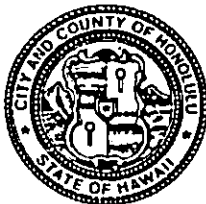


DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 523-4564 Fax: (808) 523-4567  
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JEREMY HARRIS  
MAYOR



RECEIVED

GARY Q. L. YEE, AIA  
DIRECTOR

'00 AUG 10 11:55

ROLAND D. LIBBY, JR., AIA  
DEPUTY DIRECTOR

DEPT. OF ENVIRONMENT/  
QUALITY CONTROL DCP 2000-524

August 4, 2000

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

Dear Ms. Salmonson:

Subject: Notice of Determination – Finding of No Significant Impact (FONSI)  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Koolaupoko, Oahu  
TMK: 4-4-7 & 21

The City and County of Honolulu, Department of Design and Construction (DDC), is the proposing and accepting agency for the above-referenced project. The DDC has reviewed and responded to comments received during the Draft Environmental Assessment 30-day public comment period, which began on June 8, 1999. The DDC has determined that this project will not have significant environmental effects and is, therefore, issuing a Finding of No Significant Impact (FONSI). Please publish this notice in the August 23, 2000 OEQC Environmental Notice. We have enclosed a completed OEQC Publication Form and four copies of the final EA.

We provide the following information related to the proposed action:

Identification of Proposing Agency

City and County of Honolulu, Department of Design and Construction

Identification of Accepting Agency

City and County of Honolulu, Department of Design and Construction

Brief Description of Proposed Action

The City & County of Honolulu, Department of Design and Construction (the proposing and approving agency) proposes to provide sewer service to the Malae area (Aina Moi Place, Malae Place, and Paku Place) of Kaneohe Bay through the Kaneohe Bay Sewers, Improvement District (ID) project. The project will expand the existing City sewer system to include 69 properties

Ms. Genevieve Salmonson  
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August 4, 2000

which are currently utilizing private, individual wastewater disposal systems such as cesspools and septic tanks. A signature petition received by the former Department of Wastewater Management in July 1997 indicated that many of the area residents are in favor of the project since it will provide a solution to many of the chronic sanitation problems that are being faced by individual households. In addition, the project will provide an overall environmental benefit by decreasing the degradation of coastal waters and aquifers attributable to individual wastewater disposal systems.

The project will involve the installation of approximately 4,500 feet of 6-inch and 8-inch gravity sewer lines at depths ranging from 5 to 25 feet deep. The sewer lines will be installed by trenching, along the Kancohe Bay shoreline primarily within sewer easements located in private properties. A 4-inch relief force main will be installed in the same trench as the proposed gravity lines south of the WWPS.

Since the project will be partially constructed within the Shoreline Setback Area (SSA), a Shoreline Setback Variance (SSV) will be required for the construction. In addition, use within the SSA triggers the requirement for an Environmental Assessment (EA) under Subchapter 10, Department of Health (DOH), Chapter 200 of Title 11, Hawaii Administrative Rules (HAR) and Chapter 343, Hawaii Revised Statutes (HRS).

Determination  
Finding of No Significant Impact

Reasons Supporting Declaration

This determination is based on an assessment of the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Information related to each of the criteria is presented below:

1. **The proposed project will not result in an adverse commitment, loss, or destruction of any natural or cultural resources.** While the project construction activities may result in temporary impacts to natural resources, since construction will take place directly in some yards, no addition of permanent above-ground structures is included in this project, and the City will restore the ground surface after construction is completed.

With respect to cultural resources, the project area is completely covered with modern house lots and graded, landscaped yards. There is no clear evidence of any surface structures of archaeological significance with the project area. Construction that extends below fill layers may possibly encounter historical fish pond sites and other cultural deposits; however, monitoring of subsurface excavations by a qualified archaeologist, in cooperation with the Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD), will mitigate loss or destruction of such features.

Ms. Genevieve Salmonson

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August 4, 2000

2. **The proposed project will not curtail the range of beneficial uses of the environment.** The project is anticipated to result in an improvement of the water quality of Kaneohe Bay by decreasing the degradation of coastal waters attributable to individual wastewater disposal systems; thereby increasing the range of beneficial uses of the environment.
3. **The proposed project does not conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.** According to the Hawaii Administrative Rules, Title 11, Chapter 62, "A goal has been established such that the construction of wastewater disposal systems depositing untreated sewage into the environment will not be allowed after the year 2000." The proposed project will help the City meet these State goals.
4. **The proposed project will not substantially affect the economic or social welfare of the community or state.** The project will have a beneficial short-term impact on Hawaii's economy by increasing the demand for goods and services from the construction industry during construction of the sewer system expansion. In addition, property owners will not longer have to finance maintenance and repairs of their individual wastewater disposal systems and will no longer face responsibility for damages to property or for possible fines from improperly functioning private wastewater systems. The project is part of the City's efforts to upgrade their wastewater disposal systems, with the majority of the funding coming from the Capital Improvement Program. The property owners to be served by the new system will be levied a sewer assessment to pay for a small portion of the project, and will also have to pay for closure of private sewer systems and installation of lateral connections. The City offers qualified owners payment deferments and loans to help to mitigate the economic impact.
5. **The proposed project will not adversely affect public health.** The project is anticipated to result in an improvement in public health by eliminating public health problems attributable to individual wastewater disposal systems.
6. **The project will not involve substantial secondary impact, such as population changes or effects on public facilities.** The proposed project is not sufficiently large to have a significant effect on the Windward population. The project does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF or the Kailua Regional WWTP, so it is not anticipated to result in increased development and population. Nor will the project necessitate any changes in infrastructure at these facilities, as it is part of the original service area these facilities were designed to accommodate. The design average and peak flows of the project are a very small part of the design average and peak flows to the Kailua Regional WWTP.

7. **The project will not involve a substantial degradation of environmental quality.** The project is anticipated to result in an improvement of the environmental quality through the elimination of private sewer systems that presently negatively impact the environment.
8. **The project does not involve a commitment for larger actions and will not result in significant cumulative effect upon the environment.** The proposed project is complete and is not part of a larger action.
9. **The project will not substantially affect a rare, threatened or endangered species, or its habitat.** Due to its residential nature, no rare, threatened or endangered species are known to occur in the project area.
10. **The project will not detrimentally affect air or water quality or ambient noise levels.** Short-term construction-related impacts will be mitigated by specified contractor actions and Best Management Practices. Positive long-term effects on air quality consist of eliminating odors associated with individual sewer systems. Negative long-term effects on air quality and noise are not anticipated. Although air quality problems have been associated with the Kailua Regional WWTP, the project will have minimal impact on the WWTP, since it does not significantly increase the flow to the WWTP.
11. **The project will not affect and is unlikely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.** The project is anticipated to have a beneficial impact on coastal waters due to the elimination of problematic individual wastewater systems.
12. **The project will not affect identified scenic vistas or view planes.** Although project construction activities will result in short-term impacts on scenic and visual resources for project property residents, these impacts will be temporary in nature and no addition of permanent above-ground structures is included in this project. After completion of the work, the City will restore the ground surface.
13. **The project does not require substantial energy consumption.** The project does not include any component that requires substantial energy consumption.

90

Ms. Genevieve Salmonson  
Page 5  
August 4, 2000

Should you have any questions, please contact one of the following persons:

Proposing Agency: Ms. Tina Ono  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 2<sup>nd</sup> Floor  
Honolulu, Hawaii 96813  
(808) 523-4067

Consultant: Ms. Janice Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701  
(808) 484-5366

Very truly yours,

  
FOR GARY Q. L. YEE, AIA  
Director

2000-08-23-0A-~~FEA~~

AUG 23 2000  
**FILE COPY**

DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

FINAL  
ENVIRONMENTAL ASSESSMENT

FOR

(KANEHOE BAY SEWERS IMPROVEMENT DISTRICT)

AT

KANEHOE, KOOLAUPOKO, OAHU  
TMK: 4-4-7 & 21

JULY 2000

PROPOSING AGENCY: Department of Design & Construction  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

RESPONSIBLE OFFICIAL:

  
FOR Gary Q.L. Yee  
Director

AUG 07 2000  
Date

PREPARED BY:

Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS

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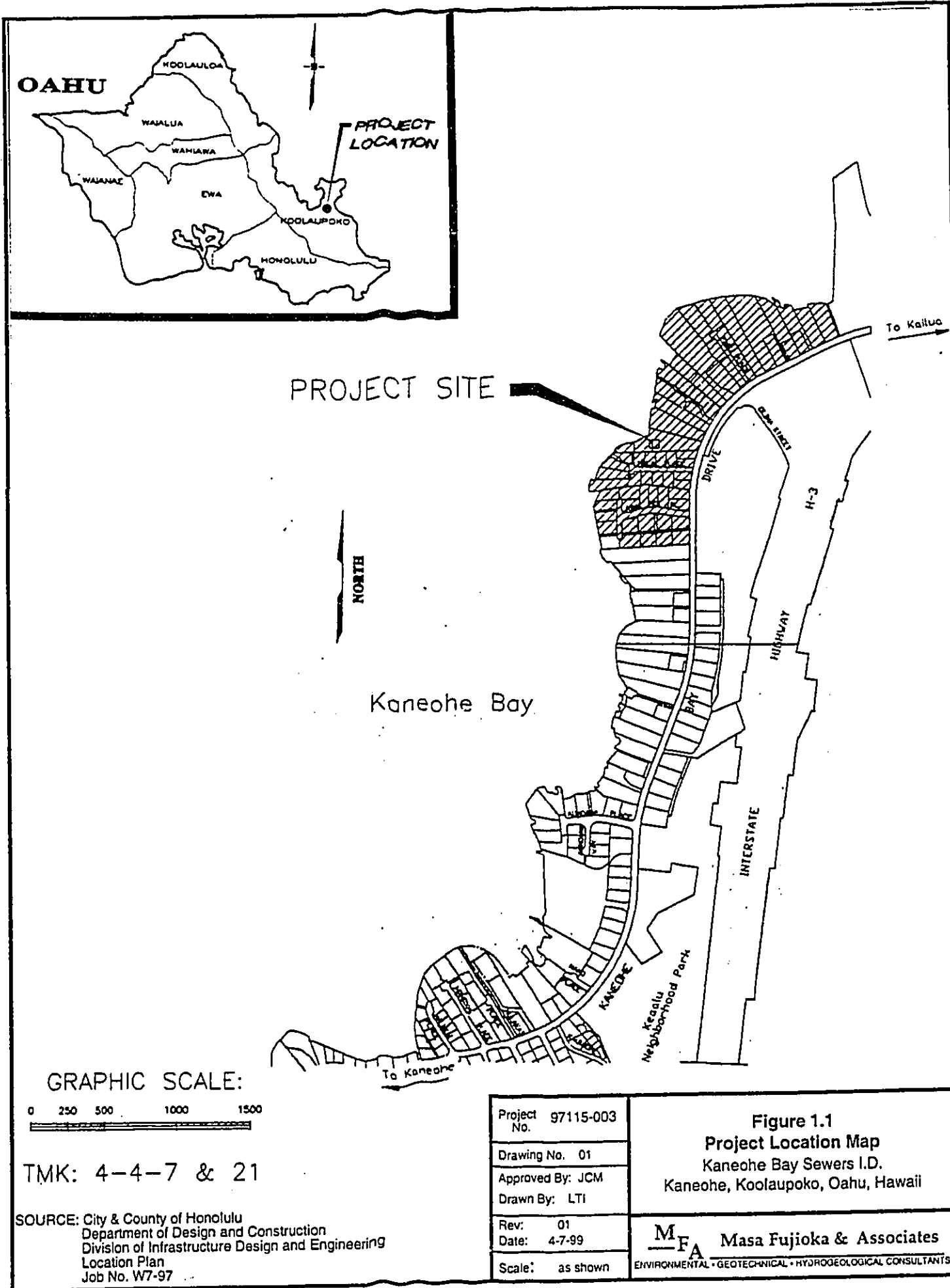
### LIST OF ACRONYMS

|        |   |
|--------|---|
| BMP    | best management practice  |
| CIP    | Capital Improvement Program                                       |
| C&C    | City and County of Honolulu                                       |
| CZM    | Coastal Zone Management   |
| CWA    | Clean Water Act   |
| DLNR   | Department of Land and Natural Resources (State of Hawaii)        |
| DLU    | Department of Land Utilization (City & County of Honolulu)        |
| DOH    | Department of Health (State of Hawaii)                            |
| DOT    | Department of Transportation (State of Hawaii)                    |
| DGP    | Department of General Planning (City & County of Honolulu)        |
| DPP    | Department of Planning and Permitting (City & County of Honolulu) |
| EA     | Environmental Assessment  |
| EPA    | Environmental Protection Agency                                   |
| FEMA   | Federal Emergency Management Agency                               |
| HAR    | Hawaii Administrative Rules                                       |
| HCZMP  | Hawaii Coastal Zone Management Program                            |
| HRS    | Hawaii Revised Statutes   |
| ID     | Improvement District  |
| KBMPTF | Kaneohe Bay Master Plan Task Force                                |
| KBTF   | Kaneohe Bay Task Force  |
| KMCAS  | Kaneohe Marine Corps Air Station                                  |
| MFA    | Masa Fujioka & Associates   |
| NEPA   | National Environmental Policy Act                                 |
| NPDES  | National Pollutant Discharge Elimination System                   |
| OEQC   | Office of Environmental Quality Control (State of Hawaii)         |
| OSP    | Office of State Planning (State of Hawaii)                        |
| SHPD   | State Historic Preservation Division (State of Hawaii)            |
| SMA    | Shoreline Management Area   |
| SSA    | Shoreline Setback Area  |
| SSV    | Shoreline Setback Variance  |
| UH     | University of Hawaii  |
| UIC    | Underground Injection Control                                     |
| USBC   | United States Bureau of the Census                                |
| USGS   | United States Geological Survey                                   |
| WWPS   | wastewater pump station   |
| WWPTF  | wastewater preliminary treatment facility                         |
| WWTP   | wastewater treatment plant  |

## 1.0 INTRODUCTION

The City & County of Honolulu, Department of Design and Construction (both proposing and approving agency) proposes to provide sewer service to the Malae area of Kaneohe Bay (see Figure 1.1 - Project Location Map), through this Kaneohe Bay Sewers, Improvement District (ID) project. The project will expand the existing City sewer system to include 69 properties in the Malae area of Kaneohe Bay which are currently utilizing private, individual wastewater disposal systems such as cesspools and septic tanks. A signature petition received by the former Department of Wastewater Management in July 1997 indicated that many of the area residents are in favor of the project since it will provide a solution to many of the chronic sanitation problems that are being faced by individual households. In addition, the project will provide an overall environmental benefit by decreasing the degradation of coastal waters and aquifers attributable to individual wastewater disposal systems.

Since the project will be partially constructed within the Shoreline Setback Area (SSA), a Shoreline Setback Variance (SSV) will be required for the construction. In addition, use within the SSA triggers the requirement for an Environmental Assessment (EA) under Subchapter 10, Department of Health (DOH), Chapter 200 of Title 11, Hawaii Administrative Rules (HAR) and Chapter 343, Hawaii Revised Statutes (HRS).



## 2.0 DESCRIPTION OF THE PROPOSED ACTION

### **2.1 PROJECT OVERVIEW**

The proposed project is a sewer improvement district project (a project that can be initiated by the property owners or by the City Council to provide sewer service to an area). According to the Hawaii Administrative Rules, Title 11, Chapter 62, "Individual wastewater systems (such as septic tanks) may be utilized in remote areas and in areas of low density. A goal has been established such that the construction of wastewater disposal systems depositing untreated sewage into the environment will not be allowed after the year 2000." The proposed project will help the City meet these State requirements.

### **2.2 PROJECT BACKGROUND**

This City & County of Honolulu, Department of Design and Construction project will provide sewer service to the Malae area of Kaneohe Bay (Figure 1.1). The Kaneohe Bay Sewers ID project will expand the existing City sewer system to include 69 properties, on Aina Moi Place, Malae Place, and Paku Place, which are currently utilizing private, individual wastewater disposal systems. A signature petition received by the former Department of Wastewater Management in July 1997 indicated that many of the area residents are in favor of the project since it will provide a solution to many of the chronic sanitation problems that are being faced by individual households. In addition, the project will provide an overall environmental benefit by decreasing the degradation of coastal waters and aquifers attributable to individual wastewater disposal systems (C&C, 1998a).

The Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Wastewater Preliminary Treatment Facility (WWPTF) or the Kailua Regional Wastewater Treatment Plant (WWTP). The ID project is part of the original service area these facilities were designed to accommodate.

### **2.3 PROJECT DESCRIPTION**

The project will involve the installation of approximately 4,500 feet of 6-inch and 8-inch gravity sewer lines at depths ranging from 5 to 25 feet deep. The sewer lines will be installed by trenching, along the Kaneohe Bay shoreline primarily within sewer easements located in private properties. The gravity sewer lines will transport the sewage generated within the project tributary area to the recently completed Kaneohe Bay South Wastewater Pump Station (WWPS) No. 5, located just north of Malae Place. A primary 6-inch force main will transport sewage directly to the Kailua Regional WWTP. Under emergency conditions, a

new 4-inch relief force main beyond the south end of Aina Moi Place will carry the sewage to join an existing system that flows to the Kaneohe Pretreatment Facility.

The construction of the proposed project will be conducted by the conventional method of excavating trenches and installing the pipe. Trench bedding and backfill will consist of compacted soil or engineered fill as recommended by the soils investigation for the project (MFA, 1998). Trench excavations will encounter groundwater in some areas. A National Pollutant Discharge Elimination System (NPDES) permit application has been prepared for the project's anticipated construction dewatering discharge.

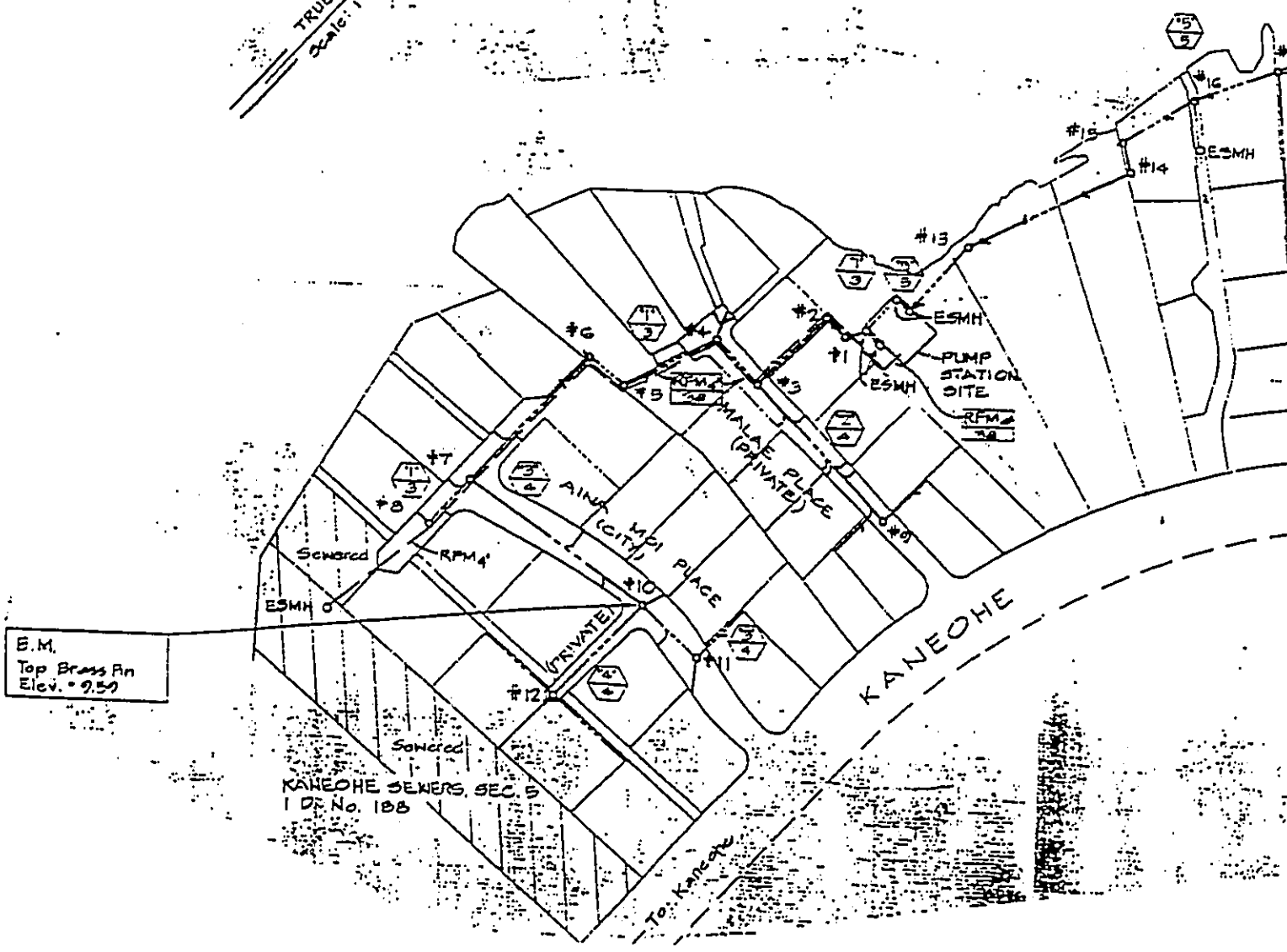
Under the project, at least one sewer lateral will be installed by the City for each property. The City sewer lateral will terminate at the property line. The location selected for the sewer lateral was based upon such factors as the number of residences on the property, the topography of the property, and the cesspool or septic tank location. A property owner will only be allowed to make connection to the City sewer system at the lateral specifically provided for his property. The cost of connection, including the cost for the sewer line from the residence to the City lateral, is the responsibility of the property owner.

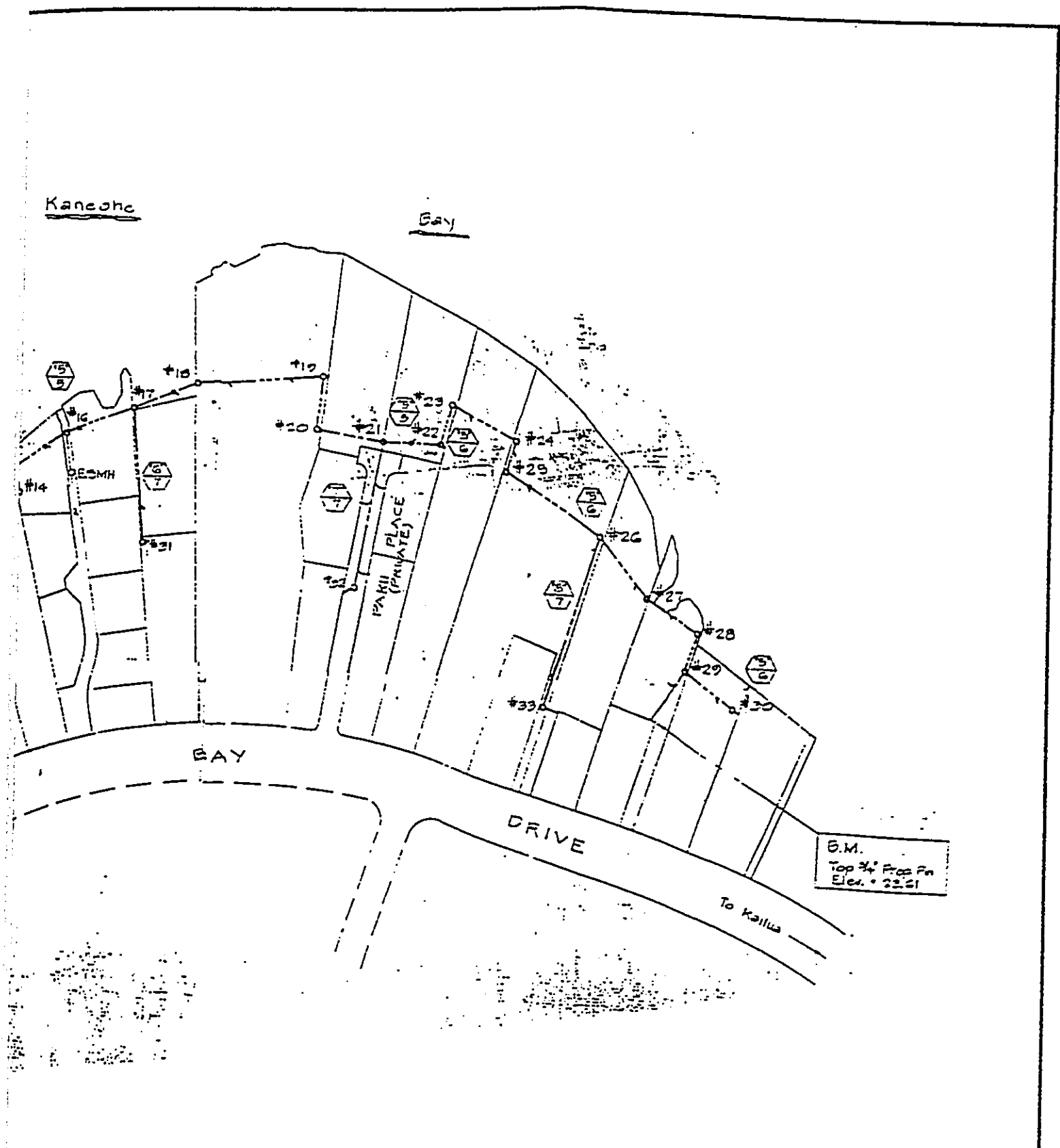
In certain situations, the City will install sewer lines through private properties in order to serve interior properties which cannot be served from the street frontage. Whenever a sewer line is required through private property, the City acquires an easement for the purpose of installation, repair, and maintenance of the sewer line and manholes. Some of the easements for this project have already been acquired by the City, and negotiations are underway for the remaining sewer easements. In granting the sewer easements to the City, the property owner is allowing access onto the property and the removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever such installation, repair or maintenance work is required (C&C, 1998a).

A sewer assessment will be levied onto every property within the project tributary area for the sewer service that will be made available. Actual connection to the City sewer system is not a determining factor since even vacant properties will be assessed. The sewer assessment is based upon the "specially benefited area" of each property as determined by the Department of Design and Construction. The specially benefited area may be equal to or less than the actual square footage of a property.

Kaneohe

TRUE NORTH  
Scale: 1" = 200'





SOURCE: City & County of Honolulu  
 Department of Design and Construction  
 Division of Infrastructure Design and Engineering  
 Key Sheet  
 Job No. W7-97

|   |   |
|---|---|
| Project No. 97115-003                     | <b>Figure 2.1</b><br><b>Site Map</b><br>Kaneohe Bay Sewers I.D.<br>Kaneohe, Koolaukopo, Oahu, Hawaii                    |
| Drawing No. 002                           |   |
| Approved By: JCM<br>Drawn By: LTI         |   |
| Rev. 1<br>Date: 4-7-99<br>Scale: as shown | <b>M<sub>F</sub>A</b> Masa Fujioka & Associates<br><small>ENVIRONMENTAL • GEOTECHNICAL • GEOLOGICAL CONSULTANTS</small> |



# CORRECTION

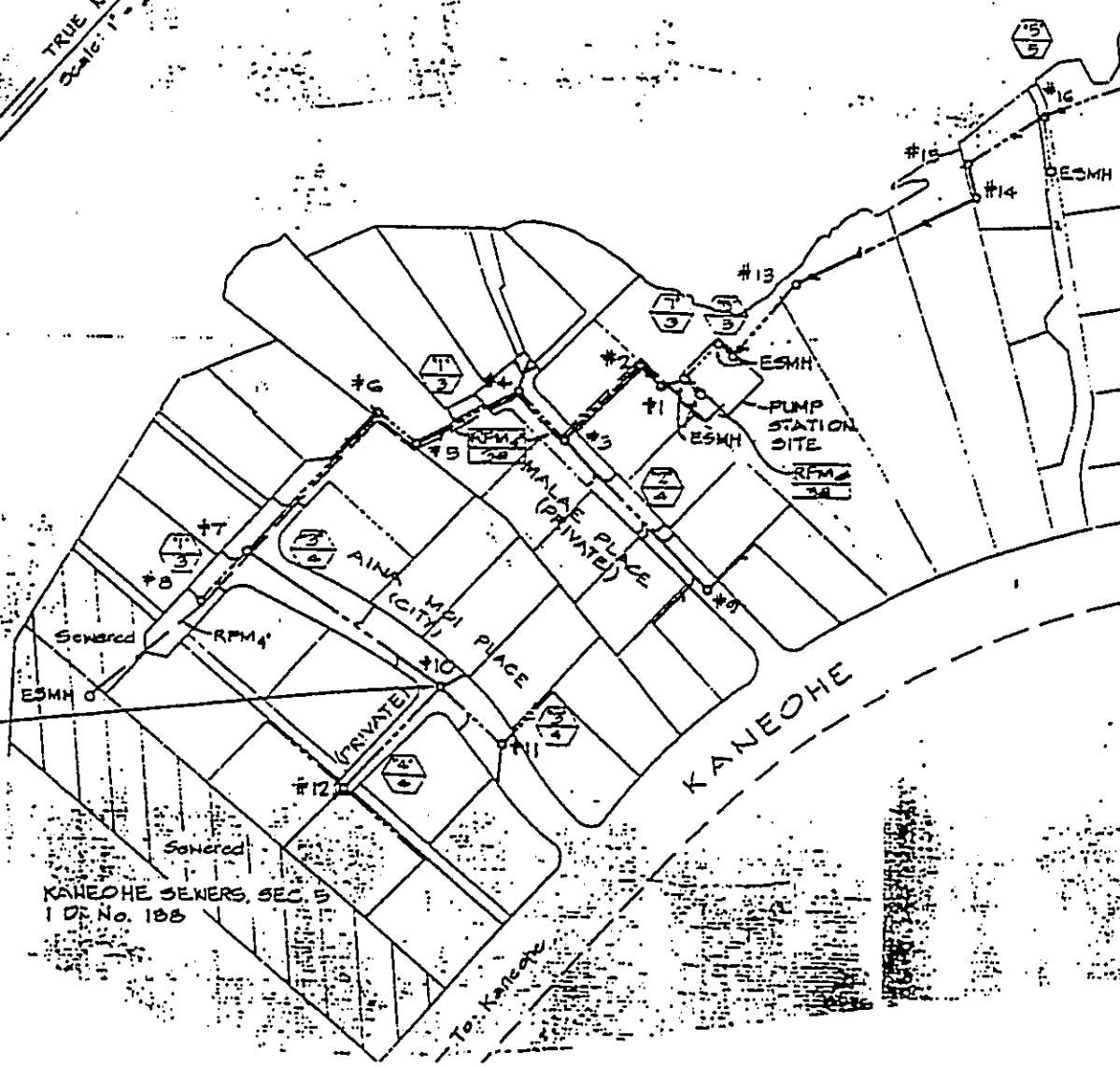
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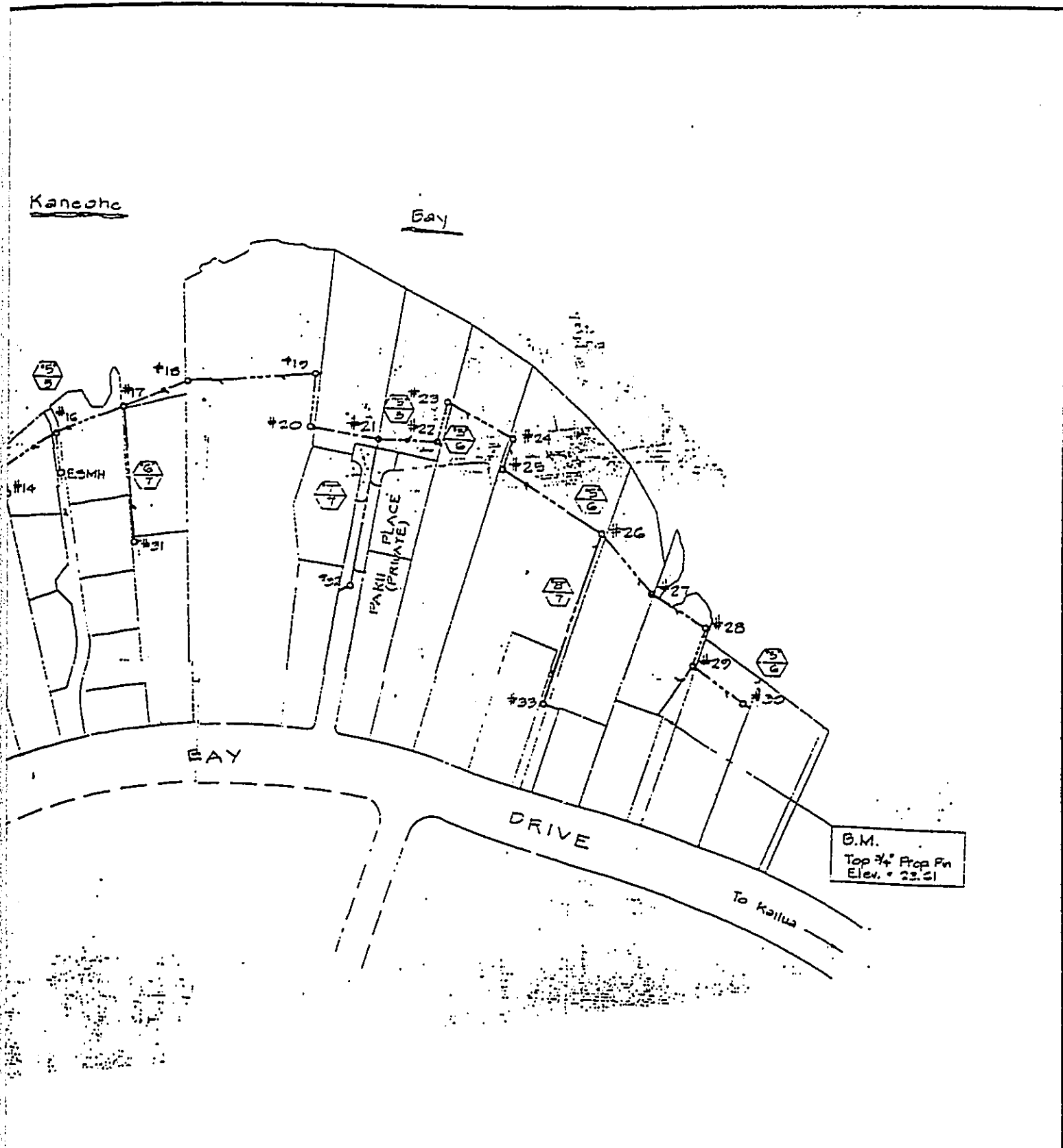
Kaneohe

TRUE NORTH  
SCALE: 1" = 100'

E.M.  
Top Brass Pin  
Elev. = 7.52

Kaneohe SEWERS, SEC. 5  
I.D. No. 185





SOURCE: City & County of Honolulu  
 Department of Design and Construction  
 Division of Infrastructure Design and Engineering  
 Key Sheet  
 Job No. W7-97

|   |   |
|---|---|
| Project No. 97115-003                     | <b>Figure 2.1</b><br><b>Site Map</b><br>Kaneohe Bay Sewers I.D.<br>Kaneohe, Koolaukopo, Oahu, Hawaii              |
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| Rev: 1<br>Date: 4-7-99<br>Scale: as shown | <b>MFA</b> Masa Fujioka & Associates<br><small>ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS</small> |

### **3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT**

#### **3.1 OVERVIEW**

This section of the EA contains a description of the existing physical, biological and socio-economic environment affected by the project. The physical, biological and socio-economic factors were considered during the analysis of project components, potential impacts and mitigation measures, and project alternatives.

#### **3.2 PHYSICAL ENVIRONMENT**

##### **3.2.1 General Setting**

The Hawaiian Archipelago comprises a chain of more than 100 islands spanning a distance of more than 1,500 miles (UH Dept. Geography, 1983). The islands are the emerged summits of volcanoes on a great submarine ridge that strikes northwest-southeast. The islands were formed by the passage of the Pacific lithospheric plate over a hot spot fixed in the earth's mantle (Macdonald et al., 1983). The sequential formation of the archipelago is indicated by the occurrence of submerged older islands in the northwest portion of the chain and by the relative youth and current volcanic activity of the islands of the State of Hawaii at the southeast end.

Six major islands comprise the State of Hawaii. From west to east they are Kauai, Oahu, Molokai, Lanai, Maui and Hawaii. The project site is located on the windward coast of the island of Oahu, the third largest island in the state with an area of 608 square miles. Oahu houses almost 80 percent of the State's people and is the State's center of government and industry (UH Dept. Geography, 1983).

##### **3.2.2 Climate**

The outstanding features of the Hawaiian Islands' climate include mild and equable temperatures year round, moderate humidities, persistence of northeasterly tradewinds, remarkable differences in rainfall within short distances, and infrequency of severe storms (UH Dept. Geography, 1983). In most of Hawaii there are only two seasons. The "summer" season occurs between about May and October, when the sun is more nearly overhead, the weather warmer and drier, and the tradewinds most persistent. The "winter" season occurs between about October and April, when the sun is in the south, the weather cooler, and the tradewinds more often interrupted by other winds and by intervals of widespread clouds and rain (Figure 3.1 - Median Annual Rainfall Map and Surface Wind).

Mean annual temperature in the islands generally varies between 72° and 75°F near sea level and decreases by about 3°F for each 1,000 feet of elevation (UH Dept. Geography, 1983). Almost everywhere at low elevations the highest temperatures of the year are in the low 90s and the lowest near 50°F.

The islands' heaviest rains are brought by winter storms during the October-to-April season (UH Dept. Geography, 1983). The project site receives an average annual rainfall of approximately 60 inches (Figure 3.1 - Median Annual Rainfall Map and Surface Wind). Most of the rain is produced by the higher intensity Kona rains during the winter months. Kona rains can cause serious runoff and flooding problems in low-lying areas such as the project site. Fortunately, these conditions usually occur only a few days of the year. Potential impacts and mitigation measures for runoff control during construction are discussed in Section 5.2.4 of this EA.

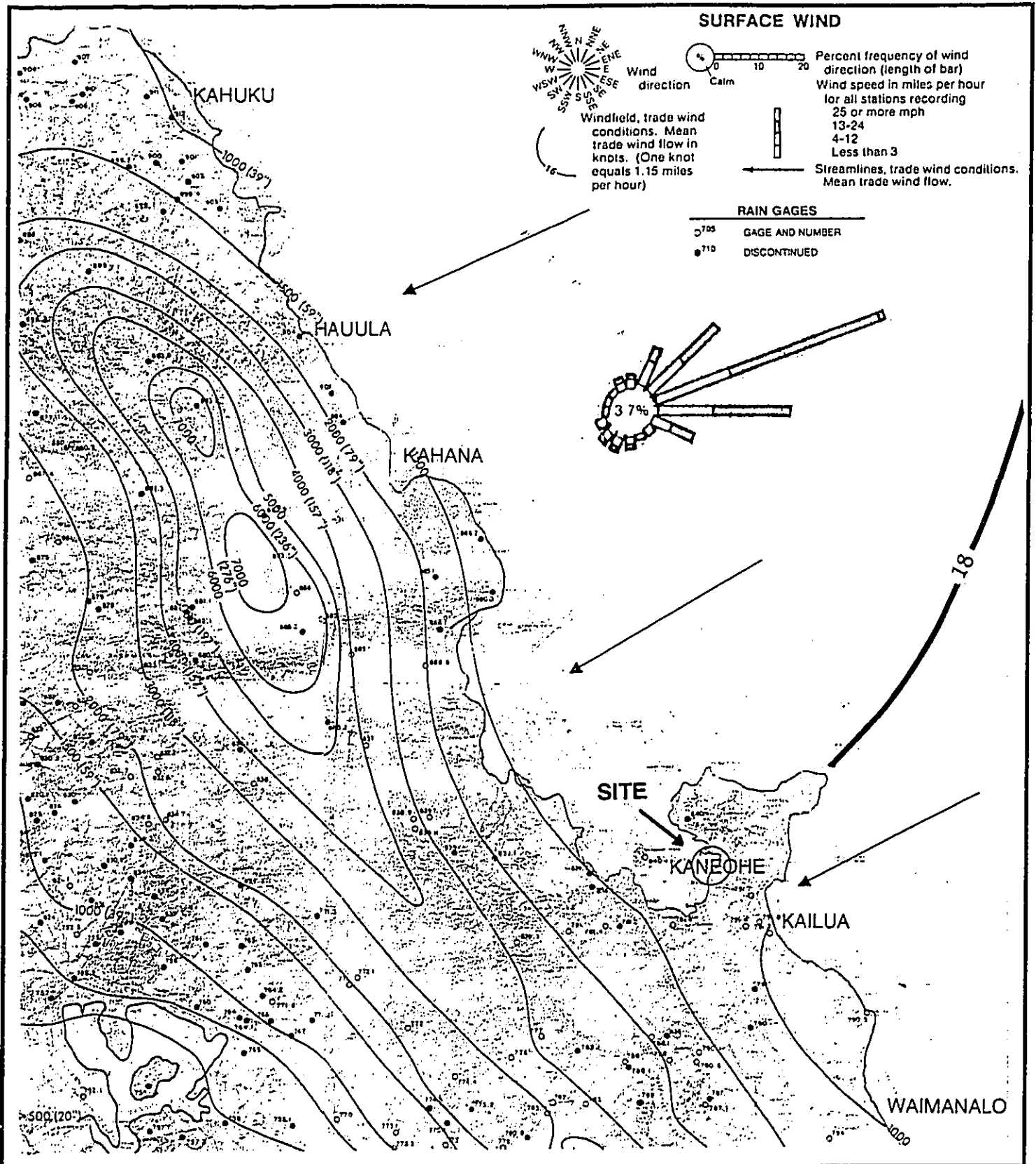
### **3.2.3 Air Quality and Noise Levels**

Air quality in most areas of Oahu is generally affected by vehicular traffic and stationary sources. The general lack of high volumes of both sources, combined with the normal fresh tradewind conditions, indicates that the air quality is good in the project area.

Noise levels are also anticipated to be low in the project area, due to the residential land use in the area. The existing ambient noise levels within the project area are anticipated to be dominated by vehicular travel along Kaneohe Bay Drive, with some potential input from recreational use of Kaneohe Bay and nearby Kaneohe Marine Corps Air Station (KMCAS).

Large military machinery and aircraft exhaust and noise at KMCAS may cause a localized degradation of air quality and increase in local noise levels. KMCAS is located across Kaneohe Bay, approximately 4,000 feet north of the northern end of the project. The Kailua Regional WWTP may also cause occasional degradation of air quality in the project area. The Kailua Regional WWTP is located approximately 2,500 east of the east end of the project.

Potential impacts and mitigation measures regarding air quality and noise levels are discussed in Section 5.2.1 of this EA.



|  |  |   |   |
|--|--|---|---|
| Median Annual Rainfall Isohyets in Millimeters and (Inches)<br><br><b>SOURCES:</b><br>State of Hawaii DLNR Rainfall Atlas of Hawai'i<br>Median Annual Rainfall Map, Oahu, 1986<br><br>Surface Wind Map<br>Atlas of Hawaii, University of Hawaii Press 1983 |  | Project No. 97115-003                   | <b>Figure 3.1</b><br><b>Median Annual Rainfall Map</b><br><b>and Surface Wind</b><br>Kaneohe Bay Sewers I.D.<br>Kaneohe, Koolaupoko, Oahu, Hawaii |
|  |  | Drawing No. 01                          |   |
|  |  | Approved By: JCM<br>Drawn By: BAS       | <b>Masa Fujioka &amp; Associates</b><br>ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS  |
|  |  | Rev: 01<br>Date: 8/26/99<br>Scale: None |   |

### **3.2.4 Geology**

The Hawaiian Islands are comprised of an undersea mountain range almost wholly built up by volcanic activity. The eroded remains of the Koolau volcanic shield, approximately 37 miles long and oriented northwest-southeast, comprise eastern Oahu. The shield-building phase of the volcano resulted in the Koolau Volcanic series. A long period of volcanic quiescence followed the shield building state, during which erosion occurred and alluvium and marine sediments accumulated along the coastal regions when a series of worldwide sea level changes occurred. During the periods of greater submergence, sedimentation filled the great valleys, resulting in flat valley floors and coral reefs grew in areas presently above sea level (Stearns and Vaksvik, 1938).

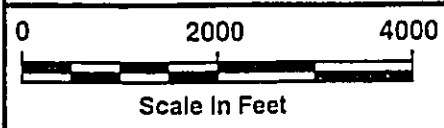
The site is located just southwest of the Mokapu Peninsula on the east side of Kaneohe Bay. Surface deposits in the area of the site include unconsolidated noncalcareous deposits. These deposits are chiefly younger alluvium, a black to brown fluvial deposit generally consisting of coarse permeable detritus only slightly weathered and in many places subangular (Stearns and Vaksvik, 1938).

### **3.2.5 Soils**

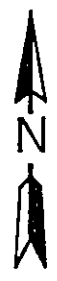
Surface soils at the site (Figure 3.2 - Soils Map) are classified as Kokokahi Clay and Kawaihapai Stony Clay Loam by Foote et al. (1972). Foote et al. describe Kokokahi Clay to consist of very sticky, very plastic, very dark to dark gray clay with slow permeability occurring as a surface layer approximately 14 inches thick. This layer is underlain by approximately 12 inches of dark grayish-brown clay that has a subangular blocky structure, and approximately 14 to more than 20 inches of grayish-brown to light brownish-gray clay.

Kawaihapai Stony Clay Loam (0 to 2 percent slopes) is described to consist of dark brown clay loam with granular structure that is hard, firm, sticky and plastic occurring as a surface layer approximately 22 inches thick (Foote et al., 1972). This layer is underlain by about 32 inches of dark brown sandy loam that is slightly hard and slightly plastic. The soil is described to have moderate permeability.

Subsurface soils indicated by soil borings conducted during the geotechnical investigation for this project (MFA, 1998) generally consist of medium stiff to stiff brown clayey silts and silty clays overlying very stiff clayey silt (saprolite) in the northern half of the site. In the southern portion of the site, borings encountered medium stiff to stiff brown clayey silts and silty clays overlying very loose silty sand and soft gray silt with organics (lagoonal soils).



SOURCE: Foote, D.E., Hill, E.L., Nakamura, S. and Stephens, F.  
Soil Survey of Island of Kauai, Oahu, Maui, Mokolai,  
and Lanai, State of Hawaii  
U.S. Department of Agriculture  
Soil Conservation Service  
August 1972



|              |           |
|--------------|-----------|
| Project No.  | 97115-003 |
| Drawing No.  | 004       |
| Approved By: | JCM       |
| Drawn By:    | LTI       |
| Rev:         | 1         |
| Date:        | 4-7-99    |
| Scale:       | 1:24,000  |

**Figure 3.2**  
**Soils Map**  
Kaneohe Bay Sewers I.D.  
Kaneohe, Koolaukopo, Oahu, Hawaii

**M<sub>F</sub>A** Masa Fujioka & Associates  
ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS



### **3.2.6 Topography and Slopes**

Topographic map coverage of the subject site is provided by the US Geological Survey (USGS) Kaneohe and Mokapu Quadrangles at a scale of 1:24,000 (USGS, 1983; Figure 3.3 - USGS Map). The elevation of the subject site is between 0 and 40 feet above mean sea level. Slopes range from 7 to 20% within approximately 250 feet from Kaneohe Bay Drive, and range from 0 to 6% closer to the ocean (C&C, 1998b).

### **3.2.7 Hydrology and Drainage**

No streams are located within the project boundaries. The nearest stream is an intermittent stream that flows from the Oneawa Hills down to the Kaneohe Yacht Club Harbor, approximately 3,000 feet south of the project.

Stormwater from Kaneohe Bay Drive travels through a series of stormwater drains and concrete channels, including concrete channels through the project area, to Kaneohe Bay. Stormwater drainage from the project residential area is by overland flow to Kaneohe Bay.

The project site is located in an area in which flood hazards are undetermined (FEMA, 1987). Generally, the project area appears adequately sloped that it does not experience any serious flooding problems. According to area residents, ponding of stormwater does occur during heavy rain events since stormwater drainage is by overland flow (MFA, 1999).

Portions of the sewer line will be located within the SSA (generally 40 feet from the shoreline). Therefore, this project is subject to Coastal Zone Management (CZM) regulations listed in HRS Chapter 205A. The CZM regulations are expanded on the county level by the establishment of Special Management Areas (SMA) which control development along the shoreline. An SMA permit is required from the appropriate County agency for construction activity within the SMA. However, the former City and County Department of Land Utilization (now Department of Planning and Permitting) has ruled that the proposed project is not defined as "development" and is therefore exempt from SMA requirements, although a SSV is still required.

Potential impacts and mitigation measures regarding hydrology and drainage issues resulting from the project are discussed in Section 5.2.4.



### **3.2.8 Groundwater Resources**

The aquifer beneath the proposed project site is part of the Waimanalo System of the Windward Sector (Figure 3.4 - Aquifer Identification Map). The Waimanalo System is characterized by two aquifers (Mink and Lau, 1990). The upper aquifer is basal (fresh water in contact with sea water), unconfined (the water table is the upper surface of the saturated aquifer), and sedimentary (nonvolcanic lithology). Mink and Lau (1990) use a status code to describe the aquifer's development stage, utility, salinity, uniqueness, and vulnerability to contamination. They classify the upper Waimanalo aquifer as currently used and ecologically important; as low salinity (250 - 1000 mg/l Cl<sup>-</sup>); and as highly vulnerable to contamination and irreplaceable (Mink and Lau, 1990).

The lower aquifer is characterized by Mink and Lau (1990) as basal (fresh water in contact with sea water), unconfined (the water table is the upper surface of the saturated aquifer), and dike (aquifers in dike compartments). Mink and Lau (1990) classify this aquifer as currently used for drinking water, as fresh (salinity < 250 mg/l Cl<sup>-</sup>), and as irreplaceable with a low vulnerability to contamination.

The nearest drinking water wells are a cluster of three wells (#2245-01, 2245-02, and 2245-03) located approximately 3.9 miles south of the site (DOH, 1983) in a different aquifer system than the subject site. The project is located approximately 18,000 feet makai of the Underground Injection Control (UIC) line (DOH, 1983).

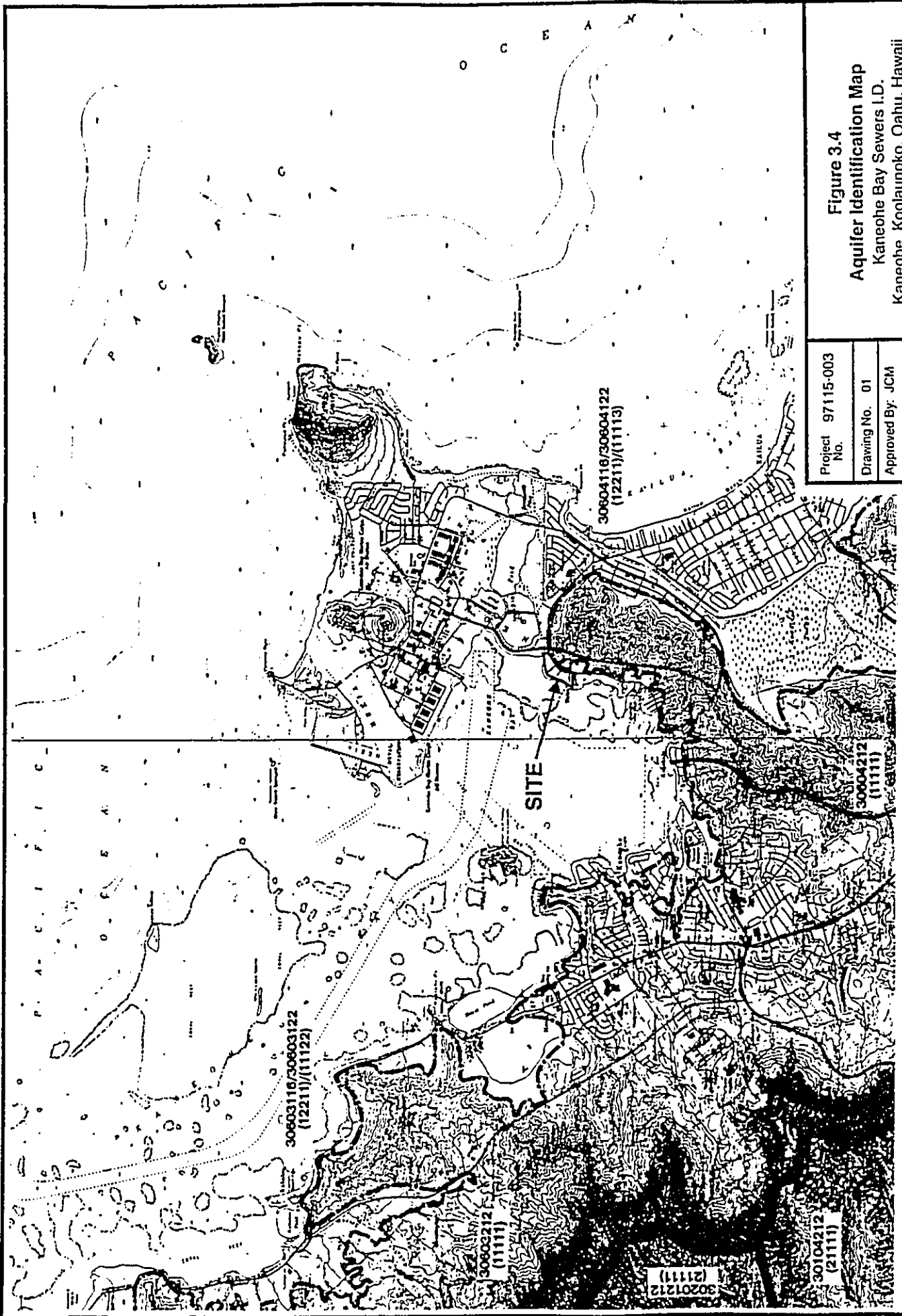
## **3.3 BIOLOGICAL ENVIRONMENT**

### **3.3.1 Flora**

A detailed botanical survey for the project was not undertaken, since the existing vegetation at the site consists mainly of residential landscaping. Typical plants include kiawe trees, palm trees, ferns, lily, hibiscus, croton, widelia, and other exotic plants.

### **3.3.2 Fauna**

Animal and bird species found in the vicinity include a variety of rodent species, mongoose, and birds such as mynahs, sparrows, and doves, typical of the introduced fauna found in residential areas. No threatened or endangered species are anticipated in the project area, due to its residential nature.



Project No. 97115-003

Drawing No. 01

Approved By: JCM

Drawn By: LTI

Rev: 01

Date: 4-7-99

Scale: as shown

**Figure 3.4**  
**Aquifer Identification Map**  
 Kaneohe Bay Sewers I.D.  
 Kaneohe, Koolauopoko, Oahu, Hawaii

SOURCE: Mink, John F. and L. Stephen Lau  
 Aquifer Identification and Classification for Oahu  
 Groundwater Protection Strategy for Hawaii  
 Water Resources Research Center  
 February 1990

**MFA** Masa Fujioka & Associates  
 ENVIRONMENTAL - GEOTECHNICAL - HYDROGEOLOGICAL CONSULTANTS

### **3.3.3 Kaneohe Bay**

Kaneohe Bay has been designated by DOH as Class AA waters. According to Hawaii Administrative Rules §11-54-03, the objective of Class AA waters is to "remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected." The Bay is rich with natural resources that provide productive fisheries, excellent diving and snorkeling sites, and other recreational uses (KBTF, 1998).

Potential impacts and mitigation measures regarding dewatering during construction are discussed in Section 5.2.4.

According to the Hawaii Administrative Rules, Title 11, Chapter 62, "Individual wastewater systems (such as septic tanks) may be utilized in remote areas and in areas of low density. A goal has been established such that the construction of wastewater disposal systems depositing untreated sewage into the environment will not be allowed after the year 2000." The proposed project will provide an overall benefit by decreasing the degradation of coastal waters and aquifers attributable to individual wastewater disposal systems.

## **3.4 SOCIO-ECONOMIC ENVIRONMENT**

### **3.4.1 Population**

The resident population of Oahu was about 838,500 persons and of Kaneohe was approximately 35,500 persons in 1990 (USBC, 1991).

The Kaneohe Bay Sewers Improvement District does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF or the Kailua Regional WWTP, so it is not anticipated to result in increased development and population in the project area. The current development and population are part of the original service area these facilities were designed to accommodate.

### **3.4.2 Existing Land Use**

Approximately 60% of the land in Hawaii is zoned as conservation land, partly because of the steep slopes and the need to preserve watersheds (UH Dept. Geography, 1983). National parks and recreational preserves are included in this percentage. Agricultural uses, plantation agriculture and cattle ranching utilize approximately 35% of Hawaii's land. Urban uses, including residential, commercial, and industrial uses, comprise approximately 4%, and

non-residential military use comprises the remaining 1% of land use in the State. The current State land use district classifications place the proposed project site within an Urban District (Figure 3.5).

The area immediately surrounding the project site is zoned as a residential district (R-10) (C&C, 1998a). According to the Land Use Ordinance, the intent of the residential district is to "allow for a range of residential densities." The specified intent of the R-10 district "is to provide areas for large lot developments ... located typically at the outskirts of urban development and may be applied as a transitional district between preservation, agricultural or country districts and urban districts" (DLU, 1997). The R-10 district "would also be applied to lands where residential use is desirable but some development constraints are present" (DLU, 1997). The development constraints present in the project area include shoreline setback requirements and other shoreline constraints.

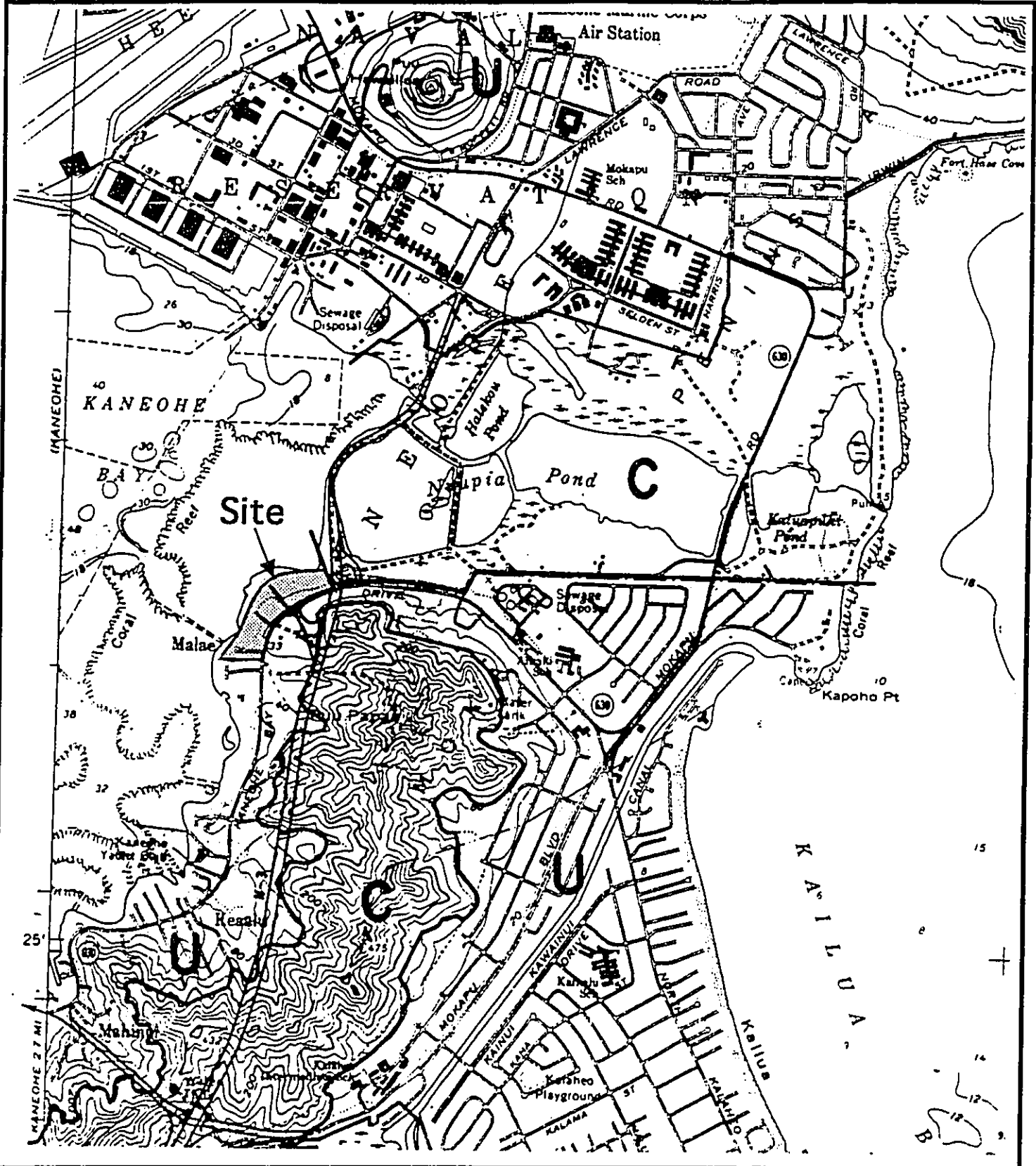
In some cases, the City will install sewer lines through private properties in order to serve interior lots and those lots which cannot be served from the street frontage. Whenever a sewer line is required through private property, the City will acquire a sewer easement for the purpose of installation, repair, and maintenance of the sewer line and manholes. Some of the easements have already been acquired by the City, and negotiations are underway for the remaining sewer easements. In granting the sewer easements to the City, the property owner is allowing access onto the property and the removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever such installation, repair or maintenance work is required.

### **3.4.3 Recreation**

The area's principal recreation resource is Kaneohe Bay, which provides a range of recreational uses, including fishing, diving, snorkeling, boating, and other seaside activities (KBTF, 1998). Potential impacts of the project on Kaneohe Bay and proposed mitigation measures are discussed in Section 5.2.4.

### **3.4.4 Scenic and Visual Resources**

Residential development in the project site largely blocks views of Kaneohe Bay from Kaneohe Bay Drive. The project will not block scenic views of ocean or mountain resources. Potential impacts of the project on scenic and visual resources and proposed mitigation measures are discussed in Section 5.4.4.



|  |  |                          |  |
|--|--|--------------------------|--|
| <b>LEGEND</b><br><br><b>U</b> Urban<br><b>C</b> Conservation |  | Project No. 97115-003    | <b>Figure 3.5</b><br><b>State Land Use Map</b><br>Kaneohe Bay Sewers I.D.<br>Kaneohe, Koolaupoko, Oahu, Hawaii |
|  |  | Drawing No. 01           |  |
| SOURCE: State of Hawaii<br>Land Use Commission               |  | Approved By: JCM         | <b>Masa Fujioka &amp; Associates</b><br>ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS             |
|  |  | Drawn By: BAS            |  |
|  |  | Rev: 01<br>Date: 8/26/99 |  |
|  |  | Scale: 1:24,000          |  |

#### **3.4.5 Archaeological and Historical Resources**

According to an archaeological assessment by Cultural Surveys Hawaii, the present project area is completely covered with modern house lots and graded, landscaped yards. There are a number of 1 to 2 meter (3 to 7 feet) high retaining walls built along the shore that have clearly been backfilled and landscaped. Other areas show indications of dredging in the bay. There is no clear evidence of any surface structures of archaeological significance within the project area. However, there is the possibility that evidence of the former Panahaha fish ponds is present below fill layers at the north end of the project area. These fish ponds are significant for information on Hawaiian history and prehistory that they are likely to yield. There is also the possibility that cultural deposits or evidence of habitation or human burials exist within the original soil matrix. A copy of the assessment by Cultural Surveys Hawaii is attached as Appendix A.

#### **3.4.6 Infrastructure**

The main roadway in the area is Kaneohe Bay Drive, a paved two-lane road. Kaneohe Bay Drive originates near Aikahi Elementary School and runs generally southeast to Kaneohe, where it becomes Likelike Highway at the Kamehameha Highway Intersection. According to the State Department of Transportation Cadastral Engineering Section, the state owns the northeast (toward Kailua) portion of Kaneohe Bay Drive within the project vicinity from approximately 110 feet Kailua side of Malae Place to the Kailua end of the project (DOT, 1999a). The remaining portion of Kaneohe Bay Drive in the project vicinity is owned by the City and County of Honolulu (DOT, 1999a). Kaneohe Bay Drive along the project area is bisected by the jurisdiction line between the City and State portions.

Vehicular access to the residential properties is currently provided by a series of paved two-lane City and County and one-lane private roads (see Figure 2.1).

Potable water is supplied by the City and County system; this system has been considered in the design and routing of the project. The project area is not served by a public wastewater collection and disposal system; the project is intended to provide such a system to the project area.

Telephone service and natural gas service are provided to the project area via separate underground utility lines. Electric power service and cable television service are provided to the project area via underground and overhead utility lines. These systems have been considered in the design and routing of the project.



### **3.4.7 Economic Considerations**

According to the 1998 State Office of Planning's "The State of Hawaii Data Book", Hawaii's gross State product topped \$29,324 billion in 1992. Hawaii's high land, labor, and materials costs contribute to a cost of living about 40 percent higher than the continental U.S. average (Office of Planning, 1998).

Economic considerations specifically related to the proposed project include the City's costs (including procurement of easements and construction) and private owner costs (including improvement district assessment, the closure of private systems, and the installation of lateral connections). Measures provided by the City to mitigate private economic impacts are addressed in Section 5.4.7.

#### **Construction Costs**

The City anticipates that construction costs for the project will be on the order of \$3,650,000.

#### **Easements**

The City generally pays about one-tenth (1/10) of the market value of the land required for the sewer easement. Acquisition of easements entitles the City rights to enter the property and the removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever installation, repair or maintenance of the City sewer system is required (C&C, 1998a). Payment may include full compensation for loss of specified improvements (i.e., landscaping) as agreed upon during negotiations with individual owners. The City anticipates that the cost of procuring easements for the project will be on the order of \$42,000.

#### **Sewer Assessments**

Per Ordinances of the City and County of Honolulu, a sewer assessment will be levied onto every property within the project tributary area for the sewer service that will be made available. Actual connection to the City sewer system is not a determining factor since even vacant properties will be assessed. The sewer assessment is based upon the "specially benefited area" of each property as determined by the Department of Design and Construction. The specially benefited area may be equal to or less than the actual square footage of a property. The sewer assessment is calculated by multiplying the specially benefited area of a property by the assessment rate that is set by law for the zone designation in which the property is located (C&C, 1998a).

The current sewer assessment rate for residential zoned properties is \$0.25 per square foot of specially benefited area (C&C, 1998a). Based on the R-10 zoning, each property having a specially benefited area of at least 10,000 square feet but less than 20,000 square feet would be assessed \$2,500.00 (10,000 square feet x \$0.25 per square foot) (C&C, 1998a). Properties with sufficient area to allow for potential subdivision or construction of additional homes are imposed a larger assessment. Those properties with specially benefited areas greater than 20,000 square feet would be assessed a minimum of \$5,000.00 (20,000 square feet x \$0.25 per square foot) with a \$2,500.00 increase in assessment for each additional 10,000 square foot increment of specially benefited area beyond 20,000 square feet (C&C, 1998a). A property having an actual square footage of less than 10,000 square feet would be considered to have a specially benefited area equal to its square footage. The property would therefore be assessed an amount equal to its actual square footage multiplied by \$0.25 per square foot (C&C, 1998a).

Payment of the sewer assessment will be due 30 days after the assessment ordinance for the project is approved by the Mayor and a notice of sewer assessment is received by the property owner. It is estimated that assessments will be due around August 2001. Property owners may choose to pay the sewer assessment in one lump sum payment or in 20 equal annual installments of principal with interest on the unpaid balance at a rate not to exceed 10% per annum. The interest rate will be set in the future by the City Council.

Eligible property owners may apply for deferred payment of the sewer assessment. In order to be eligible for deferred payment, all of the following conditions must be met:

- A. Property owner must be at least 65 years old or be permanently and totally disabled as defined in Section 235-1, Hawaii Revised Statutes, Income Tax Law.
- B. Property owner must be sole owner or part owner of the property and required to pay the assessment.
- C. Property must be the only residence of the property owner.
- D. Payment of assessment would cause financial hardship. Evidence of hardship shall be showing that:
  - 1) the average annual sewer assessment payment exceeds one (1) percent of the adjusted gross income of the property owner; or
  - 2) the income of the property owner does not exceed \$20,000.00 per year.

The deferment procedure requires that the property owner fill out an application form and attach sufficient documentation to establish eligibility. If eligibility is based on permanent and total disability, the application must include a certification by the State or County Medical Officer duly authorized by the State Department of Health. The application must be filed within 15 days after the applicant has received a notice of assessment.

Within 30 days of filing, the Director of Finance shall notify the applicant that the application is rejected or accepted. If accepted, the Director of Finance shall offer to enter into a contract with the applicant. However, a deferral may be terminated when any of the following events occur:

- A. A participant residing upon the property terminates the deferral by giving written notice to the City Director of Finance;
- B. A participant residing upon the property dies and there are no other participants residing upon the property at that time, the amount of deferral and interest shall be a claim against the property which is the subject of the deferral;
- C. The property which is the subject of the deferral is sold, or an agreement of sale is executed, or some person other than the participant residing upon the property becomes the owner;
- D. The property which is the subject of the deferral is no longer the only dwelling of the participant residing upon the property; or
- E. Occupation of the structure on the property in the deferred assessment program is terminated for any other reasons.

According to the contract, when the deferral is terminated, the principal and interest will become payable to the City in a lump sum (C&C, 1998a).

#### Closure of Private Systems

The Plumbing Code requires that a cesspool, septic tank, or seepage pit that is abandoned or discontinued from further use must first be emptied of sewage before it is completely filled with earth, sand, gravel, concrete or other approved material (C&C, 1998a). The property owners will be individually responsible for arranging, acquiring the proper permits, and paying for the abandonment of their cesspool, septic tank, or seepage pit.

Installation of Lateral Connections

Under the project, at least one sewer lateral will be installed for each property. The location(s) selected for the sewer lateral was based upon such factors as the number of residences on the property, the topography of the property, and the cesspool or septic tank location. The City sewer lateral will terminate at the property line. A property owner will only be allowed to make connection to the City sewer system at the lateral specifically provided for his property (C&C, 1998a). The cost of connection, including the sewer line from the residence to the City lateral, is the responsibility of the property owner.

Typically, a property owner will hire a licensed plumber to acquire the proper permits and to make the actual connection to the City lateral. A licensed plumber may charge anywhere from approximately \$50 to \$100 per linear foot to install this private sewer line. Prices may vary with the configuration of the property, the length of the private sewer line to be installed, the type of soil that must be excavated, the type and size of equipment that can be utilized on the property, etc. (C&C, 1998a).

City and County loans are available to qualified owners to finance the cost of making the sewer lateral connection. As shown in the table below, low-interest loans at either 0% or 2% rates may be available through the City and County Department of Community Services depending on a property owner's household size and household income level (from all sources). All loans will be secured by a mortgage on the property and will have a maximum term of 15 years.

| Number in Household  | Moderate Gross Income Limits |                         |
|--|------------------------------|-------------------------|
|  | <u>0% Interest Rate</u>      | <u>2% Interest Rate</u> |
| 1  | \$27,120                     | \$33,450                |
| 2  | 31,020                       | 38,250                  |
| 3  | 34,860                       | 43,000                  |
| 4  | 38,760                       | 47,800                  |
| 5  | 41,880                       | 51,600                  |
| 6  | 44,940                       | 55,450                  |
| 7  | 48,060                       | 59,250                  |
| 8*   | 51,180                       | 63,100                  |
| * For each additional family member beyond 8 members, add the specified amount to the 8 member family income limits. | 3,101                        | 3,824                   |

Once a property owner is connected to the City sewer system, he will be responsible for paying a monthly sewer service charge. The following are the current rates for sewer service charges:

- A. For each single family/duplex dwelling, the monthly rate for each unit is \$24.85 plus \$1.05 for each increment of 1,000 gallons over the first 2,000 gallons of water consumption (reduce consumption by 18% water irrigation factor).
- B. For each multiple unit dwelling, the monthly rate for each unit is \$17.40 plus \$1.05 for each increment of 1,000 gallons over the first 2,000 gallons of water consumption (reduce consumption by 18% water irrigation factor).

The sewer service charge will be included with the Board of Water Supply's water billing which is typically mailed out every two months.

Property owners may propose an alternate sewer lateral location for consideration by the Department of Design and Construction. If the alternate location is judged to be feasible, the Department of Design and Construction will install the lateral at the agreed upon location (C&C, 1999a).

Once construction of the project has been completed, property owners will be notified in writing that, by law, connection must be made to the new City sewer system within 90 days. Property owners will be individually responsible for arranging, acquiring the proper permits, and paying for the private sewer line that will connect their home to the City sewer lateral that has been specifically installed for each property (C&C, 1998a).

## 4.0 THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS FOR THE AFFECTED AREA

### 4.1 OVERVIEW

This section discusses the various land use plans and policies pertaining to the proposed sewer system expansion. Other plans and regulations related to the proposed project are also discussed.

### 4.2 POLICY PLANS

#### 4.2.1 Overview of Policy Plans

The State of Hawaii, City and County of Honolulu, and Kaneohe Bay Task Force have adopted general plans to guide the physical, social and economic development of the islands in general and Oahu and Kaneohe Bay in particular. These general plans outline the objectives and policies that encourage the controlled development of resources (energy, economics, water, etc.). These policies include a general framework for the proposed sewer system expansion project, as described below.

#### 4.2.2 Hawaii State Plan

On May 22, 1978, the Hawaii State Plan was signed into law. The Hawaii State Plan serves "as a guide for the future long-range development of the State; identifies goals, objectives, policies, and priorities for the State. The Plan provides a basis for determining priorities and allocating limited resources, such as public funds, services, and human resources. It improves coordination of federal, state, and county plans, policies, programs, projects, and regulatory activities. The plan also establishes a system for plan formulation and program coordination to provide for an integration of all major state and county activities" (OSP, 1996).

The Hawaii State Plan objectives and policies that pertain most directly to the proposed sewer system expansion are contained in Section 226-11, 226-13, 226-14 and 226-15 of the Plan:

*Section 226-11: Objective and policies for the physical environment - land-based, shoreline, and marine resources*

*(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:*

*(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.*

- (2) *Effective protection of Hawaii's unique and fragile environmental resources.*
- (b) *To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:*
  - (1) *Exercise an overall conservation ethic in the use of Hawaii's natural resources.*
  - (3) *Take into account the physical attributes of areas when planning and designing activities and facilities.*
  - (4) *Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.*
  - (7) *Provide public incentives that encourage private actions to protect significant natural resources from degradation and unnecessary depletion.*

Section 226-13: Objective and policies for the physical environment - land, air, and water quality.

- (a) *Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives.*
  - (1) *Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.*
  - (2) *Greater public awareness and appreciation of Hawaii's environmental resources.*
- (b) *To achieve land, air, and water quality objectives, it shall be the policy of this State to:*
  - (1) *Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.*
  - (2) *Promote proper management of Hawaii's land and water resources.*
  - (3) *Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.*
  - (6) *Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.*
  - (7) *Encourage urban developments in close proximity to existing services and facilities.*
  - (8) *Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures, and visitors.*

*Section 226-14: Objective and policies for facility systems - in general*

- (a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, energy and telecommunication systems that support statewide social, economic, and physical objectives.*
- (b) To achieve the general facility systems' objective, it shall be the policy of this State to:*
  - (1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.*
  - (2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.*
  - (3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.*
  - (4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.*

The proposed project responds to these objectives and policies by providing a sewer system that supports statewide social, economic, and physical objectives. Specifically, the proposed sewer system expansion will accommodate the needs of community residents and reduce the negative impact on groundwater quality and coastal water quality from current wastewater management practices (i.e., cesspools and septic tanks). The proposed expansion has been designed in a manner that promotes prudent use of resources and that accommodates public concerns.

*Section 226-15: Objectives and policies for facility systems - solid and liquid wastes*

- (a) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:*
  - (1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.*
  - (2) Provisions of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.*



*(b) To achieve solid and liquid waste objectives, it shall be the policy of this State to:*

- (1) Encourage the adequate development of sewerage facilities that complement planned growth.*
- (2) Promote re-use and recycling to reduce solid and liquid waste and employ a conservation ethic.*
- (3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.*

The proposed project responds to the objectives and policies for waste by aiding in maintenance of basic public health and sanitation standards relating to treatment and disposal of wastes. The design of the proposed sewer system expansion provides efficient and economical disposal of waste by connecting to a new wastewater pump station and a nearby sewage treatment plant.

#### **4.2.3 General Plan of the City and County of Honolulu**

In 1992, the General Plan of the City and County of Honolulu was adopted as a comprehensive plan for the long-range development of Oahu (DGP, 1992). The plan includes the following policies relating to the subject project:

- (1) Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.*
- (2) Provide safe, efficient, and environmentally sensitive waste-collection and waste-disposal services.*
- (3) Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reef and offshore islands.*
- (4) Allocate fiscal resources of the City and County to efficiently implement to the policies of the General Plan and the Development Plans.*
- (5) Ensure that government attitudes, actions, and services are sensitive to community needs and concerns.*

The proposed project responds to these objectives and policies of the City and County of Honolulu General Plan. The proposed sewer project will clearly improve the utilities in the subject neighborhood to reduce substandard conditions, which have been the cause of

numerous complaints to the City from the community residents. The proposed project will provide safe, efficient and environmentally sensitive waste disposal, protecting nearby natural resources.

#### **4.2.4 Kaneohe Bay Master Plan**

Pursuant to Act 208, Session Laws of Hawaii 1990, the Legislature established the Kaneohe Bay Master Planning Task Force to develop a comprehensive master plan for Kaneohe Bay (KBMPTF, 1992). The Kaneohe Bay Master Plan was developed through extensive public participation with the assistance of a Kaneohe fisherman, a commercial recreation businessperson, representatives from neighborhood boards and State agencies, as well as non-voting representatives of the KMCAS and the City and County of Honolulu.

In their development of the Master Plan, the Task Force stated the following land use positions that impact the subject project:

- (1) Mitigate deteriorating water quality in key watersheds by installing pollution prevention measures.*
- (2) Restrict development in the watershed in accordance with the Koolauoko Development Plan. Limit development where a sewage collection system does not exist, and restrict use of septic individual waste water systems to residential lots with sufficient size (15,000 square feet or more) for proper disposal.*
- (3) Delay northward extension of the sewage collection system until existing infrastructure deficiencies are rectified. Repair and upgrade the existing sewage collection system to prevent by-passes of raw or partially treated sewage effluent into the Bay and to prevent sewage infiltration through groundwater to the Bay.*

The proposed project responds to these objectives and policies of the Master Plan. The proposed sewer project will replace the use of problematic individual waste water systems and prevent sewage infiltration through groundwater to the Bay. Required infrastructure, including the new pump station, are in place as needed for the expansion of the system.

#### **4.2.5 State Environmental Policy**

Adopted in 1974 and patterned after the National Environmental Policy Act (NEPA) requirements, Hawaii's Environmental Impact Statement law (HRS 343) requires the preparation of environmental assessments and environmental impact statements for many development projects. The law requires that government give systematic consideration to the

environmental, social and economic consequences of proposed development projects before granting permits and allowing construction to begin. The National Environmental Policy Act also assures the public right to participate in planning projects that may affect the community (OEQC, 1997).

An environmental assessment is required under HRS 343 for any program or project that proposes one or more of the following eight land uses or administrative acts:

1. *Use of state or county lands or funds other than for feasibility studies or the purchase of raw land,*
2. *Use of any land classified as Conservation District set by state law,*
3. *Use within the Shoreline Setback Area (usually 40 feet inland from the certified shoreline),*
4. *Use within any Historic Site or District as designated in the National or Hawaii Register of Historic Sites,*
5. *Use within the Waikiki Special District as designated by the county,*
6. *Any amendment to county general plans that would designate land as other than agriculture, conservation or preservation except comprehensive plan amendments initiated by the county,*
7. *Reclassification of State Conservation District lands, and*
8. *Construction or modification of helicopter facilities which may affect conservation land, the shoreline area, or historic properties.*

The proposed sewer system expansion will be county-funded. The alignment of certain sections of the proposed sewer system expansion is within the Shoreline Setback Area. This EA has been prepared to comply with the State's environmental policy and to give appropriate regard to environmental, economic and technical concerns.

#### **4.2.6 Hawaii Administrative Rules**

The Hawaii Administrative Rules, Title 11, were developed and are enforced by the State Department of Health. Chapter 62 of these rules outlines wastewater systems management in Hawaii. These rules were finalized on August 30, 1991 and are scheduled to be revised in late 1999 (HAR, 1999).

The State Department of Health has set regulations for wastewater systems management. The purpose of Chapter 62 is to "insure that the disposal of wastewater from water treatment works and individual wastewater systems:

- 1) *Does not contaminate or pollute any drinking water or potential drinking water supply, or the waters of any beaches, shores, ponds, lakes, streams, groundwater, or shellfish growing waters;*
- 2) *Does not encourage the harborage of insects, rodents or other possible vectors;*
- 3) *Does not give rise to nuisances;*
- 4) *Does not become a hazard or potential hazard to public health, safety and welfare;*
- 5) *Contributes to the achievement of wastewater management goals contained in approved county water quality management plans; and*
- 6) *Reinforces state and county planning policies."*

According to Chapter 62, "Individual wastewater systems (such as septic tanks) may be utilized in remote areas and in areas of low density. A goal has been established such that the construction of wastewater disposal systems depositing untreated sewage into the environment will not be allowed after the year 2000." The proposed project will help the City meet these State requirements.

#### **4.3 PROJECT PERMIT REQUIREMENTS**

The following permits were reviewed as to applicability to this project. Certain permits are discussed in detail in the following sections.

##### **4.3.1 Federal Permits**

###### **Permit for Activities in Waterways**

Not applicable. The project does not cross or enter waterways.

###### **Section 404 for discharges into the waters of the U.S.**

Discussed in Section 4.3.2, NPDES Permit.

###### **Flood Determination in General Flood Plain District / Development Applications in Flood Hazard District / Flood Hazard Variance**

According to a Flood Insurance Rate Map (FIRM) for the City and County of Honolulu, the entire project site is classified as "Other Areas - Zone D: Areas in which flood hazards are undetermined" (FEMA, 1989; panel 60 of 135).

#### 4.3.2 State of Hawaii Permits

##### Conservation District Use Permit

Not applicable. The project is not in a Conservation District.

##### Special Permit - State Land Use, Agricultural, and Rural Districts

Not applicable. The project is not in an Agricultural or Rural District.

##### Historic Sites Review

Information regarding review of historic sites is presented in section 5.4.5.

##### In Stream Use of Water: Stream Channel Alteration

Not applicable. The project does not involve altering any stream channel or using stream water.

##### Variation from Pollution Controls (Noise and Air Pollution)

To be completed during the Design/Construction phase of the project.

##### Section 401, Water Quality Certification

Not applicable. The project does not involve conducting work within State waters.

##### CZM Consistency Determination

The Hawaii Coastal Zone Management Program (HCZMP) was established to guide the development, protection, and use of the land and ocean resources within Hawaii's coastal zone (OSP, 1990). The objectives of the HCZMP are stated in Chapter 205A of the Hawaii Revised Statutes (HRS, 1998b). Any significant development activity within the coastal zone is required by law to conform to the HCZMP objectives and policies. The objectives are listed below:

1. *Recreational resources; (A) Provide coastal recreational opportunities accessible to the public.*
2. *Historic resources; (A) Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone*

*management area that are significant in Hawaiian and American history and culture.*

- 3. Scenic and open space resources; (A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.*
- 4. Coastal ecosystems; (A) Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*
- 5. Economic Uses; (A) Provide public or private facilities and improvements important to the State's economy in suitable locations.*
- 6. Coastal hazards; (A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*
- 7. Managing development; (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*
- 8. Public participation; (A) Stimulate public awareness, education, and participation in coastal management.*
- 9. Beach protection; (A) Protect beaches for public use and recreation.*
- 10. Marine resources; (A) Implement the State's ocean resources management plan.*

The HCZMP is expanded on the county level by the establishment of Special Management Areas (SMA) which control development along the shoreline. An SMA permit is required from the appropriate County agency for construction activity within the SMA. However, the City and County Department of Planning and Permitting has ruled that the proposed project is not defined as "development" and is therefore exempt from SMA requirements, although a SSV is still required.

*Perform Work Affecting State Highway*

A DOT permit may be required for construction signs that will be posted along Kaneohe Bay Drive (C&C, 1999b).

*Cross or Enter State Energy Corridor*

According to Derrick Lining of the State of Hawaii, Department of Transportation, Harbors Division, this project does not cross or enter any State Energy Corridors (DOT, 1999b).

EA/EIS

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, and the significance criteria of Chapter 200, Title 11, Hawaii Administrative Rules, this assessment indicates that the project will have no significant adverse impact to archaeological sites, water quality, noise, existing utilities, or wildlife habitat, and will not require an EIS.

Due to the fact that this project includes construction work within the shoreline setback area, the project requires an EA (this document).

NPDES Permit

In 1972, the Federal Water Pollution Control Act (often referred to as the Clean Water Act or CWA) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Amendments to the CWA in 1987 added Section 402(p) to the Act and establishes a framework for regulating municipal and industrial discharges under the NPDES program.

The EPA published final regulations on November 16, 1990, which established application requirements for discharge of construction dewatering effluent. The State DOH has obtained a General Permit for discharge of construction dewatering effluent in Hawaii. However, discharge into Kaneohe Bay does not qualify for inclusion under the General Permit because Kaneohe Bay has been designated by DOH as a Class AA waters. According to Hawaii Administrative Rules §11-54-03, the objective of Class AA waters is to "remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected." Discharge into Kaneohe Bay requires an Individual NPDES Permit. Permit applications have been completed to cover the proposed sewer system construction, in compliance with State and Federal regulations.

**4.3.3 City and County of Honolulu**

Development Plan Public Facilities Map Amendment

Exempt. The project is considered an improvement district. Per City Ordinance No. 93-1, improvement districts are not considered as a major public facility and are not required to be depicted on the Public Facilities Map.

Property Ownership

Work for this project will be conducted within the City Right-of-Way or private properties. The City is currently in the process of acquiring easements through private properties as necessary for construction of the proposed sewer alignment.

Conditional Use Permit, or any other relevant city Permit

Exempt. This project consists of the installation of a new public facility which is exempt from the Conditional Use Permit.

Special Management Area Use Permit (SMA)

Exempt. The former City and County Department of Land Utilization has ruled that the proposed project is not defined as "development" and is therefore exempt from SMA requirements. The letter exempting the project from SMA requirements is attached in Appendix B.

Street Usage Permit

To be obtained by the contractor prior to construction of the project.

Shoreline Setback Variance

To be obtained following the completion of this EA.

Special District Permit

Not applicable. The project is not located within a special district.

Subdivision Permit

Not applicable. No division of lots or parcels is to be done under this project.

Permit to Discharge Effluent (Temporary)

A permit application to discharge construction dewatering effluent into the City and County storm drainage system has been completed and will be submitted to the Department of Environmental Services.

Grubbing, Grading, and Stockpiling Permit

To be obtained by the contractor prior to construction of the project.

Permit to Excavate in Public Right-of-Way

To be obtained by the contractor prior to construction of the project.



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## **5.0 SUMMARY OF PROBABLE IMPACTS OF THE PROPOSED ACTION AND PROPOSED MITIGATION MEASURES**

### **5.1 OVERVIEW**

This section discusses the probable impacts of the proposed sewer system expansion and the proposed mitigation measures. Impacts can be either short- or long-term. Short-term impacts are usually construction related, while long-term impacts are usually related to operation and financing of the sewer system improvements.

### **5.2 PHYSICAL ENVIRONMENT**

#### **5.2.1 Air Quality and Noise Levels**

Impacts on air quality and noise from the proposed project are anticipated to be similar to those experienced with any construction project. Some short-term deterioration of local air quality and increase in noise levels associated with trenching and construction activity and closing of the individual wastewater systems is anticipated. These vectors will primarily affect the construction workers and nearby residents. These short-term effects will be sustained during the construction of the proposed expansion.

Odor emissions during pumping of the individual wastewater systems are anticipated to be short-term, on the order of minutes, and comparable to routine pumping that occurs during regular maintenance of these systems. For most systems, pumping out the sewage into a pump truck will be the only event that has the potential to generate odor or bacterial atmospheres. After pumping out the individual wastewater systems, the systems will be closed in place by filling the system with an inert material such as earth, sand, gravel, or concrete. Filling is not anticipated to generate odor since the sewage will have been previously removed.

Normal tradewind patterns along the windward shore area should disperse pollutant emissions generated by construction activities. Construction management measures (i.e., dust control and "good housekeeping") are expected to minimize these adverse effects. The contractor will be required to maintain internal combustion equipment in excellent working condition to minimize the emission of exhaust fumes. Additionally, construction activities must comply with provisions of HAR Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust, which states that:

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

- a. Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of least impact;
- b. Providing an adequate water source at the site prior to start up of construction activities;
- c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. Controlling of dust from shoulder and access roads;
- e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f. Controlling of dust from debris being hauled away from project site.

Heavy vehicles traveling to and from the project site must comply with the provisions of the DOH's Administrative Rules, Chapter 11-42, "Vehicular Noise Control for Oahu." Furthermore, activities associated with the construction phase of the project must comply with the DOH's Administrative Rules, Chapter 11-46, "Community Noise Control" which states that:

- a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the rules as stated in Section 11-46-6(a).
- b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b) (1)(A).
- c. The contractor must comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d) (4).

Despite mitigation measures, complaints relative to fugitive dust and construction noise are to be expected, thereby increasing calls for police service to the area. If the Department of Design and Construction deems that construction air quality and noise impacts must be controlled further (i.e., as a result of justifiable complaints by residents), the contractor will be required to implement additional corrective actions (C&C, 1998a).

Positive long-term effects on air quality consist of eliminating odors associated with individual sewer systems.

Negative long-term effects on air quality and noise are not anticipated. Although air quality problems have been associated with the Kailua Regional WWTP, the subject project will have minimal impact on the WWTP, since it does not significantly increase the flow to the WWTP. The design average flow of the subject project is 0.047 million gallons per day (mgd), and the design peak flow is 0.250 mgd; these flows are a very small part of the current and design average and peak flows to the Kailua Regional WWTP. The existing (1995) and projected (2020) average wastewater flows to the Kailua Regional WWTP are 12.4 mgd and 13.9 mgd. The design average flow and the design peak flow for the WWTP facility are 15.25 mgd and 28.0 mgd, respectively (Wilson Okamoto et al., 1998). As previously stated, the project does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF or at the Kailua Regional WWTP. The ID project is part of the original service area these facilities were designed to accommodate.

Capacity-related and non-capacity related issues, including air quality and noise concerns, at the Kailua Regional WWTP are addressed in the Kailua-Kaneohe-Kahaluu Facilities Plan (Wilson Okamoto et al., 1998). The Facilities Plan contains a 20-year plan which determines the future needs for the Kailua-Kaneohe-Kahaluu wastewater service area and the required improvements to the wastewater treatment plant, preliminary treatment facilities, pump stations, and the collection and disposal system.

The Facilities Plan proposes the following major elements for future sewerage work and improvements to the Kailua-Kaneohe-Kahaluu service area:

- "No new Kailua plant processing facilities, except ultraviolet disinfection and modifications with existing facilities -- secondary clarifiers, influent pump station and centrifuge building.
- Odor and noise control improvements for the Kailua Regional WWTP.
- Rehabilitation of seven (7) collection system basins, including collection system lines in the Kalaheo Avenue area.
- Provide flow equalization storage facilities for the Kailua Basin following a determination of 1) acceptability of planning for a 2-year or a 5-year storm, and 2) the extent of reduction in infiltration/inflow by rehabilitation measures.
- 8.5 million gallon (MG) flow equalization storage at Kaneohe wastewater primary treatment facility (WWPTF).
- 0.9 MG flow equalization storage at Ahuimanu WWPTF.

- Collection system improvements, including relief lines, rehabilitation or replacement of trunk sewers, and pump station improvements and upgrades.
- Sewer Improvement Districts in nine (9) areas." (Wilson Okamoto et al., 1998)

According to the Facilities Plan, improvements to the Kailua Regional WWTP will be phased over several years in three phases: short-term, intermediate-term, and long-term. A number of improvements address capacity and odor/noise issues. Many of the collection system's capacity issues have been related to infiltration and inflow of groundwater and stormwater into the collection system. Infiltration and inflow issues are being addressed by the City through rehabilitation of existing systems, and through education of the public regarding the impacts of illegal connections. In addition, system capacity will be improved to accommodate either a 2-year or 5-year storm (currently under study; Wilson Okamoto et al., 1998).

A second Improvement District project, the Kahaluu Sewers Section 3 I.D. is included in the 20-year Capital Improvement Program (CIP) for FY2002. The properties in the project service area utilize private, individual wastewater disposal systems such as cesspools, and the project will eliminate failed cesspool systems and potential threat to public health and the environment. The flow for this project, which will also be added to the Kailua Regional WWTP, is estimated to average 0.345 mgd, therefore also minimally impacting the WWTP. Other planned sewer Improvement Districts are included in the Facilities Plan (Wilson Okamoto et al., 1998). Again, these projects do not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF or at the Kailua Regional WWTP, but are part of the original service area these facilities were designed to accommodate. Long-term improvements to the treatment facilities, particularly those that are capacity related, will be phased to match event-driven projects in the collection system (Wilson Okamoto et al., 1998).

### **5.2.2 Soils**

The project will involve the installation of approximately 4,500 feet of gravity sewer lines in trenches excavated to depths ranging from approximately 5 to 25 feet deep. Some of the excavated soils may be reused as trench backfill. Other soils will need to be removed from the site as they will be unsuitable for backfill.

Soft soils to be excavated below the water table may be over saturated with water (sloppy) and could result in unsightly spillage of muddy water during transport. The contractor will be required to provide non-leaking transport for sloppy soils.

In addition, imported soil (off-site soils and engineered fill) will be used in some areas where soft soils are anticipated. The contractor will be required to place imported soils in an efficient manner that minimizes their impact to areas outside the trenches. The contractor will also be required to use appropriate dust control measures during construction.

Upon completion of the installation, the ground surface will be returned to preconstruction conditions. There will be no significant long-term impact to the soils in the project area.

### **5.2.3 Topography and Slopes**

There will be no grading conducted during the project and, therefore, there will be no short-term or long-term impacts to the project site topography and slopes.

### **5.2.4 Hydrology and Drainage**

Construction activities could provide short-term impact to the quality of stormwater drainage from the project to Kaneohe Bay. In addition, the project could potentially impact the physical environment of Kaneohe Bay through the discharge of dewatering effluent during construction.

The contractor will be required to comply with project specifications regarding stormwater control during construction. An Individual NPDES permit application has been prepared for the discharge of construction dewatering effluent to the area's storm drainage system and/or to Kaneohe Bay. The contractor will be required to comply with the Best Management Practices (BMPs) outlined in the approved dewatering plan, or will be required to submit revised BMPs for approval by the City and DOH. The contractor will be required to conduct water quality monitoring as specified by the NPDES permit.

Long-term adverse impacts on hydrology and drainage are not anticipated. The long-term impact to Kaneohe Bay will be a positive one, with the elimination of private sewer systems that presently negatively impact the bay through transmission of sewage in groundwater.

### **5.2.5 Groundwater Resources**

The project will occur near the shoreline and will entail excavating below the groundwater table over much of the project's length. However, the project is not anticipated to have any negative effect on the caprock or basal aquifer below. The contractor will be required to have pollution prevention BMPs in place to prevent contamination of groundwater at the construction site.

The long-term impact to the groundwater in the project area will be a positive one, with the elimination of private sewer systems that presently negatively impact groundwater.

### **5.3 BIOLOGICAL ENVIRONMENT**

#### **5.3.1 Flora**

Vegetation at the site consists mainly of residential landscaping, and threatened or endangered species are not anticipated to be found. To the extent possible, vegetation removal will be kept to a minimum, and the project is not expected to have a significant adverse effect on flora in the area.

#### **5.3.2 Fauna**

No threatened or endangered species are anticipated in the project area, due to its residential nature. The project will not have a significant adverse impact on fauna in the area.

#### **5.3.3 Kaneohe Bay**

The project could potentially impact the biological environment of Kaneohe Bay through the discharge of stormwater runoff and dewatering effluent during construction. Potential impacts and mitigation measures regarding stormwater control and dewatering BMPs during construction were discussed above in Section 5.2.4.

The long-term impact to Kaneohe Bay will be a positive one, with the elimination of private sewer systems that presently negatively impact the bay through transmission of sewage in groundwater.

### **5.4 SOCIAL ENVIRONMENT**

#### **5.4.1 Population**

The proposed project is not sufficiently large to have a significant effect on the Windward population. The Kaneohe Bay Sewers I.D. project does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF or the Kailua Regional WWTP, so it is not anticipated to result in increased development and population.

#### **5.4.2 Existing Land Use**

Short-term impact to individual residences will occur during installation of each section of the sewer line. Due to the residential nature of the project area, with homes and structures closely spaced, short-term impacts and inconveniences caused by the construction work will

be unavoidable. However, the Department of Design and Construction is committed to keeping the impacts and inconveniences to the lowest levels possible for such construction.

Restrictions on the contractor will be incorporated into the construction contract documents (i.e., construction plans and specifications). The contract documents will require that the contractor perform his work in accordance with all applicable City, State and Federal regulations. Special emphasis will be placed upon safety, health and environmental concerns. In particular, the contractor will be required to keep areas safe for residents by using the appropriate barriers and trench covers. Also, during construction, if the Department of Design and Construction deems that construction impacts must be controlled further (i.e., as a result of justifiable complaints by residents), the contractor will be required to implement additional corrective actions (C&C, 1998a).

Sewer easements in private property may result in long-term impact since, by granting easements to the City, the property owner is allowing access onto the property and the removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever installation, repair or maintenance of the City sewer system is required (C&C, 1998a). However, this work is infrequent and will only be a temporary inconvenience to the residents and the City and their contractor will strive to minimize the disruption due to any such work. Special emphasis will be placed upon safety, health and environmental concerns during installation, repair and maintenance work. After completion of the work, the City will restore the affected improvements to as close to original conditions as possible.

#### **5.4.3 Recreation**

The project area's principal recreation resource, Kaneohe Bay, could potentially be impacted through the discharge of dewatering effluent during construction. However, the impact of dewatering effluent discharge would be a short-term impact, occurring only during construction. Potential impacts and mitigation measures regarding dewatering during construction were discussed above in Section 5.2.4.

The project will provide an overall long-term environmental benefit to Kaneohe Bay by decreasing the degradation of coastal waters and aquifers attributable to individual wastewater disposal systems, thereby improving recreational opportunities.



#### **5.4.4 Scenic and Visual Resources**

The project construction activities will result in short-term impacts on scenic and visual resources for project property residents, since construction will take place directly in some yards. However, these impacts will be temporary in nature and no addition of permanent above-ground structures is included in this project. After completion of the work, the City will restore the ground surface. Therefore, there will be no long-term impacts to scenic and visual resources.

#### **5.4.5 Archaeological and Historical Resources**

According to an archaeological assessment by Cultural Surveys Hawaii, the present project area is completely covered with modern house lots and graded, landscaped yards. There are a number of 1 to 2 meter (3 to 7 feet) high retaining walls built along the shore that have clearly been backfilled and landscaped. Other areas show indications of dredging in the bay. There is no clear evidence of any surface structures of archaeological significance within the project area. However, there is the possibility that evidence of the former Panahaha fish ponds is present below fill layers at the north end of the project area. These fish ponds are significant for information on Hawaiian history and prehistory that they are likely to yield. If construction excavations exceed the depth of fill materials in the location of the fish ponds, these activities could impact the fish pond sites.

There is also the possibility that cultural deposits or evidence of habitation or human burials exist within the original soil matrix below existing fill materials throughout the project area. Since these areas are not adequately identifiable due to the present residential development within the project area, Cultural Surveys Hawaii recommends monitoring of subsurface excavations by a qualified archaeologist, at least in the initial phases of construction. When it is established that excavation activities will occur only within fill materials, on-call archaeological monitoring may be considered in consultation with the Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD). The extent and conditions for archaeological monitoring will be set forth in an archaeological monitoring plan to be reviewed and accepted by the SHPD.

In the event that any human burials, artifacts, or other cultural remains or deposits are encountered during construction, the contractor will contact the SHPD. Work in the immediate area will be suspended until the SHPD is able to assess the impact and make further recommendations for mitigative measures if warranted.

#### **5.4.6 Infrastructure**

Necessary measures to assure public convenience, as well as public health and safety, will be provided throughout all phases of the project. Residential vehicular and pedestrian traffic are the main traffic concerns for the proposed project. A traffic control plan has been prepared, in conjunction with the construction plans, for review and approval by the Department of Planning and Permitting, Traffic Review Branch. The contractor will provide, install, and maintain all necessary signs, lights, barricades, markers, cones, and other protective facilities to assure protection of the public. Such safety precautions shall conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", as adopted by the Highway Safety Coordinator and the U.S. Federal Highway Administration. In spite of mitigation measures, complaints relative to traffic problems are to be expected, thereby increasing calls for police service in the area.

Potable water, electric power, and other utility systems have been considered in the design and routing of the project. Temporary relocation of some utility systems may cause a short-term impact on the project area. However, the contractor will be required to maintain service to the project area. Per Board of Water Supply requirements, the construction specifications will require that the contractor use approved reduced pressure principle backflow prevention assemblies after all water meters used during construction activities. There are no anticipated long-term impact to utility systems.

The project does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF nor at the Kailua Regional WWTP, and will not necessitate any changes in infrastructure at these facilities. The ID project is part of the original service area these facilities were designed to accommodate. The design average and peak flows of the project are a very small part of the design average and peak flows to the Kailua Regional WWTP.

The project will provide a long-term beneficial impact to the area's wastewater collection system, by providing a solution to many of the chronic sanitation problems that are being faced by individual households.

#### **5.4.7 Economic Considerations**

The project will have a beneficial short-term impact on Hawaii's economy by increasing the demand for goods and services from the construction industry during construction of the sewer system expansion.

The project will also have beneficial long-term economic impacts on owners of properties included in the project. Beneficial long-term economic impacts are related to the shifting of the cost of wastewater system maintenance from the property owners to the City. Property owners will no longer have to finance maintenance and repairs of their individual wastewater disposal systems. The costs related to maintenance of the proposed sewage system will be the responsibility of the City and County of Honolulu. In addition, property owners will no longer be responsible for damages to property or for possible fines from improperly functioning private wastewater systems.

Adverse economic impacts include the City's costs for procurement of easements and for construction. Costs related to the installation of a new sewer line will be funded through the Capital Improvement Program and through the sewer assessments paid by the property owners.

Adverse economic impacts to the property owners are related to the payment of the improvement district assessment (which are to be used to pay for a portion of the project costs), the closure of private sewer systems, and the cost of installation of lateral connections. Measures provided by the City to qualified owners to mitigate these impacts include payment deferments and loans.

The ID sewer assessment may be a financial burden for property owners. The City requires payment of the sewer assessment within 30 days after the assessment ordinance for the project is approved by the Mayor. It is estimated that assessments will be due around August 2001 for this project. The City allows property owners to pay the sewer assessment in one lump sum payment or in 20 equal annual installments of principal with interest. Property owners meeting certain conditions may also apply for deferred payments of the sewer assessment, as previously described in Section 3.4.7.

The closure of private systems may be a financial burden for property owners. The Plumbing Code requires that a cesspool, septic tank, or seepage pit that is abandoned or discontinued from further use must first be emptied of sewage before it is completely filled with earth, sand, gravel, concrete or other approved material (C&C, 1998a). The property owners will be individually responsible for arranging, acquiring the proper permits, and paying for the costs associated with the abandonment of their cesspool, septic tank, or seepage pit. The costs associated with the closure of private sewer systems will vary for each property owner and will depend on such factors as the accessibility of the existing cesspool, septic tank, or seepage pit to be abandoned, the material used for fill, etc. While the

closure of private systems may be a short-term financial burden for residents, the closure will mitigate the long-term costs of maintaining the private systems and handling damages due to problems with the private wastewater systems.

The connection to sewer laterals may be a financial burden for property owners. As indicated on page 3-17, the cost for installing the connection to the City lateral will vary depending on property conditions. To mitigate the associated financial burden, City loans are available to qualified owners to finance the cost of making the sewer lateral connection. As previously described in Section 3.4.7, low-interest loans may be available depending on a property owner's household size and household income level.

Once a property is connected to the City sewer system, the owner will be responsible for paying a monthly sewer service charge. The sewer service charge is included with the Board of Water Supply's water billing. There are no mitigation measures for the payment of the monthly sewer service charge.

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## **6.0 ALTERNATIVES TO THE PROPOSED ACTION**

### **6.1 OVERVIEW OF ALTERNATIVES**

Alternatives considered to the proposed action were the "No Action" alternative, the "Delayed Action" alternative, and the "Alternate Alignment" alternative.

### **6.2 NO ACTION**

This alternative is typically considered when contemplating a new project. The City Council selected to proceed with the proposed project. "No Action" was determined to be undesirable for the reasons discussed below.

The "No Action" alternative infers that no new sewer system will be developed for the Malae residential community. If the proposed project is not undertaken, chronic sanitation problems that are being faced by individual households will continue and the degradation of the coastal waters and aquifers attributable to individual wastewater disposal systems in the area will also continue.

The project allows the City to comply with various State, County, and local plans and policies regarding protection of the environment and disposal of sewer waste.

### **6.3 DELAYED ACTION**

The "Delayed Action" alternative is also undesirable, due to the chronic sanitation problems that are currently being faced by individual households.

### **6.4 ALTERNATE ALIGNMENTS**

The chosen sewer line alignment was determined after carefully considering topography, locations of improvements, etc. In general, the primary portions of the alignment have been reserved through the acquisition of sewer easements early on in the project's inception. Due to the tight configuration of homes, alternative alignments are not available.

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## 7.0 DETERMINATION

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, and the significance criteria of Chapter 200, Title 11, Hawaii Administrative Rules, this assessment indicates that the project will have no significant adverse impact to archaeological sites, water quality, noise, existing utilities, or wildlife habitat, and will not require an EIS.

Short-term adverse impacts to local air quality, local noise levels, the physical environment of Kaneohe Bay, scenic and visual resources, local utility systems, and local vehicular and pedestrian traffic are expected during construction. However, measures will be implemented to mitigate these impacts.

Long-term adverse impacts are related to land use in the area of the sewer easements. In granting easements to the City, the property owner is allowing access onto the property and removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever installation, repair or maintenance of the City sewer system is required (C&C, 1998a). These impacts will be kept to a minimum through special emphasis on safety, health, and environmental concerns during installation, repair and maintenance work; and the City will restore the affected improvements to as close to original conditions as possible.

No long-term impacts on the existing sewage treatment facilities are anticipated. The City of Honolulu has stated that the Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe WWPTF nor at the Kailua Regional WWTP. The ID project is part of the original service area these facilities were designed to accommodate. The design average flow of the subject project is 0.047 million gallons per day (mgd), and the design peak flow is 0.250 mgd; these flows are a very small part of the current and design average and peak flows to the Kailua Regional WWTP. The existing (1995) and projected (2020) average wastewater flows to the Kailua Regional WWTP are 12.4 mgd and 13.9 mgd. The design average flow and the design peak flow for the WWTP facility are 15.25 mgd and 28.0 mgd, respectively (Wilson Okamoto et al., 1998).

The Kailua-Kaneohe-Kahaluu Facilities Plan (Wilson Okamoto et. al, 1998) is a 20-year plan which determines the future sewerage work needs for the Kailua-Kaneohe-Kahaluu water service area and the required improvements to the wastewater treatment plan, preliminary treatment facilities, pump stations, and the collection and disposal system. The Facilities Plan addresses capacity-related and non-capacity related issues at the Kailua Regional



WWTP, and recommends short-term, intermediate-term, and long-term improvements to the system and to the plant. The Plan also includes and accommodates Sewer Improvement Districts in nine (9) areas, including the subject project.

Additional adverse impacts to the property owners are related to the payment of the improvement district assessment, the closure of private sewer systems, and the cost of installation of lateral connections. These impacts may be mitigated through City deferment and loan programs and by eliminating the costs of maintaining their existing systems.

Long-term beneficial impacts of the subject project include: 1) a solution to many of the chronic sanitation problems that are currently being faced by individual households, 2) the elimination of financial obligations of property owners regarding the maintenance and repair of their individual disposal systems, and 3) the elimination of private sewer systems that presently negatively impact the bay through transmission of sewage in groundwater.

**8.0 AGENCIES, ORGANIZATIONS, AND INDIVIDUALS CONSULTED DURING PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT**

A number of agencies, organizations, and individuals were consulted by letter requesting comment. Preliminary correspondence received is attached as Appendix C. The following agencies were sent a pre-consultation letter during preparation of the Draft EA. A copy of the Draft EA was sent to agencies, organizations, or individuals who made significant comments or who requested a copy. Letters from reviewers of the Draft EA are contained in Appendix D.

**CITY AND COUNTY OF HONOLULU AGENCIES**

Department of Design and Construction:  
Division of Planning and Programming  
Board of Water Supply  
Department of Budget and Fiscal Services:  
Purchasing Division  
Department of Planning and Permitting  
Department of Parks and Recreation  
Department of Facility Maintenance  
Honolulu Fire Department  
Honolulu Police Department  
Department of Community Services  
Department of Environmental Services  
Honolulu Emergency Services Department  
City Council Member Steve Holmes, District II

**STATE OF HAWAII AGENCIES**

Department of Accounting and General Services:  
Public Works  
Department of Business, Economic Development & Tourism:  
Hawaii Community Development Authority  
Land Use Commission  
Office of Planning  
Department of Health:  
Clean Air Branch  
Clean Water Branch  
Environmental Management Division  
Office of Environmental Quality Control  
Wastewater Branch

Department of Land & Natural Resources:  
Aquatic Resources Division  
State Historic Preservation Division  
Land Division  
Water Resource Management Division  
Department of Transportation, Highways Division  
Kaneohe Public Library  
Office of Hawaiian Affairs  
State Representative Ken Ito, District 48  
State Senator Marshall Ige, District 24  
Governor's Office:  
Office of State Planning  
Environmental Center, University of Hawaii

#### **FEDERAL AGENCIES**

Department of the Army:  
Pacific Ocean Division, Corps of Engineers  
Department of the Interior:  
U.S. Fish and Wildlife Service  
U.S. Geological Survey, Water Resources Division  
U.S. Environmental Protection Agency  
Pacific Islands Contact Office

#### **UTILITIES**

The Gas Company  
GTE Hawaiian Tel  
Hawaiian Electric Company  
Oceanic Cable

#### **OTHER ORGANIZATIONS**

Kaneohe Neighborhood Board (#30)  
The Nature Conservancy of Hawaii

**OTHER INDIVIDUALS (potentially concerned project area residents)**

Robert D. Loney  
Jerry C. and Laura D. Mueller  
John F. and Barbara M. D. Minton  
Leo Fortess  
Leonard K. and Kathleen A. Lum  
Bettie Y. F. Nakagawa  
Lawrence W. K. and Cheryl M. Catobus  
Ev Luther Gd Samaritan Soc.  
Peter and Margaret Krainer  
Thomas B. and Cheryl F. Sellers  
Francis E. and Kuulei B. McGrail  
Lloyd K. and Diane L. Komagome  
Alan E. and Sharmini K. Cassady  
Lorrin A. Sakae  
Nelson H., Jr., and Christel Case  
Phillip R. and Sandra M. Hagstrom  
David L., IV, and Dane C. Ward  
Pamela D. Ross  
Rosanne C. Harrigan  
Melvin T. and Marjorie A. Minakami  
Richard J. and Kim R. Ethington  
Harold A. and Florence C. Fanning  
Juan C. and Marina K. Bermundo  
Christopher Johnson  
David Shibata  
Ernest H. Hui  
Bertil R. L. and Christina E. A. Werjefelt  
BJ Management Corporation  
Allen M. and Joann B. Best  
Charles F. Greenwald  
Kenneth W. and Therese M. Otenbriet, et al.  
Erick K. and Karen M. Wurlitzer  
Deborah A. Goebert  
John P. Brack  
Andrew M. and Margaret B. Stanley  
Ella M. Cullen  
Robert H. and Kelly R. Armstrong  
Robert P. and Florence B. Freitas  
Malia Investment Corp.  
Koichi and Pamela J. Isayama  
Gayle B. and Becky Chestnut

Sheryl E. Buecher  
John A. and Renee L. Kojima  
Paul A. and Kim E. McDaniel  
David A. and Sharon L. Kuchenbecker  
Adam F. and Amanda J. Sutton  
Paul D. and Karen L. Sullivan  
Richard B. and Marianna W. Meachen  
Thomas A. and Martie W. Biuso  
Allen J. and Margaret E. Fraga  
John D. and Heather M. Huitt  
Laurence G. Rotkin  
Arthur and Norma Harrington  
James M. and Hiroko S. Keanu  
Gregory T. and Virginia Hamilton  
Marvin L. and Barbara B. Wilson  
Barbara K. Woita  
Tom and Maryellen Hennessy  
Michael J. Mottl and J. Rabinov  
William J. and Anne M. Deeley  
Charles S. and Diane H. Milliken  
Maryln J. Williams  
Sharon Toma  
Gregory A. and Bobbi A. Lee  
Stephen R. Harvey  
Richard A. and Eileen G. Cote  
Manuel F. and Tina B. Manfredi  
Floyd K. and Ligaya A. Mitchell  
Wallace T. and Betsy S. Yamamoto  
James J. Y. Louis  
Ken K. & Donna M. Hayashida  
George L. and Linda K. Gilchrist  
Kimberly J. Rocha  
Terri L. Needels  
Craig S. and Gretchen B. Waltz  
Andrew R. and Deborah D. Zimmerman  
Peter S. and Debra C. Van Osdol  
Nathan and Corinne L. Shulman

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**APPENDIX A**

ARCHAEOLOGICAL ASSESSMENT  
OF KANE`OHE BAY SHORELINE  
FOR  
PROPOSED SEWER LINE INSTALLATION



**AN ARCHAEOLOGICAL ASSESSMENT  
OF KĀNE`OHE BAY SHORELINE  
FOR  
PROPOSED SEWER LINE INSTALLATION  
WITHIN THE `ILI OF MĀLA`E, KĀNE`OHE,  
KO`OLAUPOKO DISTRICT, ISLAND OF O`AHU, HAWAII  
(TMK 4-4-7 & 21)**

by

Loren A. Zulick, B.A.,  
and  
Hallett H. Hammatt, Ph.D.

Prepared for

**MASA FUJIOKA ASSOCIATES**

Cultural Surveys Hawaii, Inc.  
revised September, 1999

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## INTRODUCTION

This document presents the results of an archaeological assessment performed by Cultural Surveys Hawaii in February, 1999, at the request of Masa Fujioka and Associates. The archaeological assessment is to be included in an Environmental Assessment required in advance of the undertaking of the Kaneohe Bay Sewers Improvement District No. 275 construction project. The project area is within a residential tract containing up to 69 individual properties in the Māla`e area of Kaneohe Bay in the *ahupua`a* of Kaneohe, on the island of O`ahu (TMK 4-4-7-7 & 4-4-21). It is located along the west coast of the isthmus connecting Mōkapu Peninsula with Kaneohe (Figures 1-5).

### Scope of Work

The scope of work for the archaeological assessment includes the following:

1. A literature search to document previously recorded sites and historic context of the site area.
2. Field reconnaissance to document potential site areas, existing conditions, and previously recorded sites (if any).
3. The preparation of a report to contain the results of background search and field study along with recommendations for further investigation (if appropriate).

### Project Area and Soil Description

The project area is located on the west coast of the *isthmus* connecting Mōkapu Peninsula and Kaneohe, `ili of Malae including the `apana of Panahaha, *ahupua`a* of Kaneohe, district of Ko`olaupoko, on the island of O`ahu (TMK 4-4-7 & 4-4-21). It is bounded by the intersection of Kaneohe Bay Drive and the H-3 interstate on the north. The Nuupia Pond lies just north of this intersection. The project area is additionally bounded by Kaneohe Bay Drive on the east, extending south past Aina Moi Place, and down to the shoreline of Kaneohe Bay on the west.

The project area, ranging from 40 ft. amsl to sea level is located at the western base of the undulating slope of Puu Papaa, the peak of which is located approximately 0.3 miles to the east. However, the general nature of the undulating slope is preserved. The soils within the project area are designated Kokokahi clay (KtC) (Foote et al. 1972:73), occurring on talus slopes of 6 to 12 percent grade and alluvial fans. These are dark to very dark gray to grayish-brown, very sticky and very plastic clay soils, with slow to moderately slow permeability. Their previous uses have been for pasture land and home sites. The natural vegetation would have been *kiawe*, *koa haole*, klu, bristly foxtail, pilgrass, and bermuda grass. Soil borings conducted by Masa Fujioka and Associates in November, 1998, generally confirm the nature of the original soils, although areas of coral gravel fill and the preponderance of grass lawns, with accompanying top soils, were noted.

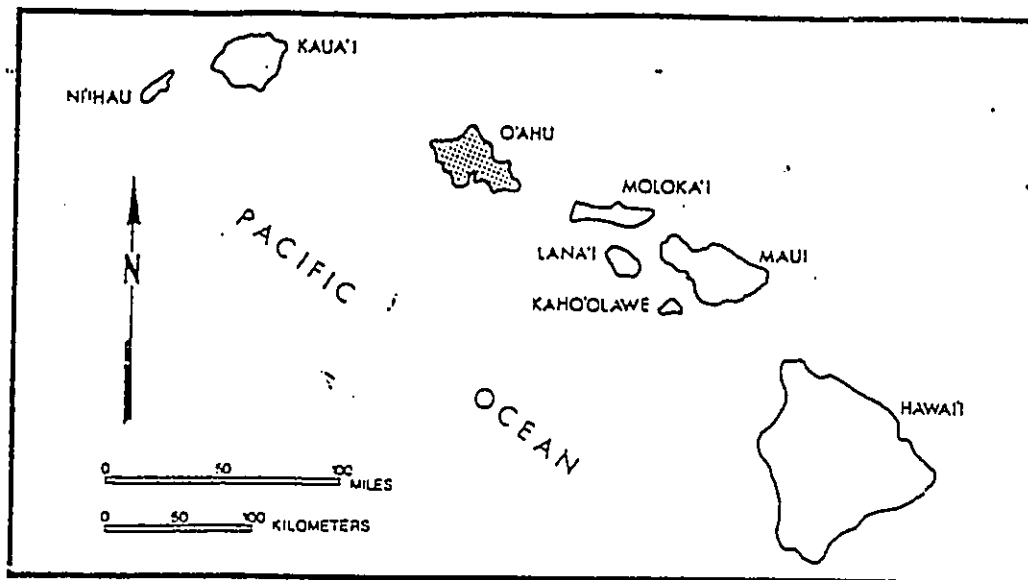


Fig. 1 State of Hawai'i

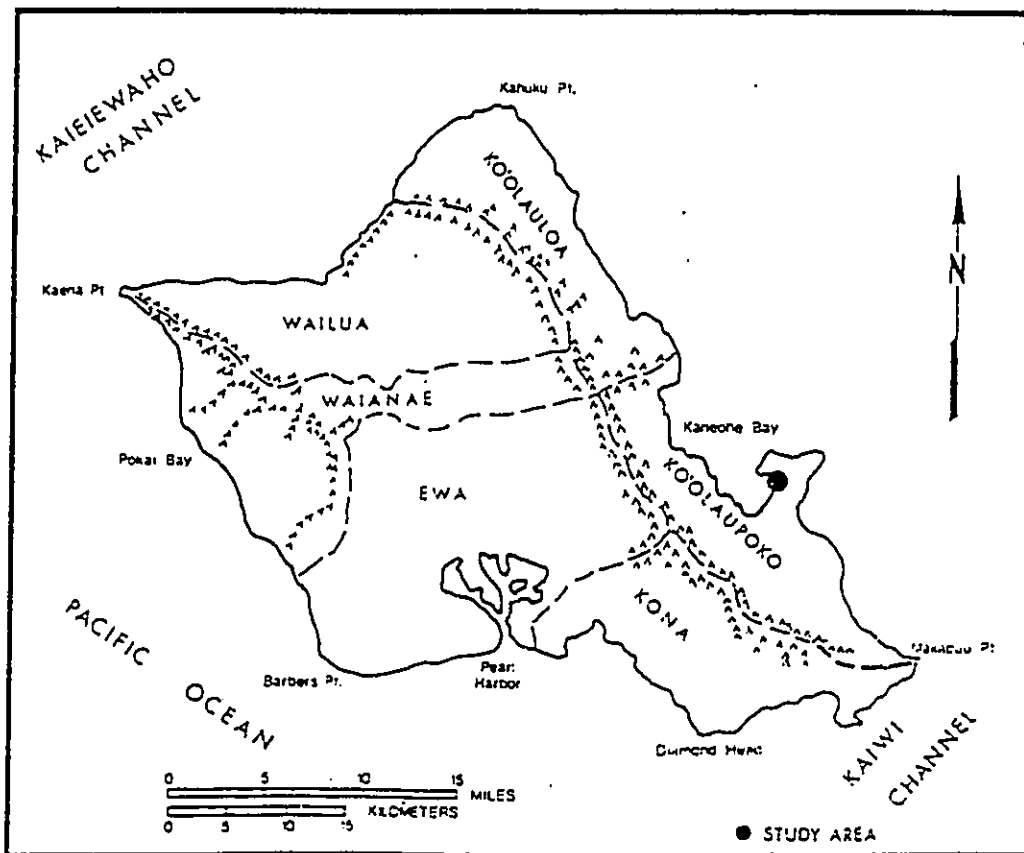


Fig. 2 O'ahu Island Location Map

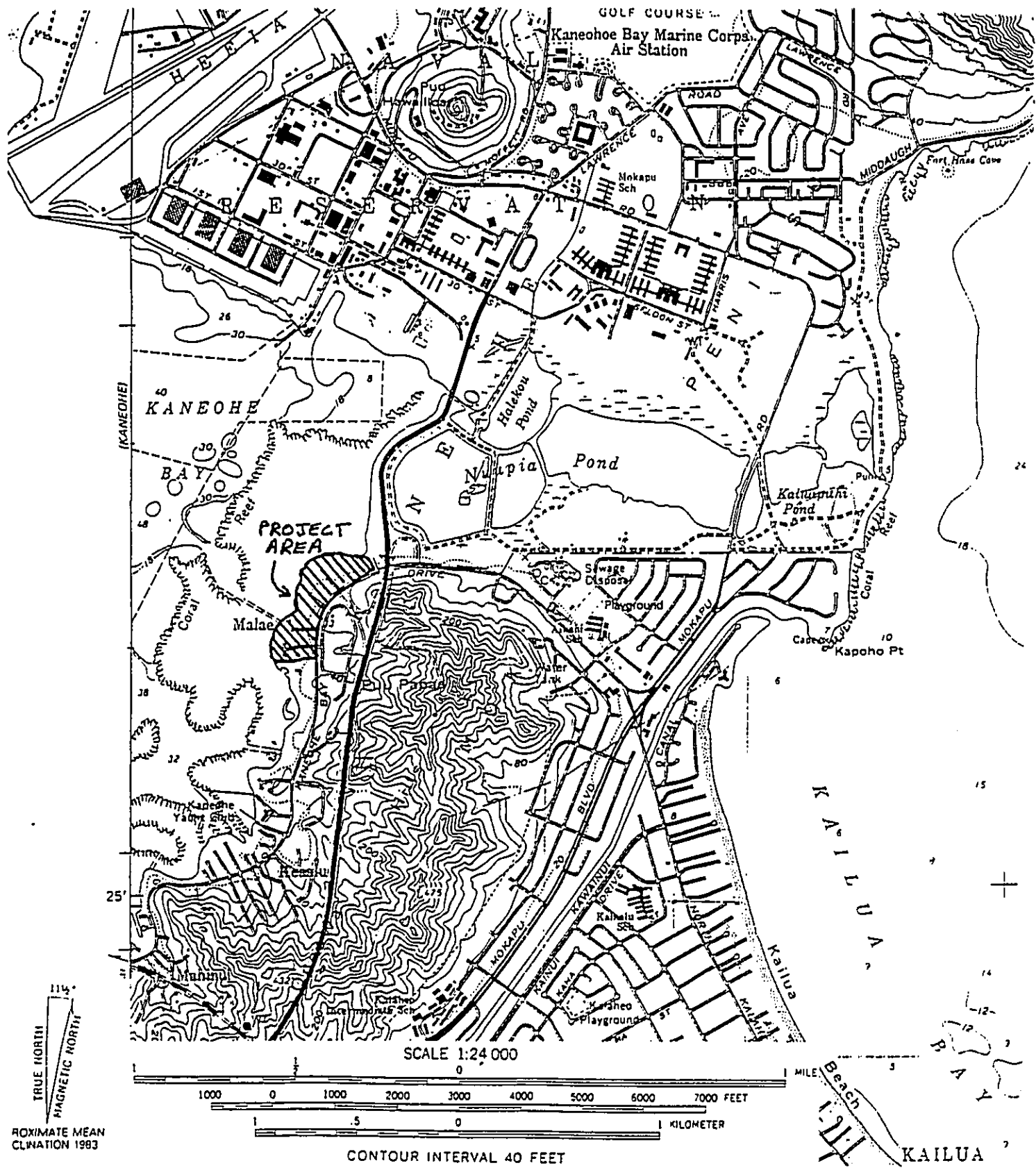


Fig. 3 Portion of USGS 7.5 Minute Series Topographical Map, Mōkapu Quadrangle, showing study parcel

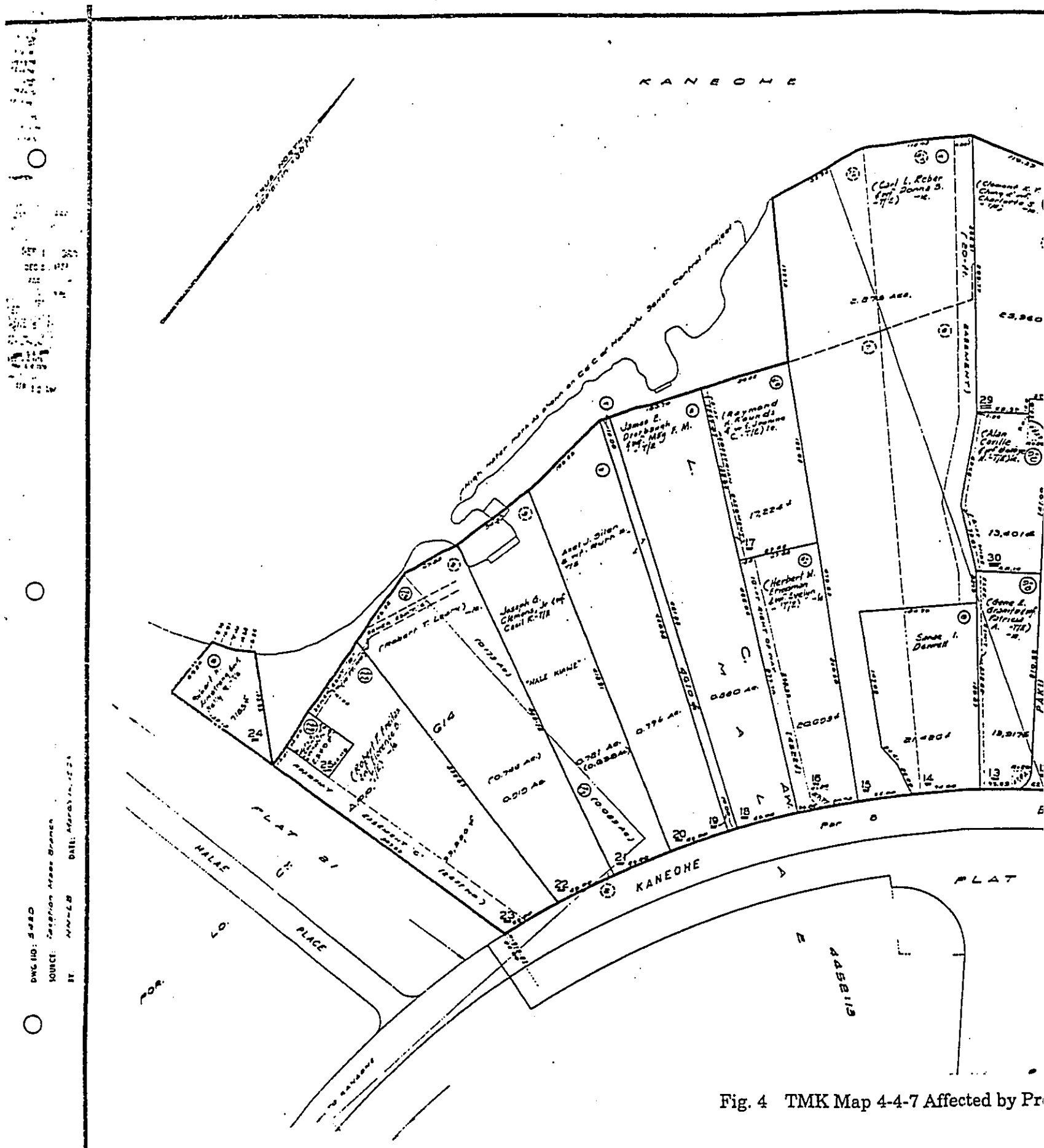
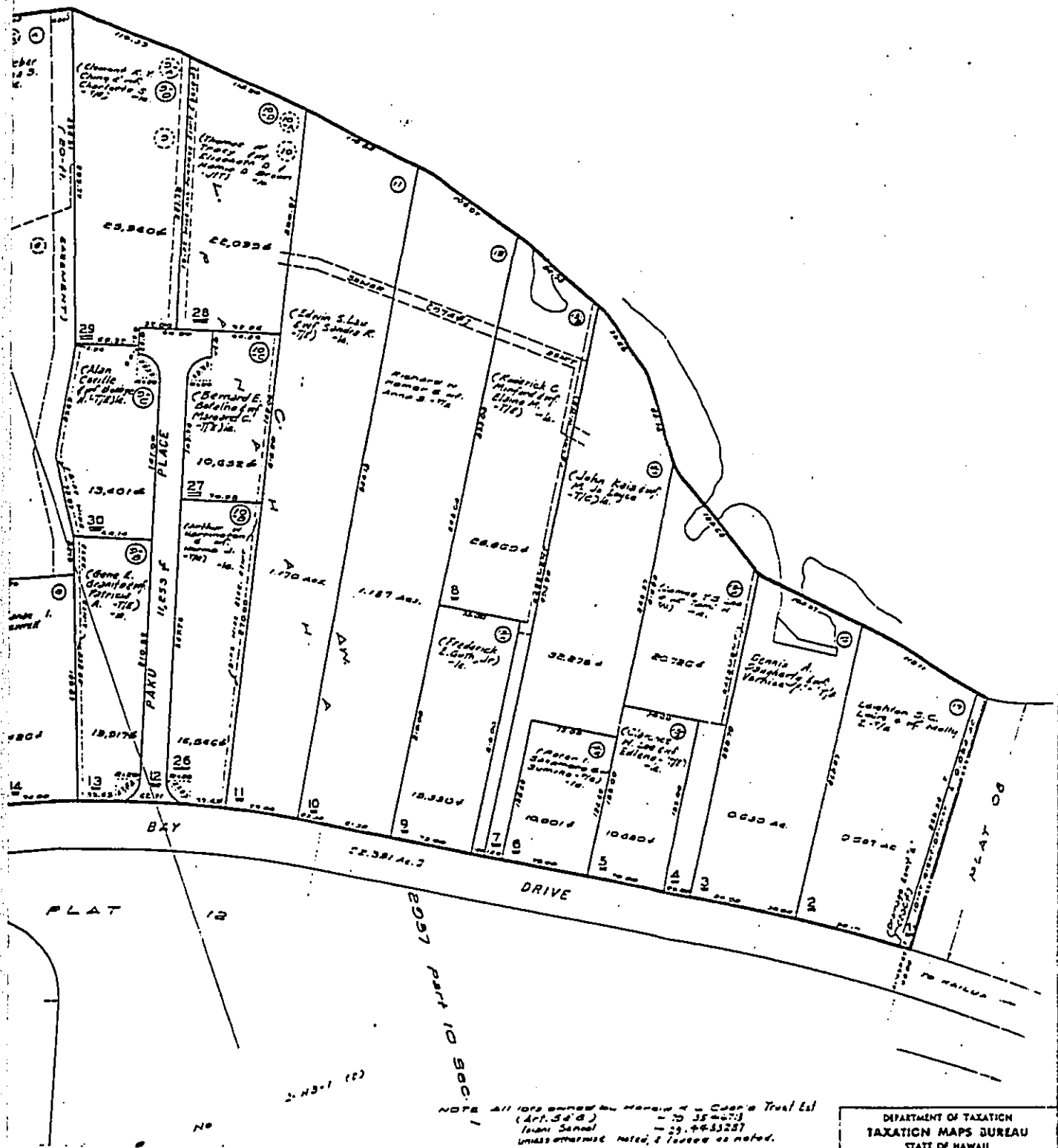


Fig. 4 TMK Map 4-4-7 Affected by Pr

BAY



NOTE: All lots shown on this map are based on the original map of the area (see map of the area) (see map of the area) (see map of the area) UNLESS OTHERWISE NOTED, AS NOTED.

Affected by Proposed Project Area

FOR REAL PROPERTY TAXATION PURPOSES  
SUBJECT TO CHANGE

|                         |     |      |
|-------------------------|-----|------|
| DEPARTMENT OF TAXATION  |     |      |
| TAXATION MAPS BUREAU    |     |      |
| STATE OF HAWAII         |     |      |
| TAX MAP                 |     |      |
| FIRST TAXATION DIVISION |     |      |
| ZONE                    | SEC | PLAT |
| 4                       | 4   | 07   |
| SCALE 1 IN 60 FT        |     |      |



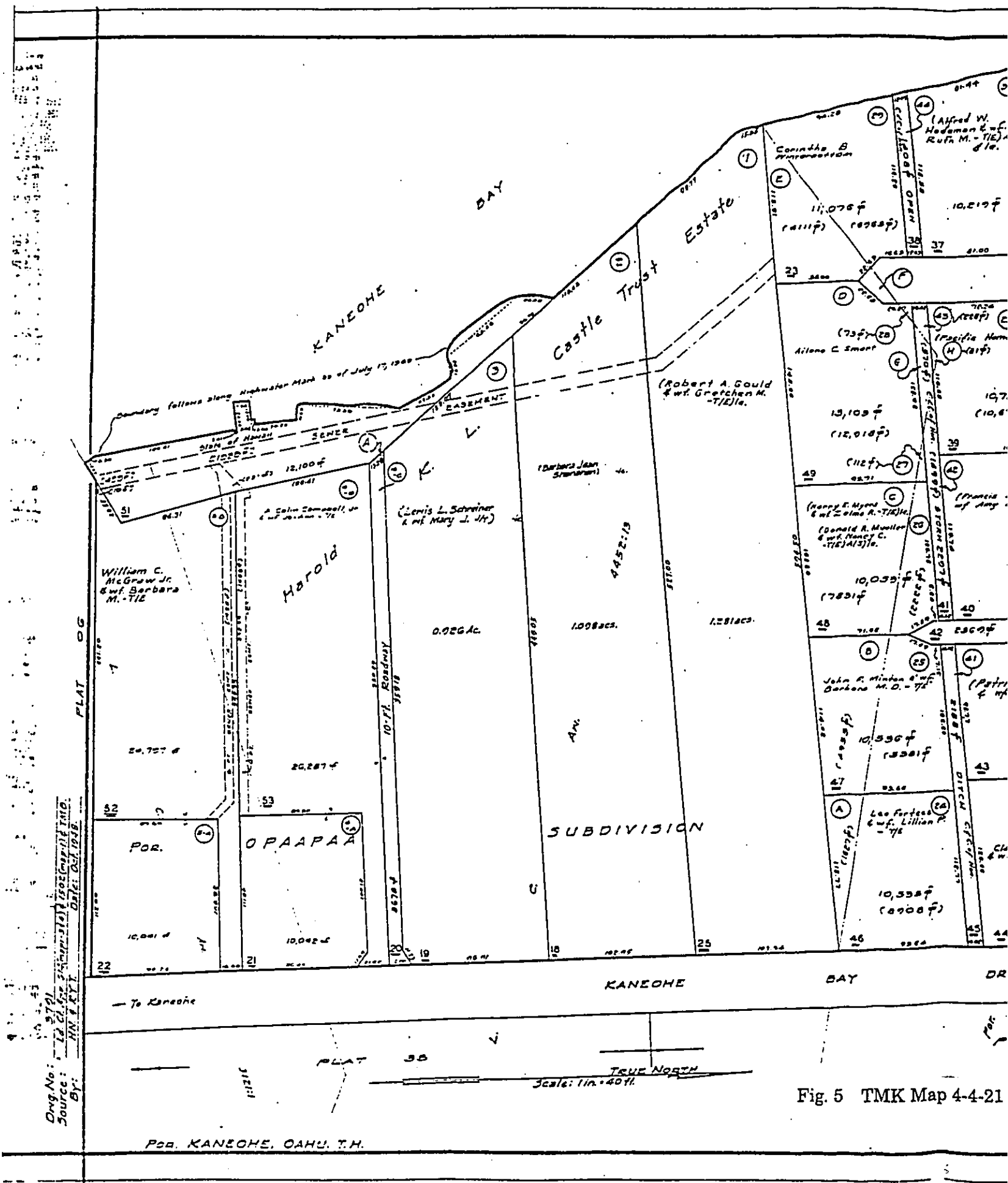
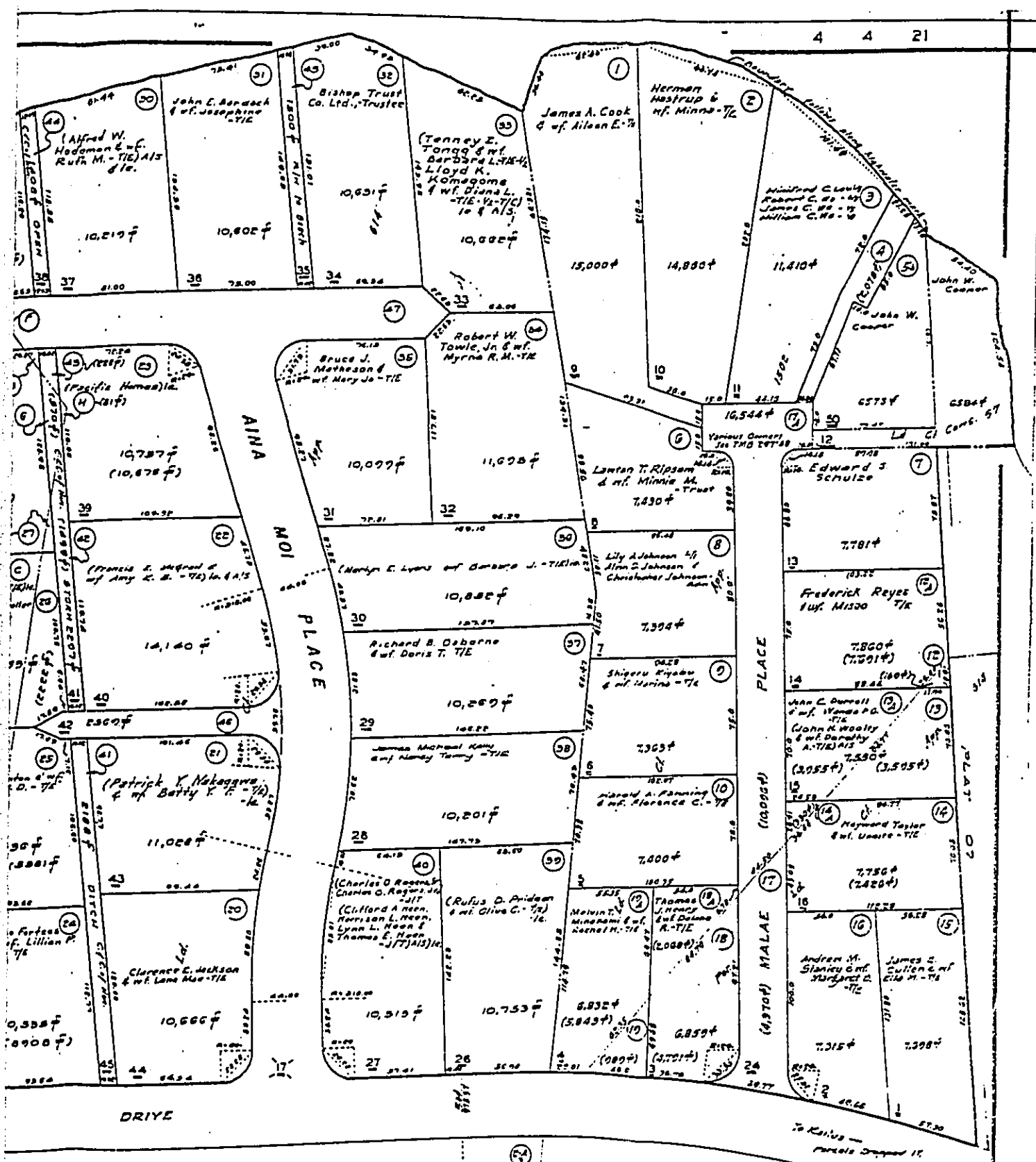


Fig. 5 TMK Map 4-4-21

P.O.B. KANEHOE, OAHU, T.H.



MK Map 4-4-21 Showing Portion Affected by Project on Malae Place

5

TO CHANGE

|                      |      |      |
|----------------------|------|------|
| TAXATION MAPS BUREAU |      |      |
| TERRITORY OF HAWAII  |      |      |
| TAX MAP              |      |      |
| FIRST DIVISION       |      |      |
| ZONE                 | SEC. | PLAT |
| 4                    | 4    | 21   |
| CONTAINING PARCELS   |      |      |
| SCALE: 1 IN. = 40 FT |      |      |

## HISTORICAL BACKGROUND

The project area borders the Mōkapu Peninsula and the Nuupia fishpond both of which have undergone extensive historical research notably by Tuggle (1986a) and Cordy (1984). The Mōkapu Peninsula was known by a different name: "Māla`e. ...Peninsula east of Kāne`ohe, Oahu. *Lit.*, clear" (Pukui 1981:143). A prehistoric name for Māla`e was Naonealaa (the sands of Laa) (Seto In Progress). The place name Māla`e is retained historically as an `ili on the Kāne`ohe Bay shore below Pu`u Papa`a which separates Kāne`ohe and Kailua. Today, Māla`e is part of the peninsula only on the south side of Nu`upia Fishpond where it abuts the Kailua `ili of `Aikahi on the east (*ibid.*). It is in this northern section of the `ili that the `apana of Panahaha is located.

In prehistoric times, the *ahupua`a* of Kāne`ohe offered fresh water from *mauka* (upland) springs and a well developed fishpond system making it both an agricultural and aquacultural center on O`ahu (Devaney, 1982). Prehistoric land use would have consisted mainly of wetland taro and sweet potato cultivation. Kāne`ohe Bay, with its numerous fishponds, was a bountiful source of fish.

An early reference to the general project area may be found in Sterling and Summers (1978. p. 212):

"...Here, in the 16<sup>th</sup> century, the royal palace of King Peleiholani was the scene of gay court pageantry. His impressive estate sat in the area adjacent to Nu`upia fish pond, and bordering Kāne`ohe Bay."

A significant historical event occurred at the area of Māla`e best told by the author familiar with it, Muriel Seto:

"Kūali`i produced a remarkable son who, because of troubling family differences, spent a great deal of life on Kaua`i, not returning to O`ahu until after his father's death (Fordnander 1969:II, 138). The reason for his return was in response to a call for assistance to his home island. At the time the ambitious Hawai`i chief, `Alapa`inui was threatening attack. Pelei`ōholani's young nephew was king at the time (Fordnander 1969:II, 278-288, and 139).

The ambitious `Alapa`inui had been rebuffed by not being allowed by Oahu forces to land at Waikīkī, Wai`alae, Koko, or Hanauma. He had relentlessly continued on around the island to Kailua, where he was able to reach the sands of Oneawa. Oahu forces rushed through Nu`uanu to skirmish on Ko`olau. With some believing strong leadership was needed, they sent for Pelei`ōholani and his west Kaua`i forces to lead them. On arriving, Pelei`ōholani found `Alapa`inui's war fleet on the beach at Oneawa in Kailua.

Significantly, Kailua *ahupua`a*'s `okana was considered a *pu`uhonua*, or safe haven, for the Ko`olau district, as was Waikane further north (Kamakau 1968:18). One of the Oahu leaders, a Wai`anae chief named Na`ili, was able to convince the

Hawai'i invader at "Waihaukalua, near the shore", that peace negotiations were in order. It was decided that `Alapa`inui should move his forces to *Naoneala`a*. It was mutually determined that `Alapa`inui would go ashore alone and unarmed to meet Pelei`ohōlani, who would also be alone and unarmed. peace was agreed upon, with no further threats or conflicts... (Kamakau 1968:18)" (Seto, in progress:71,72).

It is further suggested that the land described in this account is the `ili known as Māla`e.

"...Perhaps the lands formerly called *Naoneala`a* were re-named Māla`e, "clear, calm," to commemorate the statesmanship of two powerful chiefs, and the peace-making which took place there." (Seto, in progress:73)

Research indicates four individual requests for Land Commission Awards (Waihona `Aina 1998). Three of which were granted to commoners using lands at Māla`e.

Claim No. 1958, Mahu; To the Land Commissioners, Greetings and Peace: I, the undersigned, hereby state the boundaries of my land in Kāne`ohe, Koolau. At Waikalua are two *lo`i*. One fishpond is at Māla`e. On the east is the land of Maluae, on the north is an irrigation ditch, on the west is the land of Kaulahea, on the south is the land of the *konohiki*. Also, there is a house. Mahu December 18, 1847.

Claim No. 4471, Piikea; To the Land Commissioners: I hereby explain my claim: Kekahuna is above and I am under. I have one *lo`i*, a *mo`o* of sweet potatoes, and a house parcel. Piikea Malae, Kāne`ohe.

Claim No. 4478, Kane; To the land commissioners: I hereby explain my claim for land and my one *lo`i*. Kamalii is above and I am below. There are three *mo`o* of sweet potato and a *hala* tree which was planted. Kane Ko`olau.

It is a witness to Kane's claim that references Māla`e:

F.T. 1v14; Cl. 4478, Kane; Mahinaolelo, sworn, I know the land of claimant in Kāne`ohe, the `ili of Malae. It consists of a house lot, potato field and two fishponds... Claimant has his land from Kaiakoili about the year 1830, and has had it in peace, till within about two years, when the *konohiki* took the fishponds and potato field from claimant...

Claim: No. 5985, Moeikeahua; Greetings to the Land Commissioners: I have two *mo`o* of sweet potatoes, six *mo`o* of bitter gourd, two salt *mo`o*, two sand hill ponds. Four *mo`o* of sweet potatoes are at Ualekou. A house lot and a *hala* tree are at Māla`e in Kāne`ohe, Island of Kāne`ohe. I got these at the time of the rebuilding of the fort. Moikeahua.

Further evaluation of these land claims reveals land usage at the time of the *Māhele*. These particular requests give us information from circa 1830 to 1850. The mentioning of house lots in the land claims allude to coastal habitation. Agricultural references include *lo`i*, *mo`o* of sweet potatoes, and a *hala* tree. There are references to streams and *loko* (ponds) presumably fresh water for irrigation. In addition there are several references to fishponds.

Kāne`ohe Bay has undergone dramatic changes in its appearance as a result of modern dredging. Many of the known fishponds that once existed have been filled, or altered (Daveney, 1982). Between January and March of 1942, much of the reef west of Nu`upia Fishpond was dredged (*ibid.* 116). Previous disturbance to the present project area is extensive, including the filling-in of two 2- acre fish ponds (Panahaha 1 and 2), known to have existed at the northern end of the project area (Fig. 6). Wall remnants of Panahaha 1 appear to have been visible as late as the early 1940's, but the pond subsequently filled, largely through soil accretion. Panahaha 2 was filled by natural accretion during the early 1900's. The addition of fill in the 1950's for residential development appears to have obliterated any remaining surface evidence of these two ponds. Additionally, dredging and filling to create numerous small inlets for moorings and a boat channel have altered the shoreline of the project area (Devaney *et al.* 1982).



Location of Historic  
Sites within the Proposed  
New Sewer Line,  
Kane'ohē Bay Sewers  
Improvement District

Panahaha Fishponds  
Papaa Fishpond

based on SHPD GIS Inventory  
June 1999

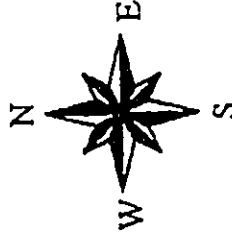


Fig. 6 Location of Panahaha 1 and 2 Fishponds based on State Historic Preservation  
Division GIS Inventory, June 1999

## PREVIOUS ARCHAEOLOGICAL RESEARCH

Mōkapu Peninsula has received a good deal of archaeological attention over the years owing primarily to the extensive prehistoric Hawaiian sand dune burial areas. They are some of the most extensive burial areas known for the Hawaiian Islands and are some of the largest in the Pacific (Hammatt *et al.* 1985). None of the recorded burial sites are within the current project area. While it seems likely that the Mōkapu cemetery extends south of Nu`upia pond, the possibility of burials being present cannot be discounted.

The history of archaeological involvement with the Mōkapu area began on April 19, 1912, when John F. G. Stokes, curator of collections at B.P. Bishop Museum, curated an adz purchased from a Chinese resident of Mōkapu, Lam Zi Sun. From 1912 to 1914 a number of artifacts were purchased from Chinese residents of Mōkapu. In 1917, two College of Hawai'i professors, MacCaughey and Austin, visited Mōkapu, recorded a wealth of archaeological data, and published their observations. MacCaughey described the fishponds as having been large arms of Kāne`ohe Bay cut off from the sea by heavy stone walls. He records the first known description of the Nu`upia Pond:

"Arriving at the Nu`upia fishpond, we passed the hovel of the Chinese keeper, and his snarling chained watch-dogs, and walked along the wall that separates the pond from the bay. This wall, like those of other fishponds, is four to six feet wide. At high tide it stands about eighteen inches above the water; its average total height is some five feet. It is made up of two laid stone walls. The central part between the walls is filled with earth and loose rubble. The path lies along the middle of the wall, and owing to inequities in the settling and packing of the rubble it is very irregular, with abrupt pits and knolls." (MacCaughey 1917:186)

Along the eastern shore of Kāne`ohe Bay lie a number of sites recorded by McAllister (1933) in 1930: Site 349 - Waikalua Fishpond, Site 350 - Keana Fishpond and Kalokohanahou Fishpond, Site 351 - Mahinui Fishpond, Mikiola Fishpond, and Kaluoa Fishpond, Site 352 - Ahukini *Heiau*, Site 353 - Kinikailua-ManuKāne`ohe spring, Site 361 - Keaalau Fishpond, Site 362 - Hanalua Fishpond, and Site 363 - Papaa Fishpond (Figure 7).

Another summary is presented by Tuggle (1986) who prepared a very thorough historic property inventory of Mōkapu Peninsula. Please refer to his work for more detailed information on Mōkapu Peninsula.

In 1985, Hammatt *et al.* (1985) conducted archaeological coring and testing at the Nu`upia Ponds for a predator moat that was to be constructed in order to protect nesting birds from predators such as rats and mongooses. A total of 294 artifacts were collected, all of lithic material. Of this total, 249 were surface collected with the remaining 45 artifacts recovered in the 0 - 20 cmbs level.

Cultural Surveys Hawaii, Inc. (Hammatt 1989) performed sub-surface testing at 44-291A Kaneo`he Bay Drive (TMK 4-4-7:8,10), to assess the archaeological potential of the parcel. The parcel lies within the Panahaha portion of the present project area in the vicinity of the

Panahaha fish ponds. Four backhoe trenches were excavated on the 1.8-acre parcel, revealing three stratigraphic units. One trench (Trench 1), possibly placed in a Panahaha fish pond showed only imported fill to a depth of 2 meters (Hammatt 1989:11). Finely laminated grey gleyed clay deposits were encountered in disturbed form in the *mauka* portion of the project area. Both these stratigraphic units overlay a raised coral reef deposit, which by its 6 meters amsl is clearly from a Pleistocene high stand of the sea. The property contains two small dredged inlets, and the dredged channel, which runs the extent of the *'ili* of Malae, is evident just off-shore. No cultural material or fish pond remnants were encountered.



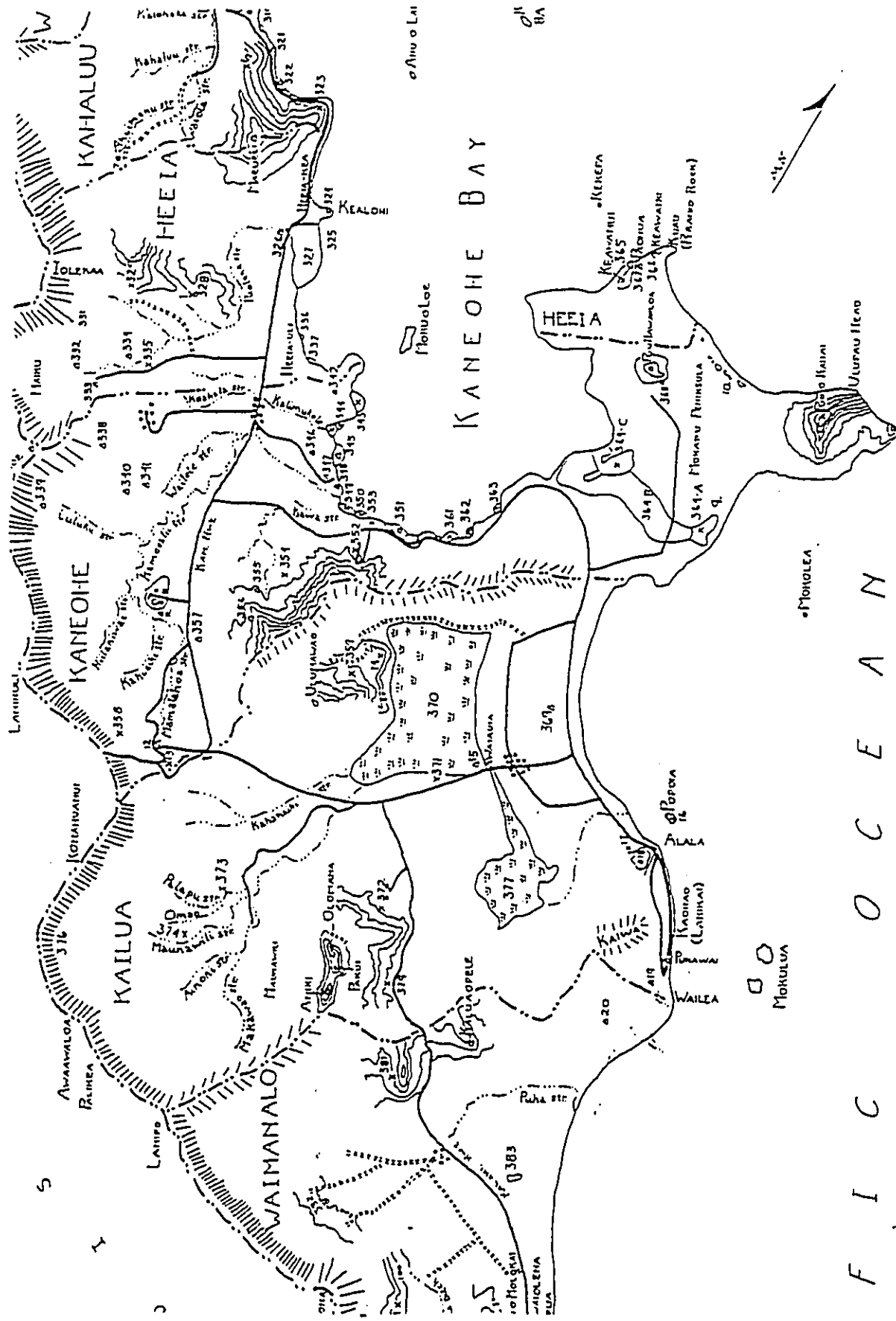


Fig. 7 Portion of Sterling and Summers (1978:256) Map Showing McAllister Sites Near Project Area

## RESULTS OF ARCHAEOLOGICAL ASSESSMENT

The archaeological field assessment was accomplished on Feb 18, 1999, by one archaeologist who, accompanying project surveyors and geologists, viewed the full extent of the sewer line alignment. This involved gaining access through streets, pedestrian beach accesses, and residential yards.

The entire project area is presently comprised of as many as 69 residential house lots, nearly all of which are occupied by existing housing, accompanied by attendant sub-surface infrastructure. Extensive grading and filling of house lots and access streets occurred during the construction of the sub-division, considerably altering the surface topography. This grading and any importation of fill and top soil materials would have altered the original topography and the original stratigraphy in those areas affected by these grading activities.

The original coastline has been altered with the creation of private inlets for moorings, and the addition of a dredged channel running adjacent to the shoreline to provide small boat access to shoreline house lots. Additionally, portions of the shoreline within the project area are bordered by sea walls to control erosion, as well as to provide moorings for small boats. These alterations leave unclear the extent of the modification, either seaward or inland, to the original shoreline.

As expected, due to the extensive residential development within the project area, no archaeological resources were observed on the surface. However, no sub-surface observations were made, thus, existence of sub-surface archaeological resources cannot be discounted.

## SUMMARY AND RECOMMENDATIONS

The Mōkapu Peninsula played an important role in the economy of the *ahupua`a* of Kāne`ohe due to its large fishponds and salt works. The peninsula is also the site of perhaps the largest pre-contact cemetery in Polynesia. Within and in close proximity to the project area the recorded evidence is of agriculture and fishponds.

The present project area is completely covered with modern house lots and graded, landscaped yards. There are a number of 1 to 2 meter high retaining walls built along the shore that have clearly been back-filled and landscaped. Other areas show indications of dredging in the bay. There is no clear evidence of any surface structures of archaeological significance within the present project area.

There is the possibility that evidence of the Panahaha fish ponds is present below fill layers at the north end of the project area. These fish ponds are significant for information on Hawaiian history and prehistory that they are likely to yield. If construction excavations exceed the depth of fill materials in the location of the fish ponds, these activities could impact the fish pond sites. There is also the possibility that cultural deposits or evidence of habitation, or human burials are present within the original soil matrix below existing fill materials throughout the project area. Since these areas are not adequately identifiable due to the present residential development within the project area, monitoring of initial sub-surface excavations by a qualified archaeologist is recommended. When it is established that excavation activities will occur only within fill materials, on-call archaeological monitoring may be considered in consultation with the Department of Land and Natural Resources, State Historic Preservation Division (SHPD). The extent and conditions for archaeological monitoring will be set forth in an archaeological monitoring plan to be reviewed and accepted by the SHPD.

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Waihona `Aina

1998 *Mahele data base*

**APPENDIX B**

**SPECIAL MANAGEMENT AREA  
EXEMPTION LETTER**

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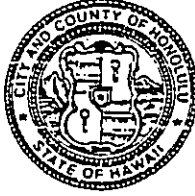
DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
 650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
 PHONE: (808) 523-4414 • FAX: (808) 527-6743

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'97 DEC 17 P2:29

JEREMY HARRIS  
 MAYOR

DEPT OF WASTE WATER  
 DIVISION OF PLANNING  
 & SERVICE CENTER



JAN NAOE SULLIVAN  
 DIRECTOR  
 LORETTA K.C. CHEE  
 DEPUTY DIRECTOR  
 97-08773 (DT)

December 16, 1997

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR  
 DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: JAN NAOE SULLIVAN, DIRECTOR  
 DEPARTMENT OF LAND UTILIZATION

SUBJECT: SPECIAL MANAGEMENT AREA REVIEW *Kaunakakai Bay Sewer ID*

DEPT. OF WASTEWATER MANAGEMENT

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*Design*  
 E/C A  
 Plant I  
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*Use of a certified shoreline survey*

Tax Map Keys : 4-4-7 and 4-4-21  
 Type of Project: Install approximately 4,600 linear feet of 6-inch and 8-inch gravity sewer main and 900 linear feet of 4-inch relief force main and laterals

The proposed project on the above-referenced tax map keys has been reviewed. We find that it:

- [ ] Is not within the Special Management Area.
- [X] Is within the Special Management Area, but is not defined as "development", and is therefore exempt (Section 25-1.3 [2][M], Chapter 25, Revised Ordinances of Honolulu). However, certain portions of the proposal are less than 55 feet from the shoreline. A current certified shoreline survey is required for areas where the proposal is less than 55 feet from the shoreline. Furthermore, a Shoreline Setback Variance will be required if any portion of the proposal is less than 40 feet from the shoreline.

Should you have any questions, please contact Ms. Dana Teramoto at Extension 4648.

*[Signature]*  
 JAN NAOE SULLIVAN  
 Director of Land Utilization

JNS:am  
 g:ppd\9708773.djt

**APPENDIX C**

**COMMENTS RECEIVED DURING PRELIMINARY CONSULTATION  
AND RESPONSES**



In preparation of the Draft EA, a letter requesting comment was sent to the agencies, organizations, and individuals listed in Section 8.0. A sample of that letter is attached in this appendix, as are comments received and responses to those comments. Comments were received from the following entities:

**CITY AND COUNTY OF HONOLULU AGENCIES**

Board of Water Supply  
Department of Planning and Permitting  
Department of Facility Maintenance  
Honolulu Fire Department  
Honolulu Police Department  
Department of Community Services

**STATE OF HAWAII AGENCIES**

Department of Accounting and General Services  
Department of Business, Economic Development and Tourism:  
Land Use Commission  
Department of Health:  
One letter from Clean Air Branch, Clean Water Branch, and Noise,  
Radiation and Indoor Air Quality Branch  
Department of Land and Natural Resources:  
Land Division  
Commission on Water Resource Management  
Hawaii Community Development Authority

**FEDERAL AGENCIES**

Department of the Army: U.S. Army Engineer District, Honolulu  
Department of the Interior: U.S. Fish and Wildlife Service

**UTILITIES**

Oceanic Cable

**OTHER INDIVIDUALS**

John F. and Barbara M.D. Minton  
Gayle B. Chestnut  
Marlyn J. Williams  
Uli Frowein  
Andrew R. Zimmerman

MFA

MASA FUJIJOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Huiwai Valley Street, Suite 303 • Alaia, Hawaii 96701-3281  
Phone 808 484-5366 • Fax 808 484-0007

March 15, 1999  
MFA Project No. 97115-001

Department of Health  
Clean Water Branch  
919 Ala Moana Boulevard Room 301  
Honolulu, Oahu, Hawaii 96814

SAMPLE

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Sir/Madam :

Masa Fujioka & Associates (MFA) is working with the City and County of Honolulu, Department of Design and Construction, on the design of the Kaneohe Bay Sewers Improvement District. The location of the project is shown on the attached figure. The Kaneohe Bay Sewers ID project will expand the City sewer system to include 69 properties in the Malae area of Kaneohe Bay which are currently utilizing private, individual wastewater disposal systems such as cesspools and septic tanks. The project will involve the installation of approximately 4,500 feet of 6-inch and 8-inch gravity sewer lines at depths ranging from 5 to 20 feet deep. The sewer lines will be installed by trenching, along the Kaneohe Bay shoreline primarily within sewer easements located in private properties.

The project will be partially constructed within the Shoreline Setback Area, which triggers the requirement for an Environmental Assessment (EA) under State laws. The EA is being prepared to comply with the State's environmental policy and to give appropriate regard to environmental, economic and technical concerns. We are notifying potentially interested parties to provide the opportunity for comments or the raising of potential concerns that can be addressed in the Draft EA.

Please direct your comments to Janice Marsters via mail at the letter head address, by email to [mfa@lava.net](mailto:mfa@lava.net), or by fax to 484-0007. We welcome your input.

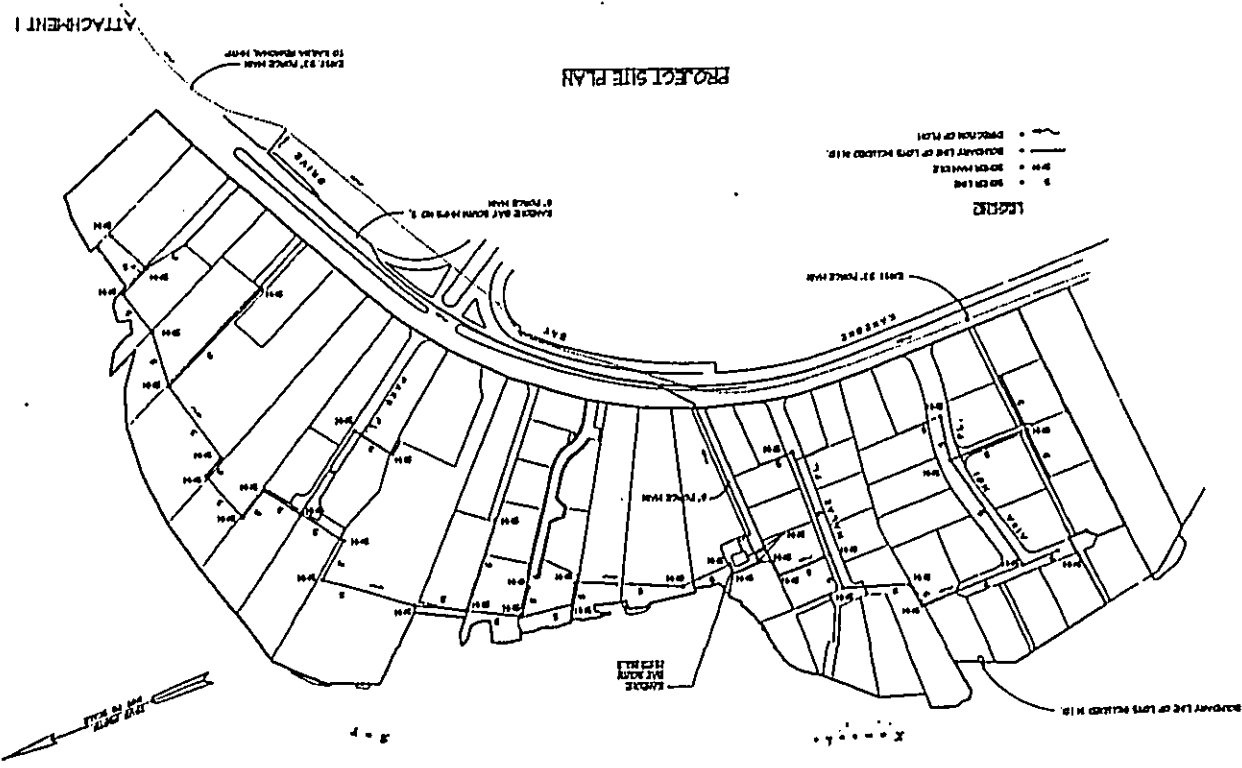
Very truly yours,

MASA FUJIJOKA & ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

Attachment: Plan showing proposed sewer line location.



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



April 20, 1999

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Your Letter of March 15, 1999 Requesting Pre-Assessment Comments for  
the Proposed Kaneohe Bay Sewer Improvements, Kaneohe, Oahu, Hawaii

Thank you for the opportunity to review and comment on the proposed sewer system improvements.

We have no objections to the proposed project. The construction plans for the proposed sewer system improvements should be submitted to our Engineering Branch for review and approval. In addition, approved reduced pressure principle backflow prevention assemblies are required after all water meters used during construction activities.

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

Very truly yours,

  
CLIFFORD S. JAMILE  
Manager and Chief Engineer

cc: Department of Design and Construction

JEREMY HARRIS, Mayor  
EDDIE FLORES, Jr., Chairman  
ROBERT C. MURPHY, Vice Chairman  
KAZU HAYASHIDA  
JAN M. LY AME  
BARBARA TIM STANTON  
CHARLES A. STED

CLIFFORD S. JAMILE  
Manager and Chief Engineer

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL ENGINEERING CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-5355 • Fax 808 484-0007

September 20, 1999

Board of Water Supply  
630 South Beretania Street  
Honolulu, Oahu, Hawaii 96843

Attention: Mr. Clifford S. Jamile  
Manager and Chief Engineer

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Jamile:

Thank you for your letter dated April 20, 1999 regarding the subject project. We have the following response to your comment:

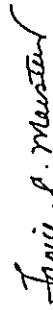
Your comment: The construction plans for the proposed sewer system improvements should be submitted to our Engineering Branch for review and approval. In addition, approved reduced pressure principle backflow prevention assemblies are required after all water meters used during construction activities.

Our response: Construction plans for the proposed sewer system improvements will be submitted to the Board of Water Supply Engineering Branch for review and approval. The construction specifications will require that the contractor use approved reduced pressure principle backflow prevention assemblies after all water meters used during construction activities. We have included this reference in the Final Environmental Assessment, Section 5.4.6.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

  
Janice C. Marsters  
Principal

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**  
810 SOUTH KING STREET • HONOLULU, HAWAII 96813  
PHONE: (808) 525-4414 • FAX: (808) 537-8743



JEREMY HARRIS  
MAYOR

JAN NAOE SULLIVAN  
DIRECTOR  
LORETTA K.C. CHEE  
SENIOR DIRECTOR

1999/CLOG-2109(ASK)

April 8, 1999

Ms. Janice C. Marsters  
Masa Fujitoka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu

This responds to your March 15, 1999 letter requesting input on the above project.

Please refer to our December 24, 1997 letter (enclosed) regarding permit and application requirements.

The project is within the Special Management Area. Provided the sewer lines will be located within established easements, a Special Management Area Use Permit will not be required.

When our office reviewed preliminary plans for this project, we noted that a portion of the project appeared to be beyond the private property boundary, seaward of the parcel identified by Tax Map Key 4-4-7: 17. If this is the case, we recommend that the State Department of Land and Natural Resources be contacted regarding compliance with State regulations.

Should you have any questions regarding the above, you may contact Ardis Shaw-Kim of our Staff at 527-5349.

Very truly yours,

JAN NAOE SULLIVAN  
Director of Planning and Permitting

JNS:am  
Encl.

POSSE doc no. 3530

DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
810 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 525-4414 • FAX: (808) 527-8743



JEREMY HARRIS  
MAYOR

JAN NAOE SULLIVAN  
DIRECTOR

LORETTA K.C. CHEE  
SENIOR DIRECTOR

97-08995 (DT)

December 24, 1997

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

ATTN: MS. TINA ONO

FROM: JAN NAOE SULLIVAN, DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

SUBJECT: KANEOHE BAY SEWERS I.D. PROJECT

A Shoreline Setback Variance (SV) is required for the above project as a portion of the sewer line will be within the 40-foot shoreline setback.

We have reviewed the Environmental Assessment (EA) that was published in the Office of Environmental Quality Control (OEQC) Bulletin in 1975. The EA does not address the current requirements under Chapter 200, Hawaii Administrative Rules (HAR) of the State Department of Health and Chapter 23, Revised Ordinances of Honolulu (ROH):

Chapter 200, HAR

1. A general description of the project's technical, economic, social, and environmental characteristics.
2. The flood zone designation of the project site.
3. Identification and summary of impacts and alternatives considered.
4. Proposed mitigation measures for construction runoff.
5. List of all permits and approvals required (federal, state, county).

**M F A**  
**MASA FUJIOKA & ASSOCIATES**  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halewa Valley Street, Suite 302 • Aiea, Hawaii 96701-3291  
Phone 808 484-5366 • Fax 808 484-0007

September 20, 1999

Department of Planning and Permitting  
650 South King Street  
Honolulu, Oahu, Hawaii 96813

Attention: Ms. Jan Naoe Sullivan  
Director of Planning and Permitting

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Sullivan:

Thank you for your letter dated April 8, 1999 regarding the subject project. We have utilized the information you provided in preparation of the Final Environmental Assessment (EA) and the Shoreline Setback Variance. Responses to your comments on the Draft EA are addressed in a separate letter.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*  
Janice C. Marsters  
Principal

KENNETH E. SPRAGUE, DIRECTOR  
Page 2  
December 24, 1997

6. Written comments and responses to the comments received from number 5 above, under the early consultation provision of sections 11-200-9(a)(1), 11-200-9(b)(1), or 11-200-15, and statutorily prescribed public review periods.

Chapter 23, ROH

1. An explanation on why the variance should be granted by the Director of Land Utilization. See Chapter 23-1.8, ROH.
2. Probable impacts of the proposal on beach processes.
3. Any effects on shoreline views and open space.

The above requirements should be addressed in a new, updated EA. Furthermore, the EA mentions that construction is scheduled to start in 1976 or 1977, and would be completed in eight months. The project cost is listed at \$409,000 in the EA. This information is outdated and needs to be current in the new EA.

We will be able to process your SV application upon receipt of a completed DLU Master Application Form (MAF), a current (less than one year old) certified shoreline survey, and when your EA obtains a Finding of No Significant Impact from the OEQC.

Enclosed is an outline for preparing an EA, instructions for an SV, a DLU MAF, and Chapter 23, ROH. If you have any questions regarding this letter, please contact Ms. Dana Teramoto of our staff at Extension 4648.

*JAN NAOE SULLIVAN*  
JAN NAOE SULLIVAN  
Director of Land Utilization

JNS:am  
Encls.

0:0:0419708925.d11

MFA

MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • CIVIL • ELECTRICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Hahaione Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-3366 • FAX 808 484-0007

99-0365  
*Lawrence*

March 15, 1999

MFA Project No: 97115-001

Department of Facility Maintenance  
650 South King Street 11th Floor  
Honolulu, Oahu, Hawaii 96813

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Sir/Madam :

Masa Fujioka & Associates (MFA) is working with the City and County of Honolulu, Department of Design and Construction, on the design of the Kaneohe Bay Sewers Improvement District. The location of the project is shown on the attached figure. The Kaneohe Bay Sewers ID project will expand the City sewer system to include 69 properties in the Malae area of Kaneohe Bay which are currently utilizing private, individual wastewater disposal systems such as cesspools and septic tanks. The project will involve the installation of approximately 4,500 feet of 6-inch and 8-inch gravity sewer lines at depths ranging from 5 to 20 feet deep. The sewer lines will be installed by trenching, along the Kaneohe Bay shoreline primarily within sewer easements located in private properties.

The project will be partially constructed within the Shoreline Setback Area, which triggers the requirement for an Environmental Assessment (EA) under State laws. The EA is being prepared to comply with the State's environmental policy and to give appropriate regard to environmental, economic and technical concerns. We are notifying potentially interested parties to provide the opportunity for comments or the raising of potential concerns that can be addressed in the Draft EA.

Please direct your comments to Janice Marsters via mail at the letter head address, by email to mfa@lava.net, or by fax to 484-0007. We welcome your input.

March 30, 1999

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

Very truly yours,

MASA FUJIOKA & ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

*R. A. R.*  
Ross S. Sasamura  
Acting Director and Chief Engineer  
Department of Facility Maintenance

Attachment: Plan showing proposed sewer line location.

Record of Discussion Job KANEOHE BAY SEWERS Date MAY 5, 1999  
By JCM Owner/Client CITY & COUNTY OF HONOLULU

With LAVERNE HIGA Phone \_\_\_\_\_  
Business CITY & COUNTY FACILITY MAINTENANCE Fax \_\_\_\_\_  
Title \_\_\_\_\_ e-mail \_\_\_\_\_  
Nature of call: Incoming  Outgoing   
Distribution: Information: FILE Action: \_\_\_\_\_

MAIN SUBJECT DRAFT EA

LAVERNE SAID NO NEED TO SEND DRAFT EA TO THEM FOR REVIEW

MASA FUJIOKA AND ASSOCIATES

CITY OF HONOLULU

FIRE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

3375 KONOHA STREET, SUITE 402  
HONOLULU, HAWAII 96819-1888



JEREMY HARRIS  
MAIL ROOM

ATTILIO K. LEONARDI  
FIRE CHIEF  
JOHN CLARE  
DEPUTY FIRE CHIEF

April 1, 1999

NO RESPONSE NEEDED

Ms. Janice C. Marsters  
Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii  
HFD Internal No. OL 99-063

We received your letter dated March 15, 1999, regarding the proposed project's draft Environmental Assessment. We do not have any environmental, economic, or technical concerns pertaining to the project.

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

Sincerely,

ATTILIO K. LEONARDI  
Fire Chief

AKL/CW:bt

POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 • AREA CODE (808) 529-3111



JEREMY HARRIS  
MAYOR

LEE D. DONOHUE  
CHIEF  
WILLIAM B. CLARK  
MICHAEL CARVALHO  
DEPUTY CHIEFS

OUR REFERENCE CS-DL

April 16, 1999

Ms. Janice C. Marsters  
Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

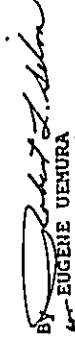
Thank you for the opportunity to comment on the design of the Kaneohe Bay Sewers Improvement District.

During the time that the connection to the main city sewer line is being done, we would anticipate an impact on services provided by this department. In spite of mitigation measures, complaints relative to fugitive dust, construction noise, and traffic problems are to be expected, thereby increasing calls for police service to the area.

If there are any questions, please call Assistant Chief Eugene Uemura at 529-3255 or Lieutenant John Thompson at District 4 at 235-7621.

Sincerely,

LEE D. DONOHUE  
Chief of Police

BY   
EUGENE UEMURA  
Assistant Chief  
Support Services Bureau

**M F A**  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808-484-5366 • Fax 808-484-0007

September 20, 1999

Honolulu Police Department  
801 South Beretania Street  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. Lee D. Donohue  
Chief of Police

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Donohue:

Thank you for your letter dated April 16, 1999 regarding the subject project. We have the following response to your comment:

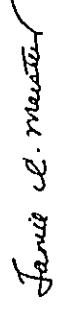
**Your comment:** During the time that the connection to the main city sewer line is being done, we would anticipate an impact on services provided by this department. In spite of mitigation measures, complaints relative to fugitive dust, construction noise, and traffic problems are to be expected, thereby increasing calls for police service to the area.

**Our response:** Potential impacts due to fugitive dust and noise are addressed in Section 5.2.1 (Air Quality and Noise Levels) of the EA. Potential impacts due to the traffic problems are addressed in Section 5.4.6 (Infrastructure). Mitigation measures are also discussed in this section. The contractor will be responsible for the implementation of controls which will mitigate these potential problems.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

  
Janice C. Marsters  
Principal



DEPARTMENT OF COMMUNITY SERVICES  
CITY AND COUNTY OF HONOLULU

718 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 327-3311 • FAX: 327-3408

JEREMY HARRIS  
MAYOR



ABELINA MADRID SHAW  
DIRECTOR

MANUEL T. VALBUENA  
DEPUTY DIRECTOR

April 8, 1999

Ms. Janice Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District

The Department of Community Services has no comments on the proposed sewer line.  
Thank you for the opportunity to comment.

Sincerely,

*Abelina Madrid Shaw*  
ABELINA MADRID SHAW  
Director

AMS:df

Record of Discussion Job KANEHE BEACH SEWERS Date: MAY 5, 1999  
By: JCM Owner/Client: CITY & COUNTY OF HONOLULU

With: RANDY WONG Phone: \_\_\_\_\_  
Business: DEPT. OF COMMUNITY SERVICES Fax: \_\_\_\_\_  
Title: \_\_\_\_\_ e-mail: \_\_\_\_\_

Nature of call: Incoming  Outgoing   
Distribution: Information: FIVE Action: \_\_\_\_\_

MAIN SUBJECT: DRAFT EA  
RANDY SAID THEY DO NOT WANT TO REVIEW THE EA

MASA FUJIOKA AND ASSOCIATES



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 118, HONOLULU, HAWAII 96810

LETTER NO. (P) 1267.9

APR 12 1999

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

NO RESPONSE NEEDED

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

This is in response to your letter of March 15, 1999, requesting our comments on the subject project.

The project will not impact any of our existing or proposed facilities. Therefore, we have no comments.

In the future, when actions described by Environmental Assessments, Environmental Impact Statement Preparation Notices, Environmental Impact Statements, Plan Review Use, etc., do not impact on specific Department of Accounting and General Services plans or facilities, we for workload reasons will not provide a "no comment" or "good planning principles evaluation" type of response. But, since we are still interested in knowing what is going on planning-wise, we would still appreciate the opportunity to review all such documents.

Should you have any questions, please contact Mr. Alan Sanborn of the Planning Branch at 596-0499.

Sincerely,

GORDON MATSUOKA  
Public Works Administrator

JT:jy

c: C&C of Honolulu, Dept. of Design & Construction

# CORRECTION

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

DEPARTMENT OF COMMUNITY SERVICES  
CITY AND COUNTY OF HONOLULU

718 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 527-5311 • FAX: 527-5498

JEREMY HARRIS  
MAYOR



ABELINA MADRID SHAW  
DIRECTOR

MANUEL T. VALBUENA  
DEPUTY DIRECTOR

April 8, 1999

Ms. Janice Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halaawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District

The Department of Community Services has no comments on the proposed sewer line.  
Thank you for the opportunity to comment.

Sincerely,

*Abelina Madrid Shaw*  
ABELINA MADRID SHAW  
Director

AMS:df

Record of Discussion Job KANEHOE BAY SEWERS Date MAY 5, 1999  
By JM Owner/Client CITY & COUNTY OF HONOLULU

With RANDY WONG Phone \_\_\_\_\_  
Business DEPT. OF COMMUNITY SERVICES Fax \_\_\_\_\_  
Title \_\_\_\_\_ e-mail \_\_\_\_\_

Nature of call: Incoming  Outgoing   
Distribution: Information: FILE Action: \_\_\_\_\_

MAIN SUBJECT DRAFT EA

RANDY SAID THEY DO NOT WANT TO REVIEW THE EA

MASA FUJIOKA AND ASSOCIATES



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 1118, HONOLULU, HAWAII 96841

LETTER NO. (P) 1267.9

APR 12 1999

Ms. Janice C. Marsters, Principal  
Nasa Fujioka & Associates  
99-1205 Halaawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

NO RESPONSE NEEDED

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

This is in response to your letter of March 15, 1999, requesting our comments on the subject project.

The project will not impact any of our existing or proposed facilities. Therefore, we have no comments.

In the future, when actions described by Environmental Assessments, Environmental Impact Statement Preparation Notices, Environmental Impact Statements, Plan Review Use, etc., do not impact on specific Department of Accounting and General Services plans or facilities, we for workload reasons will not provide a "no comment" or "good planning principles evaluation" type of response. But, since we are still interested in knowing what is going on planning-wise, we would still appreciate the opportunity to review all such documents.

Should you have any questions, please contact Mr. Alan Sanborn of the Planning Branch at 585-0499.

Sincerely,

GORDON MATSUOKA  
Public Works Administrator

JT:jy

c: C&C of Honolulu, Dept. of Design & Construction



STATE OF HAWAII  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
LAND USE COMMISSION

P.O. Box 2359  
Honolulu, HI 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

April 12, 1999

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line, Kaneohe Bay Sewers Improvement District, Kaneohe, Oahu, Hawaii

We have received your letter dated March 15, 1999, regarding the subject project and find that the proposed sewer lines, as represented on the sewer line plan, are located within the State Land Use Urban District.

We suggest that the draft environmental assessment include a map showing the location of the proposed sewer lines in relation to the State Land Use Districts.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject project.

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

Sincerely,

ESTHER UEDA  
Executive Officer

EU:th

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808-494-5366 • Fax 808-494-0007

September 20, 1999

Department of Business, Economic Development and Tourism  
Land Use Commission  
235 South Beretania Street  
Honolulu, Oahu, Hawaii 96813

Attention: Ms. Esther Ueda  
Executive Officer

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Ueda:

Thank you for your letter dated April 12, 1999 regarding the subject project. We have the following response to your comment:

Your comment: We suggest that the draft environmental assessment include a map showing the location of the proposed sewer lines in relation to the State Land Use Districts.

Our response: The State Land Use Map is presented as Figure 3.5 of the Final EA.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
PO BOX 3378  
HONOLULU, HAWAII 96801

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

BY MAIL, PERMIT 104916  
74

April 16, 1999

99-061/epo

Ms. Janice C. Marsters  
April 16, 1999  
Page 2

99-061/epo

- c. The contractor must comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d) (4).

2. Heavy vehicles traveling to and from the project site must comply with the provisions of the Administrative Rules, Chapter 11-42, "Vehicular Noise Control for Oahu."

Should there be any questions on this matter, please call Mr. Jerry Haruno, Environmental Health Program Manager of the Noise, Radiation and Indoor Air Quality Branch at 586-4701.

Fugitive Dust

Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

- a. Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. Providing an adequate water source at the site prior to start up of construction activities;
- c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. Controlling of dust from shoulders and access roads;
- e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f. Controlling of dust from debris being hauled away from project site.

If you have any questions regarding these issues on fugitive dust, please contact the Clean Air Branch at 586-4200.

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701

Dear Ms. Marsters:

Subject: Pre-Draft Environmental Assessment (DEA) Review  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Hawaii

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

Polluted Runoff Control

Please address in the DEA measures to be used to control soil runoff during rainy periods.

Noise Concerns

- 1. Activities associated with the construction phase of the project must comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."
  - a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the rules as stated in Section 11-46-6(a).
  - b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b) (1)(A).

Ms. Janice C. Marsters  
 April 16, 1999  
 Page 3

September 20, 1999

Department of Health  
 Deputy Director  
 P.O. Box 3378  
 Honolulu, Oahu, Hawaii 96813


Attention: Mr. Gary Gill  
 Deputy Director

Subject: Proposed Installation of New Sewer Line  
 Kaneohe Bay Sewers Improvement District  
 Kaneohe, Oahu, Hawaii

- Water Pollution
1. A National Pollutant Discharge Elimination System (NPDES) general permit is required for the following discharges to waters of the State:
    - a. Storm water discharges relating to construction activities, such as clearing, grading, and excavation, for projects equal to or greater than five acres;
    - b. Storm water discharges from industrial activities;
    - \*c. Construction dewatering activities;
    - d. Noncontact cooling water discharges less than one million gallons per day;
    - e. Treated groundwater from underground storage tank remedial activities;
    - f. Hydrotesting water;
    - g. Treated effluent from petroleum bulk stations and terminals; and
    - h. Treated effluent from well drilling activities.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a notice of intent with the Department's Clean Water Branch at least 30 days prior to commencement of any discharge to waters of the State.

Any questions regarding these comments should be directed to Mr. Denis Lau, Branch Chief, Clean Water Branch at 586-4309.

Sincerely,  
  
 GARY GILL  
 Deputy Director for  
 Environmental Health

c: CHB  
 NR&IAQB  
 CAB

Dear Mr. Gill:

Thank you for your letter dated April 16, 1999 regarding the subject project. We have the following response to your comments:

1. Your comment: Polluted Runoff Control - Please address in the DEA measures to be used to control soil runoff during rainy periods.  
 Our response: Section 5.2.4 of the Final EA discusses runoff control.
2. Your comment: Noise Concerns -  
 (1.) Activities associated with the construction phase of the project must comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."  
  - a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the rules as stated in Section 11-46-6(a).
  - b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b) (1)(A).
  - c. The contractor must comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d) (4).

(2.) Heavy vehicles traveling to and from the project site must comply with the provisions of the Administrative Rules, Chapter 11-42, "Vehicular Noise Control for Oahu."

Our response: The information on noise control has been added to Section 5.2.1 (Air Quality and Noise Levels) of the Final EA.



Department of Health  
Deputy Director  
September 20, 1999  
Page 2

Department of Health  
Deputy Director  
September 20, 1999  
Page 3

3. **Your comment: Fugitive Dust** - Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.
- The contractor should provide adequate measure to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:
- Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of least impact;
  - Providing an adequate water source at the site prior to start up of construction activities;
  - Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
  - Controlling of dust from shoulder and access roads;
  - Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
  - Controlling of dust from debris being hauled away from project site.

**Our response:** These suggested dust control measures have been added to Section 5.2.1 (Air Quality and Noise Levels) of the Final EA.

4. **Your comment: Water Pollution** - A National Pollutant Discharge Elimination System (NPDES) general permit is required for the following discharges to water of the State:
- Storm water discharges relating to construction activities, such as clearing, grading, and excavation, for projects equal to or greater than five acres;
  - Storm water discharges from industrial activities;
  - Construction dewatering activities;
  - Noncontact cooling water discharges less than one million gallons per day;
  - Treated groundwater from underground storage tank remedial activities;

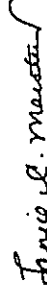
- Hydrotesting water;
  - Treated effluent from petroleum bulk stations and terminals; and
  - Treated effluent from well drilling activities.
- Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department's Clean Water Branch at least 30 days prior to commencement of any discharge to waters of the State.

**Our response:** Section 5.2.4 of the Final EA discusses the NPDES requirement for this project. As stated in Section 5.2.4, an individual NPDES permit application has been prepared for the discharge of construction dewatering effluent. It is our understanding that an individual permit, rather than a general permit, is needed since the receiving water, Kaneohe Bay, is Class AA Marine Waters.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership



Janice C. Marsters  
Principal



STATE OF HAWAII  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 LAND DIVISION  
 P.O. BOX 621  
 HONOLULU, HAWAII 96809

AGRICULTURE DEVELOPMENT  
 PROGRAMS  
 LAND ACQUISITION  
 BOUNDARY AND OCEAN RECLAMATION  
 CONSERVATION AND  
 RESOURCES ENFORCEMENT  
 COOPERATION  
 CONSULTING AND PLANNING  
 HISTORIC PRESERVATION  
 LAND DIVISION  
 STATE PLANNING  
 WATER RESOURCE MANAGEMENT

Ref:PS:EH

Ms. Janice C. Masters, Principal  
 Masa Fujioka & Associates  
 99-1205 Halawa Valley Street  
 Suite 302  
 Aiea, Hawaii 96701-3281

Dear Ms. Masters:

Subject: Proposed Installation of New Sewer Line  
 Kaneohe Bay Sewers Improvement District

We have reviewed the proposed project description and offer the following comment.

Engineering Branch:  
 Our current projects and programs are not effected by the proposed project.

We have no other comments to offer.

Thank you for the opportunity to review the proposed project. Should you have any questions, or require further assistance please contact staff planner Ed Henry at 587-0380.

Very truly yours,

*Sean Uchida*  
 Sean Uchida,  
 Administrator

c.c. Engineering Branch

NO RESPONSE NEEDED

KEVIN J. CASTLEMAN  
Secretary of State



THOMAS E. JOHNS  
Commissioner  
BRUCE S. ANDERSON  
RICHARD H. COLE  
GEOFFREY S. HARRIS  
DAVID A. KOSKOFF  
KEVIN M. INOUE  
LEWIS I. SAKODA  
Acting Deputy Director

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
HONOLULU, HAWAII 96820

APR 16 1999

Ref: MFA Project No. 97115-001

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District

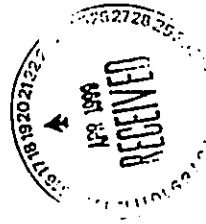
This is in response to your letter, dated March 15, 1999, regarding installation of 4,500 feet of sewer lines in the vicinity of Paku Place and Aina Mōi Place, Kaneohe Bay Drive, Oahu (TMK: 4-4-7 and 4-4-21). A site inspection was conducted by our staff on April 7, 1999, to determine if a stream channel alteration permit would be required.

No streams were observed in this area, and none were identified on the U.S.G.S. Quad Map or Tax Maps. Therefore, this project is not subject to stream channel alteration permit requirements.

Thank you for consulting us in this matter. Should you have any questions, please contact David Higa at 587-0249.

Sincerely,

*Edwin T. Sakoda*  
EDWIN T. SAKODA  
Acting Deputy Director



SKS:ky

Record of Discussion Job KANEHOE BAY SEWERS Date MAY 5, 1999  
By JCM Owner/Client CITY & COUNTY OF HONOLULU

With DAVID HIGA Phone \_\_\_\_\_  
Business DLNK CWEM Fax \_\_\_\_\_  
Title \_\_\_\_\_ e-mail \_\_\_\_\_

Nature of call: \_\_\_\_\_ Incoming  Outgoing   
Distribution: Information: FILE Action: \_\_\_\_\_

MAIN SUBJECT PEAPT EA

DAVID SAID NO NEED TO SEND PEAPT EA FOR THEIR REVIEW

MASA FUJIOKA AND ASSOCIATES

Record of Discussion Job 91115-003 Date 3/30/99  
By Lisa Owner/Client C. C. WASHBURN

With Jon Yokota Phone \_\_\_\_\_  
Business HCDA (Hawaii Community Development Authority) Fax \_\_\_\_\_  
Title Development Authority e-mail \_\_\_\_\_  
Nature of call: Incoming  Outgoing   
Distribution: Information: JCH Action: file

MAIN SUBJECT Re-consultation letter

-Jon Yokota called to inform us that HCDA (Hawaii Community Development Authority) was not part of the Department of Business, Economic Development and Tourism and that HCDA was only responsible for the Kakaako District  
-she asked if she needed to respond to the letter; I told her no  
-she called because she was concerned that we were trying to get a hold of someone at DBEDT but HCDA is not a part of DBEDT.

MASA FUTOKA AND ASSOCIATES



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

REPLY TO  
ATTENTION OF

April 1, 1999

Operations Branch

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

This letter responds to your request for comments on the Kaneohe Bay Sewers Improvement District, dated March 15, 1999. The information you provided was not sufficiently detailed for me to determine if a Department of the Army permit would be required for this project. Please send me a copy of the draft Environmental Assessment when it is available.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-9258, extension 13, and reference File No. 990000241.

Sincerely,

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

NO RESPONSE NEEDED

Record of Discussion Job Q7115-003 Date 4/1/99  
By Morie Owner/Client

With John Schmeffeld Phone 541-3441  
Business U.S. Fish Wildlife Service Fax  
Title \_\_\_\_\_ e-mail \_\_\_\_\_

Nature of call: Incoming  Outgoing   
Distribution: Information: SMIC Action: LISA  
LISA file

MAIN SUBJECT knowing pay sheet

No objection - will not send letter

MASA FUJIOKA AND ASSOCIATES



Engineering and Design Department  
200 Akamainui St.  
Miliama, Hawaii 96789  
(808) 625 - 2100  
FAX (808) 625 - 5888

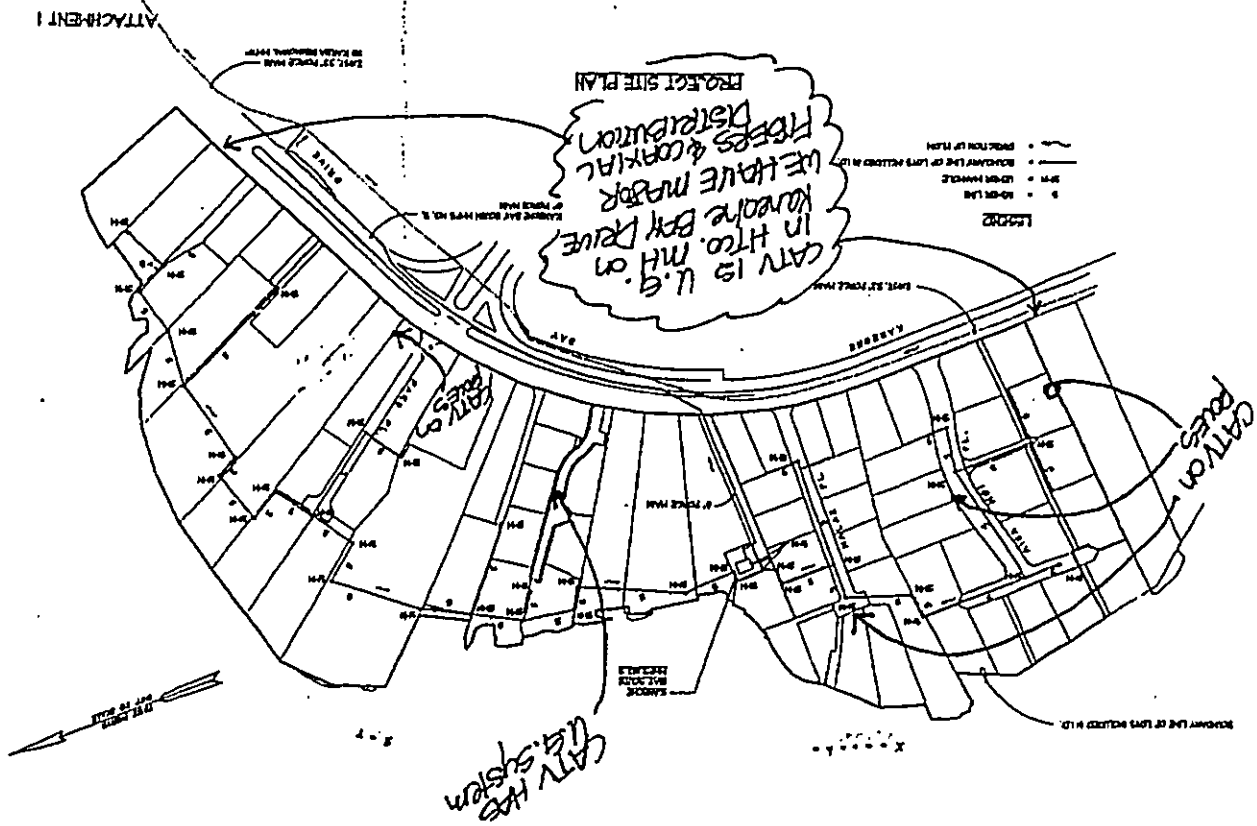
TO: JANICE MARSTERS, PRINCIPAL  
OFFICE# 484-5366  
FAX# 484-0007  
FROM: LEONA L. PORTER  
OFFICE# 625-8457

DATE: May 5, 1999  
SUBJECT: KANEOHE BAY SEWERS IMPROVEMENTS DISTRICT

Number of pages including cover sheet: 2  
Comments: Thank you for sending information on your project. Your job will be on the Kaneohe Bay shoreline (easements-private properties) but I have marked up the attached site plan since you took the time to send us information.

If there are questions you may have, please call me as I do take care all of the North Shore and Windward Areas....

Mabalo,





Engineering and Design Department  
200 Akamaiui St.  
Mililani, Hawaii 96789  
(808) 625 - 2100  
FAX (808) 625 - 5888

TO: JANICE MARSTERS, PRINCIPAL

OFFICE# 484-5366

FAX# 484-0007

FROM: LEONA L. PORTER

OFFICE# 625-8457

DATE: May 26, 1999

SUBJECT: KANEHOE BAY SEWERS IMPROVEMENTS DISTRICT

Number of pages including cover sheet: 1

Comments: RESPONDING TO YOUR PHONE MESSAGE LBFT  
YESTERDAY, THERE WILL BE NO NEED TO CONTACT ME REGARDING  
THE ABOVE PROJECT, SINCE YOUR JOB WILL BE ON THE SHORELINE.

MAHALO  
  
LEONA

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halewa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-5366 • Fax 808 484-0007

September 20, 1999

Oceanic Cable  
Engineering and Design Department  
200 Akamaiui Street  
Mililani, Oahu, Hawaii 96789

Attention: Ms. Leona L. Porter

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Porter:

Thank you for your facsimile dated May 5, 1999 regarding the subject project.  
We have the following response to your comment:

Your comment: Your job will be on the Kaneohe Bay shoreline (easements-  
private properties) but I have marked up the attached site plan.  
(See attachment)

Our response: Underground cable lines are not located within construction  
activity boundaries. We appreciate your identification of underground cable  
locations.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal



Proposed Installation of New Sewer Line-K Bay Sewers Improvement District

Subject: Proposed Installation of New Sewer Line-K Bay Sewers Improvement District  
Date: Thu, 15 Apr 1999 18:59:36 EDT  
From: MintBar@aol.com  
To: mfa@lava.net

Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Ste. 302  
Aiea, Hawaii 96701

Dear Ms. Marsters:

I am not sure whether we should address our concerns about how close to get to which plants which will be affected by the digging of the trench for the sewer lines to you at this time or to someone in the future who will be doing the actual layout of the sewerlines.

Our concern is our two fences and a wall that will have to be undermined. We also prefer that the trench be as close to the culvert as possible where we have oleanda growing. We don't care whether the oleanda is destroyed because we would like to replace that hedge with a continuing of the green and yellow croton hedge that we felt should be preserved since it is our floral fence to keep children and animals from going in and out of the culvert or falling in to it.

Thank you for your letter.

Sincerely,

Mr. & Mrs. John F. Minton  
44-027A Aina Moi Place  
Kaneohe, Hawaii 96744  
Phone: 254-2601  
Email: Mintbar@aol.com

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

99-1205 Halawa Valley Street, Ste. 302 • Aiea, Hawaii 96701-3231  
Phone 808 484-5566 • Fax 808 484-0007

September 20, 1999

John F. & Barbara MD Minton  
44-027A Aina Moi Place  
Kaneohe, Oahu, Hawaii 96744

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. & Mrs. John F. Minton:

Thank you for your letter dated April 15, 1999 regarding the subject project. We have the following response to your comment:

*Your comment:* Our concern is our two fences and a wall that will have to be undermined. We also prefer that the trench be as close to the culvert as possible where we have oleanda growing ... because we would like to replace that hedge with a continuing of the green and yellow croton hedge that we felt should be preserved since it is our floral fence to keep children and animals from going in and out of the culvert or falling in to it.

*Our response:* The sewer lines will be installed within sewer easements located in private property. If your fences, wall, and landscaping are within the sewer easement, the easement grants the City access onto the property and the removal of any walls, fences, landscaping, irrigation systems, paved areas, structures or other improvements that are located within the easement boundaries whenever installation, repair or maintenance work is required. The exact location of the sewer line within the easement has not yet been finalized, so it is difficult to address your comments at this time. If your concern is in regard to the sewer line which will be installed from your residence to the City's lateral, this line is your responsibility, so you can coordinate with your contractor regarding its location. Your concerns will be incorporated into the Final Environmental Assessment.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

of 1

4/15/99 2:17 PM

C-22

1 April 1999

Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281  
ATTN: Janice C. Marsters

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Marsters:

I refer to your letter dated 15 March 1999, which my wife and I received on 26 March 1999, in an envelope postmarked 25 March 1999. Your letter refers to us as "potentially interested parties." Indeed, the City has known for a long time that we are "potentially interested" (see my testimony before the City Council on 14 October 1998, Enclosure 1). We have several comments and questions regarding your letter.

First, could you please explain why our letter was posted 10 days after it was dated? Were all letters to potentially interested parties similarly delayed? Also, how long do we have to respond to your letter? We assume sending letters such as ours was the first step in the "early consultation" of "individuals which the proposing agency reasonably believes to be affected" referred to in Hawaii Administrative Rules (HAR) §§ 11-200-9(a) and 11-200-10 (12). While we understand the regulations do not establish a finite time period for such "consultation" of "affected individuals," reason dictates that all affected individuals should be given approximately the same amount of time to provide their comments. Thus, all letters to affected individuals should be posted at approximately the same time—or at least each letter should be dated and then mailed at approximately the same time. Accordingly, we hereby request that you notify all affected individuals in writing of the amount of time they have to respond to your letter, and that all such notification letters be sent at approximately the same time, or at least dated approximately the same time as they are sent.

Second, as indicated on your attachment (the plan showing the proposed sewer line location) this "project" (as you refer to it) actually has two essential components—Kaneohe Bay South Wastewater Pump Station No. 5, with its 6-inch force main (the pump station)—and the 6-inch and 8-inch gravity sewer lines (the gravity lines) feeding the pump station. We understand that a contract for construction of the pump station was awarded in December of 1996 at an initial price of \$2,269,056 and that the pump station is nearly, if not already, complete. An environmental assessment for the pump station component was prepared in 1993, but we were never consulted during its preparation. The 1993 environmental assessment did not address the gravity lines. As of 5 August 1998, the City estimated the total cost of the gravity lines would be \$3,533,000. We understand that bids for the gravity lines construction contract were opened in December of 1998, but that none of the bids were within the funds available at that time. We further

understand that no environmental assessment for the gravity lines component has ever been prepared. Please confirm our understanding that the pump station has no independent utility without the gravity lines, and that no environmental assessment has ever been prepared for the gravity lines. Please also explain why we were never consulted about the environmental impact of the pump station, since we obviously were also "potentially interested parties" regarding the pump station component of this project. That is to say: please explain why, as adjacent landowners—by definition "affected individuals"—we were not consulted at the earliest practicable time about this project, as required by HAR § 11-200-9(a)(1).

Third, we are enclosing a copy of a letter from Hawaii's Office of Environmental Quality Control (OEQC) to Honolulu's Department of Design and Construction (DDC) dated 14 December 1998 (Enclosure 2). In that letter the State's OEQC informed the City's DDC that "if any part of the sewer system falls within the shoreline setback area, the City must prepare an environmental assessment" and recommended "that the City complete the assessment process before making any major irrevocable decision concerning the project." Clearly, both the pump station and the gravity line components are "part of the sewer system," and each of those parts "falls within the shoreline setback area." In light of OEQC's advice to the City, please explain how it is possible that the City has not already made a "major irrevocable decision concerning the project," with the pump station component already completed (or nearly complete) at a public cost in excess of \$2.2 million.

Fourth, we understand that there have been no serious environmental studies linking any environmental degradation in the Bay with effluent from any of the existing septic systems or cesspools being used by the 69 properties described in your letter, or any other properties along the shore of the Bay. This has been admitted by the DDC at various City Council hearings, and has been confirmed in the testimony of other credible witnesses (see, for example, the testimony of the Chairman of the Oceanography Department at the University of Hawaii, Manoa, Enclosure 3). A simple mathematical calculation reveals that, adding up only the City's estimate for the gravity lines and contract price for the pump station (cumulatively \$5,802,056), the public cost alone to connect these 69 properties to the sewer system will be approximately \$84,000 each. We understand, from information given to us in writing by the DDC, as well as the July 1998 public informational meeting conducted by the DDC, that our mandatory private cost to connect our home to the sewer system will be approximately \$30,000, including construction of 265 feet of private connecting lines (much of it under an asphalt concrete parking lot), closure of our currently operating cesspool, and our connection fee. Thus, the public and private cost to connect only our home to the project is estimated to be approximately \$114,000. For that amount of money (invested at, say, 5% simple interest) our cesspool could be pumped out monthly, ad infinitum, using only the monthly interest of \$475. So could our 68 neighbors' individual treatment systems. Please explain how a project with these kinds of economic indicators can be expected to survive any sort of reasonable benefit-cost analysis. While we understand that Chapter 343 of Hawaii Revised Statutes (HRS) and related regulations do not require a formal written benefit-cost analysis or quantification, still, they require that all reasonable alternatives to the

CERTIFIED MAIL—RETURN RECEIPT REQUESTED

proposed action be considered, and that foreseeable "secondary and nonphysical effects," such as socio-economic consequences, be considered. In that context, please explain why public funds in excess of \$5.8 million, and a significant amount of private funds (that we understand thus far remain unquantified, but \$30,000 is significant to us) would not be better spent on alternative projects with cost-effective benefits to the community, such as a credible scientific study to determine the real causes of any current environmental degradation to the Bay, rather than extending the sewer system to connect 69 properties that have not been shown to be causing any deleterious effect on the Bay to date.

Fifth, this letter is to put you on notice that this project will have a "significant effect" on the environment under HRS § 343-2, thus triggering the requirement for an environmental impact statement under HRS § 343-5. This project, by definition, will have a significant effect according to at least six of the 13 "significance criteria" listed in HAR § 11-200-12. It will substantially affect the economic welfare of the local community by imposing high private costs on individual property owners to construct private connecting lines, to decommission existing individual treatment systems, to pay substantial connection fees, and to pay increased sewer and water fees indefinitely. It will substantially affect the economy of the State by imposing high capital costs initially on the public at large and draining public revenues indefinitely to operate and maintain a portion of the sewer system that will have no concomitant benefit. It will substantially affect public health, because it will expose the public to the possibility—a possibility that now does not exist for the 69 properties in question—of a catastrophic spill of sewage into the Bay, such as the 7,200 gallons of untreated sewage that spilled into Keaahala Stream and the Bay on 1 February 1999. It will involve substantial secondary impacts, such as population changes and effects on public facilities, because it will encourage increased population density in the area of the 69 affected properties. While the effect upon the environment caused by the \$2.2 million pump station component might be considered "individually limited," the project "cumulatively has considerable effect upon the environment," and it "involves a commitment for larger actions"—for example, the commitment to spend an additional \$3.5 million for the capital cost of the gravity lines, and an unquantified amount for future operation and maintenance of the entire project. It will detrimentally affect water quality and ambient noise levels for the reasons referred to above. It will affect the "environmentally sensitive" coastal area. And, finally, because this project will utilize force mains, rather than mere gravity lines, it will require substantially more energy consumption, for both operation and maintenance, than would either a gravity system or the existing individual treatment systems.

As we have told the City on many occasions before, we remain willing to meet with the City's Corporation Counsel to resolve our concerns regarding this project; and, in this regard City Council Chairman Mufi Hannemann in January of 1999 officially referred some of our earlier correspondence on these matters to the Corporation Counsel for review and comment. In a letter dated 4 January 1999 Chairman Hannemann assured us he would respond to us as soon as he received a response from the Corporation Counsel. To date, however, neither the City Council, nor any City agency has answered our concerns.

We anxiously await your early response to our questions and requests. Although this letter is only our preliminary response to your letter, we hereby request that it be made a part of the environmental assessment record for this project.

I can be reached by telephone at home at 254-5368, or during business hours at 438-2423.

Sincerely,



Gayle B. Chestnut  
44-323 Kaneohe Bay Drive  
Kaneohe, Hawaii 96744

3 enclosures, as stated

Copies furnished:

Honorable Mufi Hannemann, Chairman, Honolulu City Council  
Honorable Steve Holmes, Councilmember, Honolulu City Council  
Mr. Randall K. Fujiki, Director, Honolulu Department of Design and Construction  
David Z. Arakawa, Esq., Honolulu Corporation Counsel  
Mr. David Waite, *The Honolulu Advertiser*

TESTIMONY OF GAYLE B. CHESTNUT  
REGARDING THE KANEOHE BAY SEWERS IMPROVEMENT DISTRICT PROJECT  
BEFORE THE COUNCIL OF THE CITY AND COUNTY OF HONOLULU  
OCTOBER 14, 1998

Good morning Mr. Chairman and Members of the Council. You may recall the testimony my wife and I gave at your August 5, 1998 public hearing, and I want to reiterate it here. Not much has changed. In short, since then the City has made our lives miserable, devaluing our home and threatening to confiscate our lives' savings by forcing us to connect to this unnecessary and wasteful sewer project that will serve only 70 homes at enormous public and private expense.

Two things really offend me. One is squandering public funds on an ill-planned project that serves only private interests and no useful public purpose. The other is the government's using delay and overreaching tactics to overwhelm a private citizen in attaining questionable governmental ends. We have both here.

In the October 5, 1998 *Honolulu Advertiser* I saw an article by David Waite entitled, "Sewers proposed to protect bay." He concludes this project will protect the southeastern portion of Kaneohe Bay and will cost each homeowner only "\$5,000 to hook into the city sewer line." Now, I'm sure Mr. Waite is a very conscientious reporter, but clearly he has been misled. He might be enlightened by these facts:

- The City admits this project will cost over \$3.5 million — a public cost of about \$51,000 per home to connect 70 homes.
- The City admits this project will cost my wife and me over \$30,000 to hook into the new line and to "decommission" our cesspool. Thus, the combined public and private cost to hook up our tiny lot will exceed \$81,000.
- At the July 29, 1998 public information meeting the City admitted there was *absolutely no scientific evidence* that these 70 homes contribute *any* pollution to the Bay. Indeed, there was undisputed testimony at your August 5 hearing that water quality in our part of the Bay actually has improved over the last two decades.
- At the public meeting the City denied there had been any serious spills from similar sewer lines, or that any spills were likely from this one. This, of course, was not true. Mayor Harris in an August 6, 1998 press release acknowledged that "sewage spills *often* occur when groundwater leaks into sewer lines during heavy storms, creating high flows that overwhelm the system."
- We doubt that all the persons on the petition brandished by Councilmember Holmes at the public meeting (supposedly favoring this project) were even homeowners in the area to be served. We, as actual homeowners, were never consulted about that petition.

- The City already is constructing the pump station to serve this project, without ever doing a benefit / cost analysis or an environmental assessment. This clearly involves action that proposes a use within the shoreline area, which under State law is illegal without an environmental assessment (see HRS § 343-5 (a)(3) and (b)).

On August 5 my wife asked you to imagine how you would feel, having your home's equity stolen to contribute to an unnecessary and wasteful project planned and started without any semblance of due process. After over two months and numerous letters from me (which some of you no doubt have seen) the City finally has agreed to meet with us about our situation — but only reluctantly before the November elections. We hope our own personal financial disaster can be averted before then; however, we remain opposed to the way this project has been sold to and forced upon an unwitting public, with sheer emotionalism, environmental pontification and junk science.

Thank you very much for your patience in listening to me. I will be happy to answer any questions you may have, now or at your convenience.

Enclosure 1

BENJAMIN J. CAYETANO  
Governor



STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

315 SOUTH BERKELEY STREET  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 534-1100  
FACSIMILE (808) 534-1100

GARY OEL  
DIRECTOR

December 14, 1998

Mr. Randall K. Fujiki, Director  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street, Second Floor  
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Kaneohe Bay Sewers Improvement District, Kaneohe Bay,  
Oahu

This is in response to a letter of November 24, 1998 from Gayle Chestnut, a concerned citizen, regarding environmental assessment requirements for the proposed Kaneohe Bay Sewers Improvement District wastewater collection system.

OEQC staff has reviewed the information presented and obtained. We find that if any part of the sewer system falls within the shoreline setback area, the City must prepare an environmental assessment. We also recommend that the City complete the assessment process before making any major irrevocable decision concerning the project.

Facts

1. In 1991, the City and County of Honolulu prepared an environmental assessment for the Kaneohe Bay South Wastewater Pump Station No. 5. The 1993 environmental assessment covered the pump station, force main, relief force main, access roadway and utilities.
2. The purpose of pump station No. 5 and the force main is to transport wastewater from the proposed Kaneohe Bay Sewers Improvement District wastewater collection system to the Kailua Regional Wastewater Treatment Facility.
3. The 1993 environmental assessment did not assess the impacts of the Kaneohe Bay Sewers Improvement District wastewater collection system.

Enclosure 2

Mr. Fujiki  
Page 2

4. The current design for the Kaneohe Bay Sewers Improvement District wastewater collection system includes facilities that may be constructed within the shoreline area, and would therefore require a shoreline setback variance.
5. HRS 343-5(3) states that an environmental assessment is required for actions which "propose any use within the shoreline area as defined in section 205A-41."
6. The City is planning to conditionally award a contract for the construction of the Kaneohe Bay Sewers Improvement District wastewater collection system project. The City is also evaluating various other options to meet the objectives of this project.

Analysis

Section 11-200-8(a)(9) of the Environmental Impact Statement Rules does not allow any project needing a shoreline setback variance to be declared exempt from preparing an environmental assessment. If this project will require a shoreline setback variance, an environmental assessment must be prepared before the project can be implemented.

We also recommend that the City complete the environmental assessment process before any construction on the project is allowed to begin. Early preparation of the assessment will enable the City to consider all the environmental, social and economic impacts as well as the full range of alternatives before making any major irrevocable decision.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185. Thank you.

Sincerely,

Gary Oel  
Director

c: Gayle Chestnut

Testimony to Honolulu City Council  
November 10, 1998

Michael J. Mortl  
44-291E Kaneohe Bay Drive, Kaneohe HI 96744

I am a resident and homeowner in the Kaneohe Bay Sewer District consisting of 70 residences on the southern shore of Kaneohe Bay. I also happen to be Chairman of the Department of Oceanography at the University of Hawaii at Manoa, one of the top such departments in the country. While I personally have never worked in Kaneohe Bay, several of my oceanography colleagues have. They tell me there is no evidence whatever of any deleterious effect on the Bay from the cesspools and septic systems along the shore. In fact, the appropriate measurements have not been made in Kaneohe Bay. Where such studies have been done, for example along the shoreline in Waimanalo, no deleterious effects could be measured. It is therefore extremely unlikely that the enormous expense associated with installation of this sewer can be justified.

I and most of my neighbors are opposed to construction of this sewer for the following reasons:

1. The sewer is enormously expensive, both publicly to the taxpayer (approx. \$51,000 per household to be served) and privately to the individual homeowners (approx. \$10,000 to \$30,000 per household).
2. There is no scientific evidence that the sewer will contribute in any appreciable way to improving environmental conditions in the Bay, either now or in the future.
3. In fact, environmental damage to the Bay could be greater with the sewer than with the present dispersed septic systems, provided they are up-to-date and properly maintained. The sewer itself will be very close to sea level, and in some places may actually lie below sea level. The sewage must be pumped uphill to the sewage plant. If the pumps fail, the resulting pressure is likely to produce a massive spill of raw sewage into the Bay, a virtual impossibility with the present septic systems.

I conclude that this sewer project would fail any reasonable test of cost vs. benefits, if such studies were done. The project should not be carried out.

September 20, 1999

Cayle B. Chestnut  
44-323 Kaneohe Bay Drive  
Kaneohe, Oahu, Hawaii 96744

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Chestnut:

Thank you for your letter dated April 1, 1999 regarding the subject project. We have the following responses to your comments:

1. *Your comment:* Could you explain why our letter was posted 10 days after it was dated? Were all letters to potentially interested parties similarly delayed? Also, how long do we have to respond to your letter? ... We hereby request that you notify all affected individuals in writing of the amount of time they have to respond to your letter, and that all such notification letters be sent at approximately the same time, or at least dated approximately the same time as they are sent.

*Our response:* The letters were dated when they were initially drafted. The process of distributing the letters involved printing, reviewing, signing, stuffing envelopes, and mailing, which was completed over a several day period. All letters had the same date, March 15, 1999, and were mailed on the same day. There was no firm deadline for responding to our March 15, 1999 letter. Comments received by April 7, 1999 were incorporated into the Draft EA; comments received after April 7, 1999 are being incorporated into the Final EA. The May 28, 1999 cover letter sent out with the Draft EA stated that the comment period for the Draft EA ended on July 8, 1999.

2. *Your comment:* Please confirm our understanding that the pump station has no independent utility without the gravity lines, and that no environmental assessment has ever been prepared for the gravity lines ... Please explain why, as adjacent landowners - by definition "affected individuals" - we were not consulted at the earliest practicable time about this project [the pump station], as required by HAR § 11-200-9(a)(1).

*Our response:* Your understanding is correct; the pump station has no independent utility without the gravity lines. The gravity lines are the subject of this EA. Affected individuals were consulted at the earliest practicable time in development of this EA. The EA prepared in 1993 to address the pump station also consulted affected individuals.

Enclosure 3

Gayle B. Chestnut  
September 20, 1999  
Page 2

3. *Your comment:* Clearly, both the pump station and the gravity line components are "part of the sewer system," and each of those parts "falls within the shoreline setback area" .... Please explain how it is possible that the City has not already made a "major irrevocable decision concerning the project," with the pump station component already completed (or nearly complete) at a public cost in excess of \$2.2 million.

*Our response:* The pump station component and this project were planned components of the overall Facilities Plan for the Kahaluu, Kaneohe, and Kailua service area. The overall impacts of each of these components were collectively addressed in the "Revised EIS for Kaneohe-Kailua Wastewater Facilities, March 1984."

4. *Your comment:* We understand that there have been no serious environmental studies linking any environmental degradation in the Bay with effluent from any of the existing septic systems or cesspools being used by the 69 properties described in your letter, or any other properties along the shore of the Bay ... Please explain why public funds in excess of \$5.8 million, and a significant amount of private funds ... would not be better spent on alternative projects with cost-effective benefits to the community, such as a credible scientific study to determine the real causes of any current environmental degradation to the Bay, rather than extending the sewer system to connect 69 properties that have not been shown to be causing any deleterious effect on the Bay to date.

*Our response:* One of the main reasons the project is being proposed is to meet State Department of Health wastewater management goals that allow individual wastewater systems (such as septic tanks) only in remote areas and in areas of low density and that do not allow wastewater systems depositing untreated sewage into the environment after the year 2000. The project is also being proposed to meet the objectives of the Kaneohe Bay Master Plan, the Hawaii State Plan, and the General Plan of the City and County of Honolulu. The EA discusses the objectives of these plans and how the project meets these objectives.

5. *Your comment:* This project, by definition, will have a significant effect according to at least six of the 13 "significance criteria" listed in HAR § 11-200-12. It will substantially affect the economic welfare of the local community by imposing high private costs on individual property owners ... It will substantially affect economy of the State by imposing high capital costs ... It will substantially affect public health ... It will involve substantial secondary impacts, such as population changes and effects on public facilities ... It will detrimentally affect water quality and ambient noise levels for the reasons referred to above. It will affect the "environmentally sensitive" coastal area ... It will require substantially more energy

Gayle B. Chestnut  
September 20, 1999  
Page 3

consumption, for both operation and maintenance, that would either a gravity system or the existing individual treatment systems.

*Our response:* The Final EA discusses the economic impacts of the project, and impacts to public health, population, public facilities, water quality, and noise levels, among other impacts, both adverse and beneficial. However, the EA concludes that the adverse impacts are not significant and that an EIS will not be required. Your letter will be incorporated into the Final EA.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

April 1, 1999

Masa Fujioka and Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Masters:

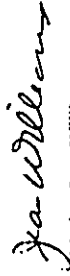
In response to your letter regarding the proposed installation of a new sewer line and the EA you are performing. (Reference MFA Project No. 97115-001 Kaneohe Bay Sewer Improvement

The project is costly and unnecessary as there are only a handful of people in this district who are not in compliance with current building codes. It would be less costly to pay for those who are not in compliance than to install the proposed line. Our septic system at 44-291 KBD is very current and meets all code and is only five years old. To destroy this system which cost about 12 thousand to install would cost us an additional (approximate) \$5,000 to destroy and add the expenses of hook up and additional taxes and fees imposed by the city for construction. Additionally, we are in dispute over the value of the property which the city is allowing for the proposed line. As many people in this economic downturn are struggling and the resources available to the city are finite it would seem fool hardy to continue with this project.

My other concern is that the existing sewer treatment facilities cannot handle the additional capacity and the city already having problems with compliance on federal wastewater treatment standards will further jeopardize the water and taxpayer.

Thank you for your time and consideration.

Sincerely,



Marilyn Jean Williams  
1155 Fort Street Mall Suite 163  
Honolulu, Hawaii 96813  
Phone: (808) 254-1119  
Fax: (808) 254-9209



M F A

**MASA FUJIOKA & ASSOCIATES**  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Haliwa Valley Street, Suite 302 • Aiea, Hawaii 96701-1251  
Phone 808-484-5366 • Fax 808-484-0007

September 20, 1999

Marlyn Jean Williams  
1155 Fort Street Mall, Suite 163  
Honolulu, Hawaii 96813

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Williams:

Thank you for your letter dated April 1, 1999 regarding the subject project. We have the following responses to your comments:

*Your comment:* The project is costly and unnecessary as there are only a handful of people in this district who are not in compliance with current building codes. It would be less costly to pay for those who are not in compliance than to install the proposed line. Our septic system at 44-291 KBD is very current and meets all code and is only five years old. To destroy this system which cost about 12 thousand to install would cost us an additional (approximate) \$5000 to destroy and add the expenses of hook up and additional taxes and fees imposed by the city for construction. Additionally, we are in dispute over the value of the property which the city is allowing for the proposed line. As many people in this economic downturn are struggling and the resources available to the city are finite it would seem fool hardy to continue with this project.

*Our response:* Your letter has been incorporated into the Final Environmental Assessment (EA) for the project. Your concerns on the economics of the project are addressed in the Final EA. The Final EA includes a discussion on economic considerations of the project, including a discussion of how the City calculates the sewer assessment for individual properties. The EA states that the impacts of the project may be a financial burden for residents. Mitigative measures are also discussed in the EA under economic considerations.

One of the main reasons the project is being proposed is to meet State wastewater management goals that allow individual wastewater systems (such as septic tanks) only in remote areas and in areas of low density and that do not allow wastewater systems depositing untreated sewage into the environment after the year 2000. The project is also being proposed to meet the objectives of the Kaneohe Bay Master Plan, the Hawaii State Plan, and the General Plan of the City and County of Honolulu. The EA discusses the objectives of these plans and how the project meets these objectives.

M F A

**MASA FUJIOKA & ASSOCIATES**  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS

Marlyn Jean Williams  
September 20, 1999  
Page 2

*Your comment:* My other concern is that the existing sewer treatment facilities cannot handle the additional capacity and the city already having problems with compliance on federal wastewater treatment standards will further jeopardize the water and taxpayer.

*Our response:* The City has stated that the Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PTF) or the Kailua Regional Wastewater Treatment Plant (WWTP). The ID project is part of the original service area these facilities were designed to accommodate. The Final EA will discuss capacity issues at the Kaneohe PTF and the Kailua Regional WWTP.

Thank you again for your comments. As stated previously, your letter will be included in the Final EA.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal



Terrl Needels & Uli Frowein

Telephone (808) 254-6114

44-317 A Kaneohe Bay Drive  
Kaneohe, HI 96744 USA

March 31, 1999

Ms. Janice C. Marsters  
Masa Fujita & Associates  
99-1205 Halewa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Kaneohe Bay Sewers Improvement District

Dear Ms. Marsters,

Thank you for your letter postmarked March 25, 1999, and your invitation to comment on the Kaneohe Bay Sewers Improvement District for your Environmental Assessment (EA).

I am a home owner within the Kaneohe Bay Sewers Improvement District and want to express to you my serious concerns about the lack of connection to the public sewer system.

We very much enjoy living in this area ; Kaneohe Bay is certainly one of the most beautiful areas of our islands and deserves to be protected and preserved, at any price, from pollutants and other detrimental conditions - such as sewage.

Unfortunately, this is not the case at all in our area. When I take out my kayak several times a week, I come across pollutants in the water from insufficient private sewer systems all the time. Friends and neighbors have the same experience on a daily basis.

As a former real estate appraiser for Bank of Hawaii, I was specialized in Winward Oahu real estate and ocean front properties around the State. I have had the opportunity to physically inspect many homes in this area. Most of the older homes (many with non-conforming conditions) have too small, outdated and insufficient cesspools, resulting in overflow and, in some cases, leakage into the streets, neighboring properties and/or the bay.

Some newer properties have septic tanks with separate seepage pits and leaching fields. However, the soil-absorption rate is extremely poor in this area (expensive clay) and the water table is too close to the surface for the systems to function properly. Therefore, I have seen new systems fail as well. The pockets and multiple horizontal layering of non-absorbing, almost 100% waterproof clay and well absorbing coral rock leads to amazing ways, directions and distances the overflow from defective private sewer systems can travel.

Having closely examined interior and exterior of many homes in this area (and also having recommended stage-one EAs in several cases), I think I am able to provide an accurate report on the current situation.

I heard from unaware residents in the area "Our system works perfectly well". This can only mean that the sewage disappears into the ground and is gone - at least gone from their property.

Owners are often aware but do not want to invest in updating their systems or prefer their insufficient systems over monthly sewer payments and/or the initial connection cost. It has become a vicious cycle. Therefore, I strongly believe that opponents of the long overdue sewer connection are badly informed about the magnitude of the problem and/or are arguing only for their own selfish concerns. Being located so close (less than 3,000 feet) to the sewer treatment plant, it is very frustrating to see Kaneohe Bay being polluted.

I am also concerned that our health is being endangered by unsanitary conditions. The protection of our health and the preservation of our environment necessitates making improvements to the sewer system a high priority. I would like to ask you to consider my comments and strongly urge you to support the Kaneohe Bay environment.

Thank you and Aloha

U. Frowein

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Hahaione Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808-484-5566 • Fax 808-484-0007

September 20, 1999

Uli Frowein  
44-317A Kaneohe Bay Drive  
Kaneohe, Oahu, Hawaii 96744

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Frowein:

Thank you for your letter dated March 31, 1999 regarding the subject project. Your letter has been incorporated into the Final EA.

We understand your concerns are basically that Kaneohe Bay deserves to be protected and preserved, at any price, from pollutants and other detrimental conditions - such as sewage; and that you are concerned that public health is being endangered by unsanitary conditions from insufficient cesspools and septic systems that do not function properly. Further, we understand you are concerned that the protection of health and the preservation of the environment necessitates making improvements to the sewer system a high priority.

The proposed new sewer line is designed to alleviate these concerns. We are glad that you support the project. Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

44-313 B Kaneohe Bay Drive  
Kaneohe, HI 96744  
808-254-8172

April 11, 1999

Maas Fujioka & Associates  
99-1205 Halawa Valley St. Suite 302  
Aiea, HI 96701-3281

Attn: Janice Marsters

RE: New Sewer line proposal at Kaneohe Bay: MFA Project No. 97115-001

Dear Ms. Marsters,

I just wanted to express my opinion, and a minimal amount of research I have done. This project is a huge waste of money. The City and County will end up spending 6 million dollars on this project (approximately 3 million has already been spent on the pump station) so that 60 some-odd houses can have their sewage routed to an already over utilized sewer treatment plant. This works out to 100,000 \$/house. With geniuses making these kinds of decisions, it is no wonder that our Hawaii is in such an economic disaster. The C&C could afford to pump everybody's cesspool once a month at approximately 100 \$/pumping and invest the balance and be far ahead. This analysis excludes the burden imposed on homeowners who now must pay for hook up and a monthly fee from now on.

If there was a health or environmental problem this expenditure may be warranted. But the fact is, according to UH oceanographer researcher Dr. Law, the water quality in this area is "excellent". Being involved in the construction industry and a current employee of Fletcher Pacific (we built the pump station that is suppose to service this line), I know that a substantial amount of damage will be done to the Bay just building this line, in spite of any agencies efforts to prevent damage.

Why is this disaster even being considered?

Thanks,

Andrew Zimmerman

Andrew R. Zimmerman  
44-3138 Kaneohe Bay Drive  
Kaneohe, Oahu, Hawaii 96744

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Zimmerman:

Thank you for your letter dated April 11, 1999 regarding the subject project. We have the following responses to your comments:

*Your comment:* This project is a huge waste of money. The City and County will end up spending 6 million dollars on this project (approximately 3 million has already been spent on the pump station) so that 60 some-odd houses can have their sewage routed to an already over-utilized sewer treatment plant. This works out to 100,000 \$/house. With geniuses making these kinds of decisions, it is no wonder that our Hawaii is in such an economic disaster. The C&C could afford to pump everybody's cesspool once a month at approximately 100 \$/pumping and invest the balance and be far ahead. This analysis excludes the burden imposed on homeowners who now must pay for hook up and a monthly fee from now on.

If there was a health or environmental problem this expenditure may be warranted. But the fact is, according to UH oceanographer researcher Dr. Law, the water quality in this area is "excellent." Being involved in the construction industry and a current employee of Fletcher Pacific, ... I know that a substantial amount of damage will be done to the Bay just building this line, in spite of any agencies efforts to prevent damage.

Why is this disaster even being considered?

*Our response:* Your letter has been incorporated into the Final Environmental Assessment (EA) for the project. Your concerns on the economics of the project are addressed in the Final EA. The Final EA includes a discussion on economic considerations of the project and states that the impacts of the project may be a financial burden for residents. Mitigative measures are also discussed in the EA under economic considerations.

The EA also includes a discussion on construction impacts to Kaneohe Bay and associated mitigative measures.

Andrew R. Zimmerman  
September 20, 1999  
Page 2

One of the main reasons the project is being considered is to meet State wastewater management goals that allow individual wastewater systems (such as septic tanks) only in remote areas and in areas of low density and that do not allow wastewater systems depositing untreated sewage into the environment after the year 2000. The project is also being considered to meet the objectives of the Kaneohe Bay Master Plan, the Hawaii State Plan, and the General Plan of the City and County of Honolulu. The EA discusses the objectives of these plans and how the project meets these objectives.

Thank you again for your comments. As stated previously, your letter will be included in the Final EA.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

**APPENDIX D**

**COMMENTS RECEIVED ON THE DRAFT EA  
AND RESPONSES**

The following agencies, organizations, and individuals commented on the Draft EA. Comments received and responses to those comments are contained in this appendix.

**CITY AND COUNTY OF HONOLULU AGENCIES**

Department of Planning and Permitting  
Honolulu Fire Department  
Honolulu Police Department

**STATE OF HAWAII AGENCIES**

Department of Accounting and General Services  
Department of Business, Economic Development and Tourism:  
    Land Use Commission  
    Office of Planning  
Department of Health:  
    One letter from Clean Water Branch and Noise, Radiation and Indoor Air  
    Quality Branch  
    Clean Air Branch  
    Office of Environmental Quality Control  
Department of Land and Natural Resources:  
    Historic Preservation Division  
Department of Transportation  
Office of Hawaiian Affairs

**FEDERAL AGENCIES**

Department of the Army:  
    U.S. Army Engineer District, Honolulu  
Department of the Interior:  
    U.S. Geological Survey  
    U.S. Fish and Wildlife Service

**UTILITIES**

GTE Hawaiian Telephone Company, Inc.  
Hawaiian Electric Company, Inc.

**OTHER ORGANIZATIONS**

American Lung Association of Hawaii

DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU

450 SOUTH KING STREET • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 522-4418 • FAX: (808) 522-4743



PERMITTING  
SECTION

JAN NAOE SULLIVAN  
DIRECTOR

LORETTA A.C. CHIEE  
ASST. DIRECTOR

1999/CLOG-3611(DT)

July 7, 1999

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Draft Environmental Assessment (EA)  
Kanchoe Bay Sowers Improvement District

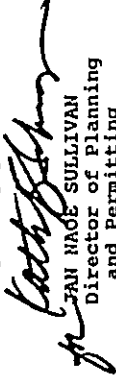
We have reviewed the above-referenced EA and have the following comments:

1. Appendix C of the above EA contains comments from various government agencies and the public. However, your responses were omitted and should be included in this section.
2. A traffic control plan during construction should be prepared and approved by our Traffic Review Branch, prior to applying for a street usage permit. The traffic control plan should be prepared in accordance with the approved construction plans.
3. As mentioned in our memo to the Department of Design and Construction dated January 28, 1999, a certified shoreline survey does not have to be submitted with your Shoreline Setback Variance (SV) application. The State Department of Land and Natural Resources would not certify the shoreline survey due to encroachments consisting of private structures located on State-owned lands. We understand the City has little control over such property.
4. We can begin processing your SV application when your Final EA is published in The Environmental Notice.
5. Our Wastewater Branch has no comments to offer at this time.

Ms. Janice C. Marsters  
Page 2  
July 7, 1999

Should you have any questions regarding this letter, please call Dana Teramoto of our staff at 523-4648.

Very truly yours,

  
JAN NAOE SULLIVAN  
Director of Planning  
and Permitting

JHS:am

POSS doc no. 5493



M F A

MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEO-TECHNICAL • HYDROLOGICAL CONSULTANTS

99-1207 Hahaione Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 494-3556 • Fax 808 494-0007

September 20, 1999

Department of Planning and Permitting  
650 South King Street  
Honolulu, Oahu, Hawaii 96813

Attention: Ms. Jan Naos Sullivan  
Director of Planning and Permitting

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Sullivan:

Thank you for your letter dated July 7, 1999, providing comments on the Draft Environmental Assessment (EA). We have the following responses to those comments:

1. *Your comment:* Appendix C of the above EA contains comments from various government agencies and the public. However, your responses were omitted and should be included in this section.

*Our response:* Appendix C contained comments from "preconsultation letters" which we sent out to potential interested parties. Responses to the letters, as well as responses to letters received from reviewers of the Draft EA, are included in the Final EA.

2. *Your comment:* A traffic control plan during construction should be prepared and approved by our Traffic Review Branch, prior to applying for a street usage permit. The traffic control plan should be prepared in accordance with the approved construction plans.

*Our response:* A traffic control plan has been prepared in conjunction with the construction plans for review and approval by the Traffic Review Branch. This reference will be included in Section 5.4.6 of the Final EA.

3. *Your comment:* As mentioned in our memo to the Department of Design and Construction dated January 28, 1999, a certified shoreline survey does not have to be submitted with your Shoreline Setback Variance (SV) application. The State Department of Land and Natural Resources would not certify the shoreline survey due to encroachments consisting of private structures located on State-owned lands. We understand the City has little control over such property.

M F A

MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEO-TECHNICAL • HYDROLOGICAL CONSULTANTS

Department of Planning and Permitting  
September 20, 1999  
Page 2

4. We can begin processing your SV application when your Final EA is published in The Environmental Notice.

*Our response:* The SV application will be submitted without the certified shoreline application.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

FIRE DEPARTMENT  
CITY AND COUNTY OF HONOLULU  
3375 KOAPAKA STREET, SUITE 425  
HONOLULU, HAWAII 96819-1869



JOHN CLARK  
DEPUTY FIRE CHIEF

ATILIO K. LEONARDI  
FIRE CHIEF

June 3, 1999

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halaawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii  
HFD Internal No. OL 99-120

We received your memorandum dated May 28, 1999, regarding the subject project's Draft Environmental Assessment. We do not foresee any significant environmental impact, however, the traffic plan for this project should be coordinated by the Department of Transportation Services.

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

Sincerely,

ATTILIO K. LEONARDI  
Fire Chief

AKL/CW:bh

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halaawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-5566 • Fax 808 484-0007

September 20, 1999

Honolulu Fire Department  
3375 Koapaka Street  
Suite H425  
Honolulu, Oahu, Hawaii 96819-1869

Attention: Mr. Attilio K. Leonard  
Fire Chief

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Leonard:

Thank you for your letter, dated June 3, 1999, providing comment on the Draft Environmental Assessment (EA). We have the following response to your comment:

*Your comment:* We do not foresee any significant environmental impact, however, the traffic plan for this project should be coordinated by the Department of Transportation Services.

*Our response:* A traffic control plan has been prepared, in conjunction with the construction plans, for review and approval by the Department of Planning and Permitting, Traffic Review Branch. This reference will be included in Section 5.4.6 of the Final EA.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU  
801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111  
<http://www.honolulu.gov>



JEREMY HARRIS  
MAYOR

LEE D. DONOHUE  
CHIEF  
WILLIAM B. CLARA  
MICHAEL CARVALHO  
DEPUTY CHIEFS

OUR REFERENCE CS-DL

July 2, 1999

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, 302  
Aiea, Hawaii 96701-3281


Dear Ms. Marsters:

Thank you for your letter of May 28, 1999, concerning the Draft Environmental Assessment for Kaneohe Bay Sewers Improvement District at Kaneohe, Koolauloko.

Our response will remain the same as stated in our letter of April 16, 1999. In spite of mitigation measures, we anticipate an impact on services provided by this department due to fugitive dust, construction noise, and traffic problems. However, once the project is completed, there should be no further impact on police services.

If there are any questions, please call me at 529-3255 or Lieutenant John Thompson of District 4 at 235-7621.

Sincerely,  
LEE D. DONOHUE  
Chief of Police

By   
EUGENE DEMURA  
Assistant Chief  
Support Services Bureau

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

LAND SURVEYING • GEOTECHNICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 494-5566 • Fax 808 494-0007

September 20, 1999

Honolulu Police Department  
801 South Beretania Street  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. Lee D. Donohue  
Chief of Police

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Donohue:

Thank you for your letter, dated July 2, 1999, providing comment on the Draft Environmental Assessment (EA). We have the following response to your comment:

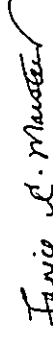
**Your comment:** During the time that the connection to the main city sewer line is being done, we would anticipate an impact on services provided by this department. In spite of mitigation measures, complaints relative to fugitive dust, construction noise, and traffic problems are to be expected, thereby increasing calls for police service to the area.

**Our response:** Potential impacts due to fugitive dust and noise are addressed in Section 5.2.1 (Air Quality and Noise Levels) of the EA. Potential impacts due to the traffic problems are addressed in Section 5.4.6 (Infrastructure). Mitigation measures are also discussed in this section. The contractor will be responsible for the implementation of controls which will mitigate these potential problems.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

  
Janice C. Marsters  
Principal

**M F A**  
**MASA FUJIOKA & ASSOCIATES**  
A PROFESSIONAL PARTNERSHIP  
ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-5566 • Fax 808 484-0007



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810

September 30, 1999

LETTER NO. (P) 1418-9

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Department of Accounting and General Services  
PO Box 119  
Honolulu, Oahu, Hawaii 96810

Attention: Mr. Gordon Matsuoka  
Public Works Administrator

Subject: Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Marsters:

Subject: Draft Environmental Assessment (EA) for  
Proposed Installation of New Sewer Line  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Matsuoka:

Thank you for the opportunity to review the subject Draft EA,  
which we received with your May 28, 1999, letter.

The proposed project does not affect any of our existing or  
proposed facilities. Therefore, we have no comments to offer.

In the future, when actions described by Environmental  
Assessments, Environmental Impact Statement Preparation Notices,  
Environmental Impact Statements, Plan Review Use, etc., do not  
impact on specific State plans or facilities, we, for work  
reasons, will NOT provide a "no comments" or a "good planning  
principles" type of response. But, since we are still interested  
in knowing what is going on planning-wise in our State, we would  
still appreciate the opportunity to review all such documents.

Should you have any questions, please contact Mr. Ronald Ching of  
our Planning Branch at 586-0490.

Sincerely,

GORDON MATSUOKA  
Public Works Administrator

RC/ET:mo  
c: OEQC

Thank you for your letter, dated June 14, 1999, providing comments on the  
Draft Environmental Assessment (EA). Your letter will be incorporated into the  
Final EA.

We understand that the proposed project does not affect any of your existing  
or proposed facilities, and that you have no comments at this time. We also note  
that you are interested in all State planning-related activities, and we will continue  
to offer such documents for your review.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal

BOULANGER J. CATTELANO  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
LAND USE COMMISSION  
P.O. Box 2359  
Honolulu, HI 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

June 7, 1999

Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Draft Environmental Assessment (DEA) Proposed  
Installation of New Sewer Line, Kaneohe Bay Sewers  
Improvement District, Kaneohe, Oahu, Hawaii

We have reviewed the DEA for the subject project and have no additional comments to add to our previous comments dated April 12, 1999, except to reiterate our suggestion that a map showing the location of the proposed sewer lines in relation to the State Land Use Districts be provided.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject DEA.

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

Sincerely,

Esther Ueda  
Executive Officer

EU:aa

cc: C&C Honolulu Dept. of Design & Construction  
OEQC

ESTHER UEDA  
EXECUTIVE OFFICER

M F A  
MASA FUJIOKA & ASSOCIATES  
PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • ARCHITECTURAL • INTERIOR DESIGN • CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808-484-5366 • Fax 808-484-0007

September 20, 1999

Department of Business, Economic Development and Tourism  
Land Use Commission  
235 South Beretania Street  
Honolulu, Oahu, Hawaii 96813

Attention: Ms. Esther Ueda  
Executive Officer

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Ueda:

Thank you for your letter, dated June 7, 1999, regarding the Draft Environmental Assessment (EA). We have the following response to your comment:

Your comment: We suggest that the draft environmental assessment include a map showing the location of the proposed sewer lines in relation to the State Land Use Districts.

Our response: The State Land Use Map is presented as Figure 3.5 of the Final EA.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

**OFFICE OF PLANNING**

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Ref. No. P-8143

June 23, 1999

Ms. Janice C. Marsters  
Masa Fujiooka and Associates  
99-1205 Halaawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

**SUBJECT:** Draft Environmental Assessment for Proposed Installation of New Sewer Line,  
Kaneohe Bay Sewers Improvement District, Kaneohe, Oahu.

We do not have any concerns regarding the proposed activity's compliance with the objectives and policies of the Coastal Zone Management (CZM) Program. We understand that the proposed sewage improvements should address potential pollution problems associated with septic tanks and cesspools presently used in the area.

If there are any questions or concerns, please contact Doug Tom of our CZM Program at 587-2875.

Sincerely,

*Mary Ann Kaniyoshi for*

David W. Blane  
Director  
Office of Planning

**M F A** **MASA FUJIOKA & ASSOCIATES**  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • ARCHITECTURAL • INTERIOR DESIGN • LANDSCAPE ARCHITECTURE  
99-1205 Halaawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-3556 • Fax 808 484-0007

September 20, 1999

Department of Business, Economic Development and Tourism  
Office of Planning  
PO Box 2359

Honolulu, Hawaii 96804  
235 South Beretania Street, 6th Floor  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. David W. Blane  
Public Works Administrator

Subject: Draft Environmental Association  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Blane:

Thank you for your letter, dated June 23, 1999, providing comments on the Draft Environmental Assessment (EA). Your letter will be incorporated into the Final EA.

We understand that you do not have any concerns regarding the proposed activity's compliance with the objectives and policies of the Coastal Zone Management (CZM) Program, and that you understand that the proposed sewage improvements should address potential pollution problems associated with septic tanks and cesspools presently used in the area. We note that you have no further comments at this time.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal



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

June 25, 1999

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

BY MAIL, 2ND CLASS PERMIT NO. 124  
FBI

99-112/epo

Ms. Janice C. Marsters  
June 25, 1999  
Page 2  
99-112/epo

- c. The contractor must comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d)(4).

Should there be any questions on this matter, please call Mr. Jerry Haruno, Environmental Health Program Manager, Noise, Radiation and Indoor Air Quality Branch at 586-4701.

Water Pollution

A National Pollutant Discharge Elimination System (NPDES) general permit is required for the following discharges to waters of the State:

- a. Construction dewatering activities; and
- b. Hydrotesting water.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department's Clean Water Branch at least 30 days prior to commencement of any discharge to waters of the State.

Any questions regarding these comments should be directed to Mr. Denis Lau, Branch Chief, Clean Water Branch at 586-4309.

Sincerely,

*Gary Gill*

GARY GILL  
Deputy Director for  
Environmental Health

c: MR&IAQB  
CWB

Ms. Janice C. Marsters, Principal  
Nasa Fujiooka & Associates  
99-1205 Halawa Valley Street, Suite 301  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Draft Environmental Assessment (DEA)  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu  
THK: 4-4-7 & 21

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

Noise Concerns

In the last sentence on page 5-1 of the DEA, there is an incorrect reference to various Public Health Regulations in Title 11, Department of Health Chapters 42, 43, 44A and 44B. Chapters 43, 44A, and 44B were all repealed. They are now referred to as Hawaii Administrative Rules, Title 11, Chapters 11-42, "Vehicular Noise Control for Oahu" and 11-46, "Community Noise Control."

Activities associated with the construction of the project must comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."

- a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the maximum permissible sound levels of the regulations as stated in Section 11-46-6(a).
- b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b)(1)(A).

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOCHEMICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Hialeah Valley Street, Suite 302 • Aiea, Hawaii 96701-3291  
Phone 808 484-5566 • Fax 808 484-0007

September 20, 1999

Department of Health  
Deputy Director  
P.O. Box 3378  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. Gary Gill  
Deputy Director

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Gill:

Thank you for your letter, dated June 25, 1999, providing comments on the Draft Environmental Assessment (EA). We have the following response to your comments:

1. Your comment : Noise Concerns -

In the last sentence on page 5-1 of the DEA, there is an incorrect reference to various Public Health Regulations in Title 11, Department of Health Chapters 42, 43, 44A and 44B. Chapters 43, 44A, and 44B were all repealed. They are now referred to as Hawaii Administrative Rules, Title 11, Chapters 11-42, "Vehicular Noise Control for Oahu" and 11-46, "Community Noise Control."

Activities associated with the construction phase of the project must comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."

- a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the rules as stated in Section 11-46-6(a).
- b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b) (1)(A).
- c. The contractor must comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d) (4).

*Our response:* The information on noise control has been added to Section 5.2.1 (Air Quality and Noise Levels) of the EA. The reference to Chapters 43, 44A, and

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Department of Health  
Deputy Director  
September 20, 1999  
Page 2

44B are removed from the EA text. References to Chapters 11-42 and 11-46 have been added.

2. Your comment : Water Pollution -  
A National Pollutant Discharge Elimination System (NPDES) general permit is required for the following discharges to waters of the State:

- a. Construction dewatering activities; and
- b. Hydrotesting water.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department's Clean Water Branch at least 30 days prior to commencement of any discharge to waters of the State.

*Our response:* Section 5.2.4 of the Final EA discusses the NPDES requirement for this project. As stated in Section 5.2.4, an individual NPDES permit application has been prepared for the discharge of construction dewatering effluent. It is our understanding that an individual permit, rather than a general permit, is needed since the receiving water, Kaneohe Bay, is Class AA Marine Waters.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal



BERNARD J. CARTELLANO  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
PO BOX 3078  
HONOLULU, HAWAII 96801

BRUCE S. JOHNSON, Ph.D., M.D., M.P.H.  
DIRECTOR OF HEALTH

IN REPLY, PLEASE REFER TO  
LHD-1-CAB

May 11, 1999

99-213 CAB

Ms. Janice C. Marsters  
Principal  
Masa Fujioka and Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

**SUBJECT:** Comments on the "Proposed Installation of New Sewer Line, Kaneohe Bay Sewers Improvement District Project, Kaneohe, Oahu"

Masa Fujioka and Associates is working with the City and County of Honolulu, Department of Design and Construction, on the design of the proposed Kaneohe Bay Sewers Improvement Project. The project would expand the City sewer system to include 69 properties currently utilizing private, individual wastewater disposal systems.

**Control of Fugitive Dust:**

The proposed project would involve the installation by the conventional open trenching technique of approximately 4,500 feet of 6 and 8-inch gravity sewer lines at depths ranging from 5 to 20 feet deep. It is assumed that the new sewer line installation would include excavation and backfill for the entire length of the pipeline. As a result, there is a significant potential for fugitive dust to be generated during all phases of construction for this project. The close proximity to existing residential establishments may exacerbate dust problems. Therefore, implementation of adequate dust control measures during all phases of the project is warranted. Construction activities must comply with provisions of Chapter §11-60.1, Hawaii Administrative Rules, section §11-60.1-33 on Fugitive Dust.

Contractor should provide adequate means to control dust from road areas and during the various phases of construction activities, including but not limited to:

- a. planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing material transfer points and onsite vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;

Ms. Janice C. Marsters  
May 11, 1999  
Page 2

- b. providing an adequate water source at site prior to start-up of construction activities;
- c. control of dust from shoulders, project entrances, and access roads; and
- d. providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.

If you have any questions regarding fugitive dust, please contact Mr. Timothy Carvalho at 586-4200.

Sincerely,

*Wilfred K. Nagamine*  
WILFRED K. NAGAMINE  
Manager, Clean Air Branch

TC:jim

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (#P 371 446 167)

M F A

MASA FUJIOKA & ASSOCIATES  
PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Hilltop Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 464-5366 • Fax 808 464-0007

September 20, 1999

Department of Health  
Clean Air Branch  
919 Ala Moana Boulevard Room 203  
Honolulu, Oahu, Hawaii 96814

Attention: Mr. Wilfred K. Nagamine  
Manager

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Nagamine:

Thank you for your letter, dated May 11, 1999, providing comments on the Draft Environmental Assessment (EA). We have the following response to your comments:

*Your comments:* It's assumed that the new sewer line installation would include excavation and backfill for the entire length of the pipeline. As a result, there is a significant potential for fugitive dust to be generated during all phases of construction for this project. The close proximity to existing residential establishments may exacerbate dust problems. Therefore, implementation of adequate dust control measures during all phases of the project is warranted. Construction activities must comply with provision of Chapter § 11-60.1, Hawaii Administrative Rules, section § 11-60.1-33 on Fugitive Dust.

Contractor should provide adequate means to control dust from road areas and during the various phases of construction activities, including but not limited to:

- a. planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing material transfer points and onsite vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. providing an adequate water source at site prior to start-up of construction activities;
- c. control of dust from shoulders, project entrances, and access roads; and
- d. providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.

M F A

MASA FUJIOKA & ASSOCIATES  
PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROLOGICAL CONSULTANTS

Department of Health  
September 20, 1999  
Page 2

*Our response:* The suggested dust control measures have been added to Section 5.2.1 (Air Quality and Noise Levels) of the Final EA.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

M F A  
MASA FUJIOKA & ASSOCIATES  
ARCHITECTURAL PARTNERSHIP

ENVIRONMENTAL • ARCHITECTURAL • HISTORIC-PRESERVATION CONSULTANTS  
99-1205 Halaqa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808-484-5566 • Fax 808-484-0007

September 20, 1999

Office of Environmental Quality Control  
235 South Beretania Street Suite 702  
Honolulu, Oahu, Hawaii 96813

Attention: Ms. Genevieve Salmonson  
Director

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Salmonson:

Thank you for your letter, dated July 8, 1999, providing comments on the Draft Environmental Assessment (EA). We have the following response to your comments:

1. Your comment: Capacity of Sewage Treatment Plant. Please discuss what additional developments are planned in the general area and whether they have been constructed. Also discuss the growth-inducing impacts of the proposed project and the ability of the current sewage treatment plant to accommodate current and future capacity.

Our response: The limited area of the ID project is quite well developed, with only a few parcels that could be additionally developed. The City has stated that the Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PIF) or the Kailua Regional Wastewater Treatment Plant (WWTP). The ID project is part of the original service area these facilities were designed to accommodate. It is not anticipated that the sewer line will result in increased development and population in the project area. The Final EA will discuss capacity issues at the Kaneohe PTF and the Kailua Regional WWTP.

2. Your comment: Wind Patterns and Air Quality Impacts. Please provide a wind rose showing the distribution of wind currents in the general area of the sewage treatment plant servicing this improvement district. Discuss the direct, indirect and cumulative effects of any increased capacity identified in item 1 above.

Our response: A wind rose will be added as Figure 3.1 of the Final EA. In addition, Section 5.2.1 of the Final EA, entitled Air Quality and Noise Levels, will be expanded to discuss the direct, indirect, and cumulative effects of current and future capacity at the sewage treatment plant.



STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

338 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE 808-536-4188  
FACSIMILE 808-536-4189

July 8, 1999

Ms. Tina Ono  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 2nd Floor  
Honolulu, Hawaii 96813

Dear Ms. Ono:

We have reviewed the draft environmental assessment entitled "Kaneohe Bay Sewers Improvement District at Kaneohe, Koolaula, Oahu, TMS: 4-4-7 & 21" and submit the following comments for your response.

1. Capacity of Sewage Treatment Plant: Please discuss what additional developments are planned in the general area and whether they have been constructed. Also discuss the growth-inducing impacts of the proposed project and the ability of the current sewage treatment plant to accommodate current and future capacity.
2. Wind Patterns and Air Quality Impacts: Please provide a wind rose showing the distribution of wind currents in the general area of the sewage treatment plant servicing this improvement district. Discuss the direct, indirect and cumulative effects of any increased capacity identified in item 1 above.

If you have any questions, please call Leslie Segundo at 586-4185.

Sincerely,

GENEVIEVE SALMONSON  
Director

c → Janice Masters, Masa Fujioka and Associates

Office of Environmental Quality Control  
September 20, 1999  
Page 2

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

BENJAMIN J. CAYetano  
GOVERNOR OF HAWAII



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

DEPUTY  
JANE E. DAVIS

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
Kaula Center Building, Room 555  
300 South Beretani Street  
Honolulu, Hawaii 96817

ADJUTANT GENERAL  
BOATING AND OCEAN RECREATION  
CONSERVATION AND RESOURCES  
INFORMATION  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND  
LAND USE  
WATER RESOURCE MANAGEMENT

July 2, 1999

Janice C. Marsters, Principal  
Masa Fukijoka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

LOG NO: 23728 ✓  
DOC NO: 5906EJ18

Dear Ms. Marsters:

**SUBJECT:** Chapter 6E-8 Historic Preservation Review - Department of Design and Construction, City and County of Honolulu Draft Environmental Assessment (DEA) for Kaneohe Bay Sewers Improvement District Kane'ohē, Ko'olaupoko  
TMK: 4-4-7 & 21

Thank you for the opportunity to review the DEA for this project. The City and County proposes to provide sewer service to the Malae area of Kaneohe Bay which includes 69 properties currently utilizing private wastewater disposal systems. The project involves the installation of approximately 4,500 feet of 6-inch and 8-inch gravity sewer lines at depths ranging from 5 to 25 feet deep using the conventional method of trench excavation to each of the 69 properties.

Section 3.4.5 of the DEA summarizes the archaeological assessment conducted for this project (Appendix A) and states that no surface archaeological sites were noted at these parcels.

However, the possibility of subsurface archaeological sites does exist. Subsurface habitations or human burials could be present based on settlement patterns in such settings. Also, fishpond deposits could exist. The archaeological assessment provides brief historic information on the Kane'ohē Bay region and provides a listing of numerous fishponds within Kaneohe Bay. However, the report fails to note that two fishponds, Panahaha 1 & 2, were known to exist in the project area and are likely to be present under fill soils within this subdivision. A map from our office's GIS inventory is enclosed and shows the approximate locations of Panahaha 1 & 2 as taken from historic maps of Kane'ohē Bay. These fishponds are significant for the information on Hawaiian history and prehistory that they are likely to yield. The depth of fill soils covering these fishponds is not known but if the depth of the proposed improvements exceeds the depth of the fill, it is likely that excavation of the sewerline trenches could impact these fishpond sites.

Janice C. Marsters, Principal  
Page Two

Given the above information, we would recommend archaeological monitoring if proposed sewerline excavations go below the depth of the fill above these fishponds. The intent of this monitoring would be to gather sufficient information on these deposits to mitigate impacts. If excavations are above the fill over the fishponds, then monitoring would not be needed. Please check the depth of the fill in this area, evaluate whether the sewerline work will go below the fill, and then advise our office. We can then finalize a determination for this project.

If burials or habitation deposits (firepits, pavings, etc.) are encountered during construction, then work would need to halt in the immediate vicinity and our office be called. We would then assess the significance of the find and work out appropriate mitigation measures.

If you have any questions please call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

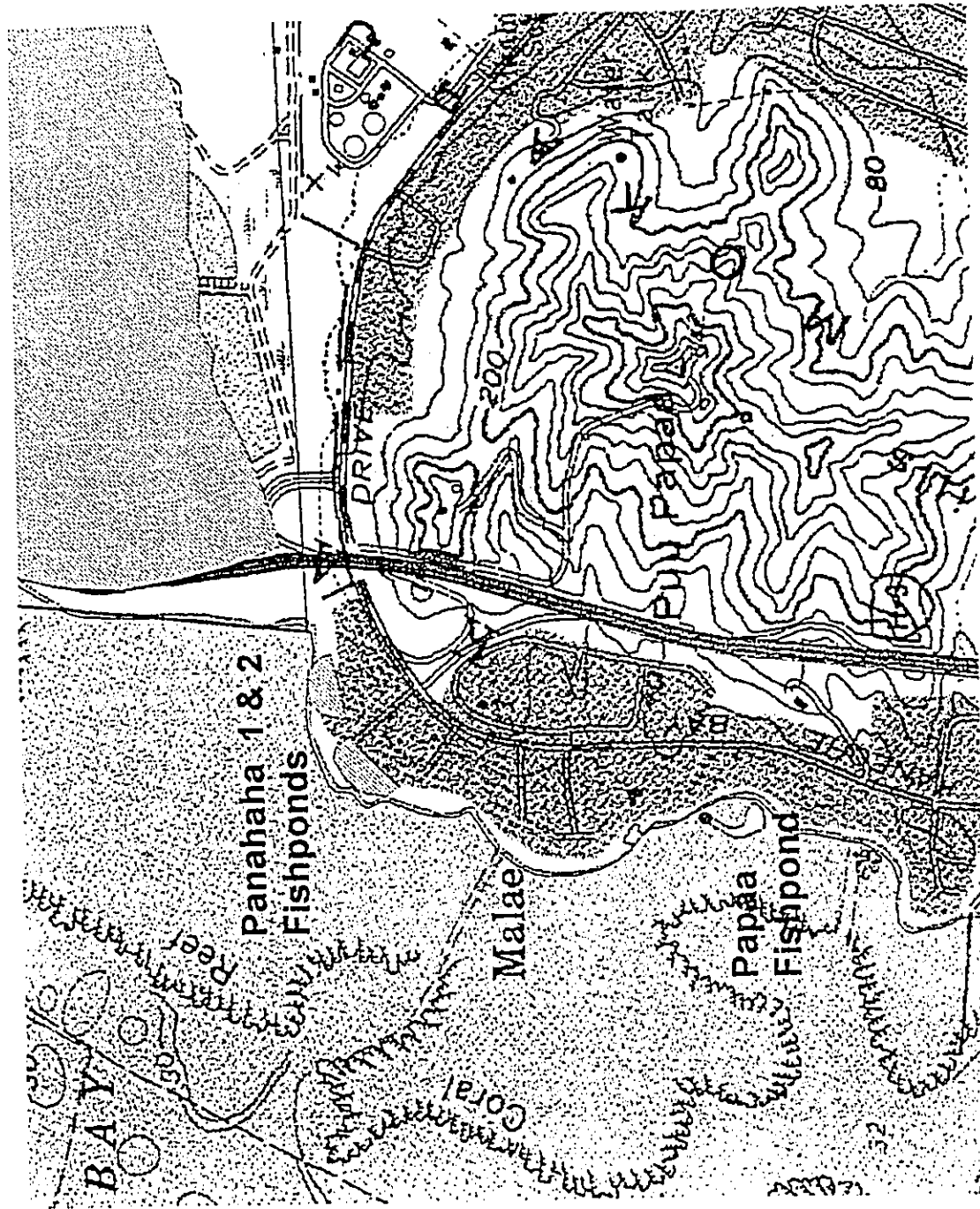
Aloha,

Don Hibbard, Administrator  
State Historic Preservation Division

EJ:jk

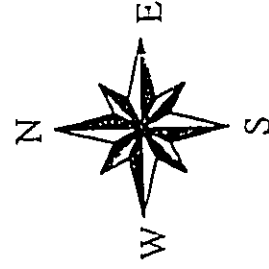
enclosure: GIS map

# Kane`ohe Bay Sewers Improvement Project



Location of Historic  
Sites within the Proposed  
New Sewer Line,  
Kane`ohe Bay Sewers  
Improvement District  
  
Panahaha Fishponds  
Papaa Fishpond

based on SHPD GIS Inventory  
June 1999



M F A

MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROGEOLOGICAL CONSULTANTS  
99-1205 Halaqa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 464-5366 • Fax 808 491-0007

September 20, 1999

Department of Land and Natural Resources  
Historic Preservation Division  
Kakuhiheva Building Room 555  
601 Kamokila Boulevard  
Kapolei, Oahu, Hawaii 96707

Attention: Mr. Don Hibbard  
Administrator

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Hibbard:

Thank you for your letter, dated July 2, 1999, providing comments on the Draft Environmental Assessment (EA). We have the following response to your comments:

*Your comments:* Section 3.4.5 of the DEA summarized the archaeological assessment conducted for this project (Appendix A) and states that no surface archaeological sites were noted at these parcels.

However, the possibility of subsurface archaeological sites does exist. Subsurface habitations or human burials could be present based on settlement patterns in such settings. Also, fishpond deposits could exist. The archaeological assessment provides brief historic information on the Kaneohe Bay region and provides a listing of numerous fishponds with Kaneohe Bay. However, the report fails to note that two fishponds, Panahaha 1 & 2, were known to exist in the project area and are likely to be present under fill soils within this subdivision ... The depth of fill soils covering these fishponds is not known but if the depth of the proposed improvements exceeds the depth of the fill, it is likely that excavation of the sewerline trenches could impact these fishpond sites.

We would recommend archaeological monitoring if proposed sewerline excavations go below the depth of the fill above these fishponds. The intent of this monitoring would be to gather sufficient information on these deposits to mitigate impacts. If excavations are above the fill over the fishponds, then monitoring would not be needed. Please check the depth of the fill in this area, evaluate whether the sewerline work will go below the fill, and then advise our office.

M F A

MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOLOGICAL • HYDROGEOLOGICAL CONSULTANTS

Department of Land and Natural Resources  
Historic Preservation Division  
September 20, 1999  
Page 2

*Our response:* The archeological report and Final EA will address the two fishponds, Panahaha 1 & 2, and will assess the need for archaeological monitoring on the basis of the depth of excavation.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

BEKUHANA J. CAYETANO  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

JUN 17 1999

KAZU HAYASHIDA  
DIRECTOR  
DEPUTY DIRECTORS  
BRUNN K. USUKAI  
GLENN M. OKIMOTO

IF REPLY REFER TO:  
HWY-PS  
2-4225

M F A  
MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL CONSULTANTS  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-1281  
Phone 808-464-5566 • Fax 808-484-0007

September 20, 1999

Department of Transportation  
869 Punchbowl Street  
Honolulu, Oahu, Hawaii 96813-5097

Attention: Kazu Hayashida, Director of Transportation  
Glenn M. Okimoto, Deputy Director

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Hayashida and Mr. Okimoto:

Thank you for your letter, dated June 17, 1999 (re. HWY-PS 2-4225), providing comment on the Draft Environmental Assessment (EA). We understand that you do not anticipate any impact to the segment of Kaneohe Bay Drive that is under the jurisdiction of the State Highways Division, and we note that a permit is required for any work within the State highway right-of-way.

We understand that you have no further comments at this time. Your letter will be incorporated into the Final EA.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Draft Environmental Assessment for Kaneohe Bay Sewers  
Improvement District at Kaneohe, Koolauopoko, Oahu  
TMK: 4-4-7 and 21

Thank you for the opportunity to review the subject document.

We have the following comments:

1. We do not anticipate any impact to the segment of Kaneohe Bay Drive that is under the jurisdiction of the State Highways Division.
2. A permit is required for any work within the State highway right-of-way.

Very truly yours,

*Kazu Hayashida*

KAZU HAYASHIDA  
Director of Transportation



PHONE (808) 594-1888



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

FAX (808) 594-1865

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
A Professional Partnership  
July 7, 1999  
Page two

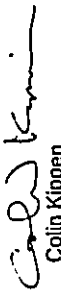
July 7, 1999

Ms. Janice C. Marsters, Principal  
Masa Fujioka & Associates  
A Professional Partnership  
99-1205 Halawa Valley St., Suite 302  
Aiea, HI 96701-3281

EIS#316

If you have any questions, please contact Mark A. Mararagan, Policy Analyst-  
Government Regulations at 594-1945.

Sincerely,

  
Colin Kippen  
Deputy Administrator

  
C. Sebastian Aloot  
Hawaiian Rights Division Director

Re: Proposed Installation of New Sewer Line  
Kane'ohe Bay Sewers Improvement District  
Kaneohe, O'ahu, Hawaii

cc: OHA Board of Trustees

Dear Ms. Marsters,

Thank you for the opportunity to review the Draft EA for the proposed installation of new sewer lines in Kaneohe Bay, O'ahu, Hawaii. As indicated in the Draft EA, the City & County of Honolulu, Department of Design and Construction proposes to provide sewer service to the Malae area of Kane'ohe Bay.

According to the Draft EA, there are no historical or pre-historical archaeological structures, and there has been intensive land altering residential sub-division modification, within the project area. There is, however, according to the Draft EA, the possibility that cultural layers or deposits, or that human burials exist within the original soil matrix.

The Draft EA states that there should be a qualified archaeologist monitoring sub-surface excavations at least in the initial phases of the project. We agree, however, we caution that the State Historic Preservation Division (SHPD) should be contacted if any human burials, artifacts, or other cultural remains or deposits are encountered within the project area.

M F A MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • ARCHITECTURAL • INTERIOR DESIGN • LANDSCAPE ARCHITECTURE  
99-1209 Halaiva Valley Street, Suite 302 • Aiea, Hawaii 96701-3291  
Phone 808 464-5566 • Fax 808 434-0007

September 30, 1999

Office of Hawaiian Affairs  
711 Kapi'olani Boulevard Suite 500  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. Colin Kippen      Mr. C. Sebastian Aloit  
Deputy Administrator      Hawaiian Rights Division Director

Subject: *Draft Environmental Assessment*  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Kippen and Mr. Aloit:

Thank you for your letter, dated July 7, 1999, providing comment on the Draft Environmental Assessment (EA). We have the following response to your comment:

*Your comment:* The Draft EA states that there should be a qualified archaeologist monitoring subsurface excavations at least in the initial phases of the project. We agree; however, we caution that the State Historic Preservation Division (SHPD) should be contacted if any human burials, artifacts, or other cultural remains or deposits are encountered within the project area.

*Our response:* The State Historic Preservation Division (SHPD) will be contacted if any human burials, artifacts, or other cultural remains or deposits are encountered within the project area.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal



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

SENT TO  
ATTENTION OF

June 4, 1999

Regulatory Branch

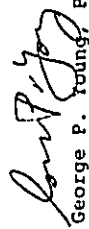
Ms. Janice C. Marsters  
Masa Fujioka & Associates  
99-1205 Halawa Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

This letter responds to your request for comments on the draft Environmental Assessment (EA) for the Kaneohe Bay Sewers Improvement District, dated May, 1999. Based on the information provided in the EA and a site visit by a member of my staff I have determined that a Department of the Army permit will not be required for this project.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-9258, extension 13, and reference File No. 990000259.

Sincerely,

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

M F A MASA FUJIOKA & ASSOCIATES  
A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROLOGICAL • LAND USE PLANNING  
99-1205 Halawa Valley Street, Suite 302 • Aiea, Hawaii 96701-3281  
Phone 808 484-5366 • Fax 808 484-0007

September 20, 1999

Department of the Army  
U.S. Army Engineer District, Honolulu  
Fort Shafter, Oahu, Hawaii 96858-5440

Attention: Mr. George P. Young  
Chief, Regulatory Branch

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii


Dear Mr. Young:

Thank you for your letter, dated June 4, 1999 (re. File No. 990000259), providing comment on the Draft Environmental Assessment (EA). We understand that you have determined that a Department of the Army permit will not be required for this project, and that you have no further comment. Your letter will be incorporated into the Final EA.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

  
Janice C. Marsters  
Principal



United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
WATER RESOURCES DIVISION  
677 Ala Moana Boulevard, Suite 415  
Honolulu, Hawaii 96813

June 8, 1999

Ms. Janice C. Marsters  
Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Dear Ms. Marsters:

Subject: Proposed Installation of New Sewer Line, Kaneohe Bay Sewers Improvement District,  
Kaneohe, Oahu, Hawaii

The staff of the U.S. Geological Survey, Water Resources Division, Hawaii District Office, has reviewed the subject Draft Environmental Assessment and we have no comments to offer at this time.

Thank you for allowing us the opportunity to review and comment on this document. We are returning it for your future use.

Sincerely,

*William Meyer*

William Meyer  
District Chief

Enclosure

M F A  
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Phone 808 484-5366 • Fax 808 484-0007

September 20, 1999

United States Department of the Interior  
U.S. Geological Survey, Water Resources Division  
677 Ala Moana Boulevard, Suite 415  
Honolulu, Oahu, Hawaii 96813

Attention: Mr. William Meyer  
District Chief

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Meyer:

Thank you for your letter, dated June 8, 1999, providing comment on the Draft Environmental Assessment (E.A.). We understand that your staff has reviewed the subject Draft Environmental Assessment and that you have no comments to offer at this time.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal

**M F A**  
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 99-1205 Hales Road, Suite 302 • Aiea, Hawaii 96701-3181  
 Phone 808-484-5366 • Fax 808-484-0007

September 20, 1999

United States Department of the Interior  
 U.S. Fish and Wildlife Service, Ecological Services  
 300 Ala Moana Boulevard, Room 3-122  
 Honolulu, Oahu, Hawaii 96813

Attention: Mr. John Schmerfeld  
 Biologist

Subject: Draft Environmental Assessment  
 Kaneohe Bay Sewers Improvement District  
 Kaneohe, Oahu, Hawaii

Dear Mr. Schmerfeld:

Thank you for your telephone call, dated June 8, 1999, providing comment on the Draft Environmental Assessment (EA). We understand that you received the subject Draft Environmental Assessment, that you have no objection, and that you will not be forwarding a comment letter.

Thank you again for your telephone call.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
 A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
 Principal

Record of Discussion Job KANEHOE BAY SEWERS Date JUNE 8, 1999  
 By MARIE Owner/Client CITY & COUNTY OF HONOLULU

With JOHN SCHMERFELD Phone 541-3441  
 Business U.S. FISH & WILDLIFE SERVICE Fax \_\_\_\_\_  
 Title \_\_\_\_\_ e-mail \_\_\_\_\_

Nature of call: Incoming  Outgoing   
 Distribution: Information: FILE Action: \_\_\_\_\_

MAIN SUBJECT DRAFT EA

JOHN RECEIVED THE DRAFT EA. HE HAS NO OBJECTION.  
HE WILL NOT BE FORWARDING A COMMENT LETTER

MASA FUJIOKA AND ASSOCIATES

**GTE** Hawaiian Tel

*Beyond the call*

GTE Hawaiian Telephone Company Incorporated  
P.O. Box 2200, Honolulu, HI 96841 • (808) 538-4511

M F A

**MASA FUJIOKA & ASSOCIATES**

AN ENVIRONMENTAL PROFESSIONAL PARTNERSHIP  
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Phone 808 484-5566 • Fax 808 484-0007

September 20, 1999

GTE Hawaiian Tel  
P.O. Box 2200  
Honolulu, Oahu, Hawaii 96841

Attention: Mr. Harlan Hashimoto  
Environmental Affairs

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

June 18, 1999

Ms. Janice Marsters, Principal  
Masa Fujioka and Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, HI 96701-3281

Dear Ms. Marsters,

I have reviewed the "Proposed Installation of New Sewer Line, Kaneohe Bay Sewers Improvement District (TMK: 4-4-7 & 21)" draft environmental assessment.

Section 5.4.6 Infrastructure, discusses the temporary relocation of some utility systems during the construction activity. Please contact our telephone cable permit group at 483-8085 to identify existing underground lines in the vicinity. This will minimize accidental damage to our extensive network.

I appreciate the opportunity to communicate my concern.

Very truly yours,



Harlan Hashimoto  
Environmental Affairs  
(546-2562)

Dear Mr. Hashimoto:

Thank you for your letter, dated June 18, 1999, providing comment on the Draft Environmental Assessment (EA). We have the following response to your comment:

*Your comment:* Section 5.4.6 Infrastructure, discusses the temporary relocation of some utility systems during the construction activity. Please contact our telephone cable permit group ... to identify existing underground lines in the vicinity. This will minimize accidental damage to our extensive network.

*Our response:* The telephone cable permit group will be contacted to identify existing underground lines prior to construction activity.

Thank you again for your comment.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership



Janice C. Marsters  
Principal

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



Scott W.H. Seu, P.E.  
Manager  
Environmental Department

June 21, 1999

Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, Hawaii 96701-3281

Attention: Ms. Janice Marsters

Subject: Kaneohe Bay Sewer Improvements

Thank you for the opportunity to comment on your May 1999 DEA for the Kaneohe Bay Sewer Improvements, as proposed by the Department of Design & Construction, City and County of Honolulu. We have reviewed the subject document and have no comments at this time.

HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this DEA.

Sincerely,

cc: OEQC



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Phone 808 484-5366 • Fax 808 484-0007

September 20, 1999

Hawaiian Electric Company, Inc.  
P.O. Box 2750  
Honolulu, Oahu, Hawaii 96840-0001

Attention: Mr. Scott W. H. Seu, P.E.  
Environmental Department

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Mr. Seu:

Thank you for your letter, dated June 21, 1999, providing comment on the Draft Environmental Assessment (EA). We understand that you have reviewed the subject document and have no comments at this time, and that you shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized.

Thank you again for your letter.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

Janice C. Marsters  
Principal



10 June, 1999

Janice C. Marsters, Principal  
Masa Fujioka & Associates  
99-1205 Halawa Valley Street, Suite 302  
Aiea, HI 96701-3281

RE: Draft Environmental Assessment (DEA) for Proposed Installation of New Sewer Line, Kaneohe Bay Sewers Improvement District, MIFA Project No. 97115-001

Dear Ms. Marsters:

We thank you for the opportunity to review the DEA for the proposed installation of new sewer line along Kaneohe Bay in the Maialae area. We have the following comments concerning the DEA:

1. It seems a bit disingenuous to state in Section 2.2, Project Background, that the "Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PTF) or the Kailua Regional Wastewater Treatment Plant (WWTP)." While the Maialae area may indeed lie within the district boundaries, it will add in-flow to facilities that seem to already be beyond capacity (judging by the number of sewage spills). The DEA should address the issue of capacity at both the Kaneohe PTF and the Kailua Regional WWTP. We note that respondents to the first request for comments brought up this point and yet the issue remains unexplained in the DEA.
2. In section 3.2.3, Air Quality and Noise Levels, the following quote may be found, "The only significant generator of air pollutants and noise in the area is the neighboring Kaneohe Marine Corps Air Station (KMicas)." The Lung Association is sure the residents of the area would cite the Kailua Regional WWTP as a much greater source of air quality and noise problems. The air quality problems of the Kailua Regional WWTP should be addressed in the DEA because the project will directly impact that facility.  
In other words, the air quality impact is a "cumulative" impact. Therefore, we recommend amending section 5.2.1, Air Quality and Noise Levels, to include a discussion of how the increased load from the project will impact the Kailua Regional WWTP (and thus, air quality at the plant). This discussion should include an evaluation of sewage spills from the Kailua Regional WWTP related to cause (e.g., storm event of "x" inches of rain) and the impact of the increased load from the project (e.g., if a storm event of "x" inches of rain occurs, the Kailua Regional WWTP will now be "y" gallons over capacity resulting in an estimated raw sewage spill of "z" gallons). Since these spills also impact air quality, we suggest including this discussion in this section and referencing it in section 5.3.3, Kaneohe Bay. The same sort of analysis needs to be made for the Kaneohe PTF.
3. In section 3.4.1, Population, is the following quote, "If [the project] is not anticipated to result in increased development and population in the project area." While quoted above this, in section 3.3.3, Kaneohe Bay, the Hawaii Administrative Rules, Title 11, Chapter 62, regarding individual wastewater systems, "... [such systems] will not be allowed after the year 2000." This area of Maialae is zoned R-10 (Section 3.4.2,

When You Can't  
breathe,  
nothing Else  
matters®

Founded in 1904, the American Lung Association includes affiliated associations throughout the U.S., and a medical section, the American Bronchitis Society.

Letter: J. Marsters  
RE: DEA for Kaneohe Bay SID  
Date: 10 June, 1999  
Page: 2 of 2

Existing Land Use), and a number of the parcels are undeveloped, some just recently subdivided for sale. So, if individual wastewater systems will not be allowed after the year 2000, and the only means of sewage disposal is this new sewer line, then the construction of the sewer line will indeed result in increased development and population in the project area.

4. In section 5.2.1, Air Quality and Noise Levels, only the construction air quality impacts are addressed, not the cumulative air impacts of the entire project. Once it is finished, this project has many more potential ramifications on air quality than the construction-related impacts discussed in this section. Also the potential air impacts of closing the individual wastewater systems are not addressed. Since the closure of these systems is mandated if the project goes through, a discussion of the potential hazardous atmospheres (both biological and chemical) should appear in this section.
5. Is this system only a sanitary sewer or is it also expected to handle rainwater run-off? If it is expected to handle run-off, then when over-flows occur, will they occur within the neighborhood where the line is installed, at the (new) pump station, at the Kaneohe Pretreatment facility and/or at the Kailua Regional WWTP?
6. Another of the "significant criteria" under HAR § 11-200-12 is if a project involves "a commitment for larger actions." While we note other references in the comments to this criteria, we would like to add that the additional load to the Kailua Regional WWTP is one step towards a need to expand this facility (or otherwise deal with the over-capacity). The current on-going failure of the Kailua Regional WWTP to meet loading requirements needs to be addressed, since the project is going to exacerbate the problems of this facility.
7. In section 7.0, Determination, the long-term impacts of the project are not discussed. The most important of which, from the Association's perspective, are those impacting current facilities such as the Kaneohe PTF and the Kailua Regional WWTP.

Should you have any questions about issues addressed herein, please feel free to contact me at ALAH, on Mondays or Wednesdays, at 808 537-5966, extension 307.

Respectfully,

Alison M. Beale  
Environmental Toxicologist,  
Director of Environmental Health

cc: Les Segundo, Environmental Health Specialist, OEOC, 235 S. Beretania Street, Rm 702



September 20, 1999

American Lung Association of Hawaii  
245 North Kukui Street Suite 100  
Honolulu, Oahu, Hawaii 96817

Attention: Ms. Allison M. Beale

Subject: Draft Environmental Assessment  
Kaneohe Bay Sewers Improvement District  
Kaneohe, Oahu, Hawaii

Dear Ms. Beale:

Thank you for your letter, dated June 10, 1999, providing comment on the Draft Environmental Assessment (EA). We have the following responses to your comments:

1. *Your comment:* It seems a bit disingenuous to state in Section 2.2, Project Background, that the "Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PTF) or the Kailua Regional Wastewater Treatment Plant (WWTP)." While the Malae area may indeed lie within the district boundaries, it will add in-flow to facilities that seem to already be beyond capacity (judging by the number of sewage spills). The DEA should address the issue of capacity at both the Kaneohe PTF and the Kailua Regional WWTP. We note that respondents to the first request for comments brought up this point and yet the issue remains unexplained in the DEA.

*Our response:* The City has stated that the Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PTF) or the Kailua Regional Wastewater Treatment Plant (WWTP). The ID project is part of the original service area these facilities were designed to accommodate. It is our understanding that the capacity issues at these facilities are the result of inflow during heavy rainfall events, caused by breaches in the existing system. These capacity issues are being addressed by the City through rehabilitation of existing systems. The Final EA will discuss capacity issues at the Kaneohe PTF and the Kailua Regional WWTP.

2. *Your comment:* In section 3.2.3, Air Quality and Noise Levels, the following quote may be found, "The only significant generator of air pollutants and noise in the area is the neighboring Kaneohe Marine Corps Air Station (KMCAS)." The Lung Association is sure the residents of the area would cite the Kailua Regional WWTP as a much greater source of air quality and noise problems. The air quality problems of the Kailua Regional WWTP should be addressed in the DEA because the project will directly impact that facility.

American Lung Association of Hawaii  
September 20, 1999  
Page 2

In other words, the air quality impact is a "cumulative" impact. Therefore, we recommend amending Section 5.2.1, Air Quality and Noise Levels, to include a discussion of how the increased load from the project will impact the Kailua Regional WWTP... This discussion should include an evaluation of sewage spills from the Kailua Regional WWTP related to cause ... and the impact of the increased load from the project ... Since these spills also impact air quality, we suggest including this discussion in this section and referencing it in Section 5.3.3, Kaneohe Bay. The same sort of analysis needs to be made for the Kaneohe PTF.

*Our response:* The addition of 69 households to the system is highly unlikely to result in a significant increase in flows to the system and, therefore, is unlikely to impact air quality. The City addresses complaints about WWTP air quality as a separate issue. However, Section 5.2.1 of the Final EA will be revised to include a discussion of air quality problems at the Kailua Regional WWTP.

3. *Your comment:* In Section 3.4.1, Population, is the following quote, "it [the project] is not anticipated to result in increased development and population in the project area" ... If individual wastewater systems will not be allowed after the year 2000, and the only means of sewage disposal is this new sewer line, then the construction of the sewer line will indeed result in increased development and population in the project area.

*Our response:* The limited area of the ID project is quite well developed, with only a few parcels that could be additionally developed. The ID project is part of the original service area these facilities were designed to accommodate. It is not anticipated that the sewer line will result in increased development and population in the project area.

4. *Your comment:* In Section 5.2.1, Air Quality and Noise Levels, only the construction air quality impacts are addressed, not the cumulative air impacts of the entire project. Once it is finished, this project has many more potential ramifications on air quality than the construction-related impacts discussed in this section. Also the potential air impacts of closing the individual wastewater systems are not addressed. Since the closure of these systems is mandated if the project goes through, a discussion of the potential hazardous atmospheres (both biological and chemical) should appear in this section.

*Our response:* The project is not anticipated to have significant cumulative air impacts. Section 5.2.1 will be amended to address the potential air impacts of closing the individual wastewater systems.

5. *Your comment:* Is this system only a sanitary sewer or is it also expected to handle rainwater run-off? If it is expected to handle run-off, then when over-flows occur, will they occur within the neighborhood where the line is installed, at the

American Lung Association of Hawaii  
September 20, 1999  
Page 3

(new) pump station, at the Kaneohe Pretreatment facility and/or at the Kailua Regional WWTP?

*Our response:* The system is only a sanitary sewer.

6. *Your comment:* ...we would like to add that the additional load to the Kailua Regional WWTP is one step towards a need to expand this facility (or otherwise deal with the over-capacity). The current on-going failure of the Kailua Regional WWTP to meet loading requirements needs to be addressed, since the project is going to exacerbate the problems of this facility.

*Our response:* The City has stated that the Kaneohe Bay Sewers ID does not expand the service area of the existing wastewater facilities at the Kaneohe Pretreatment Facility (PIF) or the Kailua Regional Wastewater Treatment Plant (WWTP). The ID project is part of the original service area these facilities were designed to accommodate. It is our understanding that the capacity issues at these facilities are the result of inflow during heavy rainfall events, caused by breaches in the existing system. These capacity issues are being addressed by the City through rehabilitation of existing systems.

7. *Your comment:* In Section 7.0, Determination, the long-term impacts of the project are not discussed. The most important of which, from the Association's perspective, are those impacting current facilities such as the Kaneohe PTF and the Kailua Regional WWTP.

*Our response:* Long-term impacts were discussed in the last two paragraphs of Section 7.0. We have added a discussion to Section 7.0 indicating that the Kaneohe PTF and the Kailua Regional WWTP were designed to accommodate the ID project and that no long-term impacts on the current facilities are anticipated.

Thank you again for your comments.

Very truly yours,

MASA FUJIOKA AND ASSOCIATES  
A Professional Partnership

*Janice C. Marsters*

Janice C. Marsters  
Principal