November 13, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
State of Hawaii
State Office Tower, Room 702
215 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Gill:

CHAPTER 343, HRS
Environmental Assessment (EA)/Determination
Finding of No Significant Impact

Owner/Applicant: USPO Galleria, LLC
Agent: R.G. Wood and Associates, Ltd.
Location: 335 Merchant Street, Honolulu, Oahu
Tax Map Key: 2-1-25: 4
Request: Hawaii Capital Special District Permit (Minor)
Proposal: Rehabilitation of the United States Post Office, Custom House and Court House Building
Determination: A Finding of No Significant Impact is Issued

Attached and incorporated by reference is the Final EA prepared by the applicant for the project. Based on the significance criteria outlined in Chapter 200, State Administrative Rules, we have determined that preparation of an Environmental Impact Statement is not required.
Mr. Gary Gill, Director  
Page 2  
November 13, 1998  

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final EA. If you have any questions, please contact Art Challacombe of our staff at 523-4107.

Very truly yours,

JAN NAGE SULLIVAN  
Director of Planning and Permitting  

JNS:am  
Encls.  
gizlfeau spo. eoo
ENVIRONMENTAL ASSESSMENT

November 1998

OF

THE STAGE ONE REHABILITATION

OF THE

UNITED STATES POST OFFICE CUSTOM HOUSE AND COURT HOUSE

Tax Map Key: 2-1-25-4

APPLICANT

USPO Galleria, LLC.
335 Merchant Street, Suite 100
Honolulu, Hawaii 96813

Architect/Planners

R. G. Wood and Associates, Ltd.
444 Hobron Lane, Suite 307,
Honolulu, HI 96815
FINAL

ENVIRONMENTAL ASSESSMENT

November 1998

OF

THE STAGE ONE REHABILITATION

OF THE

UNITED STATES POST OFFICE CUSTOM HOUSE AND COURT HOUSE

Tax Map Key: 2-1-25-4

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444 Hobron Lane, Suite 307,
Honolulu, HI 96815
ENVIRONMENTAL ASSESSMENT

November 1998

I. GENERAL INFORMATION

A. Applicant: USPO Galleria, LLC.
   335 Merchant Street, Suite 100
   Honolulu, Hawaii 96813.

B. Recorded Fee Owner: USPO Galleria, LLC.
   335 Merchant Street, Suite 100
   Honolulu, Hawaii 96813

C. Agent: R. G. Wood and Associates, Ltd.
   444 Hobron Lane, Suite 307,
   Honolulu, HI 96815.

D. Tax Map Key: 2-1-25-4

E. Lot Area: 2.617 AC

F. Agencies Consulted in making Assessment: This list and the resulting correspondence is included in Appendix I of this Assessment.

II. DESCRIPTION OF THE PROPOSED ACTION

A. General Description

1. Location The property is located at 335 Merchant Street, Honolulu, Hawaii. The building was designed by York & Sawyer Architects of New York City between 1918 and 1919, and was completed in 1922. It was expanded in 1930 using the Treasury Department architects. Exhibit 1. The structure was designed to accommodate the Post Office, Custom House, Court House, Internal Revenue Service, U. S. Marshall and other federal agencies. Exhibit 2.

   In 1973 the building was nominated to The National Register of Historic Places by the Government Services Administration and was placed on the register. The structure's designation as a National Register property provides it protection under the National Historic Preservation Act (NHPA) of 1966. This act provides "that the historical and cultural foundations of the Nation should be preserved... to insure future generations a genuine opportunity to appreciate and enjoy the rich heritage of our nation."
The property is located in the Hawaii Capitol Special District, Historic Precinct designated by the Land Use Ordinance (LUO) of the City & County of Honolulu. This designation provides "safeguards for the preservation and enhancement of buildings which represent or reflect elements of the State's civic, aesthetic, cultural, social, economic, political and architectural heritage." The building is recognized as a listing on the Hawaii Register of Historic Places (HRHP) as well as the National Register of Historic Places (NRHP).

The USPO Galleria, LLC. is proceeding with plans to rehabilitate The United States Post Office, Custom House and Court House Building. STAGE ONE, the 1922 portion on Merchant Street will be an interior rehabilitation, consisting of alterations involving such things as partitions, plumbing and electrical conveyances. The present Post Office Mail Box Lobby will be enlarged with historically compatible alcoves to accommodate additional mailboxes. The Post Office Customer Service and Postal Box functions will remain operational during this procedure. Exhibit 1.

After the rehabilitation, the building will include the Downtown Post Office with additional adaptive re-uses such as retail and duty free stores and fine dining. In addition, the Bishop Museum will maintain exhibits of Hawaiian history, culture and art relevant to the building’s time period.

2. Relation of the parcel to the SMA: The Project is located entirely within the Statistical Metropolitan Area (SMA) of the City and County of Honolulu.

3. Map: The accompanying Maps Exhibits 13 thru 15 of this assessment indicate the project location and historical importance in downtown Honolulu.

4. Land Use Approvals: The land is presently zoned B-2, and is located in the Hawaii Special Capitol District, Historic Precinct. The Stage One portion of the building was built in 1922 long before the 1972 open space requirements of the Capitol District. The land area attributable to the Stage One project is 63,870 sf., with a building area of 35,693 sf., yielding an Open Space ratio of 55.9 %. We are not changing this ratio in this STAGE ONE project, as we are not making any change in the building footprint.

The rehabilitation of this Historic Building for the adaptive re-use will not affect the parking requirements of the B-2 zoning. However ample off site parking facilities are being provided. USPO Galleria will file with the Department of Planning and Permitting a written agreement assuring the continued availability of a total of 350 parking stalls within 160 feet of the project. A Conditional Use permit for this parking will be initiated with the DPP. The parking and loading requirements are:

<table>
<thead>
<tr>
<th>Stage One Historic Building area 72,528 sf.</th>
<th>Parking</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Retail use..........................</td>
<td>181</td>
<td>4</td>
</tr>
<tr>
<td>Former Office use........................</td>
<td>(181)</td>
<td>(2)</td>
</tr>
<tr>
<td>Residual Requirement....................</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
The requirement for two loading spaces for the Stage One adaptive re-use of the building will be accomplished in the present Service Court off Millilani Street. See Exhibit 19.

5. **Applicable Regulations**: The following Federal and State historic preservation regulations will affect the United States Post Office Custom House and Court House and the addition:
   - Sections 106 and 110 of the National Historic Preservation Act (NHPA)
     The Section 106 Application Documents have been accepted as having "no effect" on the Historical aspect of the building.
   - State of Hawaii preservation regulations which are considered related to the NHPA for compliance.

6. Other codes and regulations that may affect the United States Post Office Custom House and Court House are:
   - The Land Use Ordinance (LUA) of the City and County of Honolulu as stated above,
   - The Building Code of the City and County of Honolulu,
   - The Uniform Federal Accessibility Standards.

B. **Technical Characteristics**:

1. **Use Characteristics**: The use of the building was previously for the US Post Office Downtown Station operation, and the US Customs offices and warehouse. Various State of Hawaii functions including the Appellate Court and Hawaiian Home Lands and many other agencies have occupied the building for many years. The State has canceled their leases and has moved out, as has the US Customs. The new commercial use will continue and increase the level of activity in the building and the surrounding area.

2. **Physical Characteristics**: Exhibits 3 thru 12 are drawings showing the property lines, lot size, and the existing building floor plans, elevations and sections.

3. **Construction Characteristics**: Exhibits 16 and 17 show photographs of the existing building and perspectives of the proposed project. Exhibits 18 thru 25 show the floor plans and elevations of the rehabilitated building including the existing heights and setbacks.

4. **Utility Requirements**: The site is presently served with water, electricity, and telephone. These services were ample for the historic uses of the building and we are told that the water service will be adequate to meet normal domestic water demand, i.e., toilets and irrigation. Exhibit 26. However further analysis
will be required to determine the adequacy of the water service to accommodate heavy demand from future food service tenants. The new fire sprinkler system will also require more water capacity from the lines in the street. The water pressure requirements imposed by the fire sprinkler systems will likely result in the need for a booster pump. The electrical and telephone services will be enlarged and up-graded for the new use requirements.

5. **Liquid Waste Disposal:** Municipal sewers are available at the property line. Preliminary investigation has indicated that there is ample capacity for the new STAGE ONE use requirements. Exhibit 25. This is being coordinated with the Department of Waste Water Management.

6. **Solid Waste Disposal:** Will continue to be accomplished by collection within the building and removal by a commercial refuse service to existing and future disposal facilities. No specific toxic or other solid waste will be produced by the adaptive re-use.

7. **Access to site:** Pedestrian access will continue to be from all four surrounding streets. Parking will be provided off-site with a total of 350 spaces located within 160 feet of the building. Access to the loading spaces will be accomplished from Mililani Street through the present service court. Exhibit 19.

C. **Economic and Social Characteristics:**

1. **Estimated cost and time phasing of construction:** The construction cost is estimated to be $7,000,000 for STAGE ONE. This rehabilitation work is proposed to start in December 1998 and continue for about four months.

2. **Other pertinent information:** It is anticipated that this project will bring new activity and life to the immediate surrounding neighborhood, extending activity into the evening hours. A wide variety of customers will be attracted by the new shopping and entertainment facilities provided.

D. **Environmental Characteristics:**

1. **Soils:** As there will be no building excavation on this Stage One Project there is no need for a soils investigation to be preformed.

2. **Topography:** The site in downtown Honolulu is relatively flat with about a three foot slope from the Merchant/Mililani Street corner to the Queen/Richards Street corner.

3. **Surface runoff, drainage, and erosion hazard:** The property is presently covered with building, paved area and landscaping, and this will not change. All roof drains are connected to storm sewers so there is no erosion hazard

4. **Federal FIRM Zone, LOU Flood Hazard District:** The FIRM Zone and the LOU Flood Hazard District are both ZONE X which means the site is outside of the 500 year flood plain. There are no known geological hazards on this site and no
5. Other information pertinent to the Special Management Area: Building height will be that of the present building. Historical appropriateness is required by The National Park Service Regulations as the building is on the Historical Register. Street trees and signs are intended to be in accord with the existing Historical Precinct regulations.

6. Hazardous Materials: A Hazardous Material Survey of the building was conducted by Unitek Environmental Services of Honolulu in 1992, and in July of this year by EMG of Baltimore, Maryland. The only contaminating materials that were found either time were asphalt tile on the floor of the 6th floor Weather Station offices, and the possibility of lead paint on some woodwork, which will be properly handled on an as needed basis by the construction contractor. As the building as constructed had no air-conditioning or hot water, there were no large amounts of insulation that would contain contaminants. There has been no known storage of large quantities of petroleum products on the site which would result in soil contamination.

III. AFFECTED ENVIRONMENT

A. A brief description of the site in relation to the surrounding area: The site is located in downtown Honolulu, on a full city block bounded on all four sides by paved streets. It is at the North side of the Hawaii Capitol District in the Historic precinct. Exhibit 16. The East boundary, Merchant Street, is a twenty foot wide two lane one way street with a forty eight car metered parking lot between it and King Street. King Street is the major North/South thoroughfare in downtown Honolulu. It is six lanes wide. Many Historic Structures are located in this Hawaii Capitol Special District. Exhibit 15. East of King Street are the Iolani Palace built in 1866, the only Royal Palace in the United States, and the State Capitol. Across the south boundary street, Mililani is the state judicial building Aliiolani Hale built in 1871. Queen Street on the West is the end of the Capitol District and the Historic Precinct. The structures on the West side of it are multi-story office buildings. On the North side of the Richards Street boundary, also the end of the Capitol District and the Historic Precinct, the buildings are multi-story office buildings. The property is zoned for business use, as are the properties across both Queen and Richards Streets. The United States Post Office Custom House and Court House building has always been a major part of both the governmental and commercial activity of downtown Honolulu. It is presently a transition link between the commercial center and the historic area of Honolulu.

B. The project site in relation to publicly owned or used beaches, parks etc.: The project site is strictly urban, not connected to any beaches, parks or recreation areas. The Iolani Palace grounds across King Street are used for public band concerts at noon on Friday, and the Palace itself is open for tours three times a
week. The King Kamehameha statue in front of Aliiolani Hale across Miliiani Street is a favorite photographic site for residents and visitors. The general appearance to the East and South is government buildings in a nineteenth century park-like setting, but it is not a park.

C. Relation to historic, cultural, and archaeological resources: The Iolani Palace being the only one in the United States is a historic and cultural resource of the first magnitude. The Aliiolani Hale is a historic building predating the United States Post Office Custom House and Court House. The Hawaiian Electric Company building, and the YWCA on Richards Street as well as the Honolulu Hale were all designed in the Spanish Colonial Style, following the trend set by the United States Post Office Custom House and Court House. The Historic Structures in the area are listed on Exhibit 15.

Archaeological resources. The 1922 portion of the United States Post Office Custom House and Court House Building is to be left essentially intact in this rehabilitation. The interior construction activities however, require monitoring in conformance with State of Hawaii laws, the Archaeological and Historic Preservation Act of 1974 and the Archaeological Resource Protection Act of 1979, and this will be accomplished.

D. Views from the site: Views from the site are taller buildings to the North and West, and to the mountains on the East and South.

E. Quality of receiving waters and ground water: The receiving water is from the main in the street provided and maintained by the Board of Water Supply of the City and County of Honolulu. There are no wells or pumping requirements on the site.

F. Location and Site Maps: These maps are included in Exhibits 13 thru 15.

G. Historical Effect The Stage One interior rehabilitation of the building has been approved in the 106 Application as having "no effect" on the historic character of the building. This rehabilitation action will make the adaptive re-use of the building feasible.

Alternatives considered: Several alternatives to the proposed action have been investigated: no action; moving the Post Office Operation out of the building; rehabilitating the building as it is.

1. No action. The Post Office is not able to provide the growing amount of maintenance the old building requires on the income stream generated by the government agency tenants. It is falling into disrepair.

2. A feasibility study done by the U S Postal Service in 1994 showed that it
would cost approximately $11 million dollars just to rehabilitate the building. This did not create any new space and the USPS could not make a reasonable rate of return on the investment from lease rents that were projected.

3. The USPO Galleria, LLC. proposes the Stage One interior rehabilitation of the 1922 portion of the building for adaptive re-use as a shopping mall, and fine restaurants, as well as continuing the present use as the Downtown Station by the USPS.

The rehabilitation program is the key to the only feasible option that met the needs of the project and will retain this historical landmark as a vital functioning part of the community

IV. SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Short term impacts: Construction related impacts are the primary short-term impacts identified. These include the production of noise, dust and emissions by heavy equipment that could be used for delivery of heavy objects and materials. Construction activities will have minimal effect on the public except for the Postal Box customers who will be protected during the addition of the new boxes.

Short-term construction impacts of dust and noise can be mitigated by compliance with the State Department of Health Administrative Rules.

Long term impacts: No major long term adverse impacts are foreseen.

V. ANTICIPATED DETERMINATION

Based on the analysis presented in this assessment, the proposed action will not significantly alter the environment and impacts will be minimal. Therefore a Negative Declaration is being filed with this Final Environmental Assessment.

VI. FINDINGS AND REASONS SUPPORTING THE DETERMINATION

1. The proposed project does not involve an irrevocable commitment of any natural or cultural resources. The subject lands are a developed urban area with commercial and public uses in historic buildings. The project will continue the public use of the same building. There should be no adverse archaeological impacts. Excavation will be limited to construction excavation for sewer and water lines which should
occur at the location of present lines, where the soil has already been disturbed.

2. The project does not curtail the range of beneficial uses of the environment. The project is situated in the extensively developed Historic Precinct of the Hawaii State Capitol Special District, in the center of Honolulu. The proposed STAGE ONE project is to rehabilitate the interior of the 1922 portion of the United States Post Office, Customs House and Court house building for adaptive re-use as a shopping center in order to preserve the building and prolong its useful life.

3. The proposed project does not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 343, HRS, and any revisions thereof and amendments thereto, court decisions or executive orders. The area has been in urban development for many years and therefore does not contain any significant natural resources.

4. The proposed project does not substantially affect the social welfare of the State, although it is intended to increase economic activity and prolong the useful life of a beautiful old building.

5. The proposed project does not substantially affect public health. Any construction-related impacts of noise, dust and emissions will be mitigated by compliance with the State Department of Health Administrative Rules. There will be no adverse impact on water or air quality as there will be no polluting activities in the building beyond those of a normal shopping center to discharge of any pollutants into the air or water.

6. The proposed project does not involve substantial secondary impacts, such as population changes or effects on public utilities. The infrastructure is already in place and will be upgraded as required for the adaptive re-use of the building. The parking requirement for the adaptive re-use of the Historic building as retail space is the same as for the former office use, and both uses are public oriented.

7. The proposed project does not involve a substantial degradation of environmental quality. There will be no adverse impacts on the other historic buildings in the Hawaii Special Capitol District, Historic Precinct. The siting will remain as is and the appearance of the building will be improved according to NHPA guidelines by this rehabilitation.

8. The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger action. The proposed project is to rehabilitate the interior of the 1922 portion of the United States Post Office, Customs House and Court house building for adaptive re-use as a shopping center in order to preserve the building and prolong its useful life. It will be confined to the land on which it is presently located.
9. The proposed project does not substantially affect any rare, threatened or endangered species of the habitat. The project area as well as the surrounding area has been extensively improved with existing office, public and commercial structures and related parking areas. Therefore, no rare, threatened or endangered species or habitats of flora or fauna is present at the site.

10. The proposed project does not detrimentally affect air or water quality or ambient noise levels. The project is situated in downtown Honolulu surrounded by existing buildings and busy streets. The activity of a shopping center with fine restaurants will not alter the urban environment appreciably. Any construction-related impacts of noise, dust and emissions will be mitigated by compliance with the State Department of Health Administrative Rules.

11. The proposed project not in an environmentally sensitive area. The building has been open and in continuous operation for over 76 years.

For the reasons stated above, the proposed project will not have any significant effects in the context of Chapter 343, Hawaii Revised Statutes, and Section 11-200-12 of the State Administrative Rules.

VII. AGENCIES CONSULTED

The following agencies provided comments, and any substantive comments are included in the appropriate sections of the Final EA. Copies of the comments and responses are provided in the Appendix 1.

List of Agencies Consulted:

State of Hawaii Department of Land and Natural Resources
  • State Historic Preservation Division
State of Hawaii Office of Environmental Quality Control
Department of Planning and Permitting, City and County Of Honolulu
  • Environmental Review Branch
  • Urban Design Branch
  • Zoning Plan Review
Department of Transportation Services, City and County of Honolulu
Board of Water Supply, City and County of Honolulu
Fire Department, City and County of Honolulu
Police Department, City and County of Honolulu
INFORMATIONAL NOTE ON STAGE TWO:

STAGE TWO will involve the rehabilitation of the 1930 addition to the building on Queen Street. It was designed by the Treasury Department to add ancillary spaces such as clerical office spaces, Customs Warehouse and USPS workspace to the original 1922 building. It contains very few historically significant elements that are character defining other than the exterior trim and the massing of the building. The interior architectural features that are important in defining the historic character of the building are in the original 1922 building. This STAGE TWO of the rehabilitation will remove the Loading Dock and Mail Bag Room additions, and construct a new addition on the Richards Street side. This will be thoroughly covered in the Environmental Assessment for STAGE TWO.
APPENDIX I

The Draft Environmental Assessment was circulated by the The Department of Planning and Permitting to various City and County of Honolulu agencies, and also published by the State of Hawaii Office of Environmental Control in the Environmental Notice September 23, 1998 issue. The following Agencies of the State of Hawaii, and the City and County of Honolulu responded to the Draft Environmental Assessment with the enclosed correspondence. There was no response from private citizens. The consultant's replies to the comments offered are included immediately behind each of the letters received.

State of Hawaii Department of Land and Natural Resources
- State Historic Preservation Division

State of Hawaii Office of Environmental Quality Control

Department of Planning and Permitting, City and County Of Honolulu
- Environmental Review Branch
- Urban Design Branch
- Zoning Plan Review

Department of Transportation Services, City and County Of Honolulu

Board of Water Supply, City and County Of Honolulu

Fire Department, City and County Of Honolulu

Police Department, City and County Of Honolulu
September 23, 1998

Shopping Center in Historic Downtown Post Office Building

A Downtown developer is proposing a “Galleria” shopping complex in the historic Downtown post office near the intersection of Merchant and Richards Streets. The post office building was designed by York and Sawyer Architects of New York City and was completed in 1922. The property was placed on the National Register of Historic Places in 1973.

The existing structures will be Windward Oahu Wastewater Plan to be drafted by City

The City’s Department of Design and Construction, pursuant to a 1995 consent decree (Save Our Bay and Beaches et alia vs. City and County of Honolulu) proposes various long term improvements to the wastewater collection, treatment and disposal system for the Kailua-Kane'ohe-Kalalau wastewater service area. The improvements are discussed in the Kailua-Kane'ohe-Kalalau Facilities Plan.

The plan covers a 20-year period and identifies future wastewater needs for the service area and required improvements to the Kailua Regional wastewater treatment plant, preliminary treatment facilities, pump stations, and the collection and disposal system. See page 9 for more information.

Citizens to Protect Drinking Water

The 1996 amendments to the Safe Drinking Water Act contain new requirements to protect drinking water. One important element directs the state to develop the Hawaii Source Water Assessment Program (HISWAP) to assess ground and surface sources of drinking water. HISWAP has a strong public participation element. A statewide HISWAP Advisory Committee will assist DOH in program development and implementation. Local advisory committees are being formed on each island to provide community input on the program plan and assist in assessment activities. DOH is seeking citizens to be involved in the local advisory groups. Informational meetings to describe the program and gather public input have been scheduled on every island. See page 19.

New Rules to Allow Commercial Use of Public Trails

Public hearings will be held by the DLNR, Na Ala Hele Trail and Access Program on proposed rules for the Hawaii Statewide Trail and Access Program. These proposed rules are to provide guidance for the conduct of the Na Ala Hele Advisory Councils; procedures for the selection and inclusion of trails and accesses in Na Ala Hele, the Hawaii Statewide Trail and Access System; and rules for the management and commercial use of these Na Ala Hele trails and accesses. For a list of hearing dates and more information see page 15.

Other Resources available at OEQC . . .

- Guidebook for Hawaii’s Environmental Review Process
- Environmental Impact Study Resource Library
- Environmental Education Database
- Environmental Council Annual Reports
- Rules and Policies
- “How to Plant a Native Hawaiian Garden”

OEQC
215 S. Beretania St.
State Office Tower
Suite 702
Honolulu, HI 96813

Tel. (808) 585-4185
Fax. (808) 585-4186

Website & Email: 1-800-666-4644 ext.64185
Kaniu: 274-3514 ext. 64185
Mail: 994-3420 ext. 64185
Hawaii: 994-4000 ext. 64185
Miscellaneous sidewalk improvements, in this section of Chinatown will include widening of the sidewalks, by 18 inches, on the mauka and makai side of North King Street between River Street and Bethel Street. This will be achieved by reducing existing lane widths on King Street, while maintaining four through lanes. In addition, the project will include provision of a storm drain system in King Street between Smith Street and Nuuanu Avenue; new street light standards designed for an appearance consistent with the earlier development period of most of the structures in Chinatown; new street name signs mounted on traffic signal standards at the intersections; new accessibility ramps at the intersections; relocation of certain water and utility lines; installation of street trees (Fiddlewood) at a spacing of about 20 feet on center; modification of awnings to accommodate the new street trees; and relocation to curbside of certain above ground appurtenances, such as fire hydrants, signs, light poles and street light standards.

The City and County of Honolulu has made a number of capital improvements in Chinatown in recent years, and this project is a continuation of the Chinatown improvements. It is the objective of the City and County of Honolulu to preserve and enhance the historic character of Chinatown and in doing so the proposed sidewalk improvements will enhance the appearance of the street scape and allow for greater pedestrian linkages within and connecting outside Chinatown.

(4) Kawai Nui Marsh Management Plan

District: Koolau
TMK: 4-2-16:01 and 4-2-13:05
Applicant: Department of Land and Natural Resources
Address: 1151 Punchbowl Street, Room 220
Honolulu, Hawaii 96813
Contact: Tom Eisen/Lauren Tanaka (387-0386/387-0385)

Approving Agency/Accepting Authority: Same as above.

Public Comment Deadline: October 23, 1998
Status: DEA First Notice pending public comment. Address comments to the applicant with copies to the approving agency or accepting authority, the consultant and OEQC.

Permits Required: CDU, SMA, NPDES, grading, building; 401 Water Quality Certification, zoning variance; sewer and water connection; Federal consistency determination
Ms. Jan Naoe Sullivan  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7th Floor  
Honolulu, Hawaii 96813

Attention: Art Challacombe

Dear Ms. Sullivan:

SUBJECT: Environmental Assessment  
Galleria Shopping Center, Phase I  
Old Federal Building  
TMK: 2-1-25:04, Capital District, Honolulu, Oahu

Thank you for the submittal on the above project which we have previously reviewed during the Federal Section 106 process. We believe that the plans, as submitted thus far, will have "no effect" on the historic character of the Old Federal Building. We concur with you Finding of No Significant Impact.

Thank you for the opportunity to comment. Please feel free to call Tonia Moy or myself at 587-0045 if you have further questions.

Aloha,

DON HIBBARD, Administrator  
State Historic Preservation Division
October 29, 1998

Mr. Don Hibbard, Administrator
State Historic Preservation Division
State of Hawaii, Department of Land and Natural Resources
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Mr. Hibbard:

Thank you for your Divisions timely review of and comments of September 28, 1998 on the above mentioned project concurring with our finding of “no Significant Impact” on the historical aspect of the building. The Stage One project will be accomplished within the original 1922 building on Merchant Street and will improve that beautiful old historic building and the neighborhood.

We appreciate your comments and look forward to working with your department throughout this project.

Cordially,

Richard G. Wood, AIA
Mr. Russell Allen
USPO Galleria, LLC
335 Merchant Street, Suite 100
Honolulu, Hawaii 96813

Dear Mr. Allen:

Having reviewed the September 1998 draft environmental assessment (DEA) for the "Stage One
Rehabilitation of the United States Post Office Custom House and Court House, Tax Map Key 2-1-25-4,"
we submit the following comments for your response.

I. DISCUSSION OF DIRECT, INDIRECT AND CUMULATIVE EFFECTS OF THE PROPOSED
PROJECT ON THE ENVIRONMENT

Section 11-200-10, Hawai‘i Administrative Rules (HAR) requires that the environmental assessment
identify and summarize "impacts." Please refer to section 11-200-2, HAR, which defines the three types of
impacts: direct, indirect and cumulative. As presented in the DEA, section IV discusses only the effect of
the proposed action on the historic/architectural character of the building. Please rewrite section IV,
entitled "Project Effects" and discuss direct, indirect and cumulative impacts (see also item 2, below) of the
project on the local and regional environment (e.g. traffic/parking impacts, archaeological and cultural
resource impacts, water quality impacts, air impacts, impacts to other historic structures, etc.).

2. SEGMENTATION AND CUMULATIVE EFFECTS UNDER SECTION 11-200-7, HAWAI‘I
ADMINISTRATIVE RULES

The economic and social characteristics of the action described on page 4 of the DEA note that there are
two stages for the proposed project. The current DEA discusses only the first stage of the project and
makes passing mention that the second stage is "projected to start in December 1998 and continue for
fourteen months or less."

Section 11-200-7, Hawai‘i Administrative Rules states that "[a] group of actions proposed by an agency or
an applicant shall be treated as a single action when ... [t]he component actions are phases or increments
of a larger total undertaking; ... [a]n individual project is a necessary precedent for a larger project; ... [a]n
individual project represents a commitment to a larger project; or ... [t]he actions in question are
essentially identical and a single statement will adequately address the impacts of each individual action
and those of the group of actions as a whole [underscoring supplied]." Projects consisting of two or more
phases may have cumulative impacts which may not be readily apparent if the action is segmented. We
therefore strongly urge you to discuss both phases of the project in a single document and to evaluate the
direct, indirect and cumulative effects of both phases.
3. FINDINGS AND REASONS FOR SUPPORTING THE FONSI DETERMINATION

Please discuss the findings and reasons for supporting the FONSI determination based on the significance criteria listed in Section 11-200-12, Hawai'i Administrative Rules (EIS Rules). Please see the enclosed example.

4. SUSTAINABLE BUILDING TECHNIQUES

Please consider applying sustainable building techniques as presented in the enclosed "Guidelines for Sustainable Building Design in Hawai'i." In the final EA include a description of any of the techniques you will implement.

5. COMPLIANCE WITH NATIONAL ENVIRONMENTAL POLICY ACT

The proposed project appears to be subject to both Chapter 343, Hawai'i Revised Statutes and the National Environmental Policy Act. Please discuss if this document is being submitted to fulfill both state and federal requirements.

Thank you for the opportunity to comment. If there are any questions, please call Leslie Segundo, Environmental Health Specialist, at 586-4185.

Sincerely,

[Signature]

GARY GILL
Director

c: Mr. Edward Broglio, United States Postal Service
Mr. Arthur Challacombe, Department of Planning and Permitting
R. G. Wood and Associates, Ltd.
October 29, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
State of Hawaii,
235 South Beretania Suit 702
Honolulu, Hawaii 96813

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Mr. Gill:

Thank you for your offices timely review of and comments on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant street and will improve that beautiful old historic building and the neighborhood.

1. Thanks for your comment on clarifying the content of the Draft Environmental Assessment. The questioned Section IV has been re-written and two new Sections V Anticipated Determination and Findings and Reasons Supporting the Determination have been added.

2. Your request to clarify the distinction between the two stages of the project is appreciated and has been implemented in the text and exhibits, along with a note that explains what the second stage will encompass.

3. The new section on Findings and Reasons Supporting the Determination supplies this discussion.

4. The analysis of Sustainable Building Techniques is normally a part of an Environmental Impact Statement not an Environmental Assessment, however a quick pass at energy savings involved in rehabilitation rather than demolition and new construction are quite remarkable. Demolition would require 725,280,000 Btu. And new construction of the same area would take 118,945,000 Btu. The total translates into about 1,085,444 gallons of gasoline. That’s quite an energy saving!

5. We will comply with the National Environmental Policy Act. This would involve the U. S. Post Office space, and we are familiar with their requirements.

We appreciate your comments and look forward to working with your department.

Cordially,

Richard G. Wood, AIA
Mr. R.G. Wood
R.G. Wood and Associates, Ltd.
444 Hobron Lane, Suite 307
Honolulu, Hawaii 96815

Dear Mr. Wood:

Draft Environmental Assessment (EA) For
United States Post Office Galleria Shopping Center, Stage I
Honolulu, Oahu

Tax Map Key: 2-1-25: 4

Thank you for your submittal on the above-referenced Draft EA document. We understand that this Draft EA document is only for Stage I of this project, and that Stage II will be forthcoming. For the purposes of this document, there should be a clear distinction in the final EA document of what is included in Stage I. For clarity purposes, we suggest that if it is not necessary to mention or show Stage II items, please delete them from the document (in the text and exhibits).

We offer the following comments:

1. Under Item 4 regarding "Land Use Approvals", it should be "Hawaii Capital Special District, Historic Precinct." This special district was adopted back in 1972 not 1995. References to DLU should be replaced with DPP.

2. There should be an area tabulation (showing the amount required, existing, proposed, and their differences) and discussion about how open space requirements under the Land Use Ordinance (LUA) will be satisfied.
3. There should be a tabulation and some discussion about how many parking and loading stalls are required, "grandfathered", and provided off-site to meet the parking requirements for the Stage I development. If off-site parking is being provided to meet the required amount, a conditional use permit is required from this department.

4. There is a 6-foot road widening setback on Queen Street along the frontage of the project including 30-foot property line radii at the Richard Street/Merchant Street, Queen Street/Richard Street and Mililani Street/Queen Street corners. The developer should work with the City during the early stages of the project to determine the exact nature of the road improvements that will be required for this project. Ordinance 2412 may be enforced to dedicate roadway setback along Queen Street and construct road widening and frontage improvements in accordance with City standards and the Americans With Disabilities Act Accessibility Guidelines (ADAAG). The proposed site plan for Stage I should show the road widening as well as the 20-foot required yards.

5. All loading and unloading activities of patrons and maneuvering of delivery vehicles should occur on-site. Loading areas should be designed and located where it will provide convenient access to businesses in the building to limit this type of activity from occurring on public streets.

6. The status of the State’s proposal to close Mililani Street between Queen Street and Merchant Street should be included in the narrative. The relative impacts of the effects of the closure to traffic and access to existing and/or proposed driveways around the site should also be addressed.

7. The Draft EA states that a traffic study is currently being conducted. We will be able to provide more specific comments based on our review of this traffic study in the Stage II project.

8. Construction plans for all work within and affecting the street right-of-way should be submitted for review and approval prior to issuance of building permits. Traffic control plans during construction, as required, should also be submitted.
Mr. R.G. Wood  
Page 3  
October 23, 1998

9. The municipal wastewater system is available and adequate to accommodate Stage I of the proposed project, provided only retail shops are developed. This statement shall not be construed as confirmation of sewage capacity reservation. Sewage capacity reservation is contingent on submittal and approval of a "Sewer Connection Application" form.

Please be advised that the sewer lines are inadequate to support any proposed restaurants. Please see the attached map. Connection to the municipal sewer lines will not be allowed until improvements to the sewer lines are completed. There is limited capacity in the sewer line running along Merchant Street and this line may not be able to accommodate all the proposed restaurants and the food court.

We appreciate the opportunity to comment on this project. Should you have any questions, please contact Tony Ching of our Urban Design Branch at 527-5833 or Art Challacombe of our Coastal Lands Branch at 523-4107.

Very truly yours,

JAN MAE SULLIVAN  
Director of Planning and Permitting

JNS:am  
attach.

cc: USPO Galleria, LLC  
Office of Environmental Quality Control
October 29, 1998

Ms. Jan Naoe Sullivan, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813  

Re: Environmental Assessment  
Galleria Shopping Center Stage One

Dear Ms. Sullivan:

Thank you for your departments timely review of and comments on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant Street and will improve that beautiful old historic building and the neighborhood.

Your request to clarify the distinction between the two stages of the project is appreciated and has been implemented in the text and exhibits.

Response to comments:
1. The corrections noted for paragraph A 4 have been made.

2. The areas involved regarding open space requirements have been added to paragraph A 4. As the present configuration of this historic building is not to be changed under STAGE ONE the present LUO ordinance requirements will not be satisfied.

3. A tabulation of the parking requirements for the two uses of this historic building has been added to paragraph A 4.

4. As the property involved in STAGE ONE of the project is not contiguous to Queen Street the comment is inapplicable at this time. However realizing that it would come up on STAGE TWO we wish to state that this action is not acceptable. The building is listed on the National Register of Historic Places and as such is provided protection under the National Historic Preservation Act (NHPA) of 1966. The rehabilitation and adaptive re-use of the building are controlled by The SECRETARY OF THE INTERIOR’S STANDARDS FOR REHABILITATION which state “(2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize the property shall be avoided.” The building on Queen Street is not going to be changed at the Mililani Street end, where it is presently about eight feet
from the property line. See Exhibit 19. Taking six feet off the property at that point will have a significant adverse impact the historic character of the building. The enclosed letter of October 28, 1998 from the Director of the State Historic Preservation Division reiterates this point. The building is also located in the Hawaii Capitol Special District, Historic Precinct which states in 7.30 (b) "The purpose of this section is to establish a special district to be called the "Hawaii Capitol special district" and to provide for the protection, preservation, enhancement and orderly development." It has as its first objective 7.30.1 (a) To provide safeguards for the preservation and enhancement of buildings and landmarks within the Hawaii Capitol Special District which represent or reflect elements of the state's civic, aesthetic, cultural, social, economic, political and architectural heritage, and encourage new development which is compatible with and complements those buildings and sites. See Exhibit 15. The site is an integral part of the purpose of this district.

5. This comment is being complied with. See Exhibit 19.

6. At the present time we are told that the Mililani Street pedestrian mall project is dead for lack of funds. As stated in the EA paragraph 4 the loading for STAGE ONE will be accomplished in the present service court.

7. The traffic study will be a part of STAGE TWO Environmental Assessment.

8. There is no work anticipated in street right-of-way in STAGE ONE with the possible exception of water or sewer connections. The approvals and traffic plans will be worked out during the permitting process.

9. We are working with the Department of Waste Water Management on sewage capacities and our requirements. There are sewer lines on all four sides of the block and we are discussing which ones should be used when.

We look forward to continuing working with your department in obtaining the required Minor Use Permit for this project. The cooperation received up to now has been outstanding.

Cordially,

Richard G. Wood

Richard G. Wood, AIA
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

October 28, 1998

Ms. Jan Naoe Sullivan
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Ms. Sullivan:

SUBJECT: Response to Draft Environmental Assessment (EA) for U.S. Post Office Galleria Shopping Center, Phase I
TMK: 2-1-025:004, Honolulu, Oahu

We note in your response to the Draft EA of the above project that there is a proposed 6-foot road widening setback on Queen Street. We do not concur with this road widening project as it would have an adverse effect on the setting of the historic Post Office building. The current setback of the building from the street is already minimal and any further encroachment to the historic building will not allow enough buffer between the busy street and the building.

Thank you for your consideration. Should you have further questions, please call Tonia Moy at 587-0005.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

TM:jk

c: V Mr. R.G. Wood, 444 Hobron Lane, Ste 307, Hon. Hi 96815
Mr. Russell Allen  
USPO Galleria, LLC.  
335 Merchant Street, Suite 10w  
Honolulu, Hawaii  96813  

Dear Mr. Allen:  

Subject: Galleria Shopping Center  

This department reviewed the Draft Environmental Assessment of the Stage One Rehabilitation of the United States Post Office Custom House and Court House. The following comments are the result of this review:  

1. Page 4 of the document states that a traffic study will be conducted. This department will provide more detailed comments regarding the traffic impacts of the project after reviewing this study.  

2. It is recommended that the project be coordinated with the State of Hawaii Commission on Persons with Disabilities to help ensure compliance with the Americans with Disabilities Act (ADA) and ADA Accessibility Guidelines.  

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

Sincerely,  

Cheryl D. Soon  
Director  

cc: Mr. Gary Gill, Office of Environmental Quality Control  
    R. G. Wood and Associates, Ltd.
October 29, 1998

Ms. Cheryl D. Soon, Director
Department of Transportation Services
City and County of Honolulu
711 Kapiolani Boulevard Suite 1200
Honolulu, Hawaii 96813

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Ms. Soon:

Thank you for taking the time to review and comment on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant street and will improve that beautiful old historic building and the neighborhood.

We will appreciate your review of the traffic study mentioned Item 1 of your letter. It will be a part of the STAGE TWO Environmental Assessment where we will describe the rehabilitation of the 1930 portion of the building.

As suggested in Item 2 we will be complying with the applicable ADA requirements as much as possible in the project planning for the adaptive re-use of this historic building.

We look forward to working with your department in providing for the transportation needs of our project.

Cordially,

Richard G. Wood, AIA
Thank you for the opportunity to review and comment on the Environmental Assessment for the proposed Galleria Shopping Center, Phase I.

We have the following comments:

1. The existing water system is presently adequate to accommodate the proposed shopping center.

2. There are existing 4-inch and 6-inch water meters currently serving the project site.

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

4. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

5. The applicant may also be required to pay a downtown special assessment for water system infrastructure improvements.

6. If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.

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

If you have any questions, please contact Barry Usagawa at 527-5235.
October 29, 1998

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

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Mr. Jamile:

Thank you for taking the time to review and comment on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant street and will improve that beautiful old historic building and the neighborhood.

Items 1 & 2 in your letter regarding the adequacy of supply and the size of the meters are noted and appreciated.

Item 3,4 & 5 will be worked out as the planning and permitting for the adaptive re-use is accomplished. All fees will be paid at that time.

The meters presently serving the building are the type described in items 6 & 7 and although we do not anticipate need for any larger service at this time the final requirements will come with the final design.

We look forward to working with your fine department to provide the water needs for our project.

Cordially,

Richard G. Wood, AIA
TO: JAN NAOE SULLIVAN, DIRECTOR DEPARTMENT OF PLANNING AND PERMITTING

FROM: ATtilio K. LEONardi, FIRE CHIEF

SUBJECT: ENVIRONMENTAL ASSESSMENT, CHAPTER 343, HRS PROJECTS WITHIN THE HAWAII CAPITAL DISTRICT

PROJECT NAME: GALLERIA SHOPPING CENTER, PHASE I
LOCATION: 335 MERCHANT STREET, HONOLULU, OAHU
TMK: 2-1-25: 4
STAFF PLANNER: ART CHALLACOMBE
HFD INTERNAL NO. OL 98-332

We received your memorandum dated September 15, 1998, regarding an Environmental Assessment (EA) for the subject project. We have reviewed the submitted EA and support the issuing of a Finding of No Significant Impact.

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

for ATtilio K. LEONardi
Fire Chief

AKL/CW: bh
October 29, 1998

Mr. Attilio K. Leonardi, Fire Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street Suite H425
Honolulu, Hawaii 96819

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Chief Leonardi:

Thank you for taking the time to review and comment on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant street and will improve that beautiful old historic building and the neighborhood.

We appreciate your Finding of No Significant Impact. The building is of 1922 vintage fireproof construction, and that is still good today. We are anticipating working with Battalion Chief Wassman on bringing this historic building as close as possible to present fire protection standards.

We look forward to working with your department in providing for the fire protection needs of our project.

Cordially,

Richard G. Wood

Richard G. Wood, AIA
October 9, 1998

TO: JAN NAOE SULLIVAN, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

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

SUBJECT: ENVIRONMENTAL ASSESSMENT, CHAPTER 343, HRS
PROJECTS WITHIN THE HAWAII CAPITAL DISTRICT
(GALLERIA SHOPPING CENTER, PHASE I)

We have reviewed the subject document and have the following comments relative to the impact it will have on police services.

With this kind of commercial project, we anticipate the usual problems of shoplifting and other criminal activity. We also expect to see some of the homeless population migrate to the area. These situations will have an impact on calls for police services.

Further, because the area is proposed to attract more people, traffic flow and pedestrian safety will also be of concern and will generate more calls for police services.

We believe that more patrol activity will be needed and feel that this area will be better served with more bicycle patrol officers. In addition, we would like to recommend that the principles of crime prevention through environmental design be incorporated into the design of the facility to minimize opportunity for criminal activity.

Thank you for the opportunity to respond. If there are any questions, please call me at 529-3175 or Major Henry Lau of District 1 at 529-3386.

LEE D. DONOHUE
Chief of Police

By
JAMES PENIA
Assistant Chief
Administrative Bureau

cc: District 1
October 29, 1998

Mr. Lee D. Donohue, Chief of Police
Honolulu Police Department
801 South Beretania Street
Honolulu, Hawaii 96813

Re: Environmental Assessment
Galleria Shopping Center Stage One

Dear Chief Donohue:

Thank you for taking the time to review and comment on the above mentioned project. The Stage One project will be accomplished within the original 1922 building on Merchant street and will improve that beautiful old historic building and the neighborhood.

The principles of crime prevention through environmental design are being implemented in the rehabilitation of the building. We will have 24 hour guard service, with security surveillance. All interior areas of the building will be brightly illuminated at all times as will be the front court and the building exterior at night. The building will be securely locked and patrolled after closing hours.

It is recognized that a larger concentration of people may contribute to additional police calls and appreciate your willingness to deal with them. We will confer with your staff and cooperate with them in any way possible as the job progresses.

Cordially,

Richard G. Wood, AIA
EXHIBITS
EXISTING BUILDING
U.S. Post Office, Custom House, and Court House

PROPOSED PROJECT
Rehabilitated 1922 Building and 1930 Addition with New Addition

Exhibit 2
HAWAII CAPITAL SPECIAL DISTRICT
HEIGHT AND OPEN SPACE PRECINCTS

LEGEND

SUPERSEDED BY HCDA

NORTH

SCHEDULE IN FEET

Land Use Ordinance of the City & County of Honolulu, April 1995
EXISTING BUILDING - MERCHANT STREET VIEW
Corner of Merchant and Milliani Street

PROPOSED PROJECT - MERCHANT STREET VIEW
Corner of Merchant and Milliani Street

Exhibit 16
EXISTING BUILDING - RICHARDS STREET VIEW
Corner of Richards and Merchant Street

PROPOSED PROJECT - RICHARDS STREET VIEW
Corner of Richards and Merchant Street

Exhibit 17
DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

FINAL

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

FOR

GULICK AVENUE RELIEF SEWER

AT
KALIHI, HONOLULU, HAWAII
TMK: 1-3-17, 18, 24 TO 26

JULY 1998

PROPOSING AGENCY: DEPARTMENT OF DESIGN & CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII

RESPONSIBLE OFFICIAL: RANDALL K. FUJIKI
DIRECTOR

PREPARED BY: AKINAKA & ASSOCIATES, LTD.
CONSULTING ENGINEERS
250 NORTH BERETANIA STREET, SUITE 300
HONOLULU, HAWAII 96817

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
GULICK AVENUE RELIEF SEWER

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C. WRITTEN COMMENTS AND RESPONSES
I. INTRODUCTION

A. PROJECT DESCRIPTION

The proposed project involves relief of Gulick Avenue Sewers. The recommended alternative includes installation of relief sewer lines on: 1) Likeliike Highway between Kono and Makuahine Streets, 2) Kalihi Street between Likeliike Highway and Maliu Street and, 3) Makuahine Street from Likeliike Highway to School Street. Rehabilitation and replacement of the existing lines in these areas are also recommended.

B. PROJECT LOCATION

EXHIBIT 1: LOCATION MAP shows the Project in Southern Oahu at the northern edge of Honolulu. The area is mainly residential with supporting neighborhood - commercial sections. The area is approaching full development as envisioned by the City & County's Primary Urban Center Development Plan (Development Plan).

New pipeline construction is shown on EXHIBIT 2: VICINITY MAP. Kalihi Stream crossing parallels Likeliike Highway and will reside in the state highway right-of-way. Access to the site is from Likeliike Highway and an abandoned asphalt concrete pathway for pedestrians. The pathway served as a route to pedestrian walkways under Likeliike Highway Bridge which have been removed.

C. NEED FOR SUPPLEMENTAL EA

An Environmental Assessment (EA) was prepared for the Project and the Final EA/FONSI was published in the August 23, 1995 OEQC Bulletin. This EA included the plan to hang the new sewer line crossing Kalihi Stream on the existing Likeliike Highway bridge. The plan has been revised due to calculations which revealed that the bridge cannot support the additional load.

Discussions within this Supplemental EA are limited to the Kalihi Stream crossing which is the only change within the Project. The discussions will cover existing conditions, environmental setting, alternatives and impacts.
II. DESCRIPTION OF PROPOSED PROJECT

A. BACKGROUND AND EXISTING CONDITIONS

The Project requires a sewer line crossing Kalihi Stream in the vicinity of Likelike Highway. The existing crossing is an inverted siphon at Kalihi Valley District Park. Inspections and capacity calculations indicated that the siphon and the downstream mains are undersized and in need of repairs. Narrow streets and dense residential facilities in the area do not promote traditional construction or improvements.

Likelike Highway crossing of Kalihi Stream consists of a cast-in-place concrete bridge with reinforced concrete piers on spreadfooting. The original construction (1953) included pedestrian walkways along the north and south abutments and outside the west girder. Subsequent bridge alterations included removal of the walkways and installation of concrete barrier railings.

Kalihi Stream at the crossing has been altered for the bridge construction, pedestrian walkway and drain installation. Drains consist of 30" pipe (south bank) and 42" (north bank) discharging into the stream. Wingwalls and CRM walls direct storm flows to the bridge and protect the adjacent lands. Trees, brush and grasses along the stream banks are described as "weeds and garden escapees" by the flora & fauna report (APPENDIX A).

B. VISUAL INSPECTIONS

Visual conditions at the stream crossing site are shown on the photographs of EXHIBIT 3: SITE CONDITIONS. The photographs were selected to show limited accessibility, bridge/channel improvements and overgrown conditions. Urban litter, debris, and graffiti were much in evidence at the site.

Surveys of the site were completed by Botanical Consultants (APPENDIX A) and AECOS, Inc. (APPENDIX B). As noted in Appendix A, the plant cover along the banks is dominated by mixed introduced vegetation. This vegetation can be described as weeds and garden escapees.

Appendix B concluded that none of the aquatic species observed during the survey are valuable or of concern from a preservation perspective. Most of that observed can be described as pest species which have been introduced to Hawaiian streams in the last several decades.
C. PROPOSED IMPROVEMENTS

A utility bridge is proposed for the sewer crossing of Kalihi Stream. This bridge will be constructed of reinforced concrete and solely dedicated to support the sewer pipeline. Bridge site plan and sections are included in this report as EXHIBITS 4 & 5.

The new piers will follow the spacing and alignment of the existing piers. By conforming to the spacing and alignment, stream flow conditions will be maintained. Improvements such as channel lining may upset the downstream bed stability and will not be included. Alternate means to cross the stream are discussed in Section VI.

D. PROJECT FUNDING

The preliminary construction cost estimate for the entire Project is approximately $9.1 million of which $650,000 is the estimate for the crossing. Funding for this project will be provided by the City and County of Honolulu. Construction of the Project will not require direct assessments to the residents being served by the improvements.
EXHIBIT 3
SITE CONDITION

Gulick Ave.
Relief Sewer
Supplemental E.A.
III. ENVIRONMENTAL SETTING

A. TOPOGRAPHY

Kalihi Stream is typical of upper valley streams in Hawaii with steep banks and mixed boulder/sediment stream bed. The stream width is about 30 feet wide with flowline gradient of approximately two percent.

B. GEOLOGY/SOILS

Borings for the highway bridge indicate that hard lava is overlain by approximately two feet of top soil or a loose mixture of gravel and small boulders. Additional borings will be scheduled for design of the utility bridge.

C. CLIMATE

The area has a mild subtropical climate with prevailing northeast trade winds. Mean annual temperature is 77°F. Occasional average temperatures in the lower seventies in January-February and slightly over 80°F during August-October. The mean annual rainfall averages 22.4 inches at the Honolulu International Airport. The mean annual precipitation at the Nuuanu Reservoir No. 4 is 124 inches. Heavy rains often occur during November-February, with only about 20 percent of the annual rainfall occurring in March-October.

D. BIOLOGY

There are no known endangered species of flora or fauna located within the project site. Due to the fully developed areas surrounding the project, construction of this project will have no impact on wildlife. Appendices A&B discuss observations of flora and fauna in the area.

E. AIR QUALITY

Although no information on air quality at the project site was obtained, it is observed that the air is relatively clear and low in pollution. This is because of the distance from the central business district and industries which produce noxious gases.
F. **NOISE**

Noise levels were not measured at the project site. The noise levels are basically normal residential activities and highway road traffic.

G. **ARCHAEOLOGY**

There are no identified historic or archaeologically significant locations located within the project site. However, should any unanticipated sites, artifacts or remains, such as shell, bone or charcoal deposits, be discovered during construction, the work would be halted and mitigating measures will be discussed with the State Historic Preservation Office prior to commencing construction activity.

H. **FLOOD HAZARD**

Construction of the stream crossing requires work within the Kalihi Stream flood way. The new piers will follow the spacing, alignment and thickness of the existing piers at Likeliike Highway bridge. The Contractor must develop a plan to suspend work, remove material from the stream area and install protective measures during inclement weather conditions. Normal rainfall situations could be mitigated with silt screens but larger storms will require concrete barriers if construction is at an intermediate stage.

**EXHIBIT 5** shows the base flood elevation obtained from the FEMA Flood Insurance Study dated 9/28/90. Floodway limits and base flood elevations are shown on **EXHIBIT 6: FLOOD LIMITS**. **EXHIBIT 6** indicates that the flood remains within the stream area.

I. **STREAM WATER QUALITY**

**APPENDIX B** includes a discussion on the stream's water quality with a tabulation of chemical characteristics. The tabulation suggests eutrophic conditions and sluggish waters. Nitrogen levels exceeded the water quality criteria of the State regulations.
IV. PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

A. SHORT TERM IMPACTS

Short term impacts of the proposed project will be primarily due to construction. Use of construction equipment such as cranes, backhoes, trucks, and compactors will create noise, dust and exhaust emissions. The noise of the construction equipment will be minimized by placing mufflers on machinery, avoiding unnecessary "gunning" of equipment, and restricting construction activity during daylight hours.

Construction activities will partially interfere with the flow of vehicular traffic. Traffic control by off-duty Police Officers and/or trained construction flagmen will mitigate traffic congestion. Parking will be restricted on the highway during construction. Construction plans will be reviewed for coordination by all utility companies affected.

Presence of groundwater is not indicated on the borings for Likelike Highway Bridge. Recent borings by Fewell Geotechnical Engineering (1997) confirm the absence of groundwater in the project depths. Pumping and other dewatering operations may be required if surface water enters the excavation. Open excavations will be protected with sand bags if in proximity to the normal stream alignment. Use of detention ponds to control dewatering fluids will mitigate sediment propagation.

B. LONG TERM IMPACTS

There are no negative long term impacts from this portion of the sewer project. The crossing structure will be below the motorist view plane and is similar to the existing highway bridge. Adjacent trees will visually screen the proposed construction as shown in the photographs (EXHIBIT 3). Two of the trees that interfere with construction of the bridge will be removed. These trees are regularly trimmed back during highway maintenance.

When the Project is completed, sewer lines in vicinity of Gulick Avenue Extension (mauka of School Street) will be relieved and overflows should be eliminated.
V. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

The noise level will increase during the construction period. This effect will be of short duration, lasting only for the construction phase. The noise level can be reduced by the contractor by ensuring proper functioning of mufflers on all equipment, and conducting construction activity only during daylight hours, between 7:30 a.m. to 5:00 p.m. Actual construction schedule will be as allowed by the Department of Transportation, Division of Highways.

During construction, dust may be generated during pipe installation. The contractor will be required to comply with the procedures outlined by the Department of Health to mitigate the dust emission.

Traffic along the highway will be disrupted for short periods during delivery of material and installation of the concrete girders and sewer line.

Trees within the work site will be trimmed back and two trees removed to allow construction. Botanical surveys (APPENDIX A) confirm that the affected trees are not an endangered species. Trimming of the trees are a normal maintenance operation of the State Division of Highways.

Installation of the pier footings will require excavation within the stream floodway. Also, equipment and material will traverse the stream section in order to build the footings and piers. A Best Management Practice (BMP) procedure will be developed to mitigate any adverse impacts.

Social and economic impacts were addressed in the original EA.
VI. ALTERNATIVES TO THE PROPOSED ACTION

A. REINFORCING THE EXISTING BRIDGE

The existing bridge can be strengthened by adding columns mid-way between the existing piers. This method will affect the hydraulic conditions and increase the backwater levels. Also, the columns add another element to block the stream during high storm flows.

Another reinforcing method is to add a reinforced concrete jacket to the outside girder supported by additional columns on the existing pier alignment. The work to reinforce the outside girder is at least equivalent to constructing a new stream crossing since the footings must be expanded. Concerns of affecting the stability of the existing bridge must be included in the decision.

B. UNDER STREAM PROFILE

Placing the pipe under the stream can be accomplished by tunneling, horizontal drilling or trench excavation. Microtunneling will be specified for other sections of the Project and therefore an attractive alternate construction method. The sewer profile, geology and available work space do not allow use of microtunneling in this situation.

Horizontal directional drilling (HDD) is also a means to place the pipe under the stream by tunneling. Plans were reviewed by HDD contractors for applicability of this technology. Due to the size of the pipeline (24" I.D.) and geology (hard lava & boulders), the consensus was that HDD is not appropriate due to the vertical alignment and geology (stones).

Installation by trench excavation was the normal means of construction in the past. For inverted siphons, three pipe lines were installed for various levels of flow. Extensive excavation will be required for the pipelines and concrete encasement. Concrete grouted rock paving is required on the stream bank to prevent erosion. Inverted siphons require increased maintenance and have a higher potential for blockage and resultant sewage spills. Cost for the inverted siphon construction is equivalent to the stream crossing structure.
C. NO ACTION ALTERNATIVE

The "no action" alternate is not practical as inspections have shown that the existing sewer systems are deteriorated and should be repaired. Studies (Preliminary Engineering Report, Islandwide Sewer Adequacy Project) have also shown that the sewer system is undersized at several locations.
VII. RELATIONSHIP BETWEEN LOCAL SHORT TERM USES AND MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

The short term use of the utility bridge is the same as its long term use - transport sewer flows across Kalihi Stream. The proposed action, if implemented, will enable the City and County of Honolulu to meet the sewer demands of the Development Plans projected land use.

The proposed action will not involve trade-offs between short-term uses, foreclose future options, narrow the range of beneficial use of the environment, nor pose long-term risks to health and safety.
VIII. MITIGATING MEASURES TO MINIMIZE ADVERSE IMPACTS

The short term impacts occurring during the construction work will be minimized by applying current techniques and methods. In addition, restrictions of operational hours will minimize noise impacts to the adjoining area.

To minimize pollutant emissions from internal construction engines, the contractor will be responsible for proper maintenance of all construction equipment and vehicles.

The contractor will be required to comply with Department of Health regulations to mitigate dust emission. Dust is not anticipated to be a problem due to the rocky nature of the native material. Dust problems can be mitigated by use of an appropriate water sprinkling method and limiting the area being worked at any one time.

Traffic control by off-duty Police Officers and/or trained construction flagmen will moderate traffic congestion.

Best Management Practices (BMP) to minimize water quality impacts include:

1. Minimize area of clear and grubbing. Since the stream bed is mainly stone and cobbles, the disturbed material will not generate high levels of sediments.

2. Minimize dewatering of excavation. Leak resistant forms and berms will reduce water from entering the excavation.

3. Use of detention ponds. A detention pond located away from low flows could be used if dewatering is required. Also, construction of the initial pier could use the excavated area of the second pier as a detention pond.

4. Disposal of excavated material outside the floodway limits will prevent generation of sediment. The existing material to be excavated is mainly hard rock, therefore high levels of sediments are not expected.

5. Use of silt fences downstream from the work area may be required if the excavated material does not conform to the boring logs.
IX. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The construction of the proposed project would involve the commitment of certain natural and fiscal resources. The commitment of construction materials, manpower, and energy are mostly unrenewable and irretrievable. The impacts of using these resources should, however, be weighed against the benefits to the residents of Kalihi who will not experience future sewage overflows and benefit from non-degradation of water quality and public health. There will be no loss of any natural or cultural resources.
X. DETERMINATION

Based on the preceding paragraphs, it is anticipated that the proposed action will result in no significant adverse impacts other than those described in this assessment. Consequently, a finding of no significant impact (FONSI) is recommended and therefore, an Environmental Impact Statement would not be required.
XI. REASONS SUPPORTING RECOMMENDED DETERMINATION

A. The proposed action does not involve an irrevocable commitment or loss of or destruction of any natural or cultural resource:

There are no natural or cultural resources associated with the project site. Development of the project area has substantially altered the site from its natural condition.

B. The proposed action does not curtail the range of beneficial uses of the environment:

The proposed project is consistent with the County's General Plan and the Department of Wastewater Managements planning standards and would not curtail beneficial uses of the environment in the area. The proposed project will be compatible with the uses of the surrounding area.

C. The proposed action is in concert with the State's long-term environmental policies, goals and guidelines as expressed in Chapter 343, HRS, and any revisions and amendments thereto, court decisions and executive orders:

The proposed project is consistent with the State's Land Use Plan which is in concert with all applicable policies, goals and guidelines. No long-term environmental conflicts are foreseen.

D. The proposed action does not substantially affect the economic or social welfare of the community or State:

The economic impact will be affected by the short-term, construction related activities. Cash infusion during the construction phase will be the primary short-term economic impact. Upon completion of the project, the economic situation should return to the existing condition.

E. The proposed action does not involve substantial secondary impacts, such as population changes or effects on public facilities:

The proposed project will not directly result in an increase of population in the area but the project will eliminate restriction to growth due to the inadequacy of the existing system. The proposed project will allow development of lands in conformance with the existing Development plan.

XI-1
REASONS SUPPORTING RECOMMENDED DETERMINATION
JULY 1998
F. The proposed action does not substantially affect public health:

Only the short-term impacts have potential for affecting public health. Construction activities will be regulated to minimize noise, dust and exhaust emissions.

G. The proposed action does not involve a substantial degradation of environmental quality:

The existing physical aspects of the surrounding area will be preserved.

H. The proposed action is individually limited and cumulatively, does not have a considerable effect upon the environment or involve a commitment for larger actions:

The proposed action, either individually or cumulatively, will not have a considerable effect on the environment, nor will it involve a commitment to larger actions.

I. The proposed action does not substantially affect rare, threatened or endangered species or habitats:

There are no known rare, threatened or endangered species or habitat associated with the project site. (See APPENDIX A & B)

J. The proposed action does not detrimentally affect air or water quality or ambient noise levels:

Short-term impacts on air and water quality, as well as noise, may occur during the construction period, but will be mitigated by normal construction practices and will be regulated by the project plans and specifications.

K. The proposed action does not affect an environmentally sensitive area such as a tsunami zone, erosion-prone area, geologically hazardous land, estuary or coastal waters.

The proposed project is not located in an environmentally sensitive area. The project is not located within a tsunami zone. The project is not located on unique geologically hazardous lands. It is also not expected to have any significant adverse impacts on fresh or coastal waters. Affects to the flood plain will be mitigated by adopting a BMP procedure.
L. The proposed action does not substantially affect scenic vistas and view planes identified in County of State plans or studies.

The top of the stream crossing structure will be seven feet below the adjacent highway bridge pavement level. A solid concrete barrier on the highway bridge screens the proposed structure from vehicular passengers. Trees within the stream and along the bank blocks the view of the structure from residents on the easterly side of Likelike Highway.

M. The proposed action does not require substantial energy consumption.

Energy consumption is limited to the construction effort. The system is a collector sewer and will operate by gravity.
XII. LIST OF NECESSARY REVIEW/APPROVALS (KALIHI STREAM CROSSING)

A. STATE OF HAWAII

1. Department of Health
   a. Community Noise Permit for Construction Activities
   b. Air Quality-Authority to Construct Permit and Permit to Operate
   c. Construction Plan Approval
   d. NPDES Permits
      (1) Construction Dewatering
      (2) Hydrotesting Disposal

2. Department of Transportation
   a. Construction plan approval
   b. State Highway - Permit to Perform Works

3. Department of Land & Natural Resources
   a. Permit for Stream Channel Alteration and Diversions
   b. Historic Site Review

B. CITY & COUNTY OF HONOLULU

1. Building Department
   a. Building Permit for Building, Electrical, Plumbing
XIII. ORGANIZATIONS AND PERSONS CONTACTED DURING ORIGINAL EA

A. ORIGINAL ENVIRONMENTAL ASSESSMENT

1. STATE OF HAWAII

   a. Department of Accounting and General Services
   b. Department of Business, Economic Development and Tourism
   c. Department of Education
   d. Department of Land and Natural Resources
   e. Department of Transportation
   f. State Historic Preservation Division
   g. Department of Health
   h. University of Hawaii
   i. American Lung Association

2. CITY AND COUNTY OF HONOLULU

   a. Board of Water Supply
   b. Building Department
   c. Department of Land Utilization
   d. Department of Public Works
   e. Department of Transportation Services
   f. Police Department
   g. Fire Department
3. FEDERAL
   a. U.S. Army Corps of Engineers

4. OTHERS
   a. AT&T Company
   b. Gasco, Inc.
   c. Hawaiian Electric Company, Inc.
   d. Oceanic Cable
   e. GTE Hawaiian Tel
   f. Kalihi Neighborhood Board
   g. Kamehameha Shopping Center
   h. Outdoor Circle
      1314 So. King Street, Suite 306
      Honolulu, HI. 96814
   i. Neighborhood Association

B. SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

1. STATE OF HAWAII
   a. Department of Land & Natural Resources
   b. Department of Transportation
   c. Department of Health
   d. University of Hawaii
   e. Elected Officials (Senator, Representative)
2. CITY AND COUNTY OF HONOLULU
   a. Building Department
   b. Department of Land Utilization
   c. Fire Department
   d. Police Department
   e. Council Person

3. FEDERAL
   a. U.S. Army Corps of Engineers
   b. U.S. Fish and Wildlife Service

4. OTHERS
   a. Kalihi Neighborhood Board
   b. Outdoor Circle
   c. Neighborhood Associates
XIV. BIBLIOGRAPHY


B. Standard Details for Public Works Construction, City and County of Honolulu, September 1984.


D. Islandwide Sewer Adequacy Study (Hart Street Area), City & County of Honolulu, Dept. of Public Works, Dept. of Wastewater Management, Park Engineering, September 1990.

FLORA AND FAUNA SURVEY REPORT FOR THE PROPOSED
GULICK AVENUE RELIEF SEWER LINE

FOR
AKINAKA & ASSOCIATES, LTD.
CONSULTING ENGINEERS
250 BERETANIA STREET, SUITE 300
HONOLULU, HAWAII 96817-4716

BY
EVANGELINE J. FUNK, PH.D.
BOTANICAL CONSULTANTS
HONOLULU, HAWAII 96835
1997

APPENDIX A
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INTRODUCTION

The proposed Gulick Avenue Relief Sewer will be constructed in a mostly urbanized area. At the proposed crossing of Kalihi Stream near Likelike Highway is the only place where the line will cross undeveloped terrain. Flora and fauna surveys of the undeveloped area, one-hundred feet above and one-hundred feet below the Likelike Highway bridge, were conducted in June 1997. The purpose of these surveys was to discover what plants and animals inhabit the site, to describe the vegetation, and to determine if any proposed or listed threatened or endangered species are present in the area. The results of the botanical survey will be presented first followed by the results of the fauna survey.

BOTANICAL HISTORY

At least six negative declarations for projects in Kalihi Valley have been prepared in the last ten years. The most complete study results are contained in the Board of Water Supply (1990) environmental assessment for an exploratory well in Kalihi Valley. In this document the vegetation of the site is summarized as the "the flora of the site consists mostly of bamboo and hau trees with a ground cover of bamboo leaves and rose apple seedlings".

Other documents, Dept. of Education (1989), Terry W. Hay (1989), and Dept. of Parks and Recreation (1997) either declared there would be no impact on the environment or noted that only introduced weeds would be disturbed. The declarations are not surprising in view of the fact that Kalihi Valley has been urbanized for many, many years.
METHODS

In June 1997 a two person team of environmental scientists carried out a reconnaissance of a two hundred foot segment of Kalihi Stream banks just above and just below the Likelike Highway bridge. Both sides of the stream were surveyed and the results of those surveys are presented here.

RESULTS

The plant cover along the banks of Kalihi Stream in the vicinity of Likelike Highway bridge is dominated by Mixed Introduced Vegetation. At the top of the banks, near the houses, there are large planted trees including monkey pods (Samanea saman (Jacq.) Merr.), banyans (Ficus microcarpa and F. benjamina L.), 'opiuma (Pithecellobium dulce (Roxb.) Benth), mango (Mangifera indica L.), and horseradish tree (Moringa oleifera Lam.), among others. The understory is elephant grass (Pennisetum purpureum Schumach.), Guinea grass (Panicum maximum Jacq.), and some large invasive vines. The most notable of the vines is ivory nut gourd (Coccinia grandis (L.) Voigt), Balsam pear (Momordica charantia L.), and the big, white morning glory, koali pehu (Ipomoea alba L.). At the edges of the stream can be found large patches of Ruellia brittoniana E. Leonard. In summary, the vegetation along this portion of Kalihi Stream can be described as weeds and garden escapees. No irreparable damage will be done if this vegetation is disturbed.

ENDANGERED SPECIES

No candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543), are known from lower Kalihi Stream.
SPECIES LIST

The plant families in the following species list have been alphabetically arranged within two groups, Monocotyledons, and Dicotyledons. The genera and species are arranged alphabetically within families. The taxonomy and nomenclature follow that of Neal (1965), Wagner, Herbst and Sohmer (1990). For each taxon the following information is provided:

1. An asterisk before the plant name indicates a plant introduced to The Hawaiian Islands since Cook or by the aborigines.
2. The scientific name.
3. The Hawaiian name and or the most widely used common name.
4. Abundance ratings are for this site only and they have the following meanings:

   Uncommon = a plant that was found less than five times.
   Occasional = a plant that was found between five to ten times.
   Common = a plant considered an important part of the vegetation.
   Locally abundant = plants found in large numbers over a limited area, for example the plants found in grassy patches.

This species list is the result of an extensive survey of this site during the dry season (June 1997) and it reflects the vegetative composition of the flora during a single season. Minor changes in the vegetation will occur due to introductions and losses and a slightly different species list would result from a survey conducted during a different growing season.
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Abundance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARACEAE - Aroid Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Epipremnum pinnatum</em> (L.) Engl.</td>
<td>Golden pothos</td>
<td>Common</td>
</tr>
<tr>
<td><em>Dieffenbachia picta</em> Schott</td>
<td>Dumb cane</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Syngonium auritum</em> (L.) Schott.</td>
<td>Syngonium</td>
<td>Common</td>
</tr>
<tr>
<td><strong>ARECACEAE - Palm Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Areca catechu</em> L.</td>
<td>Betel-nut palm</td>
<td>Rare</td>
</tr>
<tr>
<td><em>Cocos nucifera</em> L.</td>
<td>Coconut</td>
<td>Rare</td>
</tr>
<tr>
<td><strong>COMMELINACEAE - Spiderwort Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Commelina diffusa</em> N. L. Burm.</td>
<td>Honohono grass</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><strong>CYPERACEAE - Sedge Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cyperus alternifolius</em> L.</td>
<td>'Ahu'awa haole</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>MUSACEAE - Banana Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Musa x paradisiaca</em> L.</td>
<td>Banana</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>POACEAE - Grass Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Brachiaria mutica</em> (Forssk.) Stapf.</td>
<td>Buffelgrass</td>
<td>California grass</td>
</tr>
<tr>
<td>Locally abundant</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cenchrus ciliaris</em> L.</td>
<td>Sourgrass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Chloris barbata</em> (L.) Sw.</td>
<td>Guinea grass</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Cynodon dactylon</em> (L.) Pers.</td>
<td>Bermuda grass</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Digitaria insularis</em> (L.) Mez ex Ekman</td>
<td>Hilo grass</td>
<td>Uncommon</td>
</tr>
<tr>
<td><em>Panicum maximum</em> Jacq.</td>
<td>Vasey grass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Paspalum conjugatum</em> Bergius</td>
<td>Elephant grass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Paspalum urvillei</em> Stend.</td>
<td>Palmgrass</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Pennisetum purpureum</em> Schumach.</td>
<td>Johnson grass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Setaria palmifolia</em> (J. Konig) Stapf.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Sorghum halmense</em> (L.) Pers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DICOTYLEDONES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ACANTHACEAE - Acanthus Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Asystasia gangetica</em> (L.) T. Anders</td>
<td>Chinese violet</td>
<td>Common</td>
</tr>
<tr>
<td><em>Barleria cristata</em> L.</td>
<td>Philippine violet</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Ruellia britoniana</em> E. Leonard</td>
<td></td>
<td>Common</td>
</tr>
<tr>
<td><em>Thunbergia</em> sp.</td>
<td></td>
<td>Uncommon</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Abundance</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td><strong>AMARANTHACEAE - Amaranth Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Amaranthus viridis</em> L.</td>
<td>Slender amaranth</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>ANACARDIACEAE - Mango Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mangifera indica</em> L.</td>
<td>Mango</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>ASTERACEAE - Sunflower Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Wedelia trilobata</em> (L.) Cass.</td>
<td>Wedelia</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Synedrella nodiflora</em> (L.) Gaertn.</td>
<td>Nodweed</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>BIGNONIACEAE - Bignonia Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Spathodea campanulata</em> P. Beauv.</td>
<td>African tulip</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>CONVOLVULACEAE - Morning glory Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ipomea alba</em> L.</td>
<td>Moon flower</td>
<td>Common</td>
</tr>
<tr>
<td><em>Ipomea cairica</em> (L.) Sweet</td>
<td>Koali 'ai</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Ipomea obscura</em> (L.) Ker-Gawl</td>
<td></td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>CUCURBITACEAE - Cucumber Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Coccinia grandis</em> (L.) Voight</td>
<td>Scarlet gourd</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Momordica charantia</em> Crantz</td>
<td>Balsam apple</td>
<td>Common</td>
</tr>
<tr>
<td><strong>EUPHORBIACEAE - Spurge Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aleurites moluccana</em> (L.) Willd.</td>
<td>Kukui</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Ricinus communis</em> L.</td>
<td>Castor bean</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>FABACEAE - Bean Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Leucaena leucocephala</em> Lam deWit</td>
<td>Koa-haole</td>
<td>Common</td>
</tr>
<tr>
<td><em>Phaseolus sp.</em></td>
<td>Bean</td>
<td>Uncommon</td>
</tr>
<tr>
<td><em>Pithecellobium dulce</em> (Roxb.) Benth</td>
<td>'Opiuma</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Samanea saman</em> (Jacq.) Merr.</td>
<td>Monkey pod</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Senna pendula</em> (Humb. &amp; Bonpl. ex Willd.)</td>
<td>Common</td>
<td></td>
</tr>
<tr>
<td><strong>MORACEAE - Fig Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ficus benjamina</em> L.</td>
<td>Weeping fig</td>
<td>Uncommon</td>
</tr>
<tr>
<td><em>Ficus microcarpa</em> L. fil.</td>
<td>Chinese banyan</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>MORINGACEAE - Moringa Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Moringa oleifera</em> Lam.</td>
<td>Horse-radish tree</td>
<td>Occasional</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Abundance</td>
</tr>
<tr>
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</tr>
<tr>
<td>MYRTACEAE - Myrtle Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Syzygium cumini (L.) Skeels</td>
<td>Java plum</td>
<td>Common</td>
</tr>
<tr>
<td>PHYTOLACCACEAE - Pokeweed Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Rivina humilis L.</td>
<td>Coral berry</td>
<td>Common</td>
</tr>
<tr>
<td>PORTULACACEAE - Purslane Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Portulaca oleracea L.</td>
<td>Pigweed</td>
<td>Occasional</td>
</tr>
<tr>
<td>RUBIACEAE - Coffee Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Paederia scandens (Lour.( Merr.</td>
<td>Maile pilau</td>
<td>Common</td>
</tr>
<tr>
<td>RUTACEAE - Rue Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Murraya paniculata (L.) Jack</td>
<td>Mock orange</td>
<td>Occasional</td>
</tr>
<tr>
<td>ULMACEAE - Elm Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Trema orientalis (L.) Blume</td>
<td>Gunpowder tree</td>
<td>Uncommon</td>
</tr>
</tbody>
</table>
FAUNA SURVEY REPORT

INTRODUCTION AND METHODS

This report summarizes the results of a fauna survey of the proposed Gulick Avenue Relief Sewer Line site, Honolulu, Hawaii which was conducted in June 1997. Because this area has been used for various human activities and the vegetation has been greatly altered, there is very little or no habitat for native birds. It does, however, offer abundant resources for many introduced, seed and fruit eating bird species. Three fixed station observation points (20 minutes at each station), one approximately one-hundred feet above the Likelike Highway bridge, one one-hundred feet below the bridge, and one on the bridge were used to collect data on the faunal activities at this site. Observations were made during early daylight hours in order to take advantage of the higher activity levels of both birds and mammals during cooler parts of the day. No nighttime observations were made.

RESULTS

Mammals - No mammal species were found during the survey. However, one dead cat Felis catus, was found along the stream. This carcass may of been dumped here or it may have washed in. No live cats were seen although they undoubtedly use the area.

Most urban and agricultural sites in the Hawaiian Islands may be considered to support rodent populations of varying sizes. During the survey the cucumber-like fruit of the ivory nut gourd and balsam apple were found to have been gnawed by both large and small rodents. We therefore assume that both the ubiquitous house mouse (Mus musculus) and at least one species of rat, most likely the black rat (also known as the roof, house, or ship rat) (Rattus rattus), inhabit this area.

Birds - Although the entire site has been extensively modified it does support a variety of non-native species. Most of the bird observation stations were in open areas where large numbers of ground feeding birds congregate or near large trees and
shrubs which provide resting places. The observation station on the bridge gave an overview of the site.

Nine species of introduced birds were found on this site. No native, indigenous, or migratory birds were seen at site. All of the bird species found during the survey are listed below. The annotated checklist follows the nomenclature of Pratt, Bruner and Berrett (1987).

SPECIES LIST

Family Passeridae: Old World Sparrows

*Passer domesticus* (House sparrow)

House sparrows are sometimes called feathered mice. These streaky brown and gray birds are a familiar commensal species and were seen on powerlines and in the open grassy area near the school. They appear to flock with the chestnut mannikins.

Family Emberizidae: Emberizine Finches

*Cardinalis cardinalis* (Northern cardinal)

Northern cardinals, both males and females were seen in the big trees and shrubs above the stream in low numbers. The bright red coloring of the male bird make him easily recognizable. The call of these birds is very distinctive.

Family Columbidae: Pigeons and Doves

*Columba livia* (Spotted Dove)

The spotted dove is a large bird which is grayish brown with rosy blushed breast feathers. At the sides and back of the neck is a patch of black with white spots. The spotted dove was seen on powerlines, in the open, mowed school yard, and in trees above the stream.

*Geopelia striata* (Zebra Dove)

This ground dwelling, seed eating dove is smaller and often more abundant than the spotted dove. Zebra doves were very common on this site. They were seen on the open play ground, on the fence above the stream, powerlines, and in trees.
Family Sturnidae: Starlings and Mynas

*Acridotheres tristis* (Common Myna)

The ubiquitous myna is a plump, brown bird with a black head and tail. It has a white belly, tail tip and wing patches, and bright yellow legs, feet, bill, and eye liners. Mynas were seen in the trees, on lawns, in the parking lot of the school, and on the powerlines.

Family Pycnonotidae: Bulbuls

*Pycnonotus cafer* (Red-vented bulbul)

Large, raucous birds, red-vented bulbuls were seen in the trees, on fences, and in open school yard. Bulbuls are conspicuous for their noisy call and the bright red feathers beneath their tails. Primarily fruit eaters, the bulbuls appeared to be also feeding on insects, the small fruit of the banyan trees and the ivory nut gourd vine.

Family Estrildidae: Waxbills, Mannikins, and Parrotfinches

*Lonchura malacca* (Chestnut Mannikin)

These tiny, dark brown finches were seen in the open, mowed playground with mynas, and sparrows.

*Padda oryzivora* (Java sparrow)

Several of these tiny, brightly colored birds were seen in the haole koa bushes near the bridge and the school yard.

Family Zosteropidae: White-eyes

*Zosterops japonicus* (Japanese white-eye)

These small greenish birds with white eyes and pale bellies are very hard to see as they flit about among the trees. They give themselves away by their constant twittering. Many white-eyes inhabit the trees that line the upper bank of the stream.
ENDANGERED SPECIES

No candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543), or State of Hawaii listed species were found on or around the proposed Gulick Avenue Relief Sewer site.
BIBLIOGRAPHY


Dept. of Education. 1989. Environmental Assessment for Kalihi Elementary School to Install Air Conditioning and Expand the Library.


FAUNA SURVEY
FOR LOWER KALIHI STREAM AT THE LIKELIKE HIGHWAY
ISLAND OF O'AHU, HAWAI'I

BY
ERIC B. GUINThER
AECOS, INC.
KAILUA, HAWAII 96734

JULY 1997

APPENDIX B
Fauna survey for lower Kalihi Stream at the Likelike Highway, Island of O'ahu, Hawai'i

July 14, 1997

Eric B. Guinther
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Introduction

In order to span Kalihi Stream with a new sewer line at Likelike Highway it has been proposed that supports (pillars) be added as extensions to the mauka (upstream) side of the existing bridge supports for northbound traffic lanes of the highway. The existing supports are within the banks of Kalihi Stream (within the Ordinary High Water Mark or OHWM). This report considers aquatic environments in the vicinity of the bridge and assesses the potential impacts of the proposed project on aquatic resources in Kalihi Stream.

Methods

A reconnaissance survey of Kalihi Stream beneath the Likelike Highway viaducts was conducted on June 17, 1997. Weather at the time was 70-80% cloud cover with very light showers moving from mauka to makai (Tradewinds). Water clarity was high and intervals of clear skies were sufficient to produce good to excellent viewing conditions in the stream despite the rain. Visual observations were combined with net sweeps to develop a semi-quantitative listing of the aquatic and riparian biota. Only macrobiota were assessed.

Water samples were collected and in situ measurements of temperature and dissolved oxygen made to support a general characterization of the stream environment and the NPDES dewatering permit application process (see AECOS, 1997). Reported here are the basic water quality results. Table 1 presents information on analytical methods used.

General Description

Kalihi Stream under the Likelike Highway viaducts is confined in a natural stream bed with steep banks, consisting of fill material on the right bank and basalt outcrop on the left. Upstream of the viaducts and underneath them, stream width is on the order of 10
m (32 ft). Here the stream bed is mixed boulders, with sediment dominated by coarse sand to gravel, but containing some silt. Boulders are worn, but not strongly rounded, suggesting the source is basalt outcrops along the left bank. Stream depths are mostly on the order of 0.1 to 0.2 m (0.3 to 0.6 ft) in this area. Some 20 m (64 ft) upstream, occurs a series of deeper pools separated by low outcrops of smooth, dense basalt. The bottoms of these pools is layered with sand. Depths in the pools exceed 0.6 m (2 ft) in some places. Downstream from the viaduct, the stream channel narrows to about 4 m (13 ft) across, with large boulders more evident in the stream bed, and banks which are steep and high. Stream runs and pools are deeper than under the bridge spans: 0.5 to 0.7 m (1.6 to 2.3 ft).

<table>
<thead>
<tr>
<th>Analysis List</th>
<th>Method</th>
<th>Reference</th>
<th>Instrument</th>
</tr>
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<td>pH</td>
<td>EPA 150.1</td>
<td>EPA (1979)</td>
<td>Orion SA 250 pH meter</td>
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<tr>
<td>Dissolved Oxygen</td>
<td>EPA 360.1</td>
<td>EPA (1979)</td>
<td>YSI meter model 55</td>
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<tr>
<td>Temperature</td>
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<td>EPA (1979)</td>
<td>YSI meter model 55, thermistor calibrated to NBS certified thermometer</td>
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<td>Ammonia</td>
<td>alkaline phenol</td>
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</tr>
<tr>
<td>Nitrate + nitrite</td>
<td>EPA 353.2</td>
<td>EPA (1993)</td>
<td>Technicon AutoAnalyzer II</td>
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<tr>
<td>Total Nitrogen</td>
<td>persulfate digestion /EPA 353.2</td>
<td>D'Elia et al. (1977)</td>
<td>Technicon AutoAnalyzer II</td>
</tr>
<tr>
<td>Total Phosphorus</td>
<td>persulfate digestion /EPA 365.1</td>
<td>EPA (1993)</td>
<td>Technicon AutoAnalyzer II</td>
</tr>
</tbody>
</table>


(Greenberg, Clesceri, & Eaton, eds.). APHA, AWWA, & WEF. 1100 p.

In all, the physical environment at this location is of moderate quality, marred only by the considerable amounts of litter in the stream bed. An area of long term (although perhaps not recent) dumping down the steep slope of the ravine above the left bank accounts for some of the man-made debris in the stream, although material moving
downstream from urban Kalihi Valley, and litter from the highway, probably contributes much more.

Biota

Aquatic organisms observed or reported living in Kalihi Stream are given in Table 2. In June 1997, most abundant in the stream under the Likelike Highway bridges were the guppy or rainbowfish (*Poecilia reticulata*), armored catfish (*Hypostomus* sp.), and a melanid snail (*Tarebia granifera*). Young catfish were very abundant in shallows along the margins of the stream, and schools of adults were plentiful in the pools upstream of the bridge. Downstream from Likelike Highway, where the stream bed narrows and water flow is fast through moderately deep pools, swordtail (*Xiphophorus helleri*) is the most abundant fish.

Other aquatic species observed, although generally uncommon at the time of the survey, were American swamp crayfish (*Procambarus clarkii*) and tadpoles of American bullfrog (*Rana catesbeiana*). A snail (*Lymnaeidae*) was collected in the small drainage structure entering on the right bank immediately downstream of the highway bridges. This intermittent drainage skirts along the mauka boundary of Kaewae Elementary School.

<table>
<thead>
<tr>
<th>Species</th>
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<td><strong>INVERTEBRATES</strong></td>
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<td><strong>MOLLUSCA</strong></td>
<td></td>
<td></td>
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<tr>
<td>GASTROPODA - NERITIDAE</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Theodoxus vespertinus</em> Sowerby</td>
<td>hapawai</td>
<td>end.</td>
<td>01</td>
<td>1)</td>
</tr>
<tr>
<td>GASTROPODA - THIARIDAE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tarebia granifera</em> Lam.</td>
<td>melanid snail</td>
<td>nat.</td>
<td>21</td>
<td>*1)</td>
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<tr>
<td>PULMONATA - LYMNAEIDAE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>small sinistral snail</td>
<td>pond snail</td>
<td>nat.</td>
<td>20</td>
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<tr>
<td>BIVALVIA - CORBICULIDAE</td>
<td></td>
<td></td>
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<tr>
<td><em>Corbicula fluminea</em> (Müller)</td>
<td>Asiatic flume clam</td>
<td>nat.</td>
<td>20†</td>
<td></td>
</tr>
<tr>
<td>ARTHROPODA, CRUSTACEA</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DECAPODA - PALAEMONIDAE</td>
<td></td>
<td></td>
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<tr>
<td><em>Macrobrachium grandimanus</em></td>
<td>Hawaiian prawn</td>
<td>end.</td>
<td>21</td>
<td>1)</td>
</tr>
<tr>
<td>DECAPODA - CAMBARIDAE</td>
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<td></td>
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<tr>
<td><em>Procambarus clarkii</em> (Girard)</td>
<td>American swamp crayfish</td>
<td>nat.</td>
<td>10</td>
<td>*1,2)</td>
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<td>ARTHROPODA, INSECTA</td>
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<tr>
<td>ODONATA, LIBELLULIDAE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pantala flavescens</em> (Fabricius)</td>
<td>globe skimmer dragonfly</td>
<td>ind.</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

AECOS, Inc. [888.DOC]
### Table 2. (continued)

<table>
<thead>
<tr>
<th>FISHES - CICHLIDAE</th>
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<tr>
<td>Oreochromis mossambica</td>
<td>Mozambique tilapia</td>
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<tr>
<td>FISHES - CLARIIDAE</td>
<td>Chinese catfish</td>
</tr>
<tr>
<td>Clarius fuscus</td>
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</tr>
<tr>
<td>FISHES - COBITIDAE</td>
<td>Loach</td>
</tr>
<tr>
<td>Misgurnus anguillicaudatus</td>
<td></td>
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<tr>
<td>FISHES - ELEOTRIDAE</td>
<td>'o`opu akupa</td>
</tr>
<tr>
<td>Eleotris sandwicensis (Vaillant &amp; Sauvage)</td>
<td></td>
</tr>
<tr>
<td>FISHES - GOBIIDAE</td>
<td>'o`opu naniha</td>
</tr>
<tr>
<td>Awaous genivittatus (Cuvier &amp; Vaillant)</td>
<td></td>
</tr>
<tr>
<td>Awaous stamineus (Eydoux &amp; Souleyet)</td>
<td>'o<code>opu na</code>kea</td>
</tr>
<tr>
<td>FISHES - KUHLIIDAE</td>
<td>aholehole</td>
</tr>
<tr>
<td>Kuhlia sandwicensis</td>
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</tr>
<tr>
<td>FISHES - LORICARIIDAE</td>
<td>armored catfish</td>
</tr>
<tr>
<td>Hypostomus sp.</td>
<td></td>
</tr>
<tr>
<td>FISHES - POECILIDAE</td>
<td>guppy</td>
</tr>
<tr>
<td>Poecilia reticulata Peters</td>
<td>swordtail</td>
</tr>
<tr>
<td>Xiphophorus helleri Heckel</td>
<td></td>
</tr>
</tbody>
</table>

**KEY TO SYMBOLS USED:**

Status:

- nat. - naturalized. An introduced or exotic species.
- end. - endemic - A native species found only in the Hawaiian Islands.

**QC Code:**

- 01 - Reported in unpublished literature from this stream (see Source codes).
- 02 - Reported in published literature from this stream (see Source notes).
- 10 - Observed and identified in the field.
- 20 - Collected and identified in the laboratory; specimen(s) not saved.
- 21 - Collected and identified in the laboratory; voucher specimen(s) saved.
- † - Identified from non-living material (e.g., shell), sign, or call.

**Source Codes:**

- * - Seen at project location on June 17, 1997 AND reported by source.
- 1) AECOS (1987) - lower Kalihi Stream location close to estuary.
- 2) Timbol and Maciokek (1978) - At Likelike Highway crossover.

Scattered valves (shells) of the flume clam (*Corbicula fluminea*) were collected from the stream bed. A search of sediment deposits did not reveal any live clams, but this introduced species is apparently in Kalihi Stream. A common dragonfly known as the globe skimmer (*Pantala flavescens*) was observed in the open area over the large stream pools. Two types of algae were seen. An encrusting blue-green (Cyanophyta), magenta in color, was observed coating rocks under the north bridge span. A bright-green, filamentous (hair-like) form (*Cladophora* sp.) was common on the rocks forming small waterfalls upstream from the span.
Water Quality

Results of basic water quality testing in Kalihi Stream at a point just under the north span of Likakilike highway are presented in Table 3. Samples were obtained at 1115 on June 17, 1997.

<table>
<thead>
<tr>
<th>Date</th>
<th>Temp. (°C)</th>
<th>DO (mg/l)</th>
<th>Cond. (mhos/cm)</th>
<th>pH</th>
<th>Turbidity (ntu)</th>
<th>TSS (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-17-97</td>
<td>24.0</td>
<td>7.40</td>
<td>212</td>
<td>8.14</td>
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<td>2.3</td>
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<table>
<thead>
<tr>
<th>Nitrate + nitrite</th>
<th>Ammonia</th>
<th>Total N</th>
<th>Total P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(µg N/l)</td>
<td>(µg N/l)</td>
<td>(µg N/l)</td>
<td>(µg P/l)</td>
</tr>
<tr>
<td>6-17-97</td>
<td>128</td>
<td>32</td>
<td>327</td>
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</tbody>
</table>

The dissolved oxygen (DO) value represents 88% of saturation at the stream temperature. This moderately high value, coupled with high pH, suggests high primary productivity in the stream (i.e., eutrophic conditions). Turbidity and total suspended solids (TSS) values were not unusually high, reflecting the relatively clear water observed at the time of sampling. The criterion for stream turbidity in State of Hawaii water quality regulations (DOH, 1992) is a mean value not to exceed 2.0 ntu in the dry season flow. For TSS, the criterion is a mean value not to exceed 10.0 mg/l.

The total and inorganic forms of nitrogen (ammonia, nitrate, and nitrite) were substantially elevated at the time of sampling. These compounds contribute to plant and algal growth, supporting eutrophication. The water quality criteria in State regulations (DOH, 1992) have, as average dry season values for nitrate + nitrite and total N, of 30.0 µg N/l and 180 µg N/l, respectively. No criteria are set for ammonia in streams because this value should be quite low. Elevated ammonia in this case would be indicative of sluggish water (perhaps in pools upstream) and decay of organic matter. The water quality criterion for total P is a mean value not-to-exceed of 30.0 µg P/l. The single measurement made on June 17 is slightly higher.

Discussion

Kalihi Stream is assigned the code 3-3-11 by the Hawaii Stream Assessment (Hawaii Cooperative Park Service Unit, 1990) and listed as a continuous flowing, perennial
stream. Kaliihi Stream, with its several branches, drains Kaliihi Valley on the leeward side of the Island of O'ahu, flowing through Honolulu and into Honolulu Harbor. There has been evidence in the past that sediments in the lower or estuarine part of this stream, located in an industrial area and opening on the harbor, may be polluted (ECI, 1978; AECOS, 1979). Poor water quality in the lined estuary of this stream could adversely impact native species throughout the length of the stream because these species are anadromous, recruiting from larval stages that enter the stream through the mouth.

An extensive monitoring of water quality in Kaliihi Stream was undertaken by the Water Resources Research Center at University of Hawaii (Matsushita and Young, 1973). The study appears to conclude that levels of chlorinated pesticides (around 1 ppt in water samples) were not indicative of contamination, although present knowledge of the effects of these persistent chemicals on stream biota would certainly suggest otherwise. The pesticides analysis was only a small part of this detailed study which provided a valuable baseline for Kaliihi Stream water quality as it was in 1971-72. This study produced the following wet weather averages (and ranges) for Kaliihi Stream as a whole: total N: 320 μg N/l (100 - 640 μg N/l), total P: 260 μg P/l (30 - 270 μg P/l). Our single sampling does not suggest that conditions have changed, although our total P is at the lower end of the values for total P in 1971-2.

Previous biological surveys have been conducted in the upper estuary (near Middle Street, between King St. and Dillingham Blvd.; AECOS, 1987) and under the Likiliki Highway bridge (Timbol and Maciolek, 1978). As was the case with the current survey, these earlier observations found many introduced species living in the stream. However AECOS(1987) also reported native nerite snail (Theodoxus vespertinus) and native prawn (Macrobrachium grandimanus). Both of these species are typically found where stream and estuary meet. Neither was observed under the Likiliki Highway bridge in June 1997.

A survey of island streams conducted by Timbol and Maciolek (1978) included a station on Kaliihi Stream at Likiliki Highway. These authors reported finding three species of native fishes or `o`opu (Awaous genivittatus, A. stamineus, and Eleotris sandwicensis), five species of exotic fishes (see Table 2), and crayfish (Procambarus clarkii).

None of the aquatic species observed during the present survey is valuable or of concern from a resource preservation perspective. Indeed, most can be described as pest species which have been introduced to Hawaiian streams in the last several decades and whose presence contributes to the paucity of native fauna in this reach of Kaliihi Stream. It can be concluded that the proposal to extend the Likiliki bridge supports northward within the ordinary high water mark (OHWM) of Kaliihi Stream will have no adverse consequences on stream resources.
References Cited


# AECOS REPORT OF ANALYTICAL RESULTS

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**DATE SAMPLED:** 06/17/97

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<td>ANALYTE 8</td>
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</tr>
<tr>
<td>Dissolved Oxygen (mg/L)</td>
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<tr>
<td>pH</td>
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<td>me</td>
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</tr>
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<tr>
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**AECOS LOG No.:** 10673  
**DATE RECEIVED:** 06/17/97

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</tr>
<tr>
<td>Ammonia (µg N/L)</td>
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<td>06/23/97</td>
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<tr>
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<td>128</td>
<td>06/25/97</td>
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<td>Total Nitrogen (µg N/L)</td>
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<td>dh</td>
</tr>
<tr>
<td>Lead (µg/L)</td>
<td>&lt;5</td>
<td>06/30/97</td>
<td>PACE</td>
</tr>
<tr>
<td>BTEX (µg/L)</td>
<td>ND*</td>
<td>06/25/97</td>
<td>PACE</td>
</tr>
<tr>
<td>EPA 8080</td>
<td>ND* except Dieldrin</td>
<td>06/28/97</td>
<td>PACE</td>
</tr>
<tr>
<td>Dieldrin</td>
<td>0.034</td>
<td>DL = 0.02</td>
<td></td>
</tr>
</tbody>
</table>

ND - Not detected.  
*See attached lists for Detection Limits  
DL - detection limit  

J. Mello, Laboratory Director
## EPA 8015M/8020M - GAS/BTEX

<table>
<thead>
<tr>
<th>Compound</th>
<th>Detection Limit (µg/L)</th>
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</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.5</td>
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<tr>
<td>Toluene</td>
<td>0.5</td>
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<tr>
<td>Ethylbenzene</td>
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<tr>
<td>Xylene (Total)</td>
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## EPA 8310  PAH's in Water

<table>
<thead>
<tr>
<th>Compound</th>
<th>Detection Limit (µg/L)</th>
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</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>0.5</td>
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<tr>
<td>Acenaphthylene</td>
<td>1</td>
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<tr>
<td>Acenaphthene</td>
<td>0.5</td>
</tr>
<tr>
<td>Fluorene</td>
<td>0.1</td>
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<tr>
<td>Phenanthrene</td>
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<tr>
<td>Anthracene</td>
<td>0.05</td>
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<tr>
<td>Fluoranthene</td>
<td>0.05</td>
</tr>
<tr>
<td>Pyrene</td>
<td>0.05</td>
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<tr>
<td>Benzo(a)anthracene</td>
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<tr>
<td>Chrysene</td>
<td>0.05</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
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<tr>
<td>Benzo(k)fluoranthene</td>
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</tr>
<tr>
<td>Benzo(a)pyrene</td>
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<tr>
<td>Dibenz(a,h)anthracene</td>
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<tr>
<td>Benzo(g,h,i)perylene</td>
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<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
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## EPA 8080  Organochlorine Pesticides/PCBs

<table>
<thead>
<tr>
<th>Compound</th>
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</thead>
<tbody>
<tr>
<td>alpha-BHC</td>
<td>0.03</td>
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<tr>
<td>beta-BHC</td>
<td>0.06</td>
</tr>
<tr>
<td>delta-BHC</td>
<td>0.09</td>
</tr>
<tr>
<td>gamma-BHC (Lindane)</td>
<td>0.04</td>
</tr>
<tr>
<td>Heptachlor</td>
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<tr>
<td>Aldrin</td>
<td>0.04</td>
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<tr>
<td>Heptachlor Epoxide</td>
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<tr>
<td>Endosulfan I</td>
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<tr>
<td>Dieldrin</td>
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<tr>
<td>4,4'-DDE</td>
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<tr>
<td>Endrin</td>
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<td>Endosulfan II</td>
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<td>4,4'-DDD</td>
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<td>Endosulfan sulfate</td>
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<tr>
<td>4,4'-DDT</td>
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<tr>
<td>Methoxychlor</td>
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<td>Chlordane</td>
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<td>Toxaphene</td>
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<td>PCB 1016</td>
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<td>PCB 1221</td>
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<td>PCB 1232</td>
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<td>PCB 1242</td>
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<td>PCB 1248</td>
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<td>PCB 1254</td>
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<td>PCB 1260</td>
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</tr>
<tr>
<td>Endrin aldehyde</td>
<td>0.23</td>
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</tbody>
</table>

---

**CLIENT:** Akinaka & Associates

**ATTENTION:** Henry Moriia

**FILE No.:** 888  
**REPORT DATE:** 07/14/97  
**PAGE:** 2 of 2  
**LOG No.:** 10673
WRITTEN COMMENTS
AND
RESPONSES
<table>
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<th>NAME</th>
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<th>COMMENT DATE</th>
<th>RESPONSE DATE</th>
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<tr>
<td>1. DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT &amp; TOURISM</td>
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<tr>
<td>3. DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES</td>
<td>3/30/98</td>
<td>5/7/98</td>
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<td>5. DEPARTMENT OF TRANSPORTATION</td>
<td>3/30/98</td>
<td>4/16/98</td>
<td>7/6/98</td>
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<tr>
<td>6. STATE HISTORIC PRESERVATION OFFICER (DLNR)</td>
<td>3/30/98</td>
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<td>7. OFFICE OF ENVIRONMENTAL QUALITY CONTROL</td>
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<td>8. DEPARTMENT OF LAND UTILIZATION</td>
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<td>4/15/98</td>
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<tr>
<td>9. DEPARTMENT OF PUBLIC WORKS</td>
<td>3/30/98</td>
<td>4/16/98</td>
<td>7/6/98</td>
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<tr>
<td>10. BOARD OF WATER SUPPLY</td>
<td>3/30/98</td>
<td>5/5/98</td>
<td>7/6/98</td>
</tr>
<tr>
<td>11. PLANNING DEPARTMENT</td>
<td>3/30/98</td>
<td>4/15/98</td>
<td>7/6/98</td>
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<td>12. FIRE DEPARTMENT</td>
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<td>13. POLICE DEPARTMENT</td>
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<td>3/30/98</td>
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### LIST OF CONSULTED AGENCIES

<table>
<thead>
<tr>
<th>NAME</th>
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<th>COMMENT DATE</th>
<th>RESPONSE DATE</th>
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<tbody>
<tr>
<td>16. DEPARTMENT OF THE INTERIOR</td>
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<tr>
<td>FISH &amp; WILDLIFE SERVICE</td>
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<tr>
<td>17. SIERRA CLUB, HAWAII CHAPTER</td>
<td>3/30/98</td>
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<td>18. THE OUTDOOR CIRCLE</td>
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<td>19. KALIHI-PALAMA PUBLIC LIBRARY</td>
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<td>20. KALIHI VALLEY NEIGHBORHOOD BOARD #16</td>
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<td>21. LILIHA-KAPALAMA NEIGHBORHOOD BOARD #14</td>
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<tr>
<td>22. KALIHI-PALAMA NEIGHBORHOOD BOARD #15</td>
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<td></td>
</tr>
<tr>
<td>23. COUNCILMEMBER DONNA MERCADO KIM</td>
<td>3/30/98</td>
<td></td>
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</tr>
<tr>
<td>24. REPRESENTATIVE DENNIS ARAKAKI</td>
<td>3/30/98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. SENATOR NORMAN MIZUGUCHI</td>
<td>3/30/98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
April 2, 1998

Mr. Henry S. Morita  
Executive Vice President  
Akinaka & Associates, Ltd.  
250 North Beretania Street, 300  
Honolulu, Hawaii  96817-4716

Dear Mr. Morita:

This is in response to your letter of March 30, 1998, concerning the Draft Supplemental Environmental Assessment for the Gulick Avenue Relief Sewer, Kalihi Stream Crossing.

Since the potential problems that could generate calls for service appear to have been addressed, this project should have no significant impact on the operations of the Honolulu Police Department.

Thank you for the opportunity to comment.

Sincerely,

LEE D. DONOHUE  
Acting Chief of Police

By  
JAMES FEMIA, Assistant Chief  
Administrative Bureau
MEMORANDUM

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

ATTN: MR. JAMES FEMIA, ASSISTANT CHIEF
      ADMINISTRATIVE BUREAU

FROM: RANDALL K. FUJIKI, DIRECTOR
      DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER BS-DL DATED APRIL 2, 1998 RELATING TO THE
         GULICK AVENUE RELIEF SEWER
         DRAFT SUPPLEMENTAL ASSESSMENT (DSEA) FOR THE
         KALIHI STREAM CROSSING, KALIHI, HAWAII

Thank you for your comments relating to the DSEA for the proposed sewer crossing over
Kalihi Stream for the Gulick Avenue Relief Sewer project.

We note that this project should have no significant impact on the operations of the
Honolulu Police Department.

If you have any questions, please feel free to contact Warren Yamamoto at extension
6872.

cc: Akinaka & Associates, Ltd.
Mr. Henry S. Morita  
Akinaka & Associates, Ltd.  
250 North Beretania Street, Suite 300  
Honolulu, Hawaii  96817-4716

Dear Mr. Morita:

Subject: Draft Supplemental Environmental Assessment for the  
Gulick Avenue Relief Sewer, Kalihi Stream Crossing  
Kalihi, Honolulu, Hawaii  
HFD Internal No. OL 98-149

We received the Draft Supplemental Environmental Assessment for the subject project and have no objections or comments relating to the document.

If you need additional information, please contact Battalion Chief Charles Wassman of our Fire Prevention Bureau at 831-7778.

Very truly yours,

ANTHONY J. LOPEZ, JR.  
Fire Chief

AJL/CW:th
MEMORANDUM

TO: MR. ANTHONY J. LOPEZ, JR., FIRE CHIEF
   FIRE DEPARTMENT

ATTN: CHARLES WASSMAN, BATTALION CHIEF
   FIRE PREVENTION BUREAU

FROM: RANDALL K. FUJIKI, DIRECTOR
   DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER DATED APRIL 6, 1998 RELATING TO THE
   GULICK AVENUE RELIEF SEWER
   DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (DSEA)
   FOR THE KALIHI STREAM CROSSING, KALIHI, HAWAII

Thank you for your comments relating to the DSEA for the proposed
crossing over Kalihi Stream for the Gulick Avenue Relief Sewer
project.

We note that you have no objections or comments relating to the
DSEA.

If you have any questions, please feel free to contact Warren
Yamamoto at extension 6872.

[Signature]

RANDALL K. FUJIKI
Director

cc: Akinaka & Associates, Ltd.
April 15, 1998

Mr. Henry S. Morita
Executive Vice President
Akinaka & Associates, Ltd.
250 N. Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

Draft Supplemental Environmental Assessment (EA)
Gulick Avenue Relief Sewer, Kalihi Stream Crossing

A "Finding of No Significant Impact" was published in the Office of Environmental Quality Control Bulletin on August 23, 1995, for the above project. The project includes the installation of relief sewer lines in the Kalihi area. A new sewer line was proposed for the existing Likelike Highway bridge, which crosses Kalihi Stream. The existing bridge will not support the additional load of the sewer line. Therefore, the supplemental EA is required for the construction of a new utility bridge to accommodate the sewer pipeline.

According to the federal Flood Insurance Rate Map, the proposed project is located within the 100-year floodway of Kalihi Stream. The City's flood hazard ordinance, Section 7.10 of the Land Use Ordinance, requires that a licensed professional engineer certify that the improvements within the floodway will not result in any increase in the regulatory flood elevations. The certification statements, including "no-rise" determination, shall include back-up documentation in the form of studies, plans, or other data, for transmittal to the Department of Public Works for their review and acceptance.

If you have any questions regarding the City's flood regulations, please contact Mr. Mario Siu-Li of our staff at 523-4247.

Very truly yours,

JAN NAOE SULLIVAN
Director of Land Utilization
MEMORANDUM

TO: MS. JAN NAOE SULLIVAN, DIRECTOR
    DEPARTMENT OF PLANNING AND PERMITTING

ATTN: MR. MARIO SIU-LI

FROM: RANDALL H. FUJIKI, DIRECTOR
      DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER, 98-02271 (DT), DATED APRIL 15, 1998 RELATING
         TO THE GULICK AVENUE RELIEF SEWER
         DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (DSEA)
         FOR THE KALIHI STREAM CROSSING, KALIHI, HAWAII

Thank you for your comments relating to the DSEA for the subject project. In
response to your comments regarding the requirements of the City’s flood hazard
ordinance, Section 7.10 of the Land Use Ordinance, we wish to inform you that
our consultant for the project, Akinaka & Associates, Ltd., has investigated the
stream hydraulics and a licensed professional engineer will certify that the
improvements within the floodway will not result in any increase in the regulatory
flood elevations.

The "Flood Hazard Districts Certification" will be submitted to your office for
submittal to the Department of Public Works under separate cover.

If you have any questions, please contact Warren Yamamoto at extension 6872
or Henry S. Morita of Akinaka & Associates at 536-7721.

cc: Akinaka & Associates, Ltd.
April 15, 1998

Mr. Henry S. Morita, L.P.E.
Executive Vice President
Akinaka and Associates, Ltd.
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

Draft Supplemental Environmental Assessment (SEA) for the
Gulick Avenue Relief Sewer, Kalihi Stream Crossing, Kalihi, Oahu, Hawaii

In response to your letter of March 30, 1998, we have reviewed the subject draft SEA and offer the following comments.

We have no objections to the proposed project. The proposed project is related to a previous Development Plan Public Facilities Map amendment submitted by the Department of Wastewater Management in 1996. The amendment, 96/PUC-1001(IC), was approved by the City Council and adopted as Ordinance 97-21 on May 16, 1997.

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

Yours very truly,

[Signature]

PATRICK T. ONISHI
Chief Planning Officer

PTO:ft

c: WWM, Warren Yamamoto
MEMORANDUM

TO: MR. PATRICK T. ONISHI, CHIEF PLANNING OFFICER
    PLANNING DEPARTMENT

FROM: RANDALL K. FUJIKI, DIRECTOR
      DEPARTMENT OF DESIGN AND CONSTRUCTION

         TO THE GULICK AVENUE RELIEF SEWER
         DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (DSEA) FOR
         THE KALIHI STREAM CROSSING, KALIHI, HAWAII

Thank you for your comments relating to the DSEA for the proposed
sewer crossing over Kalihi Stream for the Gulick Avenue Relief
sewer project.

We note that you have no objections to the project.

If you have any questions, please feel free to contact Mr. Warren
Yamamoto at extension 6872.

cc: Akinaka & Associates, Ltd.
April 16, 1998

Mr. Henry S. Morita
Executive Vice President
Akinaka & Associates, Ltd.
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

Subject: Draft Supplemental Environmental Assessment (DSEA)
Gulick Avenue Relief Sewer, Kalihi Stream Crossing
TMK: 1-3-17, 18, 24 to 26

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

1. The DEA should address best management practices (BMPs) proposed during construction to minimize impact to water quality in Kalihi Stream. Examples include removal of effluent inside the existing inverted siphon, clearing Kalihi Stream in order to gain access across the stream, possibly limiting construction work to dry months, etc.

2. An effluent discharge permit for construction dewatering in Kalihi Stream may be required if the discharge is to the City-owned portion of Kalihi Stream. If so, an application must be made and submitted together with appropriate BMPs.

3. Provide hydrological calculation to ensure "no rise" of water surface as required by Federal Emergency Management Agency (FEMA).

4. Exhibit 4: Please correct "AAHO" to read as "AASHTO."

Should you have any questions, please contact Mr. Alex Ho, Environmental Engineer, at 523-4150.

Very truly yours,

[Signature]

JONATHAN K. SHIMADA, PhD
Director and Chief Engineer
MEMORANDUM

TO: MR. KENNETH E. SPRAGUE, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTN: MR. ALEX HO, ENVIRONMENTAL ENGINEER

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER, ENV 98-090, DATED APRIL 16, 1998 RELATING TO
THE GULICK AVENUE RELIEF SEWER
DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (DSEA)
FOR THE KALIHI STREAM CROSSING

Thank you for your comments relating to the DSEA for the subject project. As discussed with Mr. Alex Ho, due to the reorganization, we are directing this response to your department for appropriate action. In response to the comments, the following information is provided.

1. The "Mitigating Measures to Minimize Adverse Impacts" section of the DSEA will be amended to address best management practices proposed during construction. The existing inverted siphon will remain in operation and actual work in the stream will be limited to the drier months.

2. Discharge for construction dewatering will not be in the City owned portion of Kalihi Stream.

3. Hydraulic calculations to ensure "no rise" of the water surface will be submitted to the Department of Land Utilization for forwarding to your department.

4. Exhibit 4 "AAHO" will be corrected to read "AASHTO."

If you have any questions, please feel free to contact Warren Yamamoto at extension 6872 or Henry S. Morita of Akinaka & Associates at 536-7721.

cc: Akinaka & Associates, Ltd.
Mr. Henry S. Morita  
Executive Vice President  
Akinaka & Associates, Ltd.  
250 N. Beretania Street, Suite 300  
Honolulu, Hawaii 96817-4716  

Dear Mr. Morita:

Subject: Draft Supplemental Environmental Assessment for the  
Gulick Avenue Relief Sewer, Kalihi Stream Crossing,  
Kalihi, Honolulu, Hawaii  

Thank you for your transmittal of March 30, 1998, requesting our review and comments  
regarding the above project.

Please coordinate this project with our Highways Division’s projects along Likelike Highway to  
avoid possible future conflicts.

Plans for work done within the Likelike Highway rights-of-way must be submitted for our  
review and approval.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation
July 6, 1998

Mr. Kazu Hayashida, Director of Transportation
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Hayashida:

Subject: Your Letter HWY-PS 2.8857
Dated April 16, 1998 Relating to the
Gulick Avenue Relief Sewer
Draft Supplemental Environmental Assessment (DSEA)
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for your comments relating to the DSEA for the proposed sewer crossing over Kalihi Stream adjacent to the Likelike Highway bridge.

We will coordinate this project with your Highway Division’s projects along Likelike Highway to avoid possible future conflicts. Plans for work done within the Likelike Highway rights-of-way will be submitted to your office for review and approval.

If you have any questions, please feel free to contact Mr. Warren Yamamoto at 527-6872.

Very truly yours,

[Signature]
RANDALL K. FUJIKI
Director

cc: Akinaka & Associates, Ltd.
April 20, 1998

Henry S. Morita
Executive Vice President
Akinaka & Associates, Ltd.
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

SUBJECT: Chapter 6E-8 Historic Preservation Review -- Draft Supplemental Environmental Assessment for the Gulick Avenue Relief Sewer, Kalihi Stream Crossing
Kalihi, Kona, O‘ahu
TMK: 1-3

Thank you for the opportunity to review the Draft Supplemental EA for the Kalihi Stream crossing project for the Gulick Avenue Relief Sewer. We commented in 1994 that a review of our records shows that there are no known historic sites at the project location, and that it is unlikely that subsurface historic sites will be found in the overall project corridor. The Kalihi Stream crossing portion covered in the current EA, has been previously altered during the construction of the existing bridge making it unlikely that historic sites remain. Therefore we believe that this project will have "no effect" on historic sites.

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 587-0047.

If you have any questions please call Elaine Jourdane at 587-0014.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

EJjk
Mr. Don Hibbard, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawaii  
33 South King Street, 6th Floor  
Honolulu, Hawaii 96813

Attention: Ms. Elaine Jourdane

Dear Mr. Hibbard:

Subject: Your Letter Log No.: 21318, Doc No.: 9804EJ17  
Dated April 20, 1998 Relating to the  
Gulick Avenue Relief Sewer  
Draft Supplemental Environmental Assessment (DSEA)  
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for your comments relating to the DSEA for the proposed sewer crossing over Kalihi Stream adjacent to the Likelike Highway bridge.

We note that your records show that there are no known historic sites at the project location, and that the project area has been altered during construction of the existing bridge making it unlikely that historic sites remain. Therefore, this project will most likely have "no effect" on historic sites.

In the unlikely event that historic sites or remains are uncovered during construction, the construction specification will require that the Contractor shall stop work and immediately notify the Officer-in-Charge and the State Historic Preservation Officer at 587-0047.

If you have any questions, please feel free to contact Mr. Warren Yamamoto at 527-6872.

Very truly yours,

[Signature]

RANDALL K. FUJIKI  
Director

cc: Akinaka & Associates, Ltd.
April 23, 1998

Civil Works Branch

Mr. Henry S. Morita  
Executive Vice President  
Akinaka and Associates, Ltd.  
250 North Beretania Street, Suite 300  
Honolulu, Hawaii  96817-4716

Dear Mr. Morita:

Thank you for the opportunity to review and comment on the Draft Supplemental Environmental Assessment for the Gulick Avenue Relief Sewer, Kalihi Stream Crossing, Kalihi, Hawaii (TMK 1-3-17, 18, 24, 25, and 26). The following comments are provided in accordance with U.S. Army Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit may be required for the project. Please contact Mr. Alan Everson our Regulatory Section at 438-9258 for further information and refer to file number 950010016.

b. The flood hazard information, which was previously provided in our letter dated November 23, 1994, remains unchanged.

Sincerely,

Paul Mizue, P.E.  
Chief, Civil Works Branch
July 6, 1998

Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii  96858-5440

Attention: Mr. Paul Mizue, P.E.
Chief, Civil Works Branch

Gentlemen:

Subject: Your Letter Dated April 23, 1998 Relating to the
Gulick Avenue Relief Sewer
Draft Supplemental Environmental Assessment (DSEA) for the
Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for your comments relating to the DSEA for the subject project. In
response to your comments, we provide the following information.

1. Our consultant for the project, Akinaka & Associates, Ltd., has
contacted Mr. Alan Everson of your staff in regards to the
requirements of a Department of the Army permit.

2. The flood hazard information provided in your earlier letter will be
included in the "Flood Hazard Districts Certification" submitted to
the Department of Land Utilization.

If you have any questions, the point of contact at the City is Warren Yamamoto
at 527-6872 or Henry S. Morita of Akinaka & Associates at 536-7721.

Very truly yours,

[Signature]
Director

cc: Akinaka & Associates, Ltd.
Mr. Kenneth E. Sprague, Director  
City and County of Honolulu  
Department of Wastewater Management  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Draft Supplemental Environmental Assessment for the Gulick Avenue Relief Sewer, Oahu

Thank you for the opportunity review the subject document. We have the following comments and questions.

1. The previous plan to hang the new sewer line on the existing Likelike Highway Bridge was abandoned because calculations revealed that the bridge cannot support the additional load. Please describe which agency performed the calculations and attach the calculation sheets to the final environmental assessment.

2. The new sewer bridge may invite pedestrians to dangerously use the structure as a crossing. Please describe any barriers, such as walls, fences, etc., that are planned to prevent pedestrians from using the utility bridge as a crossing.

3. Two trees that will interfere with construction of the bridge will be removed. Please describe the type, age, quality, size and value of the trees that will be removed. Are any of the affected trees placed on the City’s Exceptional Tree List?

4. Please illustrate the visual impacts of the proposed structure (including any pedestrian barriers) from public places such as roads and lookouts. Photos of existing conditions taken from public view points are helpful in evaluating visual impacts. Renderings of future structures superimposed on photos of existing views should be provided. We recommend constructing and painting the structures with
materials and colors that blend with the surroundings. We also recommend landscaping with native Hawaiian plants to reduce the visual impacts.

5. Installation of the pier footings will require excavation within the stream floodway. Also, equipment will traverse the stream during construction. These activities will cause adverse water quality impacts. Please provide details of the Best Management Practice (BMP) procedures that will be implemented to minimize water quality impacts.

6. Please consult with the U.S. Army Corps of Engineers to determine whether an army permit is required for this project. Document the findings of this consultation in the final environmental assessment.

7. Please discuss the findings and reasons for supporting the FONSI determination based on all 13 significant criteria listed in §11-200-12 of the EIS rules. Please see the enclosed example.

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

Sincerely,

Gary Gill
Director

c: Akinaka & Associates

Attachment
Mr. Gary Gill, Director  
Office of Environmental Quality Control  
State of Hawaii  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Attention: Mr. Jeyan Thirugnanam

Dear Mr. Gill:

Subject: Your Letter Dated April 24, 1998 Relating to the Gulick Avenue Relief Sewer  
Draft Supplemental Environmental Assessment (DSEA) for the Kaliihi Stream Crossing, Oahu, Hawaii

Thank you for your comments relating to the DSEA for the Gulick Avenue Relief Sewer project. In response to the comments, the following information is provided.

1. The State Department of Transportation (DOT), Highways Division, performed the calculation for the bridge loading capacity. During a meeting with DOT staff, it was stated that no additional vertical loads would be allowed as the existing highway bridge has an inventory rating of 27 tons which is less than the present HS-20 design loading of 36 tons. We did not request calculation sheets as the State DOT is the owner and operator of the bridge.

2. Chain-link fencings will be installed to prevent pedestrians from using the structure as a crossing. Railings will be provided for the safety of maintenance personnel.

3. Two trees that interfere with construction of the bridge will need to be removed with a third tree which is located approximately 20 feet from the bridge pier that may need to be trimmed. The attached letter report prepared by Botanical Consultants reports on the size, condition and type of the trees. None of the affected trees are on the list of exceptional trees.
4. In regards to visual impacts, EXHIBIT 5 of the DSEA shows that the top of the sewer line will be seven feet below the highway bridge pavement level. Also, photographs will be included in the supplemental environmental assessment showing the relative relationship between the existing bridge and the proposed Kalihi Stream Crossing. A solid concrete barrier was recently constructed eliminating all views of the proposed structure from vehicles traveling on the Likelike Highway bridge. There are no lookout points in the vicinity, and public view points of the proposed structure will be blocked by the existing topography and trees. The topography and trees that block the view planes are shown in EXHIBIT 3 of the DSEA. The proposed structure will be constructed with concrete which should blend in with the existing Likelike Highway bridge which is also a concrete structure. Both bridge structures will be left in its natural state. Painting of the proposed pipeline will be included in the contract with color selection made to blend in with the surroundings environment. Planting of native Hawaiian plants could be an option but would be outside the view planes.

5. Water quality impacts should be minimal for this project. Excavation in the floodway is limited to installation of the piers. There is minimal topsoil over hard basalt at the site. A detention pond could be located where low flows are not impeded or construction of the initial pier could use the excavated area of the second pier as a detention pond. Excavated material will be removed from the stream area and disposed at landfills or reused if acceptable.

Section VIII, "Mitigating Measures to Minimize Adverse Impacts" of the DSEA will also be amended to address Best Management Practice (BMP) procedures to be implemented during construction.

6. Consultation with U.S. Army Engineer District, Honolulu has been initiated to determine the need for a Department of the Army permit. We will include documentation of the consultation in the final supplemental environmental assessment.

7. We will include discussions on the findings and reasons for supporting the FONSI determination based on the 13 significant criteria listed in the EIS rules.

If you have any questions, please feel free to contact Warren Yamamoto at 527-6872 or Henry S. Morita of Akinaka & Associates at 536-7721.

Very truly yours,

[Signature]

Director

cc: Akinaka & Associates, Ltd.
50 - 11. Makai of Bridge Looking Mauka

The crossing structure will be behind the wingwall and seven feet below the bridge pavement level.

20 - 11. Makai of Bridge Looking Mauka

The crossing structure will be ten feet right of the bridge.

On Makaha Bridge looking Mauka

Concrete barrier for railing support obstructs views over the bridge.

Gulick Avenue Relief Sewer
July 1998
Mr. Henry A. Morita  
Executive Vice President  
Akinaka & Associates, Ltd.  
250 North Beretania Street, Suite 300  
Honolulu, Hawaii  96817-4716  

Dear Mr. Morita:  

Subject: Draft Supplemental Environmental Assessment  
Gulick Avenue Relief Sewer  
Kalihi Stream Crossing  
Kalihi, Honolulu, Oahu  
TMK: 1-3-17: 18, 24, 25, 26  

Thank you for allowing us to review and comment on the subject document. We do not have any comments to offer at this time.  

Sincerely,  

BRUCE S. ANDERSON, Ph.D.  
Deputy Director for  
Environmental Health
July 6, 1998

Dr. Bruce S. Anderson  
Deputy Director for Environmental Health  
Department of Health  
State of Hawaii  
P. O. Box 3378  
Honolulu, Hawaii 96801

Dear Dr. Anderson:

Subject: Your Letter 94-242A/epo  
Dated May 4, 1998 Relating to the  
Gulick Avenue Relief Sewer  
Draft Supplemental Environmental Assessment (DSEA)  
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for responding to our request for comments on the DSEA for the proposed sewer crossing over Kalihi Stream for the Gulick Avenue Relief Sewer project.

We note that you did not have any comments to offer.

If you have any questions, please feel free to contact Mr. Warren Yamamoto at 527-6872.

Very truly yours,

[Signature]  
RANDALL K. FUJIKI  
Director

cc: Akinaka & Associates, Ltd.
Mr. Henry S. Morita
Executive Vice President
Akinaka & Associates, Inc.
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

Subject: Your Transmittal of March 30, 1998 of the Draft Supplemental Environmental Assessment for the Gulick Avenue Relief Sewer, Kalihi Stream Crossing, Kalihi, Oahu, Vicinity of TMK: 1-3-28, 29

Thank you for the opportunity to review and comment on the proposed sewer crossing of Kalihi Stream.

We have no objections to the proposed project. We have no water system facilities within the Kalihi Stream project limits.

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

Very truly yours,

BROOKS H. M. YUEN
Acting Manager and Chief Engineer

cc: Warren Yamamoto, Department of Wastewater Management
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567

July 6, 1998

MEMORANDUM

TO: MR. BROOKS H. M. YUEN
ACTING MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: YOUR LETTER DATED MAY 5, 1998 RELATING TO THE GULICK AVENUE RELIEF SEWER DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (DSEA) FOR THE KALIHI STREAM CROSSING, KALIHI, HAWAII

Thank you for your comments relating to the DSEA for the proposed sewer crossing over Kalihi Stream for the Gulick Avenue Relief sewer project.

We note that you have no objections to the proposed project and that there are no water system facilities within the Kalihi Stream project limits.

If you have any questions, please feel free to contact Mr. Warren Yamamoto at extension 6872.

RANDALL K. FUJIKI
Director

cc: Akinaka & Associates, Ltd.
Mr. Henry S. Morita, Executive Vice President
Akinaka & Associates, Ltd.
Consulting Engineers
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96817-4716

Dear Mr. Morita:

Subject: Draft Supplemental Environmental Assessment
Gulick Avenue Relief Sewer
Kalihi Stream Crossing
Kalihi, Honolulu, Hawaii

Thank you for the opportunity to review the Draft Supplemental Environmental Assessment for the referenced subject which we received with your memorandum dated March 30, 1998.

The Gulick Avenue Relief Sewer, Kalihi Stream Crossing will not impact any Department of Accounting and General Services (DAGS) projects or existing facilities. However, DAGS recommends the Department of Education be contacted to coordinate construction work and to minimize disruptions to existing school operations.

If there are any questions, please have your staff contact Mr. Ronald Ching of the Planning Branch at 586-0490.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

RC: jy
C: Mr. Warren Yamamoto, Dept. of Wastewater Mgmt.
July 6, 1998

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

Attention: Mr. Ronald Ching, Planning Branch

Dear Mr. Matsuoka:

Subject: Your Letter Log No. (P) 1265.8
Dated May 7, 1998 Relating to the
Gulick Avenue Relief Sewer
Draft Supplemental Environmental Assessment (DSEA)
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for your comments relating to the DSEA for the proposed sewer crossing over Kalihi Stream for the Gulick Avenue Relief Sewer project.

We note that the proposed project will not impact any of your projects or existing facilities. The Department of Education should not be impacted by the construction of the Kalihi Stream Crossing.

If you have any questions, please feel free to contact Mr. Warren Yamamoto at 527-6872.

Very truly yours,

[Signature]

RANDALL K. FUJIKI
Director

cc: Akinaka & Associates, Inc.
University of Hawai‘i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2550 Campus Road • Honolulu, Hawai‘i 96822
Telephone: (808) 956-7361 • Facsimile: (808) 956-8880

May 07, 1998
EA:00172

Mr. Henry S. Morita
Akina & Associates, Ltd.
250 North Beretania Street, Suite 300
Honolulu, Hawai‘i 96817-4716

Dear Mr. Morita:

Draft Supplemental Environmental Assessment (DSEA)
Gulick Avenue Relief Sewer, Kalihi Stream Crossing
Kalihi, Honolulu, Oahu

In a supplement to the original Environmental Assessment, the City and County Department of Wastewater Management proposes to build a utility bridge for the sewer crossing of Kalihi Stream. The original EA planned to hang the new sewer line from the Likelike Highway bridge at its intersection with the Kalihi Stream. The plan has been revised due to calculations which revealed that the bridge cannot support the additional load.

We reviewed this draft Environmental Assessment (EA) with the assistance of Tori Cullins of the Environmental Center.

Need For Supplemental EA

The fact that the Likelike Highway bridge is unable to support a sewer pipe is somewhat disturbing, given the amount of unrestricted heavy traffic it currently supports. Our reviewers from the engineering program at the University stated that they would need much more information (and time) than was provided in the DSEA to determine if the bridge was indeed structurally able or unable to support the sewer pipe. It would be of great benefit to be given, in terms comprehensible to the general public, why it is that the Likelike Highway crossing of the Kalihi Stream is unable to support the weight of the sewer line.

Environmental Setting
C. Climate

The DSEA does not specify the time frame of the project. To avoid problems that would arise should the site be inundated by floodwaters or heavy surface runoff, it would be preferable for construction to be during the months of March -- October which are identified in the environmental setting (pg. III-1) as having only 20% of annual rainfall.

G. Archaeology

On page III-2, there is a statement that there "are no identified historic or archaeologically significant locations located within the project site." Please include the method used to determine this in the Final EA.

H. Flood Hazard

Please identify where the contractor will dispose of the material removed from the stream area.

IV. Short Term Impacts

On page IV-1, detention ponds are proposed to mitigate sediment propagation in the event of groundwater surging into the excavation. Where would these detention ponds be located, and how would they be prevented from filling with groundwater? Page III-1 describes the soil in the area as hard lava overlain with 2 feet of top soil or gravel and small boulders. In the Under Stream Profile on page VI-1, an underground pipeline could not be laid due to this geological formation. How would detention ponds be of benefit in this situation?

V. Long Term Impacts

On page V-1, two trees are proposed to be removed to allow bridge construction. Please identify the cumulative effect of removal of the trees on streamside stability and visual screening of the project.
Conclusion

In short, although we support the project, we suggest that it would be substantially improved by incorporation of the comments that our reviewers have provided.

Thank you for the opportunity to comment on this draft EA.

Sincerely,

John T. Harrison
Environmental Coordinator

cc: OEQC
City and County, Department of Wastewater Management
Roger Fujioka
Tori Cullins
July 6, 1998

Mr. John T. Harrison, Environmental Coordinator
Environmental Center
University of Hawaii
Crawford 317
2550 Campus Road
Honolulu, Hawaii 96822

Dear Mr. Harrison:

Subject: Your Letter, EA:00172, Dated May 7, 1998
Relating to the Gulick Avenue Relief Sewer
Draft Supplemental Environmental Assessment (DSEA)
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for providing comments relating to the DSEA for the proposed sewer crossing over Kalihi Stream for the Gulick Avenue Relief Sewer project. In response to your comments, the following information is provided:

Likeliike Highway Bridge
The State Department of Transportation (DOT), Highways Division, performed the calculations for the bridge loading capacity. During our meeting with DOT staff, it was stated that no additional vertical loads would be allowed as the existing highway bridge has an inventory rating of 27 tons which is less than the present HS-20 design loading of 36 tons. We did not request calculation sheets, as the State DOT is the owner and operator of the bridge.

C. Climate
We concur that construction of the Kalihi Stream crossing would be preferable during the months of March-October. The contract documents will specify that work within the floodway takes place during that time period.

G. Archaeology
The project area has been altered during construction of the existing bridge making it unlikely that historic sites remain. Therefore, the project will likely have "no effect" on historic sites. We have contacted the State Historic Preservation Division, Department of Land and Natural Resources, and they concur with the above statement. Attached is the letter from the State Historic Preservation Division.
H. Flood Hazard
We will include the flood limits on the construction plans with instructions to the contractor stating that material removed from the stream area must be disposed of outside the flood limits.

IV. Short Term Impacts
Detention ponds could be located where low flows are not impeded. After the excavation area is cleared, there should be no need for detention ponds as the area is hard lava below the topsoil. If required, construction of the initial pier could use the excavation area of the second pier for a detention pond. The required excavation to construct the pier footings are nominal (11 cy for one and 25 cy for the other). Leak-proof lining or leak-resistant forms could be used to control ground water.

V. Long Term Impacts
A letter report by "botanical consultants" is attached in respect to the type and condition of the trees proposed for removal. Removal of the trees within the floodway should improve the hydraulic condition as the trees presently decrease the stream hydraulic capacity. Streamside stability should not be affected, as the trees are not located on the side slopes. The trees in the area are routinely trimmed for highway maintenance eliminating any visual screening of the project.

Pertinent review comments will be incorporated into the proposed project. Should you have any questions, please feel free to contact Warren Yamamoto at 527-6872 or Henry Morita of Akinaka & Associates at 536-7721.

Very truly yours,

[Signature]

Director

Attachment

cc: Akinaka & Associates, Ltd.
Mr. Henry S. Morita  
Akinaka & Associates, Ltd.  
250 North Beretania Street, Suite 300  
Honolulu, Hawaii 96817-4716  

Dear Mr. Morita,

In response to your request for assistance dated May 1, 1998, I submit the following:

There are two and possibly three trees that may interfere with the proposed construction of the Gulick Avenue Relief Sewer, Oahu. One tree which abuts the bridge support on the Ewa (western) side of the stream will have to be removed. This gunpowder tree (*Trema orientalis* (L.) Blume) is 35 to 40 feet in height and approximately 30 inches in diameter at breast height. The trunk of the tree has been hollowed out for about 3 feet. The heart wood of the tree has been eaten by termites. This is not a specimen tree.

The next closest tree to the bridge is a small to medium monkey pod tree (*Samanea saman* (Jacq.) Merr.) approximately 30 feet in height and approximately 24 inches in diameter at breast height. This little tree has been very badly pruned. Branches have been cut off at about 15 and 20 feet above the ground leaving branch stumps 2 to 3 feet long. Insects have entered the tree through these branch stumps. The tree is in poor condition and is not a specimen tree.

The third tree is located about 20 feet from the bridge pier and may have to be trimmed. It is a multitrunked banyan tree (*Ficus microcarpa* L.). This tree has been savagely trimmed and large branches have been broken by ropes having been tied to them to swing over the stream.

Seeds of banyan trees are being spread about by birds and are beginning to become pests in the conservation district.

Gunpowder, monkey pod, and banyan trees are very common on the lowlands of Oahu and none of these trees are on the list of exceptional trees.

I hope this answers your questions.

Yours truly,

[Signature]

*Botanical*  
*Wetland*  
*Environmental Studies*
LD-NAV
Ref.:2-KALIHI.RCM

May 11, 1998

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 821
HONOLULU, HAWAII 96809

Mr. Henry S. Morita
Executive Vice President
Akinaka & Associates, LTD.
Consulting Engineers
250 North Beretania Street, Suite 300
Honolulu, Hawaii 96813-4715

Dear Mr. Morita:

SUBJECT: Review : Draft Supplemental Environmental Assessment
Project : Kalihi Stream Crossing
Gulick Ave. Relief Sewer
Job No. : A&A DWM 94-01
Applicant: Akinaka & Associates, Ltd., on behalf of, the
Department of Wastewater Management, City and
County of Honolulu
Location : Kalihi, Island of Oahu, Hawaii
TMK : 1st/ 1-3-17, 18, 24, 25 and 26

Thank you for the opportunity to review and comment on the Draft Supplemental Environmental Assessment for the proposed Gulick Avenue Relief Sewer project.

Attached is our Division of Aquatic Resources, Historic Preservation Division and Commission on Water Resource Management’s comments related to Natural, Historical and Water Resources value respectively.

The Department of Land and Natural Resources has no other comments to offer on the subject matter at this time.

Should you have any questions, please contact Nick Vaccaro at 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Oahu Land Board Member
Oahu District Land Office
APR 28 1998

TO:  Mr. Dean Y. Uchida, Administrator
     Land Division

FROM: Edwin T. Sakoda, Acting Deputy Director
      Commission on Water Resource Management

SUBJECT: Draft Supplemental Environmental Assessment (TMK:1-3-17, 18, 24, 25, 26). Kalihi Stream Crossing Gulick Ave Relief Sewer.

Thank you for allowing us to comment on the subject document. We have no corrections or additions to offer at this time.

The Department of Wastewater Management acknowledges a stream channel alteration permit (HRS Chapter 174C-71) is required for the project (page XII-1).

If you have any questions, please call David Higa at 587-0249.

DH:fc
MEMORANDUM

To:      Dean Y. Uchida, Administrator
         Land Division

From:    William Devick, Acting Administrator
         Division of Aquatic Resources

Subject: Comments on: Draft Supplemental Environmental Assessment

Date of Request:  4/21/98    Suspension Date:  5/5/98

Summary of Project

Title:    Kalihi Stream Crossing - Gulick Ave. Relief Sewer

Proj. By: Dept. of Wastewater Management, City & County of Honolulu

Location: Kalihi, Honolulu, Hawaii

Brief Description:

Proposed is a sewer line crossing of Kalihi Stream in the vicinity of Likelike Highway. The existing crossing is an inverted siphon at Kalihi Valley District Park. Inspections and capacity calculations indicate that the siphon and the downstream mains are undersized and in need of repairs.

A utility bridge is proposed for the new sewer crossing of Kalihi Stream. This bridge will be constructed of reinforced concrete and solely dedicated to support the sewer pipeline. The new support piers will follow the spacing and alignment of the existing piers, in order to maintain stream flow conditions. Improvements, such as channel linings, which may disrupt the stability of the streambed will not be included.

Comments:

The applicant should take appropriate mitigative measures to minimize erosion, and prevent cement products, oil, gas and other toxic substances associated with the use of heavy machinery from falling or leaching into Kalihi Stream.
MEMORANDUM

TO: Dean Uchida, Administrator
   Land Division

FROM: Don Hibbard, Administrator
       Historic Preservation Division

SUBJECT: Chapter 6E-8 Historic Preservation Review -- Draft Supplemental
         Environmental Assessment for the Gulick Avenue Relief Sewer, Kalihi
         Stream Crossing (File No. 2-KALIHI.COM)
         Kalihi, Kona, O'ahu
         TMK: 1-3

We responded directly to Akinaka & Associates Ltd. regarding this project (Log. 21318). Our comments consisted of the following:

Thank you for the opportunity to review the Draft Supplemental EA for the Kalihi Stream crossing project for the Gulick Avenue Relief Sewer. We commented in 1994 that a review of our records shows that there are no known historic sites at the project location, and that it is unlikely that subsurface historic sites will be found in the overall project corridor. The Kalihi Stream crossing portion covered in the current EA, has been previously altered during the construction of the existing bridge making it unlikely that historic sites remain. Therefore we believe that this project will have "no effect" on historic sites.

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 587-0047.

EJ:jk
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567

July 6, 1998

IDE 98-008

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

Attn: Mr. Nick Vaccaro

Dear Mr. Uchida:

Subject: Your Letter, LD-NAV, Dated May 11, 1998
Relating to the Gulick Avenue Relief Sewer
Draft Supplemental Environmental Assessment (DSEA)
for the Kalihi Stream Crossing, Kalihi, Hawaii

Thank you for providing comments from the various Divisions of the Department of Land and Natural Resources (DLNR) relating to the DSEA for the subject project. In response to comments from the various divisions, the following information is provided:

Division of Aquatic Resources
The construction specifications and contract directives will include appropriate measures to minimize erosion and prevent toxic substances associated with the use of heavy equipment from entering Kalihi Stream.

State Historic Preservation Division
Please note that we have responded directly to the State Historic Preservation Division.

Commission on Water Resource Management
The City acknowledges that a stream alteration permit is required for the proposed project and that an application for the required permit was submitted on May 28, 1998.

If you have any questions, please call Mr. Warren Yamamoto at 527-6872.

Very truly yours,

[Signature]

cc: Akinaka & Associates, Ltd.