

1994-12-08-0A-~~FEA~~-Manoa Stream &
Manoa-Palolo Drainage Canal Repairs

DEC 8 1994

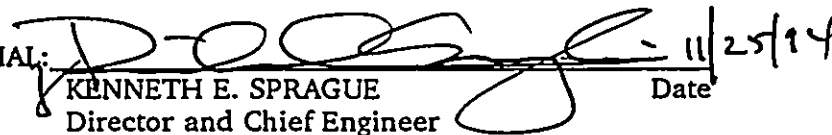
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

ENVIRONMENTAL ASSESSMENT
FOR THE
MANOA STREAM AND MANOA-PALOLO DRAINAGE CANAL
LINING REPAIRS AND RECONSTRUCTION
HONOLULU, OAHU, HAWAII
TAX MAP KEY: 2-7-27, 2-8-27

This document is prepared pursuant to Chapter 343, HRS.

PROPOSING AGENCY: DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RESPONSIBLE OFFICIAL:


KENNETH E. SPRAGUE
Director and Chief Engineer

Date

PREPARED BY
DIVISION OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

TABLE OF CONTENTS

	Page
I. Description of Proposed Action and Statement of Objective	1
II. Agencies to be Consulted in Making this Assessment	1
III. Description of Affected Environment	1
IV. General Description of the Project's Technical, Socio-Economic, and Environmental Characteristics	2
V. Identification and Summary of Major Impacts and Proposed Mitigative Measures	3
VI. Alternatives Considered	5
VII. Determination	5
VIII. Reasons for Supporting the Determination	6
 Appendix A - Location Map	
Appendix B - Site Map	
Appendix C - Plan	
Appendix D - Comments	

I. Description of Proposed Action and Statement of Objective

The proposed project requires both the repair and reconstruction of undermined and collapsed portions of existing rubble slope lining at two locations: a) Manoa Stream along the 2900 block of Koali Road (TMK: 2-8-27) and b) Manoa-Palolo Drainage Canal near the Kapiolani Boulevard bridge (TMK: 2-7-27). The two locations are within one-quarter mile of each other.

The repairs are necessary to prevent further damage to the slope lining. In addition, stabilization of the stream bank will be achieved and erosion problems will be mitigated.

II. Agencies to be Consulted in Making this Assessment

Copies of this environmental assessment will be sent to the following agencies for review:

A. City and County of Honolulu

1. Planning Department
2. Department of Land Utilization

B. State of Hawaii

1. Department of Land and Natural Resources
2. Department of Health
3. Office of State Planning

C. U.S. Government

1. Department of the Interior, Fish and Wildlife Service
2. Department of the Army, Corps of Engineers

D. Other

1. Diamond Head-Kapahulu-St. Louis Heights Neighborhood Board No. 5
2. Manoa Neighborhood Board No. 7

Appendix D contains comments received by the City Planning Department, the State Department of Land and Natural Resources, the Department of the Interior, Fish and Wildlife Service, and the Department of the Army, Corps of Engineers. None of the other agencies or special interest groups provided comments during the one month review period.

III. Description of the Affected Environment

The proposed project is located in Honolulu, Oahu, Hawaii, along the 2900 block of Koali Road and near the intersection of the Kapiolani Boulevard Bridge and the Manoa-Palolo Drainage Canal. The project areas are approximately 4 miles from the State Capitol

in Honolulu (see Appendix A - Location Map and Appendix B - Site Map). The Koali Road site is zoned R-5 (residential) and the Kapiolani Boulevard site is zoned B-2 (business).

The average annual rainfall in this area is 23 inches per year. The average temperature varies from 72.6 degrees to 81 degrees.

At the Koali Road site, Manoa Stream is a perennial stream with rubble slope lining and an unimproved invert. It provides a water habitat for aquatic species such as small freshwater fish, crayfish, tadpoles, and insect and mosquito larvae. There is no vegetation in the stream near the project site. There are homes near the stream bank. Similarly, the Manoa-Palolo Drainage Canal near the Kapiolani Boulevard Bridge is a perennial stream with rubble lined banks and an unlined invert. It also provides a water habitat for the aquatic species previously mentioned.

Wildlife in the project area consists of the usual common birds found in developed areas of Honolulu and no rare endangered species are known to frequent the area.

There are no known archaeological or historical sites in the immediate project area. A search of the Hawaii Register of Historic Places indicates that the closest historical site is the Church of the Crossroads located approximately 2,500 feet west of the Kapiolani Boulevard site and 2,700 feet west of the Koali Road site.

According to the Federal Emergency Management Agency's Flood Insurance Rate Map panel number 150001 0120C dated September 4, 1987, the Koali Road Site is located in Zone AE (areas inundated by the 100-year flood with a base flood elevation of 35 feet above mean sea level); the Kapiolani Boulevard site is located in Zone X (areas inundated by the 500-year flood).

IV. ***General Description of the Project's Technical, Socio-Economic, and Environmental Characteristics***

A) *Manoa Stream along the 2900 Block of Koali Road:*

There are several locations along the slope lining which shows signs of undermining. Depending on the location of the undermining, the repair work will consist of either: a) filling the voids and constructing a cut-off wall with CRM two feet below the unlined stream invert or b) filling the voids and constructing a base and cut-off wall of concrete two feet below the unlined stream invert to prevent future undermining problems. Furthermore, areas of slope lining will require resetting and additional CRM material. In addition, approximately 68 feet of slope lining requires total reconstruction, which will entail the construction of a CRM retaining wall with weepholes to facilitate the removal of water pressure from behind.

B) *Manoa-Palolo Drainage Canal Near Kapiolani Boulevard Bridge:*

The scope of work for this area consists of the following:

- 1) Repair a portion of collapsed slope lining approximately 83 feet long on the mauka-diamond head end of the bridge and building a CRM wall/cut-off wall at the base.
- 2) Patch a crack in the slope lining adjacent to the bridge on the mauka-diamond head end of the bridge.
- 3) Repair 10 linear feet of undermined slope lining on the makai-diamond head end of the bridge.

Refer to Appendix C for details.

A Stream Channel Alteration Permit for the repairs will be obtained from the State Department of Land and Natural Resources. In addition, applications will also be filed with the State Department of Health (401 Water Quality Certification), Office of State Planning (Hawaii Coastal Zone Management Program Federal Consistency), and the U.S. Army Corps of Engineers.

The project has an estimated construction cost of \$300,000.00 (\$272,000.00 for the Koali Road site and \$28,000.00 for the Kapiolani Boulevard site).

The project does not require the displacement or relocation of any people.

V. *Identification and Summary of Major Impacts and Proposed Mitigation Measures*

The environmental impact of the proposed project will be limited to the construction phase and may include the following temporary, unavoidable, adverse environmental effects:

- A. *Dust and Noise Emission:* The discharge of dust into the atmosphere may occur during the construction period. This is, however, only a short-term effect on the environment. Dust will be reduced and controlled through the application of water and/or other appropriate methods. The specifications will contain provisions that will require the Contractor to prevent dust nuisance at all times and have sufficient equipment and manpower at the job site to accomplish this.

Noise will be primarily generated by construction equipment. The increase in noise level by construction equipment cannot be avoided, but will be controlled and limited to normal daylight working hours. The Contractor will be required to obtain a Community Noise Permit pursuant to Chapter 43 of the State Public Health Regulations and shall comply with the provisions of Chapter 42, Vehicular Noise Control for Oahu. Individuals that may be adversely affected by the construction

noises will be residents of the surrounding community. The sound level from equipment noise has been estimated for locations at various distances from the work area. The results are summarized in Table 1.

TABLE 1

KOALI ROAD SITE:

	<u>Location</u>	<u>Distance from Project</u>	<u>Sound Level</u>
(1)	Nearest residence	25 feet	97 dB
(2)	Nearest church	2700 feet	56 dB
(3)	Nearest school	800 feet	67 dB
(4)	Nearest medical center	5000+ feet	51 dB
(5)	Nearest playground	1000 feet	65 dB
(6)	Nearest library	5000 feet	51 dB

KAPIOLANI BLVD. SITE:

	<u>Location</u>	<u>Distance from Project</u>	<u>Sound Level</u>
(1)	Nearest residence	160 feet	81 dB
(2)	Nearest church	2500 feet	57 dB
(3)	Nearest school	400 feet	73 dB
(4)	Nearest medical center	5000 feet	51 dB
(5)	Nearest playground	1000 feet	65 dB
(6)	Nearest library	5000 feet	51 dB

- B. *Water Pollution:* Provisions will be made during the construction phase to divert or transfer water around the work area. This may be accomplished through the use of diversion ditches, pumps, sandbags, etc. This will minimize erosion and sedimentation during construction activities.

The Contractor will be required to properly dispose of wash and dust control water and to take other precautionary actions during the course of construction operations to preclude the discharge of petrochemical products from construction equipment into the stream. Proper construction methods will be used to minimize disturbance to the stream bed, and prevent the introduction of debris and other deleterious material into the water.

- C. *Archaeological Deposits:* The possibility that archaeological deposits may be discovered has been recognized. The specifications will require the Contractor to contact the Historic Sites Section of the Department of Land and Natural Resources in the event that such deposits are encountered.
- D. *Disturbance to Marine Life.* The disturbance of fish and wildlife usage of the stream is unavoidable. Therefore, construction will be planned during the low flow months where the impact is not considered to be significant.

VI. *Alternatives Considered*

The following courses of action were considered: (1) no action, or (2) the proposed project.

Alternative 1: If no action is taken, further undermining and erosion problems may result, leading to the potential collapse of an extensive portion of the stream slope lining. In turn, this would affect Koali Road and jeopardize public safety. A similar scenario could occur at the Kapiolani Boulevard site.

Alternative 2: Completion of the proposed project will prevent the problems mentioned above.

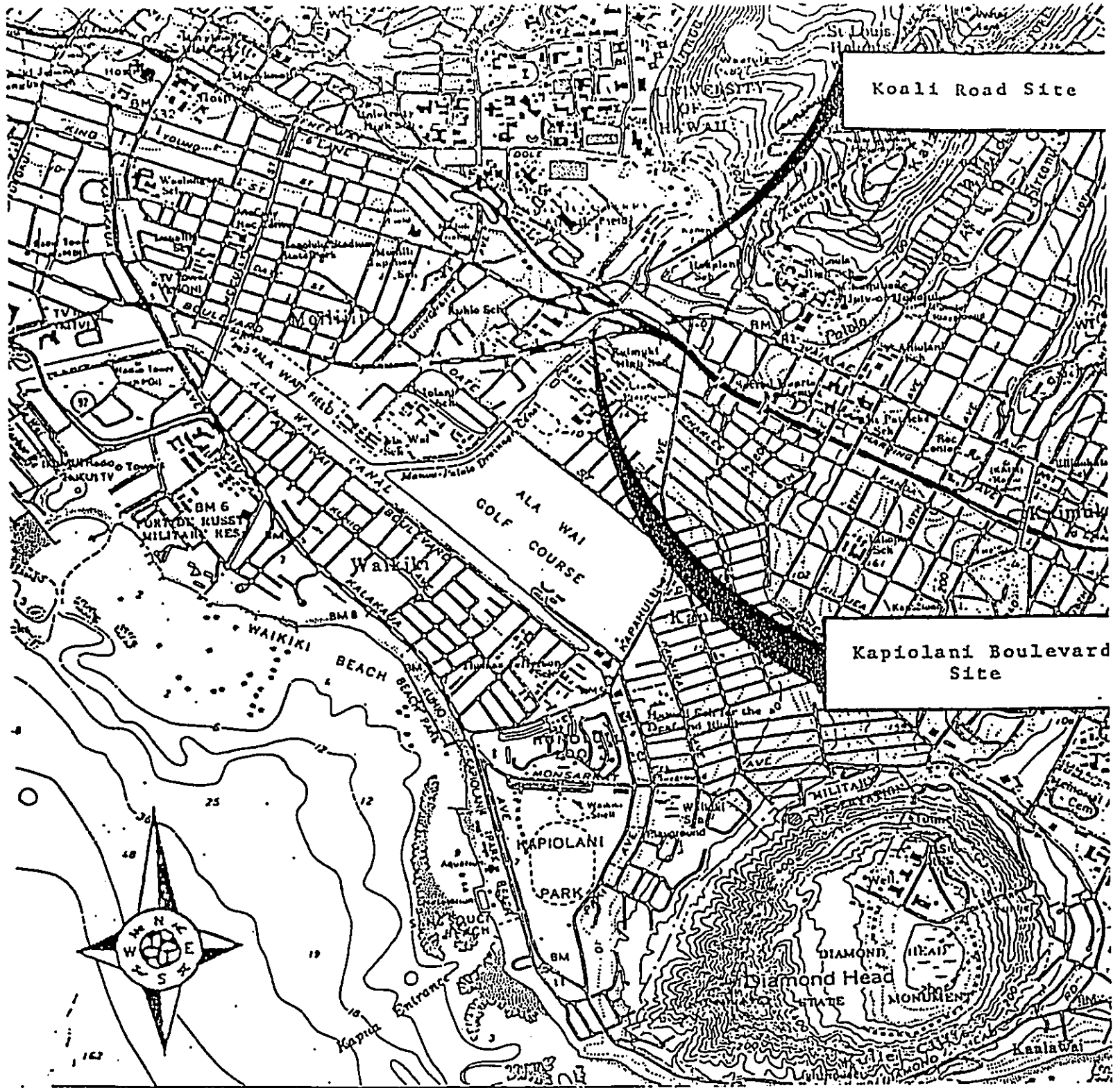
VII. *Determination*

After preparing the environmental assessment, we have determined that the proposed project will not have a significant impact on the environment and an environmental impact settlement will not be prepared.

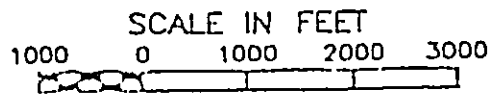
VIII. *Reasons for Supporting the Determination*

Based on the criterias, policies, guidelines and provisions of Chapters 342, 343 and 344, HRS, the reasons for supporting the Negative Declaration determination are that the proposed project will not:

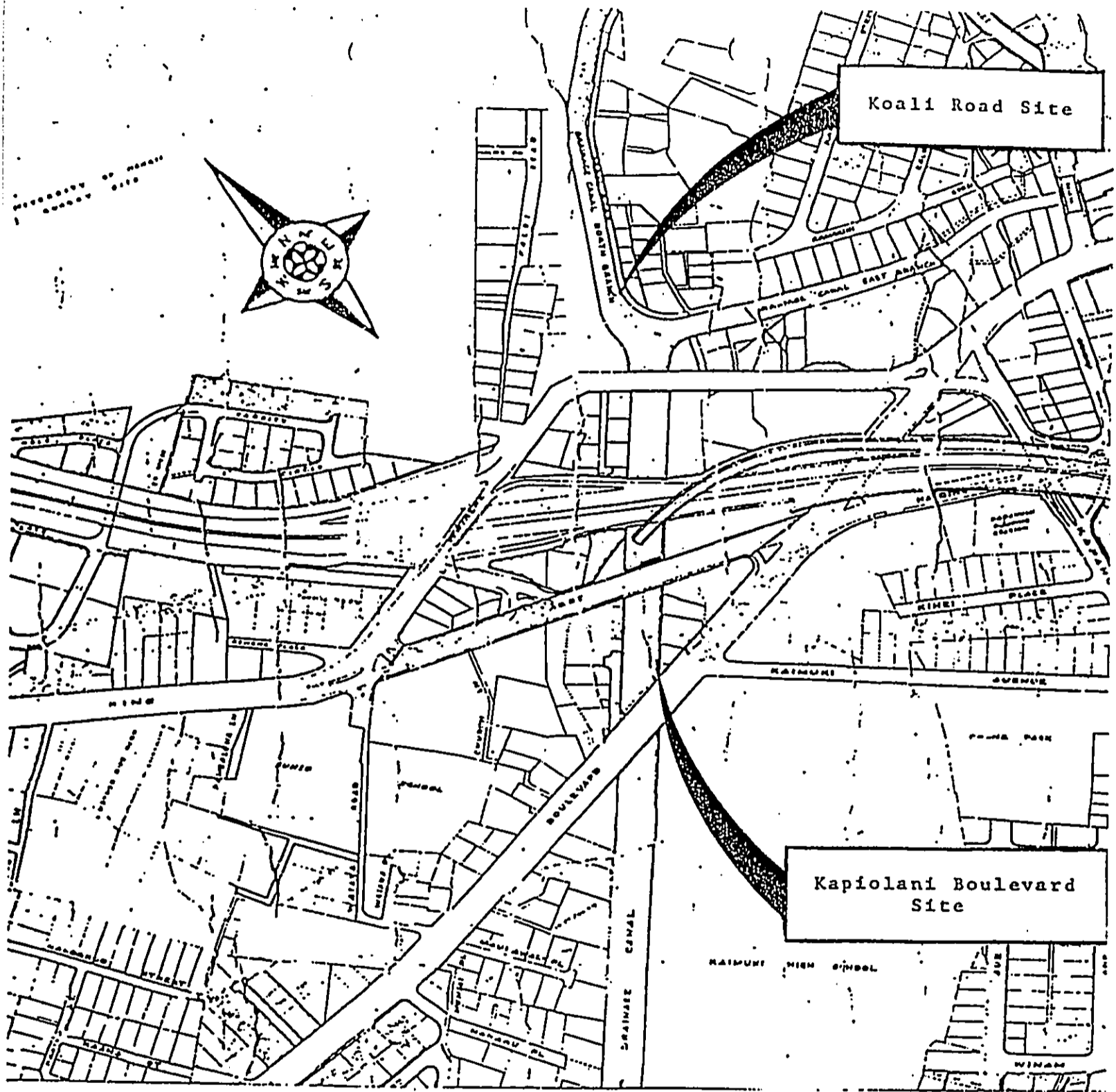
- affect rare or endangered species of flora or fauna;
- affect any natural or cultural resources;
- affect undeveloped lands;
- *conflict with existing land use and development plans;*
- have significant long term effect on air quality, water quality, or ambient noise levels;
- displace any residences or businesses;
- be located in close proximity to any known natural, historic or archaeological sites.



APPENDIX A
LOCATION MAP



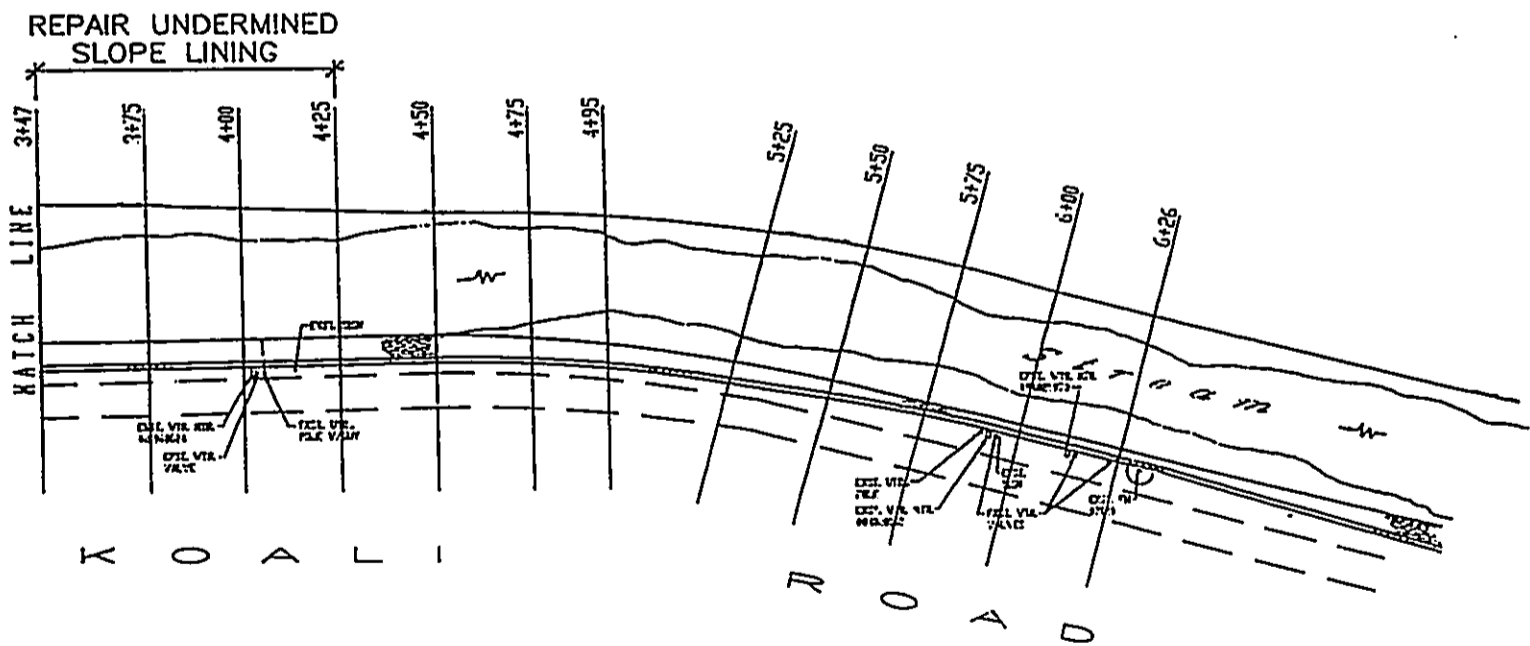
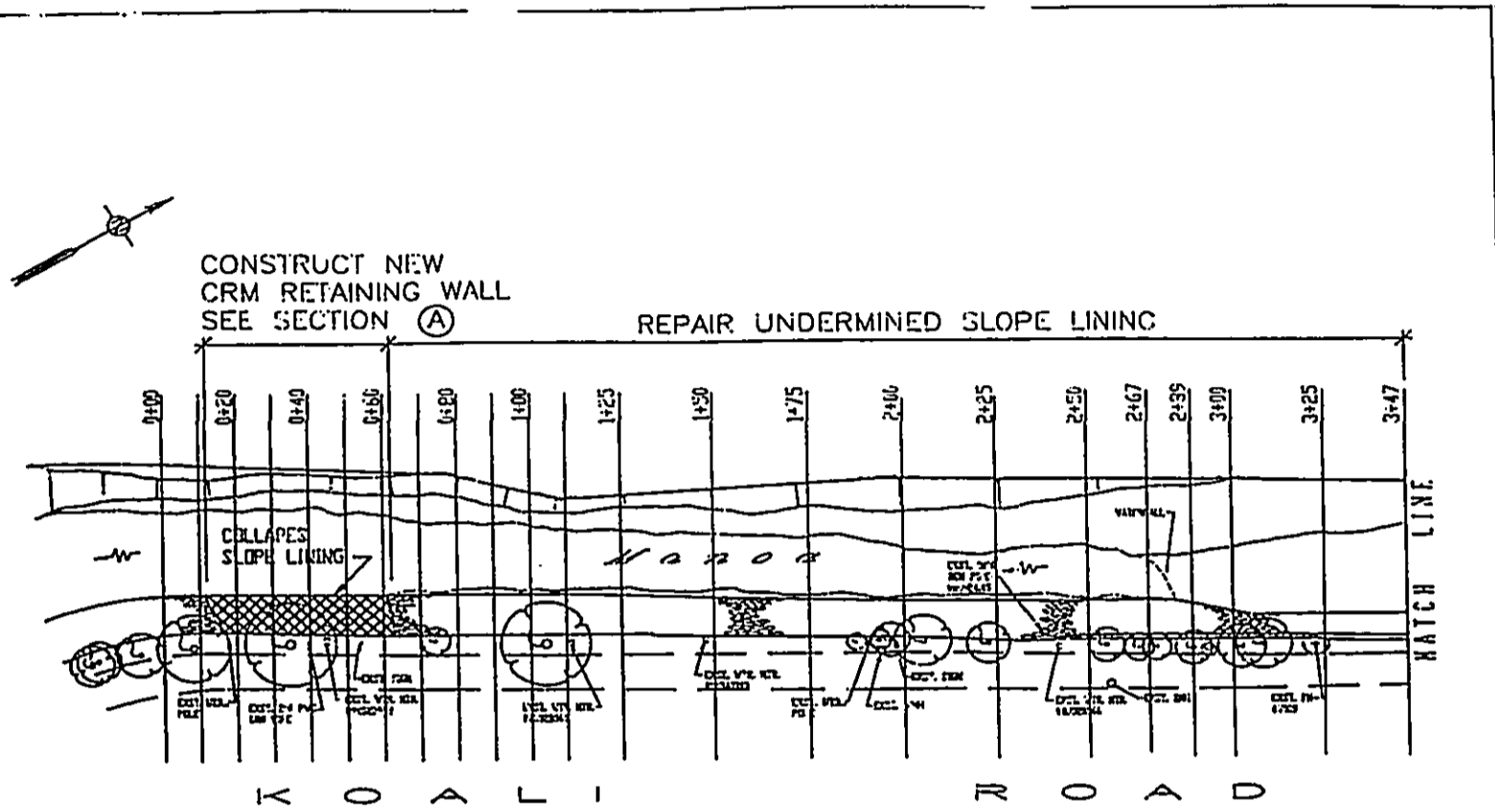
DOCUMENT CAPTURED AS RECEIVED



APPENDIX B

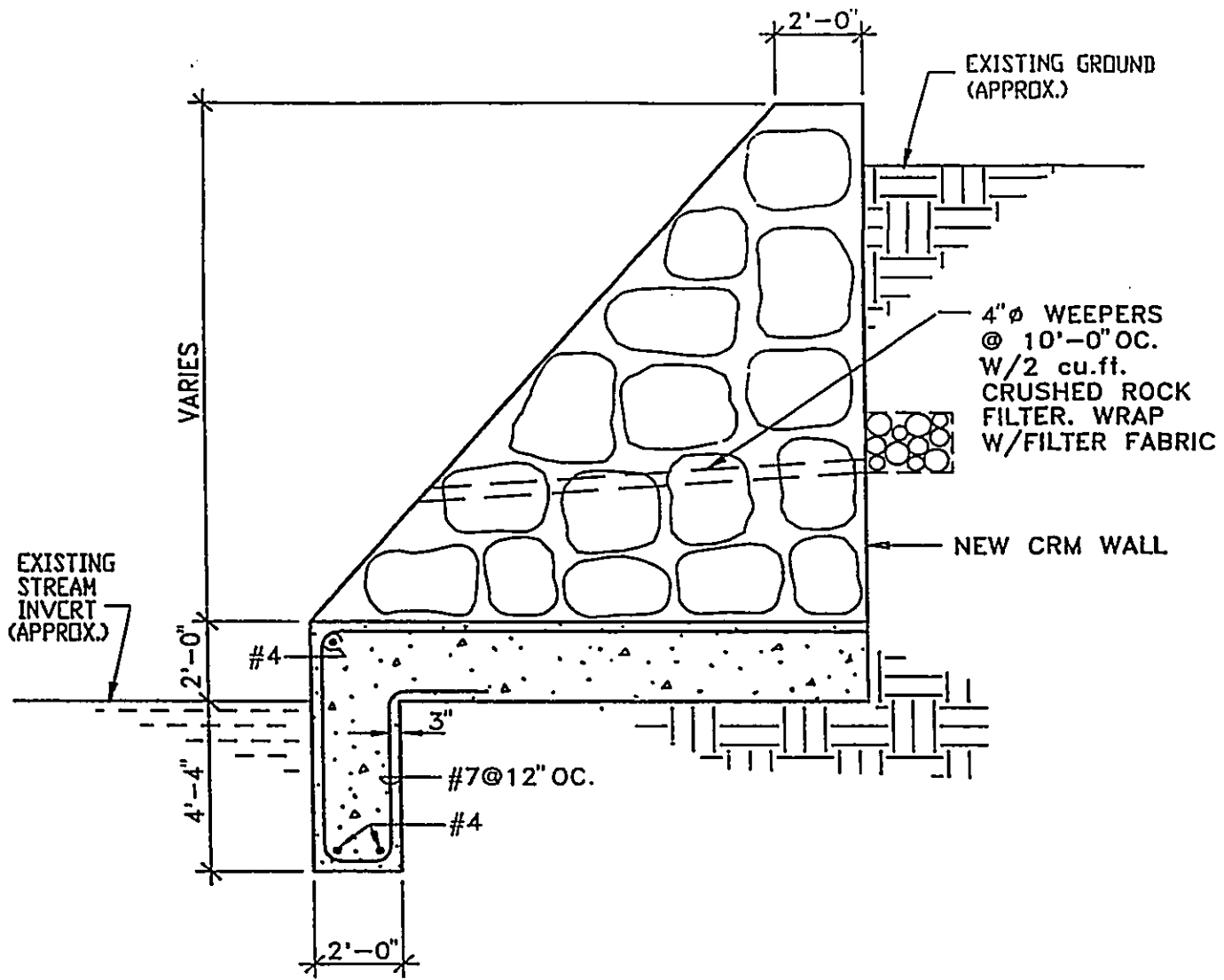
SITE MAP

NOT TO SCALE



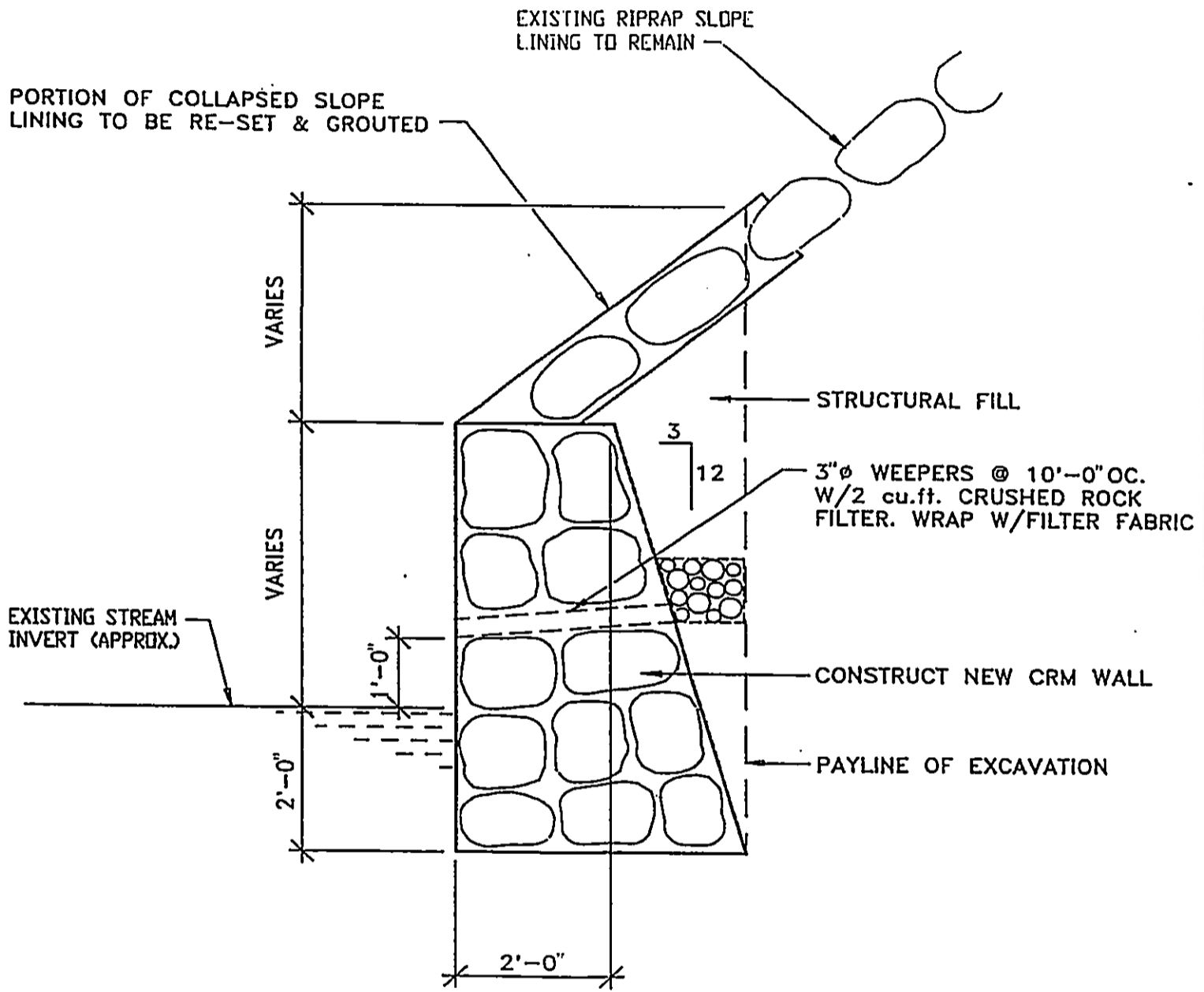
PLAN
N.T.S.

APPENDIX C



TYPICAL SECTION A
 N.T.S.

APPENDIX C



TYPICAL CRM CUTOFF WALL
N.T.S.

APPENDIX C

APPENDIX D
COMMENTS

DOCUMENT CAPTURED AS RECEIVED

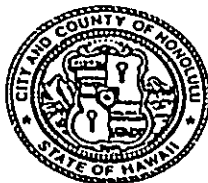
PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
DEPT. OF PUBLIC WORKS

RECEIVED
DIV. OF ENGINEERING

FRANK F. FASI
MAYOR
JUL 19 12 47 PM '94



July 18, 1994

*94-2015
o.w.h.
eng*

JUL 19 3 21 AM '94

ROBIN FOSTER
CHIEF PLANNING OFFICER

ROLAND D. LIBBY, JR.
DEPUTY CHIEF PLANNING OFFICER
TH 7/94-3904

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: ROBIN FOSTER, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR MANOA STREAM
AND MANOA-PALOLO DRAINAGE CANAL LINING REPAIRS AND
RECONSTRUCTION

In response to your memorandum of July 5, 1994, we have reviewed the subject EA and offer the following:

1. We have no objections to the proposed project.
2. Repairs and reconstruction to portions of the Manoa Stream and Manoa-Palolo drainage canals are considered minor. Therefore, an amendment to the Primary Urban Center Development Plan Public Facilities Map will not be required.

Should you have any questions, please contact Tim Hata of our staff at 527-6070.

Robin Foster
ROBIN FOSTER
Chief Planning Officer

RF:js

JOHN WAINICE
GOVERNOR OF HAWAII

RECEIVED
DEPT. OF PUBLIC WORKS



KEITH W. ANGE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEEFER II
DONAL HANAHE

AUG 32 8 30 AM '94

REF:OCEA:SKK

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 11211
HONOLULU, HAWAII 96809

FILE NO.: 95-007

DOC. ID.: 4872

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

AUG 31 1994

*94-2613
div. ak
eng*

Honorable Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Draft Environmental Assessment (DEA): Manoa Stream and Manoa-Palolo Drainage Canal Lining Repairs and Reconstruction, Honolulu, Oahu; TMKs: 2-7-27; 2-8-27

We have reviewed the DEA information for the subject project transmitted by your memorandum dated July 5, 1994, and apologize for the delayed response. Our comments on this document are as follows:

Division of Aquatic Resources

The Division of Aquatic Resources (DAR) comments that the applicant should be advised that the "Description of the Affected Environment" was of such poor quality that it would normally be unacceptable. DAR is, however, sufficiently familiar with the degraded nature of the area that they are assured the proposed project would not further impair the streams.

Historic Preservation Division

The Historic Preservation Division (HPD) comments that a review of their records shows that there are no known historic sites at the proposed project locations. The project involves repair and reconstruction of undermined and collapsed portions of the existing CRM slope linings at two locations of Manoa Stream. Since it is unlikely that historic sites remain, HPD believes that the standard construction contract provision in the DEA provides an adequate basis for mitigating possible adverse effects, should historic sites be inadvertently discovered. Therefore, HPD believes that this project will have "no effect" on historic sites.

Mr. Sprague

- 2 -

File No.: 95-007

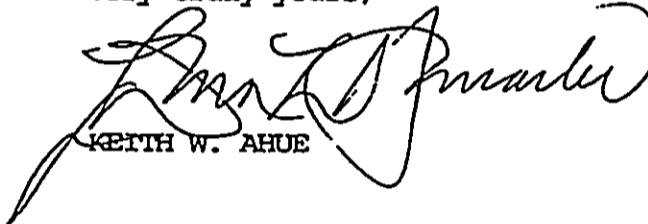
Commission on Water Resource Management

The Commission on Water Resource Management's (CWRM) staff comments that they previously commented on this project directly to the Department of Public Works and had informed them that a Stream Channel Alteration Permit (SCAP) is necessary for this project.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,



KEITH W. AHUE



DEPARTMENT OF THE ARMY RECEIVED
U. S. ARMY ENGINEER DISTRICT, HONOLULU, HAWAII
FT. SHAFTER, HAWAII 96058-5440 DIV. OF PUBLIC WORKS

REPLY TO
ATTENTION OF

RECEIVED
DIV. OF PUBLIC WORKS July 25, 1994 Jul 26 3 11 PM '94

Planning Division

Jul 27 9 19 AM '94

94-2109
em/ah
Eng

Mr. Kenneth E. Sprague
Director and Chief Engineer
City and County of Honolulu
Department of Public Works
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Manoa Stream and Manoa-Palolo Drainage Canal Lining Repairs and Reconstruction, Oahu (TMK 2-8-27). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. A DA permit will be required for any new work which may include repair, rehabilitation, and replacement. Please contact our Operations Division at 438-9258 for further information and refer to file number NW94-052.

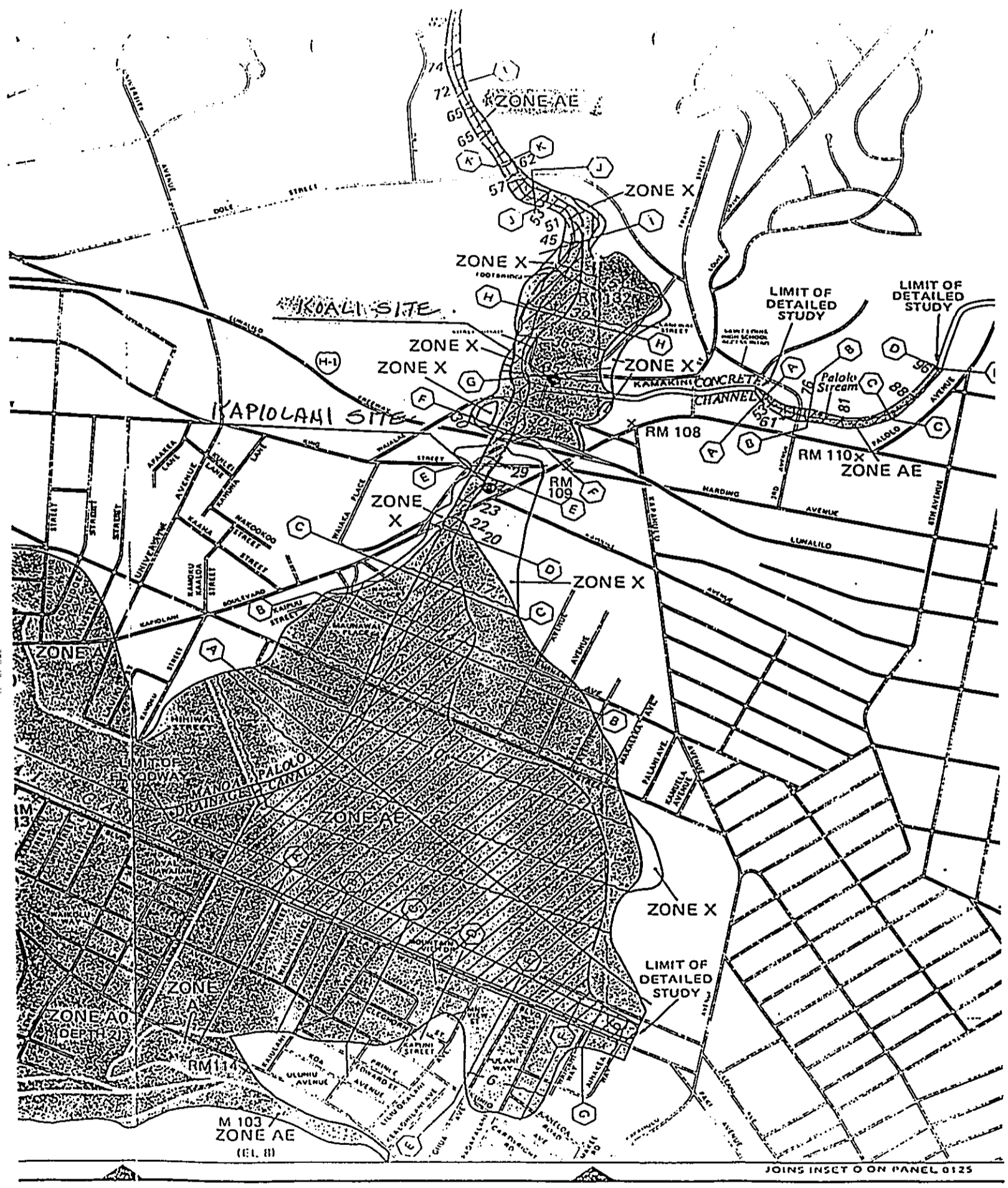
b. According to the enclosed Federal Emergency Management Agency's Flood Insurance Rate Map panel number 150001 0120C dated September 4, 1987, the Koali site is located in Zone AE (areas inundated by the 100-year flood with a base flood elevation of 35 feet above mean sea level); the Kapiolani site is located in Zone X (shaded; areas inundated by the 500-year flood). Should you require additional information regarding the flood hazard evaluation, please contact Ms. Jessie Dobinchick of my Planning Staff at 438-2883.

Sincerely,

Ray H. Jyo, P.E. *RHJ*
Director of Engineering

Enclosure

DOCUMENT CAPTURED AS RECEIVED



DOCUMENT CAPTURED AS RECEIVED

LEGEND

ZONE A-I

ZONE AII

ZONE AIII

ZONE AIV

ZONE AV

ZONE AVI

FLASHWAY AREAS IN ZONE AI

OTHER LIMITED AREAS

ZONE K

OTHER AREAS

ZONE K

ZONE D

— Flood Boundary

--- Flashway Boundary

--- Zone II Boundary

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

— 513 — Base Flood Elevation Lines: Elevation in Feet*

— (E) — Cross Section Line

(EL 921) Base Flood Elevation in Feet Where Uniform Within Zone*

RM17x Elevation Reference Mark

based to the National Geodetic Vertical Datum of 1929


NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII


PANEL 120 OF 135
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
150001 0120 C

MAP REVISED:
SEPTEMBER 4, 1987



Federal Emergency Management Agency

CUSTOMER COPY



RECEIVED
DEPT. OF PUBLIC WORKS
United States Department of the Interior

JUL 27 1 31 PM '94
FISH AND WILDLIFE SERVICE
Pacific Islands Office
P.O. Box 50167
Honolulu, Hawaii 96850

94-212-7
ENV ak

JUL 26 1994

RECEIVED
DIV. OF ENGINEERING
JUL 26 9 52 AM '94

In Reply Refer To: CAW

Mr. Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Re: Draft Environmental Assessment for the proposed Manoa Stream and Manoa-Palolo
Drainage Canal Lining Repairs and Reconstruction, Manoa, Oahu, Hawaii (94-11-0137)

Dear Mr. Sprague:

The U. S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Assessment (DEA) for Manoa Stream and Manoa-Palolo Drainage Canal Lining Repairs and Reconstruction, Manoa, Oahu, Hawaii. The project sponsor is the Department of Public Works, City and County of Honolulu. The Service offers the following comments for your consideration.

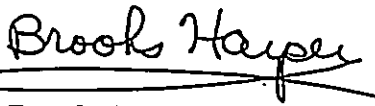
The proposed project would involve both the repair and reconstruction of undermined and collapsed portions of existing cement rubble masonry slope lining at two locations: a) Manoa stream along the 2900 block of Kaoli Road and b) Manoa-Palolo Drainage Canal near the Kapiolani Boulevard bridge.

The DEA inadequately describes the flora, fauna, and habitats that exist at the proposed project site. Nevertheless, based on the Service's knowledge of the site and on discussions with Hawaii Division of Aquatic Resources staff, no significant adverse effects on fish and wildlife resources are expected to result from the proposed work. Therefore, the Service would concur with a Negative Declaration finding and determination that an environmental impact statement is not required for the project.

Draft Environmental Assessment
Manoa-Palolo Stream Maintenance Ramps
Manoa, Oahu, Hawaii (94-11-0123)

The Service appreciates the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Christine Willis at 808/541-3441.

Sincerely,

A handwritten signature in cursive script that reads "Brooks Harper". The signature is written in black ink and is positioned above a horizontal line that underlines the name.

Brooks Harper
Field Supervisor
Ecological Services

CC: DAR, Hawaii
CZMP, Hawaii
CWB, Hawaii