevard, Fort Weaver Road and elsewhere in the vicinity of Kūʻōhina.

HAWAIIAN RAILWAY SOCIETY
A Chapter of the National Railway Historical Society

BWS Kalaeloa Redevelopment Area
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FEB-19-2004 THU 09:29 AM CFTD FAX NO. 808 735 8222 P. 01

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PROJECT MANAGEMENT CONSULTING • PLANNING • ARCHITECTURAL/ENGINEERING DESIGN • CONSTRUCTION MANAGEMENT

FAX MEMORANDUM

To: KFC Engineering Management, Inc. Attn: Joelle Dabois
Fax No.: (808) 834-4833
From: Department of Defense 3949 Diamond Head Road Honolulu, HI 96816-4495
Re: BWG Kalaheoa Redevelopment Area Transmission Mains

Please Check One:
O There is no need to include us in any further correspondence.
X Please keep us informed on this project. The point of contact is:

Name: SHAWN MITTS (shawn.mitts@chi-ngb.army.mil)
Telephone No.: 733-9004
Fax No.: 725-8002
Comments are attached:
Number of Pages:

ADDITIONAL INFO:
FROM: NICKIE M. CHAMBERS
CHARLES R. BIRD
ADDRESS: 1000 W. WILSON
SUITE 100
HONOLULU, HI 96813
PHONE: 808-531-1100
FAX: 808-531-1101
WWW: www.kfcem.com
CONTACT: JOELLE DABOIS
MANAGER AND CHIEF ENGINEER
E-MAIL: jdabois@kfcem.com

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
63 SOUTH BERTANHA STREET
HONOLULU, HAWAII
March 2, 2004

Mr. Robert Yatchemenoif, President
Hawaiian Railway Society
P.O. Box 60789
Ewa Beach, Hawaii 96706
Dear Mr. Yatchemenoif:

Subject: Your Letter Dated February 13, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheoa Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii
Tax Map Nos. 9-1-1-12 and 9-1-1-16-03

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaheoa Redevelopment Area Transmission Mains project.

We offer the following responses to your comments:

- 1. Figure 1-1 shall be modified to show a more accurate location for the transmission main. The transmission main design will be in full compliance with the horizontal and vertical clearances required by the 2002 Board of Water Supply "Water System Standards."
2. The construction plans will be modified to require pre-cast concrete at the grade crossing.
3. The construction plans will include a requirement that the contractor coordinate installation of the transmission main with the Hawaiian Railway Society to ensure that there is no impact on their operations.

If you have any questions, please contact Gregory Lee at 748-5716

Very truly yours,

For: CLIFFORD S. JAMILL
Manager and Chief Engineer

cc: J. D. Udo, KFC Engineering Management

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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
430 SOUTH BERTANNA STREET
HONOLULU, HI 96813



March 2, 2004

AGENT: RODNEY K. HARAGA
RODNEY K. HARAGA, Director
430 SOUTH BERTANNA STREET
HONOLULU, HAWAII 96813
PHONE: 808-551-2200
FAX: 808-551-2200

Mr. Shawn Naito
Department of Defense
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Dear Mr. Naito:

Subject: Your Fax of February 19, 2004 Regarding the Draft Environmental Assessment (DEA)
for the Board of Water Supply's Proposed Kalaheoa Redevelopment Area Transmission
Main, Kapaolei, Oahu, Hawaii
Fax: Mr. Naito 9-1-13 09 and 9-1-16 01

Thank you for your letter regarding the Draft Environmental Assessment for the Board of Water
Supply's Kalaheoa Redevelopment Area Transmission Main project.

We acknowledge that the Department of Defense does not have any comments on the proposed
project.

If you have any questions, please contact Gregory Lee at 748-5716

Very truly yours,

Gregory Lee
CLIFFORD S. JAMILI
Manager and Chief Engineer

c. J. Duffert, KFC Engineering Management

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EXEMPT



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
809 PULAHOWA STREET
HONOLULU, HAWAII 96813-5097
MAR - 2 2004

Mr. Clifford S. Jamile, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Bertanna Street
Honolulu, Hawaii 96813

Attn: Gregory Lee

Dear Mr. Jamile:

Subject: Draft Environmental Assessment (EA) for Kalaheoa Redevelopment Area Transmission
Main, Ewa, TMK: 9-1-13, 16, 32 & 75

Thank you for consulting us. We have the following comments:

1. Our enclosed October 6, 2003 comments (HWY-PS 2.1925) are still applicable.
2. In addition to the highways listed in the draft EA, the Oahu Rail & Land (OR&L) right-of-way (ROW) is under our jurisdiction.
3. Since the OR&L is on the National Register of Historic Places, the State Historic Preservation Officer must approve any work within the OR&L ROW.
4. Chevron and HECO have buried fuel lines within the OR&L ROW.

Please for all work done within our State highway right-of-way must be submitted for our review and approval.

If you have any questions, please contact Ronald F. Tuzuski, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

Rodney K. Haraga
RODNEY K. HARAGA
Director of Transportation

Enclosure

c. OEQC, [Redacted]

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30 -
RODNEY K. HARAGA
DIRECTOR
809 PULAHOWA STREET
HONOLULU, HAWAII 96813-5097
PHONE: 808-551-2200
FAX: 808-551-2200
HWY-PS
2.1925

BWS Kalaheoa Redevelopment Area
Transmission Main
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KFC Engineering Management, Inc.
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BWS Kalaheoa Redevelopment Area
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KFC Engineering Management, Inc.
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BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
100 SOUTH KING STREET
HONOLULU, HAWAII



REGISTRATION NUMBER
REGISTRAR OF COMMERCE
STATE OF HAWAII
DATE: 07-11-2000
REG. NO. 14-000
ROOM 111, HONOLULU MARINE
CENTER BUILDING, 1001
CLIFTONS DRIVE
HONOLULU, HAWAII 96813
State Engineer and Chief Engineer

March 15, 2004

Mr. Rodney Hargis, Director
Department of Transportation
State of Hawaii
449 Puuhonua Street
Honolulu, Hawaii 96813-5097

Dear Mr. Hargis:

Subject: Year Letter (HWY-PS 23394) Dated March 2, 2003 Regarding the Drain Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaheoa Redevelopment Area Transmission Mains, Kapehu, Oahu, Hawaii, TNK, S.L.1.1.09 and S.L.1.1.03.

Thank you for your letter regarding the Drain Environmental Assessment for the Board of Water Supply's Kalaheoa Redevelopment Area Transmission Mains project.

In response to the comments received, we offer the following:

1. Comments of October 4, 2003 still apply:
 - a. This project must be coordinated with the Fort Barrette Road Widening project. The design engineer requested *Shoreline Utilities of Highway on October 14, 2003* to coordinate this project. There is no preliminary design as yet available for coordination.
 - b. The water mains should be placed outside of roadway paved areas or as close as possible to ROW lines. If *water alignments is in accordance with DOT guidelines*.
 - c. Construction plans should be submitted to DOT for approval. *Final design plans will be submitted for approval.*
2. The Oahu Rail & Land (OR&L) will be listed as under the DOT jurisdiction;
3. The State Historic Preservation Officer will approve final construction plans for the area within the UH&L RHW;
4. The Chevron and IIECU fuel lines are shown and addressed on the construction plans.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,

Gregory Lee
GREGORY S. JAMILE
Manager and Chief Engineer

cc: J. DeBoni, KFC Engineering Management

BWS Kalaheoa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc
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1358
HWY-PS
2.1925

OCT - 6 2003

Mr. Joelle Dubois, P.E.
KFC Engineering Management, Inc.
3375 Koaopaka Street, Suite F220-30
Honolulu, Hawaii 96819

Dear Mr. Dubois:

Subject: BWS Kalaheoa Redevelopment Area Transmission Mains

Thank you for your letter requesting our review and comments regarding the subject project. We have the following comments:

1. This project must be coordinated with our Fort Barrette Road widening project. The design for this highway widening project will start in the fall of 2004.
2. The water mains should be placed outside roadway paved areas or as close to the rights of way line.
3. Construction plans must be submitted to us for approval for all work done within our highway rights of way.

If you have any questions, please contact Ronald F. Truzuki, Head Planning Engineer, Highways Division, at 397-1830.

Very truly yours,

Ronald F. Truzuki
RONNEY K. HARBO
Director of Transportation

FC: mt

cc: HWY-T, (permits), -PS (03-263)

BWS Kalaheoa Redevelopment Area
Transmission Mains
Final Environmental Assessment

KFC Engineering Management, Inc
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
1405 SOUTH BERTHOUD STREET
HONOLULU, HAWAII 96813

April 18, 2004

Mr. Clifford S. Jamila
Managerial Chief Engineer
Board of Water Supply
City and County of Honolulu
430 South Beretania Street
Honolulu, Hawaii 96813

LOG NO: 2004.1221
DOC NO: 0404NH01

Dear Mr. Jamila:

SUBJECT: Chapter 1E-4 Historic Preservation Review - Draft Environmental Assessment Kulaeoa Redevelopment Area Transmission Main [COUNTY/BWS] Honolulu, Terra, Oahu
TASK: 119-1-013.001

Thank you for the opportunity to comment on the DSA for the proposed installation of two (2) 18-inch water mains to interconnect the Kulaeoa water system with the BWS water system. We previously commented on this project during the pre-EA phase and during the draft EA phase. Our most recent comments were sent on January 24, 2004 (Doc. No. 0401E02). We received a response on these comments from the Board of Water Supply on March 2, 2004.

We received updated drawings from KFC Engineering Management, Inc. on March 30, 2004 for our review and comments. It is our understanding that all comments submitted by the Hawaiian Railway Society in their February 13, 2004 letter have been addressed and reflected in these new drawings on sheets C-4 and C-22. Ben Schlappek of the Hawaiian Railway Society per telephone conversations on 4/15/04 with SHPO staff has reiterated their approval of these new plans.

SHPO staff consulted with Mr. Tysu of DOT on 4/15/04 concerning their approval of these new drawings. It is our understanding that the DOT has no concerns with the ORLL portion of the project. According to Mr. Tysu the proposed understanding is going to be moved further away from the existing roadway. Mr. Tysu stated that their initial concerns with the ORLL Right of Way delineated in their letter to the Board of Water Supply on March 2, 2004 have been successfully addressed by this new design approach.

These mitigation efforts with the DOT and the Hawaiian Railway Society, if followed, will address any adverse effects that this project will have on the Right of Way. Prior to completion of this project, the State Historic Preservation Division and the Hawaiian Railway Society should be notified so that a final inspection can be made to verify the successful reinstallation of the tracks.

BWS Kulaeoa Redevelopment Area
Transmission Main
Final Environmental Assessment

KFC Engineering Management, Inc.
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Mr. Clifford S. Jamila
Page 2

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 692-8015.

Should you have any questions about the ORLL, please feel free to contact Nathan Napolski at 597-0192.

Aloha,

Neddy M. McElowney
P. Neddy McElowney, Administrator
State Historic Preservation Division

NN/jen

Project Manager, KFC Engineering Management, Inc.
3375 Koapaka St., Suite F220-50, Honolulu, HI 96819
Ms. Genevieve Salmonson, DE, OEOC, 235 S. Beretania St., Ste 702, Hon., HI 96813
Nathan Napolski, Branch Chief Culture and History
Ben Schlappek, Hawaiian Railway Society, P.O. Box 60369, Ewa Station, Ewa, HI 98708
Rodney K. Hiraga, Director of Transportation, Dept. of Transportation,
669 Punchbowl Street, Hon. HI 96813-5097

BWS Kulaeoa Redevelopment Area
Transmission Main
Final Environmental Assessment

KFC Engineering Management, Inc.
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BOARD OF WATER SUPPLY

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



May 11, 2004

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MAY 13 2004

JEREMY HARRIS, Mayor

KFC

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
HERBERT B.K. KAOPUA, SR.
DAROLYN H. LENDIO

RODNEY K. MAHAGA, Ex-Officio
LARRY J. LEOPARDI, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

Ms. P. Holly McEldowney, Administrator
Department of Land and Natural Resources
State of Hawaii
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

Dear Ms. McEldowney:

Subject: Your Letter Dated April 16, 2004 Regarding the Draft Environmental Assessment (DEA) for the Board of Water Supply's Proposed Kalaeloa Redevelopment Area Transmission Mains, Kapolei, Oahu, Hawaii, TMK:9-1-13:09 and 9-1-16:03

Thank you for the letter regarding the Draft Environmental Assessment for the Board of Water Supply's Kalaeloa Redevelopment Area Transmission Mains project.

In accordance with your comments, prior to completion of the project, the State Historic Preservation Division and the Hawaiian Railway Society will be notified so that a final inspection can be made to verify the successful reinstallation of the railway tracks.

If you have any questions, please contact Gregory Lee at 748-5716.

Very truly yours,


For CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: J. DuBois (KFC Engineering Management)