rec'd Mar 27 2001

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

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WWDE.P 01-122

March 14, 2001

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

Dear Ms. Salmonson:

Subject: Kuliouou Wastewater Pump Station Modification & Force Main Replacement
TMK: 3-08-04: 003, Honolulu, Oahu, Hawaii
Notice of Determination – Finding of No Significant Impact (FONSI)

The City and County of Honolulu (City), Department of Design and Construction (DDC) has reviewed and responded to comments related to the Draft Environmental Assessment (EA) for the subject project received during the 30-day public comment period that ended on December 8, 2000. The City DDC has determined that this project will not have a significant environmental effect, and has issued a Finding of No Significant Impact (FONSI) for this project. Please publish this notice for this project in the April 8, 2001 issue of the OEQC *The Environmental Notice*.

We have enclosed the following items for your use in this publication notice:

1. One copy of the OEQC Publication Form with project summary (project summary emailed to your office and hardcopy enclosed); and
2. Four (4) copies of the Final Environmental Assessment;

The following information is provided which supports our department's FONSI determination.

Identification Of Proposing Agency

City and County of Honolulu, Department of Design and Construction

Identification Of Accepting Authority

City and County of Honolulu, Department of Design and Construction

Brief Description Of Proposed Action

The City Department of Design and Construction is proposing the Kuliouou Wastewater Pump Station Modification And Force Main Replacement Project. This project involves the rehabilitation and improvement of the City's existing Kuliouou wastewater collection system (WWCS) along with improvements to the Kuliouou Wastewater Pump Station (WWPS). This municipal wastewater system presently services the Kuliouou community area.

The purpose of the project is to implement rehabilitation and other necessary improvements to the Kuliouou WWPS and WWCS to reduce the potential for future wastewater spills due to excessive amounts of inflow and rainfall infiltration from heavy rainfall.

The project will include implementing sewer rehabilitation improvements to the Kuliouou WWCS utilizing cured-in-place pipe, and constructing modifications to the Kuliouou WWPS. These sewer rehabilitation efforts will aim to reduce infiltration and inflow that enter the Kuliouou WWCS. Modifications to the Kuliouou WWPS are necessary to improve the emergency generator system and to correct inadequacies with the mechanical, electrical and ventilation systems in accordance with current City and State standards.

Upon completion of these improvements, flow monitoring would be performed to determine its effectiveness. If the system still shows excessive infiltration and inflows, or downstream constriction continues, an underground storage tank adjacent to the Kuliouou WWPS for the temporary storage of excess flows would be constructed.

Determination

A Finding of No Significant Impact (FONSI) determination is warranted for the Kuliouou Wastewater Pump Station Modification And Collection System Rehabilitation Project. It is determined that the improvements planned under this project do not have a significant impact on the surrounding environment.

Reasons Supporting Determination

The reasons supporting this determination are based upon the 13 Significance Criteria listed under Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules.

1. The project would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. The improvements are intended to improve the wastewater pump station and rehabilitate the existing wastewater collection system to prevent future wastewater spills from heavy rains or severe storms. Such improvements would occur on already urbanized areas which include existing roadways and the City's Kuliouou WWPS property. Thus, there would be no

destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources. In terms of archaeological and historic resources, a monitoring plan will be prepared and coordinated with State Historic Preservation Division (SHPD). Consequently, the SHPD has determined that the project would have no adverse effect on significant historic sites.

2. The project would not curtail the range of beneficial uses of the surrounding environment. The wastewater pump station project site has been used by the City for many years along with the collection system within existing roadways. Therefore, the improvements planned would not change the existing uses of such lands and easements within roadways.

3. The improvements would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. The Final EA addressed the probable environmental impacts associated with the project which would be primarily associated with short-term construction activities.

4. The project would not have any significant negative impacts on the economic structure of the East Honolulu district or the social welfare of the Kuliouou community. There are no known cultural resources at the Kuliouou WWPS site nor traditional native Hawaiian cultural practices occurring within the project area since the WWCS is located within roadway right-of-ways. Consequently, improvements are not expected to have an impact on cultural resources or traditional cultural practices.

5. The project is not expected to substantially affect public health since it would involve improvements to the City's existing Kuliouou WWPS and WWCS. The improvements would improve public health by minimizing future potential wastewater spills into Kuapa Pond due to heavy rains and severe storms.

6. The project should not have any secondary impacts on the social environment or infrastructure and public facilities. The project strictly involves improvements to the existing wastewater collection system and pump station.

7. The improvements to the Kuliouou wastewater system would not involve a substantial degradation to the quality of the surrounding environment. Improvements to the system would be limited to existing sewer lines within roadways and the pump station property. The project is intended to improve the environmental quality of Kuapa Pond and surrounding shoreline areas by minimizing future wastewater spills from surcharging events on the Kuliouou wastewater system.

8. The project is not individually limited and cumulatively would not have considerable effects upon the environment or involves a commitment for larger actions. This project only involves improvements to the wastewater pump station and rehabilitation of existing sewer lines. Cumulative impacts were considered in assessing environmental impacts, and it was determined that the project would not have a significant effect on the environment.

9. There are no known endangered, threatened, or rare botanical resources on the wastewater pump station property, or faunal and avifaunal species inhabiting the area which may be affected by construction activities or the operation of the wastewater system. Necessary control measures and best management practices would be implemented to minimize runoff and other potential short-term impacts associated with construction activity.

10. The project should not have a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities.

11. The Kuliouou WWPS site is not located within an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area or geologically hazardous area. Consequently, this property would not be affected by such hazards or impact such environmentally sensitive areas. This sewer line is located underground and would not suffer damage from such natural hazards.

12. The proposed improvements would not affect scenic vistas or viewplanes. The wastewater pump station property is owned by the City and public access is restricted to City personnel. Existing sewer lines are located underground, thus, they would not impact scenic views.

13. The project would not require substantial energy consumption or increased electrical facilities to serve the pump station. Improvements are relatively minor and can be serviced using existing electrical distribution facilities and power generating sources.

Should you have any questions, please contact Mr. Sung Ho Lai of our Wastewater Design and Engineering Division at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Director

2001-04-08-OA-FEA-

FINAL ENVIRONMENTAL ASSESSMENT

FOR

KULIOUOU WASTEWATER PUMP STATION MODIFICATION AND FORCE MAIN REPLACEMENT PROJECT

T.M.K. 3-08-004: 003
Honolulu, Hawaii

March 2001

Department of Design and Construction
City and County of Honolulu

FINAL ENVIRONMENTAL ASSESSMENT

FOR

KULIOUOU WASTEWATER PUMP STATION MODIFICATION AND FORCE MAIN REPLACEMENT PROJECT

T.M.K. 3-08-004: 003
Honolulu, Hawaii

March 2001

Proposing Agency:
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

This environmental document was prepared pursuant to Chapter, 343 Hawaii Revised Statutes.

Responsible Official: _____ Date: 3/14/01

Rae M. Loui, P.E., Director
Department of Design and Construction, City and County of Honolulu

Prepared By:

SSFM INTERNATIONAL

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LISTING OF TABLES

LISTING OF APPENDICES

CHAPTER 1
INTRODUCTION

1.1 PURPOSE FOR ENVIRONMENTAL ASSESSMENT

The City and County of Honolulu (City), Department of Design and Construction (DDC) is proposing the Kuliouou Wastewater Pump Station Modification And Force Main Replacement Project[1]. This project involves the proposed rehabilitation and improvement of the existing Kuliouou wastewater collection system along with improvements to the Kuliouou Wastewater Pump Station (Kuliouou WWPS). This municipal wastewater system presently services the Kuliouou community area. The purpose for this project is to minimize the potential for wastewater spills at the Kuliouou WWPS force main discharge sewer manhole (SMH "0") situated on Kawaihae Street.

This project is situated in the Kuliouou community located in the East Honolulu district of the island of Oahu. Figure 1 in Appendix A shows the project's location and general vicinity. The City owns, operates, and maintains the Kuliouou Valley Wastewater Collection System (WWCS) which serves residences in the surrounding Kuliouou Valley area. This Kuliouou WWCS includes the gravity fed sewer lines, Kuliouou WWPS, and force main.

A Draft Environmental Assessment (Draft EA) was initially prepared to address the probable impacts on the surrounding environment resulting from the proposed improvements associated with the existing Kuliouou WWPS and WWCS. This Draft EA was prepared in conformance to the regulatory and documentation requirements prescribed under Chapter 343, Environmental Impact Statements, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules.

The Draft EA was then published in the November 8, 2000 issue of *The Environmental Notice*. Subsequently, this Final Environmental Assessment (Final EA) was prepared after public review of the Draft EA during the 30-day comment period. A Finding of No Significant Impact (FONSI) is consequently being issued for this project. A summary of pertinent project related information is provided on Table 1.1.

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[1] The contract title of this project is the "Kuliouou Wastewater Pump Station Modification And Force Main Replacement." Although the force main replacement portion has been replaced with a collection system rehabilitation improvement, the name for this project has not been modified to maintain consistency throughout all documents.

Table 1.1 Summary Information

Project Name:	Kuliouou Wastewater Pump Station Modification And Force Main Replacement Project
Applicant:	Department of Design and Construction City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813 Contact: Mr. Sung Ho Lai, Project Manager
Agency's Consultant:	SSFM International, Inc. 501 Sumner Street, Suite 502 Honolulu, Hawaii 96817 Contact: Mr. Ronald A. Sato, AICP
Accepting Agency:	Department of Design and Construction, City and County of Honolulu
Project Description:	Implement rehabilitation improvements to the Kuliouou WWCS and make improvements to the Kuliouou WWPS. After these improvements are completed, conduct a flow monitoring program to monitor the effectiveness of improvements in reducing infiltration and inflow into the City's system. If further improvements are necessary to reduce flows, an underground storage tank would be constructed at the Kuliouou WWPS property.
Project Location:	This project is situated in the Kuliouou community located in the East Honolulu district of the island of Oahu.
Existing Use:	The City owns, operates, and maintains the Kuliouou Valley Wastewater Collection System which serves residences in the surrounding Kuliouou Valley area.
Land Ownership:	City and County of Honolulu
Tax Map Key:	3-08-04: 003
Land Area:	The Kuliouou WWPS lot is 10,842 square feet.
State Land Use:	Urban
County Zoning:	R-10 Residential (Kuliouou WWPS property)
SMA District:	The Kuliouou WWPS is not located within the SMA area. Rehabilitation of Kuliouou WWCS is not considered "development" under SMA regulations.

1.2 PROJECT BACKGROUND

The Kuliouou WWCS gravity sewer system is generally comprised of a network of sewer laterals, mains, trunk lines, and wastewater pump stations that serve the Kuliouou Valley residential area. This wastewater system network contains approximately 6.6 miles of vitrified clay and reinforced concrete pipe ranging in size from 6 to 18 inches in diameter.

The Kuliouou WWPS project site is situated along May Way which is located just mauka (north) of Kalanianaole Highway. This property is identified by Tax Map Key 3-08-04: 03. Photographs of this property is provided in Appendix C of this document.

1.3 LAND USE CLASSIFICATIONS AND DESIGNATIONS

1.3.1 State Land Use Districts

Under Chapter 205, HRS, all lands in the State of Hawaii are classified into four major land use districts (State Land Use Districts) which are the Urban, Rural, Agricultural, and Conservation districts. The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps. On Oahu, most lands are designated as either Urban, Agricultural, or Conservation districts. For each land use district classification, there are defined uses or activities permitted which are described under §205-2, HRS, and regulated by the State Land Use Commission (LUC).

The Kuliouou WWPS site and surrounding residential areas are classified as "Urban" on the State's Land Use District Boundary Map for the Hawaii Kai region (O-15, Koko Head). Figure 2 in Appendix A shows the project area in relation to the State's land use district boundaries. Urban Districts permit activities or uses as provided by ordinances or regulations of the county within which the Urban District is situated. Thus, Urban District lands on the island of Oahu are regulated by the ordinances and regulations of the City and County of Honolulu.

1.3.2 City Development Plans

The island of Oahu is divided in eight planning areas for which each planning area has a Development Plan.. These Development Plans consisted of conceptual schemes for implementing the development objectives and policies of the City's *General Plan.* Together with this *General Plan*, these Plans were intended to guide public improvements and zoning.

The City is currently undergoing a revision program for these Development Plans to implement a 1992 Charter Amendment. These revised Plans are to be visionary and conceptual

plans without the parcel specific detail. Presently six of the eight DP areas have been adopted with the Primary Urban Center and Central Oahu DP areas remaining. Six of these updated Plans have been renamed "Sustainable Communities Plans" to highlight the intent that these areas not intended to be heavily developed, but that existing communities and special qualities of the area be sustained and improved.

The proposed project site in the Kuliouou area subsequently falls under the East Honolulu Sustainable Communities Plan. The Kuliouou WWPS site and surrounding residential areas are identified as "Residential and Low Density Apartment" under the Plan's "Urban Land Use" Map. The "Public Facilities" Map of this Sustainable Communities Plan does not identify the existing Kuliouou WWPS site nor does it identify any other wastewater pump stations in the area. A discussion of the project's consistency with this Plan's applicable policies and objectives is provided later in this document.

1.3.3 City Zoning Districts

All lands within the City and County of Honolulu are categorized, or zoned, into specific districts. These districts and uses permitted within them are described under the City's *Land Use Ordinance*, and are shown on zoning maps. The purpose of the *Land Use Ordinance* is to regulate land use in a manner which encourages orderly development in accordance with adopted land use policies, and to protect and promote public health, safety, and welfare. This *Land Use Ordinance* is a very detailed document which addresses a wide range of development and design standards, permitted uses, administration, and procedures for zone changes or other approvals.

The Kuliouou WWPS property is zoned R-10, Residential (Figure 10) along with the majority of surrounding residential areas. Shoreline areas situated makai (south) of the project site are zoned P-2, General Preservation. Kuliouou Ridge extends from the Koolau mountain range seaward (south) up to an area about 300 feet mauka of the WWPS site. This ridge is part of the Kuliouou Forest Reserve, and is zoned P-1, Restricted Preservation. Paiko Lagoon is a wildlife sanctuary located approximately 600 feet southwest of the Kuliouou WWPS situated between Paiko Peninsula and the shoreline.

1.3.4 Special Management Area

Under Chapter 205A (Coastal Zone Management) of the Hawaii Revised Statutes (HRS), the City is given authorization to regulate land uses located within the established Special Management Area (SMA) for the island of Oahu. Review of the City's SMA map for the

Kuliouou WWPS site and immediate surrounding area determined that the City's SMA boundary extends from the shoreline up to the centerline of Kalanianaole Highway.

Since the Kuliouou WWPS site located along May Way is mauka of Kalanianaole Highway, this property is outside of the SMA boundary. As a result, the WWPS improvements are not subject to regulatory procedures, permit requirements, and review under the City's SMA regulations described in Chapter 25 of the Revised Ordinances of Honolulu.

A portion of the existing Kuliouou WWCS lines is within the SMA boundary serving residences located makai (south) of Kalanianaole Highway. Under Chapter 25, Special Management Area, of the Revised Ordinances of Honolulu, the rehabilitation improvements planned for the sewer lines are not considered a "development" under these regulations. As a result, this rehabilitation of sewer lines is not subject to permit requirements under these SMA regulations.

CHAPTER 2
PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND VICINITY

The Kuliouou WWPS site and wastewater collection system are located on the southeastern end of the island of Oahu in the Kuliouou community. This community is situated on the southwesterly flanks of the Koolau Range which forms the eastern end of the island of Oahu, and thus makes up part of the area commonly referred to as "East Honolulu." This East Honolulu planning area includes the area from Ainakoa Ridge eastward to Makapuu Head, and has a firmly established suburban character essentially consisting of a string of residential communities along Kalanianaole Highway clustered within valleys and ridge tops (Figure 1).

The Kuliouou community is a residential subdivision generally extending from the shoreline area inland into the upper Kuliouou valley. Figure 3 in Appendix A shows the project's location in greater detail. Kalanianaole Highway is a State owned highway facility generally routed along the coastline which serves as the primary access road to Kuliouou along with the entire East Honolulu area. Paiko Lagoon is a wildlife sanctuary located makai (south) of Kalanianaole Highway in the general vicinity of Kuliouou. This lagoon connects with Maunalua Bay which is a large bay generally extending from Niu Valley eastward towards Portlock.

The Kuliouou Valley residential community is situated just before the entrance into the area known as Hawaii Kai which is a master-planned community encompassing a large portion of the City's East Honolulu Development Plan area. This Hawaii Kai region generally includes the area east of Kuliouou up to Makapuu Head. Kuapa Pond is a private marina extending from the shoreline inland into much of Hawaii Kai.

Property Ownership

The Kuliouou WWPS property consists of a rectangular-shaped parcel having an area of 10,842 square feet. This project site is situated along May Way approximately 200 feet mauka of Kalanianaole Highway as shown on Figure 1. The Kuliouou WWPS property is identified as Tax Map Key 3-08-004: 003. This property is owned by the City and County of Honolulu.

2.2 EXISTING WASTEWATER SYSTEM

Wastewater collection for the Kuliouou Valley residential community is serviced by the City's Kuliouou Valley wastewater system. This wastewater collection system consists of three main components: 1) a gravity sewer system, 2) the Kuliouou WWPS, and 3) a force main. This municipal system consists of a network of sewer laterals, mains, and trunk lines.

The sewer system consists of approximately 6.6 miles of vitrified clay and reinforced concrete pipe ranging in size from 6 to 18 inches in diameter which generally follow existing roadway alignments (refer to Figure 3). The Kuliouou WWPS is owned and maintained by the City Department of Environmental Services, and receives wastewater generated from within Kuliouou Valley along with a section south of Kalanianaole Highway for a total service area of approximately 263 acres (SSFM 1999).

Wastewater collected by the Kuliouou WWPS is discharged to the Hawaii Kai WWCS on Kawaihae Street as shown on Figure 3 (Appendix A) for treatment and disposal. This Hawaii Kai WWCS is privately owned and operated by the Hawaii American Water Company.

Kuliouou WWCS Relation With Hawaii Kai WWCS

The original developers of the Hawaii Kai community, Kaiser Hawaii Kai Development Company, had entered into a contractual agreement dated January 31, 1961 with the City and County of Honolulu to accept the flows from the Kuliouou WWPS. The contract document stated:

> *"that the flow of effluent from the sewers connected by the City from said Kuliouou Valley and Paiko Area with said sewerage system shall not exceed an average of 566,000 gallons per day. Kaiser shall design and construct its sewerage system in such manner so that it will have sufficient capacity, as determined by the Chief Engineer of the City, to meet the needs of the lands owned by Bishop and said adjacent lands as herein provided; this designing and construction shall be undertaken wholly at the expense of Kaiser."*

Flow monitoring data indicates that the Kuliouou WWPS discharges an annual average of approximately 400,000 gallons per day (gpd) or 0.40 million gallons per day (mgd) (SSFM 1999). Consequently, existing effluent flows from the City's Kuliouou wastewater system are in compliance with this agreement.

Kuliouou Wastewater Pump Station

The Kuliouou WWPS property is a rectangular-shaped parcel having an area of 10,842 square feet located along May Way. This site is relatively level with a ground elevation of approximately 6.0 feet above mean sea level (msl). Pumps and related mechanical equipment are housed in a reinforced concrete structure that is approximately 30 years old and in relatively good condition.

Wastewater enters the Kuliouou WWPS via an 18-inch diameter influent pipe to the entrance chamber then enters a divided wet well before being pumped from the station. The pump station contains two (2) Yeoman Brothers model 8M8S constant-speed centrifugal pumps, each with a rating of 1,736 gallons per minute (gpm) at 31 feet of total dynamic head (TDH). The entrance chamber and wet well have a combined operating volume of 3,651 gallons between the normal operating range of the pumps.

Flows are discharged from this Kuliouou WWPS via a 12-inch diameter cast iron force main approximately 462 feet in length to a discharge manhole located along Kawaihae Street. The discharge manhole is a reinforced concrete box manhole measuring six (6) feet by four (4) feet that connects the Kuliuouou WWPS force main to an 18-inch diameter gravity sewer line associated with the privately operated Hawaii Kai WWCS (SSFM 1999).

2.3 PROJECT NEED AND OBJECTIVES

During periods of heavy rainfall occurring within the Kuliouou and Hawaii Kai drainage basins, sections of the sewer lines serving the Kuliouou Valley and Hawaii Kai system upstream of Hawaii Kai wastewater pump station No. 2 areas experience excessive amounts of inflow and rainfall infiltration (I/I). The Hawaii Kai WWCS downstream of the Kuliouou WWPS discharge manhole (SMH "0") has inadequate capacity creating a constriction of the Hawaii Kai sewer system. Consequently, flows in the Hawaii Kai WWCS exceeds the pipe capacity, and wastewater levels rise above the pipe crown. This condition, which is known as "surcharging," leads to wastewater spills at the Kuliouou WWPS discharge manhole during heavy rainfall.

The three most recent spill events occurred on November 3, 1993, March 24, 1994 and November 16, 1996. During these events, wastewater flowed onto the street and into storm drains leading into Kuapa Pond. These wastewater spills were events that infringed upon the recreational use of Kuapa Pond, and resulted in violations of the Clean Water Act.

The City Department of Environmental Services has therefore determined that actions must be taken to minimize future potential wastewater spills. This has resulted in the WWPS improvements and rehabilitation of collection system lines proposed under this project. Rehabilitation of the Kuliouou WWCS will reduce the wet weather flow from Kuliouou Valley. However, this constriction will persist if the privately-owned and maintained Hawaii Kai WWCS is not improved by the Hawaii American Water Company.

2.3.1 Wastewater Collection System Deficiencies

A smoke testing report prepared by Barrett Consulting Group in January 1996 identified 248 deficiencies in the Kuliouou WWCS that may be susceptible to I/I. A total of 83 defects were discovered within the municipal right-of-way, and consisted mainly of improperly seated rain catchers and leaking manhole frames.

The majority of the identified defects (approximately 67%) were found within private property. The most common defects on private property included defective sewer laterals and deficient or missing sewer cleanout covers.

Deficiencies in the Kuliouou WWCS were also observed via closed-circuit television inspection. The video inspection covered sewer lines with diameters larger than eight (8) inches, and was conducted by Geltech Constructors, Inc. in October 1996. Sewer lines north of Kalanianaole Highway showed a few visible signs of infiltration including misaligned joints and longitudinal and radial cracks.

The WWCS south of Kalanianaole Highway was observed to be in worse condition with infiltration seeping in at many joints. Four (4) sagged areas having a combined length of approximately 260 feet were identified. Sagged sections that are severely deteriorated would have to be replaced while offset joints would be addressed using cured-in-place pipe during a sewer rehabilitation program implemented.

2.3.2 Project Objectives

The purpose of the City's proposed project is to implement rehabilitation and other necessary improvements to the Kuliouou WWPS and WWCS to reduce the potential for future wastewater spills due to excessive amounts of inflow and rainfall infiltration from heavy rainfall. Past storm events resulted in wastewater flowing onto the street and into storm drains leading into Kuapa Pond. These wastewater spills were events that resulted in violation of the Clean Water Act. Therefore, the objective of this proposed project is to minimize the potential for

these events happening in the future. This would improve the environmental quality, and the health and safety of surrounding areas.

Improvements are planned to be phased over time, and would involve the rehabilitation of collection system lines, modifications to the Kuliouou WWPS, conducting a flow monitoring program, and providing a new underground storage tank at the Kuliouou WWPS property if necessary. These improvements need to be implemented now, and cannot wait until future improvements to the Hawaii Kai WWCS. The City Department of Environmental Services has determined that actions must be taken to minimize future potential wastewater spills. Consequently, the first phase of the project is being proposed for implementation consisting of the rehabilitation of sewer lines and modifications to the wastewater pump station. More details of the phasing program are provided later.

2.4 DESCRIPTION OF PROJECT

The Kuliouou WWPS will continue to discharge flows to the Hawaii Kai WWCS even though the Hawaii Kai wastewater system has been shown to be inadequate to accommodate the flows associated with a 2-year, 6-hour design storm. Therefore, the project being proposed will include implementing sewer rehabilitation improvements to the Kuliouou Valley WWCS utilizing cured-in-place pipe (CIPP), and constructing modifications to the Kuliouou WWPS. The sewer rehabilitation efforts for the City's Kuliouou wastewater system will aim to reduce infiltration and inflow that enter the Kuliouou Valley WWCS, and subsequently minimize the potential for future wastewater spills at SMH "0".

Modifications to the Kuliouou WWPS are necessary to improve the emergency generator system and to correct inadequacies with the mechanical, electrical and ventilation systems in accordance with current City and State regulations. The modifications include replacement of the existing emergency generator with a diesel unit; installation of a new venturi flow meter and vault; construction of a new generator room; and replacement of the ventilation system.

Upon completion of this rehabilitation program and modifications to the Kuliouou WWPS, flow monitoring would be performed to determine the effectiveness of these improvements. Monitoring would be done via the Supervisory Control and Data Acquisition (SCADA) system within the pump station to monitor flows in and out of the pump station. If the flow monitoring program still shows excessive infiltration and inflows, or downstream constriction continues, an underground storage tank adjacent to the Kuliouou WWPS for the temporary storage of excess flows would be constructed.

Specifically, the storage tank would be constructed if: 1) flows out of the pump station exceeded 2.6 mgd for a 2-year, 6-hour storm event or less, and 2) the Hawaii Kai WWCS is not upgraded to allow for a 2.6 mgd peak. This storage tank will further reduce the potential for excessive wastewater flows by providing temporary storage and attenuating the peak flow out of the WWCS.

2.4.1 Sewer Rehabilitation Program

A sewer rehabilitation program will be implemented to reduce infiltration and inflow into the Kuliouou WWCS by improving the existing sewer mains, lower laterals, and manholes. It is estimated that wet weather infiltration and inflow could be reduced by approximately 45 percent from this rehabilitation effort if these results are similar to those achieved in a pilot program completed for Enchanted Lake. The sewer rehabilitation program will also translate to lower operating costs for the City. Rehabilitation improvements planned are discussed below. The improvements are divided into those for the lower Kuliouou WWCS (manholes and pipes with inverts below elevation +2 feet MSL) and for the upper Kuliouou WWCS (manholes and pipes with inverts above elevation +2 feet MSL).

Rehabilitation Of Lower Kuliouou WWCS

The sewer rehabilitation program planned would first utilize the existing SCADA system to obtain baseline data. The cleaning and video inspection of all sewer mains and laterals within the lower Kuliouou basin (manholes and pipes with inverts below elevation +2 feet MSL) would also be performed. Any sagged sections that are severely deteriorated would be replaced, and offset joints would be addressed using CIPP. These efforts would be implemented to minimize the amount of trenching for this rehabilitation work. Segments of sewer lines with poor structural integrity would be evaluated as to whether pipe replacement is necessary. Replacement of pipes would require trench excavation and backfilling.

The next step would utilize CIPP to line all of the sewer mains and lower laterals within the lower basin. Only the lower lateral (up to the property line) would be rehabilitated. Manholes will also be lined to further reduce infiltration. Installation of CIPP would require temporary bypass pumping of sewage while the lining is installed.

The inflow problem will be addressed by repairing or replacing defective sewer cleanout covers and improperly seated manhole rain catchers associated with the City's system. To address other sources of inflow such as yard drain connections, the City would consider

establishing an enforcement program to ensure that cleanout covers and manhole rain catchers within private property are properly maintained.

Rehabilitation Of Upper Kuliouou WWCS

The sewer rehabilitation program for the upper Kuliouou WWCS would similarly first incorporate flow monitoring, cleaning, and video inspection of all sewer mains and laterals within the upper Kuliouou basin (manholes and pipes with inverts above elevation +2 feet MSL). This rehabilitation program would focus on replacing damaged and cracked pipes, and repairing joint defects using chemical grouting.

Description Of Rehabilitation Improvements

The sewer rehabilitation effort consists of addressing inflow-related deficiencies identified in the Kuliouou Valley Smoke Testing Report. Rehabilitation improvements would involve reducing infiltration by repairing sagged lines and offset joints and installing CIPP liners into deficient pipes. Inflow sources are typically "surface" problems that may be reduced by replacing or adjusting a clean-out lid, disconnecting downspouts or installing rainstoppers in manholes.

The installation of CIPP into deficient pipes is a trenchless form of sewer rehabilitation that is performed from the surface using existing manholes or clean-outs as entry points. The process involves lining the interior surface of the deficient host pipe or lateral with a flexible, cylindrical membrane having an inner felt lining impregnated with a thermosetting resin. CIPP lining can be performed on pipes of various sizes ranging from 4 inches to 100 inches in diameter. This method is especially useful for lines that are corroded, cracked or with leaking joints, and is advantageous because the liner is a monolithic structure with no joints or seams.

A slight reduction in the diameter of the host pipe will result because the liner adheres to the inside wall of the pipe. However, this reduced sizing is compensated for by the smoother finish of the liner that typically increases flow capacity by approximately 50 percent. Manufacturer's tests on installed liners have proven a roughness coefficient of approximately 0.010.

Rehabilitation using CIPP has been widely accepted as a means of repair, and is highly recommended for collection systems such as the Kuliouou WWCS that lie below the groundwater table. Based on results of the Enchanted Lake sewer rehabilitation pilot program (for a project study area with geographic characteristics that are similar to the Kuliouou Valley

basin), sewer rehabilitation utilizing CIPP is expected to provide an average reduction of 45 percent in wet weather infiltration and inflow. The cost to clean, monitor and line an 8-inch main is approximately $100 per linear foot (1999 dollars).

Chemical grouting is a method used to reduce infiltration into structurally sound mains and laterals. This rehabilitation method consists of pumping chemical grout through cracks and defective joints into the surrounding soil where it gels with the soil to form an impermeable mass. Grouting is a relatively inexpensive method to control infiltration with the cost to clean, monitor and grout an 8-inch main being approximately $10 per linear foot (1999 dollars).

2.4.2 Kuliouou WWPS Modifications

Minor modifications to the mechanical, electrical and ventilation systems of the Kuliouou WWPS are proposed to have this facility conform to current design standards and safety guidelines. Required and/or recommended modifications, upgrades and actions with respect to the WWPS are discussed below.

Emergency Generator. Replace the existing propane-powered emergency generator with a diesel-based unit in conformance with building and fire codes. Replace the existing fuel tank with an underground double-walled fiberglass tank having a capacity of approximately 500 gallons. This tank should be equipped with an overfill protection valve, venting, and an automatic leak detection/alarm system. Use double-walled fiberglass underground piping with containment pipes that drain back to the underground storage tank. The tank should be sized to provide power for five (5) days at average flow and two (2) days at peak flow.

Radiator. Provide a separate horizontal radiator for maximum heat dissipation. This radiator would be a free-standing horizontal air discharge type, mounted remotely from the skid. Discharged air from the radiator will exit the building via sound attenuating louvers. Air entering the building will be via sound attenuating louvers mounted in the doors. Radiator air flow will provide cooling for the generator and engine.

Flow Measuring Equipment. Replace the existing flow tube with a venturi flow meter to provide more accurate readings. Install a new differential pressure transmitter and rods.

Electrical System. Move the sump pump controller that is currently at the pump room level to the motor control center on the first floor to reduce the potential for a short circuit during flooding of the pump room. Replace existing lights with energy efficient fluorescent units that have non-metallic housings with gasket lenses.

Ventilation System. Install a 1-horsepower (hp) supply fan to meet current National Fire Protection Association (NFPA) 820 and City DDC requirements for mechanically ventilated spaces. Replace the existing exhaust fan with a new 3-hp special vane-axial fan that features low noise emission. The fans should operate on 460 volt, 3-phase power. The building will be positively pressurized with the air supply fan and exhaust fan having a rated capacity of 2,400 and 2,200 cubic feet per minute, respectively. Flow switch monitors connected to the Supervisory Control and Data Acquisition system will notify personnel of fan failure. Per City DDC regulations, the exhaust duct must also be relocated to the opposite side of the building.

Pump Station Facility. Construct a new generator room of approximately 11 feet by 22 feet along the west side of the existing building to house the new generator and provide partial noise containment (the existing generator room is not acoustically treated).

Noise Attenuation. Attenuate the noise radiated from the generator room to comply with the DOH noise regulations. DOH noise regulations stipulate maximum allowable noise levels of 55 decibels (dB) measured in the "A" scale slow response (dBA) during daytime hours and 45 dBA during nighttime hours for lands zoned as residential. These are the levels that may not be exceeded at, or beyond, the property line for more than 10 percent of any continuous 20-minute period. Actions being considered to address this are listed below:

1. Install a 5-foot long silencer bank across the discharge-air opening in the east wall;
2. Line the discharge-air duct from the radiator to the acoustical louvers with a layer of sound absorptive material and lag the duct by attaching one or two layers of a sound blocking material;
3. Install sound absorbing materials in the room to acoustically soften the room;
4. Construct a silencer bank across the intake-air opening.
5. Install acoustically rated doors; and
6. Install a critical grade muffler on the diesel engine exhaust.

2.4.3 Flow Monitoring Program And Backup Plan

After completion of the rehabilitation improvements to the Kuliouou WWCS and previously described improvements to the Kuliouou WWPS, the City would conduct flow monitoring at the Kuliouou WWPS and Hawaii Kai WWPS #2. This flow monitoring program would last until sufficient data is collected for evaluation of the effectiveness of the rehabilitation measures installed. Evaluation of the reduced flows will determine whether additional measures are required to minimize wastewater spills.

Storage Tank

If the flow monitoring program shows that the improvements implemented have not successfully reduced flows and minimized the potential for spills at the discharge manhole, then construction of an underground storage tank would be considered at the Kuliouou WWPS property. Construction of an underground storage tank will dampen the peak flow and minimize the surge effect on the Hawaii Kai WWCS downstream, thereby decreasing the risk of wastewater spills. It would also include return flow back to the wastewater pump station. Figures 5, 6 and 7 provide a preliminary conceptual Site Plan and preliminary Cross Sections of the storage tank being considered at this time.

The actual design and sizing of the storage tank will depend upon the flows generated within the Kuliouou basin, the Kuliouou WWPS discharge capacity, and the available capacity in the Hawaii Kai WWCS. However, a 20,000-gallon tank is being considered for planning purposes at this time. Actual sizing of the storage tank will be determined following completion of the sewer rehabilitation program and coordination with Hawaii American Water Company, owner of the Hawaii Kai WWCS (SSFM 1999).

Improvements Needed By Hawaii American Water Company

To further reduce the risk of wastewater spills occurring at the Kuliouou discharge manhole due to heavy rains, coordination between both the City and Hawaii American Water Company should be conducted to address the Hawaii Kai WWCS. The Hawaii American Water Company needs to perform similar improvements to their Hawaii Kai WWCS that are being proposed by the City to minimize infiltration and inflow into their Hawaii Kai system. Such improvements to the Hawaii Kai WWCS are necessary to accommodate the agreed-upon peak flow of 2.62 mgd from the Kuliouou WWPS (See Bibliography, SSFM 1999). The City's proposed improvements to their Kuliouou WWCS and WWPS will significantly improve the present condition, however, the ultimate solution requires improvements made by the Hawaii American Water Company to their Hawaii Kai WWCS.

The improvements needed for the Hawaii Kai WWCS may include: 1) reducing infiltration and inflow through a sewer rehabilitation program similar to that being proposed by the City for the Kuliouou WWCS, 2) upgrading the capacities of the Hawaii Kai gravity sewer system and pump stations, and 3) improving the operations of its wastewater facilities (SSFM 1999).

Improvements to the operating procedures of Hawaii Kai's WWPS #2 include improving pumping operations at the facility which could lower the hydraulic grade line of the system

which would allow Kuliouou WWPS to discharge the agreed-upon peak flow of 2.62 mgd. A spill prevention plan may also be adopted for the Hawaii Kai WWPS #2 to include emergency measures such as bypass pumping to ensure that the allowable surcharge elevation is not exceeded. Such improvements considered by the Hawaii American Water Company should be coordinated with the City.

2.4.4 Development Schedule And Estimated Costs

The Department of Design and Construction plans to initiate the design of the wastewater collection system rehabilitation and wastewater pump station improvements in the year 2002. It is estimated that construction of this project should be completed within three years. Thus, the improvements should be completed by the end of year 2005.

If the flow monitoring program shows a need for the storage tank, appropriate measures would be initiated by the City to include funding for this phase in the Capital Improvements Program (CIP). This phase of the project, if necessary, would likely occur beyond the City's 2004 design CIP budget.

Phasing of the project would be implemented without interruption of sewer collection and transport service for Kuliouou Valley. The existing wet well may be used for storage while modifications to the pumps and force main are being accomplished. The emergency generator would be operational prior to the disconnection and removal of the existing service. A pump test would be performed upon completion of the modifications. All pump station modifications would be coordinated with the City Department of Environmental Services prior to the start of work.

The estimated construction cost for this project is $5,270,000. The estimated construction costs for the various improvements planned are listed below:

1.	Rehabilitate the Kuliouou Valley WWCS utilizing CIPP		$4,070,000
	a. Rehabilitate lower basin (mains, lower laterals & manholes)	$3,220,000	
	b. Rehabilitate upper basin (mains, laterals & manholes)	$800,000	
	c. Repair inflow deficiencies	$50,000	
	d. Develop enforcement program to maintain cleanouts & manhole covers*		
2.	Modify Kuliouou WWPS		$440,000
	a. Replace generator, ventilation system, fuel tank, flow tube		
	b. Construct generator room		
	c. Install acoustical treatment		

3.	Construct a storage tank	**$760,000
	a. Provide storage for overflow from Hawaii Kai WWCS	
	b. Divert wastewater back to Kuliouou WWPS	
	* No construction costs for this item since it would be administrative cost for program.	
	** Based on costs for a 20,000 gallon storage tank.	
Total Estimated Construction Cost		**$5,270,000**

2.4.5 Listing Of Required Permits

There are no discretionary land use approvals required from the State or County such as a zone change, State land use district boundary amendment, or Special Management Area Use permit for the improvements proposed under the various phases being implemented for this project.

The following permits listed would be required for implementing the various phased improvements of this wastewater system project.

Federal Permits

1. EPA Form 7530 (Notification for Underground Storage Tanks)

State of Hawaii Permits

1. National Pollutant Discharge Elimination System (NPDES) General Permit for Discharge of Construction Dewatering, Notice of Intent (NOI) Form G
2. UST permit (if required)
3. Construction Noise Variance (if needed)
4. Department of Transportation Permits (for work within Kalanianaole Highway)

City and County of Honolulu Permits

1. Building, grading, trenching and street usage permits

CHAPTER 3
ALTERNATIVES CONSIDERED

Alternatives considered to the currently proposed improvements of the Kuliouou WWPS and WWCS consisted of: 1) performing no improvements (No Action Alternative) and delaying action on the improvements, 2) alternate methods of sewer rehabilitation, 3) alternative locations for the storage tank, 4) reductions of Kuliouou WWPS discharge, 5) improvement to the Hawaii Kai WWCS, and 6) realigning the Kuliouou WWPS force main. These design alternatives considered were based upon the Kuliouou Wastewater Pump Station Modification and Force Main Replacement, Final Preliminary Engineering Report (SSFM Engineers, Inc., 1999). A summary of the costs associated with various connection alternatives was included in this engineering report.

A greater description of these various alternatives is described in this chapter. In summary, these alternatives were dropped from further consideration and implementation because they would not adequately address the project need and objectives compared to the proposed improvements.

3.1 NO ACTION ALTERNATIVE

The No Action Alternative would involve performing no rehabilitation or improvements to the Kuliouou WWPS and WWCS. Under this alternative, the existing conditions associated with this sewer system would continue making it susceptible to future potential surcharging events during large rainfall or storms. As a result, peak flow within both the Kuliouou WWCS and Hawaii Kai WWCS during heavy rainfall would exceed the system's pipe capacity causing wastewater levels to rise leading to wastewater spills at the WWPS discharge sewer manhole (SMH "0").

During future potential events, wastewater would likely continue to flow onto the street and into storm drains leading into Kuapa Pond. These wastewater spills infringe upon the recreational use of Kuapa Pond, and result in violation of the Clean Water Act. Consequently, this alternative was eliminated because it would not properly address the current need for improvements to this system. In addition, this No Action Alternative would not meet the City Department of Environmental Services' objective of initiating action to minimize future potential wastewater spills.

3.2 ALTERNATIVE METHODS OF SEWER REHABILITATION

Three methods for reducing infiltration were considered as alternatives to the use of CIPP to repair deficient pipes. These alternatives were chemical grouting, sliplining and pipe bursting.

Chemical Grouting

This rehabilitation method consists of pumping chemical grout through cracks in structurally sound mains and laterals. The grout gels with the surrounding soil to form an impermeable mass. Chemical grouting is an inexpensive method for controlling infiltration with costs to clean, monitor and grout an 8-inch line as low as $10 per linear foot. Its effectiveness, however, is unpredictable. Large voids or extreme quantities of groundwater that exist outside the pipe may prevent proper setting of the grout.

Attempts to rehabilitate portions of the Hawaii Kai WWCS utilizing chemical grouting have been unsuccessful. Chemical grouting is a specialized construction method for which success highly depends on the experience of the contractor and quality of installation. Thus far, contractors in Hawaii have not experienced long term success, it has however, been successfully used elsewhere. Due to the uncertainty of achieving long term success in minimizing infiltration of sewer lines installed under groundwater, this technique is not recommended for long-term rehabilitation in the Kuliouou basin where the sewer lines are installed within the groundwater.

Sliplining

This method is similar to CIPP rehabilitation except that pre-formed, solid sections of pipe (typically polyethylene) are inserted into the host pipe. An entry pit is required for installation since the liner pipe does not bend readily. A drawback of this method is that flow capacity is reduced due to the liner and the annular space surrounding the liner. For structural integrity, the annular space should be grouted which is a labor-intensive task. The rigidity of the liner pipe limits its range of application. Sliplining was therefore eliminated from consideration for this project.

Pipe Bursting

With pipe bursting, an existing line can be replaced with a new one having an equal or larger diameter. This method requires pulling a pneumatic or hydraulic burster through the existing line with a winch. Immediately behind the burster is the new pipe to be installed. As the burster and new pipe advance, the existing pipe is shattered and replaced. A drawback of this method is that as the pipe bursts, its fragments and the surrounding soil are pushed outward

which may exert additional pressure upon adjacent utility lines. This method also does not alleviate sags or offsets. A thorough analysis of the soil conditions and surrounding utilities would be required to assess conditions and prevent the rupture of existing lines. Due to the potential for damage to other utility lines along the corridor, this method was eliminated from further consideration.

3.3 ALTERNATIVE LOCATIONS FOR THE STORAGE TANK

Off-line and in-line configurations at several locations were investigated as possible alternatives to locating the storage tank at the Kuliouou WWPS site.

Off-Line Configuration

With this option, wastewater would flow by gravity to the storage tank via an overflow structure built into the existing wet well. The tank would only be utilized during wet weather periods when influent to the pump exceeds a predetermined flow rate. Infrequent usage may reduce the maintenance and cleaning of the tank to periods following large storm events.

Despite these advantages, this setup requires realignment of the existing gravity sewer lines entering the wet well, and the construction of an overflow structure to divert excess flow. Due to the complexity associated with having to realign existing pipes and the likely increased construction costs, this alternative was eliminated from further consideration.

In-Line Configuration

An in-line configuration would direct the flow through both the storage tank and the WWPS en-route to the Hawaii Kai WWCS. Tanks constructed in this manner are in continuous use during dry and wet weather conditions such that higher cleaning and maintenance costs may result. One way to minimize these costs would be to channelize the bottom of the tank such that only the channel is used for conveyance during low flow periods.

Two (2) upstream locations along Kuliouou Road and May Way were investigated as possible sites. It was assumed that construction was limited to within existing street rights-of-ways. Both sites were found to be not practical or feasible due to the narrow streets. A tank at these locations would require either an excessive length or depth to fulfill the volume requirement, and would conflict with existing utilities. A storage located along Summer Street was also considered, but this was determined to be unfeasible due to its close proximity to the ocean. In addition, the narrow streets would likely present problems during construction.

Downstream locations were also determined to be unfeasible due to elevation and space limitations. An additional set of pumps would be required to discharge the wastewater to the Hawaii Kai WWCS, and additional property would need to be acquired by the City and County of Honolulu. For these reasons, these other options were eliminated from further consideration.

3.4 Reduction Of The Kuliouou WWPS Discharge

The potential for wastewater spills could be further minimized by reducing the discharge capacity from the Kuliouou WWPS. This action would involve downsizing the pump flows or installing flow control devices. Reduction of the Kuliouou WWPS discharge would minimize surcharge in the Hawaii Kai WWCS but would also create a flow restriction at the facility which may create additional problems during high flows along with potential spills within the Kuliouou basin. As a result, the option to reduce the Kuliouou WWPS discharge was determined to be unfeasible and was eliminated from further consideration.

3.5 Improvement Of The Hawaii Kai WWCS

Upgrades to the Hawaii Kai WWCS to increase the available capacity would include several actions. First, the gravity sewer mains and laterals would need to be cleaned and inspected to locate any visible deficiencies in the pipe such as cracks, misaligned joints or sags. Flow monitoring may also be conducted to obtain more accurate infiltration data. Relief, replacement or rehabilitation of sewers may then be installed to address hydraulic deficiencies.

The Hawaii Kai WWPS #2 should also be inspected to ensure that it is operating efficiently. Monitors may be installed in the wet well to record operating levels during storm conditions. Pump tests may be conducted for the Hawaii Kai WWPS #4 and other facilities within the WWCS to determine their operating conditions and capacities.

A standard operating procedure would also have to be implemented to minimize surcharge in the Hawaii Kai WWCS. These potential improvements for the Hawaii Kai basin are beyond the purview of the City and County of Honolulu since the Hawaii Kai WWCS is privately owned and operated. Consequently, such improvements would need to be considered and implemented by Hawaii American Water Company.

3.6 Realignment Of The Kuliouou WWPS Force Main

Alternatives for reducing the amount of flow in the Hawaii Kai WWPS #2 tributary basin were considered based on the assumption that wastewater spills could be avoided by discharging

the flow from the Kuliouou WWPS to a different manhole. Two scenarios were evaluated. The first scenario assumes that the force main continues to discharge to the Hawaii Kai WWCS. The second scenario assumes that the Kuliouou WWPS force main is realigned to discharge to the Sand Island WWCS.

Reroute Force Main To The Hawaii Kai WWCS

Since wastewater spills currently occur when the Kuliouou WWPS flow is discharged to SMH "0" during heavy rain periods, other manholes within the Hawaii Kai WWCS were investigated as possible discharge sites for the Kuliouou flows (see Figure 8: Alternate Force Main Alignments to Hawaii Kai WWCS). Manholes investigated as possible discharge sites include SMH 8, 17, 33 and 57. Any force main realignment alternatives are feasible only if the remainder of the Hawaii Kai WWCS downstream of the connection has adequate capacity to accommodate the peak design flows. Since the Hawaii Kai WWCS is privately-owned, detailed analysis was not conducted for the entire system. The effects of relocating the Kuliouou WWPS discharge will not reduce the rate of the peak flow, neither would it increase the downstream flow capacity. Therefore, it would not solve the spill problem and this alternative was not recommended (SSFM 1999).

ReRoute Force Main To The Sand Island WWCS

In the event that the contractual agreement for wastewater treatment and disposal between the City and County of Honolulu and AWWSC is terminated, the City and County of Honolulu would need to consider other alternatives for handling the Kuliouou WWPS flow to the City-operated Sand Island WWCS. By redirecting the force main to the Sand Island WWCS, the Kuliouou WWPS would no longer affect the performance of the Hawaii Kai WWCS and the City would assume full jurisdiction over the Kuliouou wastewater transmission, treatment, and disposal.

The recommended alignment to divert the flow to Sand Island WWCS would be to reroute the Kuliouou WWPS force main along Kalanianaole Highway directly to the Niu Valley WWPS (see Figure 9: Alternative Force Main Alignments to Sand Island WWCS). The addition of the Kuliouou flows would require modifications to the Niu Valley WWPS and force main, the Kahala WWPS and gravity sewers along Kalanianaole Highway. This alternative was therefore not recommended due to the significant impact it would have upon the environment, traffic along Kalanianaole Highway and high cost.

CHAPTER 4
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the existing surrounding environment in the vicinity of the project site. The probable environmental impacts associated with the construction and operation of the water system improvements are discussed, and mitigative measures are identified if necessary.

4.1 PHYSICAL ENVIRONMENT

This section describes the existing physical environment and resources present in the vicinity of the project site.

Climate

The climate of the State of Hawaii is relatively moderate throughout the island chain, although, moderate differences in these conditions may occur from one location to another due to the mountainous topography. Annual and daily variation in temperature depend to a large degree on elevation above sea level, distance inland, and exposure to the trade winds. On Oahu, the Koolau and Waianae mountain ranges are oriented almost perpendicular to the trade winds which account for much of the variation in local climatology.

Oahu's temperatures have small seasonal variation such that the temperature range averages only 7 degrees between the warmest months (August and September) and the coolest months (January and February) and about 12 degrees between day and night. Daily maximum temperatures usually run from the high 70's in winter to the mid-80's in summer, while daily minimum temperatures run from the mid-60's to the low 70's, respectively. Temperatures in the Kuliouou and Hawaii Kai area are expected to be similar to those found elsewhere in Oahu with typical weather conditions being generally warm and dry with average temperatures ranging from 65 to 85 degrees Fahrenheit throughout the year.

Winds are predominantly "trade winds" from the east-northeast except for occasional periods when "Kona" storms may generate strong winds from the south or when the trade winds are weak and land breeze to sea breeze circulations develop. Wind speeds typically vary between about 5 and 15 miles per hour providing relatively good ventilation much of the time. Lower velocities (less than 10 mph) occur frequently and the usual northeasterly trade winds tend to break down in the Fall giving way to more light, variable wind conditions through the Winter and on into early Spring.

Rainfall on Oahu is highly variable depending upon elevation and location with respect to the tradewinds. The Kuliouou to Hawaii Kai region has a semi-arid climate with average annual rainfall of about 20 to 30 inches along the coastline with higher mountain elevations receiving about 40 inches. Monthly rainfall averages less than 2 inches throughout most of the year. Most of the rainfall occurs during winter storms usually taking place from October through April.

4.1.1 Topography And Soils

Topography

The Kuliouou WWPS site is generally comprised of level terrain with elevations ranging between 4 and 6 feet above msl. The above ground facilities are primarily associated with the existing pump station structure, ancillary equipment and vegetation at the site (e.g., existing trees). Other Kuliouou WWCS features such as the sewer laterals, mains and trunk lines are located underground within existing street rights-of-way or sewerline easements.

Soils

As indicated in the *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai* (U.S. Department of Agriculture, 1972), several land types are present within the Kuliouou Valley project area. The lower and flatter areas near the valley mouth contain Jaucas Sand (JaC) and Fill land, mixed (FL). Mokuleia clay loam (Mt), Kawaihapai stony clay loam, 2 to 6 percent slopes (KlaB), Kawaihapai clay loam, 0 to 2 percent slopes (KlA) and Lualualei clay, 0 to 2 percent slopes (LuA) is found in the interior of the valley. Lualualei extremely stony clay, 3 to 35 percent slopes (LPE) is present along the steeper portions of the residential area and extends upwards along the valley walls.

The following descriptions of the land and soils types are from the *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai* (U.S. Department of Agriculture, 1972):

- JaC. This soils type extends along the shoreline and along both sides of Kalanianaole Highway. This classification comprises a loamy fine sand with rapid permeability and very slow runoff. This soils type is used for pasture, sugar cane, truck crops, alfalfa, recreation areas, wildlife habitat and urban development.
- FL. Land areas that extend towards Kuapa Pond and north of the JaC soils are designated as FL. This land type is often the result of past dredging operations from nearby areas. These fill lands generally consist of silty sand and coral gravel that characteristically have high porosity and permeability. Areas of FL are used for urban development including airports, housing areas and industrial facilities.

- Mt. This soils type occurs in the central portion of the residential area. Permeability is moderate in the surface layer and rapid in the subsoil. Runoff is very slow and the erosion hazard is no more than slight. This soil type is used for sugarcane, truck crops and pasture.
- KlaB. These soils are mostly well-drained. Enough stones are present to hinder, but not prevent, cultivation. Runoff is slow and the erosion hazard is slight. This soils type is used for sugarcane, truck crops and pasture.
- KlA. A small area containing the KlA soils type exists within the central portion of the Kuliouou Valley. This soils type has moderate permeability. Runoff is slow and the erosion hazard is no more than slight. KlA soils are used for sugarcane, truck crops, pasture and orchards.
- LuA. The LuA soils type exists within the interior portion of the valley. Permeability is slow, runoff is slow and the erosion hazard is no more than slight. LuA soils are used for sugarcane, truck crops, pasture, wildlife habitat, urban development and military installations.
- LPE. The slope range of LPE is 3 to 35 percent; however, in most places the soil is moderately sloping to steep. Permeability is slow. Runoff is medium to rapid and the erosion hazard is moderate to severe. LPE soils are used for pasture.

Probable Impacts From Construction Activity And Mitigative Measures

The proposed project involves some land-disturbing activities for the repair/replacement of sagged lines prior to sewer rehabilitation. Construction of a generator room and a storage tank is also anticipated. Excavation, trenching, and some grading and related construction activities will inevitably occur. However, such construction activities would be minimal, of a short-term nature, and limit the routes of existing sewer lines and the wastewater pump station site. Grading and excavation activities would thus not have a significant impact on the environment due to the nature of this project thereby reducing soil erosion impacts.

Other typical short-term impacts associated with construction-related activities are not expected to have a significant impact on the surrounding environment. Such impacts typically involve dust, noise, odors, and traffic disturbances along surrounding roadways. Fugitive dust is expected to be minimal because construction activities would involve relatively minor grading and excavation activities. Construction noise should not have a significant impact on noise sensitive resources such as schools and residences due to the limited construction activity occurring. Finally, traffic disturbances on surrounding roadways should be minimal and short-term.

Both temporary and permanent erosion and sedimentation control measures would be considered during the project's design for implementation as appropriate. Some typical erosion control measures that may be considered for implementation could include the use of cut-off ditches and detention ponds to slow runoff, temporary ground cover vegetation, and the application of various soil stabilization and protection materials. Dust control measures which could be considered may include the implementation of a watering program to minimize soil loss from fugitive dust particulate emissions. Other measures include good construction management practices at the job-site and the paving or planting of bare earth areas as soon as practicable. A traffic control plan would also be prepared and implemented. Necessary measures would be developed during the project's design and coordinated with appropriate agencies for review.

Necessary permits from the City would be obtained which would include the preparation of plans subject to City review and approval for implementation. In addition, construction activities would comply with pertinent Administrative Rules of the State Department of Health such as Title 11, *Chapter 46 (Community Noise Control), and Chapter 60 (Air Pollution Control).*

4.1.2 Natural Hazards

This section addresses only those natural and urban-related hazards applicable to the project site. Of the potential natural hazards, only earthquakes, hurricane, and flooding hazards are applicable. These natural hazards are addressed below. There are no other potential urban-related hazards applicable to the project site such as airport clear zones, nuisances, or other hazardous waste issues associated with the project.

Earthquake Hazards

Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. However, except for the island of Hawaii, the Hawaiian Islands are not situated in a highly seismic area subject to numerous earthquakes (Macdonald et al. 1983). Most of the earthquakes that have occurred were volcanic earthquakes causing little or no damage.

Earthquakes in the Hawaiian Islands are primarily associated with volcanic eruptions resulting from the inflation or shrinkage of magma reservoirs beneath which shift segments of the volcano (Macdonald et al. 1983). Oahu is periodically subject to episodes of seismic activity of varying intensity. Available historical data indicates that the number of major earthquakes occurring on Oahu have generally been less and of lower magnitude compared with other islands such as Hawaii (DBEDT 1998, Furumoto, et al. 1973). However, earthquakes cannot be

predicted with any degree of certainty or avoided, and an earthquake of sufficient magnitude (greater than 5 on the Richter Scale) may cause damage to the existing wastewater system.

Although the possibility of earthquakes on Oahu have been lower than other islands, potential damage to constructed sewer facilities may occur from an earthquake of sufficient magnitude. However, damages to these facilities will be minimized by following appropriate City building code standards. Thus, the risk of potential damage to this project will not be more than other existing land uses or infrastructure facilities on the island of Oahu.

Hurricane Hazards

The three major elements of a hurricane making it hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). A hazard mitigation report prepared by the Federal Emergency Management Agency after Hurricane Iniki in 1992 determined that nine hurricanes approached within 300 nautical miles (about one day's travel time) of the Hawaiian Island's coastlines between 1970 and 1992 (FEMA 1993). Most hurricanes affecting the islands have focused on Kauai. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or meteorological reasons why hurricanes miss the other islands but tend to steer toward Kauai (FEMA 1993).

A hurricane of significant strength and high winds passing close to the island could cause damages to the Kuliouou WWPS. However, the potential for damages to this facility would be less than that for residences and buildings in other urbanized areas of East Honolulu. The majority of facilities associated with the Kuliouou WWPS and WWCS are located underground making them less susceptible to damage from high winds and storm surge.

To minimize potential damages, the improvements would be designed and constructed in conformance to applicable City building codes and wastewater system design standards. Thus, the risk of potential damage from high winds should not be more than for other existing wastewater system developments in the East Honolulu district.

4.1.3 Tsunami Inundation And Flooding

The majority of the affected residential area that is mauka of Kalanianaole Highway and the Kuliouou WWPS site in particular fall within Zone D of the 100-year flood hazard area as designated on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (see Figure 11: Flood Insurance Rate Map). Zone D is defined as areas where flood hazards are undetermined.

Areas makai of Summer Street lie within Zone AE which is a flood hazard area that is inundated by the 100-year flood. Base flood elevations are determined to be 4 and 6 feet above msl. An area that extends from Summer Street to approximately 800 feet mauka of Kalanianaole Highway (in the vicinity of Moomuku Place and Elelupe Road) falls within Zone A. This is a flood hazard area that is inundated by the 100-year flood but for which no base flood elevations are determined.

Proposed facilities and structures are expected to be designed and constructed in compliance with Building Code requirements for structures within the flood zone. Consequently, the project is not expected to be significantly affected by flood or tsunami inundation or change the existing topography or drainage conditions of the area increasing potential flood areas.

4.1.4 Air Quality

Air quality in Hawaii is generally characterized as "relatively clean and low in pollution" (Armstrong, 1983). Northeast tradewinds that are predominant throughout the year typically carry emissions and other air pollutants from inland areas out toward the ocean.

Air Quality Standards (AQS) applicable to the Kuliouou Valley area are set by the DOH and the U.S. Environmental Protection Agency (EPA). The DOH generally sets the AQS at a more stringent level than national standards. Established stations that monitor compliance with the AQS are located in a number of areas across Oahu.

The AQS for particulate matter, carbon monoxide and ozone have been exceeded in the Honolulu area in recent years. The Kuliouou Valley is occasionally susceptible to periods of lower air quality when tradewinds give way to southerly "kona" winds. Localized problems of poor air quality generally occur along the heavily traveled transportation corridors such as Kalanianaole Highway.

Probable Impacts And Mitigative Measures

Potential short-term and temporary impacts to air quality may occur from dust emissions and odors from open manholes during construction activities. Exhaust emissions from construction equipment may also temporarily affect ambient air quality. However, these impacts should not result in a significant impact or exceedances of State ambient air quality standards. Construction activities would be temporary and to comply with other government regulations concerning construction activities.

In keeping with DOH and City and County rules (HAR Chapter 11-59, "Ambient Air Quality Standards" and Chapter 11-60.1, "Air Pollution Control"), dust control measures will be implemented during construction to control airborne particulate matter. The use of approved erosion control plans and mitigative methods such as water sprinkling will reduce potentially adverse air quality impacts. Wet cutting or dry cutting with other dust control measures will be used when saw-cutting asphaltic concrete pavements.

Construction scheduling combined with dust control measures would be implemented to minimize air quality impacts such that the least number of residents are affected by work activities. Engine exhaust emissions from construction vehicles will be minimized via the proper operation and maintenance of all equipment to further limit potential air quality impacts. Impacts from slow-moving construction vehicles would be mitigated by scheduling slow-moving vehicular travel during periods of low traffic volume on the affected roadways.

Odors associated with the storage tank may have the potential to impact area residents in the immediate vicinity of the WWPS facility. To mitigate potential odors, the storage tank will be an underground structure, and its interior will be properly lined to reduce the potential for odors. Other odor control measures will be implemented in conformance with DOH regulations. The tank will also be regularly cleaned by facility personnel.

4.1.5 Noise

Under the State Department of Health's Community Noise Control regulations (Title 11, Chapter 46, HAR), the Kuliouou WWPS site is situated within a residential zone district (Class A). Therefore, the maximum permissible sound levels for construction activities is 55 dBA during daytime (7:00 a.m. to 10:00 p.m.) hours and 45 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.). These levels may not be exceeded at or beyond the property line for more than 10 percent of any continuous 20-minute period.

Existing noise levels were measured at various locations on the Kuliouou WWPS site and were generally found to be controlled by motor vehicle traffic on Kalanianaole Highway. Daytime background ambient noise levels ranged from 46.0 dBA to 53.0 dBA with an average level of approximately 50 dBA. Nighttime traffic noise levels are estimated to be approximately 10 dBA less than daytime levels. Noise levels taken at the property line with the existing generator running exceeded the DOH daytime maximum allowable level, particularly along the north property line.

Probable Impacts And Mitigative Measures

Construction-related activities will temporarily increase ambient noise levels within the vicinity of the work area. Potential noise sources will include construction vehicles, trenching work, equipment used for temporary bypass lines, and other power equipment. Measures to control construction noise include the use of mufflers on power equipment and vehicles. Construction activities are expected to be limited to regular workday hours (8:30 a.m. to 3:30 p.m., Monday through Friday).

Thus, construction activities are not expected to result in a significant impact. If necessary, a permit would be obtained from the State DOH to allow these activities. Specific permit restrictions for construction activities are:

1. No permit shall allow construction activities creating excessive noise before 7:00 a.m. and after 6:00 p.m. of the same day.
2. No permit shall allow construction activities that create excessive noise before 9:00 a.m. and after 6:00 p.m. on Saturdays.
3. No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on holidays.

Long-term impacts to noise quality associated with the Kuliouou WWPS from the proposed new generator room are expected to be minimal as a result of incorporated noise attenuation within the structure. Consequently, the proposed improvements to this WWPS may result in a positive impact to the existing community by lowering noise volumes since the existing facility is not acoustically treated.

The following actions being considered for implementation will attenuate noise generated from the generator room to comply with the DOH noise regulations:

1. Install a 5-foot long silencer bank across the discharge-air opening in the east wall;
2. Line the discharge-air duct from the radiator to the acoustical louvers with a layer of sound absorptive material and lag the duct by attaching one or two layers of a sound blocking material;
3. Install sound absorbing materials in the room to acoustically soften the general room;
4. Construct a 5-foot long silencer bank across the intake-air opening.
5. Install acoustically rated doors; and
6. Install a critical grade muffler on the diesel engine exhaust.

4.1.6 Visual Resources

The proposed improvements to the Kuliouou WWPS and WWCS are not expected to have any significant impact on existing views of significance or important visual resources. There are no existing viewing points for the public on the wastewater pump station site and the property is surrounded by other existing residential homes. There are no important visual resources present on this property either. The existing Kuliouou WWCS is located underground, thus, there are no visual resources affected by this existing system.

Construction of proposed facilities is expected to have a minimal or no effect on visual resources or public viewing points. The proposed generator room is expected to be the only additional aboveground structure added to the wastewater pump station property. This facility will not interrupt existing viewing areas or scenic points in the East Honolulu area.

4.1.7 Historic, Archaeological, And Cultural Resources

The immediate area associated with the Kuliouou WWPS and WWCS are currently urbanized consisting primarily of roadways and homes. Consequently, there are no known historic sites situated above ground within the project site and surrounding area which would be affected by planned improvements.

The Kuliouou WWPS and existing roadway areas where the wastewater collection system is located are not known to have any cultural resources or are used for traditional native Hawaiian cultural practices. The Kuliouou WWPS property has been urbanized for over 30 years, and is located within a residential neighborhood. The collection system is located underground within existing roadway right-of-ways. Consequently, the proposed improvements are not expected to have an impact on cultural resources or traditional practices.

There is the potential for encountering human burials within the Kuliouou WWPS project site and the associated improvements to the Kuliouou WWCS due to the type of subsurface work planned to occur. Consultation with the State Historic Preservation Division (SHPD) has indicated that historic sites, including numerous human burials have been found in subsurface deposits throughout this area, especially in areas where Jaucus sand deposits are located.

The recent Kalanianaole Highway Widening project encountered a cemetery/burial ground containing human skeletal remains as well as archaeological deposits related to habitation and possible marine resource exploitation in the vicinity of the Kuliouou WWPS near May Way. The extent of the cemetery boundary was not defined at that time, but was believed to extend beyond the roadway corridor.

To minimize any impacts on potential archaeological deposits or human burials associated with this project, an archaeological monitoring plan would be developed in consultation with the SHPD during the project's design for implementation prior to construction. In addition, an archaeological monitor would be hired to identify any historic sites, document them, and coordinate with SHPD on significance evaluations and mitigation treatment. This monitoring plan will include the following:

1. The types of historic sites that are anticipated;
2. Where in the construction area the sites are likely to be found;
3. How the expected types of historic sites will be documented, if found;
4. A clear process as to how the monitor will propose the significance evaluations for any sites and obtain SHPD's approval;
5. A clear process as to how mitigation treatment of any significant sites will be proposed to SHPD's office, and handled in coordination with their office (particularly related to burials);
6. A clear statement that the archaeologist conducting the monitoring has the authority to halt construction in the immediate area of a find in order to carry out the plan;
7. A coordination meeting between the archaeologist and construction crew is scheduled, so that the construction team is aware of the plan;
8. What laboratory work will be done on resources that are collected;
9. A schedule for report preparation; and
10. Details concerning the archiving of any collections that are made.

By developing an acceptable archaeological monitoring plan approved by SHPD for implementation, the proposed project would have no adverse effect on significant historic sites which may potentially be within the subsurface area of the project site. This determination is based upon comments received in SHPD's letters dated February 3, 1999 and November 28, 2000 which are included in Appendix B.

Cultural Assessment

This project is not expected to significantly affect traditional native Hawaiian cultural practices or other traditional cultural practices occurring in the project area. There are no known traditional cultural practices occurring within the existing rights-of-way of Kalanianaole Highway or City roadways in the Kuliouou subdivision area affected by the project. Such areas are used for travel by vehicles of which the highway is heavily utilized. Surrounding properties along this section of the highway and City roadways in the Kuliouou community affected are

also highly urbanized consisting of developed residential uses. The Kuliouou WWPS site is also owned by the City, and has been used for the pump station for many years. There are no known traditional native Hawaiian cultural practices occurring on this property, and it is surrounded by established residences.

The project would not restrict access to surrounding areas which may be used for traditional native Hawaiian cultural practices. The rehabilitation and other improvements planned for the existing wastewater collection system would occur within the rights-of-way of the existing State highway and City roadways. Construction activities would result in temporary lane closures. However, this would not prevent access to shoreline areas or other potential cultural resources in the surrounding area that may be used for traditional gathering or other cultural practices.

Open trench work necessary for the wastewater collection system may encounter cultural deposits or possibly burials during construction work. However, an archaeological monitoring plan would be developed in consultation with the SHPD to address mitigative measures to be implemented by the contractor. With development of this monitoring plan, the SHPD has determined that the improvements planned for this project would have no significant adverse effect on historic sites. As a result, the project is not expected to have a significant impact on traditional native Hawaiian cultural practices or resources.

4.2 BIOLOGICAL ENVIRONMENT

4.2.1 Botanical Resources

Vegetation within the Kuliouou WWPS site consists primarily of grass and weeds with few trees. The Kuliouou WWCS is located underground within the rights-of-way of existing roadways and sewer easements, thus, there are no botanical resources associated with this collection system.

Kuliouou Valley Forest Reserve and Paiko Lagoon Wildlife Sanctuary contain endangered flora species, but will not be affected by proposed improvements. None of the observed vegetation within the WWPS site or within the affected residential area are known to be Federal- or State-listed threatened or endangered, or candidate threatened or endangered species. Two existing trees within the Kuliouou WWPS site will require replacement or relocation as a result of the installation of the storage facility. Therefore, the project is not expected to have a significant impact on botanical resources.

4.2.2 Avifauna And Fauna

Urbanized areas typically provide no suitable habitat for threatened, endangered or candidate fauna species presumed or known to reside on the island of Oahu—the Hawaiian hoary bat (*Lasiurus cinereaus semotus*), the Hawaiian or Oahu tree snail (genus *Achatinella*), the Hawaiian owl (*Asio flammeus sandwichensis*) and the Oahu creeper (*Paroremyza maculata*). Wildlife within the Kuliouou Valley residential area generally consists of insects, mammals and birds that have adapted to urbanized areas.

Birds, mammals, reptiles and amphibians that may frequent the project site are expected to be introduced or indigenous species that are commonly found in urban environments (i.e., mongooses, rats, mice, cats, etc.). No Federal- or State-listed threatened or endangered, or candidate threatened or endangered species are known to exist within the WWPS site or affected residential area. No significant resources for endangered, threatened or candidate species are known to exist within the developed residential area. Consequently, the proposed rehabilitation, modification, and construction activities are expected to result in no significant impacts to important faunal populations or resources.

4.2.3 Hydrogeological Resources

Groundwater within the general project area exists primarily as basal water floating on salt water; coastal areas may exhibit some basal water in sediments (Armstrong, 1983). Rainfall is a primary source of groundwater recharge. The close proximity to the Pacific Ocean may result in ground water levels that are generally controlled by ocean tidal conditions. The groundwater levels at the Kuliouou WWPS site vary between –1.0 and 0.0 feet at msl.

The coastal waters of Hawaii are "of high quality because the former practice of ocean disposal of municipal, agricultural, and industrial wastes has been much improved or eliminated by land treatment and water-reuse practices" (Armstrong, 1983). Coastal waters in the vicinity of the project area are designated as Class A. "It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be protected...These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class" (State of Hawaii, DOH, HAR 11-54, "Water Quality Standards").

Probable Impacts And Mitigative Measures

The increase in paved surfaces at the Kuliouou WWPS site (i.e., the addition of a new generator room) is expected to have minimal impact on the surrounding groundwater system. This small increase in paved surface would inevitably decrease the amount of localized groundwater recharge occurring at the wastewater pump station property. However, this decrease is expected to be negligible and ultimately inconsequential to the overall function of the area's natural hydrological system. Impervious surfaces created as a result of the project would create only minimal increase in localized runoff, and decrease in total time of concentration.

Impacts to coastal resources and water quality are also expected to be minor since the proposed improvements are intended to minimize the potential for future spills. The proposed rehabilitation and modification improvements would involve repairing and replacing portions of the existing collection system to reduce spills. Construction of a storage tank on the pump station property, if necessary, would further minimize spills by providing an additional level of containment. As a result, these improvements would reduce the potential for spills during periods of heavy rainfall thereby improving the water quality of the surrounding coastal waters.

Construction activities could result in short-term impacts on coastal resources and water quality resulting from silt runoff. It is expected that the construction activities (such as trenching) may also require dewatering. Thus, these construction activities could result in localized silt runoff that has a potential to enter coastal waters having some short-term impact on water quality. However, best management practices (BMP) would be implemented by the Contractor to minimize runoff and impacts on coastal waters.

Appropriate BMPs would be considered and incorporated into design plans to address potential short-term impacts from runoff. In addition, such plans developed would be reviewed by pertinent agencies for comments and approval prior to construction. Actions such as construction dewatering will also require coverage under the NPDES Permit system. Therefore, impacts on coastal waters and water quality should be minimal or minor because the Contractor will employ approved measures to prevent silt runoff from construction areas along with complying with other permit conditions.

4.3 ECONOMIC AND SOCIAL FACTORS

The section discusses the project's probable impact on economic and fiscal factors. Due to the nature of improvements proposed for this project, impacts would primarily be associated with construction-related activities.

4.3.1 Economic And Fiscal Factors

The projected construction cost for planned improvements to the Kuliouou WWPS and WWCS is estimated to be $5,270,000. As a result this construction project would create several construction jobs over the anticipated one-year construction period.

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. These new jobs would generate additional personal income for construction workers. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. Direct construction jobs created would also stimulate indirect and induced employment within other industries on the island.

Fiscal impacts associated with this project would primarily involve slightly additional tax revenue generated to the State. Tax revenue sources for State government would be composed primarily of general excise taxes (GET) on development costs and construction materials, and corporate income tax. In addition, GET taxes on indirect and induced income spent stimulated by the spending of direct income would also contribute new revenues to the State. The approximately $5.27 million expended for construction activities would therefore generate some increased tax revenue to the State under the sources identified.

Since City revenues are primarily limited to property tax revenues, there should be minimal changes to the City revenues. The improvements planned for the Kuliouou WWPS property should contribute to its property value, however, this increase is expected to be minimal. No changes to the property values or existing surrounding residences are also anticipated from this project. This project would not generate any new in-migrant residents to the island of Oahu. Thus, there would not be any effect on State and County operational expenditures for public services.

4.3.2 Social Impact Factors

The improvements planned to the Kuliouou WWPS and WWCS are not expected to change the existing resident population in the Kuliouou community or the East Honolulu district. This project is a City initiated wastewater system improvement project. There are no new residential units or visitor units associated with this project, and no in-migration of individuals to reside within the City would result. As a result, there should be no impact on the existing resident population.

This wastewater system project would also not change or alter the character of the Kuliouou residential community or the character of the East Honolulu district. The rehabilitation improvements to the wastewater collection system would be to existing lines remaining underground. The wastewater pump station property is already existing and would only have minor structural additions to the property. Other improvements would be located underground on this site. Consequently, this project would not change existing uses in the surrounding area or have a significant impact on surrounding urbanized land uses.

Kuliouou Valley is currently under a sewer connection moratorium preventing further expansion of residences in the valley. This moratorium also prevents the subdividing of existing lots to allow for additional homes being built. The improvements planned to the Kuliouou sewer system under this project may allow for this moratorium to be lifted if flows are reduced to a level satisfactory to the City. Consequently, this project could have a small benefit to the existing community by allowing some flexibility in considering additional connection requests.

4.4 INFRASTRUCTURE FACILITIES

The section discusses the project's probable impact on infrastructure facilities serving the project site and surrounding area. Due to the nature of improvements proposed for this wastewater system project, most of the impacts would be associated with construction-related activities.

4.4.1 Water Facilities

The City and County of Honolulu Board of Water Supply (BWS) provides potable water to the Kuliouou Valley project area via a distribution main that runs along Kalanianaole Highway. The BWS indicated in a June 7, 2000 letter, included in Appendix B, that an existing 2-inch water meter serves the Kuliouou WWPS property. They also indicate that the existing off-site

water system does not provide adequate fire protection required under their *Water System Standards* because the present fire hydrant is about 300 feet away.

The BWS stated that a fire hydrant would be required for the project in the vicinity of the Kuliouou WWPS. The availability of water would be determined when a building permit application is submitted for their review and approval. If water is made available, the Water System Facilities Charges for resource development, transmission, and daily storage would need to be assessed. If a 3-inch or larger water meter is needed, the construction drawing showing the installation of the meter should be submitted for their review. BWS approved reduced pressure principle backflow prevention assemblies are also required to be installed.

Appropriate coordination would be conducted with the BWS during the design of the various phases of this project to address water system requirements for the Kuliouou WWPS property and other coordination matters. Construction drawings which may include the installation of a new hydrant would be submitted to BWS for their review and approval.

4.4.2 Wastewater Facilities

This proposed project is intended to improve the existing Kuliouou WWPS and WWCS serving the Kuliouou community. As a result, this project would have a positive impact in reducing the potential for future wastewater spills during heavy rains or severe storms. The project would create a reduction of chlorides that will have a positive impact on wastewater treatment and reuse opportunities.

4.4.3 Drainage Facilities

Provisions for drainage within the project area generally follow roadway alignments and flow towards the ocean. In the vicinity of the Kuliouou WWPS, drainage is directed to several storm drains along May Way and Makaniolu Avenue that discharge to Kuapa Pond.

The planned improvements to the Kuliouou WWPS and WWCS should have minimal if any impact on the existing drainage system serving this area. Additional paved area created on the wastewater pump station property would increase the amount of impervious surface on the parcel. However, this increase will be minimal, and should have negligible if any effect on existing runoff quantities from this property. Existing drainage facilities serving this project site should be adequate and not require any improvements.

4.4.4 Solid Waste

Solid waste collection for the Kuliouou Valley area is provided by the City and County of Honolulu Department of Environmental Services. Waste is transported to the Campbell Industrial Park H-Power energy recovery incinerator.

Construction of the improvements will generate some solid waste typical of this type of construction-related activities. The volume of solid waste generated is expected to be minimal due to the small area being affected at the wastewater pump station site and nature of rehabilitation improvements planned to the sewer lines. Construction-related solid wastes generated will be a short-term impact, and consist primarily of vegetation, rocks, and other debris created from clearing, excavation, and grading activities. The contractor will be required to properly dispose of all debris generated in conformance with agency regulations.

4.4.5 Transportation Facilities

Kalanianaole Highway provides the only major vehicular access to the Kuliouou residential area. Heavier traffic volumes occur during peak travel periods such as weekday mornings and afternoons. Traffic within the immediate vicinity of the Kuliouou WWPS is mostly limited to area residents. Low traffic volumes generally occur in this area during the non-peak hours.

Short-term and temporary impacts to traffic may occur as a result of the movement of slow-moving heavy construction vehicles and equipment. Completion of the proposed rehabilitation, modification and construction action is not expected to generate long-term traffic impacts.

Standard specifications for traffic control will be used during construction. Appropriate signs and barriers will be erected and generally at least one lane will remain open during workday hours (8:30 AM to 3:30 PM). After working hours, trenches will be covered with a non-skid bridging material and all lanes will be open. No off-duty police are expected to be required for traffic control. Provisions for pedestrian traffic will allow safe passage around any closed walkways.

4.5 Public Facilities And Utilities

The section discusses the project's probable impact on public facilities and utilities serving the project site and surrounding area. Due to the nature of improvements proposed for this wastewater system project, impacts would primarily be associated with construction-related activities.

4.5.1 Electrical And Communication Facilities

Electrical services are provided to the affected residential area via Hawaiian Electric Company's (HECO) distribution lines. The Kuliouou WWPS is served by a HECO 12.47 kilovolt (kV) primary circuit routed overhead along May Way. The 12.47 kV primary voltage is stepped down to the facility's 3-phase, 3-wire utilization voltage via a HECO pole-mounted transformer bank consisting of one (1) 37-kilovolt-ampere (kVA) and two (2) 15-kVA units.

Secondary electrical service is extended to the facility's main disconnect via an underground ductline. The WWPS facility has an interior distribution system and an emergency backup electrical system. Emergency power is provided via a 50 kilowatt (kW) / 62.5 kVA, 240 V, 3-phase, 3-wire propane-driven engine generator. The unit is designed to serve the electrical load required by the WWPS to maintain service during a power outage.

Telecommunication and cable television services are available within the affected residential area. Services are primarily distributed via overhead lines.

The Kuliouou WWPS has a SCADA system that currently monitors the operational status of the facility via a flow tube installed at the discharge end of the pump station. All readings, alarms and indications are transmitted as four (4) 20-milliampere (mA) output to the Sand Island wastewater treatment plant (WWTP). The SCADA downloads pressure and velocity readings at one-hour intervals. Continuous readings of the wet well level and discharge pressure are recorded onto strip charts and stored at the Sand Island WWTP. The capability for remote operation of the various pump station equipment from a supervisory station exists but has not been activated.

The proposed improvements to the Kuliouou WWPS is not expected to have a significant impact on existing electrical facilities or HECO's ability to provide electricity. Improvements to the wastewater collection system would not affect HECO facilities. In addition, existing telecommunication and cable television facilities should not be affected by this project. Appropriate coordination with these utility companies would be conducted during the design and construction of this project to minimize disruptions to their services or activities occurring.

4.5.2 Educational Facilities

There are no educational facilities in the immediate vicinity of the Kuliouou WWPS site, or in Kuliouou Valley. The nearest schools in the area are Niu Valley Intermediate School located about 2 miles away in Niu Valley, and Hahaione Elementary School located about 1 mile away in Hawaii Kai.

The only potential impact on these school facilities from the project would be associated with short-term construction-related activities. However, these activities are not expected to have an impact due to the project site's location a considerable distance away from these facilities. Rehabilitation of sewer lines in Kuliouou Valley should also not impact these school facilities due to their location away from this valley.

4.5.3 Police And Fire Protection

The improvements proposed for the Kuliouou WWPS and WWCS are expected to have only minimal or minor short-term impacts on the police and fire departments' operation. However, such impacts are not expected to affect their ability to provide adequate protection services to the Kuliouou community and East Honolulu district.

Police staff may be hired to assist in directing traffic during construction activities. There is also the possibility of some complaints to the Police Department from residents over dust and noise from construction activities as indicated in their letter dated May 22, 2000 included in Appendix B. However, the contractor would be required to comply with applicable regulations and permit conditions governing construction activities to minimize disruptions to nearby residents. Best management practices would also be implemented to minimize dust, erosion, and other nuisances from short-term construction activities.

Therefore, this project should not have a significant impact on the police department's ability to provide protective services in the project area. Once the project is completed, there would be no personal or business activities occurring at the wastewater pump station site which may require the need for police protection services.

Fire apparatus access would be provided throughout the construction site for all phases of this project implemented as requested in the Fire Department's letter dated May 30, 2000 (Appendix B). The Fire Communication Center would also be notified by the contractor of any interruption to the existing fire hydrant system during construction activities. Thus, construction activities associated with the project should have minimal impact on the Fire Department's operations or ability to provide protective services. In addition, appropriate coordination would be performed during the design of phases implemented for this project which will include submitting construction plans for the generator and diesel fuel tank for Fire Department review.

4.5.4 Recreational Facilities

Recreational facilities located in the vicinity of the Kuliouou WWPS site include Kuliouou Beach Park, Maunalua Bay Beach Park, and Kuapa Pond (privately owned marina).

Construction activities associated with this project is not expected to result in a significant impact on these facilities nor severely disrupt existing recreational activities occurring. Construction activities would not involve the use of these facilities or impede existing activities conducted there. Design of the project would include developing appropriate erosion control plans and best management practices to minimize runoff from entering Kuapa Pond or Maunalua Bay. Such plans developed would be reviewed and approved by appropriate agencies. Thus, implementation of such plans would provide sufficient measures to minimize impacts on these recreational facilities.

4.5.5 Medical Facilities

There are no medical facilities located in the immediate vicinity of the Kuliouou WWPS and Kuliouou WWCS area. Consequently, short-term construction activities associated with the project should have no impact on medical facilities or the activities occurring there.

CHAPTER 5
CONFORMANCE WITH PLANS AND POLICIES

This chapter discusses the project's conformance with the State Land Use District regulations, and pertinent objectives and policies from the City's General Plan, and East Honolulu Sustainable Communities Plan.

5.1 STATE LAND USE DISTRICT

The Kuliouou WWPS site and surrounding residential areas are classified as "Urban" on the State's Land Use District Boundary Map for the Hawaii Kai region (O-15, Koko Head). Urban Districts permit activities or uses as provided by ordinances or regulations of the county within which the Urban District is situated. Thus, the Kuliouou WWPS site and surrounding roadways areas affected by the wastewater collection system are regulated by the ordinances and regulations of the City and County of Honolulu.

5.2 CITY & COUNTY OF HONOLULU GENERAL PLAN

This project would generally conform to and be consistent with applicable objectives and policies described under the City's *General Plan* (DGP 1992). A discussion of the project's consistency with these objectives and policies is provided.

Economic Activity

Objective E To prevent the occurrence of large scale unemployment.

Policy 1 *Encourage the training and employment of present residents for currently available and future jobs.*

The project would create several short-term construction related jobs which are expected to be filled by island residents employed within the construction industry. Consequently, this project would be consistent with this policy and objective.

Natural Environment

Objective A To protect and preserve the natural environment.

Policy 4 *Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water-recharge areas, distinctive land forms, and existing vegetation.*

Policy 7 *Protect the natural environment from damaging levels of air, water, and noise pollution.*

Policy 8 *Protect plants, birds, and other animals that are unique to the State of Hawaii and the Island of Oahu.*

The rehabilitation and other improvements proposed for the Kuliouou WWCS and WWPS would be consistent with this objective and associated policies. Appropriate measures would be incorporated in the project's design to minimize construction-related impacts on the natural environment. Consequently, no plants, birds or other animals unique to the State and island are expected to be negatively impacted. Construction activities would be conducted in conformance with applicable State and City regulations which address air quality, noise, and water quality.

The design of the project will consider natural features of the surrounding environment such as flood and erosion, existing topography, and vegetation to minimize and mitigate short-term construction related impacts. Such measures would include developing Best Management Practices to address erosion concerns. Rehabilitation measures and trenchless methods planned are also intended to minimize the amount of open trench work required to the extent possible which further minimizes potential impacts on the surrounding natural environment.

Transportation and Utilities

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

Policy 5 *Provide safe, efficient, and environmentally sensitive waste-collection and waste-disposal services.*

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

Policy 1 *Maintain existing utility systems in order to avoid major breakdowns.*

Policy 2 *Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.*

Objective D To maintain transportation and utility systems which will help Oahu continue to be a desirable place to live and visit.

Policy 1 *Give primary emphasis in the capital-improvement program to the maintenance and improvement of existing roads and utilities.*

The improvements planned would be consistent with these objectives and policies because the objective for this project is to provide a high level of wastewater service to the Kuliouou community. The project is intended to improve the existing Kuliouou WWCS and WWPS by addressing existing deficiencies. These improvements would consequently create a safer, more efficiently operating, and environmentally sensitive system by reducing the potential for future wastewater spills due to excessive amounts of inflow and rainfall infiltration. The repair and renovation of the existing wastewater collection system would avoid future breakdowns and problems with the system. In addition, modifications to the Kuliouou WWPS planned would have this facility conform to current design standards and safety guidelines. Furthermore, these improvements have been programmed in the City's Capital Improvements Program.

Culture And Recreation

Objective B To protect Oahu's cultural, historic, architectural, and archaeological resources.

Policy 1 *Encourage the restoration and preservation of early Hawaiian structures, artifacts, and landmarks.*

Policy 2 *Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.*

The rehabilitation program and trenchless construction methods planned for the wastewater collection system are designed to minimize open trench work along roadways which may affect cultural resources or potential burials encountered in the area. Furthermore, an archaeological monitoring plan would be developed in consultation with SHPD during the project's design for implementation to minimize impacts on archaeological and cultural resources. Hence, these improvements and mitigative measures would support this objective and policies.

5.3 EAST HONOLULU SUSTAINABLE COMMUNITIES PLAN

The East Honolulu Sustainable Communities Plan was adopted in May 1999. This updated Plan for East Honolulu presents a vision for future development in this area consisting of policies, guidelines, and conceptual schemes that will serve as a policy guide for more detailed zoning maps and regulations.

Under this Plan's Urban Land Use Map, the Kuliouou WWPS site and surrounding area are designated as "Residential and Low Density Apartment." Under the Public Facilities Map, the Kuliouou WWPS site and surrounding area are designated as "Urban Community Areas." In general, the improvements proposed as part of this project would be consistent with applicable policies and objectives from this Sustainable Communities Plan. A discussion of the project's consistency with pertinent policies and objectives is provided.

Open Space Preservation And Development

1. ***Shoreline Areas.***

Maintain existing makai view channels along the H-1 Freeway or Kalanianaole Highway between Waialae and Koko Head. Avoid obstructions, such as walls and landscaping, designed to screen out traffic noise.

The proposed rehabilitation program and modifications to the Kuliouou WWPS would be consistent with this guideline for shoreline areas. The project would involve underground work associated with the existing wastewater system and would thus not affect existing makai views along Kalanianaole Highway in the Kuliouou area. During construction work, there would be construction related equipment and activities occuring along this highway. However, these activities would only be temporary and thus existing views from the highway would be retained.

Historic And Cultural Resources

1. ***Preserve significant historic features from earlier periods.***

Recommended in situ preservation and appropriate protection measures for sites that have high preservation value because of their good condition or unique features.

Determine the appropriate treatment for a historic site by the particular qualities of the site and its relationship to its physical surroundings.

Require preservation in situ only for those features which the State Historic Preservation Officer has recommended such treatment.

Determine the appropriate preservation methods on a site-by-site basis in consultation with the State Historic Preservation Officer.

The proposed rehabilitation program and necessary improvements to the wastewater collection system are designed to minimize open trench work along roadways which may affect cultural resources or potential burials encountered in the area. Furthermore, an archaeological monitoring plan would be developed in

consultation with SHPD during the project's design for implementation. This plan would address measures to deal with and treat cultural layers or burials that may potentially be encountered during construction activities. Consequently, these actions would be consistent with these general policies, planning principles, and guidelines.

Wastewater Treatment

1. ***Connect all wastewater produced by urban uses in East Honolulu to a publicly-regulated or municipal sewer service system.***
2. ***Implement, where feasible, water recycling as a water conservation measure.***
3. ***Provide buffer zones and landscape elements between the East Honolulu WWTP and adjacent residential designated areas which mitigate possible visual, noise, and odor impacts.***

The rehabilitation program, necessary improvements to the wastewater collection system, and improvements to the existing Kuliouou WWPS would be consistent with the first general policy. This project is intended to improve the City's existing wastewater system and operations serving the Kuliouou community to reduce the potential for future wastewater spills due to excessive amounts of inflow and rainfall infiltration. Furthermore, the wastewater from Kuliouou is connected to the Hawaii Kai Wastewater Treatment Plant which is regulated by the State Department of Health.

The other two general policies discussing water recycling and buffer zones for the East Honolulu Wastewater Treatment Plant are not applicable to this project. The improvements consist essentially of repair and renovation work associated with City's existing wastewater system serving the Kuliouou subdivision area, and do not involve the privately-owned and operated East Honolulu Wastewater Treatment Plant. These improvements to the existing City system would also not effect water recycling efforts used for irrigation purposes.

CHAPTER 6
AGENCY AND PUBLIC CONSULTATION

Consultation with various government agencies and the community has been conducted on this project to obtain their comments and concerns associated with the project. These consultation efforts included both early consultation efforts along with the distribution of the Draft EA for this project to various agencies and community organizations for their review.

6.1 PRE-ASSESSMENT CONSULTATION WITH AGENCIES

Pre-assessment consultation with various State and County government agencies was conducted to obtain their comments and concerns associated with the project. Letters providing project information along with a preliminary site plan was provided for their review. Copies of response letters received from these parties are identified below and included in Appendix B. Comments received were addressed in the appropriate sections of the Draft EA prepared and published. This Final EA includes appropriate revisions to this published Draft EA.

State of Hawaii Agencies

- Department of Education
- Department of Health
- Department of Land and Natural Resources, Division of Aquatic Resources
- Department of Land and Natural Resources, Historic Preservation Division
- Department of Land and Natural Resources, Land Division
- Land Use Commission, Dept. of Business, Economic Development & Tourism
- Department of Transportation

City and County of Honolulu Agencies

- Board of Water Supply
- Department of Environmental Services
- Department of Parks and Recreation
- Department of Planning & Permitting, Wastewater Branch
- Fire Department
- Police Department

6.2 DRAFT EA COMMENTS

The Draft EA for this project was published in the November 8, 2000 issue of the State Office of Environmental Quality Control's *The Environmental Notice* initiating a 30-day public comment period which ended on December 8, 2000. Copies of this Draft EA were distributed to the following parties for review and comments. Those parties which submitted comments are indicated by a "» " next to them. Comment letters received from these parties along with corresponding response letters are included in Appendix B.

Federal Agencies

- • Fish and Wildlife Service, Department of the Interior
- » U.S. Army Engineer Division, Department of the Army

State of Hawaii Agencies

- » Department of Accounting and General Services
- » Department of Education
- » Department of Health
- » Department of Land and Natural Resources
- » Department of Land and Natural Resources, Historic Preservation Division
- » Department of Transportation
- » Land Use Commission, Dept. of Business, Economic Development & Tourism
- » Office of Hawaiian Affairs
- » Office of Environmental Quality Control, Department of Health

City and County of Honolulu Agencies

- » Board of Water Supply
- • Department of Environmental Services
- • Department of Facility Maintenance
- • Department of Parks and Recreation
- » Department of Planning and Permitting
- » Department of Transportation Services
- » Fire Department
- » Police Department

Community Organizations

- • Hawaii Kai Public Library
- • Kuliouou-Kalani Iki Neighborhood Board No. 2

CHAPTER 7
FINDINGS AND DETERMINATION

To determine whether a proposed action may have a significant effect on the environment, the Approving Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Approving Agency's review and evaluation of the proposed action's effect on the environment would result in a determination whether: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding Of No Significant Impact (FONSI).

This chapter discusses the findings of the environmental assessment conducted of the proposed improvements to the Kuliouou WWPS and WWCS in relation to the 13 Significance Criteria prescribed under the State Department of Health's Administrative Rules Title 11, Chapter 200. The purpose of this assessment was to consider the "significance" of potential environmental effects which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The resulting findings are discussed below for each criteria.

7.1 FINDINGS

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. As discussed in Chapter 4 of this Draft EA, the improvements are intended to improve the wastewater pump station and rehabilitate the existing wastewater collection system to prevent future wastewater spills from heavy rains or severe storms. Such improvements would occur on already urbanized areas which include existing roadways and the City's Kuliouou WWPS property. Thus, there would be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources.

In terms of archaeological and historic resources, the State Historic Preservation Division indicated that there is a potential to encounter human burials within the Kuliouou WWPS project site and the associated improvements to the Kuliouou WWCS due to the type of subsurface work planned to occur based upon prior projects in the area. However,

to minimize any impacts on potential archaeological deposits or human burials associated with this project, an archaeological monitoring plan was requested to be developed in consultation with the SHPD prior to construction.

This monitoring plan will be prepared and coordinated with SHPD to adequately address any concerns they may have. Therefore, the SHPD has determined that the proposed project would have no adverse effect on significant historic sites which may potentially be within the subsurface area of the project site.

2. *Curtails the range of beneficial uses of the environment.*

The project would not curtail the range of beneficial uses of the surrounding environment. The wastewater pump station project site has been used by the City for many years along with the collection system within existing roadways. Therefore, the improvements planned would not change the existing uses of such lands and easements within roadways. Existing surrounding uses would remain as existing which is predominantly for residential homes. Thus, the proposed improvements to the existing system would not limit or significantly impact these uses or the surrounding environment.

3. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The improvements proposed under this project would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. This Final EA addressed the probable environmental impacts associated with the project which would be primarily associated with short-term construction activities. Consequently, the project would be consistent in conserving natural resources in the area, and enhancing the quality of life for residents in Kuliouou Valley and surrounding area by improving the service quality of the wastewater system.

4. *Substantially affects the economic, social welfare, or cultural practices of the community or State.*[2]

As discussed under Chapter 4, the project would not have any significant negative impacts on the economic structure of the East Honolulu district or the social welfare of the Kuliouou community. The project would create a short-term minor economic benefit generating construction jobs and personal income. Improvements planned are limited to

[2] This significance criteria was modified to reflect the recent change to Chapter 343, HRS approved by the Governor as Act 50 on April 26, 2000. This Act added "cultural practices" as part of the factors considered in determining the significance of an effect.

the wastewater pump station project site and existing sewer lines. As a result, there should be no negative impact or change to the overall character of the community. In terms of cultural practices, there are no known cultural resources at the Kuliouou WWPS site nor traditional native Hawaiian cultural practices occurring within the project area since the WWCS is located within roadway right-of-ways. Consequently, the proposed improvements are not expected to have an impact on cultural resources or traditional cultural practices.

5. *Substantially affects public health.*

The project is not expected to substantially affect public health since it would involve improvements to the City's existing Kuliouou WWPS and WWCS. The improvements would improve public health by minimizing future potential wastewater spills into Kuapa Pond due to heavy rains and severe storms.

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

The project should not have any secondary impacts on the social environment or infrastructure and public facilities. The project strictly involves improvements to the existing wastewater collection system and pump station. Therefore, there would not be any elements of the project contributing to in-migration of residents or additional visitors to the island. The project would also not significantly impact other existing infrastructure facilities or public facilities in the immediate area due to the type of improvements being proposed as discussed under Chapter 4.

7. *Involves a substantial degradation of environmental quality.*

The improvements to the Kuliouou wastewater system would not involve a substantial degradation to the quality of the surrounding environment. Improvements to the system would be limited to existing sewer lines within roadways and the pump station property. As a result, construction activities would be performed on already urbanized areas, and necessary measures would be implemented during construction to minimize erosion and other short-term impacts. The project is intended to improve the environmental quality of Kuapa Pond and surrounding shoreline areas by minimizing future wastewater spills from surcharging events on the Kuliouou wastewater system.

8. *Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

This project only involves the improvements to the wastewater pump station and rehabilitation of existing sewer lines described in Chapter 2. Impacts associated with these

improvements were addressed in this document, and are mainly associated with construction activities. Thus, the cumulative impacts of these improvements were considered in assessing environmental impacts, and it was determined that the project would not have a significant effect on the environment. This project does not involve the commitment for larger actions since it is only intended to improve the Kuliouou wastewater system.

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

There are no known endangered, threatened, or rare botanical resources on the wastewater pump station property, or faunal and avifaunal species inhabiting the area which may be affected by construction activities or the operation of the wastewater system. Necessary control measures and best management practices would be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

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

The project should not have a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities. However, such impacts are expected to be minor due to the relatively minor amount of grading and excavation proposed. To further minimize impacts, construction activities would be subject to applicable State regulations as discussed under Chapter 4.

11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The Kuliouou WWPS site is not located within an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area or geologically hazardous area. Consequently, this property would not be affected by such hazards or impact such environmentally sensitive areas. A portion of the Kuliouou WWCS serving residences along the coastline is located within the floodplain. However, this sewer line is located underground and would not suffer damage from such natural hazards as compared to existing residences in the area. Rehabilitation of these sewer lines would be done in conformance to City design standards and other agency requirements.

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

The proposed improvements would not affect scenic vistas or viewplanes. The wastewater pump station property is owned by the City and public access is restricted to City personnel. Existing sewer lines are located underground, thus, they would not impact scenic views.

13. Requires substantial energy consumption.

The project would not require substantial energy consumption or increased electrical facilities to serve the pump station. Improvements planned are relatively minor and can be serviced using existing electrical distribution facilities and power generating sources.

7.2 DETERMINATION

A Finding of No Significant Impact (FONSI) determination is warranted for the Kuliouou Wastewater Pump Station Modification And Collection System Rehabilitation Project based upon the information provided in this Final EA document. This Final EA included public and agency review of the published Draft EA.

Based upon the previous discussion of the project's affect on the environment in relation to the 13 Significance Criteria, it is determined that the improvements planned under this project do not have a significant impact on the surrounding environment.

CHAPTER 8
BIBLIOGRAPHY

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State of Hawaii Department of Health. *Water Quality Standards.* Chapter 11-54, Hawaii Administrative Rules.

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APPENDICES

APPENDIX A

Report Figures

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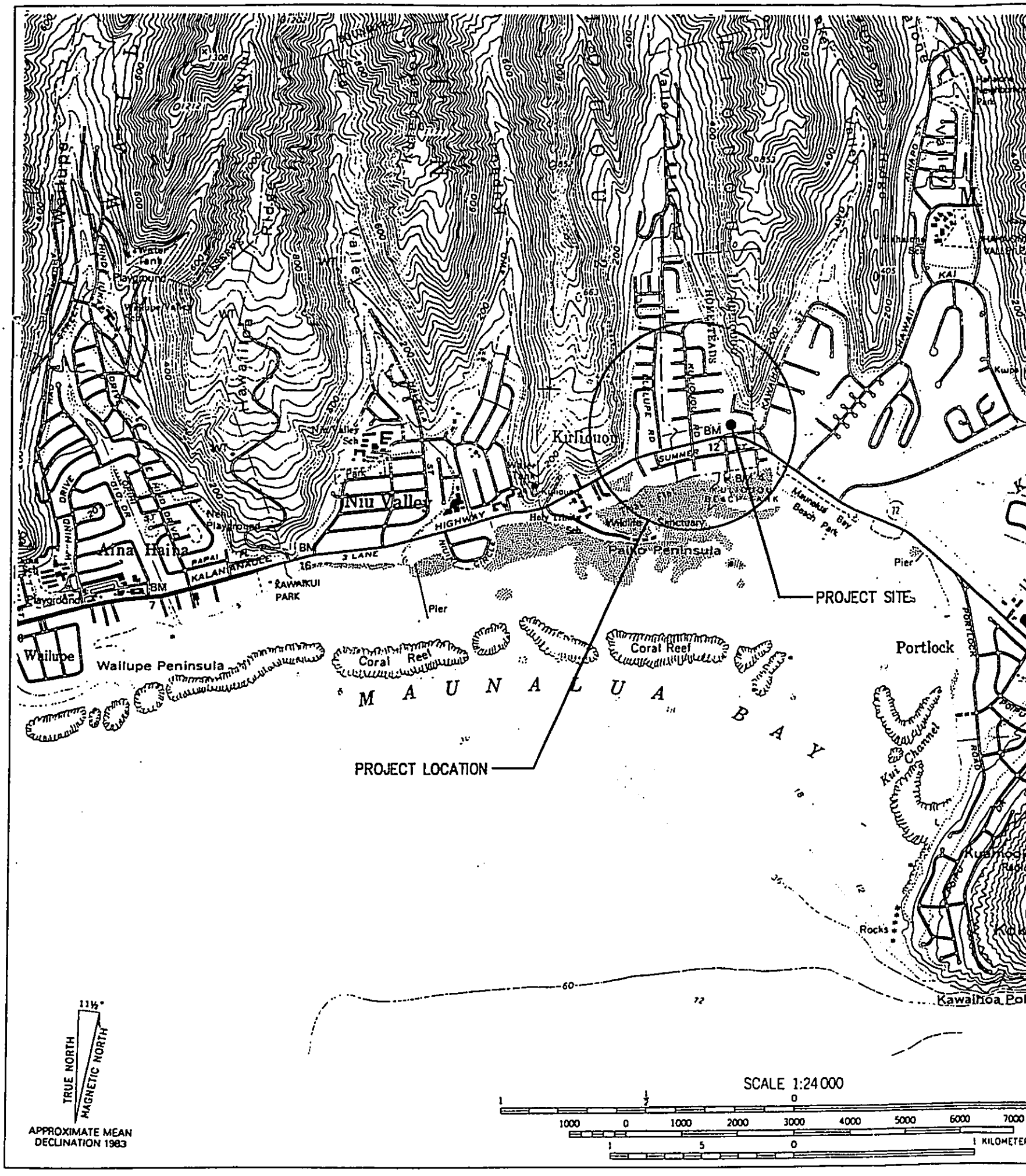

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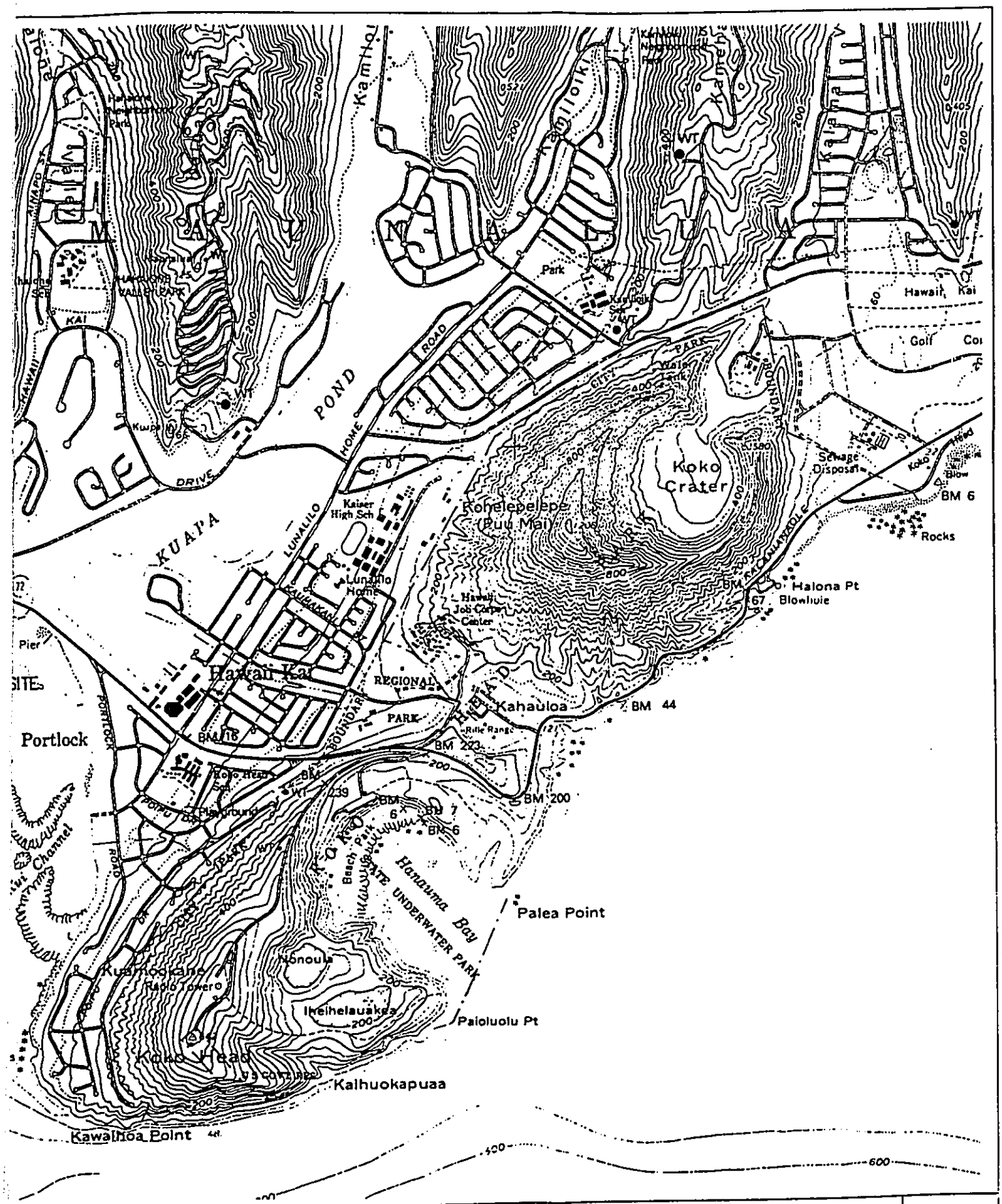

KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT LOCATION AND VICINITY MAP		FIGURE 1
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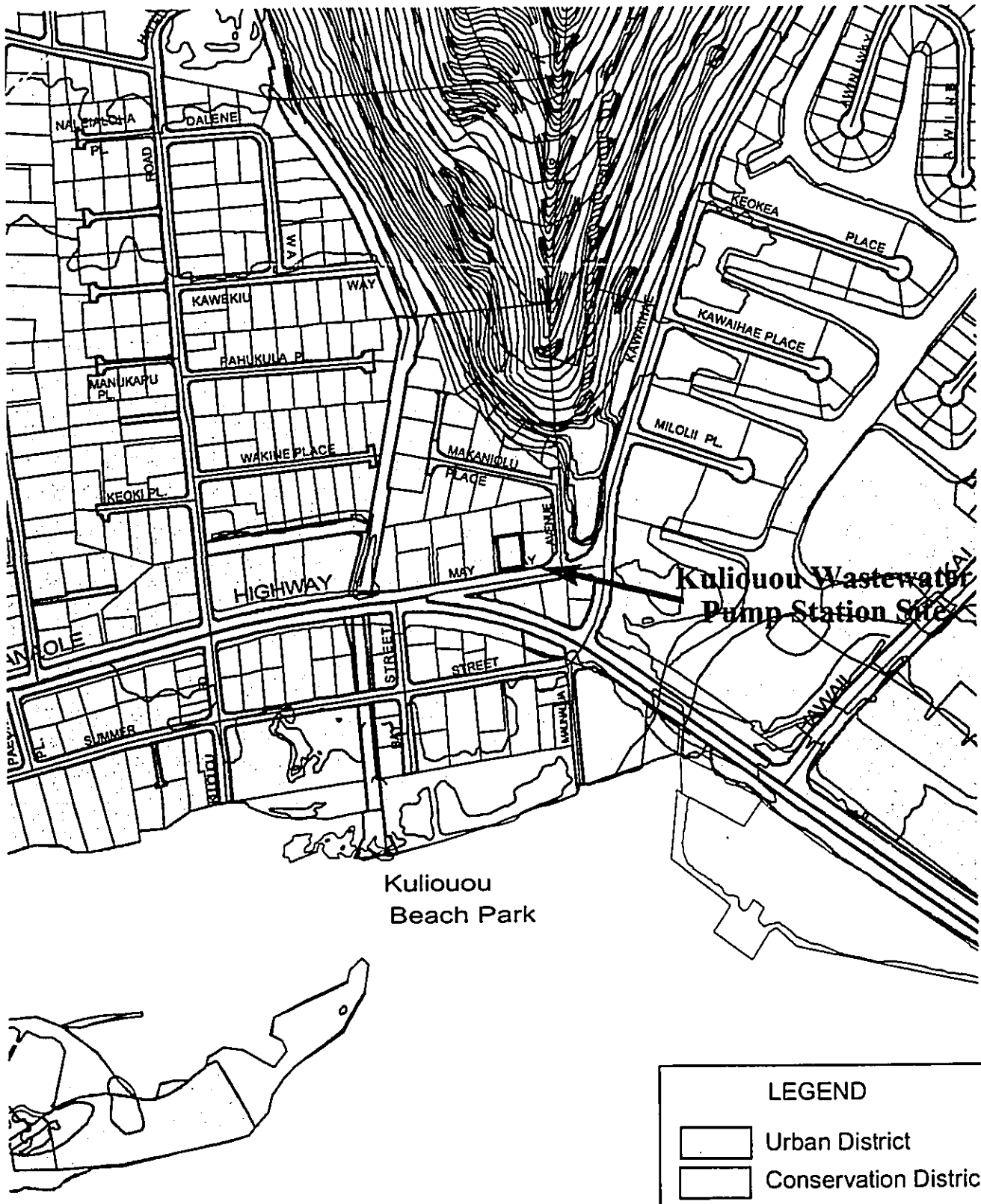

MAP SHOWING STATE LAND USE DISTRICT

Source:
Honolulu Digital Maps, City and County of Honolulu
Information Delivery Service

Figure 2

SSFM INTERNATIONAL

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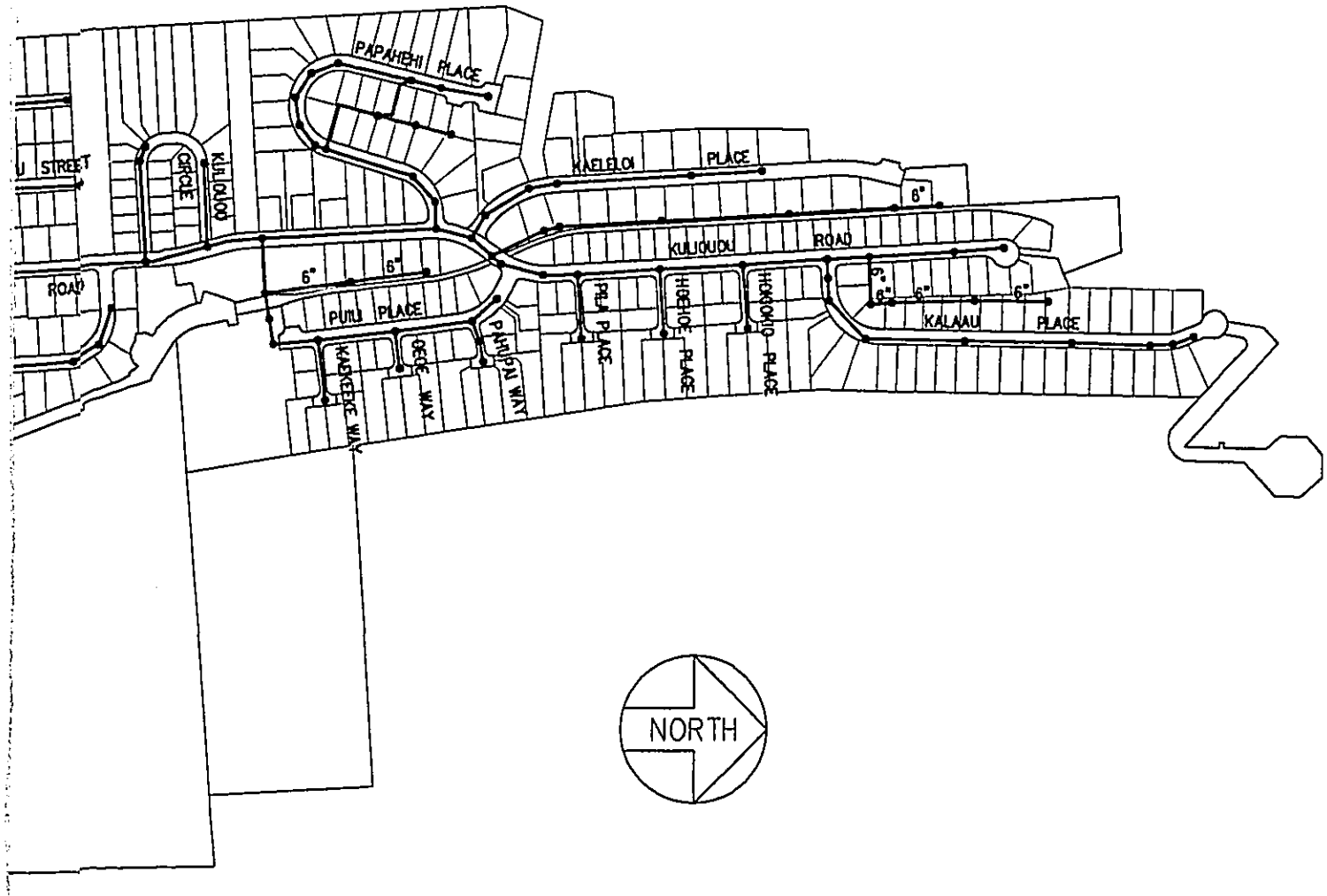

NOTE:
ALL UTILITY LINES ARE 8"ø UNLESS NOTED OTHERWISE.

LEGEND:

(X) MANHOLE #X
—— GRAVITY SEWER LINE
---- FORCE MAIN

KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT		FIGURE
KULIOUOU WASTEWATER PUMP STATION LOCATION MAP		3
SCALE: 1" = 500'	DATE: OCTOBER 2000	

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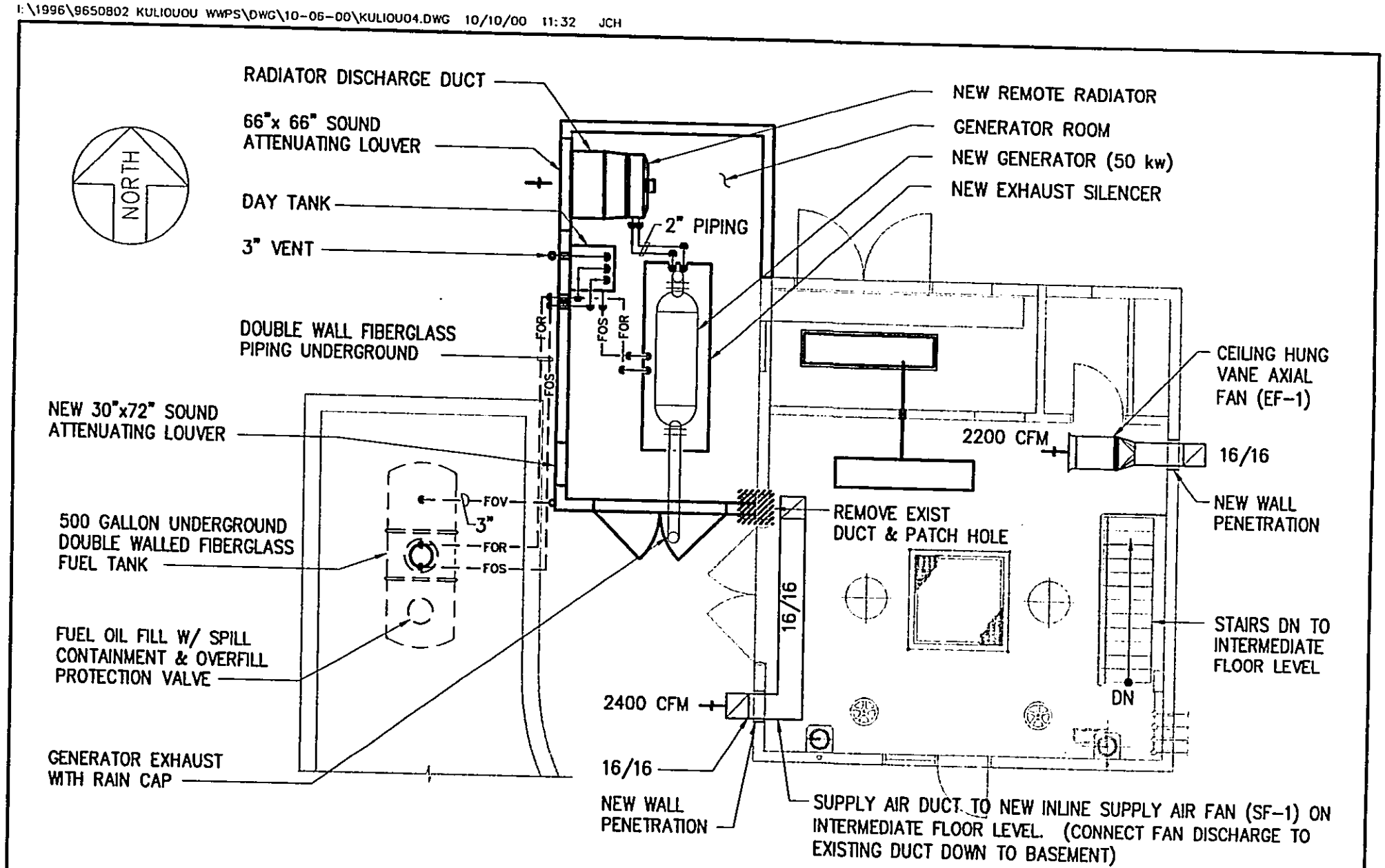


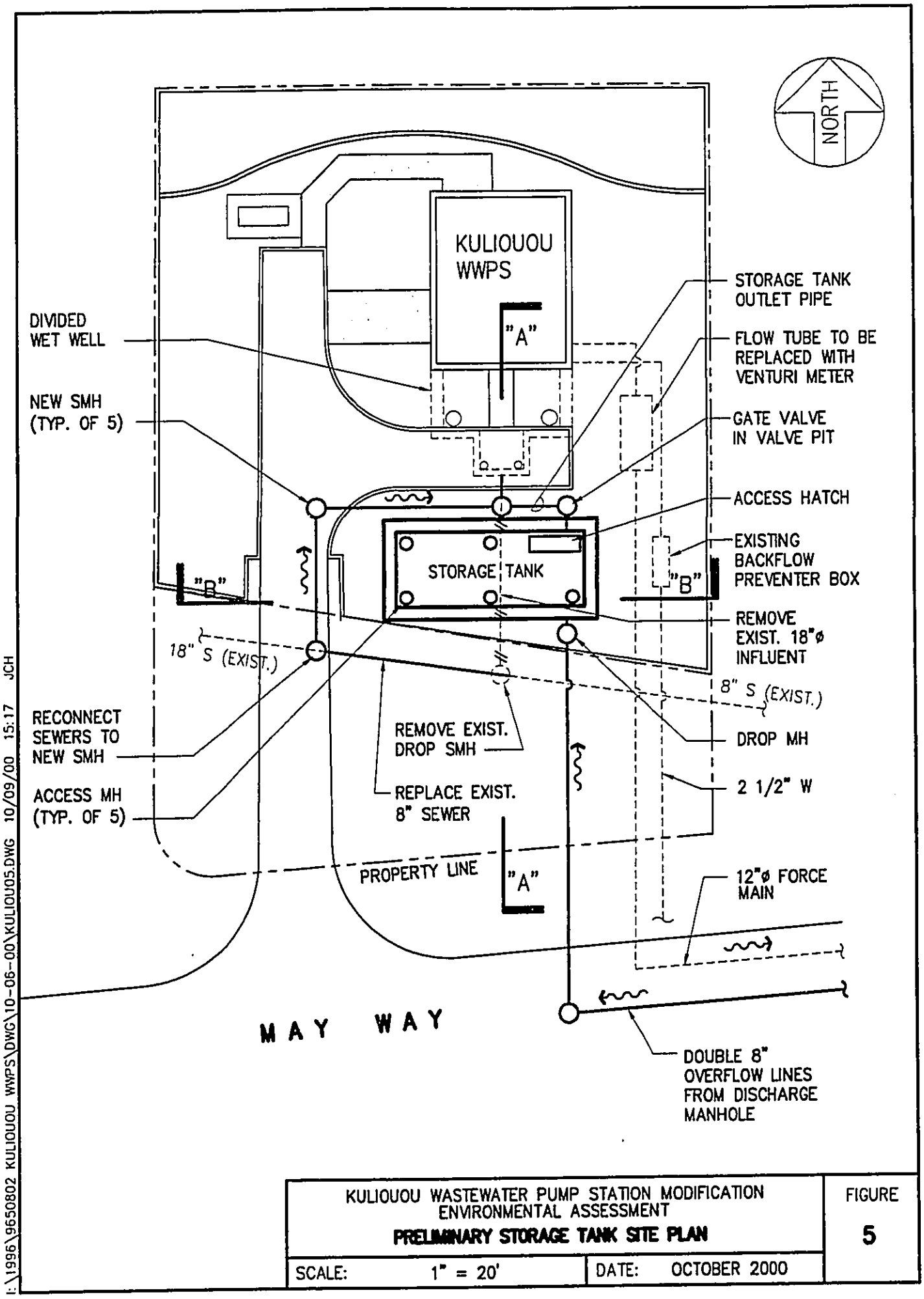
KULIOUOU WASTEWATER PUMP STATION MODIFICATION
ENVIRONMENTAL ASSESSMENT

KULIOUOU WWPS MODIFICATIONS

FIGURE 4

SCALE: 1/8" = 1'- 0"

DATE: OCTOBER 2000



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KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT **PRELIMINARY STORAGE TANK SITE PLAN**		FIGURE **5**
SCALE: 1" = 20'	DATE: OCTOBER 2000	

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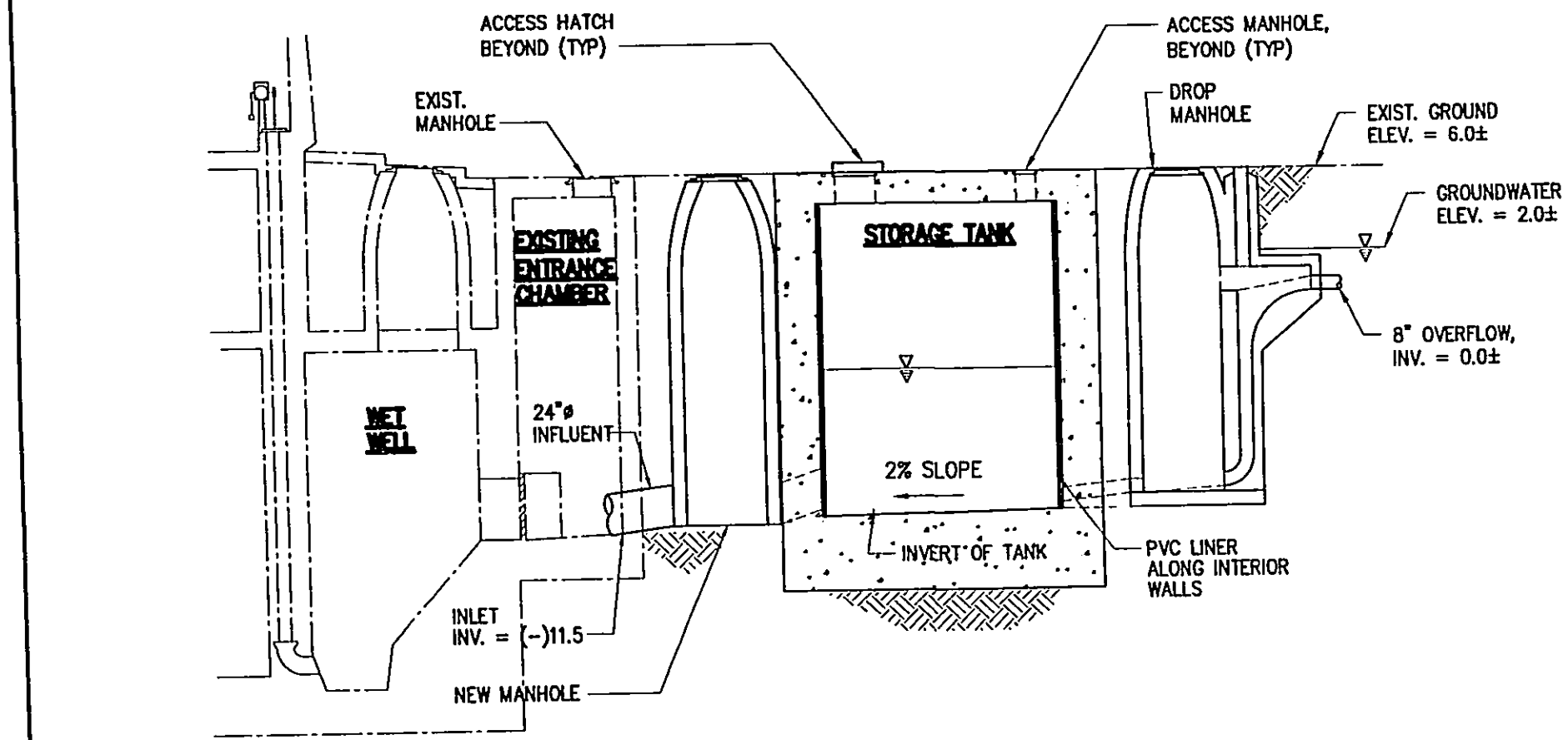

KULIOUOU WASTEWATER PUMP STATION MODIFICATION
ENVIRONMENTAL ASSESSMENT

PRELIMINARY STORAGE TANK – SECTION "A"–"A"

FIGURE 6

SCALE: 1/8" = 1'- 0" | DATE: OCTOBER 2000

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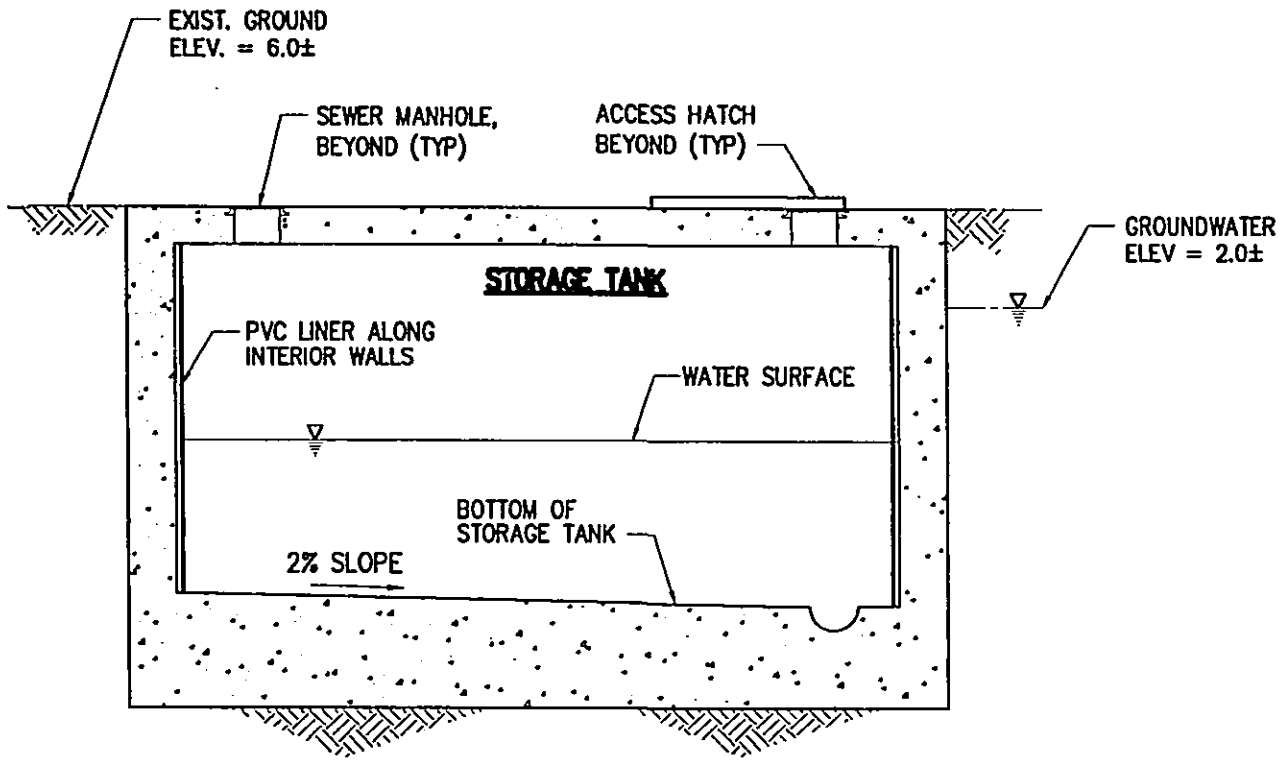
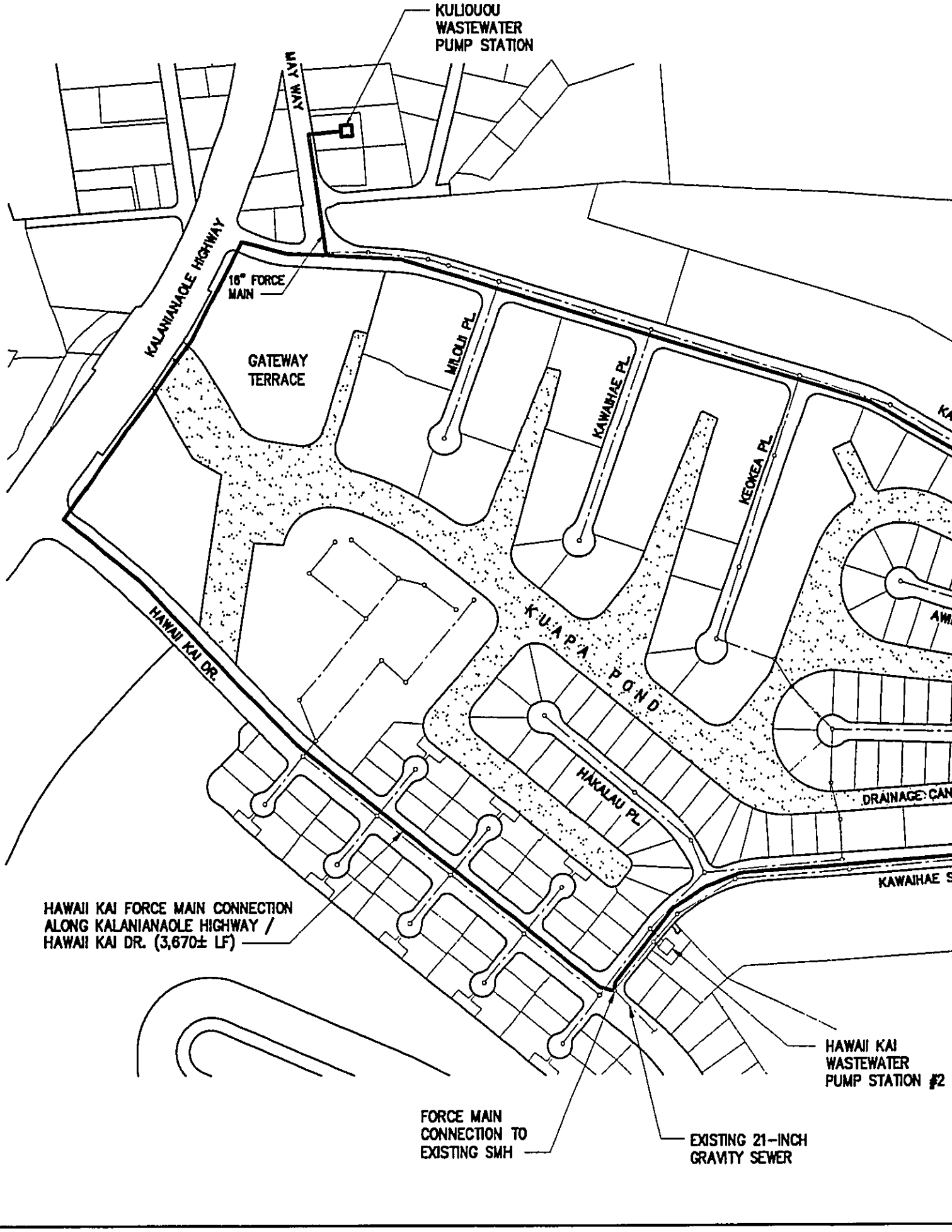


KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT		FIGURE
PRELIMINARY STORAGE TANK – SECTION "B"–"B"		7
SCALE: 1/8" = 1'– 0"	DATE: OCTOBER 2000	



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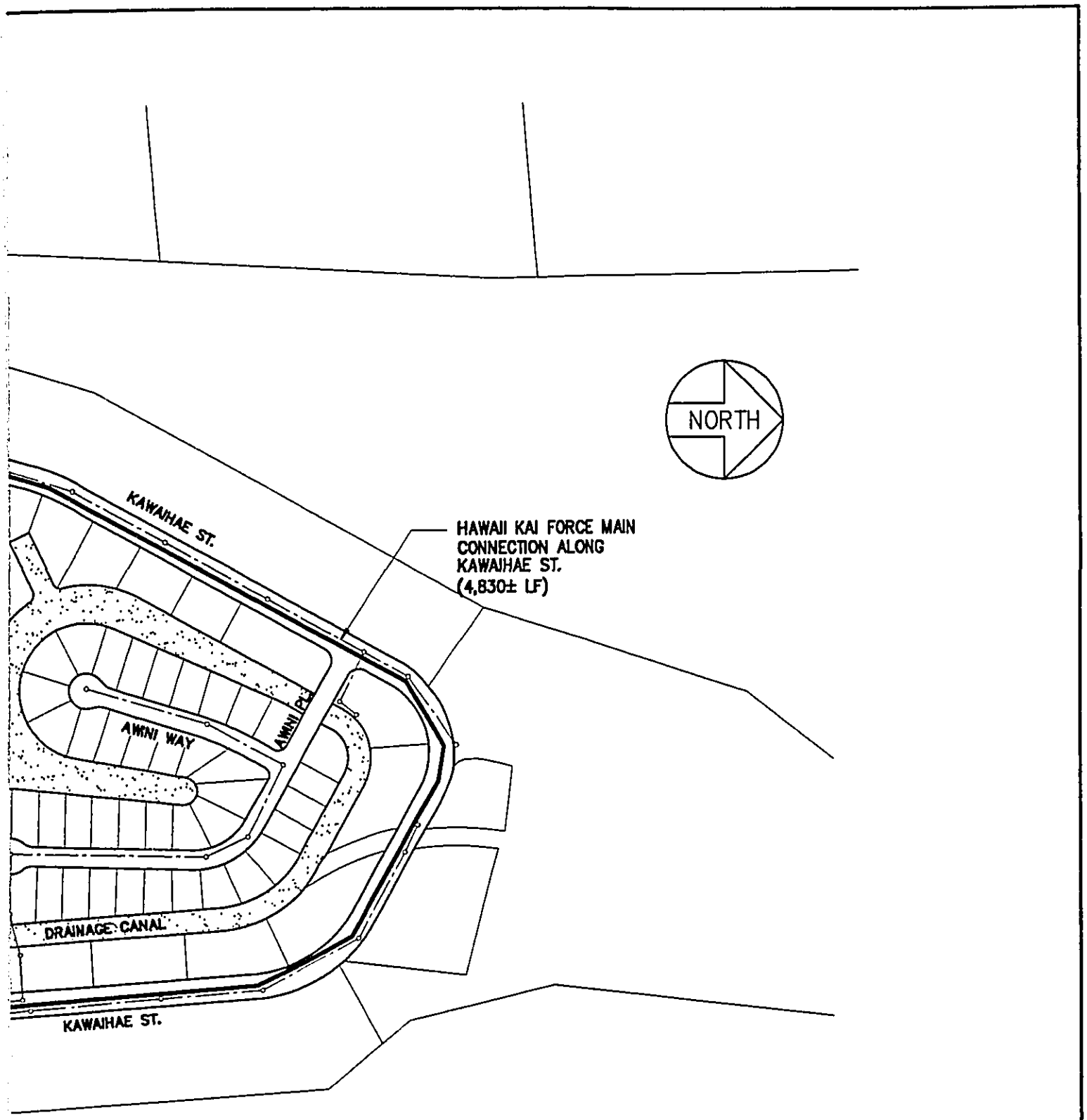

IAWAII KAI
VASTEWATER
'UMP STATION #2

KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT		FIGURE
ALTERNATE FORCE MAIN ALIGNMENTS TO HAWAII KAI WWCS		8
SCALE: 1" = 300'	DATE: OCTOBER 2000	

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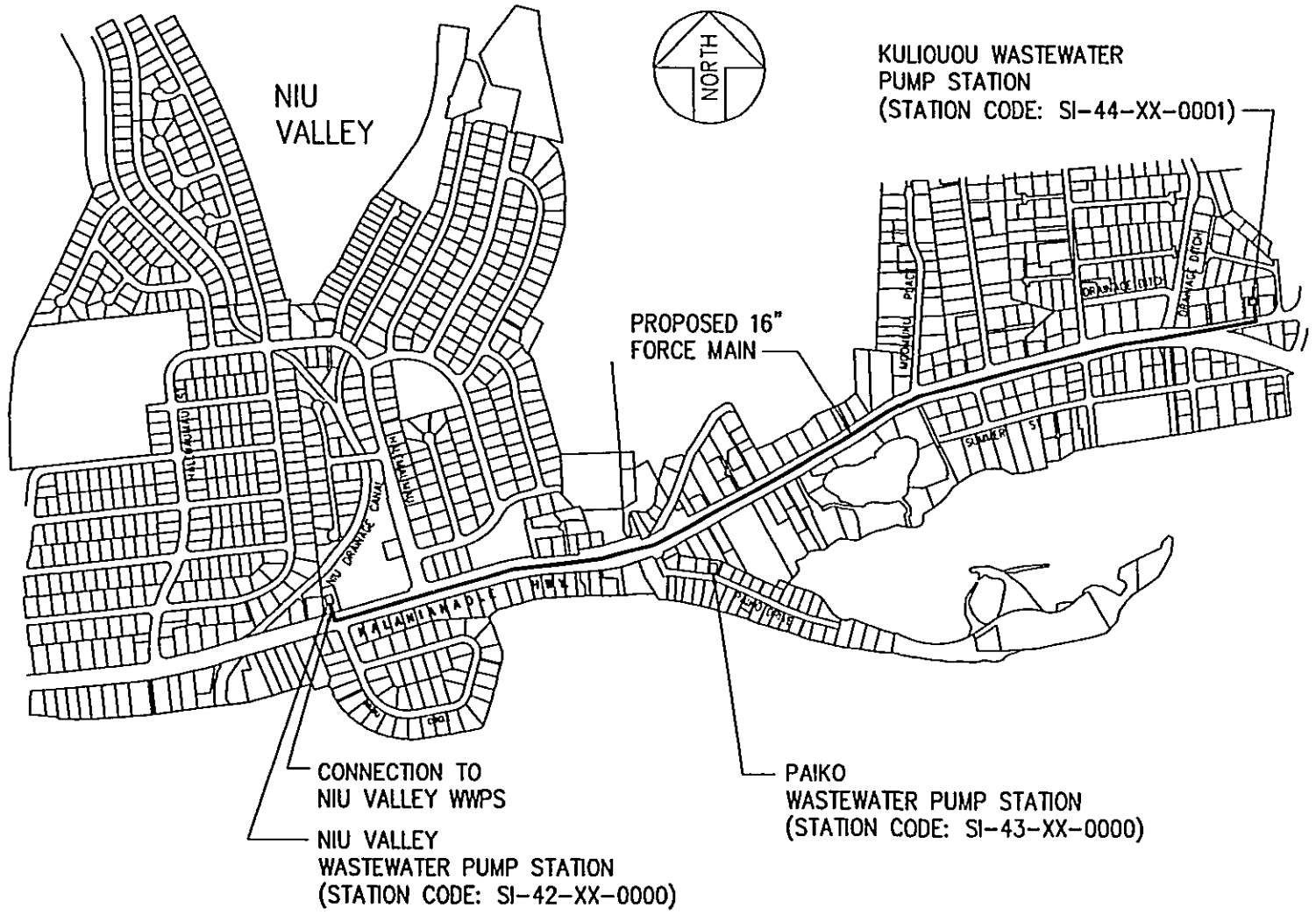
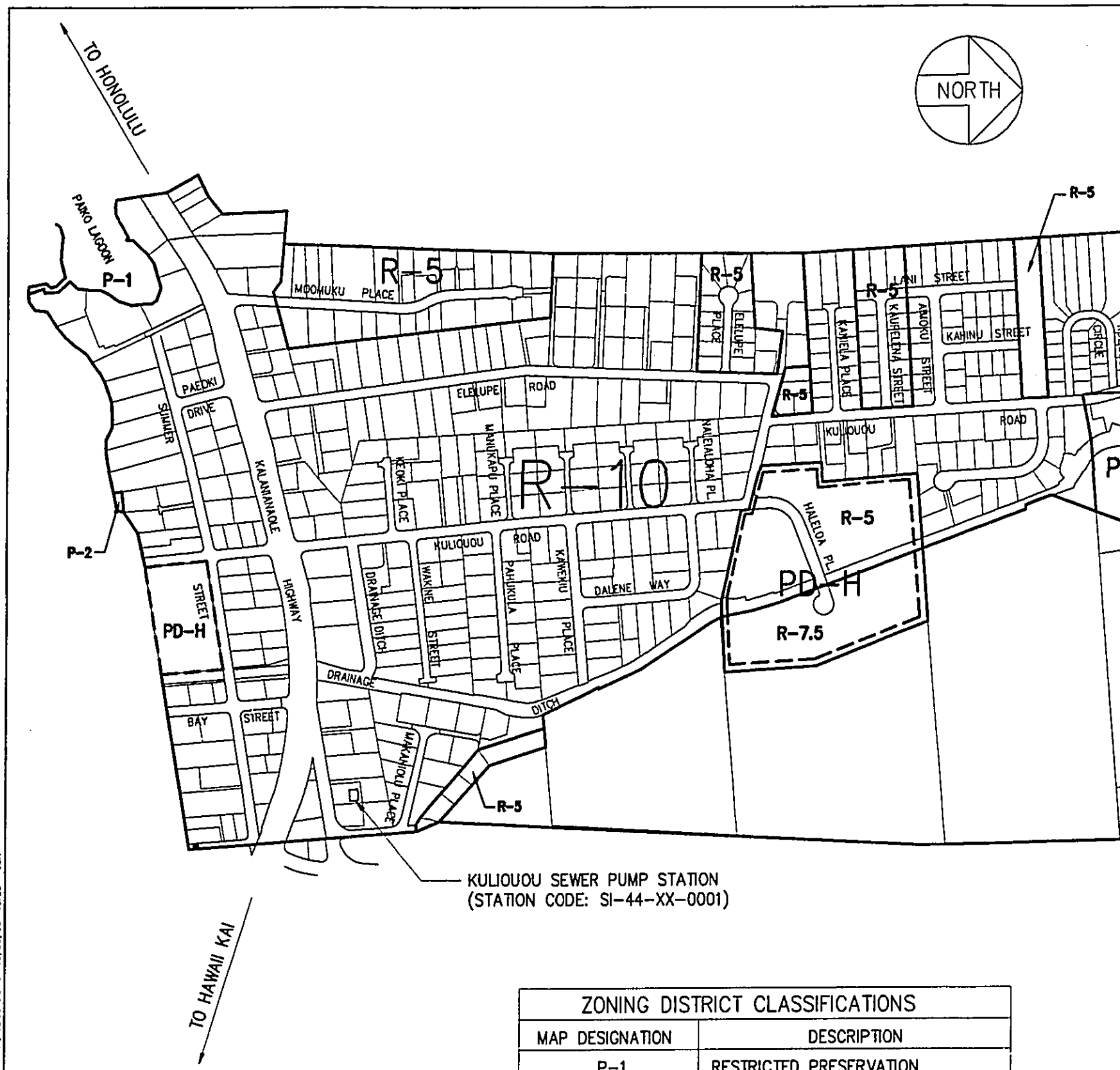


KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT		FIGURE
ALTERNATE FORCE MAIN ALIGNMENT TO SAND ISLAND WWCS		9
SCALE: 1" = 1000'	DATE: OCTOBER 2000	



ZONING DISTRICT CLASSIFICATIONS	
MAP DESIGNATION	DESCRIPTION
P-1	RESTRICTED PRESERVATION
P-2	GENERAL PRESERVATION
PD-H	PLANNED DEVELOPMENT - HOUSING
R-5	RESIDENTIAL
R-7.5	
R-10	

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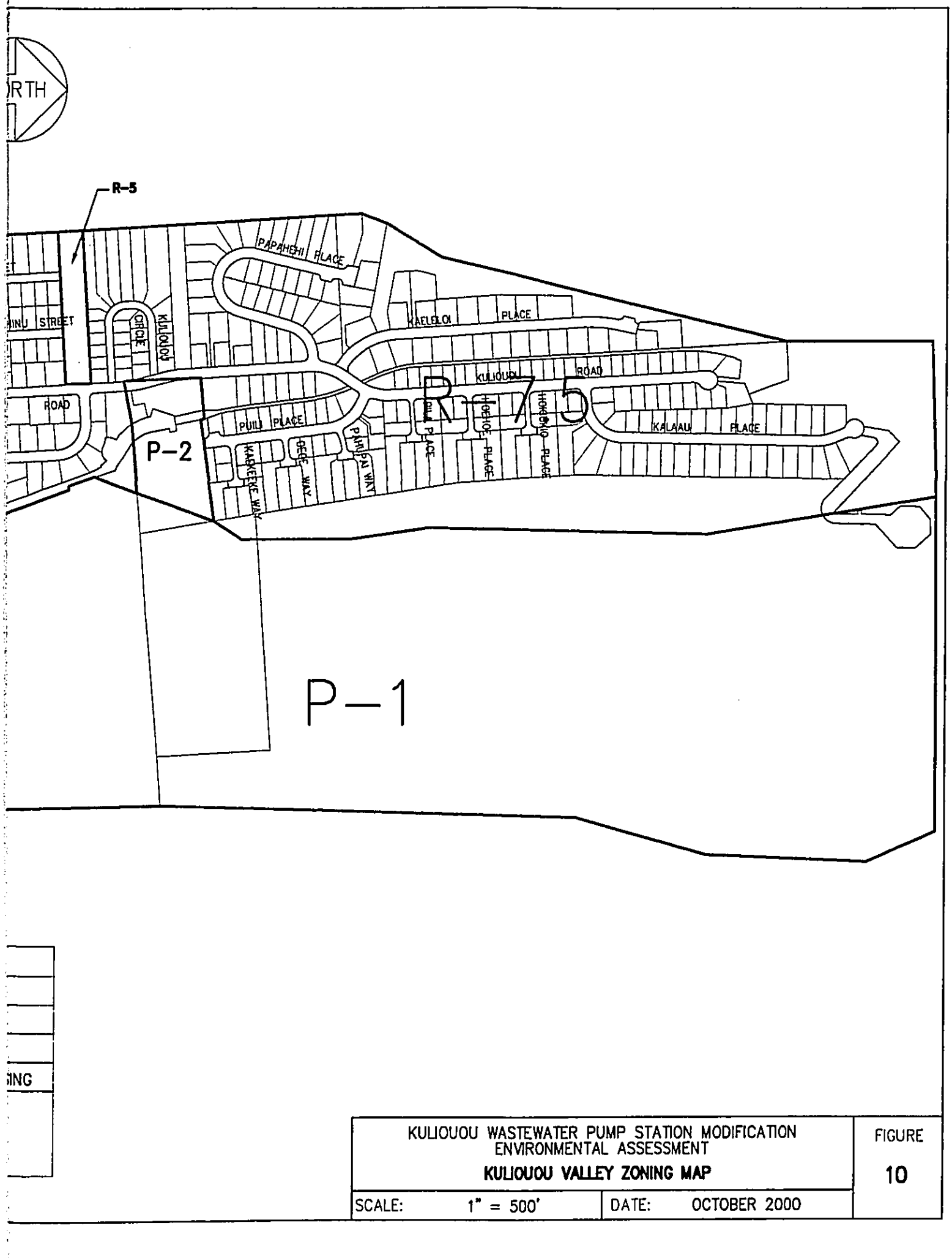


KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT		FIGURE
KULIOUOU VALLEY ZONING MAP		10
SCALE: 1" = 500'	DATE: OCTOBER 2000	

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A — No base flood elevations determined.

ZONE AE — Base flood elevations determined.

OTHER AREAS

ZONE X — Areas determined to be outside 500-year flood plain.

ZONE D — Areas in which flood hazards are undetermined.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

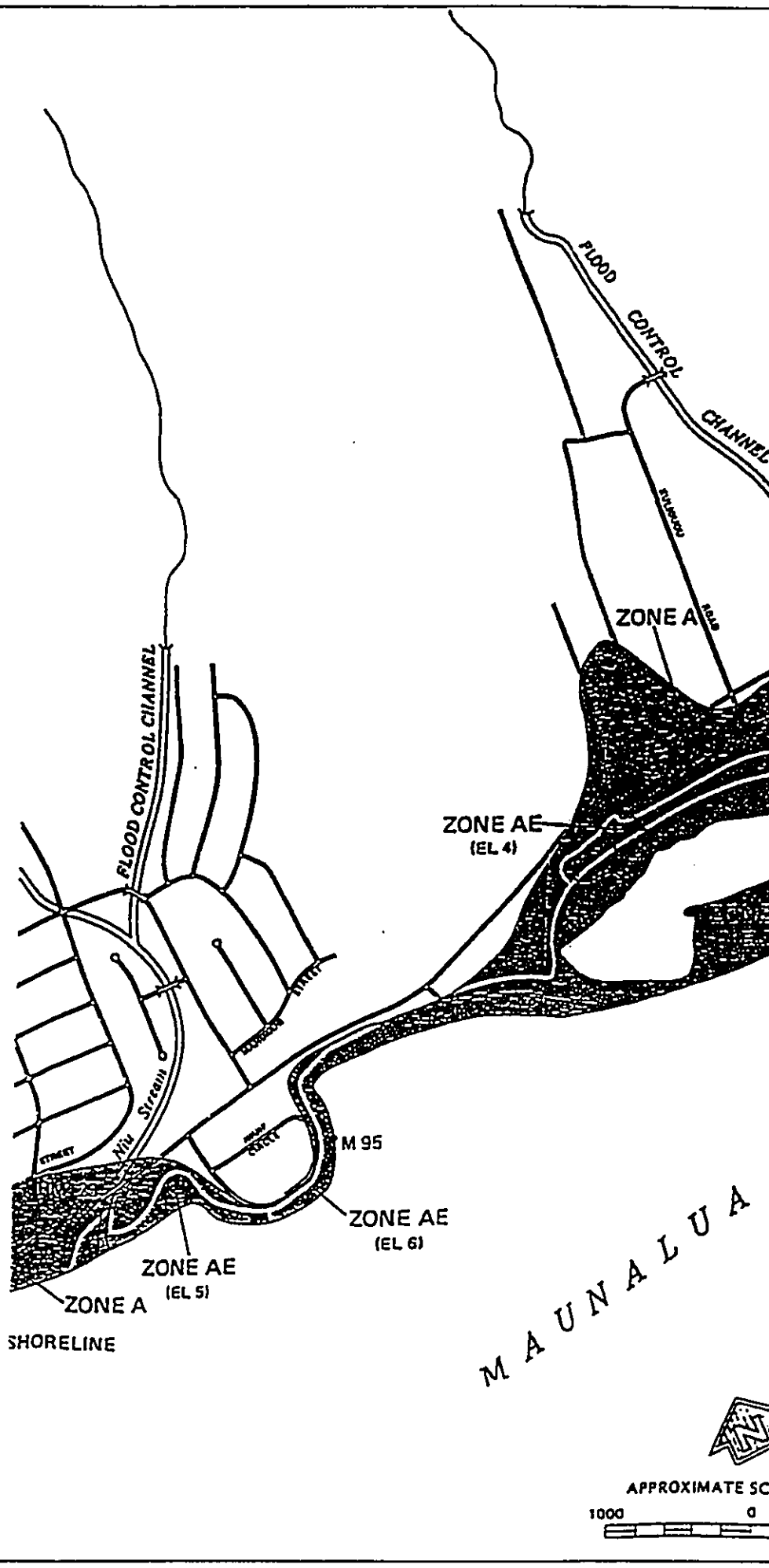
513 — Base Flood Elevation Line; Elevation in Feet*

D — D — Cross Section Line

(EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*

RM7X — Elevation Reference Mark

Referenced to the National Geodetic Vertical Datum of 1929



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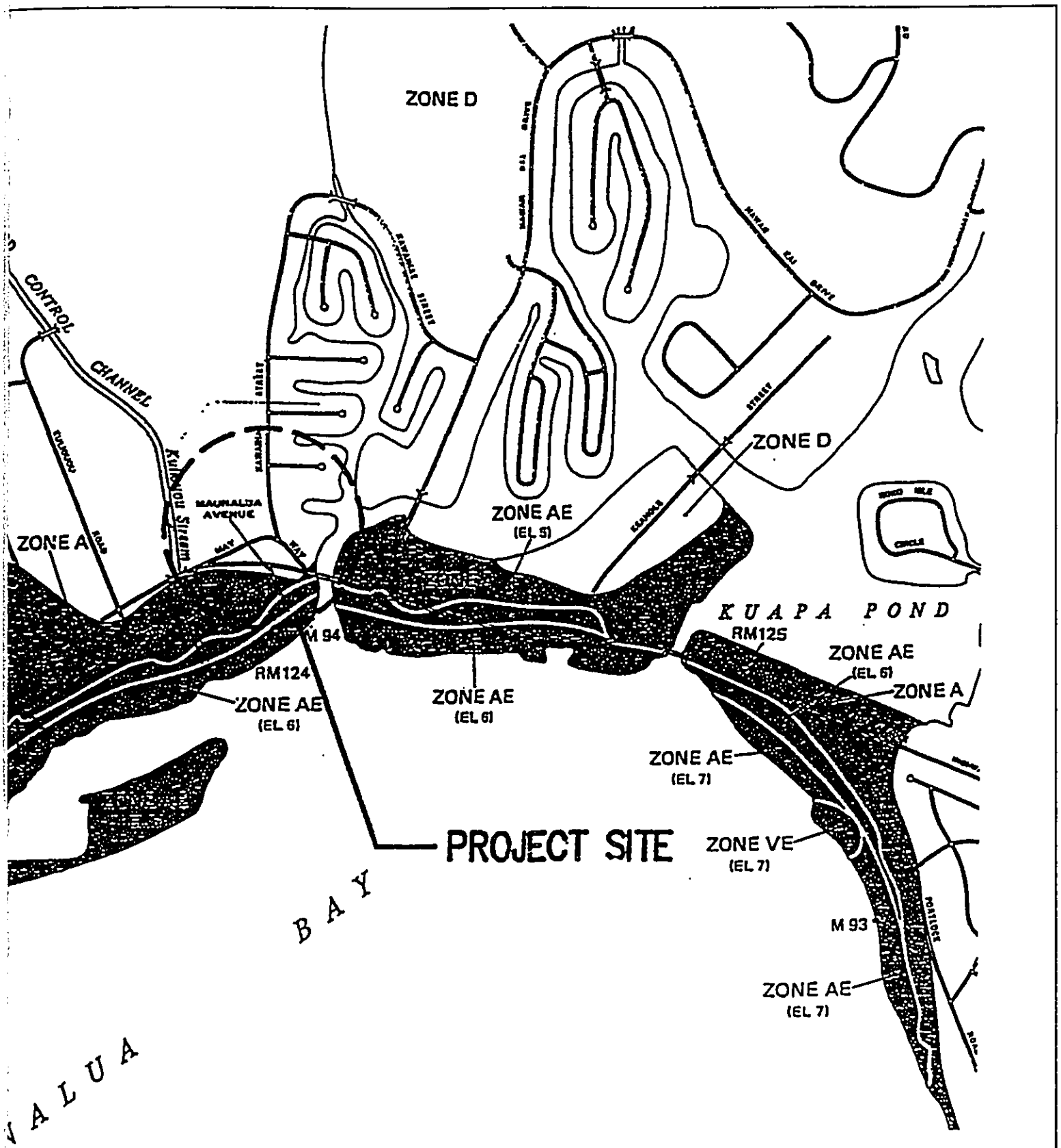

KULIOUOU WASTEWATER PUMP STATION MODIFICATION ENVIRONMENTAL ASSESSMENT **FLOOD INSURANCE RATE MAP**		FIGURE 11
SCALE: AS NOTED	DATE: OCTOBER 2000	

APPENDIX B

Agency And Public Consultation

APPENDIX B-1

Pre-Assessment Agency And Public Consultation

BENJAMIN J. CAYETANO
GOVERNOR

PAUL G. LeMAHIEU, Ph.D.
SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 2000
FILE

June 5, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station
Modification – Early Consultation for Draft EA

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

Thank you for the opportunity to respond.

Very truly yours,

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

PLeM:hy

cc: Paula Yoshioka, DAS

KLAIKEN J. CAYETANO
GOVERNOR OF HAWAII

LAWRENCE MIKE
DIRECTOR OF HEALTH

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

In reply, please refer to:
ENVIRONMENTAL PLANNING OFFICE
HAWAII STATE DEPARTMENT OF HEALTH
919 ALA MOANA BLVD., 3RD FLOOR
HONOLULU, HI 96814-4912

FACSIMILE TRANSMITTAL

DATE: 5/22/00 NO. OF PAGES (w/ cover sheet): 1

TO: Mr. Ronald Sato, AICP

OFFICE: SSFM International

FAX: 521-7348 PHONE: 531-1308

FROM: Cat Bacalso

OFFICE: EPO - DOH

PHONE: (808) 586-4337 FAX: (808) 586-4370

MESSAGE: Re: Kuliouou Wastewater Pump Station Modifications —

We have no comments to make at this time, but would like to received a copy of the EA. Mahalo. Cat Bacalso

NOTE: If this transmittal was illegible or incomplete, please call the sender.

FILE COPY

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

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

June 19, 2000

LD-NAV

Ref.: KULIOUOUWPSMP.RCM

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Kuliouou Wastewater Pump Station Modification Project
East Honolulu, Island of Oahu, Hawaii

Thank you for the opportunity to review and comment on the proposed project. We have transmitted the subject informational material to our appropriate divisions for their review and comment on the proposed project.

Attached herewith is a copy of our Division of Aquatic Resources' comments.

Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division's Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

SSFM INTERNATIONAL, INC.
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C: Oahu District Land Office

STATE OF HAWAII
Department of Land and Natural Resources
Division of Aquatic Resources

SUSPENSE DATE: June 7, 2000

MEMORANDUM

To: William Devick, Administrator WD

From: Richard Sixberry, Aquatic Biologist

Subject: Comments on Environmental Assessment Preparation Notice

Comments Requested By: Dean Uchida, LM

Date of Request: 5/19/00 Date Received: 5/22/00

Summary of Project

Title: Kuliouou Wastewater Pump Station Modification

Proj. By: C&C - Department of Design and Construction

Location: East Honolulu, Oahu

Brief Description:

The applicant proposes to undertake various improvements to the wastewater collection, treatment and disposal system in the Kuliouou community in East Honolulu.

Comments:

We will review the DEA when it is completed and comment on any significant impacts adverse to aquatic resource values at a later date.

Although the early consultation describes briefly the proposed project, it does not discuss the potential effects on the environment. We suggest the forthcoming DEA discuss in detail potential short term impacts and propose specific means for averting or minimizing adverse effects, and provide possible mitigation for unavoidable damage to natural resources in the vicinity of Kuapa Pond.

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

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

July 13, 2000

LD-NAV
Ref.: KULIOUOUWPSMP.RCM

SSFM International
Ronald A. Sato, AICP, Project Planner
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Kuliouo Wastewater Pump Station Modification Project
Early Consultation for Draft Environmental Assessment
East Honolulu, Island of Oahu, Hawaii

The Department has no other comment to offer on the subject matter at this time. Please submit five copies of the Draft Environmental Assessment to the Department of Land and Natural Resources Land Division.

Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division's Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Oahu District Land Office
C&CoH Department of Planning and Permitting
650 South King Street, Honolulu, Hawaii 96813

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

February 3, 1999

Brian Maja
Project Manager
SSFM Engineers, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

LOG NO: 22958
DOC NO: 9901EJ27

Dear Mr. Maja:

SUBJECT: **Chapter 6E-8 Historic Preservation Review -- Pre-Assessment Consultation Request for the Department of Environmental Services -- Environmental Assessment (EA) for Kuliouou Wastewater Pump Station Modification**
Kuliouou, Kona, O'ahu
TMK: 3-8-4:79

Thank you for the opportunity to provide comment during preparation of the EA for the proposed Kuliouou wastewater pump station modification project. The proposed project includes modifications to the existing Kuliouou WWPS, rehabilitation of the existing Kuliouou WWCS and the construction of an underground wastewater equalization reservoir.

We are concerned that improvements proposed in this project may have an adverse effect on historic sites. Historic sites, including numerous human burials have been found in subsurface deposits throughout this area, especially in areas where Jaucus sand deposits are located. During the recent Kalanianaole Highway Widening project, a cemetery/burial-ground containing human skeletal remains was found as well as archaeological deposits related to habitation and possible marine resource exploitation (SIHP 50-80-14-4841) in the vicinity of the KWWPS near May Way. The extent of the cemetery boundary was not defined at the time but is believed to extend beyond the road corridor.

We are also concerned about the potential for unknown human burials and other archaeological deposits being disturbed during collection system improvements being proposed. As noted above, the underlying sediments of Jaucus beach sand in these areas are known to contain human burials and other archaeological deposits associated with traditional Hawaiian use of the area. Such disturbance would

constitute an "adverse effect" on significant historic sites.

We believe that to counter any inadvertent adverse effect on significant historic sites, an archaeological monitor should be hired. That monitor would identify any historic sites, document them, and coordinate with our office on significance evaluations and mitigation treatment. Essentially, the open collection system trenches and the open construction areas near the current pump station would serve as inventory survey steps to identify and document whether historic sites are present.

Prior to beginning construction, a written archeological monitoring plan must be submitted to this office for review and acceptance. An archaeclogical monitoring plan must contain the following specifications:

1) The kinds of historic sites that are anticipated; 2) Where in the construction area the sites are likely to be found; 3) How the expected types of historic sites will be documented, if found; 4) A clear process as to how the monitor will propose the significance evaluations for any sites and obtain our office's approval; 5) A clear process as to how mitigation treatment of any significant sites will be proposed to our office and handled in coordination with our office (particularly related to burials), 6) A clear statement that the archaeologist conducting the monitoring has the authority to halt construction in the immediate area of a find in order to carry out the plan; 7) A coordination meeting between the archaeologist and construction crew is scheduled, so that the construction team is aware of the plan; 8) What laboratory work will be done on resources that are collected; 9) A schedule for report preparation; and 10) Details concerning the archiving of any collections that are made.

If an acceptable archeological monitoring plan is implemented, then we believe that the proposed modification of the Kuliouou Wastewater Pump Station will have "no adverse effect" on significant historic sites which may be in the project areas.

If you have any questions please call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

EJ:jk

BENJAMIN J. CAYETANO
GOVERNOR

ESTHER UEDA
EXECUTIVE OFFICER

SSFM INTERNATIONAL, INC.
RECEIVED
MAY 2000
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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

May 22, 2000

Mr. Ronald A. Sato
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: *Early Consultation for Draft Environmental Assessment: Kuliouou Wastewater Pump Station Modification Project*

We have reviewed the description of the subject project contained in your letter dated May 15, 2000, and find that the project site, as represented on the location map, is designated within the State Land Use Urban District.

We suggest that the draft environmental assessment include a map showing the project site 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:aa

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

LEADING HAWAII INTO THE NEW MILLENNIUM
1959 2000+

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

SSFM INTERNATIONAL, INC.
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MAY 21 2000
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IN REPLY REFER TO:
STP 8.9553

May 17, 2000

Mr. Ronald A. Sato, AICP
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station Modification Project
Early Consultation For Draft Environmental Assessment

Thank you for your transmittal requesting our review of the subject project.

The subject project will not impact our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

Kazu Hayashida

KAZU HAYASHIDA
Director of Transportation

FILE COPY

BOARD OF WATER SUPPLY

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

SSFM INTERNATIONAL, INC.
RECEIVED

June 7, 2000

FILE

Mr. Ronald A. Sato
SSFM International
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Your Transmittal of May 12, 2000 on the Pre-Assessment Consultation Phase for the Kuliouou Wastewater Pump Station Modification Project, Kuliouou, Oahu, TMK: 3-8-04: 79

Thank you for the opportunity to review and comment on the Pre-Assessment document for the proposed project.

We have the following comments to offer:

1. The existing off-site water system cannot provide adequate fire protection as required by our Water System Standards. The existing fire hydrant is approximately 300 linear feet away; therefore, the applicant will be required to install a fire hydrant in the vicinity of the pump station.

2. The construction drawings for the project, including the installation of the hydrant, should be submitted for our review and approval.

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

4. There is an existing 2-inch water meter serving the project site.

5. If a 3-inch or larger water meter is required, the construction drawing showing the installation of the meter should also be submitted for our review and approval.

6. Board of Water Supply approved reduced pressure principle backflow prevention assemblies are required to be installed immediately after all water meters serving the project site.

If you have any questions, please contact Rian Adachi at 527-5245.

Very truly yours,

CLIFFORD S. JAMILE
Manager and Chief Engineer

DEPARTMENT OF PARKS AND RECREATION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4182 • FAX: 523-4054

JEREMY HARRIS
MAYOR

WILLIAM D. BALFOUR, JR.
DIRECTOR

MICHAEL T. AMII
DEPUTY DIRECTOR

SSFM INTERNATIONAL, INC
RECEIVED
JUN 2000
FILE

June 1, 2000

Mr. Ronald A. Sato, AICP
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: *KULIOUOU* WASTEWATER PUMP STATION MODIFICATION PROJECT
EARLY CONSULTATION FOR DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for the opportunity to review and comment on the Early Consultation for the Draft Environmental Assessment of the project relating to the Kuliouou Wastewater Pump Station Modification.

The proposed project will not have an impact on any facility or program of the Department of Parks and Recreation. It is not necessary to include us as an interested party in this particular review process.

Should you have any questions, please contact Mr. John Reid, Planner, at 547-7396.

Sincerely

W. D. Balfour

WILLIAM D. BALFOUR, JR.
Director

WDB:cu
(00-1219JR)

cc: Mr. Don Griffin, Department of Design and Construction

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425 • HONOLULU, HAWAII 96819-1869
TELEPHONE: (808) 831-7761 • FAX: (808) 831-7750 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

May 30, 2000

SSFM INTERNATIONAL, INC.
RECEIVED
2000
FILE

Mr. Ronald A. Sato, AICP
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station Modification Project
Early Consultation For Draft Environmental Assessment

We received your letter dated May 12, 2000, regarding the above-referenced project.

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

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

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

3. Submit construction plans for the generator and diesel fuel tank to the HFD and the Department of Planning and Permitting.

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

Sincerely,

ATTILIO K. LEONARDI
Fire Chief

AKL/KS:ms

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

MICHAEL CARVALHO
ROBERT AU
DEPUTY CHIEFS

OUR REFERENCE CS-DL

May 22, 2000

SSFM INTERNATIONAL, INC.
RECEIVED

FILE

Mr. Ronald A. Sato, AICP
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station Modification Project
Early Consultation for Draft Environmental Assessment

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

Since it is in a residential area, this project may generate calls for police service due to construction dust and noise complaints.

If there are any questions, please call me at 529-3255 or Major Henry Robinson of District 7 at 529-3362.

LEE D. DONOHUE
Chief of Police

By
EUGENE UEMURA
Assistant Chief
Support Services Bureau

FILE COPY

APPENDIX B-2

Draft EA Agency And Public Comments

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

REPLY TO
ATTENTION OF

November 15, 2000

SSFM INTERNATIONAL, INC
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Regulatory Branch

Mr. Ronald A Sato, AICP
SSFM International, Inc.
501 Summer Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

This letter responds to your request for comments on the Draft Environmental Assessment for the Kuliouou Wastewater Pump Station Modification and Forcemain Replacement Project, dated November 8, 2000. Based on the information you provided I have determined that a Department of the Army (DA) permit will not be required for this project provided there will be no trenching or other construction in Kuapa Pond or the unnamed drainage ditch.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-6986 or FAX 438-4060, and reference File No. 200100045.

Sincerely,

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

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-075

February 21, 2001

Mr. George P. Young, P.E., Chief
Regulatory Branch
U.S. Army Engineer District, Honolulu
Department of the Army
Ft. Shafter, Hawaii 96858-5440

Dear Mr. Young:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 15, 2000 on the Draft Environmental Assessment (EA) published for the subject project.

No trenching or other construction activities are planned to occur in Kuapa Pond or the unnamed drainage ditch. Thus, we concur with your statement that a Department of the Army permit would not be required for this project. In the event such activities will need to be conducted in these areas, appropriate coordination would be conducted with your branch to obtain a Department of the Army permit.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR

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

SSFM INTERNATIONAL, INC
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NOV 2 [illegible]
LETTER NO. (P)1696.0
/ES
FILE

NOV 17 2000

Mr. Ronald A. Sato, AICP
501 Summer Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato

Subject: Draft Environmental Assessment for the Kuliouou Wastewater Pump Station Modification and Force Main Replacement, Honolulu, Hawaii
TMK 3-08-004:003

Thank you for the opportunity to review the referenced, Draft Environmental Assessment.

The project does not impact any Department of Accounting and General Services projects or existing facilities. Therefore, we have no comments to offer.

Should you have any questions, please have your staff call Mr. Alan Sanborn of the Planning Branch at 586-0499.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

AY:mo
c: Mr. Sung Ho Lai, Dept of Design & Construction
Ms. Genevieve Salmonson, OEQC

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-068

February 21, 2001

Mr. Gordon Matsuoka, Administrator
Public Works Division
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Matsuoka:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 17, 2000 on the Draft Environmental Assessment published for the subject project.

We note that your department does not have any comments on this project because it would not impact any of your department's projects or existing facilities.

Thank you for your review of this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR

ESTHER UEDA
EXECUTIVE OFFICER

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

November 14, 2000

Mr. Ronald A. Sato
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA) for Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project, Honolulu, Hawaii, TMK 3-8-04: 3

We have reviewed the DEA for the subject project and have no additional comments to offer to our previous comments dated May 22, 2000, provided during the early consultation period for the DEA.

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

c: OEQC
C&C Dept. of Design and Construction

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-069

February 21, 2001

Ms. Esther Ueda, Executive Officer
Land Use Commission
Department of Business, Economic Development & Tourism
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804-2359

Dear Ms. Ueda:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 14, 2000 on the Draft Environmental Assessment published for the subject project.

We note that your department does not have any additional comments on this project to offer to the previous comments already provided as part of the early consultation process.

Thank you for your review of this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR

PAUL G. LeMAHIEU, Ph.D.
SUPERINTENDENT

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

OFFICE OF THE SUPERINTENDENT

November 28, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station Modification Draft EA

The Department of Education has no comment on the subject draft environmental assessment.

Thank you for the opportunity to respond.

Very truly yours,

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

PLeM:hy

cc: Paula Yoshioka, DAS
Sung Ho Lai, Dept. of Design and Construction, C&C
Genevieve Salmonson, OEQC

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-065

February 21, 2001

Dr. Paul. G. LeMahieu, Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Dr. LeMahieu:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 28, 2000 on the Draft Environmental Assessment published for the subject project.

We note that your department does not have any comments associated with this project.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
File:

00-086A/epo

January 4, 2001

Mr. Ronald A. Sato, AICP
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA)
Kuliouou Wastewater Pump Station Modification Project
Honolulu, Hawaii
TMK: 3-8-04:3

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

Water Pollution

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. If a federal permit is required, then a Section 401 Water Quality Certification is required from the State Department of Health, Clean Water Branch.

2. 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.

3. After construction of the proposed facility is completed, a NPDES individual permit will be required if the operation of the facility involves any wastewater discharge into State waters.

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
Environmental Health Administration

c: CWB

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-062

February 21, 2001

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

Dear Mr. Gill:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your comment letter dated January 4, 2001 on the Draft Environmental Assessment published for the subject project.

We note that the Department of Army has determined that a DA Permit would not be required for this project since it would not involve trenching or other construction activities in Kuapa Pond or the unnamed drainage ditch.

A National Pollutant Discharge Elimination System general permit may be required for discharge of hydrotesting water and for construction dewatering activities depending upon the need for excavation for the construction of the proposed detention tank. If dewatering work is required, a general permit would be obtained at least 30 days prior to commencement of any discharge to waters of the State.

After implementation of this project, no discharges into State waters are anticipated as part of the facilities normal operation.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

FILE COPY

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

November 24, 2000

Gary Yee, Director
Department of Design & Construction
650 South King Street
Honolulu, Hawaii 96813

Attention: Sung Ho Lai

Dear Mr. Yee:

Subject: Draft Environmental Assessment (EA) for **Kuliouou Wastewater Pump Station Modification & Force Main Replacement**

We have the following comments to offer:

Two-sided pages: In order to reduce bulk and save on paper, please consider printing on both sides of the pages in the final document.

Contacts: In the final EA enclose copies of any replies to correspondence from the pre-consultation phase of this project, as well as from the draft EA review period. Also contact the neighborhood board, allowing the members sufficient time to review the draft EA and submit comments. Prior to construction notify the surrounding neighbors and property owners of disruptive construction activities.

Visual Resources: Section 4.1.6 concludes that "minimal or no effect" is expected, but the first sentence of this section states "The proposed improvements to the Kuliouou WWPS and WWCS are expected to have a significant impact on existing views of significance or important visual resources." Please either correct this sentence or include appropriate mitigation measures.

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

Sincerely,

GENEVIEVE SALMONSON
Director

c: Ronald Sato, SSFM

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-071

February 21, 2001

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

Dear Ms. Salmonson:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 24, 2000 on the Draft Environmental Assessment (EA) published for the subject project.

Consideration would be given to printing the Final EA on both sides of the pages to reduce bulk and save paper.

The Final EA will include copies of correspondences received and responses provided as part of the public review of the Draft EA. The Draft EA included copies of responses received as part of the early consultation phase. A copy of the Draft EA was distributed to the Kuliouou Neighborhood Board for their review and comments as part of the 30-day comment period. No comments were received from this Board on the document. Appropriate notification would be given to surrounding property owners directly affected by construction activities associated with this project.

Thank you for identifying the correction needed to the statement concerning visual resources. That sentence will be revised to correctly state that the project is "not expected" to have a significant impact on existing views or important visual resources.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

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

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

December 6, 2000

LD-NAV
Ref.: KULIOUOUWPAMPDEA.RCM

Mr. Ronald Sato, AICP
SSFM International
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Draft Environmental Assessment - City and County of Honolulu Department of Design and Construction Kuliouou Wastewater Pump Station Modification and Force Main Replacement, Island of Oahu, Hawaii 3-8-04: 03

We had transmitted the subject information material to our appropriate divisions for their review and comment on the proposed project.

Attached herewith is a copy of our Division of Aquatic Resources and Land Division Engineering Branch comments.

The Department has no other comment to offer on the subject matter. Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

SSFM INTERNATIONAL, INC.
RECEIVED
DEC 0 8 2000
YES
FILE

C: Oahu District Land Office
C&CoH Department of Planning and Permitting
C&CoH Department of Design and Construction

RECEIVED
LAND DIVISION

2000 NOV 30 P 2:24

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii
November 13, 2000

DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

LD/NAV
Ref.: KULIOUOUWPSMPDEA.COM

Suspense Date: 11/30/00

MEMORANDUM:

TO:
XXX Division of Aquatic Resources
Division of Forestry & Wildlife
Division of State Parks
Division of Boating and Ocean Recreation
Historic Preservation Division
XXX Commission on Water Resource Management
Land Division Branches of:
Planning and Technical Services
.XXX Engineering Branch
XXX Oahu District Land Office
Shoreline Processing Services
DAGS Survey Division

'00 NOV 14 AM 09:15 WATER & LAND

FROM: Dean Y. Uchida, Administrator
Land Division

SUBJECT: Draft Environmental Assessment - City and County of Honolulu Department of Design and Construction Kuliouou Wastewater Pump Station Modification and Force Main Replacement, Oahu, Hawaii - TMK: 3-8-004: 003

Please review the attached materials and submit your comments (if any) to us on signed and dated division letterhead on or before the suspense date. If we do not receive a response by the suspense date, we will assume there are no comments.

Should you need more time to review this matter, please contact Nicholas A. Vaccaro at 587-0438

(X) Comments Attached

Signed: Andrew M. Monden
ANDREW M. MONDEN, Chief Engineer

Date: 11/29/00

DLNR-LAND DIVISION
ENGINEERING BRANCH

COMMENTS

LD/NAV
Ref.: KULIOUOUWPSMPDEA.COM

The proposed Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project do not affect our current projects.

The project site, according to FEMA Community Panel Number 150001 0125 B, is located in Zones D, AE and A as explained below.

1. Zone D - Majority of the project site falls in this area in which flood hazards are undetermined.
2. Zone AE – areas in which base flood elevations are determined.
3. Zone A – area in which no flood elevations are determined

The proposed project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) and all applicable Country Ordinances. If there are questions regarding the NFIP, please contact the State Coordinator, Sterling Yong, of the Department of Land and Natural Resources at 587-0428. If there are questions regarding flood ordinances, please contact the applicable County representative.

M:\WLD\MAKAI\SUZIE\OAHU\Kuliouou.082.DOC

DIVISION OF AQUATIC RESOURCES		
DIRECTOR		Suspense Date:
COM FISHERIES		Draft Reply ☐
AQ REC/ENV		Reply Direct ☐
AQ ECOSYS	X	Comments ☐
ST[illegible]		Information ☐
FI[illegible]		Comp Act & File ☐
STATISTICS		Return to:
EDUCATION		Copies to:
SUPERVISOR		Remarks:
CLERICAL		
FED AID		00-951
KS		

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii
November 13, 2000

LD/NAV
Ref.: KULIOUOUWPSMPDEA.COM

Suspense Date: 11/30/00

MEMORANDUM:

TO:
XXX Division of Aquatic Resources
Division of Forestry & Wildlife
Division of State Parks
Division of Boating and Ocean Recreation
Historic Preservation Division
XXX Commission on Water Resource Management
Land Division Branches of:
Planning and Technical Services
XXX Engineering Branch
XXX Oahu District Land Office
Shoreline Processing Services
DAGS Survey Division

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2000 NOV 28 A 11:0
[illegible] DIVISION

FROM: Dean Y. Uchida, Administrator
Land Division

SUBJECT: Draft Environmental Assessment - City and County of Honolulu Department of Design and Construction Kuliouou Wastewater Pump Station Modification and Force Main Replacement, Oahu, Hawaii - TMK: 3-8-004: 003

Please review the attached materials and submit your comments (if any) to us on signed and dated division letterhead on or before the suspense date. If we do not receive a response by the suspense date, we will assume there are no comments.

Should you need more time to review this matter, please contact Nicholas A. Vaccaro at 587-0438

See attached

RECEIVED
[illegible]
DIV. AQUATIC RESOURCES

Suspense Date: November 30, 2000

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii

MEMORANDUM

To: William Devick, Administrator,
From: Richard Sixberry, Aquatic Biologist RS
Subject: Comments on Draft Environmental Assessment

Comments Requested By: Dean Uchida - Land Division

Date of Request: 11/13/00 Date Received: 11/13/00

Summary of Project

Title: Kuliouou Wastewater Pump Station Modifications

Proj. By: C&C - Dept. Of Design and Construction

Location: Kuliouou, Oahu

Brief Description:

The applicant proposes to rehabilitate and improve the Kuliouou wastewater collection system along with improvements to the wastewater pump station. The purpose is to minimize the potential for wastewater spills at a sewer manhole located on Kawaihae Street.

Comments:

Significant long-term impacts adverse to aquatic resource values are not expected from this project provided best management practices are implemented as described by the applicant in the environmental assessment.

However, we suggest that construction activities be restricted to periods of minimal rainfall and areas denuded of vegetation which could be susceptible to erosion are appropriately stabilized. Precautionary measures should include preventing construction materials, petroleum products, debris and especially excavated and eroded soil from entering Kuapa Pond or ocean waters.

Richard Sixberry
Aquatic Biologist

11/27/00

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

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JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-067

February 21, 2001

Mr. Dean Uchida, Administrator
Land Division
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Uchida:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated December 6, 2000 on the Draft Environmental Assessment published for the subject project. We have the following responses to comments received from your Division of Aquatic Resources and Land Division Engineering Branch.

Division of Aquatic Resources

Best Management Practices would be incorporated into the design of this project to minimize erosion and sedimentation from entering coastal waters. Thus, we concur with your statement that significant long-term impacts adverse to aquatic resources would not be expected with this project. Furthermore, implementation of trenchless methods, such as cured-in-place pipe, as part of the sewer rehabilitation program are intended to minimize open trench work and potential impacts on aquatic resources.

Construction activities would try to be planned and coordinated to occur during periods of lower rainfall. However, the feasibility and practicability of this would need to consider other factors such as funding availability and project scheduling as part of coordination work associated with other projects occurring in the region. Vegetated areas affected by open trench work or other construction activities would be appropriately stabilized to minimize the potential for erosion. Appropriate measures would be developed during the project's design, and would consider measures to prevent construction materials, petroleum products, debris, and excavated soils from entering Kuapa Pond or ocean waters.

Land Division Engineering Branch
We note that the project would not affect current projects being undertaken by your division. Design of the project would comply with applicable rules and regulations of the National Flood Insurance Program and City design standards for uses within flood hazard districts.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

RECEIVED

JRS

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

FILE

November 28, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

LOG NO: 26528 ✓
DOC NO: 0011EJ12

Dear Mr. Sato:

SUBJECT **Chapter 6E-8 Historic Preservation Review – Draft Environmental Assessment (DEA) for the Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project**
Kuliouou, Kona, O`ahu
TMK: 3-8-4:79 and various

Thank you for the opportunity to comment on the Draft EA for the proposed Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project. The proposed project includes modifications to the existing Kuliouou WWPS, rehabilitation of the existing Kuliouou WWCS and the construction of an underground wastewater equalization reservoir.

The DEA includes our earlier comments provided during the pre-EA consultation phase. These comments are correctly summarized in Section 4.1.7 and are included in total in Appendix B. We are looking forward to reviewing the archaeological monitoring plan for acceptance as recommended. If an acceptable archeological monitoring plan is implemented, then we believe that the proposed modification of the Kuliouou Wastewater Pump Station and Force Main Replacement Project will have "no adverse effect" on significant historic sites that may be in these project areas.

If you have any questions please call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

EJ:jk

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

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-066

February 21, 2001

Mr. Don Hibbard, Administrator
Historic Preservation Division
Department of Land and Natural Resources
State of Hawaii
Kakuhihewa Building, Room 555
1001 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Mr. Hibbard:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 28, 2000 on the Draft Environmental Assessment published for the subject project.

An archaeological monitoring plan would be developed during the design phase of this project. This plan would address potential open trench work for the collection system, if this is necessary, along with other ground disturbance work such as for the fuel tank and possibly the detention tank. This plan would be coordinated with your department for review and approval. As a result, we acknowledge your department's determination that this project would have "no adverse effect" on significant historic sites.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

January 31, 2001

HWY-PS
2.1601

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment, Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project, Department of Design and Construction City and County of Honolulu, Kuliouou, Oahu, TMK:3-8-4:3

Thank you for the opportunity to review the subject draft environmental assessment.

We have the following comments:

1. If trenching will destroy the City and County of Honolulu Survey Monuments along the various routes, the monuments must be referenced and replaced.

2. Section 4.4.5 states that "...at least one lane will remain open during workday hours." Only one lane closures are permissible. Two lanes must be opened in each direction during construction.

3. If two lanes are proposed for closure during construction, a traffic study showing the impact on traffic flow on Kalanianaole Highway must be submitted for our review and approval.

4. A traffic control plan must be submitted for our review and approval.

5. Where possible, lines should be installed outside of the travelway.

6. Construction plans for work within our State Highway right-of-way must be submitted for our review and approval.

If you have any questions, you may call Mr. Ronald Tsuzuki, Head Planning Engineer, at our Highways Division, 587-1830.

Very truly yours,

BRIAN K. MINAAI
Director-Designate of Transportation

c: Mr. Sung Ho Lai, Department of Design and Construction, City and County of Honolulu
Office of Environmental Quality and Control, Department of Health

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-076

February 21, 2001

Mr. Brian K. Minaai, Director-Designate
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Minaai:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated January 31, 2001 on the Draft Environmental Assessment (EA) published for the subject project.

Open trench work would only be performed in rehabilitation where trenchless methods are not practicable. In the event survey monuments are destroyed by open trench work, they will be referenced and replaced.

Construction work within Kalanianaole Highway would be minimized by rehabilitation or trenchless methods planned. However, if open trench work on this highway is necessary, it would be limited to one lane closures to the extent practicable. It two lanes are necessary for closure during construction, a traffic study addressing the impact on traffic flow along Kalanianaole Highway will be submitted to your department for review and approval.

A traffic control plan would be developed as part of design work for this project. This plan would be submitted to your department for review and approval. No new wastewater lines are associated with this project since it would involve repairing and renovating the existing collection system serving the Kuliouou area.

Construction plans for work within the State highway rights-of-way would be submitted for your review and approval.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

November 24, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, HI 96817

Subject: Kuliouou Wastewater Pump Station Modification And Force Main Replacement Draft Environmental Assessment (DEA), TMK: 3-08-04:003 East Honolulu, Hawai'i

Dear Mr. Sato:

Thank you for the opportunity to comment on the above referenced project. According to the DEA, the project involves the proposed rehabilitation and improvement of the existing Kuliouou wastewater collection system along with the improvements to the Kuliouou Wastewater Pump Station (Kuliouou WWPS). The Office of Hawaiian Affairs offers the following comments:

Historical and Cultural Resources

According to the DEA, "There is the potential for encountering human burials within the Kuliouou WWPS project site and the associated improvements to the Kuliouou WWCS due to the type of subsurface work planned to occur." OHA requests that an archaeological monitoring plan be developed with the State Historic Preservation Division. In addition, and SHPD archaeologist be present to monitor the subsurface work at the proposed project site.

Act 50, Session Laws of Hawai'i (SLH) – Regular Session of 2000

The purpose of Act 50, SLH 2000, is to:

1) "Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State;

2) Amend the definition of "significant effect" to include adverse effects on cultural practices."

OHA requests that the DEIS identify and address the effects on Native Hawaiian culture and traditional and customary rights pursuant to Section 343-2, Hawai'i Revised Statutes, as amended.

If you have any questions, please contact Mark A. Mararagan, policy analyst at 594-1945.

Sincerely,

Colin C. Kippen, Jr.
Deputy Administrator

cc: OHA Board of Trustees
Mr. Sung Ho Lai – Dept. of Design and Construction, C & C of Honolulu
Ms. Genevieve Salmonson - OEQC

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
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JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-074

February 21, 2001

Mr. Colin C. Kippen, Jr., Deputy Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Kippen:

Subject: Kuliouou Wastewater Pump Station Modification Project
Draft Environmental Assessment Comments

Thank you for your letter dated November 24, 2000 on the Draft Environmental Assessment (EA) published for the subject project.

An archaeological monitoring plan would be developed during the project's design in coordination with the State Historic Preservation Division for implementation during construction. Such coordination efforts would include addressing the presence of an archaeologist to monitor subsurface work.

The Draft EA did address the project's effect on traditional cultural practices under the discussion of historic, archaeological, and cultural resources, along with including this factor under the significance criteria in Chapter 5. However, more discussion will be incorporated in the Final EA to further clarify this matter.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

Very truly yours,

RAE M. LOUI, P.E.
Acting Director

cc: SSFM International, Inc.

BOARD OF WATER SUPPLY

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

December 8, 2000

Mr. Ronald A. Sato
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Your Transmittal of November 8, 2000 on the Draft Environmental Assessment for the Kuliouou Wastewater Pump Station Modification Project, Kuliouou, Oahu, TMK: 3-8-04: 79

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

Our previous comments in our letter of June 7, 2000 are still applicable.

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

Very truly yours,

CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Department of Design and Construction
Office of Environmental Quality Control

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
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Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-072

February 21, 2001

MEMORANDUM

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

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

SUBJECT: KULIOUOU WASTEWATER PUMP STATION MODIFICATION PROJECT
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Thank you for your letter dated December 8, 2000 on the Draft Environmental Assessment (EA) published for the subject project.

We note your statement that your previous comments submitted is still applicable. The Draft EA addressed these comments. Appropriate coordination would be conducted with your department to address water system requirements during the design of the project, which includes the normal review of construction plans.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

cc: SSFM International, Inc.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

FILE COPY

JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

2000/CLOG-5910 (PD)

December 6, 2000

SSFM INTERNATIONAL, INC.
RECEIVED
DEC 2000
FILE

Mr. Ronald A. Sato
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Comments on Draft Environmental Assessment (EA) for Kuliouou Wastewater Pump Station Modification and Force Main Replacement
Tax Map Key 3-8-4: 3

We have reviewed the above-referenced document, and offer the following comments on the project as it pertains to the policies and guidelines of the East Honolulu Sustainable Communities Plan (SCP) and the City General Plan.

The EA incorrectly refers to the provisions of the East Honolulu Development Plan (DP). Please note that the East Honolulu Sustainable Communities Plan (SCP) was adopted on July 27, 1999, and superseded the former DP. Moreover, the EA should contain a discussion of the project's conformance with the policies and guidelines of the SCP. The current document states only that the "Kuliouou WWPS is designated 'Public Facility' on the East Honolulu Development Plan's Land Use Map."

Essentially, the SCP presents 3 general policies for wastewater treatment facilities. These are:

1. Connect all wastewater produced within the Urban Community Boundary area to a municipal or publicly-owned sewer service system;

2. Treat and re-use, where feasible, wastewater effluent as a water conservation measure; and,

3. Provide buffer zones and landscape elements between the East Honolulu WWTP and adjacent residential designated areas which mitigate possible visual, noise, and odor impacts.

Therefore, the EA should be revised to incorporate a discussion of the project's compliance with each of the above policies.

We note that a new 11 x 22-foot generator room is proposed "to provide partial noise containment". A study should be conducted to determine the width of the required buffer zones between the site and neighboring dwellings, and the study should suggest specific types of landscaping elements and/or other buffering devices to use for mitigation of visual, noise, and/or odor impacts. In addition, the site plan should be revised to show existing and proposed landscaping, including berms and windrows, between the WWTP and adjacent residential uses.

The EA should also address compliance with the objectives and policies of the City General Plan, specifically in the areas of the Natural Environment, Transportation and Utilities, Public Safety and Health, and Economic Activity.

If you have any questions, please contact Pamela Davis of our staff at 523-4807.

Sincerely yours,

RANDALL K. FUJIKI, AIA
Director of Planning and Permitting

RKF:lh
66996

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
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JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-063

February 21, 2001

MEMORANDUM

TO: MR. RANDALL K. FUJIKI, AIA, ACTING DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

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

SUBJECT: KULIOUOU WASTEWATER PUMP STATION MODIFICATION PROJECT
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Thank you for your letter dated December 6, 2000 on the Draft Environmental Assessment published for the subject project.

A discussion of the applicable policies and guidelines associated with the East Honolulu Sustainable Communities Plan will be incorporated in the Final Environmental Assessment. These would include those three general policies identified for wastewater treatment facilities requested in your letter. We would like to note that the third general policy relates to the privately-owned East Honolulu WWTP which does not involve this project. In addition, the treatment and reuse of wastewater effluent is applicable to the East Honolulu WWTP and similarly does not involve this project.

A study to determine buffer zones between the Kuliouou WWPS and neighboring residences is not practicable for this project. The generator room building addition would be used to store a new emergency generator that would only operate in the event of a power outage to prevent the backup of sewage. Appropriate noise attenuation measures would be incorporated into the design of this room as discussed in the Draft EA to comply with State Department of Health noise regulations.

Visually, the small room addition planned to this existing Kuliouou WWPS would not significantly alter the present view of this facility nor would it create a significant visual impact. The property is already landscaped with large trees and a row of hedges along the facility's

fence. This room addition will have the same design character as the existing facility along with being the same height. In addition, space is not available for further buffer zones on the property. The site location for this building addition was also based upon the functional and operational requirements of this facility.

The Final EA will address the project's consistency with pertinent objectives and policies of the City's General Plan such as those areas identified.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

cc: SSFM International, Inc.

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
PACIFIC PARK PLAZA • 711 KAPIOLANI BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813
PHONE: (808) 523-4529 • FAX: (808) 523-4730

JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

JOSEPH M. MAGALDI, JR.
DEPUTY DIRECTOR

TPD11/00-05427R

December 6, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kuliouou Wastewater Pump Station Modification and Force Main Replacement

In response to the November 8, 2000 letter from SSFM International, Inc., the draft environmental assessment for the subject project was reviewed. We do not have any comments regarding the traffic or transportation impacts of the project.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

CHERYL D. SOON
Director

SSFM INTERNATIONAL INC
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cc: Mr. Sung Ho Lai
Department of Design and Construction

Office of Environmental Quality Control

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
Web site: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-064

February 21, 2001

MEMORANDUM

TO: MS. CHERYL D. SOON, ACTING DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

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

SUBJECT: KULIOUOU WASTEWATER PUMP STATION MODIFICATION PROJECT
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Thank you for your letter dated December 6, 2000 on the Draft Environmental Assessment published for the subject project.

We note that your department does not have any comments regarding traffic or transportation impacts associated with this project.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

cc: SSFM International, Inc.

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425 • HONOLULU, HAWAII 96819-1869
TELEPHONE: (808) 831-7761 • FAX: (808) 831-7750 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

SSFM INTERNATIONAL, INC.
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November 22, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment for the Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project

We received your letter dated November 8, 2000, regarding the Draft Environmental Assessment for the above-referenced project proposed by the City and County of Honolulu's Department of Design and Construction.

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

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

2. Notify the Fire Communication Center at 523-4411 regarding any interruption in the existing fire hydrant system during the project.

3. Submit a permit application for the generator fuel tank to the HFD prior to installation.

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

Sincerely,

Attilio K. Leonardi

ATTILIO K. LEONARDI
Fire Chief

AKL/KS:jo

cc: Mr. Sung Ho Lai, Department of Design and Construction
Office of Environmental Quality and Control

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

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-070

February 21, 2001

MEMORANDUM

TO: MR. ATTILIO K. LEONARDI, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

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

SUBJECT: KULIOUOU WASTEWATER PUMP STATION MODIFICATION PROJECT
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Thank you for your letter dated November 22, 2000 on the Draft Environmental Assessment published for the subject project.

Specifications associated with construction plans prepared during the design of this project would include provisions for implementation by the contractor to address your requests. This would include maintaining fire apparatus access throughout the construction site for the duration of the project and notification of the Fire Communication Center if there is any interruption in the existing fire hydrant system during construction activities. A permit application for the generator fuel tank would be submitted to your department at the appropriate time prior to installation.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

cc: SSFM International, Inc.

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

MICHAEL CARVALHO
ROBERT AU
DEPUTY CHIEFS

SSFM INTERNATIONAL, INC.
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OUR REFERENCE CS-LS

November 22, 2000

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Sato:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Kuliouou Wastewater Pump Station Modification and Force Main Replacement Project.

We have noted that our previous comments and proposed mitigation measures have been included in section 4.5.3 of the subject document. We have no further commentS to offer at this time.

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

Sincerely,

LEE D. DONOHUE
Chief of Police

By
EUGENE UEMURA, Assistant Chief
Support Service Bureau

cc: Mr. Sung Ho Lai, DDC
OEQC

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

RAE M. LOUI, P.E.
ACTING DIRECTOR

GEORGE T. TAMASHIRO, P.E.
DEPUTY DIRECTOR

ERIC G. CRISPIN, AIA
ASSISTANT DIRECTOR

WWDE.P 01-073

February 21, 2001

SSFM INTERNATIONAL, INC.
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MEMORANDUM

TO: MR. LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

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

SUBJECT: KULIOUOU WASTEWATER PUMP STATION MODIFICATION PROJECT
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Thank you for your letter dated November 22, 2000 on the Draft Environmental Assessment (EA) published for the subject project.

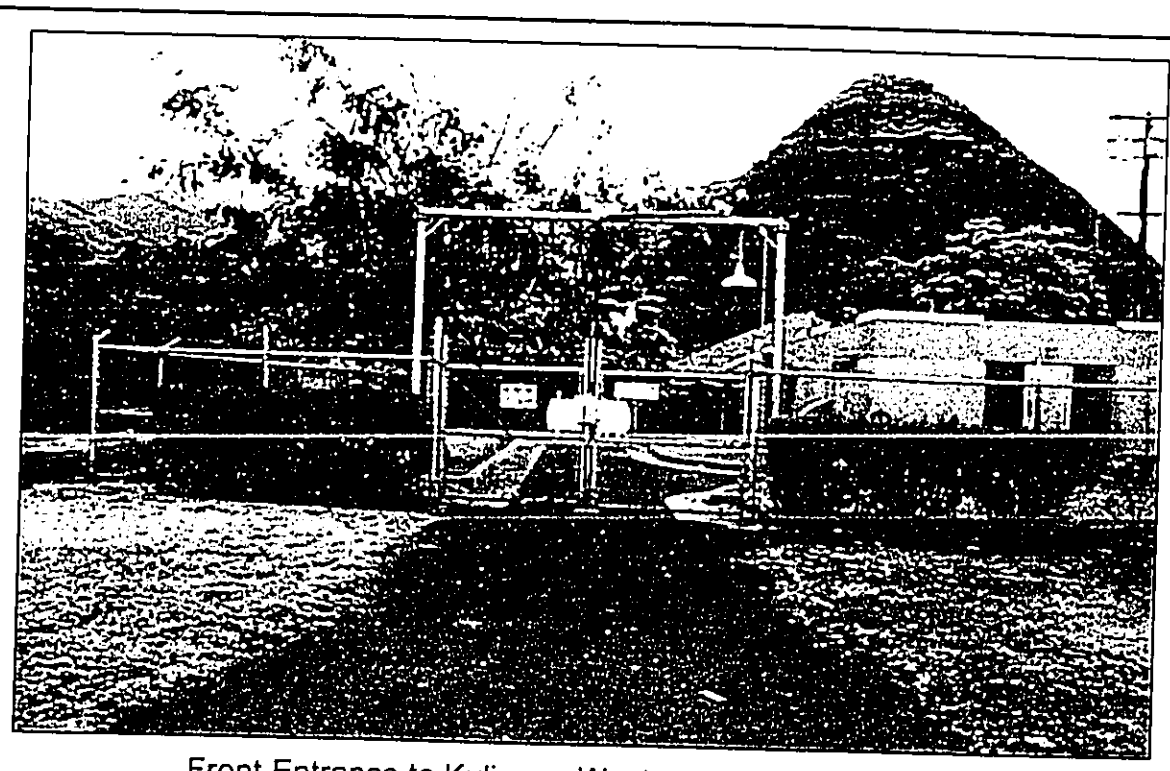
We note that your department has no further comments to offer at this time as the Draft EA addressed your earlier comments provided.

Thank you for your comments on this important project. Should you have any further comments or questions, please call Sung Ho Lai, Project Manager, at 527-5398.

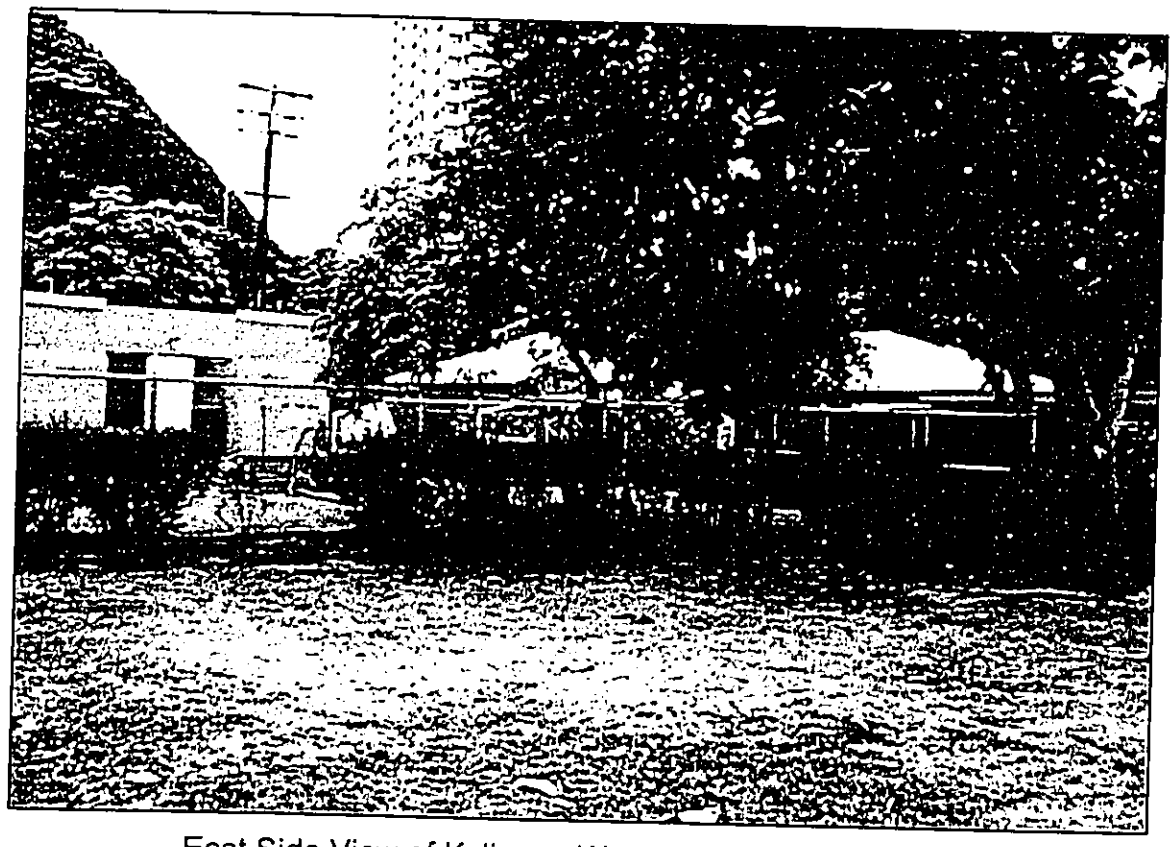
cc: SSFM International, Inc.

APPENDIX C

Photographs Of Kuliouou WWPS



Front Entrance to Kuliouou Wastewater Pump Station



East Side View of Kuliouou Wastewater Pump Station

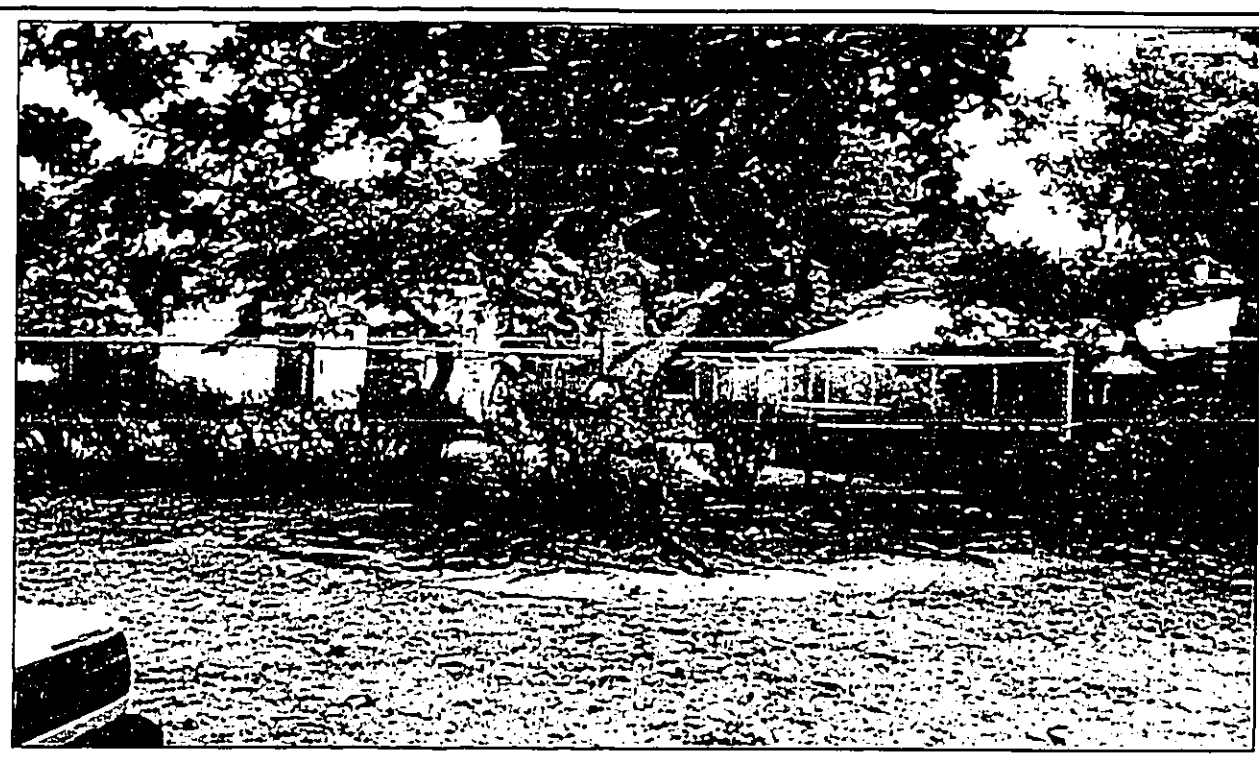
PHOTOS OF KULIOUOU WASTEWATER PUMP STATION

Figure C-1

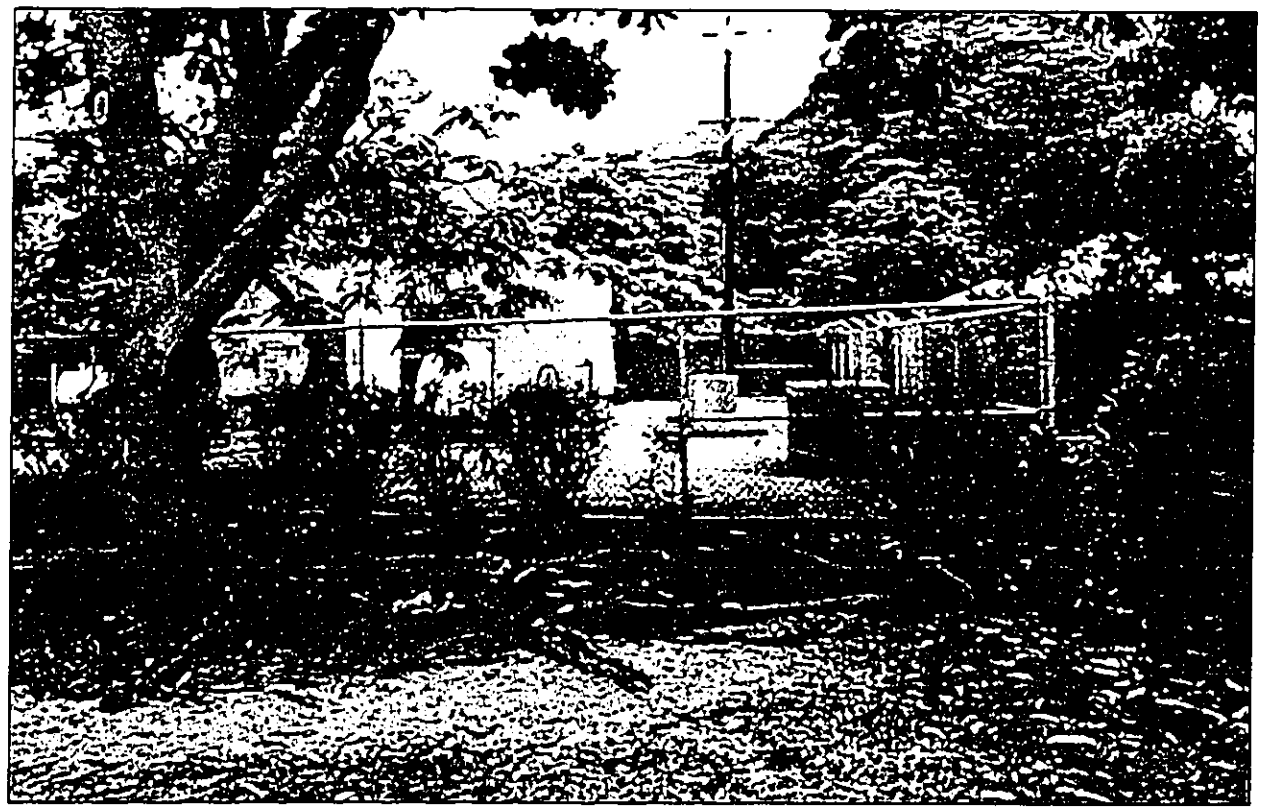
Kuliouou Wastewater Pump Station Modification Project
City Department of Design and Construction

Source:
SSFM International, Inc.

SSFM INTERNATIONAL



Side View Of Building Beyond Fenced Area



Kuliouou Wastewater Pump Station's Eastern Property

PHOTOS OF KULIOUOU WASTEWATER PUMP STATION

Figure C-2

Kuliouou Wastewater Pump Station Modification Project
City Department of Design and Construction

Source:
SSFM International, Inc.

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