DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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MUFI HANNEMANN
MAYOR

WAYNE M. HASHIRO, P.E.
DIRECTOR

EUGENE C. LEE, P.E.
DEPUTY DIRECTOR

WW.P 05-0149

April 27, 2005

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

Dear Ms. Salmonson,

Subject: Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Kapiolani Area Revised Sewer System, Contract No. F92291
TMK: 2-3-03, 04, 05, 07, 09, 10, 14, 15, 18, 22, 35, 36, & 41,-Honolulu, Oahu

The City and County of Honolulu Department of Design and Construction, has approved the Final EA and FONSI determination for the subject project. Please publish this notice in the next available Environmental Notice.

We have enclosed a completed OEQC Publication form, four copies of the final EA, and the project summary. The electronic file of the project summary has been forwarded to you by E-mail. If you have any questions, please contact Bill Liu with the Wastewater Division at 527-5388.

Very truly yours,

for WAYNE M. HASHIRO, P.E.
Director

Attachments

cc: Thomas Tamanaha
Fukunaga and Associates, Inc.

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OFC. OF ENVIRONMENTAL QUALITY CONTROL

2005-05-08 FONSI
KAPI'OLANI AREA REVISED SEWER SYSTEM

MAY 8 2005

DEPARTMENT OF DESIGN AND CONSTRUCTION
City and County of Honolulu — *Oahu, Hawaii*

KAPIOLANI AREA
REVISED SEWER SYSTEM
CONTRACT NO. F82291

Final Environmental Assessment

April 2005

FUKUNAGA AND ASSOCIATES, INC.
Consulting Engineers
1388 Kapiolani Boulevard, Second Floor
Honolulu, Hawaii 96814
(808) 944-1821

FINAL ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

KAPIOLANI AREA REVISED SEWER SYSTEM

Honolulu, Oahu, Hawaii

TMK: 2-03-003 to 005, 007, 009, 010, 014, 015,
018, 022, 035, 036, and 041

(This Environmental Document Has Been Prepared
Pursuant To Chapter 343, Hawaii Revised Statutes)

Responsible Officer: Eugene C Lee Date: 4/28/05

for Wayne M. Hashiro, P.E., Director
City and County of Honolulu
Department of Design and Construction

Prepared For

City and County of Honolulu
Department of Design and Construction

Prepared By

Fukunaga And Associates, Inc.
Consulting Engineers
1388 Kapiolani Blvd, 2nd Floor
Honolulu, Hawaii 96814

April 2005

I. INTRODUCTION

A. GENERAL

The Kapiolani Area Revised Sewer System (KARSS) project involves the rehabilitation of various sewer lines connected to the Kapiolani Trunk Sewer in the Kapiolani area. The project location is shown on **Figure I-1**. The Kapiolani study area is shown on **Figure I-2**. This environmental assessment has been prepared in accordance with Chapter 343, Hawaii Revised Statutes, for the sewer repairs and reconstructions recommended in the planning document "Kapiolani Area Revised Sewer System Design Alternatives Report".

B. PROPOSING AGENCY

City and County of Honolulu, Department of Design and Construction

C. APPROVING AGENCY

City and County of Honolulu, Department of Design and Construction

II. SEWER SYSTEM EVALUATION AND ALTERNATIVES CONSIDERED

A. BACKGROUND

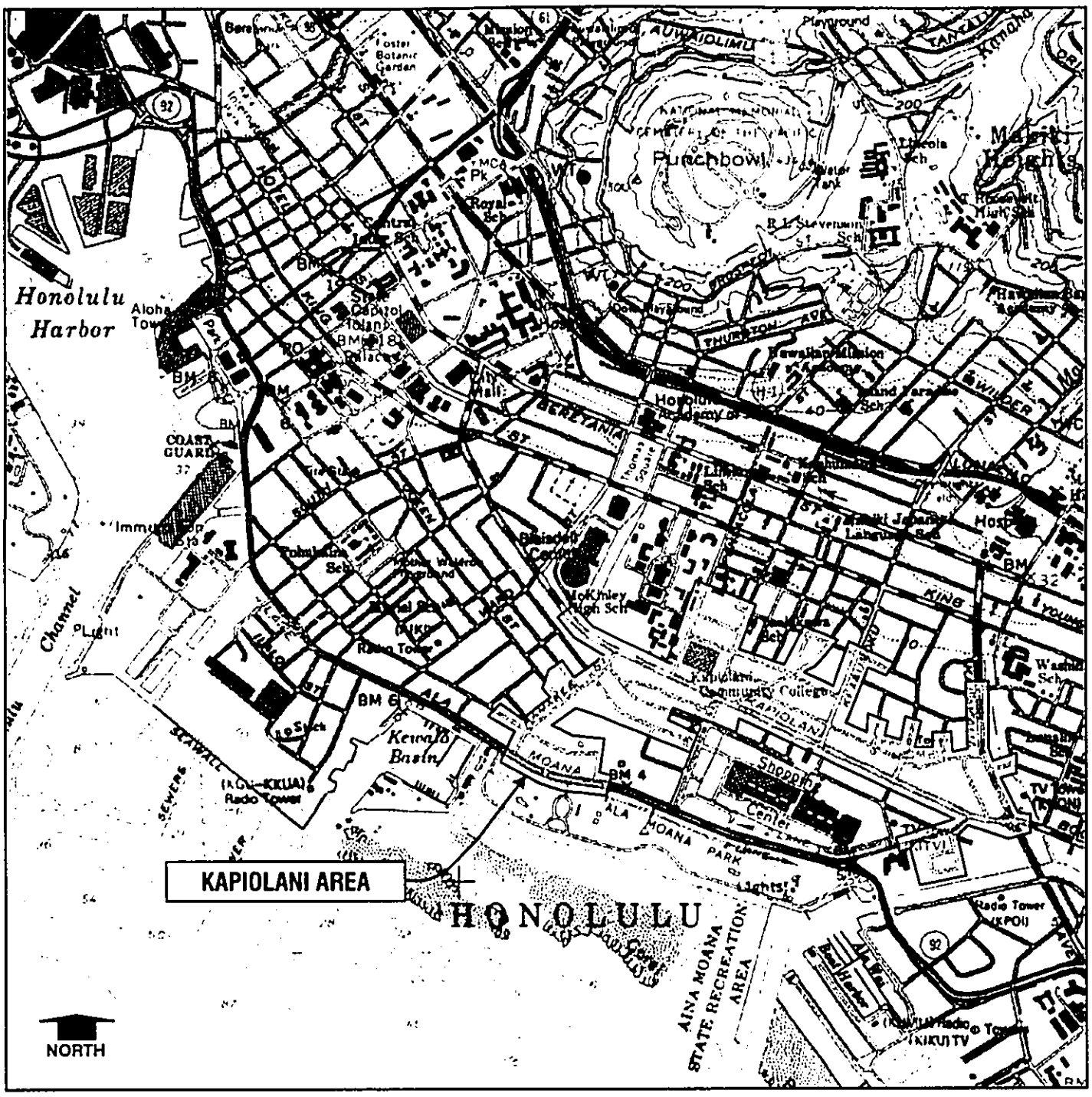
Description of Kapiolani Area

The Kapiolani Area Sewer System service area includes a mix of high-rise and low-rise commercial and apartment buildings, single dwelling homes, private schools, churches, and public facilities. Businesses located within the service area include banks, retail stores, restaurants, nightclubs, bars, automobile sales, and service and repair facilities. The sewer service area is approximately 213 acres. The sewer service area and its land uses are shown on **Figure II-1**.

Existing Sewer System

The Kapiolani sewer system includes approximately thirty thousand feet of sewer pipes, ranging in size from 6 to 21 inches. Most of these pipes are located below the mean sea level. The oldest pipes within the Kapiolani area are over 80 years old.

Many of the sewer lines within the Kapiolani area require frequent cleaning to remove grease and debris accumulations that could cause blockages and dry weather spills. Corroded pipes, structurally defective pipes, pipe sags, and illegal grease discharges contribute towards grease and debris accumulations. Backwater conditions caused by the high flow levels in the downstream Kapiolani Trunk Sewer also cause much of the problems. Severely damaged, sagged, or corroded pipes need to be replaced.

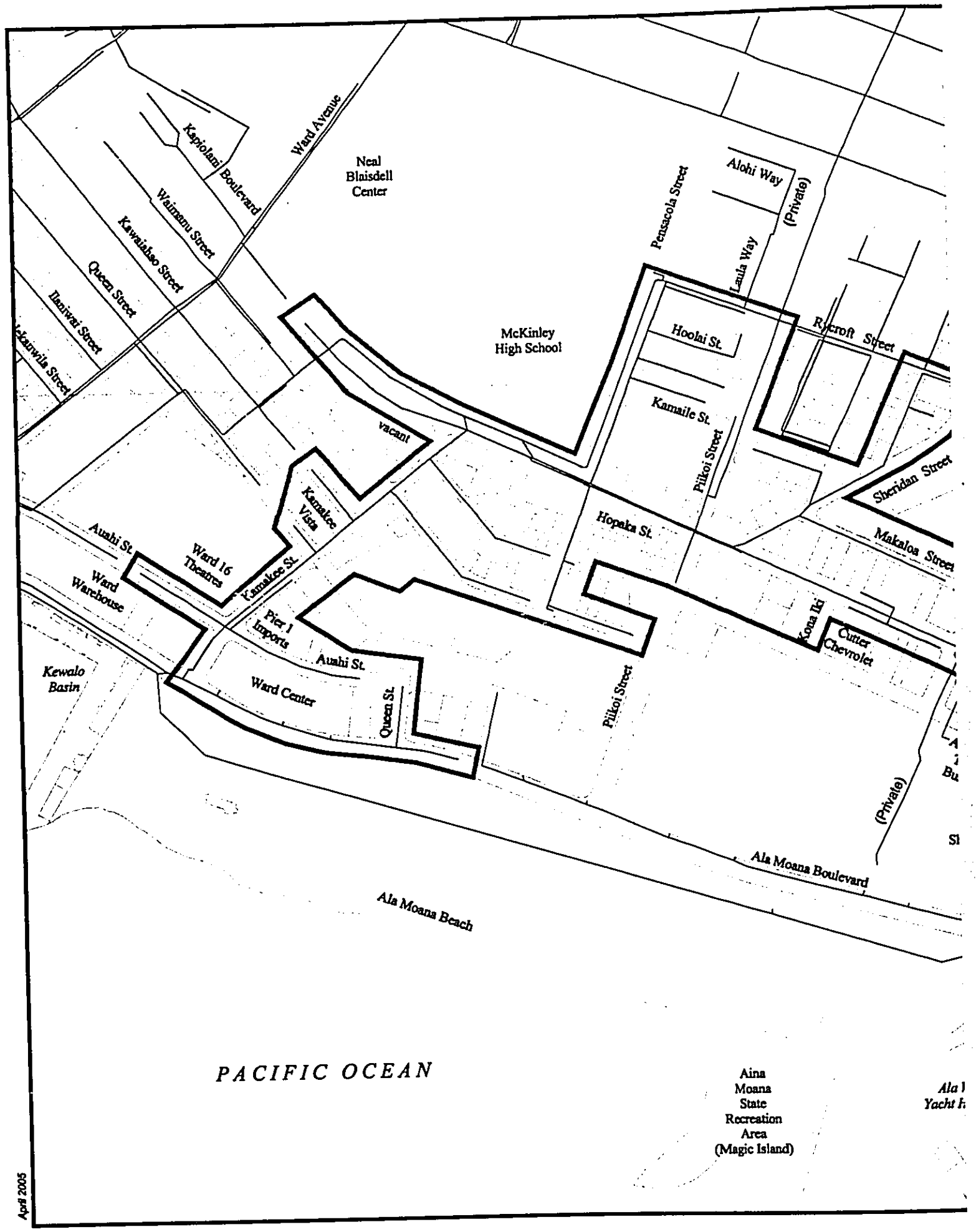


City and County of Honolulu
DEPT. OF DESIGN AND CONSTRUCTION, WASTEWATER DIV.

Kapiolani Area Revised Sewer System
Environmental Assessment

LOCATION MAP

Figure I-1


Kapiolani Boulevard
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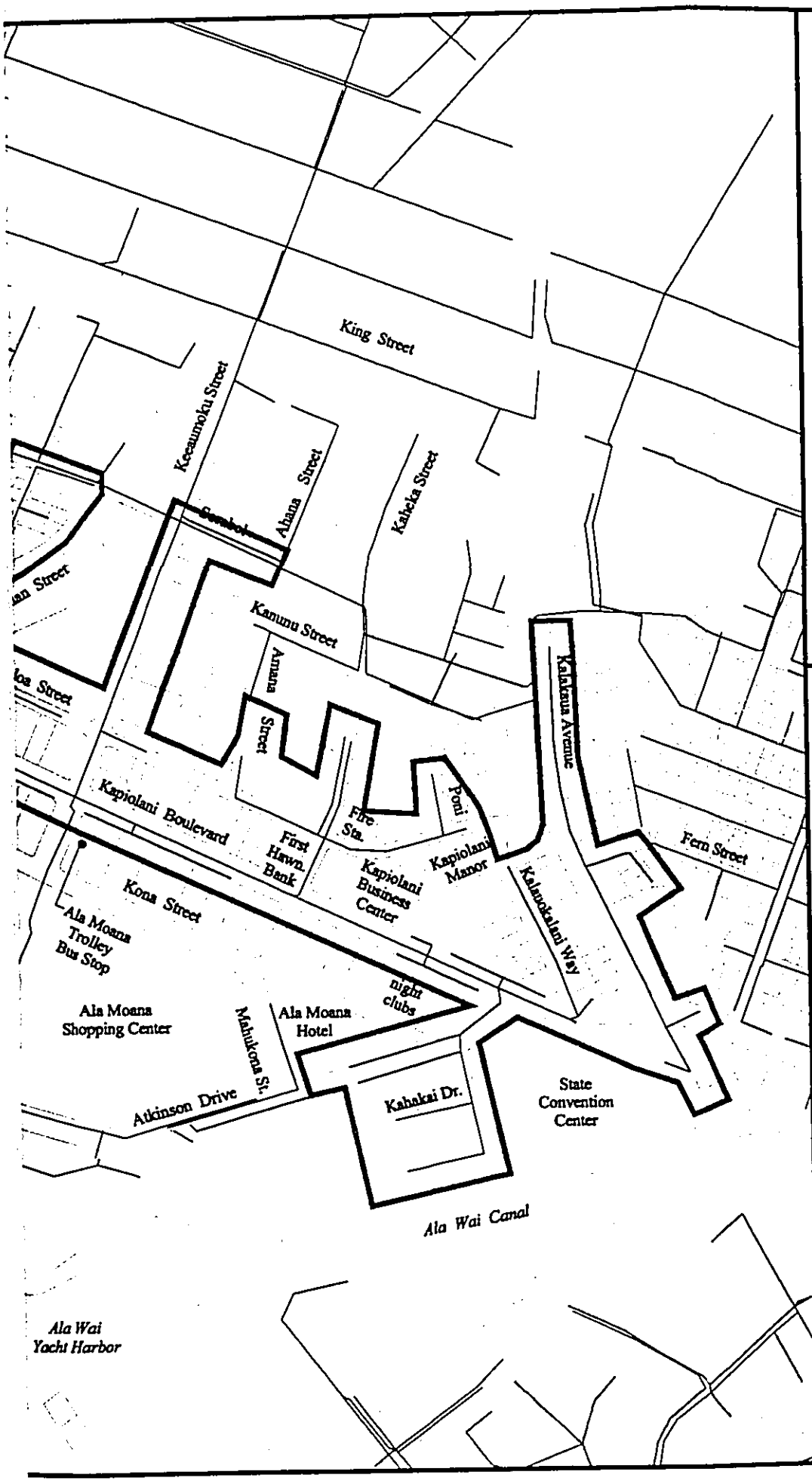
Neal Blaisdell Center
Pensacola Street
Alohi Way
(Private)
Laula Way
Waimanu Street
Kawaiahao Street
Queen Street
Ilaniwai Street
Kamwila Street
McKinley High School
Hoolai St.
Kamaile St.
Piikoi Street
Rycroft Street
Sheridan Street
vacant
Kamakee Vista
Hopaka St.
Makaloa Street
Auahi St.
Ward Warehouse
Ward 16 Theatres
Kamakee St.
Pier 1 Imports
Auahi St.
Kona Iki
Cutter Chevrolet
Kewalo Basin
Ward Center
Queen St.
Piikoi Street
(Private)
Ala Moana Boulevard
Ala Moana Beach
PACIFIC OCEAN
Aina Moana State Recreation Area (Magic Island)
April 2005



CITY AND COUNTY OF HONOLULU
Department of Design and Construction

KAPIOLANI AREA
REVISED SEWER SYSTEM
Environmental Assessment

LEGEND:

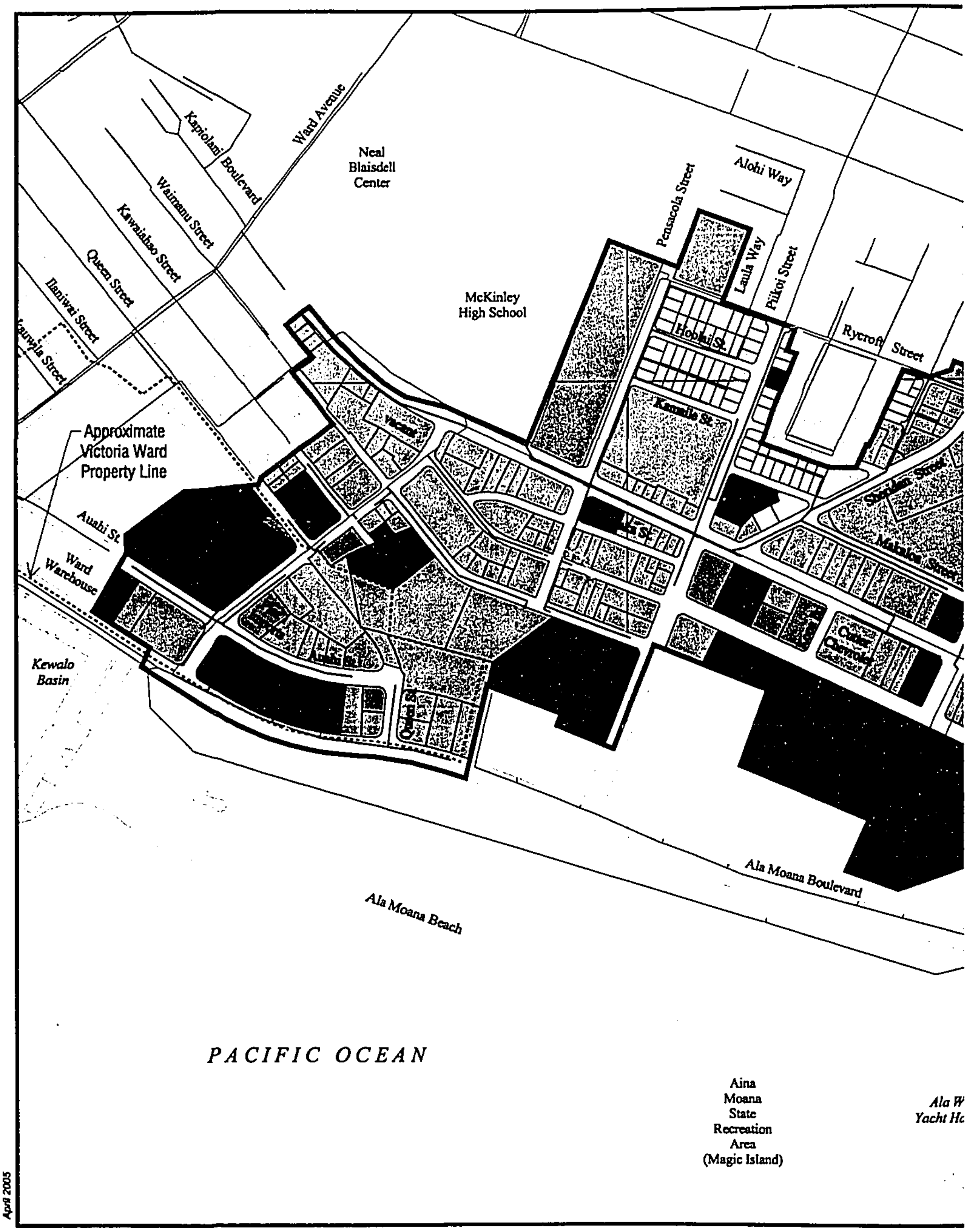
- Existing Parcels
- Existing Sewer Lines
- Study Area

KEY MAP - Oahu

600 0 600 Feet

FIGURE I-2
STUDY AREA

FUKUNAGA & ASSOCIATES, INC.
Consulting Engineers
1388 Kapiolani Boulevard Honolulu, Hawaii 96814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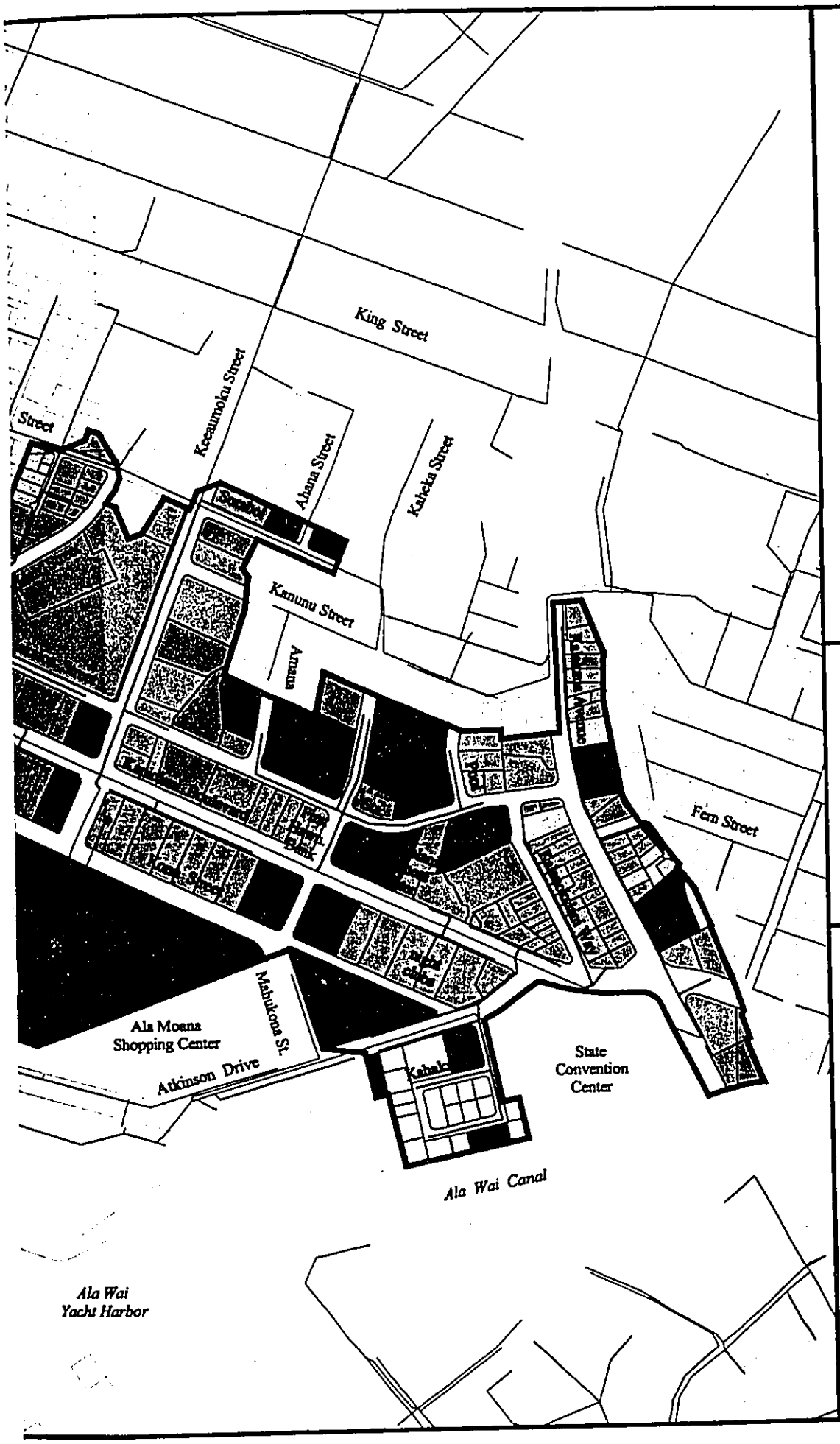
Blaisdell
Center
Ward Avenue
Kapiolani Boulevard
Waimanu Street
Kawaiahao Street
Queen Street
Ilaniwai Street
Kawaiahao Street
McKinley
High School
Pensacola Street
Alohi Way
Laula Way
Piikoi Street
Rycroft Street
Hopaka St.
Kamakee St.
Sheridan Street
Makaloa Street
Auahi St.
Ward
Warehouse
Approximate
Victoria Ward
Property Line
Kewalo
Basin
Queen St
Vacant
Cutter
Chevrolet
Ala Moana Boulevard
Ala Moana Beach
PACIFIC OCEAN
Aina
Moana
State
Recreation
Area
(Magic Island)
April 2005



CITY AND COUNTY OF HONOLULU
Department of Design and Construction

KAPIOLANI AREA REVISED SEWER SYSTEM Environmental Assessment

LEGEND:

Kapiolani Area:
LAND USE DESIGNATION

- High Density Apartment
- Medium Density Apartment
- Commerical
- High Density Commercial
- Medium Density Commercial
- Public Facilities

- Existing Parcels
- Existing Non-Kapiolani Sewer Lines
- *Kapiolani Sewer Lines*
- Service Boundary

KEY MAP - Oahu

600 0 600 Feet

FIGURE II-1
SEWER SERVICE AREA

FUKUNAGA & ASSOCIATES, INC.
Consulting Engineers
1388 Kapiolani Boulevard Honolulu, Hawaii 96814

B. POPULATION AND WASTEWATER FLOW

The current and projected population and wastewater flows in the Kapiolani area are tabulated below. The data was developed previously in the City Sewer Rehabilitation and Infiltration & Inflow (I/I) Study. The data has been extracted from the Sand Island I/I Engineering Report, Volume 5 of 9, prepared as part of the City I/I study.

Kapiolani Area Population and Design Flow Projection Summary

Projection	Current (1995) Condition	Future (2020) Condition
Total Population	22,454	32,202
Design Average (*mgd)	3.19	3.54
Design Maximum (*mgd)	4.36	5.06
WWI/I Peak (*mgd)	3.15	3.15
Design Peak (*mgd)	7.51	8.21

* Wastewater flow measured in millions gallons per day

C. EVALUATION OF SEWER LINES IN THE KAPIOLANI AREA

All City-owned sewer lines within the Kapiolani Area Revised Sewer System were evaluated in terms of three major criteria: 1) hydraulic condition, 2) operational condition, and 3) structural condition.

Hydraulic condition assessments were based upon the sewer line capacities to carry design flows, and the effect of the downstream trunk sewer flow levels upon the Kapiolani sewer lines. Operational condition assessments of the sewer lines were based on the frequency of preventive maintenance required by the individual sewer lines and the severity of the conditions. Structural condition assessments were based on evaluations of damaged, misaligned, or cracked pipes, sagged sewer lines, and pipe corrosion observed through closed circuit television (CCTV) inspections. For a detailed evaluation of the Kapiolani area sewer lines, refer to the advance final submittal of Kapiolani Area Revised Sewer System Design Alternatives Report by Fukunaga And Associates, Inc, dated October 2004.

All Kapiolani sewer lines were evaluated based on the above criteria, and rated for priority of rehabilitation or repair of their defects. Sewer lines identified as being "high priority" were selected for 10% engineering design under this project. The types of sewer repair and rehabilitation work required were selected following evaluation of various rehabilitation methods.

D. ALTERNATIVES CONSIDERED

Alternatives were developed to address sewer defects rated as "high". Different combinations of remedial and construction options were considered to develop the alternatives. The various options considered are summarized below.

Remedial Options

Two general options were considered to remedy sewer system deficiencies. The two general options are described as follows:

1. Flow Transfer

   Wastewater flow can be diverted from one area of the collection system to another to improve the overall system performance. The flow transfer provides the following benefits to the system:

   a. Eliminates the necessity of increasing the capacity of downstream sewer lines by diverting the flows from an inadequate sewer line to a sewer line with surplus capacity. System improvement costs are minimized because diversion lines are generally shorter than the length of downstream sewer lines requiring reconstruction to increase capacities.

   b. Reduces the wastewater flow depth in the downstream trunk sewer line; therefore, eliminates or alleviates flow backing up from the trunk sewer into the branch sewers. Operational and maintenance conditions are improved and improvements to the branch sewer system could be eliminated or minimized.

2. Sewer Reconstruction and Rehabilitation

   Sewer reconstruction involves construction of new replacement pipes and manholes to replace deteriorated sewer lines. Sewer rehabilitation involves repairing and/or lining the existing sewer pipes. The prevalent lining method used in Honolulu has been the cured-in-place pipe (CIPP) lining. Both sewer reconstruction and rehabilitation provide the following benefits:

   a. Restores the system structural integrity of the sewer system through installation of new, structurally sound pipes; or by the rehabilitation of the existing pipes.

   b. Improves the hydraulic, operation and maintenance performances of the sewer system by upsizing inadequate sewer lines and increasing flow velocity.

Generally, the flow transfer (flow diversion) option was only considered where alternate trunk sewer lines were located nearby. In these situations, this option was compared against either sewer rehabilitation or reconstruction. All alternatives were evaluated on the basis of their impacts upon the environment, hydraulics of the system and operations and maintenance needs; as well as comparisons of construction difficulty and construction costs.

Construction Method Options

Several construction methods are available to reconstruct sewer lines, or rehabilitate existing sewer lines.

1. Reconstruction of Existing Sewer Lines

   Generally, construction methods used to construct new lines are also applicable to reconstruct existing sewer lines, except that in some situations, existing manholes may be re-used for reconstructed lines. Reconstruction of sewer lines involves the construction of new sewer line segments to replace existing sewers. The following methods can be used to construct new lines or reconstruct existing sewer lines:

   Open Trench Excavation: Open trench installation of pipes has been the standard method of installing pipes. Open trench pipe installation involves excavation of a narrow trench, placement of crushed rock bedding, and installation of pipes. Vitrified clay or PVC (polyvinyl chloride) pipes are commonly used for sewer lines. Design of open trench pipes typically requires detailed topographic survey work; all nearby above ground facilities and underground utilities must be accurately located. Geotechnical investigations are often required for design of trench sections. Generally, open trenching costs less than "trenchless" methods and assures accurate installation of pipes to design lines and grades. Open trench excavation seems to be the most viable method of sewer line reconstruction for this project.

   Microtunneling: Microtunneling installation of new pipes involves excavation of entry and exit pits and the use of a remote controlled tunneling machine. The microtunneling machine is attached in front of pipe segments that are inserted and jacked forward from the entry (launching) pit as the tunneling machine progresses forward. The exit pit is used to retrieve the tunneling machine. Generally, microtunneling installation of pipes is much more expensive than open trench installation of smaller diameter pipes. Microtunneling construction requires entry pits, exit pits, and room on the surface for a control trailer and drilling mud mixing and settlement tanks. Microtunneling is usually impractical and expensive for small diameter sewers, and causes traffic disruptions similar to open trenching work.

2. Rehabilitation of Existing Sewer Lines

   Rehabilitation of sewer lines may be broadly categorized into two groups: pipe lining and pipe bursting. Pipe lining methods include cured-in-place-pipe (CIPP) lining, fold and form lining, and sliplining using various pipe materials. Pipe bursting installs a continuous HDPE (high density polyethylene) pipe that replaces the existing pipeline.

Cured-in-Place Pipe (CIPP) Lining: Of all the lining methods available, CIPP lining has emerged as the most commonly used method. Installation of CIPP lining involves insertion of a flexible tube that is impregnated with a resin into the existing pipe and curing the resin with hot water or steam. The finished lining is seamless and smoother than the existing vitrified clay or cast iron pipe. CIPP or other lining would not be used in substandard 6" pipes or 8" CIP sewers with heavy corrosion because the lining results in too great a reduction in pipe diameter. The CIPP lining method has been selected for this project because of its history of successful installations in Hawaii, and its acceptance by the City.

Fold and Form Lining: This method pulls a pre-manufactured thermoplastic liner pipe folded in a "U" shape into the existing pipe. After the liner pipe is in place, it is then rounded to conform to the internal surface of the existing pipe by using pressure and heat. Fold and form lining require shorter installation times and has lower costs than CIPP linings. However, there are concerns about its quality *over a long term, such as the lining re-deforming under external loads and* infiltration at lateral reinstatements. Another factor that precludes its use has been the lack of local installations.

Sliplining: This method pulls or pushes a smaller diameter flexible liner pipe(s) into an existing deteriorated pipeline. Sliplining may be segmented or continuous. Segmented sliplining consists of short sections of pipes installed through manholes. These pipes may be made of various materials and the pipes connected are bell and spigot, snap fit, or screw joints. Continuous sliplining usually consists of fused HDPE pipe inserted in a continuous piece between two or more manholes in one run. Continuous sliplining requires excavation of an insertion pit to facilitate pipe insertion. Significantly smaller pipes are used for sliplining compared to CIPP lining, and the annular space between the sliplining pipe and host pipe requires grouting. High groundwater levels in the Kapiolani area can complicate grouting procedures.

Pipe Bursting: Pipe bursting allows installation of an equal or larger pipe in place of the original sewer line. Pipe bursting uses a pipe bursting head that breaks up old pipe and forces the broken pipe pieces into the surrounding ground while towing a continuous, jointless HDPE pipe to replace the old pipe at the same location. Pipe bursting requires a suitable area to layout the entire length of pipe for a pull and open excavation to provide entry and exit pits. If several manhole-to-manhole pipe segments require rehabilitation, pipe bursting has the added benefit of being able to replace several sewer line segments in one run. Pneumatic pipe bursting equipment is commonly used. Pneumatic machines generate significant forces that often restrict its use in developed areas such as Kapiolani where nearby underground utilities could be damaged.

Pipe reconstruction and repairs are ordinarily done by means of open trenching. The short distances involved in these types of rehabilitation work makes it economically infeasible to consider microtunneling as a possible alternative method. Pipe bursting techniques might have been considered, except that the proximity of other utility lines in

the vicinity raises the risk of damaging the utilities due to the high forces generated during pipe bursting operations.

Based on the discussion above, open trench construction for reconstructed sewers, and CIPP lining for sewer rehabilitation, were selected as the construction methods to be used for this project. Other sewer reconstruction and rehabilitation methods might be considered and chosen when more detailed topographic and soils field data are available during the design stage of this project.

There were situations where "no construction action" is an option (e.g., it is too costly to raise the pipe invert elevation to avoid backwater from the Kapiolani Trunk Sewer because of huge drain boxes). In these cases, frequent sewer line cleaning of sewer lines were recommended.

III. PROPOSED ACTIONS

A. DESCRIPTION OF SEWER REPAIR/REHABILITATION WORK

Several methods of remedial work were proposed to correct the hydraulic, operational, and structural defects that were rated as "high priority" work.

Replacement or reconstruction of an existing sewer line involves construction of a new sewer line parallel to the existing line. Service laterals connected to the existing line would either be reconnected to the new sewer or replaced with new service laterals that are reconnected to the existing building sewers at the property line.

Rehabilitation of existing sewer lines by cured-in-place pipe (CIPP) lining involves insertion of a resin impregnated fabric liner and curing the resin liner with hot water or steam to form a structurally strong liner. The liner is inserted through existing manholes and no excavation is required. Lateral openings in the lined pipe are reinstated by means of remotely controlled cutting tools.

Pipe sags are corrected by reconstructing the sagged portion by removing the sagged pipes and installing new pipes to the correct grades.

Manhole repairs are done from inside the manholes and require no excavation.

B. SELECTION OF REMEDIAL OPTIONS

Both flow transfer and reconstruction/rehabilitation remedial options are involved in the proposed actions. The major flow transfer involves the reconstruction of a line from the Kapiolani Trunk Sewer to the East End Relief Sewer near the former Kapiolani Community College Site. The intent is to allow additional flows to be transferred from the Kapiolani Trunk Sewer to lower flow levels and reduce backflow conditions in the Kapiolani sewers. This reconstructed line would also enable diverting flows from the Kapiolani Trunk Sewer to the East End Relief Sewer during emergencies.

As noted previously, the open trench construction method was chosen for reconstruction of defectives sewer lines, and the cured-in-place pipe lining method was chosen for rehabilitation of defective sewer lines.

C. PROPOSED SEWER PROJECTS

The sewer lines rated as "high priority" for remedial work were developed into eight (8) sewer rehabilitation and repair projects shown on **Figure III-1**. These eight (8) projects are tentatively scheduled for construction in FY 2007 and are described below:

1. Ala Moana Blvd 12-inch Sewer Reconstruction

   - Replace the existing 12" cast iron pipes in Ala Moana Boulevard that are severely corroded and obstructed with grease deposits. Construct approximately 800 feet of new 12" pipes to replace the old pipes. Also, replace the 8" branch sewer connections to the existing 12" pipe from Ward Center. The estimated cost of construction is $1,295,000.

2. Miscellaneous Repairs at Various Locations in the Kapiolani Area

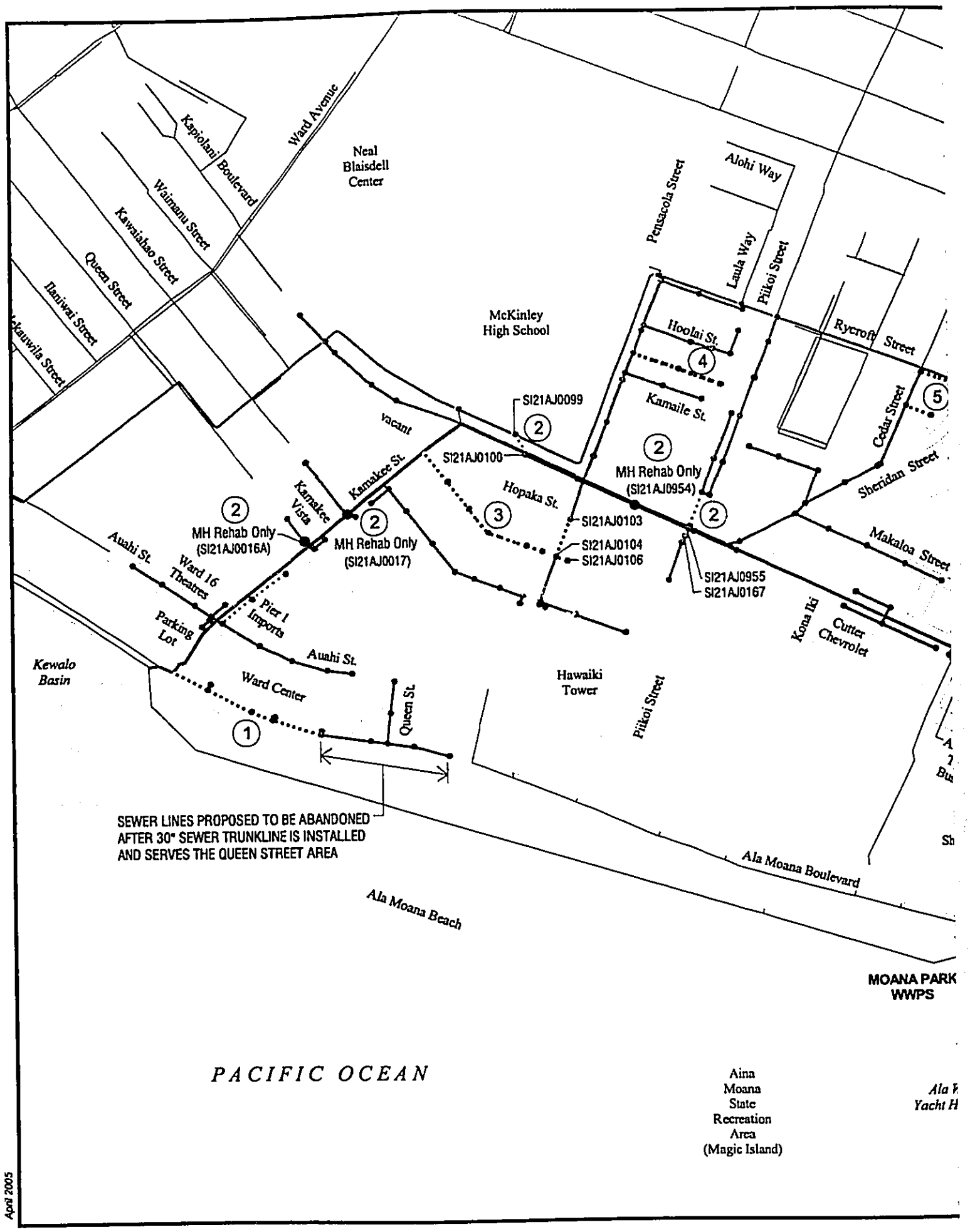
   - Rehabilitate 400 feet of existing 8" pipes with structural defects located in Kamakee Street, just mauka of Auahi Street by lining the pipe with cured-in-place pipe liner;
   - Replace the existing 15" overflow line with 100 feet of new 24" line in Kapiolani Boulevard near the former Kapiolani Community College site;
   - Rehabilitate 180 feet of existing 12" sewers in Piikoi Street and connect to the Kapiolani Trunk Sewer at a higher elevation to avoid backwater condition;
   - Replace a short length of 6" pipe with new 8" pipe in Piikoi Street;
   - Repair an existing sewer manhole with structural defects, located in Kapiolani Boulevard, and an existing sewer manhole with damaged lining, located in Queen Street; and
   - Re-plug abandoned sewer in a sewer manhole in the Kamakee Street and Kawaihao Street intersection.

   The total estimated cost of construction for all of the work is $600,000.

3. Kona Street Sewer Reconstruction

   - Replace 800 feet of the existing 6" sewers in Kona Street between Kamakee and Pensacola Streets with new 8" pipes; and
   - Point repair severe structural defects in an 8" pipe section in Pensacola Street, and replace damaged 55 feet of the existing 6" pipes in Kona Street with new 8" pipes.

   The estimated cost of construction is $873,000.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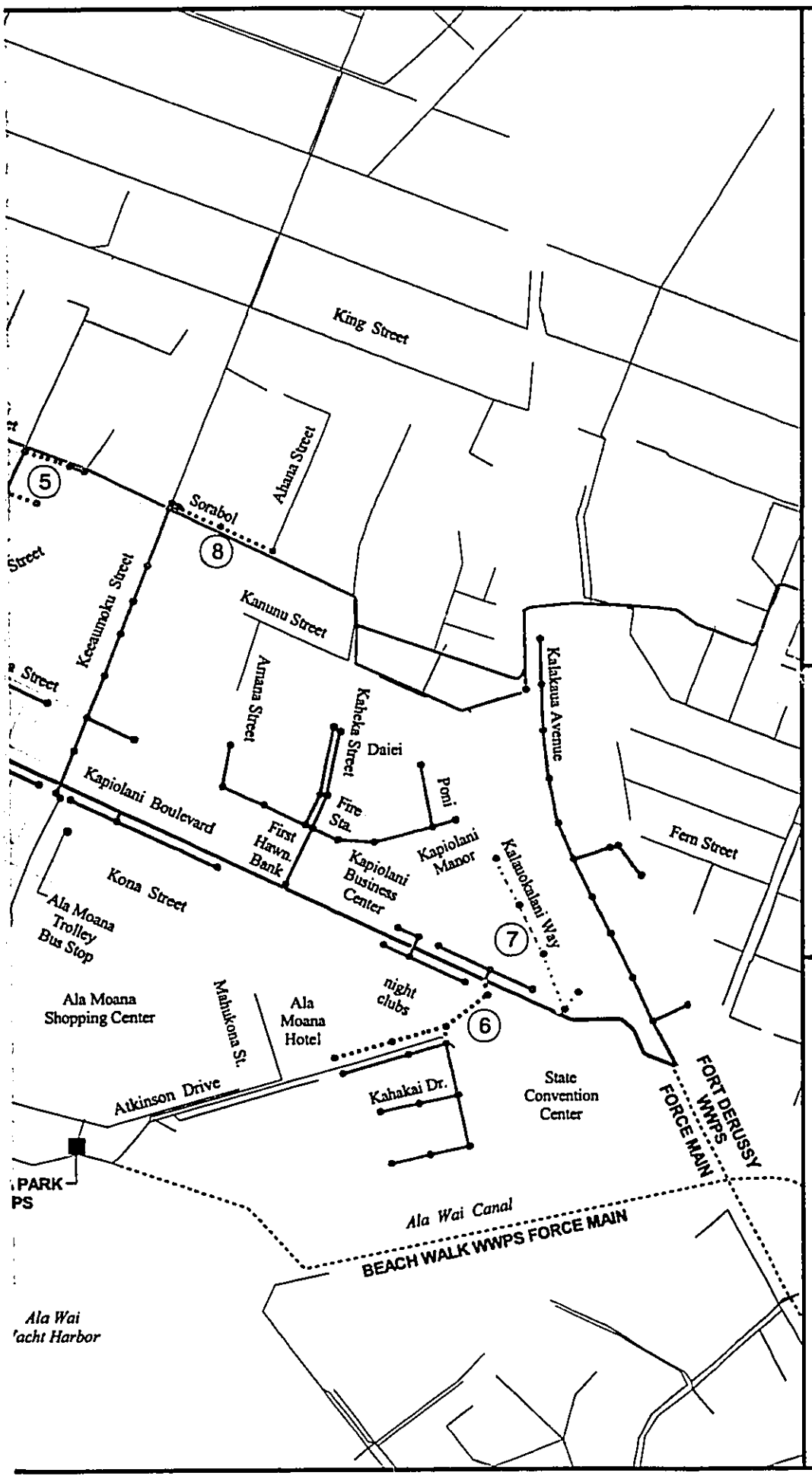
Waimanu Street
Kawaiahao Street
Queen Street
Ilaniwai Street
Pensacola Street
Aloha Way
Laula Way
Piikoi Street
McKinley High School
Hoolai St.
Rycroft Street
Kamaile St.
Cedar Street
Sheridan Street
SI21AJ0099
SI21AJ0100
vacant
Kamakee St.
Kamakee Vista
Hopaka St.
MH Rehab Only (SI21AJ0954)
MH Rehab Only (SI21AJ0016A)
MH Rehab Only (SI21AJ0017)
SI21AJ0103
SI21AJ0104
SI21AJ0106
SI21AJ0955
SI21AJ0167
Makaloa Street
Auahi St.
Ward 16 Theatres
Pier 1 Imports
Parking Lot
Kona Iki
Cutter Chevrolet
Kewalo Basin
Ward Center
Hawaiki Tower
Queen St.
Piikoi Street
SEWER LINES PROPOSED TO BE ABANDONED AFTER 30" SEWER TRUNKLINE IS INSTALLED AND SERVES THE QUEEN STREET AREA
Ala Moana Boulevard
Ala Moana Beach
MOANA PARK WWPS
PACIFIC OCEAN
Aina Moana State Recreation Area (Magic Island)
April 2005



CITY AND COUNTY OF HONOLULU
Department of Design and Construction

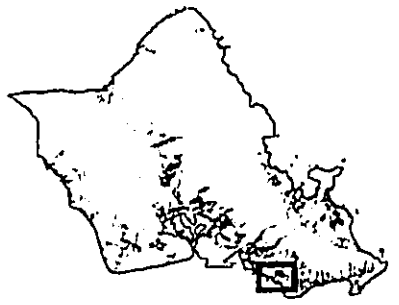
KAPIOLANI AREA REVISED SEWER SYSTEM Environmental Assessment

LEGEND:

- Existing Parcels
- Existing Non-Kapiolani Sewer Lines
- Kapiolani Trunk Sewer Line
- East End Relief Sewer Line
- Kapiolani Sewer Line and Manhole

PROJECTS (including manholes and pipes):

1. Ala Moana Blvd. 12-inch Sewer Reconstruction
2. Miscellaneous Repairs at Various Locations in the Kapiolani Area
3. Kona Street Sewer Reconstruction
4. Pensacola Easement Sewer Reconstruction
5. Sheridan Tract Sewer Repairs
6. Atkinson Drive Sewer Reconstruction
7. Kalauokalani Way Sewer Reconstruction
8. Rycroft Street Sewer Reconstruction



KEY MAP - Oahu

600 0 600 Feet

FIGURE III-1 RECOMMENDED SEWER PROJECTS

FUKUNAGA & ASSOCIATES, INC.
Consulting Engineers
1388 Kapiolani Boulevard Honolulu, Hawaii 96814

4. Pensacola Easement Sewer Reconstruction

   - Replace 440 feet of the existing 6" sewers in the easement off Pensacola Street between Kamaile and Hoolai Streets with new 8" pipes. The estimated cost of construction is $394,000.

5. Sheridan Tract Sewer Repairs

   - Replace 200 feet of the existing substandard 6" pipes in Rycroft Street with new 8" pipes; and
   - Replace 130 feet of the existing substandard 6" pipes in an easement off Cedar Street with new 8" pipes.

   The estimated cost of construction is $ 303,000.

6. Atkinson Drive Sewer Reconstruction

   - Replace 300 feet of the existing 8" pipes (hydraulically inadequate) in Atkinson Drive, between Kapiolani Boulevard and Kona Street with new 10" pipes
   - Reconstruct 500 feet of the existing 8" cast iron pipes in Atkinson Drive, between Kona Street and Mahukona Street, with new 8" VCP.

   The estimated cost of construction is $931,000.

7. Kalauokalani Way Sewer Reconstruction

   - Replace 870 feet of the existing substandard 6" pipes in Kalauokalani Way with new 8" pipes. The estimated cost of construction is $ 741,000.

8. Rycroft Street Sewer Reconstruction

   - Replace 450 feet of the existing 8" pipes with structural defects in Rycroft Street between Keeaumoku Street and Ahana Street with new 10" pipes, and the downstream existing 12" pipe (connected to the East End Relief Sewer) with new 15" pipes. The estimated cost of construction is $428,000.

IV. DESCRIPTION OF THE ENVIRONMENT

A. PROJECT LOCATION

This project area is located near the leeward shoreline of central Honolulu and is generally bounded by Rycroft Street to the north, Kalakaua Avenue to the east, Atkinson Drive and Ala Moana Boulevard to the south, and Kamakee Street and Pensacola Street to the west, as indicated in **Figure III-1**. The eight separate sewer projects described in the previous section are located within the project area.

B. LAND CLASSIFICATION AND ZONING

The State Land Use Commission classifies the land use for the project area as Urban. The City and County of Honolulu zoning designations for the project area include A-2 and A-3 Apartment, AMx-3 High Density, BMx-3 Community, and B-2 Community Business. The Ewa portion of the project area beyond Piikoi Street falls within the Kakaako Community Development District zone. See **Figure IV-1**.

C. CITY AND COUNTY OF HONOLULU PLANNING REGION

The project area is located within the Primary Urban Center geographic planning region of the City and County of Honolulu.

D. PHYSICAL FEATURES

Topography

The project area is located on fairly flat terrain with ground elevations ranging from 4 to 10 feet.

Soils

The Soil Survey issued in 1972 by the U.S. Department of Agriculture Soil Conservation Service (USDA-SCS) indicates that the soil type in the project area mauka of Kapiolani Boulevard varies with classifications of EmA (Ewa silty clay loam), KlA (Kawaihapai clay loam), MkA (Makiki clay loam), and Ph (Pearl Harbor clay). The soil type for the project area makai of Kapiolani Boulevard is classified as FL, fill land in the soil survey. See **Figure IV-2**.

Geology

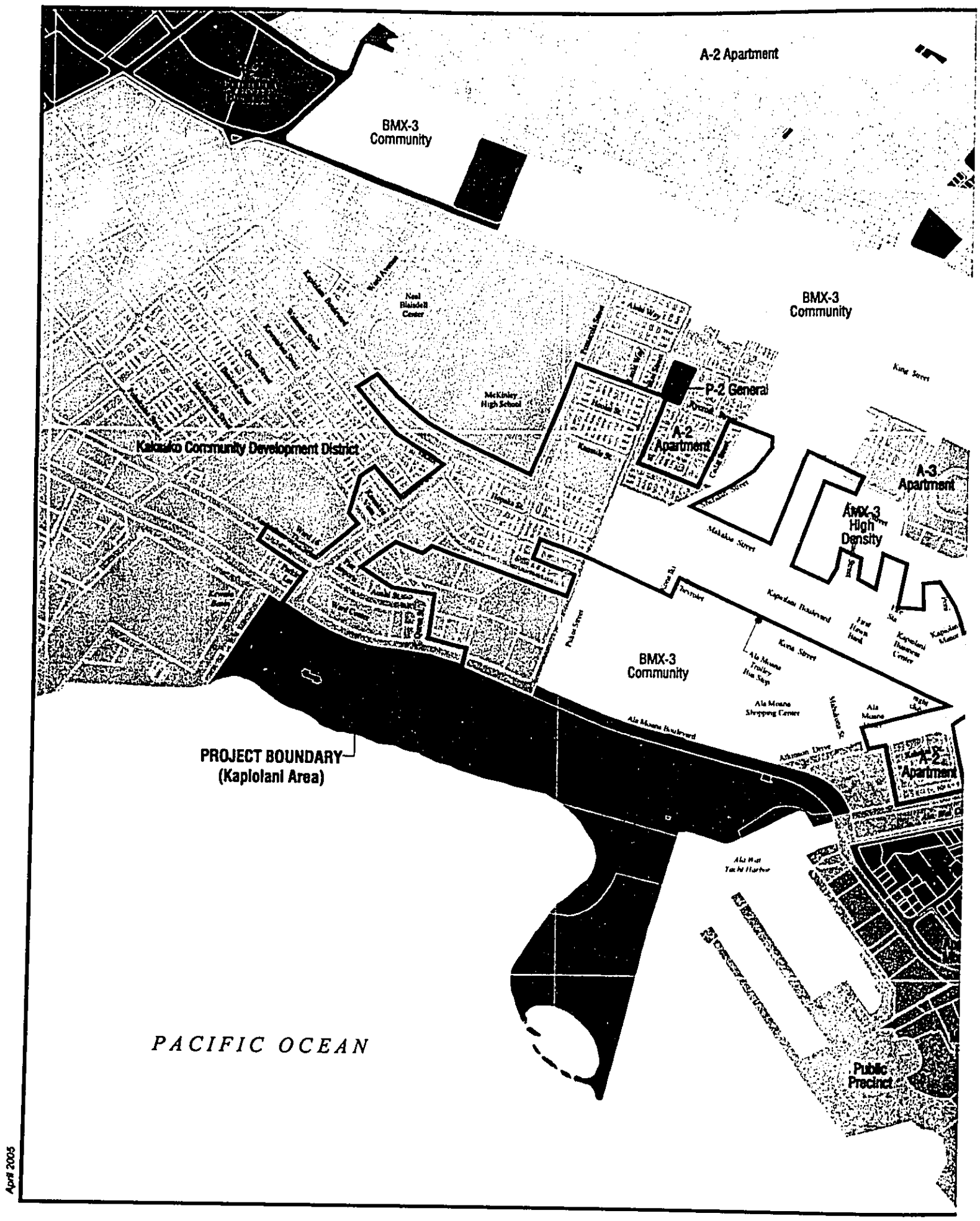
The project area is underlain with coral ledges, coralline debris, sand, and lagoonal, alluvium, and cinder deposits. The surface layer consists mostly of alluvium and fill.

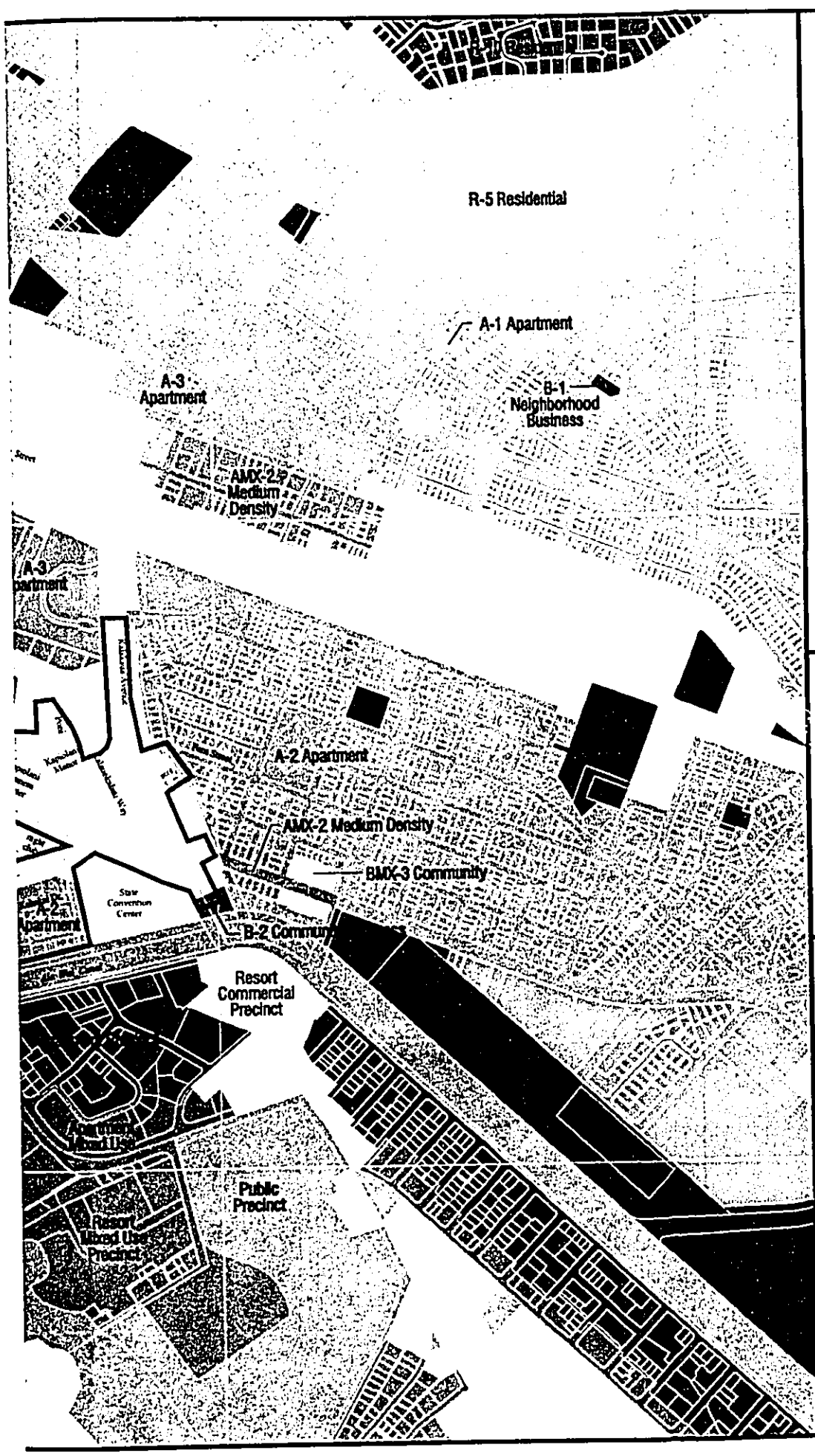
Climate

The mean annual rainfall (recorded in nearby Waikiki) is approximately 18 inches. The temperatures (recorded in nearby Waikiki) range from an average high of 84.6° F to an average low of 69° F. The prevailing winds are trade winds from the northeast. Wind velocities average approximately 11 miles per hour.

Flood and Tsunami

The Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) Community-Panel Number 15003C0365 E includes the project area. This map


A-2 Apartment
BMX-3 Community
Neal Blaisdell Center
McKinley High School
Kaka'ako Community Development District
BMX-3 Community
P-2 General
A-2 Apartment
A-3 Apartment
BMX-3 High Density
BMX-3 Community
Ala Moana Shopping Center
Ala Moana Boulevard
A-2 Apartment
PROJECT BOUNDARY
(Kaploiani Area)
PACIFIC OCEAN
Public Precinct
April 2005



CITY AND COUNTY OF HONOLULU
Department of Design and Construction

KAPIOLANI AREA
REVISED SEWER SYSTEM
Environmental Assessment

ZONING LEGEND:

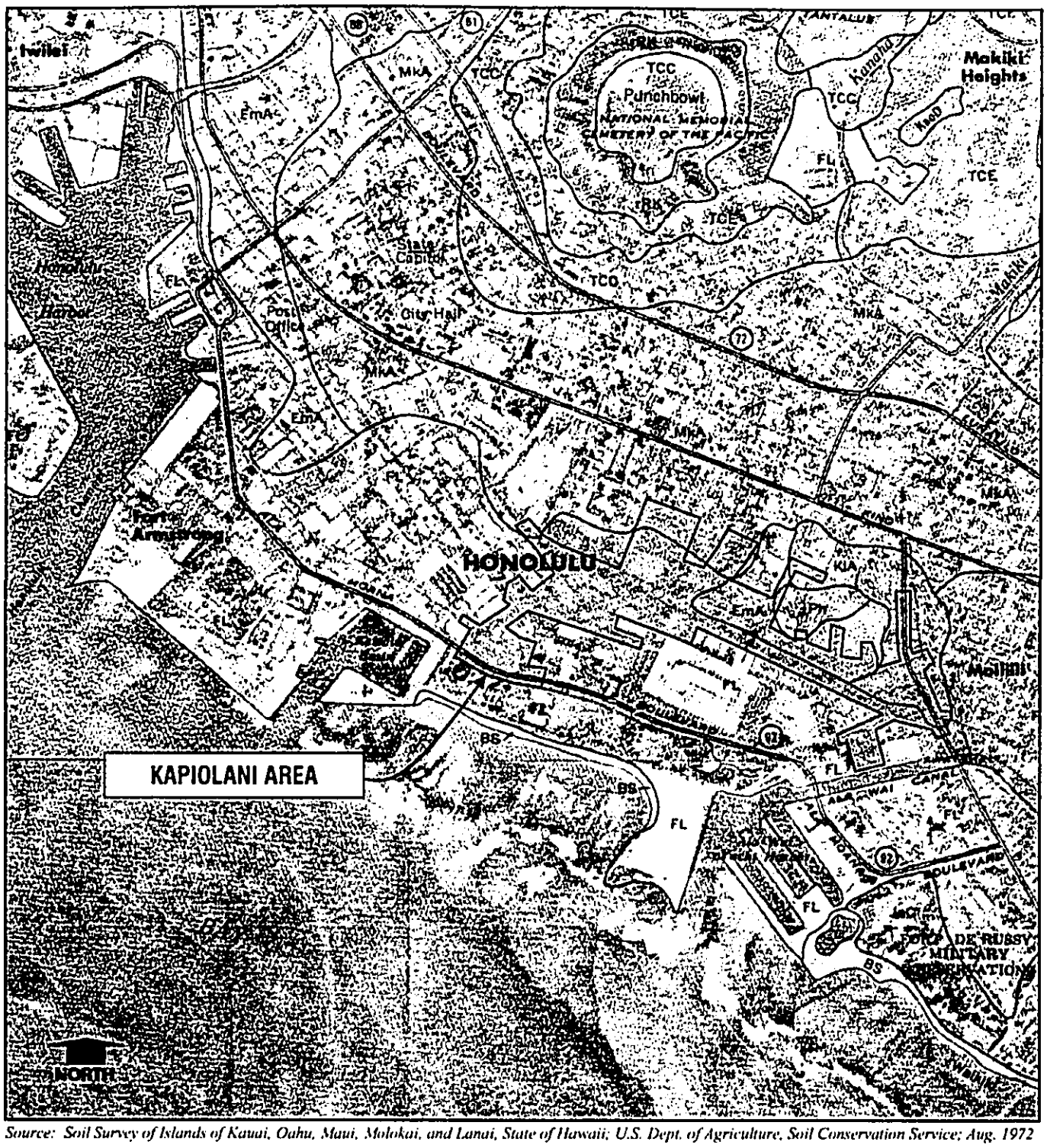
- A-1 Apartment
- A-2 Apartment
- A-3 Apartment
- AMX-1 Low Density
- AMX-2 Medium Density
- AMX-3 High Density
- Apartment Mixed Use Subprecinct
- Apartment Precinct
- B-1 Neighborhood Business
- B-2 Community Business
- BMX-3 Community
- Kakaako Comm Devel District
- P-1 Restricted
- P-2 General
- Public Precinct
- R-10 Residential
- R-5 Residential
- Resort
- Resort Commercial Precinct
- Resort Mixed Use Precinct

KEY MAP - Oahu

1000 0 1000 Feet

FIGURE IV-1
ZONING MAP

FUKUNAGA & ASSOCIATES, INC.
Consulting Engineers
1388 Kapiolani Boulevard Honolulu, Hawaii 96814



Source: Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii; U.S. Dept. of Agriculture, Soil Conservation Service; Aug. 1972

LEGEND:

BS	Beaches	MkA	Makiki clay loam, 0 to 2% slopes
EmA	Ewa silty clay loam, moderately shallow, 0 to 2% slopes	Ph	Pearl Harbor clay
FL	Fill land, mixed	rRk	Rock land
Ja	Jaucas sand, 0 to 15% slopes	TCC	Tantalus silty clay loam, 8 to 15% slopes
KaeD	Kaena stony clay, 12 to 20% slopes	TCE	Tantalus silty clay loam, 15 to 40% slopes
KlA	Kawaihapai clay loam, 0 to 2% slopes		

City and County of Honolulu
DEPT. OF DESIGN AND CONSTRUCTION, WASTEWATER DIV.

SOILS MAP

Figure IV-2

designated that portion of the project area above Kamaile Street as Zone X, determined to be outside of the 500-year flood plain. The remainder of the project area is designated as Zone A, no base flood elevations determined. The recommended sewer projects reconstruct underground sewer lines that should have no effect on flood zones.

The project area is outside the tsunami evacuation zone; the evacuation zone is located on the shoreline side of Ala Moana Boulevard. The rise in water level in nearby Kewalo Basin is not expected to exceed 4 feet during a tsunami.

E ARCHAEOLOGICAL AND HISTORICAL CONSIDERATIONS

A data search of the National and State Register of Historic Places indicated that there are no historic sites listed that are located within the project area.

Consultation with the State Historic Preservation Division (SHPD), Department of Land and Natural Resources, State of Hawaii indicated that significant subsurface historic sites, including human burials, might be encountered within the project area. The SHPD recommended that an archaeological assessment be performed for the project area.

Cultural Surveys Hawaii, Inc. was engaged to prepare an archaeological assessment of the Kapiolani study area. The archaeological assessment consisted of a literature review and a field check of the Kapiolani Area Revised Sewer System project area. The archaeological assessment stated that there was a high probability of encountering human skeletal remains and other archaeological features within the project site. The report recommended that on-site archaeological monitoring be conducted for this project. See **Appendix A**.

F. FLORA AND FAUNA

The project area is well developed with many low-rise and high-rise business and apartment buildings. Many of the properties are landscaped with various shrubs and trees. Much of Kapiolani Boulevard is lined with large monkey pod trees. Animals observed in the project area include feral cats, rats, and mice. Various birds such as doves, mynahs, cardinals, and sparrows may be found within the project area. Rare or endangered species of plants and animals are not known to inhabit the project area.

G. CONTAMINATED SOILS

There is the possibility that contaminated soils would be exposed while trenching for the sewer lines along Kona Street. Numerous automobile service stations and repair shops formerly occupied portions of Kona Street and the surrounding areas may still contain contaminated soils. Examination of the State Department of Health Leaking Underground Storage Tank (LUST) data files revealed one site (along Kaheka Street) where remediation was initiated but not completed. None of the proposed sewer projects is located near that site.

V. PROBABLE IMPACTS AND MITIGATIVE MEASURES

The probable impacts of the proposed projects include traffic congestion, business and resident inconvenience, fugitive emissions, soil erosion, and construction discharges at the construction sites. These impacts are mainly short term and will be minimized by various government laws and regulations, and contract documents and permits. The specific impacts and detailed mitigative measures will be developed during the design phase of these projects and before the start of construction work.

A. SHORT TERM IMPACTS

Short-term impacts are associated with construction activities to reconstruct, repair, and rehabilitate the defective sewer lines in the Kapiolani area. Short-term impacts include disruption of vehicular and pedestrian traffic, increased noise and exhaust emissions from construction equipment, dust emissions from excavation work, and mud during wet weather. There are two reconstructed sewer lines in easements through private properties; residents of these properties would be most affected by the above impacts during the duration of construction through these properties. Access to businesses and residences would be interrupted for short periods while trench work in the roadways progresses in front of the buildings or houses.

Traffic impacts during sewer construction are expected to be moderate to significant, depending on the specific project location. Most of the projects are located in side streets and their impacts upon traffic should be minimal to moderate. The projects on Kapiolani Blvd, Atkinson Drive, near the State Convention Center and Ala Moana Hotel, and Ala Moana Blvd would have more significant impacts upon traffic and businesses.

Construction impacts are minimized and controlled by the project contract documents that cover Federal, State and City and County of Honolulu laws, regulations, and permit requirements. The contract documents for City projects include General Conditions and Special Provisions that detail procedures, restrictions, notices, safeguards, and applicable regulations to control hazardous materials encountered during construction, water pollution, dust control, disposal of debris, noise control, and dewatering. In addition, the contract documents include special provisions that cover mitigation measures for construction impacts. Construction monitoring and inspections by City inspectors for compliance to the contract documents minimizes adverse impacts during construction.

Construction impacts related to wastewater discharges and spills, water quality from dewatering operations, and contaminated materials encountered during excavation are strictly controlled by the plans, specifications, and permitting requirements. Water pollution is regulated by provisions of Chapter 54, Water Quality Standards and Chapter 55, Water Pollution Control of Title 11, Administrative Rules of the State Department of Health. Dependent upon the choice of waste disposal method(s), the contractor may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. Construction noise is regulated by the Administrative Rules of the Department

of Health, Chapter 11-46 Community Noise Control. Fugitive dust from construction activities is regulated by the Administrative Rules of the Department of Health, §11-60.1-33 Fugitive Dust.

Traffic impacts are mitigated by means of project design, traffic control plans, and street usage permits. Traffic disruptions can be minimized by designing sewer line alignment to affect only one lane of traffic and selecting cured-in-place pipe lining and partliners to rehabilitate deteriorated sewer lines. Traffic control plans regulates vehicular and pedestrian traffic to affect their safe and orderly passage within construction zones. Contract specifications limit trench excavations lengths and prohibit storing excavated materials on the roadway to minimize traffic impacts. The contract documents also limit construction activities to non-peak traffic hours and the City's expected prohibition of construction on major Kapiolani roads during the holiday season also serve to lessen traffic disruptions. Before the construction work starts, a Best Management Plan (BMP) should be submitted to government agencies for review and approval.

The following is a tabulation of permits required for the various projects listed under Section C. Proposed Projects, under III. Proposed Actions. These permits regulate construction activities and serve to mitigate short-term impacts related to construction.

Permits	Note	Agencies
Federal		
Activities in Waterways	All projects are outside of US waters.	
State of Hawaii		
Community Noise Control/Variance	Required if the construction emits excessive noise and/or is performed during nighttime.	Department of Health (DOH)
Construction in State Highway Right-Of-Way	Applicable to Project No.1.	Department of Transportation (DOT)
NPDES General Permit	Applicable to construction activities that disturb an area of one acre or greater.	DOH
City and County of Honolulu		
Construction Dewatering	Project Nos.1, 3, 4, 6, 7, and 8 require open trench work near or below groundwater table.	Department of Planning and Permitting (DPP)
Trenching Permit	Applicable to all projects.	DPP
Grubbing, Grading, Stockpiling, and Erosion Control	Applicable to all projects.	DPP
Street Usage Permit	Applicable to all projects.	Department of Transportation Services (DTS)
Traffic Control	Applicable to all projects.	DTS and DOT

The permits and clearances should be applied for at the construction phase, 5 to 60 days prior to the commencement of construction.

B. LONG-TERM IMPACTS

There are no significant long-term negative impacts upon the environment from these eight sewer projects. Construction of these projects would provide the beneficial effects of a reliable sewer collection system with adequate carrying capacities to handle design wastewater flows that are compatible with the City's General Plan and the Primary Urban Center Development Plan. The projects will also provide a sewer collection system that will require reduced maintenance work and will greatly reduce the possibility of sewage spills that are hazardous to the health and safety of the public.

General Plan for the City and County of Honolulu

The proposed sewer rehabilitation projects are compatible with the objectives and policies of the General Plan for the City and County of Honolulu in the areas of concerns that involve the wastewater collection system. The improved sewers are planned to have capacity to handle the future (2020) wastewater flows, and are consistent with the General Plan policies to "facilitate the full development of the primary urban center" and "direct major economic activity and government services to the primary urban center". These sewer rehabilitation projects are also necessary to prevent wastewater overflows and major collapse of deteriorated sewer lines, consistent with the policies to "protect Oahu's natural environment", "maintain existing utility systems in order to avoid major breakdowns", and "provide improvements to utilities in existing neighborhoods to reduce substandard conditions". Additionally, the projects will be designed to reduce ground and surface water infiltration into the sewer system, resulting in reduction of the volume of wastewater required to be pumped, treated, and disposed of, thus it is consistent with the objective to "conserve energy through the more efficient management of its use". Finally, the project conforms to the policies stated in the General Plan to "facilitate the redevelopment of Kakaako as a major residential, as well as commercial and light industrial area" and "maintain City and County government service at the level necessary to be effective".

Primary Urban Center Development Plan for the City and County of Honolulu

This project is consistent with the provisions of City and County's Primary Urban Center Development Plan, adopted on June 21, 2004. Sub-section 4.2.2 Policies, of Section 4.2 Wastewater, states "Implement wastewater system improvements to provide adequate service and sound facilities to existing neighborhoods and timely increases in system capacity to areas planned to undergo improvement or change in use". The sewer improvements developed in this project conform to this policy.

Archaeological

An archaeological assessment performed for this project indicated that there is a great probability for human skeletal remains being encountered during trenching for the sewer lines of this project. As recommended in the assessment report, an approved archaeological monitoring plan, including on-site monitoring by a qualified archaeologist,

will be included in the construction contract to mitigate long-term archaeological impacts of this project.

Public Funds

Public funds will be expended to design and construct this project. This project is expected to be constructed under the City's Capital Improvement Program and funded by the City's sewer fund.

Construction Materials

Various construction materials will be required. In general, materials will be selected to function efficiently, provide a long service life, and require minimal maintenance. Reinforced concrete will be used to construct sewer manholes and protective jackets. Asphalt concrete will be used for road surface restoration. Pipe materials will be polyvinyl chloride (PVC) or vitrified clay. Pipe lining and repair materials will be fabric impregnated with polyvinyl or epoxy resins. Materials would be selected based on their cost effectiveness, hydraulic characteristics and ease of maintenance. Long service life of the materials is an essential consideration during the planning and design phases of this project.

C. PROJECT COORDINATION AND NOTIFICATION

To further reduce various impacts during construction periods, the design and construction of these sewer projects should be coordinated with other improvement projects in the vicinity, including, but not limited to, street repaving, waterline, electrical, and other underground utility projects. The residents, businesses, the neighborhood board, emergency and transit agencies need to be appropriately informed of work and the potential impacts during construction periods.

VI. AGENCIES CONSULTED, AND APPROVALS REQUIRED

A. AGENCIES CONSULTED

State Government

Department of Health
Environmental Management Division

Department of Land and Natural Resources
State Historic Preservation Division

Department of Transportation
Highways Division

Department of Business, Economic Development, & Tourism
Hawaii Community Development Authority

City and County of Honolulu

Department of Design and Construction

Department of Environmental Services

Department of Planning and Permitting

The information collected from these agencies includes guidelines for environmental assessment, and requirements for environmental clearances and permits.

B. APPROVALS REQUIRED

State Government

Department of Health
Environmental Management Division

Department of Health
State Office of Environmental Quality Control

City and County of Honolulu

Department of Design and Construction

VII. FINDINGS AND DETERMINATION

A. FINDINGS

Based upon the guidelines and provisions of Title 11, Chapter 200, Environmental Impact Statement Rules and Chapter 343, HRS, the findings of this environmental assessment are:

1. The proposed projects do not involve the irrevocable commitment of loss of or destruction of any natural or cultural resources. There is a high probability that human skeletal remains and archaeological sites would be encountered within the project area. The project will require conformance to an approved archaeological monitoring plan to preserve cultural and archaeological resources.

2. The proposed projects do not curtail the range of beneficial uses of the environment. The proposed actions rehabilitate deficient portions of the

Kapiolani sewer system that serves the Kapiolani area in accord with its zoned use.

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

4. The proposed projects do not substantially affect the economic or social welfare of the community or state. The rehabilitated sewer system would continue to service the business and residential community more reliably with less maintenance and less potential for wastewater spills.

5. The proposed projects would enhance public health and tourism industry by minimizing wastewater spills within the Kapiolani area.

6. The proposed projects do not involve substantial secondary impacts, such as population changes or effects on public facilities. The projects involve the rehabilitation and reconstruction of sewer lines that provide sufficient sewer capacities to meet design flows.

7. The proposed projects do not involve the degradation of environmental quality. The rehabilitation and reconstruction of the sewer system improves the environmental quality by reducing the potential of wastewater spills and reducing exfiltration of wastewater into the surrounding underground area.

8. The proposed projects do not cumulatively have a considerable effect upon the environment or involve a commitment for larger actions. The proposed projects mainly involve the rehabilitation and reconstruction of existing collection sewers in the Kapiolani area.

9. The proposed projects do not substantially affect rare, threatened, or endangered species or their habitat. There are no known endangered species of flora or fauna in the project sites that would be disturbed.

10. The proposed projects are expected to temporarily affect traffic flow, air and water quality, and raise ambient noise levels during construction, but these would be controlled by the plans and specifications, regulations, permits and construction restrictions.

11. There are no known environmentally sensitive areas such as flood plain, tsunami zones, geologically hazardous land, estuary, or coastal water immediately near the project sites that will be adversely affected by the projects.

12. The proposed projects do not affect scenic vistas and viewplanes; the projects involve underground utilities.

13. The proposed projects do not involve energy consumption. The projects involve only gravity sewer lines.

B. DETERMINATION

Based upon the above findings, the proposed projects are not anticipated to significantly impact the environment. Mitigative measures will be implemented as deemed necessary and as required by the governmental agencies. A Negative Declaration determination is anticipated. An Environmental Impact Statement (EIS) document is not required.

VIII. REFERENCES

U.S. Department of Agriculture, Soil conservation Service, Soil Survey, Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, August 1972

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City and County of Honolulu, Primary Urban Center Development Plan, adopted by City and County of Honolulu Ordinance 04 - 14

APPENDIX A

ARCHAEOLOGICAL ASSESSMENT

APPENDIX A

ARCHAEOLOGICAL ASSESSMENT

Literature Review and Field Check for the Kapi'olani Area Revised Sewer System, Honolulu *Ahupua`a*, Kona District, Island of O'ahu

(TMK: 2-3-04, 05, 07, 09, 10, 13, 14, 17, 18, 22, 35, 36, & 38)

by

Jon Tulchin, AS

and

Hallett H. Hammatt, PhD

Prepared for

Fukunaga & Associates, Inc.

1388 Kapiolani Blvd., 2nd Floor

Honolulu, HI 96814

by

Cultural Surveys Hawai'i, Inc.

May 2004

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I. INTRODUCTION

A. Project Background

At the request of Fukunaga & Associates, Inc., Cultural Surveys Hawai'i, Inc., completed an literature review and field check for the Kapi'olani Area Revised Sewer System project. The project comprises sewer line reconstruction parallel to the existing sewer lines on Kalauokalani Way, Atkinson Dr., Rycroft St. (between Ke'caumoku St. & Amana St. and between Sheridan St. & Ceder St.), an easement off Cedar St., an easement off Pensacola St. (between Ho'ola'i St. & Kamaile St.), Kona St. (between Kamake'e St. & just past Pensacola), Kapi'olani Blvd. (between Kamake'e St. and Pensacola St.) and on Ala Moana Blvd. (between Kamake'e St. & Queen St.) (TMK: 2-3-04, 05, 07, 09, 10, 13, 14, 17, 18, 22, 35, 36, & 38) (Figures 1 & 2).

B. Scope of Work

The purpose of this literature review and field check was to ascertain the potential of encountering any historic properties during sewer line reconstruction. Additionally, background research was conducted to provide the historical and archaeological context from which project area land use could be synthesized. The literature review and field check does not meet the SHPD/DLNR requirements for a more intensive inventory-level survey but does provide sufficient data to make recommendations for future treatment.

The scope of work includes:

1) Historical research to include study of archival sources, historic maps, Land Commission Awards and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.

2) Field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before future development projects proceed.

3) Preparation of a report to include the results of the historical research and the fieldwork with an assessment of archaeological potential based on that research; with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.

C. Project Area Description

The project area is located within the Kapi'olani area of Honolulu, Kona District, Island of O'ahu. The project area is bounded by Ala Moana Beach Park to the south, Ward Ave. to the northwest, Kalākaua Ave to the east, and King St to the north (see Figures 1 & 2). The proposed

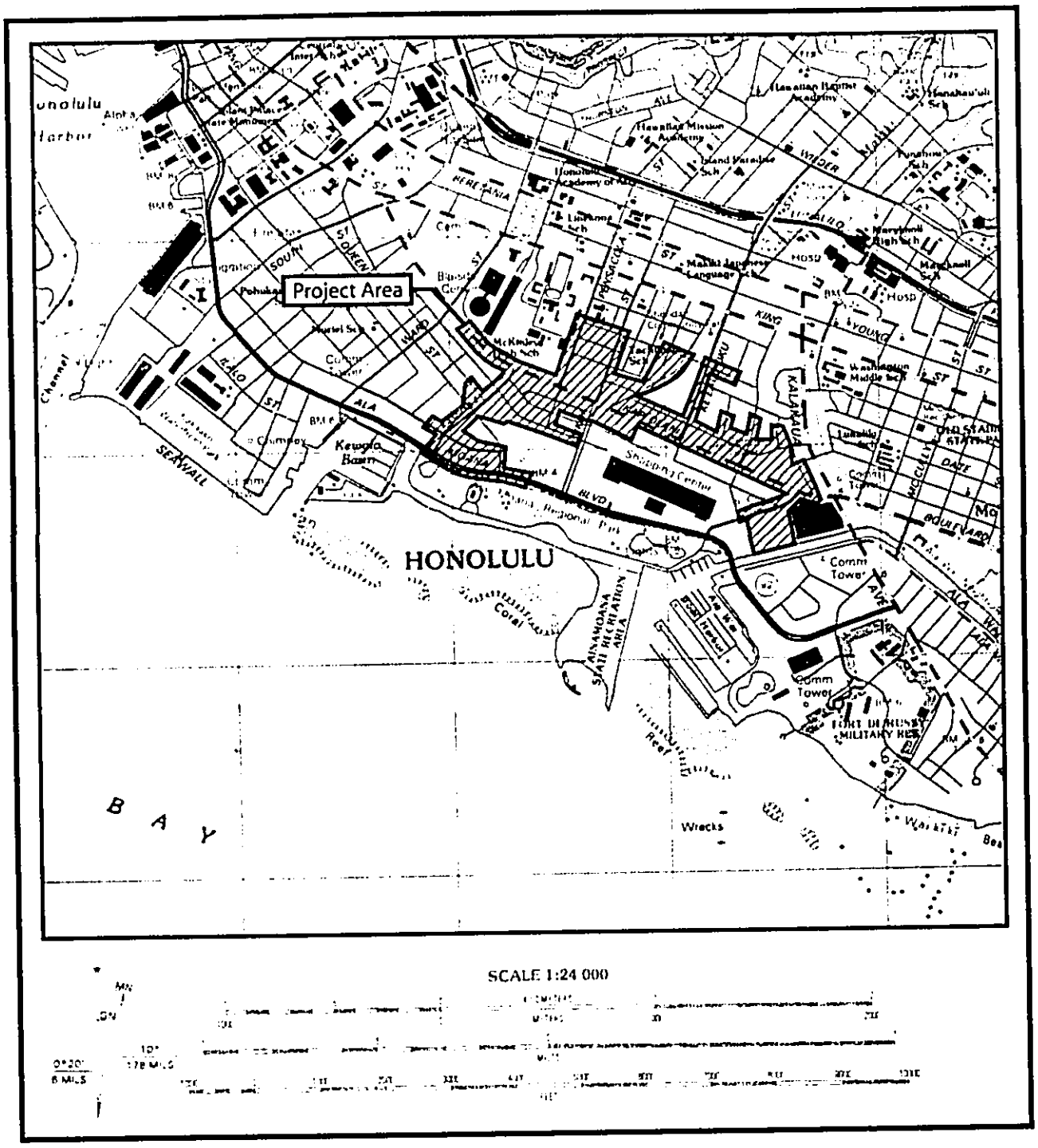

Figure 1: Portion of USGS 7.5 Minute Series Topographical Map, Honolulu Quadrangle, showing location of project area

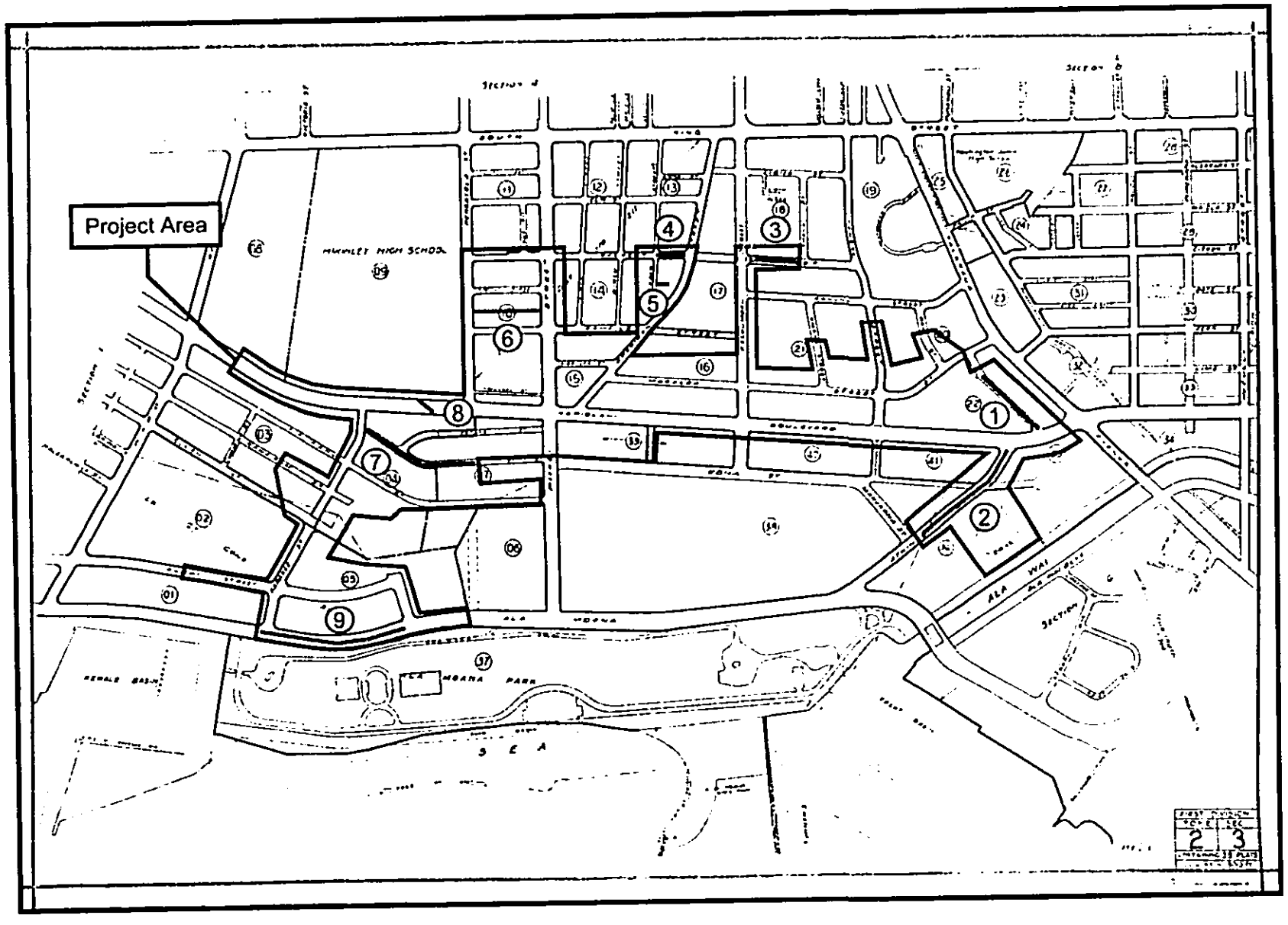

Figure 2: Tax map (2-3) showing location of project area divided into 9 sub-areas (See Table 1)

Table 1: Kapi'olani Area Revised Sewer System Project Area (Provided by Fukunaga & Associates, Inc.)

Sub-area #	TMK	Street/Location	Pipe Size (In.)	Pipe Length (Ft.)	Trench Width (Ft.)	Excavation Depth (Ft.)
1	2-3-22	Kalauokalani Way	8	660	2	5.5
2	2-3-35, 36 & 38	Atkinson Dr.	10	200	2	9
	2-3-35, 36 & 38	Atkinson Dr.	8	440	2	7
3	2-3-17 & 18	Rycroft St. (Ke'eaumoku & Amana)	10	20	2	8
	2-3-17 & 18	Rycroft St. (Ke'eaumoku & Amana)	8	400	2	7
4	2-3-13 & 14	Rycroft St. (Cedar & Sheridan)	8	240	2	6
5	2-3-14	Easement off Cedar St.	8	120	2	5
6	2-3-10	Easement off Pensacola St. (Ho'ola'i & Kamaile)	8	440	2	5
7	2-3-04 & 07	Kona St. (Kamake'e to just past Pensacola)	8	800	2	8
8	2-3-09	Kapi'olani Blvd. (Kamake'e & Pensacola)	24	90	5	14
9	2-3-05	Ala Moana Blvd. (Kamake'e to Queen)	12	1000	2.5	10

reconstruction project has nine (9) segments which are described separately in this report as sub-areas 1-9 (see Figure 2). Table 1 lists the 9 sub-areas with columns for TMK, street location, pipe size, pipe length, trench width, and excavation depth.

The elevation of the project area is approximately 3 to 7 feet A. M. S. L. Annual rainfall within the project area ranges from 36 to 48 inches (Giambelluca, 1986). Soil within the project area consists primarily of Makiki clay loam (MkA) and Fill land (FL), however a small portion of the project area just west of Kalākaua Ave. contains Pearl Harbor clay (Ph), Kawaihapai clay loam (KlA) and Ewa silty clay loam (EmA) (Foote et al. 1972). Vegetation consists of ornamental trees and bushes.

D. Methods

1. Background Research

Background research included: a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; review of documents at the O'ahu Historical Society, Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources.

2. Field Methods

Field inspection of the project area was conducted on April 30th, 2004 by CSH archaeologist Jon Tulchin. The field inspection consisted of a surface survey of each of the nine sub-areas of the project (see Figure 2). No subsurface testing was conducted as part of the field check.

The field inspection was initiated at sub-area #1 and continued through each sub-area ending at sub-area #9. Particular attention was paid to the identification of historic buildings and/or cemeteries that may be located within the project area. In most cases terrain and soil type could not be observed due to asphalt and concrete which covers most of the project areas surface.

II. HISTORICAL AND CULTURAL DOCUMENTATION

The present project area is located in a region identified as Kewalo and Kālia on early historic maps. Kewalo and Kālia are situated between two centers of traditional Hawaiian population and activity on the southern shore of pre-contact O'ahu: Kou and Waikīkī. In Waikīkī, a system of irrigated taro *lo'i* fed by streams descending from Makiki, Mānoa, and Pālolo valleys blanketed the plain, and networks of fishponds extended inland from the shoreline. Similarly, Kou – the area of downtown Honolulu surrounding the harbor – possessed shoreward fishponds and irrigated fields watered by ample streams descending from Nu'uanu and Pauoa valleys. Kewalo and Kālia's "identity" – its pre-contact population and land usage patterns – may have derived from its relationship to these two densely populated areas – i.e., it may have participated in some of the activities associated with its neighboring areas.

An 1884 Hawai'i Territory Survey map by S.E. Bishop shows this portion of south O'ahu as comprising marshlands and fishponds (Figure 3). Scattered across the landscape are Land Commission Award (LCA) parcels associated with the mid-19th century Māhele. The present project area has been drawn on the map. The Kapi'olani Boulevard portion of the project area runs across four LCA parcels. In the 'ewa half of the Kapi'olani Boulevard portion is parcel 1 of LCA 3169 to Koalele. Māhele documents indicate that this parcel comprised "some *kalo* patches" (Foreign Testimony vol. 3, pg. 507). In the Diamond Head half of the Kapi'olani Boulevard portion are two parcels of LCA 101 to Kaluaoku and one parcel of LCA 100 to Kekaula. Māhele documents indicate that the two parcels of LCA 101 include "two ponds, three fry deposits (ponds), and one [taro] patch" (Native Testimony vol. 10, pg. 339). The documents also record that the parcel of LCA 100 comprised "2 ponds, 5 fish ponds, 1 patch, house site and a pasture in one section of land" (Native Testimony vol. 10, pg. 304).

The 1884 map also shows that the Atkinson Drive portion of the present project area crosses over the northwest (*mauka*) end of Loko Kūwili, a traditional Hawaiian fishpond in a complex of ponds that once stretched into Waikīkī, covering the area of the present Fort DeRussy. During the Māhele Loko Kūwili was awarded to Kaunuohua in LCA 6450:2. Kaunuohua was the granddaughter of the sacred chief Keawema'uhili, descended from a line of distinguished Hawai'i Island *ali'i*, and she had been a *kahu* (guardian or attendant) to Alexander Liholiho (Kamahameha IV) (Maly 1994).

During the 20th century, the marshy landscape beneath the present project area would be progressively filled-in for the development of urban Honolulu creation of the Ala Wai Canal, Ala Moana Beach Park, and Kewalo Basin (Figure 4).

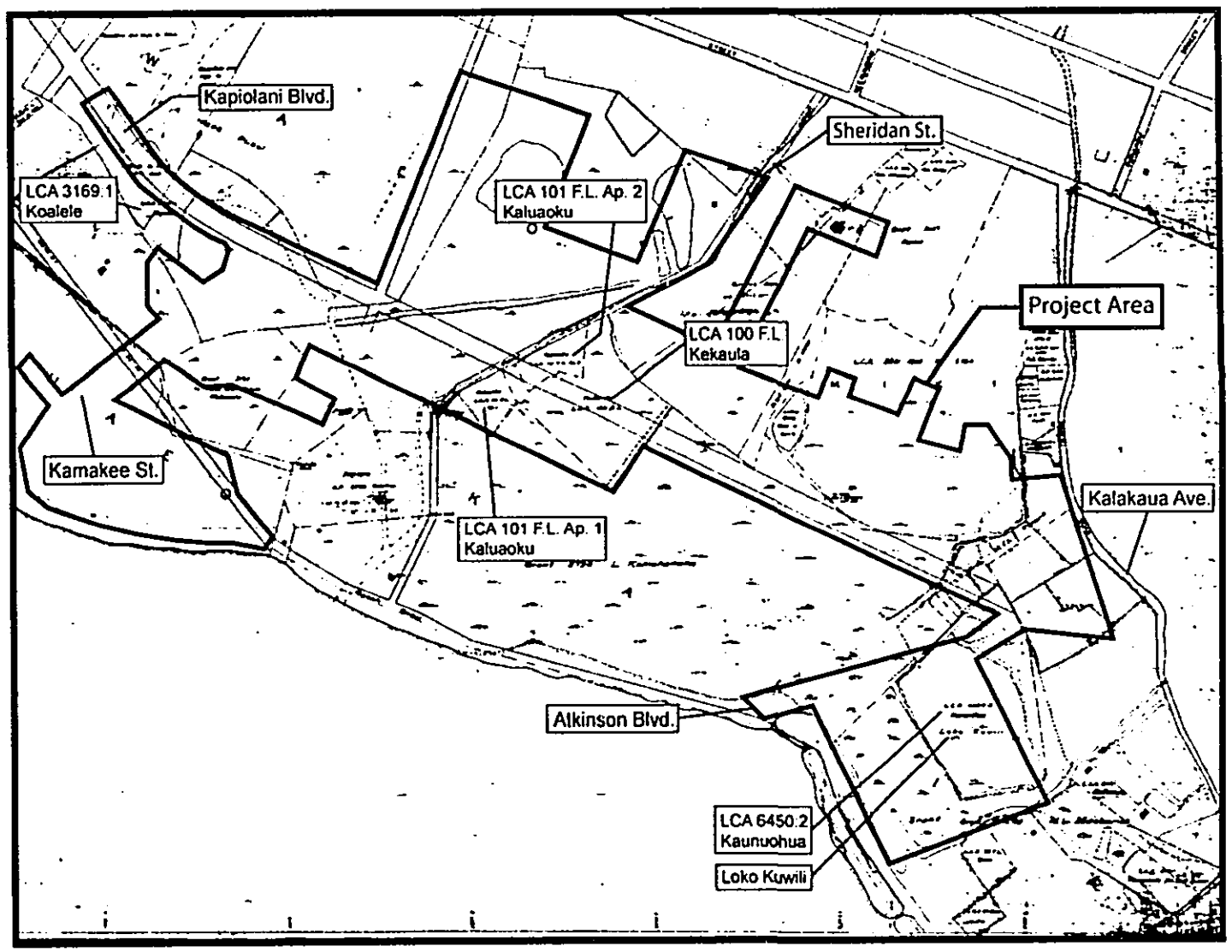

Figure 3: Portion of 1884 Hawai'i Survey map by S.E. Bishop with approximate location of project area, Land Commission Awards, and Kūwili Pond indicated

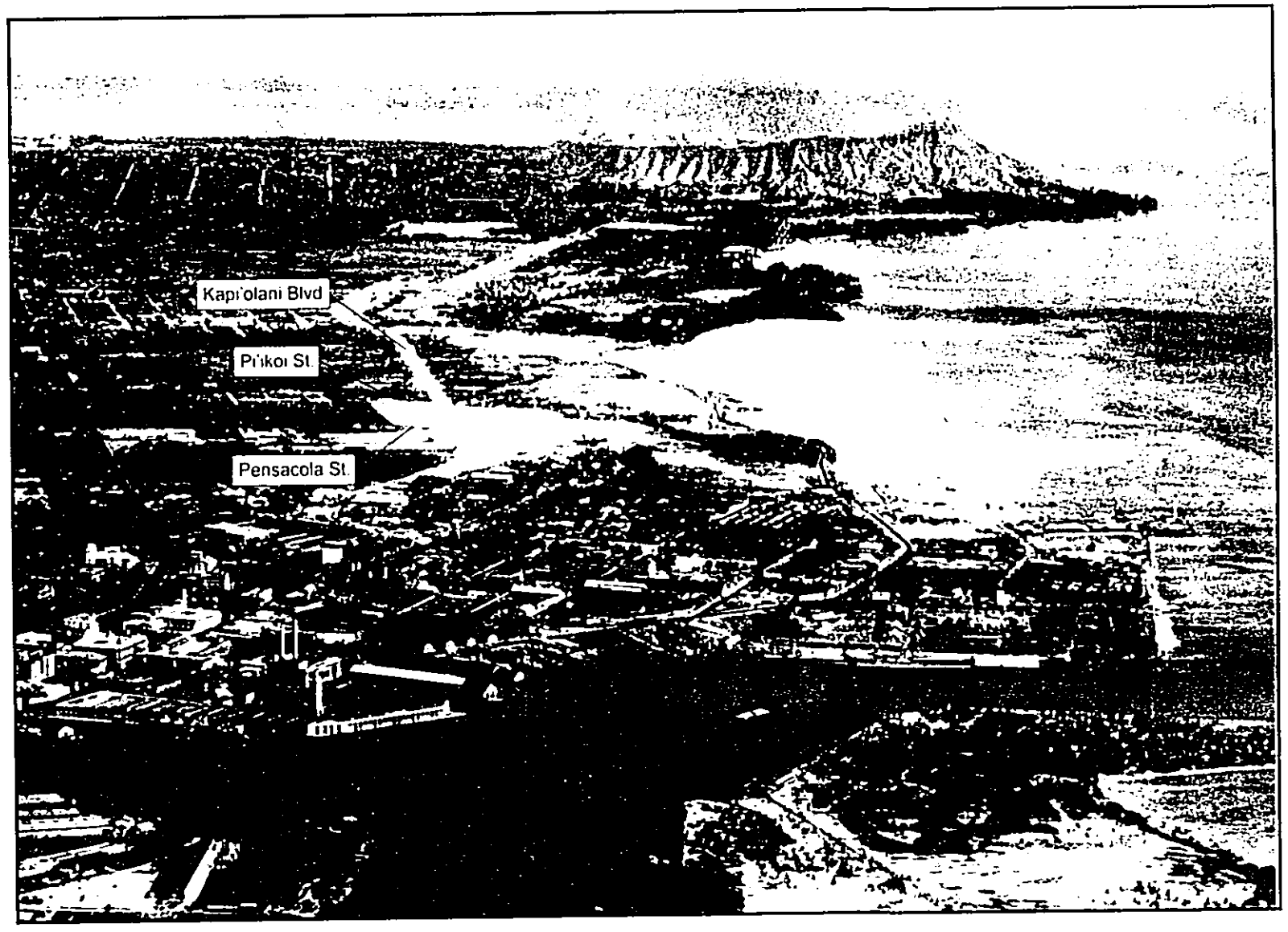

Figure 4: 1931 aerial photograph showing project area(s) during construction of Kapiolani Blvd. and filling from Kewalo Basin dredging

III. PREVIOUS ARCHAEOLOGICAL RESEARCH

The following is a summary of urban archaeology in the vicinity of the present study area:

In 1989, four bone fragments were found by construction workers in a property (TMK 2-3-39:19) on the southeast corner of Kapi'olani Boulevard and Pi'ikoi Street. The find was reported to Marc Smith (1989) of the SHPD. Smith examined the bones and determined that only one was human; the remaining bones were pig bones. The human bone was a right tibia shaft fragment. The bone was temporarily taken to the Honolulu SHPD office and the site was given the designation of State Site # 50-80-14-4243.

In 1992, an archaeological assessment (Chiogioji and Hammatt 1992) of a lot that once housed the Kapi'olani Community College was conducted by Cultural Surveys Hawai'i. This project area is bound by Pensacola Street on the east and Kapi'olani Street on the south. This report covered the historical and archival research used to predict possible sub-surface deposits that may be within the project area. Based on the background and previous archaeological research, it was concluded that the property could contain burials, the remains of Hawaiian agricultural features, and pre-and post-habitation deposits. Due to these concerns, archaeological monitoring was recommended during any future construction in the study area.

In 1994, during excavation of a trench for an underground telephone line near the north-east corner of Pi'ikoi Street and Kapi'olani Boulevard, the remains of a single individual were inadvertently discovered and later disinterred (State Site #50-80-14-4847)(Athens et al. 1994). Osteological analysis revealed that the remains were the fairly complete skeleton of a twelve to fifteen year old female. Radiocarbon analysis of a sample of bone collagen yielded a date of death of between the 13th and 15th centuries, supporting the osteological determination of Hawaiian- Polynesian ancestry. The remains were found within a wetlands environment at a shallow depth of 50-80 cmbs. A lack of burial goods and the presence of the remains within an unusual wetlands context, strongly suggested that the location of the remains did not reflect an intentional burial. Osteological analysis revealed severe bone infection of the right pubis as the probable cause of death. The report suggests the individual may have died unattended in the then-marsh environment of the present Pi'ikoi Street and Kapi'olani Boulevard intersection.

Archaeological monitoring for the Kaka'ako Improvement District 4 construction project documented two isolated historic coffin burials (State Site # 50-80-14-5598), on Kamake'e Street, between the intersections of Kawaiaha'o and Waimanu Streets (Winieski and Hammatt, 2000). The two burials, adjacent to one another, were within an undisturbed beach sand deposit, directly underlying an "A" horizon which itself underlay approximately 50 cm. of construction fill and pavement. Well-defined burial pits were present, as well as staining from the deteriorated coffin wood. No associated artifacts, other than the coffins, were discovered during disinterment. Additionally, during excavation for a manhole hookup approximately 25 meters 'ewa of Kamake'e Street on Waimanu Street, a horse or mule skeleton was discovered within the undisturbed sand layer, approximately 1 meter below the surface. No other materials were observed during the Kaka'ako ID-4 project, except for random bottles and bottle fragments of modern provenance discovered within fill materials.

During excavation activities associated with the Kaka'ako Improvement District 7 Construction Project, three human burials were encountered (Souza et al. 2002). Burial #1 (State

Site # 50-80-14-6376) was inadvertently discovered by Delta personnel on October 13, 2000 in the base yard backdirt pile derived from a trench for an electric box on Ala Moana Blvd. and Kamake'e St. Burial #2 (State Site # 50-80-14-6377) was encountered by a Cultural Surveys Hawai'i archaeologist during backhoe excavations for a box drain located at Kamake'e St between Queen St and Auahi St. The burial was within an undisturbed beach sand deposit. Burial #3 (State Site # 50-80-14-6378) was recovered from a backdirt pile in the Delta Co. base yard on Pensacola Avenue and Kapi'olani Boulevard. The original location of the burial could not be determined.

In September of 2003, Cultural Surveys Hawai'i (Borthwick 2003, in progress) completed the fieldwork pertaining to the archaeological inventory survey of the proposed Sunset Heights project. The project area is located on Waimanu Street in Kaka'ako, bounded by the Hawaiki Tower to the east, the Nauru Tower to the south, and the Queen Street Extension Project (Kakaako Improvement District 10 project) to the west. The archaeological inventory survey primarily consisted of subsurface testing as the project area had undergone previous stages of filling and surface clearing. The majority of the project area at the time of the survey was paved asphalt, with additional landscaped and bare-earth areas. Subsurface testing consisted of thirteen (13) trenches excavated with the use of a backhoe. Subsurface testing indicated the presence of undisturbed beach sand in the southwestern (*makai*) portion of the project area. A historic garbage pit (c. 1920s-1940s) was observed in the central *makai* portion of the project area. The remaining trenches contained primarily mixed dry fill materials, over pumped-dredge fill materials, down to the underlying coral shelf. There was no evidence of indigenous pre-contact cultural materials, early historic development, or human remains throughout the subsurface testing area

During archaeological monitoring of the Kaka'ako Improvement District 10 project (the Queen Street Extension Project) (TMK 2-3-04, 06, & 07) 31 human burials were found and disinterred by CSH archaeologists (State Site #'s have not yet been assigned as this project is currently on going) (Bush *et al.* 2004, in progress). Twenty-eight burials were in relatively close proximity to each other near the west end (Kamake'e Street) of the project area, constituting a small cemetery for a family or community possibly used between the 1840s and the 1880s (O'Hare et al. 2003). Other than coffin hardware, 57 grave items were found in eleven burials. The grave goods consisted of 1 ivory bead, 1 ivory ornament, 1 shell *lei niho palaoa*, 4 ceramic items, 4 glass bottles and 1 stemware, 29 coconut, shell, and metal buttons, 3 gold earrings, 7 individual glass beads, 2 necklaces with glass beads, 1 wood tobacco pipe, 1 metal buckle, and 2 leather shoe heels. The ivory bead, ornament and *niho palaoa* were the only grave goods of traditional Hawaiian manufacture, though probably manufactured in the early post-contact period. The remaining artifacts that could be dated were manufacture between 1840 and 1880. The remaining three sets of human remains were located near the Waimanu Street end of the project area and may not be associated with the main cemetery. These three sets of human remains were disturbed during excavations associated with this project, and no information on the nature of interment or age and gender could be determined; none of these three burials had any apparent grave goods. The human remains and associated grave goods have been reintered on-site in a specially constructed vault complex.

According to information provided in personal communications with State Historic Preservation Division (SHPD) personnel, multiple human burials have been encountered recently during excavations within the block bounded by Sheridan, Rycroft, Ke'eaumoku, and Makaloa

Streets (Wall Mart construction project), within the present project area. These burials are confined to the area of the block at the corner of Sheridan and Makaloa Streets, within the *mauka*-most portion of the Land Commission Award (LCA) 100 parcel to Kekaula. According to SHPD personnel, the *makai* extent of this burial area – i.e. *makai* of Makaloa Street – has yet to be determined. As LCA 100 is located within the present project area (see Figure 3 above) there is a possibility that additional burials may be present beneath this section of Kapi'olani Boulevard.

In summary, no major pre-contact habitation areas have been found within the current project area. It appears, based on the results of previous archaeological work, that all or most of the permanent habitation sites were located farther inland. Post-contact habitation refuse and fill layers are found throughout the area. Several refuse dumps have been dated to the late 19th and early 20th century, when the expansion of street construction east of the main Honolulu area brought in businesses and large number of occupants, some who lived in separate ethnic enclaves, into the area. Previous and on-going archaeological reports have documented human burials - both pre-contact Hawaiian and historic - throughout the greater Kaka'ako area (Kaka'ako Improvement District), which includes the Kewalo area, and throughout Waikīkī. The majority have been identified as probably of Hawaiian ethnicity, buried in the post-contact period from the 18th to the 20th centuries. Isolated burials and burial clusters have been found primarily in sandy deposits, just above the water table and below historic era fill materials.

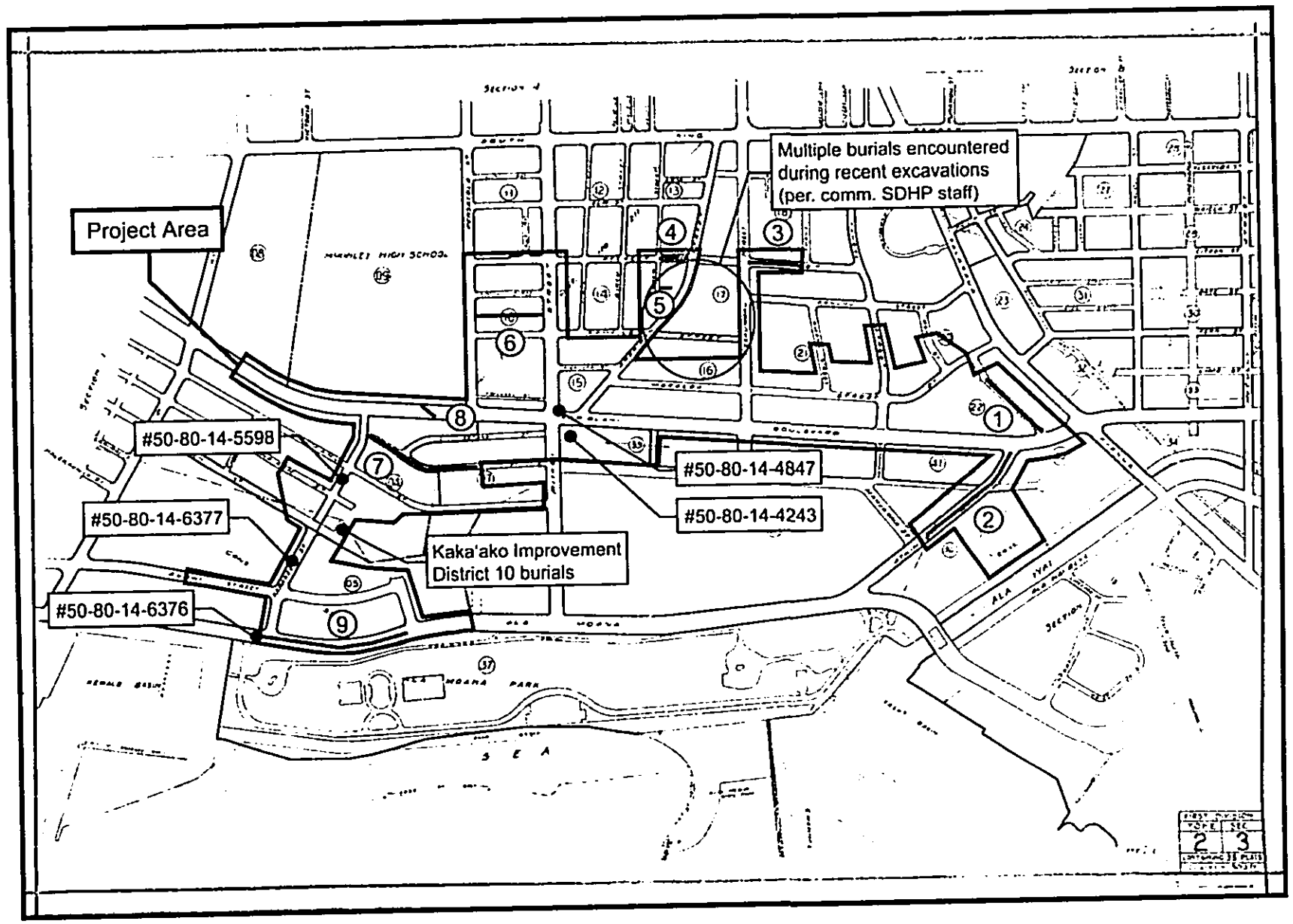

Figure 5: Tax map (2-3) showing location of human burials observed within the project area

IV. PREDICTIVE MODEL

The present project area is located between two centers of traditional Hawaiian population and activity on the southern shore of pre-contact O'ahu: Kou and Waikīkī. Land Court Award documentation from the time of the Mahele indicated Land Commission Award (LCA) parcels scattered across the project area. Land use in the area included sweet potato, *kalo* and taro cultivation, fishponds, pasture land, house lots, and human interment activities.

The current project area would have been part of the settlement of the region. Based on background research it would be expected that evidence of occupation could be encountered in the form of subsurface structures, fire pits, midden deposits, ponds/wetlands, remnants of tool use or manufacture as well as historic era deposits, trash pits, fill layers, and other subsurface utilities. Additionally, archaeological work in the area has documented numerous human burials within the overall project area (Athens et al. 1994, Winieski and Hammatt 2000 & Souza et al. 2002,). Thus there is a probability of encountering human skeletal remains during ground disturbance activities in the project area.

An 1884 Hawai'i Territory Survey map overlaid with the locations of the project sub-areas 1-9, Land Commission Awards, and burials indicates that several of the project sub-areas are in locations that could contain subsurface archaeological features. Sub-area 2 crosses over the northwest (*mauka*) end of Loko Kūwili, a traditional Hawaiian fishpond. During the Māhele Loko Kūwili was awarded to Kaunuohua, granddaughter of the sacred chief Keawema'uhili, in LCA 6450:2. Sub-area 2 also crosses over wetlands used for both prehistoric and historic agricultural activities.

Sub-areas 5 & 6 also cross over ponds which may have been utilized for agriculture or as fish ponds by prehistoric and/or historic Hawaiians before it was filled.

Sub-area 9 crosses over an area that formerly consisted of beach sand, which was utilized by Hawaiians for burials. A burial (-6376) was observed at the west end of this sub-area (Souza et al. 2002).

As exemplified above, construction activities in the project area have the potential to inadvertently uncover: (1) pre-contact and post-contact (1800s) burials; (2) pre-contact and post-contact (1800s) habitation deposits; and, (3) pre-contact and post-contact agricultural features.

Pre-contact burials will likely be located within pits and be associated with pre-contact habitation deposits. Post-contact burials will typically be located within extended pits with possible evidence of coffin material and/or grave goods associated with the post-contact period (metal jewelry or other Asian or European objects), which may be present. Habitation deposits will frequently be evident in the stratigraphy as dark-colored sand with features such as post-holes and fire pits, artifacts, and food remains (marine shell, bone, and *kukui* endocarps etc.). The post-contact deposits will likely contain ceramic, metal and glass. Agricultural features such as irrigation ditches, fishponds and irrigated fields, and the sand berms that were often built along the edges of ponds and fields may be found in the trench profiles. *'Auwai* and sand berms will frequently be evident within the stratigraphy as a dip within a stratigraphic layer which could possibly be stone-lined (McDermott *et al.* 1996:27). *Lo'i* will frequently be evident by a silty clay layer within the stratigraphy.

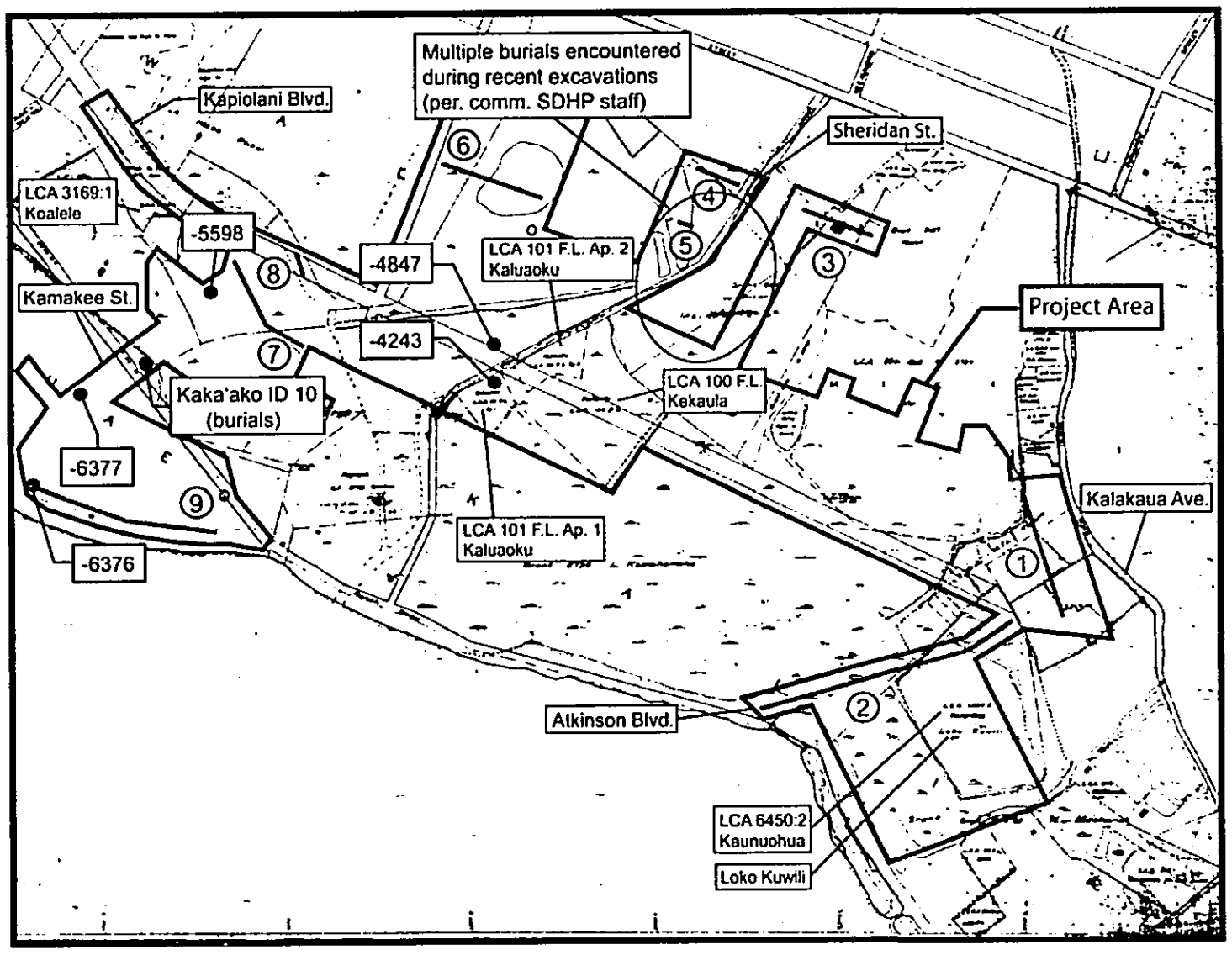

Figure 6: Portion of 1884 Hawai'i Survey map by S.E. Bishop with approximate location of project sub-areas 1-9, Land Commission Awards, Kūwili Pond, and burials indicated

V. RESULTS OF FIELD CHECK

The field inspection for the Kapi'olani Area Revised Sewer System project proposed for sewer line reconstruction was conducted by Jon Tulchin on April 30th, 2004. The field inspection included a surface survey of each of the nine sub-areas of the project (Figures 7-22). No subsurface testing was conducted as part of the archaeological assessment. No surface archaeological or historical features were observed at any of the nine sub-areas.

Sub-area 1 (TMK: 2-3-22), Kalauokalani Way, was surveyed in entirety. The area is level and covered with asphalt and concrete. Mango trees, grass, *ti* leaf, African tulip, and other various ornamental trees surround a small apartment complex and a house located in the middle of the corridor.

Sub-area 2 (TMK: 2-3-35, 36 & 38), Atkinson Dr., was surveyed in entirety. The Convention Center is located at the east end of the sub-area. The area is level and covered with asphalt and concrete. Ornamental palm trees are along the side walk.

Sub-area 3 (TMK: 2-3-17 & 18), a portion of Rycroft St. between Ke'eaumoku and Amana, was surveyed in entirety. The area is level and covered with asphalt and concrete. Apartment buildings, restaurants, and shops line the street. Ornamental palm trees, grass, and hedges are along the side walk.

Sub-area 4 (TMK: 2-3-13 & 14), a portion of Rycroft St. between Cedar and Sheridan, was surveyed in entirety. The area is level and covered with asphalt and concrete. Miscellaneous shops line the street. A lone house, with various ornamental vegetation surrounding it, is located at the west end of the corridor. Ornamental trees also line the side walk.

Sub-area 5 (TMK: 2-3-14), an easement off Cedar St.. was surveyed in entirety. Sub-area #5 is an easement that extends between a residential home and a large brick building of undetermined use. The area is level and covered with asphalt and concrete. Various ornamental plants line the side of the house.

Sub-area 6 (TMK: 2-3-10), an easement off Pensacola St. between Ho'ola'i and Kamaile, was surveyed in entirety. Sub-area #6 is an easement that extends between two small apartment buildings. The area is level and covered with asphalt and concrete. Ornamental trees and grasses surround the apartment buildings.

Sub-area 7 (TMK: 2-3-04 & 07), a portion of Kona St. from Kamake'e to just past Pensacola, was surveyed in entirety. The area is level and covered with asphalt and concrete. Miscellaneous shops, bars, and warehouses line the street. No vegetation was observed.

Sub-area 8 (TMK: 2-3-09), a portion of Kapi'olani Blvd. between Kamake'e and Pensacola, was surveyed in entirety. The area is level and covered with asphalt and concrete. A large grassy field is located to the northeast. Ornamental trees line the side walk.

Sub-area 9 (TMK: 2-3-05), a portion of Ala Moana Blvd. between Kamake'e and Queen, was surveyed in entirety. The area is level and covered with asphalt and concrete. Ala Moana Beach Park is located along the *makai* side of the road, while Ward Centre lies along the *mauka* side. Ornamental trees and bushed line the side walk.

Figure 7: Sub-area 1, view to south

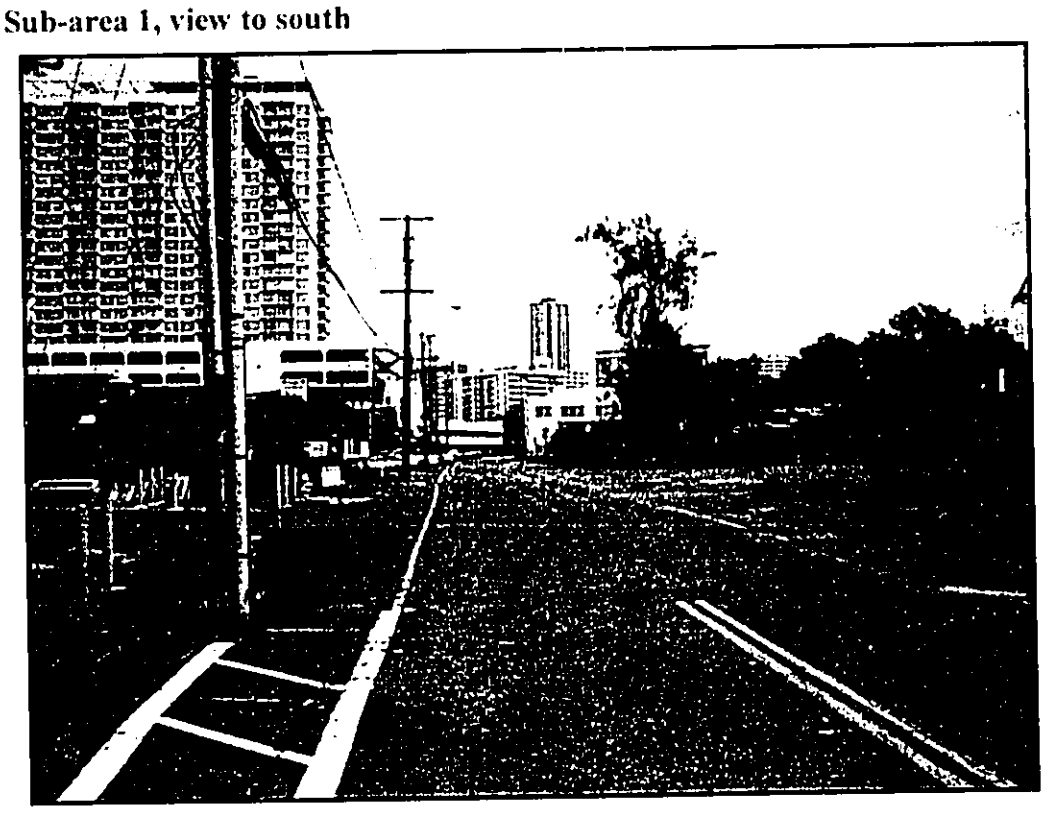

Figure 8: Sub-area 1, view to north

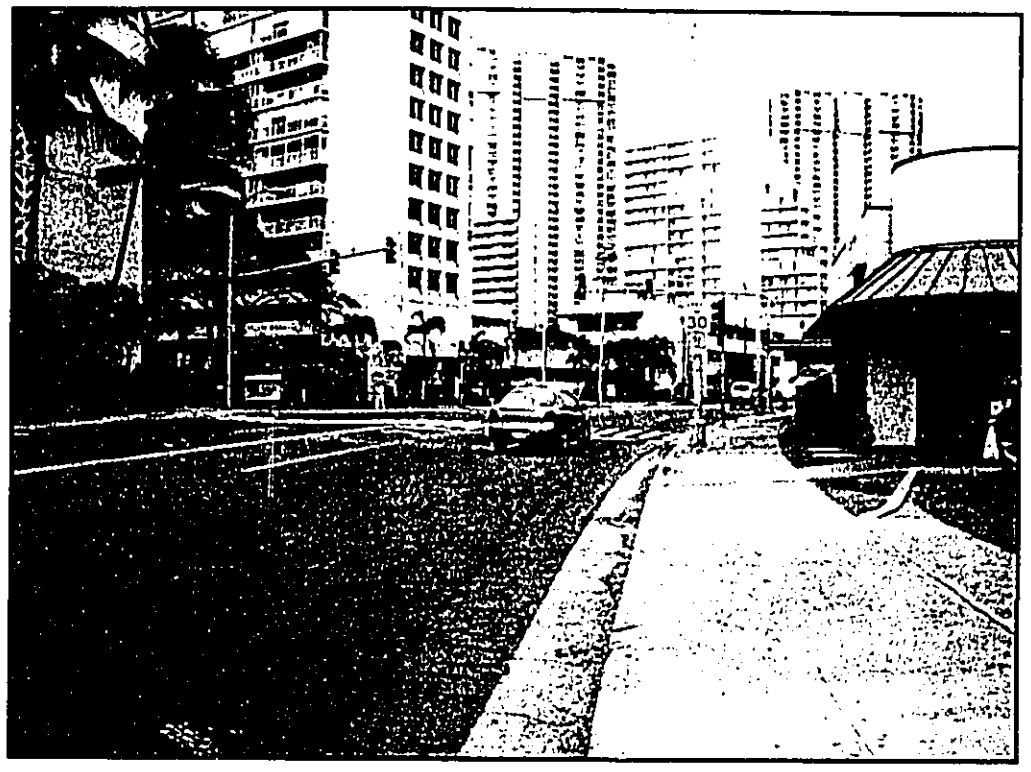

Figure 9: Sub-area 2, view to southwest

Figure 10: Sub-area 2, view to east

Figure 11: Sub-area 3, view to southeast

Figure 12: Sub-area 3, view to northwest

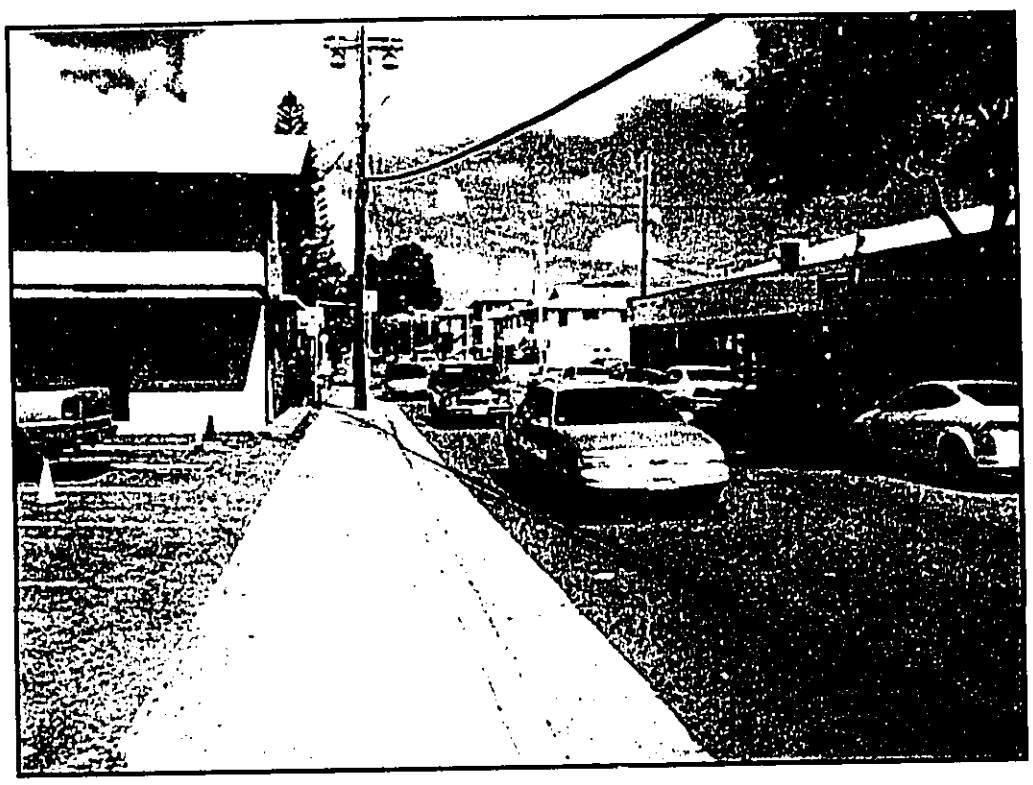

Figure 13: Sub-area 4, view to west

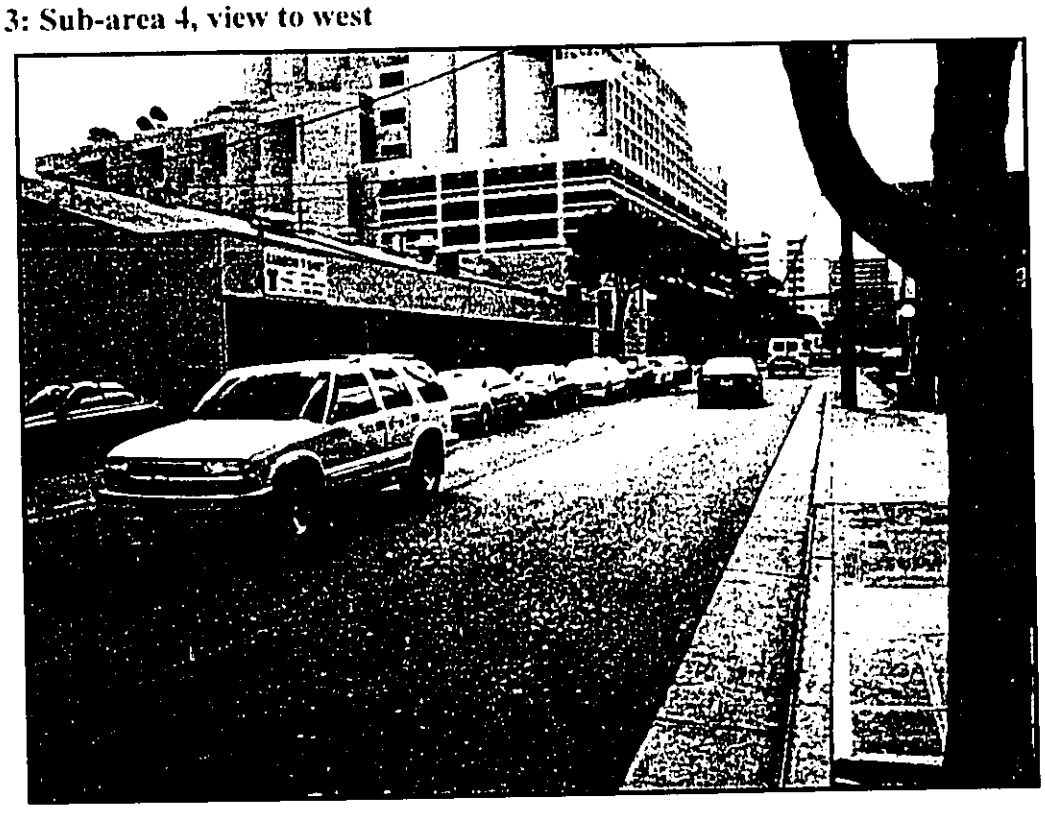

Figure 14: Sub-area 4, view to east

Figure 15: Sub-area 5, view to east/southeast

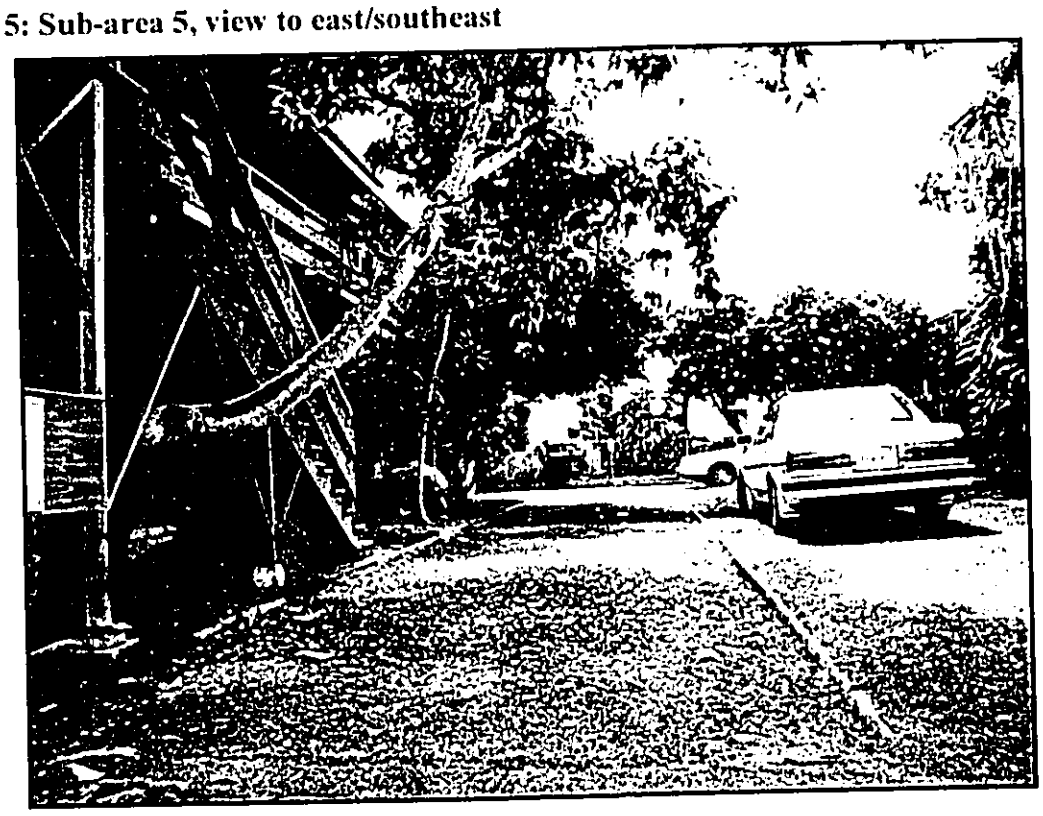

Figure 16: Sub-area 6, view to east/southeast

Figure 17: Sub-area 7, view to northwest

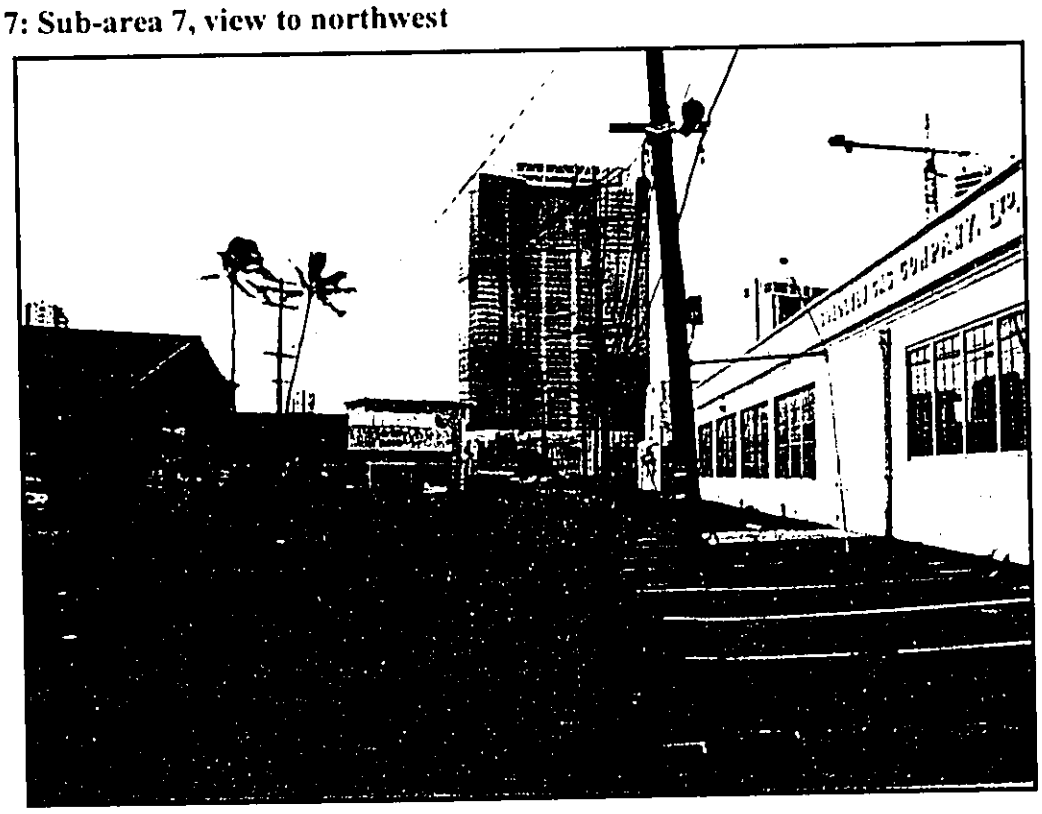

Figure 18: Sub-area 7, view to south

Figure 19: Sub-area 8, view to southeast

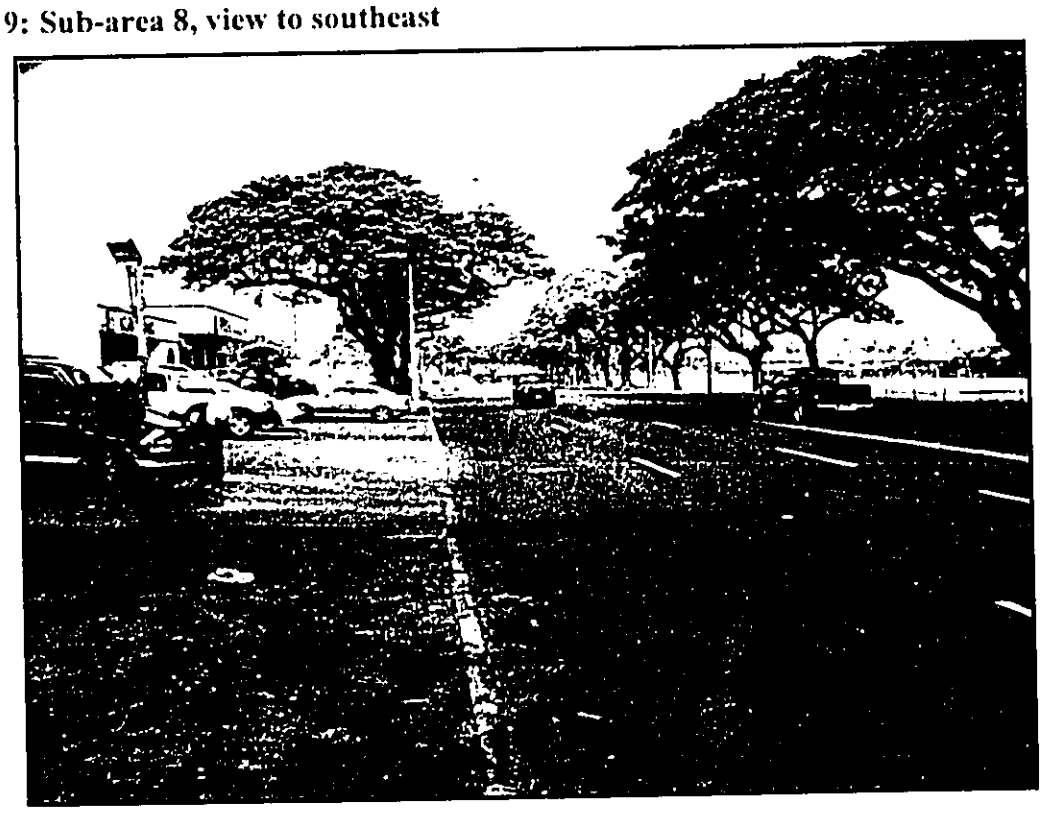

Figure 20: Sub-area 8, view to northwest

Figure 21: Sub-area 9, view to southeast

Figure 22: Sub-area 9, view to west

VI. SUMMARY & RECOMMENDATIONS

A. Summary

Historical research has found that the project area is located in what was the wetland plain of Kewalo. This area provided ancient Hawaiians with the environment needed for the cultivation of fishponds and subsistence crops such as taro and banana. Following the initial years of European contact, Westerners engaged in new massive agricultural ventures. Immigrant workers from Asia were brought to Hawai'i to labor in these new agricultural ventures, and as a result rice also became a major crop in many areas. In the early 20th century, the area was altered more intensely due to land-reclamation plans resulting in dredging and filling projects.

Background research of previous archaeology in the area suggests a high probability of encountering human skeletal remains. Multiple human burials are documented within the project area; Site -4847 (Athens et al. 1994), Site -5598 (Winieski and Hammatt, 2000), Sites –6376, -6377, and -6378 (Souza et al. 2002) as well as multiple human burials encountered recently during excavations within the block bounded by Sheridan, Rycroft, Ke'eaumoku, and Makaloa Streets (per. comm. SHPD staff, 2004).

Sub-areas 2, 5 & 6 cross over ponds that were likely to have been used in traditional Hawaiian subsistence activities, and may contain subsurface archaeological features associated with agriculture and/or fish ponds.

Sub-area 9 crosses over an area that formerly consisted of beach sand, which was utilized by traditional Hawaiians for burials. A burial (-6376) was observed at the west end of this sub-area (Souza et al. 2002).

B. Recommendations

Archaeological monitoring in the area has revealed that although the project area has been heavily impacted by previous filling, grading, and infrastructural development, portions of the original natural beach sand deposits and remnants of the "A" horizon are still present. The wide scope of disturbance to these deposits makes prediction of their location impossible. Thus direct observation of construction excavations is necessary if impacts upon cultural materials are to be mitigated.

Thus based on background research and field observations it is recommended that a qualified archaeological monitor be present during all ground disturbing activities. This recommendation is based on the archaeological assessment of the project area along with the historical and archaeological research presented above, which indicates that the project area is situated in an area that was well populated during both prehistoric and historic times. Of special note is the possibility of encountering human burials. Due to the fact that human skeletal remains have been previously documented within the project area there is a high probability of encountering human burials during ground disturbance activities.

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APPENDIX B

BACKUP DOCUMENTS

OEQC BULLETIN PUBLICATION FORM (See instructions that follow)

1. Project Name: Kapiolani Area Revised Sewer System Contract No. F82291

Type of Document *(check one)*: ☐Draft EA ☒Final EA ☐EIS prep notice ☐draft EIS ☐ final EIS ☐NEPA ☐Other (explain):

check if applicable: ☐revised document ☐supplemental document

Legal Authority *(check one)*: ☒chapter 343 HRS ☐Oahu SMA ☐NEPA
Agency determination: ☐Anticipated FONSI ☒FONSI ☐FEIS acceptance

Applicable sections *(check all that apply)*:
☒use of state or county lands or funds
☐use of land in the Waikiki district
☐use of conservation district lands
☐amendment to county general plan
☐use within shoreline setback area
☐reclassification of conservation lands
☐use of historic site or district
☐construction or modification of helicopter facilities
☒ wastewater facility, waste-to-energy facility, landfill, oil refinery, or power-generating facility

2. Island: Oahu
Judicial District: Honolulu
Tax Map Key Number: 3-3-03, 04, 05, 07, 10, 14, 18, 22, 36, & 38

3. Applicant or proposing agency: Department of Design & Construction, City & County of Honolulu
Address: Honolulu Municipal Building, 14th Floor
650 South King Street
Honolulu, Hi 96813

Contact: William K. Liu Phone: 527-5388
Note for EAs: when the applicant is a state or county agency ("proposing agency"), the proposing agency and the approving agency are the same.

4 Approving Agency (EAs) or Accepting Authority (EISs): Department of Design & Construction, City & County of Honolulu
Address: Honolulu Municipal Building, 14th Floor
650 South King Street
Honolulu, Hi 96813

Contact: William K. Liu Phone: 527-5388

5 Consultant: Fukunaga & Associates, Inc.
Address: 1388 Kapiolani Blvd, 2nd Floor
Honolulu, Hi 96814

Contact: Thomas Tamanaha Phone: 944-1821

6 Public Comment Deadline:
7 Permits required prior to implementation: City Street Usage Permit, Permit to Perform Work in State Right-of-Way
8 Project Summary *(name of file)*: Project Summary - Kapiola
(not required for final documents if no change from the draft)
9 Public Library Copy: *(not required for final EAs)*

10 ☐ Please publish notice of *(check all that apply)*: ☐ Safe Harbor Agreement ☐ Accreted land ☐ Habitat conservation plan ☐ Incidental take license

11 This form was prepared by: Thomas Tamanaha Phone: 944-1821

PROJECT SUMMARY - KAPIOLANI AREA REVISED SEWER SYSTEM

The Kapiolani Area Revised Sewer System project involves the rehabilitation of sewer lines in the Kapiolani area. This project proposes to construct eight sewer projects that are listed and described below:

1. Ala Moana Blvd 12-inch Sewer Reconstruction - Replace 800 feet existing 12" cast iron pipes in Ala Moana Boulevard, just east of Kamakee Street, with new 12" pipes.

2. Miscellaneous Repairs at Various Locations in the Kapiolani Area

   - Rehabilitate 400 feet of existing 8" pipes in Kamakee Street, just mauka of Auahi Street by lining the pipe with cured-in-place pipe liner;
   - Replace 100 feet of 15" sewer line in Kapiolani Boulevard west of Pensacola Street, with new 24" pipes;
   - Rehabilitate 180 feet of existing 12" sewers and replace a short length of 6" pipe with new 8" pipe in Piikoi Street, mauka of Kapiolani Boulevard;
   - Repair existing sewer manholes in Kapiolani Boulevard, and Queen Street; and
   - Re-plug abandoned sewer in a sewer manhole in the Kamakee and Kawaihao Streets intersection.

3. Kona Street Sewer Reconstruction - Replace 1,010 feet of existing 6" sewers in Kona Street, between Kamakee and Piikoi Streets, with new 8" pipes; and repair severe structural defects in a pipe section in Pensacola Street.

4. Pensacola Easement Sewer Reconstruction - Replace 440 feet of existing 6" sewers in an easement off Pensacola Street between, Kamaile and Hoolai Streets with new 8" pipes

5. Sheridan Tract Sewer Repairs - Replace 200 feet of existing 6" pipes in Rycroft Street, just east of Cedar Street, with new 8" pipes; and replace 130 feet of existing 6" pipes in an easement off Cedar Street with new 8" pipes.

6. Atkinson Drive Sewer Reconstruction - Replace 800 feet of existing 8" pipes in Atkinson Drive, between Kapiolani Boulevard and Mahukona Street, with new 10" and 8" pipes

7. Kalauokalani Way Sewer Reconstruction - Replace 870 feet of existing 6" pipes with new 8" pipes

8. Rycroft Street Sewer Reconstruction - Replace 470 feet of existing 8" and 12" pipes in Rycroft Street between Keeaumoku Street and Ahana Street with new 10" and 15" pipes.

1388 KAPIOLANI BLVD. / 2ND FLOOR / HONOLULU, HI 96814 / PH. (808) 944-1821 / FAX (808) 946-9339 / office@fainc.org / www.fainc.org

October 12, 2004

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

Subject: Draft Environmental Assessment
Kapiolani Area Revised Sewer System, Honolulu, Oahu

On behalf of the City and County of Honolulu, Department of Design and Construction, we are transmitting a copy of the Draft Environmental Assessment (EA) for the Kapiolani Area Revised Sewer System for your review and comment. The EA was prepared pursuant to Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Department of Health Administrative Rules. Please send your original comments to:

City and County of Honolulu
Department of Design and construction
650 South King Street, 11th floor
Honolulu, Hawaii 96813
Attn: Mr. Raj Rath
Facsimile: (808) 523-4642

Please send copies of your comments to the following:

Ms. Genevieve Salmonson, Director
State of Hawaii
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813
Facsimile: (808) 586-4186

And

Fukunaga and Associates, Inc.
1388 Kapiolani Boulevard, 2nd Floor
Honolulu, Hawaii 96814
Attn: Thomas Tamanaha
Facsimile: (808) 946-9339

A notice of availability will be published in the October 23, 2004 issue of the Environmental Notice. In order for your comments to be considered in the final EA, they must be received or postmarked by November 22, 2004.

We appreciate your participation in the environmental review process.

Sincerely,

Thomas Tamanaha, Project Engineer

Enclosure

DRAFT EA DISTRIBUTION LIST

State of Hawaii
OEQC (4)
Hawaii Finance Development Corporation
State DBEDT Planning Office
State Department of Health (3)
State department of Land and Natural Resources (5)
State DLNR Historic Preservation Division
State Department of Transportation
Office of Hawaiian Affairs
UHM Water Resource Research Center
State Legislature

City and County of Honolulu
City Council
Board of Water Supply
Department of Design and Construction
Department of Planning and Permitting (5)
Department of Parks and Recreation
Planning Department
Department of Facility Maintenance
Department of Transportation Services
Department of Environmental Services
Library, HonoluluMunicipal Reference & Records Center (3)

Federal
U. S. Army Corps of Engineers

Library
McCully-Moiliili Public Library

Utility Companies
Hawaiian Electric Company
The Gas Company
Verizon

Others
Ala Moana/Kakaako Neighborhood Board No. 11
Waikiki Business Improvement District Association
Hawaii Tourism Authority
Hawaii Convention Center
Ala Moana Shopping Center
Victoria Ward Center

THE GAS COMPANY

P.O. Box 3000
Honolulu, Hawaii 96802-3000

October 18, 2004

City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention: Mr. Raj Rath

Gentlemen:

Subject: Draft Environmental Assessment
Kapiolani Area Revised Sewer System, Honolulu, Oahu

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

Also for your information, The Gas Company owns a portion of Kona Street between Kamakee and Pensacola Streets. Therefore, the replacement of the 6" sewer in this area will require an easement.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Should there be any questions, or if additional information is desired, please call me at 594-5570.

Very truly yours,

Charles E. Calvet, P.E.
Manager, Engineering

CEC:krs
04-253

Cc: Ms. Genevieve Salmonson, Director, State of Hawaii
Mr. Thomas Tamahana, Fukunaga and Associates, Inc.

THE GAS COMPANY

FACSIMILE

P.O. Box 3000
Honolulu, Hawaii 96802-3000, USA

To: Fukunaga and Associates

Attention: Tom Tamanaha

Fax No.: 946-9339

Ph. No.: 944-1821

From: Charles Calvet

Date: 10/29/04

Subject: DEA Kapiolani Area Revised Sewer System

No. Pages: 2

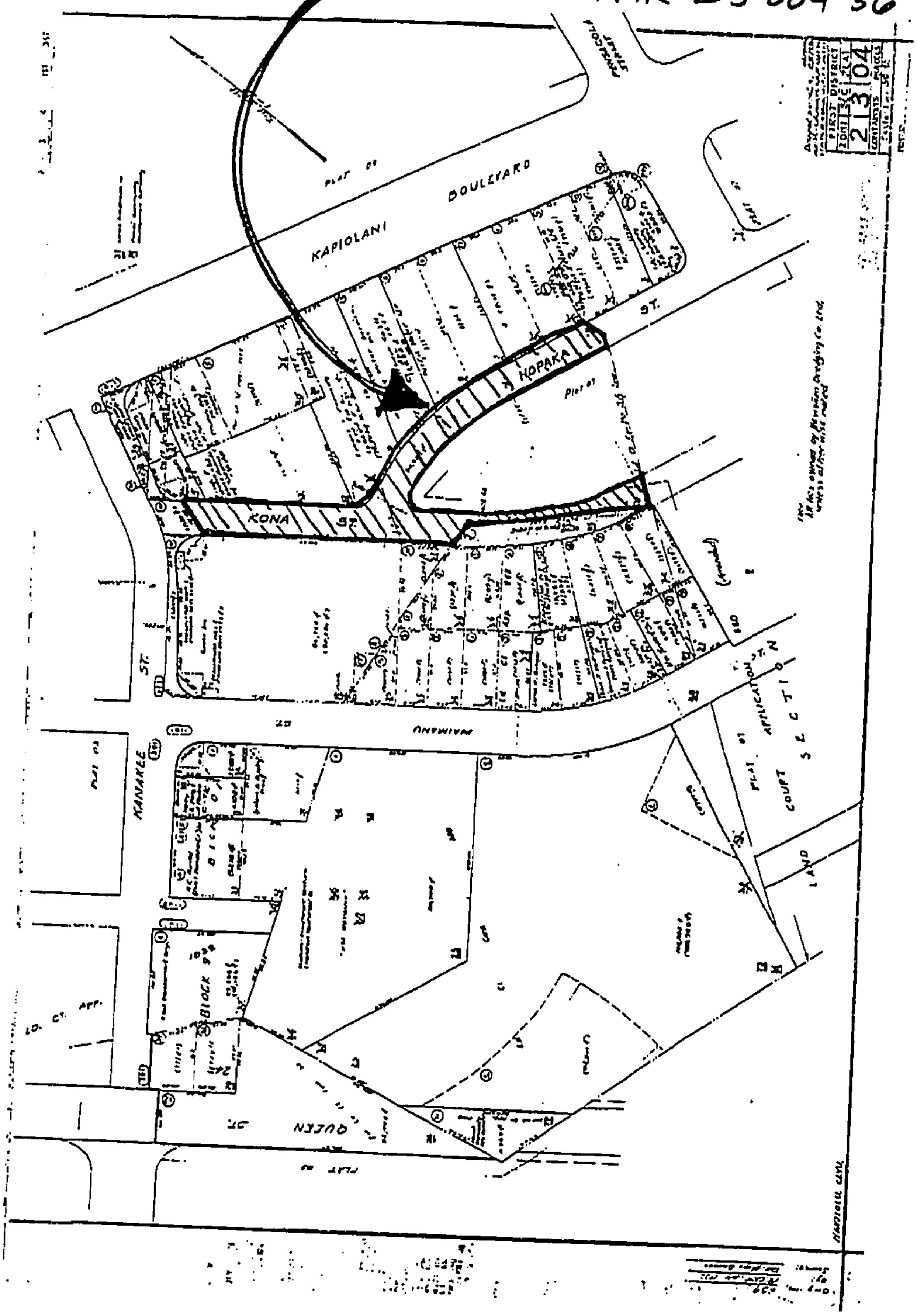
If there are any problems with this transmission **call 594-5570** or **fax 594-5621**

Tom,
Attached is a marked up TMK map showing the Gas Co. property on Kona St. The TMK number for this parcel is 2-3-004:036.

If you have any further questions, please call.

Charlie

THE GAS CO. OWNED PARCEL TMK 2 3 004 36



DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0433

December 10, 2004

The Gas Company
P.O. Box 3000
Honolulu, Hawaii 96802-3000

Gentlemen:

Attention: Mr. Charles E. Calvet
Manager, Engineering

Subject: Your Letter of October 18, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

The following are our response to your comments:

- We are aware of your underground utilities within the project area and will design the sewer reconstruction projects to minimize disturbances to your facilities.

- The City will acquire an easement from The Gas Company prior to construction of any portion of the sewer line is to be located within your property on Kona Street.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0433

December 10, 2004

The Gas Company
P.O. Box 3000
Honolulu, Hawaii 96802-3000

Gentlemen:

Attention: Mr. Charles E. Calvet
Manager, Engineering

Subject: Your Letter of October 18, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

The following are our response to your comments:

- We are aware of your underground utilities within the project area and will design the sewer reconstruction projects to minimize disturbances to your facilities.

- The City will acquire an easement from The Gas Company prior to construction of any portion of the sewer line is to be located within your property on Kona Street.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

VICTORIA WARD, LIMITED
1240 ALA MOANA BLVD., SUITE 601 • HONOLULU, HAWAII 96814-4998 • TEL: (808) 591-8411 • FAX: (808) 596-4919
"Old Plantation"

November 18, 2004

City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention Mr. Raj Rath

Gentlemen:

Re: Queen Lane

In response to your request, enclosed herewith are two (2) copies of the Engineering Report: Queen Lane Sewer for Sunset Heights, Hokua Tower and Victoria Ward, Limited Future Growth prepared by Gray Hong Bills Nojima & Associates, Inc., dated July 7, 2003. Would you please incorporate the findings of this study into your plans.

Should you have any questions, please do not hesitate to contact me at 591.8411, ext. 212.

Thank you.

Very truly yours,

GENERAL GROWTH
PROPERTIES, INC.
at Victoria Ward, Limited

Jeffrey C. Dinsmore
Vice President - Development,
Hawaii Region

JCD:dcic
Encs.

cc: Genevieve Salmonson, State Office Environmental Quality Control (no enc.)
Thomas Tamanaha, Fukunaga and Associates, Inc. (no enc.)

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0429

December 10, 2004

Mr. Jeffrey C. Dinsmore
Vice President - Development, Hawaii Region
General Growth Properties, Inc. at Victoria Ward, Limited
1240 Ala Moana Boulevard, Suite 601
Honolulu, Hawaii 96814-4998

Dear Mr. Dinsmore:

Subject: Your Letter of November 18, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project and for providing the Engineering Report: Queen Lane Sewer for Sunset Heights, Hokua tower, and Victoria Ward, Limited Future Growth, dated July 7, 2003.

We will consider the portions of this report that are relevant to the subject project in preparing the final EA on the proposed project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

The Senate
State of Hawaii

STATE CAPITOL
HONOLULU, HAWAII 96813

November 17, 2004

Mr. Timothy Steinberger, Director
Department of Design and Construction
650 S. King Street
Honolulu, Hawaii 96813

Re: Kapiolani Area Revised Sewer System Draft Environmental Assessment

Dear. Mr. Steinberger,

Thank you for the opportunity to offer comments on the Kapiolani Area Revised Sewer System's Draft Environmental Assessment (EA). The rehabilitation and modernization of Honolulu's sewage system is an important public works project that will help City & County of Honolulu achieve compliance with statutory federal/state environmental requirements.

One of the most important and visible sewer rehabilitation projects is the Kapiolani Area Revised Sewer System, which will traverse a significant transportation corridor in my senatorial district. This project is urgently-needed to replace thousands of feet of aging and corroding pipes and repairing major structural defects within Ala Moana, Sheridan and Kaheka. Project boundaries include Rycroft Street (north), Kalakaua Avenue (east), Atkinson Drive/Ala Moana Boulevard (south) and Kamakee/Pensacola Streets (west).

The Draft Environmental Assessment for this project does not list a proposed start or completion date. Therefore, I have assumed that the earliest the project would commence is 2005, with a projected completion in 2006-2007. Within a similar time frame, Hawaiian Electric Company and the Honolulu Board of Water Supply have announced plans for major public works projects within the same geographical areas as the Kapiolani Area Revised Sewer System. These projects have a projected start date of 2005 and are expected to last between 12-24 months.

Ala Moana, Sheridan and Kaheka communities — and motorists using Kapiolani Boulevard, King/Beretania Streets and related cross streets — have experienced major traffic congestion and delays in recent months due to emergency repairs to sewer lines under Kapiolani Boulevard, Department of Transportation's morning rush-hour Lunalilo On-ramp Diversion project and the October openings of the Wal-Mart/Sam's Club discount outlets.

Since the Ala Moana area is heavily traveled during normal business hours, and its congestion directly impact most of urban Honolulu's Waikiki, Kaka'ako and downtown business operations, I urge your department to coordinate your construction timetable with Hawaiian Electric Company and Honolulu Board of Water Supply on their major Kapiolani Boulevard projects to minimize the level of disruption to traffic travelling through the area.

Additionally, increased cooperation in the timing/scheduling of construction work through the Kapiolani transportation corridor may help reduce construction costs since digging, trenching and related activities could be scheduled to maximize the work done in specific areas by all parties.

Your department's efforts to coordinate scheduled 2005-2007 sewer line repairs, electrical and water line upgrades would provide residents, businesses and motorists with mutually-beneficial traffic solutions and infrastructure upgrades in the urban Honolulu community.

Sincerely,

Carol Fukunaga

Senator Carol Fukunaga
District 11 (Makiki/Punchbowl, Ala Moana-McCully)

cc: Fukunaga and Associates, Inc.
Office of Environmental Quality Control

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0430

December 10, 2004

The Honorable Carol Fukunaga
Senator, 11th Senatorial District
Hawaii State Capital, Room 216
415 South Beretania Street
Honolulu, Hawaii 96813

Subject: Your Letter of November 17, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We appreciate your support of the proposed sewer system improvements and offer the following responses to your comments:

The project is tentatively scheduled for construction during 2007. The construction schedule would be dependent upon approval of the City's Capital Improvement Program schedule and availability of funding.

The draft EA has been sent to all other utility companies for review. Every effort will be made to coordinate construction activities with other utility projects in the vicinity. Where other utilities have projects planned within the same streets as sewer projects, the coordination may involve phasing the construction of the separate utilities to minimize the number of traffic lanes that would be closed at the same time. The coordination may also involve scheduling of major repaving of streets after all construction of the different utilities are completed in any particular street.

We concur that coordination of the construction schedules and activities of the various utilities would minimize traffic impacts and could result in cost savings, especially if restoration work were done jointly.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

HAWAII COMMUNITY DEVELOPMENT AUTHORITY

KAKAAKO KALAEOA

Linda Lingle
Governor

James S. Kometani
Chairperson

Daniel Dinell
Executive Director

677 Ala Moana Boulevard
Suite 1001
Honolulu, Hawaii
96813

Telephone
(808) 587-2870

Facsimile
(808) 587-8150

E-Mail
contact@hcdaweb.org

Web site
www.hcdaweb.org

Ref. No.: GF COUN 5.15

October 20, 2004

Mr. Raj Rath
City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Rath:

Re: Draft Environmental Assessment
Kapiolani Area Revised Sewer System

We have no comments on the subject environmental assessment, but would appreciate being kept informed of the construction schedule for each project.

Sincerely,

Daniel Dinell
Executive Director

DD/SHM:fmc
c: Ms. Genevieve Salmonson
Office of Environmental Quality Control
State Department of Health

Mr. Thomas Tamanaha
Fukunaga and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0428

December 10, 2004

Mr. Daniel Dinell, Executive Director
Hawaii Community Development Authority
677 Ala Moana Boulevard, Suite 1001
Honolulu, Hawaii 96813

Dear Mr. Dinell:

Subject: Your Letter of October 18, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We acknowledge that you have no comments on the proposed project. You will be informed of the construction schedule during the design phase of this project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

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
E-mail: oeqc@health.state.hi.us

November 19, 2004

Mr. Tim Steinberger, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawai'i 96813

Dear Mr. Steinberger:

Subject: Draft Environmental Assessment for Kapiolani Area Revised Sewer System, O'ahu

Thank you for the opportunity to review and comment on the subject project. We have the following comments.

1. Please analyze the impacts of the project to cultural resources.

2. Please take mitigation measures to minimize traffic disruptions during construction.

3. Please analyze the cumulative impacts by taking into consideration other construction projects in the vicinity during the same time period.

4. Please consult with the City Department of Transportation Services and the neighborhood board.

Sincerely,

Genevieve Salmonson

Genevieve Salmonson
Director

c: Fukunaga & Associates

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0432

December 10, 2004

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

Dear Ms. Salmonson,

Subject: Your Letter of November 19, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

Our responses to the comments are as follows:

1. The State Historic Preservation Division of the DLNR has been consulted and as a result, an archaeological assessment for the project has been prepared. The recommendations of the Archaeological Assessment as well as the recommendations of the State Historic Preservation Division will be implemented during construction of the project.

2. The construction plans and specifications will include measures to minimize traffic disruptions during construction, such as traffic control plans, limitations of work to non-peak traffic hours, limitations on lane closures. Permitting requirements also serve to control construction and minimize impacts upon traffic.

3. The draft EA has been submitted to other agencies for review. Every effort will be made to coordinate construction of this project with projects of other agencies in the vicinity of this project to minimize cumulative adverse impacts.

4. The City's Department of Transportation Services and the Ala Moana/Kakaako Neighborhood Board No. 11 were sent copies of the draft EA for review. Additionally, the Department of Transportation Services will be consulted during the design phase of this project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

FAX TRANSMITTAL SHEET

ENVIRONMENTAL CENTER
University of Hawaii
2500 Dole Street, Krauss Annex 19, Honolulu, HI 96822
Telephone: (808) 956-7361 Fax: (808) 956-3980

DATE: 11/22/2004

FROM: John Harrison

TO: Raj Rath, Design and Construction (523-4642)
Thomas Tamanaha, Fukunaga & Associates (946-9339)
OEQC (586-4186)

SUBJECT: DEA
Kapiolani Sewer System

Pgs: 3

UNIVERSITY OF HAWAI'I AT MĀNOA
Environmental Center

November 22, 2004
EA: 308

Mr. Raj Rath
City and County of Honolulu
Department of Design and Construction
650 South King Street, 14th floor
Honolulu, Hawai'i, 96813

Dear Mr. Rath:

Draft Environmental Assessment (DEA)
Kapiolani Area Revised Sewer System
Honolulu, Oahu

The City and County of Honolulu Department of Design and Construction (DDC) propose to revise the Kapiolani area sewer system. The project consists of the rehabilitation of sewer lines at eight sewer project sites. The estimated total project cost of the eight sites is $6,294,000.

The Environmental Center conducted this review with the assistance of Roger Babcock, Civil and Environmental Engineering; and Kerry Halford, Environmental Center.

General Comments

This draft EA does a fine job describing the overall project, the alternatives, and construction methods; however, it does not adequately discuss probable impacts and mitigative measures. Our reviewers address a number of areas in their critical remarks.

Time

Although the overall project is comprised of several segments, the projected dates of the separate projects could not be found in the draft EA; these dates should be mentioned in the final EA. Are these projects to be completed in phases or accomplished at the same time period? If the latter, how will the individual projects impact each other.

Short Term Impacts

On page 17, section V.A, the short term impacts of the projects were discussed. However, this section does not thoroughly explain the mitigative measures. The section states that construction impacts such as disruption of traffic, noise, exhaust, dust, etc. will be "minimized and controlled" by various "laws, regulations and permits". This statement is written vaguely and insufficiently. A

2500 Dole Street, Krauss Annex 19, Honolulu, Hawai'i 96822-2313
Telephone: (808) 956-7361 • Facsimile: (808) 956-3980

description of what will be done, what laws and regulations will be followed and what permits will be obtained is in order.

Since wastewater discharges and spills, dewatering wastes, and contaminated material may be encountered or occur, how will these be avoided and mitigated? The EA states that plans, specifications and permitting will address these. This is also vague and insufficient. Again, some description of what will be done, what laws and regulations will be followed, and what permits will be obtained is in order.

For CIPP, aren't there other short-term impacts such as odors from the volatile chemicals in the resins when installed and cured? How long do these last? How are they mitigated? Will notices be given to residents and businesses beforehand? Are there susceptible populations such as asthmatics?

Long Term Impacts

On page 18, section V.B, the long term impacts of the projects were covered. The Construction Materials subsection lists materials to be used and how they will be selected. However, our reviewers have inquired what are the long-term impacts of these materials? How long do they last? Do they degrade and cause pollution? A more thorough explanation is in order as to why this section is here.

Archeological Assessment

The archeological assessment included in the appendix indicates that human remains and other artifacts are probable finds during excavation in the project area. If human remains are found, there are requirements on handing, reburial, etc. These seem like either a long-term impact or short-term impact. That study recommended that a "qualified archeological monitor be present during all ground disturbing activities." It is assumed that the monitor would help identify artifacts and ensure proper handling protocols. This argument sounds like a mitigation measure. These measures should be included in the final EA.

Thank you for the opportunity to review this Draft EA.

Sincerely,

John T. Harrison, Ph.D.
Environmental Coordinator

cc: OEQC
Fukunaga & Associates, Inc.
James Moncur, WRRC
Roger Babcock
Kerry Halford

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0434

December 10, 2004

Dr. John T. Harrison, Ph.D.
Environmental Coordinator
Environmental Center
University of Hawaii
2500 Dole Street, Krauss Annex 19
Honolulu, Hawaii 96822

Dear Dr. Harrison:

Subject: Your Letter of November 22, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

Our responses to your comments are as follows:

Time

The final environmental assessment will include projected dates for construction of the project. The individual project locations are scattered and would not significantly impact each another. Also. these individual projects involve separate collection systems that do not affect each other hydraulically.

Short Term Impacts

We will include the various regulations concerning environmental impacts and the construction permits required by the contractor in the final environmental assessment. Specific mitigation measures are not detailed in the EA because the construction design plans and the construction methods chosen by the contractor determine what procedures and measures are required to prevent or minimize the impacts of construction. Procedures or restrictions to mitigate wastewater discharges and spills, water and air pollution, discovery of hazardous materials; noise control, and odor control are detailed in the General Conditions of Construction Contracts, special provisions of the project

specifications, construction plan notes, and the various construction permits required to be complied with on all City projects.

CIPP lining of pipes utilizes resin impregnated liners that are inserted in the existing pipes and heat cured in the pipe. Odors from the CIPP lining work affecting the public are mainly confined to the vicinity of the existing sewer manhole that is used to insert the liner and inject the heated medium (hot water or steam). The pipe liner tubes are saturated with resin in the shop and transported to the job site in a refrigerated container to retard the curing process; odors are not a problem during this period. The existing sewers to be lined are in open areas, and the odors (styrene from the resins) are rapidly dissipated and destroyed in the atmosphere. Odors would be confined in the vicinity of the insertion manhole and is anticipated to last a few hours while the CIPP lining is heated and chemically cured. Measurements of styrene concentrations near the insertion manhole have been much lower than OSHA standards for exposure at projects where measurements were taken. While odorous, the low concentrations of styrene have not been known to be hazardous to the health and safety of passers-by or nearby residents; nor have they been considered detrimental to the environment.

Long Term Impacts

Selection of sewer system materials is done during the design phase of this project and is dependent upon many factors, including the characteristics of the subsurface materials, groundwater conditions, depth of the sewers, type and proximity of nearby facilities, external loading, method of construction to be used, and quality of the wastewater being transported by the sewer system. These factors affect the service life, operability, maintainability, and hydraulic characteristics of the system and are considered during the design phase of this project. In general, sewer systems are designed for a minimum of 50 years of service life.

Archaeological Assessment

We concur that the archaeological findings and subsequent actions should be included in the section on long-term impacts. The final EA will include this impact and mitigation measures.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

November 22, 2004

Mr. Raj Rath
City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

LOG NO: 2004.3372
DOC NO: 0411EJ16

Dear Mr. Rath:

SUBJECT: Chapter 6E-8 Historic Preservation Review-City and County of Honolulu, Department of Design and Construction Draft Environmental Assessment Kapi`olani Area Revised Sewer System Honolulu, Kona, O`ahu
TMK: (1)2-3-04, 05, 07, 09, 10, 132, 14, 17, 18, 22, 35, 36, & 38

Thank you for the opportunity to comment on the DEA for the Kapi`olani Area Revised Sewer System (Fukunaga & Associates, October 2004). We previously provided comments to Fukunaga & Associates during the pre-EA phase recommending an archaeological and architectural assessment of the project corridor to identify any historic sites in the area (McEldowney to Tamanaha, February 23 2004, SHPD Log 2004.0467). Subsequently we received for review a report documenting a literature review and field check for this project (Tulchin and Hammatt, May 2004. *Literature Review and Field Check for the Kapi`olani Area Revised Sewer System, Honolulu, Ahupua`a, Kona District, Island of O`ahu*). Our review of the report stated that we concurred with the recommendation to have an on-site archaeological monitoring program carried out in conjunction with ground disturbance caused by project's proposed work. The on-site monitoring should be carried out in accordance with an approved archaeological monitoring plan (see attached copy of: McEldowney to Tulchin, June 22, 2004, SHPD Log 2004.1792).

Based on the above, we believe that Section IV E "Archaeological and Historic Considerations", and Section VII "Findings and Determination" should be revised to reflect our concerns that ground disturbance for the project has the potential to affect historic properties within the project area and that on-site monitoring by a qualified archaeologist for ground disturbing activities associated with this project following and approved archaeological monitoring plan, be conducted.

Should you have any questions about archaeology, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027. Should you have any questions about burial matters or cultural matters, please feel free to contact Nathan Napoka at 587-0192.

Aloha,

Melanie A. Chinen, Administrator
State Historic Preservation Division

EJ:jen

c: Ms. Genevieve Salmonson, Director, OEQC
Mr. Thomas Tamanaha, Fukunaga and Associates, Inc., 1338 Kapi`olani Blvd., 2nd Flr, Honolulu, HI 96814
Mr. V. Horn Diamond, OIBC
Mr. Nathan Napoka, History and Culture Branch

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0422

December 10, 2004

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

Gentlemen:

Attention: Ms. Melanie A. Chinen, Administrator

Subject: Your Letter of November 22, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

Our responses to the comments from the Historic Preservation Division are as follows:

We concur with the comments that the disturbances of the ground has the potential to affect historic and archaeological sites in the project area and that an on-site monitoring by a qualified archaeologist following an approved archaeological monitoring plan shall be conducted during project activities involving ground disturbances. We will revise Section IV. E. Archaeological and Historic Considerations, Section V. Probable Impacts and Mitigative Measures B. Long-term Impacts, and Section VII. Findings and Determination of the EA to reflect your comments.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

November 5, 2004

LD-NAV
KAPIOLANISEWER.RCM

Thomas Tamanaha, Project Manager
Fukunaga and Associates, Inc.
1388 Kapiolani Blvd., 2nd Floor
Honolulu, Hawaii 96809

Dear Mr. Tamanaha

SUBJECT: Draft Environmental Assessment for the Kapiolani Area Revised Sewer System, Honolulu, Hawaii

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

The Department of Land and Natural Resources' Land Division transmitted or made available a copy of the document pertaining to the subject matter to the following Department of Land and Natural Resources' Divisions for their review and comment:

- Division of Forestry and Wildlife
- Commission on Water Resource Management
- Engineering Division Planning
- Office of Conservation and Coastal Lands
- Land-Oahu District Land Office

Enclosed please find a copy of the Engineering Division comment.

Based on the attached responses, the Department of Land and Natural Resources has no other comment to offer.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at (808) 587-0384. Thank you.

Very truly yours,

DIERDRIE S. MAMIYA
Administrator

C: ODLO

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
DEPUTY DIRECTOR - WATER

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BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
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LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 19, 2004
LD/NAV
KAPIOLANISEWER.CMT

Suspense Date: 10/29/04

MEMORANDUM:

TO: XXX Engineering Division
XXX Division of Forestry and Wildlife
XXX Commission on Water Resource Management
XXX Office of Conservation and Coastal Lands
XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Kapiolani Area Revised Sewer System, Honolulu, Oahu

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

( ) We have no comments.

(✓) Comments attached.

Signed: Andrew M. Monde

Date: 10/20/04

Name: for ERIC T. HIRANO, CHIEF ENGINEER

Division: Engineering

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/NAV
Ref.: KAPIOLANISEWER.CMT

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zones X and A. The National Flood Insurance Program does not have any regulations for development within Zone X, however, it does regulate development within Zone A as indicated in bold letters below.**

( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is also located in Zone ____.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

(X) **Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.**

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

(X) **Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.**

( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

(X) **Other: Please correct information on page 13, Flood and Tsunami of the document. The correct Firm Community-Panel Number is 15003C0365 E, not 150001 0120 C.**

Should you have any questions, please call Mr. Andrew Monden of the Planning Branch at 587-0229.

Signed: Andrew M. Monden
FOR ERIC T. HIRANO, CHIEF ENGINEER

Date: 10/20/04

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 19, 2004
LD/NAV
KAPIOLANISEWER.CMT

Suspense Date: 10/29/04

MEMORANDUM:

TO: XXX Engineering Division
XXX *Division of Forestry and Wildlife*
XXX Commission on Water Resource Management
XXX Office of Conservation and Coastal Lands
XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Kapiolani Area Revised Sewer System, Honolulu, Oahu

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

(✓) We have no comments. ( ) Comments attached.

Signed: Cecil Santos Date: 10/20/04

Name: CECIL SANTOS Division: LAND

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 19, 2004
LD/NAV
KAPIOLANISEWER.CMT

Suspense Date: 10/29/04

MEMORANDUM:

TO: XXX Engineering Division
XXX Division of Forestry and Wildlife
XXX Commission on Water Resource Management
XXX Office of Conservation and Coastal Lands
XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Kapiolani Area Revised Sewer System, Honolulu, Oahu

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

(X) We have no comments. ( ) Comments attached.

Signed: Paul J. Conry Date: OCT 20 2004

Name: PAUL J. CONRY, ADMINISTRATOR
DIVISION OF FORESTRY AND WILDLIFE

Division: _____

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0431

December 10, 2004

State of Hawaii
Department of Land and Natural Resources
Land Division
Post Office Box 621
Honolulu, Hawaii 96809

Attention: Ms. Dierdre S. Mamiya, Administrator

Subject: Your Letter of November 5, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We acknowledge that the Division of Forestry and Wildlife, the Commission on Water Resources Management, the Office of Conservation and Coastal Lands, and the Land-Oahu District land Office have no comment on the proposed project.

Our responses to the comments from the Engineering Division are as follows:

1. The proposed project will comply with the rules and regulations of the National Flood Insurance Program presented in 44CFR.

2. The proposed project will comply with the applicable City and County of Honolulu ordinances and the requirements of the City Department of Planning and Permitting

3. The reference to the Firm Community Panel Number will be corrected to reflect the updated map number in the final EA.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E STEINBERGER, P.E.,
Director

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD / CWB

11081PKP.04

November 22, 2004

Mr. Raj Rath
Department of Design and
Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Rath:

Subject: Draft Environmental Assessment
Kapiolani Area Revised Sewer System, Honolulu, Oahu

The Department of Health (DOH), Clean Water Branch (CWB), has reviewed the subject document and offers the following comments:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 to identify whether a Federal license or permit (including a Department of Army permit) is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Control Act (commonly known as the "Clean Water Act"), a Section 401 Water Quality Certification is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..."

2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following activities:

   a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

   b. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.**

   c. Discharges of treated effluent from leaking underground storage tank remedial activities.

   d. Discharges of once through cooling water less than one (1) million gallons per day.

   e. Discharges of hydrotesting water.

f. Discharges of construction dewatering effluent.

g. Discharges of treated effluent from petroleum bulk stations and terminals.

h. Discharges of treated effluent from well drilling activities.

i. Discharges of treated effluent from recycled water distribution systems.

j. Discharges of storm water from a small municipal separate storm sewer system.

k. Discharges of circulation water from decorative ponds or tanks.

The CWB requires that a Notice of Intent (NOI) to be covered by an NPDES general permit for any of the above activities be submitted at least 30 days before the commencement of the respective activities. The NOI forms may be picked up at our office or downloaded from our website at:
http://www.hawaii.gov/health/environmental/water/cleanwater/index.html

3. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters and/or coverage of the discharge(s) under the NPDES general permit(s) is not permissible (i.e. NPDES general permits do not cover discharges into Class 1 or Class AA State waters). An application for the NPDES permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at:
http://www.hawaii.gov/health/environmental/water/cleanwater/index.html

4. Hawaii Administrative Rules, Section 11-55-38, also requires the applicant to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD.

If you have any questions, please contact Ms. Kris Poentis of the Engineering Section, CWB, at 586-4309.

Sincerely,

DENIS R. LAU, P.E., CHIEF
Clean Water Branch

KP:np

c: Ms. Genevieve Salmonson, OEQC
Mr. Thomas Tamanaha, Fukunaga & Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0424

December 10, 2004

Mr. Denis R. Lau, P.E., Chief
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Mr. Lau:

Subject: Your Letter of November 22, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We appreciate the information provided on the regulatory requirements related to your agency. Our responses to the comments are as follows:

1. We have contacted the Army Corps of Engineers and they concur that the anticipated work activities of this project do not require a Corps of Engineers license or permit. A copy of the draft EA had been sent to the Army Corps of Engineers for review.

2. The only condition where a NPDES permit would be required for this project would be if the contractor chooses to discharge construction dewatering effluent in the storm drain system as stated in the EA.

3. Items 3 and 4 of your comments, the requirements for an application for an individual NPDES permit and submittal of a Notice of Intent or NPDES permit application to the DLNR Historic Preservation Division would not be applicable to this project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0424

December 10, 2004

Mr. Denis R. Lau, P.E., Chief
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Mr. Lau:

Subject: Your Letter of November 22, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We appreciate the information provided on the regulatory requirements related to your agency. Our responses to the comments are as follows:

1. We have contacted the Army Corps of Engineers and they concur that the anticipated work activities of this project do not require a Corps of Engineers license or permit. A copy of the draft EA had been sent to the Army Corps of Engineers for review.

2. The only condition where a NPDES permit would be required for this project would be if the contractor chooses to discharge construction dewatering effluent in the storm drain system as stated in the EA.

3. Items 3 and 4 of your comments, the requirements for an application for an individual NPDES permit and submittal of a Notice of Intent or NPDES permit application to the DLNR Historic Preservation Division would not be applicable to this project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

November 8, 2004

04-997A CAB

Mr. Raj Rath
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Rath:

SUBJECT: Draft Environmental Assessment for the Kapiolani Area Revised Sewer System Project, Honolulu, Oahu

This letter is to transmit the following comments on the subject document:

Control of Fugitive Dust:

There is a significant potential for fugitive dust emissions during all phases of construction. Proposed construction activities will occur in proximity to existing residences, businesses, public areas and major thoroughfares, thereby exacerbating potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. Implementation of adequate dust control measures during all phases of development and construction activities is warranted.

Construction activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust.

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

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

If you have any questions, please contact Mr. Barry Ching of my staff at 586-4200.

Sincerely,

WILFRED K. NAGAMINE
Manager, Clean Air Branch

BC:jhm

c: Genevieve Salmonson, Director, OEQC
Thomas Tamanaha, Fukunaga and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0423

December 10, 2004

State of Hawaii
Department of Health
Clean Air Branch
Post Office Box 3378
Honolulu, Hawaii 96801-3378

Gentlemen:

Attention: Mr. Wilfred K. Nagamine, Manager, Clean Air Branch

Subject: Your Letter of November 8, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

In response to your comments, a reference to §11-60.1-33 Fugitive Dust of the Administrative Rules of the Department of Health will be included in the final EA. We agree that trenching work during construction has the potential for fugitive dust emissions. Dust emissions would be controlled and monitored by the plans, specifications, permits, and inspections required during construction activities.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

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

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
File:

November 8, 2004

TO: Raj Rath
Department of Design and Construction
City & County of Honolulu

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

SUBJECT: **Comments to the Draft Environmental Assessment**
Kapiolani Area Revised Sewer System, Honolulu, Oahu
Contract No. F82291
Pursuant to Chapter 343, HRS, and Chapter 200 of Title 11

Our comments should be printed as follows:

"Project activities shall comply with the Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control.

Should there be any questions, please contact Russell S. Takata, Environmental Health Program Manager, Noise, Radiation and Indoor Air Quality Branch, at 586-4701."

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0425

December 10, 2004

State of Hawaii
Department of Health
Noise, Radiation & Indoor Air Quality Branch
Post Office Box 3378
Honolulu, Hawaii 96801-3378

Gentlemen:

Attention: Mr. Russell S. Takata, Environmental Health Program Manager

Subject: Your Letter of November 8, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We will include a reference to Chapter 11-46 Community Noise Control of the Administrative Rules of the Department of Health to control construction activity noise in the final EA.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

November 15, 2004

O2 3 004 etc.wpd
W12 wb040972

City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention: Mr. Raj Rath

Dear Sirs:

Subject: **Draft Environmental Assessment**
Kapiolani Area Revised Sewer System
Honolulu, Hawaii
TMK: (1) 2-3-004, 005, 007, 009, 010, 013, 014, 017, 018, 022, 035, 036 & 038

Thank you for allowing us the opportunity to review the subject Environmental Assessment. We have reviewed the document which proposes sewer line reconstruction parallel to the existing sewer lines on Kalauokalani Way, Atkinson Drive, Rycroft Street, an easement off Cedar Street, an easement off Pensacola Street, Kona Street, Kapiolani Boulevard and on Ala Moana Boulevard.

We are in favor of sewer line reconstruction and improvements which will better service our communities. Therefore we have no objections to the plan and concur with its recommendations.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules.

Should you have any questions, please contact the Planning & Design Section of our Branch at 586-4294.

Sincerely,

HAROLD K. YEE, P.E., CHIEF
Wastewater Branch

LNKM:erm

c: Ms. June Harrigan-Lum, EPO
Mr. Tom Tamanaha, Fukunaga & Associates
Ms. Genevieve Salmonson, Office of Environmental Quality Control

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4564 • FAX: (808) 523-4567 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0427

December 10, 2004

Mr. Harold K. Yee, P.E., Chief
Wastewater Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Mr. Yee:

Subject: Your Letter of November 15, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We appreciate your support of the proposed plans for the Kapiolani area sewer improvements project.

The construction plans will be prepared in conformance to the applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We acknowledge that you reserve the right to review the construction plans for conformance to the applicable rules.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

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

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD/SHWB

November 22, 2004

Mr. Raj Rath
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Rath:

SUBJECT: Kapiolani Area Revised Sewer System
Draft Environmental Assessment

Thank you for the opportunity to offer comments on the above document. Your request has been reviewed by the Solid Waste, Underground Storage Tank, and Hazardous Waste programs within the Solid and Hazardous Waste Branch.

We have no comments to offer at this time.

Sincerely,

STEVEN Y.K. CHANG, P.E., CHIEF
Solid and Hazardous Waste Branch

c: Ms. Genevieve Salmonson, Director, Office of Environmental Quality Control
✓Mr. Thomas Tamanaha, Fukunaga and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0426

December 10, 2004

State of Hawaii
Department of Health
Solid and Hazardous Waste Branch
P. O. Box 3378
Honolulu, Hawaii 96801-3378

Gentlemen:

Attention: Mr. Steven Y.K. Chang, P.E., Chief
Solid and Hazardous Waste Branch

Subject: Your Letter of November 22, 2004, Regarding the Draft Environment Assessment for the Kapiolani Area Revised Sewer System

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We acknowledge that you have no comments on the proposed project.

Should you have any questions, please contact Bill Liu at 527-5388.

Very truly yours,

for TIMOTHY E. STEINBERGER, P.E.
Director

BOARD OF WATER SUPPLY

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

November 8, 2004

Mr. Timothy Steinberger, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th floor
Honolulu, Hawaii 96813

Attention: Mr. Raj Rath

Dear Mr. Steinberger:

Subject: Draft Environmental Assessment for Kapiolani Area Revised Sewer System, Honolulu, Oahu

Thank you for the opportunity to comment on the proposed project. The construction drawings should be submitted for our review and approval. The construction schedule should be coordinated to minimize impact to the water system.

If you have any questions, please contact Joseph Kaakua at 748-5442.

Very truly yours,

K. Sumida

for CLIFFORD S. JAMILE
Manager and Chief Engineer

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0419

December 10, 2004

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

FROM: for TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER OF OCTOBER 18, 2004, REGARDING THE DRAFT ENVIRONMENT ASSESSMENT FOR THE KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

In response to your comments, we will submit the construction plans for the proposed project to your department for review and approval. We also acknowledge that the construction schedule should be coordinated to minimize impact to the water system.

Should you have any questions, please contact Bill Liu at 527-5388.

October 20, 2004

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: WILLIAM D. BALFOUR, JR., DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to the Kapiolani Area Revised Sewer System.

The Department of Parks and Recreation has no comment.

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

W. D. Balfour

WILLIAM D. BALFOUR, JR.
Director

WDB:mk
(80493)

cc: Ms. Genevieve Salmonson, Office of Environmental Quality Control
Mr. Thomas Tamanaha, Fukunaga and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0418

December 10, 2004

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

FROM: for TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT; YOUR LETTER OF OCTOBER 18, 2004, REGARDING THE DRAFT ENVIRONMENT ASSESSMENT FOR THE KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We acknowledge that you have no comments on the proposed project.

Should you have any questions, please contact Bill Liu at 527-5388.

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4529 • FAX (808) 523-4730 • INTERNET www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GEORGE "KEOKI" MIYAMOTO
DIRECTOR

ROBERT J. FISHMAN
DEPUTY DIRECTOR

TP10/04-80344R

December 7, 2004

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: RAJ RATH

FROM: GEORGE "KEOKI" MIYAMOTO, DIRECTOR

SUBJECT: KAPIOLANI AREA REVISED SEWER SYSTEM

In response to the October 12, 2004 letter from Fukunaga & Associates, we have reviewed the draft environmental assessment (EA) for the subject project and are offering the following comments:

1. The draft EA states that there will be a moderate to a significant construction related traffic disruptions depending on the specific project location. The mitigation measures discussed are non-specific. We suggest the addition of more specificity and some degree of quantitative analysis to identify the impacts and effectiveness of the proposed mitigation measures.

2. The area neighborhood board, as well as area residents, businesses, emergency personnel, bus personnel, etc. should be informed and kept apprised of the details of the proposed project and the impacts the project may have on the surrounding area.

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

GEORGE "KEOKI" MIYAMOTO

cc: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control

Mr. Thomas Tamanaha, Project Engineer
Fukunaga and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E
DIRECTOR

WW.P 04-0440

December 13, 2004

TO: MR. GEORGE "KEOKI" MIYAMOTO, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: FOR TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR MEMORANDUM OF DECEMBER 7, 2004, REGARDING THE DRAFT ENVIRONMENT ASSESSMENT FOR THE KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

Our responses to the comments from the Department of Transportation Services are as follows:

1. The final EA will be expanded to include further discussion of traffic mitigation measures. Specific impacts and mitigation measures would be determined following the design phase of the project, when the sewer alignments are finalized and construction methods are evaluated and selected.

2. We acknowledge that residents, businesses, the neighborhood board, emergency and transit agencies need to be appropriately informed of work impacting the various agencies or individuals during construction.

Should you have any questions, please contact Bill Liu at 527-5388.

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 215, KAPOLEI, HAWAII 96707
TELEPHONE : (808) 692-5054 FAX: (808) 692-5857

JEREMY HARRIS
MAYOR

LARRY J. LEOPARDI, P.E.
DIRECTOR AND CHIEF ENGINEER

JOSEPH MAGALDI
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 04-941

November 18, 2004

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: RAJ RATH

FROM: LARRY LEOPARDI, P.E., DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF FACILITY MAINTENANCE

SUBJECT: **DRAFT ENVIRONMENTAL ASSESSMENT (DEA), OCTOBER 2004**
KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for the opportunity to review the subject DEA.

We support the "cured-in-place" and "pipe busting" pipe lining methods for existing pipeline replacement and rehabilitation. To lessen the impact on the project roadway pavements we request that open trench construction be kept to a minimum and utilized only where less destructive methods may not be feasible.

Should you have any questions, please call Charles Pignataro of our Division of Road Maintenance, at 484-7697.

cc: State of Hawaii Department of Health
Fukunaga & Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW.P 04-0421

December 10, 2004

TO: MR. LARRY LEOPARDI, P.E. DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF FACILITY MAINTENANCE

FROM: for TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER OF NOVEMBER 18, 2004, REGARDING THE DRAFT ENVIRONMENT ASSESSMENT FOR THE KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

We acknowledge your support of "trenchless" methods of sewer system rehabilitation and have recommended these methods wherever feasible or economically justifiable. CIPP lining methods of pipe rehabilitation will be used in this project. Pipe bursting is a desirable method of pipe reconstruction except in areas where other utility lines are located in the proximity of the project sewer lines. There is a risk of damaging adjacent utilities and road surfaces by forces generated by pipe bursting equipment. Although the initial study for this project did not recommend pipe bursting, detailed field investigations conducted during the design phase of this project may lead to the selection of pipe bursting as a means to reconstruct certain sewer lines.

Should you have any questions, please contact Bill Liu at 527-5388.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
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DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

JEREMY HARRIS
MAYOR

ERIC G. CRISPIN, AIA
DIRECTOR

BARBARA KIM STANTON
DEPUTY DIRECTOR

04WWB165 (SG)
2004/ELOG-2335

November 19, 2004

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: RAJ RATH
WASTEWATER DIVISION

FROM: Dennis M. Nishimura
For ERIC G. CRISPIN, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: **DRAFT ENVIRONMENTAL ASSESSMENT**
KAPIOLANI AREA REVISED SEWER SYSTEM

This is in response to Fukunaga and Associates' letter dated October 12, 2004, requesting comments for the proposed sewer rehabilitation project. This project will require a trenching permit from the Department of Planning and Permitting, and pavement restoration shall be done in accordance with the City administration's September 30, 2004 repaving policy.

If you have any questions, please contact Mr. Scott Gushi of the Wastewater Branch at 523-4886.

EGC:dl
[337134]

cc: Ms. Genevieve Salmonson (State DOH)
Mr. Thomas Tamanaha (Fukunaga and Associates, Inc.)

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
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JEREMY HARRIS
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

WW. P 04-0420

December 10, 2004

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

FROM: for TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR MEMORANDUM OF NOVEMBER 19, 2004, REGARDING THE DRAFT ENVIRONMENT ASSESSMENT FOR THE KAPIOLANI AREA REVISED SEWER SYSTEM

Thank you for reviewing the Draft Environmental Assessment for the proposed Kapiolani Area Revised Sewer System project.

In response to your comments, the construction plans and specifications for the proposed project will require the contractor to obtain a trenching permit from the Department of Planning and Permitting and to conform to the provisions of the City's policy on Trenching Permits and Repaving of Streets, dated September 30, 2004.

Should you have any questions, please contact Bill Liu at 527-5388.