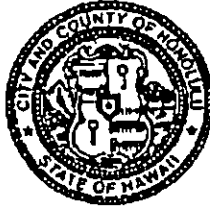


DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
Phone: (808) 523-4341 • Fax: (808) 527-5857

*Kahiwa Place Drainage
Ditch Improvements*

JEREMY HARRIS
MAYOR



June 5, 1998

RECEIVED
JONATHAN K. SHIMADA, PhD
DIRECTOR

ROLAND D. LIBBY, JR.
DEPUTY DIRECTOR
'98 JUN 8 P 2:02

IN REPLY REFER TO:
98-12-0297
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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

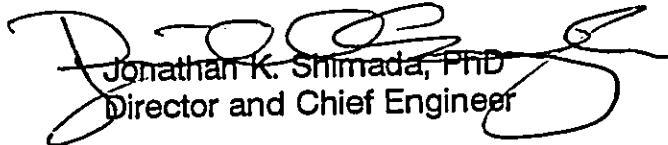
Dear Mr. Gill:

Subject: Finding of No Significant Impact (FONSI) for Kahiwa Place Drainage
Ditch Improvements, Honolulu, Oahu, Hawaii, TMK: 2-9-38: 014

The City and County of Honolulu's Department of Public Works has reviewed the comments received during the 30-day public comment period which began on April 8, 1998. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the June 23, 1998, OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final environmental assessment. Please call Tyler Sugihara of the Division of Engineering at 523-4932 if you have any questions.

Very truly yours,


Jonathan K. Shimada, PhD
Director and Chief Engineer

Encl.

cc: GMP Associates, Inc.

60

0000 0025 2621

JUN 23 1998

1998-06-23-OA-PEA-Kahiwa Place
Drainage Ditch Improvements

FILE COPY

KAHIWA PLACE DRAINAGE DITCH IMPROVEMENTS

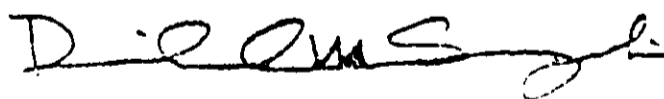
HONOLULU, OAHU, HAWAII

TMK: 2-9-38

FINAL ENVIRONMENTAL ASSESSMENT

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

Responsible Official:



JUN 08 1998

for Jonathan K. Shimada, Ph.D.
Director and Chief Engineer

Date



ASSOCIATES, INC.
Engineers/Architects

JUNE 1998

0000 0025 2622

TABLE OF CONTENTS

0000 0025 2623

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1	PURPOSE AND NEED FOR ACTION	1-1
1.1	PURPOSE	1-1
1.2	NEED FOR ACTION	1-1
1.3	PROJECT LOCATION	1-1
1.4	PROPOSED ACTION	1-1
1.5	DEVELOPMENT SCHEDULE AND COST	1-1
1.6	APPLICABLE GOVERNMENTAL PERMITS	1-5
1.7	PROPOSING AGENCY	1-5
1.8	APPROVING AGENCY	1-5
2	ALTERNATIVES TO THE PROPOSED ACTION	2-1
2.1	NO ACTION	2-1
2.2	DELAYED ACTION	2-1
3	EXISTING CONDITIONS	3-1
3.1	EXISTING LAND USE DESIGNATIONS	3-1
3.2	SURROUNDING LAND USE	3-1
3.3	LAND OWNERSHIP	3-1
3.4	TOPOGRAPHY	3-2
3.5	SOILS	3-2
3.6	HYDROLOGY	3-2
3.7	FLOOD HAZARDS	3-4
3.8	FLORA AND FAUNA	3-4
3.9	ARCHAEOLOGY	3-5
3.10	PUBLIC UTILITIES	3-5
4	ENVIRONMENTAL IMPACTS AND MITIGATIVE MEASURES	4-1
4.1	SHORT-TERM IMPACTS	4-1
4.1.1	Water Quality Impacts	4-1
4.1.2	Air Quality	4-1
4.1.3	Noise Impacts	4-2
4.1.4	Land Ownership Impact	4-2
4.1.5	Traffic Impacts	4-2
4.1.6	Flora and Fauna Impacts	4-2
4.1.7	Archaeological Impacts	4-3

0000 0025 2624

TABLE OF CONTENTS, Continued

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.1.8	Impacts on Public Utilities	4-3
4.1.9	Socio-Economic Impacts	4-3
4.2	LONG-TERM IMPACTS	4-3
4.2.1	Water Quality Impacts	4-3
4.2.2	Flora and Fauna Impacts	4-4
4.2.3	Visual Impacts	4-4
4.2.4	Streambank Erosion Impacts	4-4
4.2.5	Land Ownership Impacts	4-4
4.2.6	Socio-Economic Impacts	4-4
5	NOTICE OF FINDING OF NO SIGNIFICANT IMPACT	5-1
5.1	SIGNIFICANCE CRITERIA	5-1
5.1.1	Involves an Irrevocable Commitment to Loss or Destruction of Any Natural or Cultural Resources	5-1
5.1.2	Curtails the Range of Beneficial Uses of the Environment	5-1
5.1.3	Conflicts With the State's Long-Term Environmental Policies or Goals and Guidelines as Expressed in Chapter 344, HRS; and Any Revisions Thereof and Amendments Thereo, Court Decisions, or Executive Orders	5-2
5.1.4	Substantially Affects the Economic or Social Welfare of the Community or State	5-2
5.1.5	Substantially Affects Public Health	5-2
5.1.6	Involves Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities	5-2
5.1.7	Involves a Substantial Degradation of Environmental Quality	5-2
5.1.8	Is Individually Limited But Cumulatively Has Considerable Effect on the Environment, or Involves a Commitment for Larger Actions	5-3
5.1.9	Substantially Affects a Rare, Threatened or Endangered Species or Its Habitat	5-3
5.1.10	Detrimentially Affects Air or Water Quality or Ambient Noise Levels	5-3

TABLE OF CONTENTS, Continued

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.1.11	Affects or is Likely to Suffer Damage by Being Located in an Environmentally Sensitive Area, Such as a Flood Plain, Tsunami Zone, Beach, Erosion-Prone Area, Geologically Hazardous land, Estuary, Freshwater, or Coastal Waters	5-4
5.1.12	Substantially Affects Scenic Vistas and View Planes Identified in County or State Plans or Studies	5-4
5.1.13	Requires Substantial Energy Consumption	5-4
6	AGENCIES CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT	6-1
6.1	FEDERAL GOVERNMENT	6-1
6.2	STATE GOVERNMENT	6-1
6.3	CITY AND COUNTY OF HONOLULU	6-1
6.4	OTHER PARTIES	6-2
 REFERENCES		
APPENDIX A	CONSTRUCTION PLANS	
APPENDIX B	AGENCY CORRESPONDENCE DURING THE PRE-ASSESSMENT CONSULTATION PERIOD	
APPENDIX C	AGENCY CORRESPONDENCE DURING THE 30-DAY COMMENT PERIOD	

0000 0025 2626

LIST OF FIGURES

<u>Figure</u>	<u>Title</u>	<u>Page</u>
1-1	ISLAND MAP	1-2
1-2	LOCATION MAP	1-3
1-3	PROJECT SITE	1-4
3-1	CONTRIBUTING DRAINAGE AREAS	3-3

0000 0025 2627

CORRECTION

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

0000 0025 2628

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1	PURPOSE AND NEED FOR ACTION	1-1
1.1	PURPOSE	1-1
1.2	NEED FOR ACTION	1-1
1.3	PROJECT LOCATION	1-1
1.4	PROPOSED ACTION	1-1
1.5	DEVELOPMENT SCHEDULE AND COST	1-1
1.6	APPLICABLE GOVERNMENTAL PERMITS	1-5
1.7	PROPOSING AGENCY	1-5
1.8	APPROVING AGENCY	1-5
2	ALTERNATIVES TO THE PROPOSED ACTION	2-1
2.1	NO ACTION	2-1
2.2	DELAYED ACTION	2-1
3	EXISTING CONDITIONS	3-1
3.1	EXISTING LAND USE DESIGNATIONS	3-1
3.2	SURROUNDING LAND USE	3-1
3.3	LAND OWNERSHIP	3-1
3.4	TOPOGRAPHY	3-2
3.5	SOILS	3-2
3.6	HYDROLOGY	3-2
3.7	FLOOD HAZARDS	3-4
3.8	FLORA AND FAUNA	3-4
3.9	ARCHAEOLOGY	3-5
3.10	PUBLIC UTILITIES	3-5
4	ENVIRONMENTAL IMPACTS AND MITIGATIVE MEASURES	4-1
4.1	SHORT-TERM IMPACTS	4-1
4.1.1	Water Quality Impacts	4-1
4.1.2	Air Quality	4-1
4.1.3	Noise Impacts	4-2
4.1.4	Land Ownership Impact	4-2
4.1.5	Traffic Impacts	4-2
4.1.6	Flora and Fauna Impacts	4-2
4.1.7	Archaeological Impacts	4-3

TABLE OF CONTENTS, Continued

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.1.8	Impacts on Public Utilities	4-3
4.1.9	Socio-Economic Impacts	4-3
4.2	LONG-TERM IMPACTS	4-3
4.2.1	Water Quality Impacts	4-3
4.2.2	Flora and Fauna Impacts	4-4
4.2.3	Visual Impacts	4-4
4.2.4	Streambank Erosion Impacts	4-4
4.2.5	Land Ownership Impacts	4-4
4.2.6	Socio-Economic Impacts	4-4
5	NOTICE OF FINDING OF NO SIGNIFICANT IMPACT	5-1
5.1	SIGNIFICANCE CRITERIA	5-1
5.1.1	Involves an Irrevocable Commitment to Loss or Destruction of Any Natural or Cultural Resources	5-1
5.1.2	Curtails the Range of Beneficial Uses of the Environment	5-1
5.1.3	Conflicts With the State's Long-Term Environmental Policies or Goals and Guidelines as Expressed in Chapter 344, HRS; and Any Revisions Thereof and Amendments Thereo, Court Decisions, or Executive Orders	5-2
5.1.4	Substantially Affects the Economic or Social Welfare of the Community or State	5-2
5.1.5	Substantially Affects Public Health	5-2
5.1.6	Involves Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities	5-2
5.1.7	Involves a Substantial Degradation of Environmental Quality	5-2
5.1.8	Is Individually Limited But Cumulatively Has Considerable Effect on the Environment, or Involves a Commitment for Larger Actions	5-3
5.1.9	Substantially Affects a Rare, Threatened or Endangered Species or Its Habitat	5-3
5.1.10	Detrimentially Affects Air or Water Quality or Ambient Noise Levels	5-3

TABLE OF CONTENTS, Continued

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.1.11	Affects or is Likely to Suffer Damage by Being Located in an Environmentally Sensitive Area, Such as a Flood Plain, Tsunami Zone, Beach, Erosion-Prone Area, Geologically Hazardous land, Estuary, Freshwater, or Coastal Waters	5-4
5.1.12	Substantially Affects Scenic Vistas and View Planes Identified in County or State Plans or Studies	5-4
5.1.13	Requires Substantial Energy Consumption	5-4
6	AGENCIES CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT	6-1
6.1	FEDERAL GOVERNMENT	6-1
6.2	STATE GOVERNMENT	6-1
6.3	CITY AND COUNTY OF HONOLULU	6-1
6.4	OTHER PARTIES	6-2
REFERENCES		
APPENDIX A	CONSTRUCTION PLANS	
APPENDIX B	AGENCY CORRESPONDENCE DURING THE PRE-ASSESSMENT CONSULTATION PERIOD	
APPENDIX C	AGENCY CORRESPONDENCE DURING THE 30-DAY COMMENT PERIOD	

0000 0025 2631

LIST OF FIGURES

<u>Figure</u>	<u>Title</u>	<u>Page</u>
1-1	ISLAND MAP	1-2
1-2	LOCATION MAP	1-3
1-3	PROJECT SITE	1-4
3-1	CONTRIBUTING DRAINAGE AREAS	3-3

0000 0025 2632

SECTION 1
PURPOSE AND NEED FOR ACTION

SECTION 1 PURPOSE AND NEED FOR ACTION

1.1 PURPOSE

The proposed improvements involve the construction of approximately 85 lineal feet of a cement rubble masonry (CRM) retaining wall along a segment of the Kahiwa Place Drainage Ditch. The purpose of this project is to help prevent further erosion of the embankment, thereby alleviating the potential for further damages to the adjacent residential properties. An Environmental Assessment (EA) is prepared in accordance with Chapter 343 HRS and Title 11, Chapter 200 HAR for the Kahiwa Place Drainage Ditch Improvements project.

1.2 NEED FOR ACTION

Improvements to the Kahiwa Place Drainage Ditch are needed in order to mitigate the erosion occurring on the embankment adjacent to the properties identified as TMK: 2-9-38:100 and TMK: 2-9-38:084 and to prevent future wall failures in this area.

1.3 PROJECT LOCATION

The proposed project is situated in Manoa Valley on the island of O'ahu, as shown in Figure 1-1. The project site is located approximately 500 feet northeast of the intersection of East Manoa Road and Kahaloa Drive, along the west embankment of Kahiwa Ditch, adjacent to Tax Map Key (TMK) parcels 2-9-38:100 and 2-9-38:084 as shown in Figures 1-2 and 1-3.

1.4 PROPOSED ACTION

The proposed drainage ditch improvements involve the construction of an approximately 85-foot long CRM retaining wall that will help prevent further erosion of the existing unlined slope along the northeast property line of TMK parcels 2-9-38:084 and 100 as shown in Figure 1-3. A 4-foot high chain link fence will be installed atop the new CRM wall as part of the project. A set of the project's preliminary construction plans has been included in Appendix A.

1.5 DEVELOPMENT SCHEDULE AND COST

Following the necessary approvals for the regulatory permits, construction of the proposed project is expected to commence after July of 1998 and last approximately 60 days. The capital construction costs are estimated at \$150,000.

0000 0025 2634

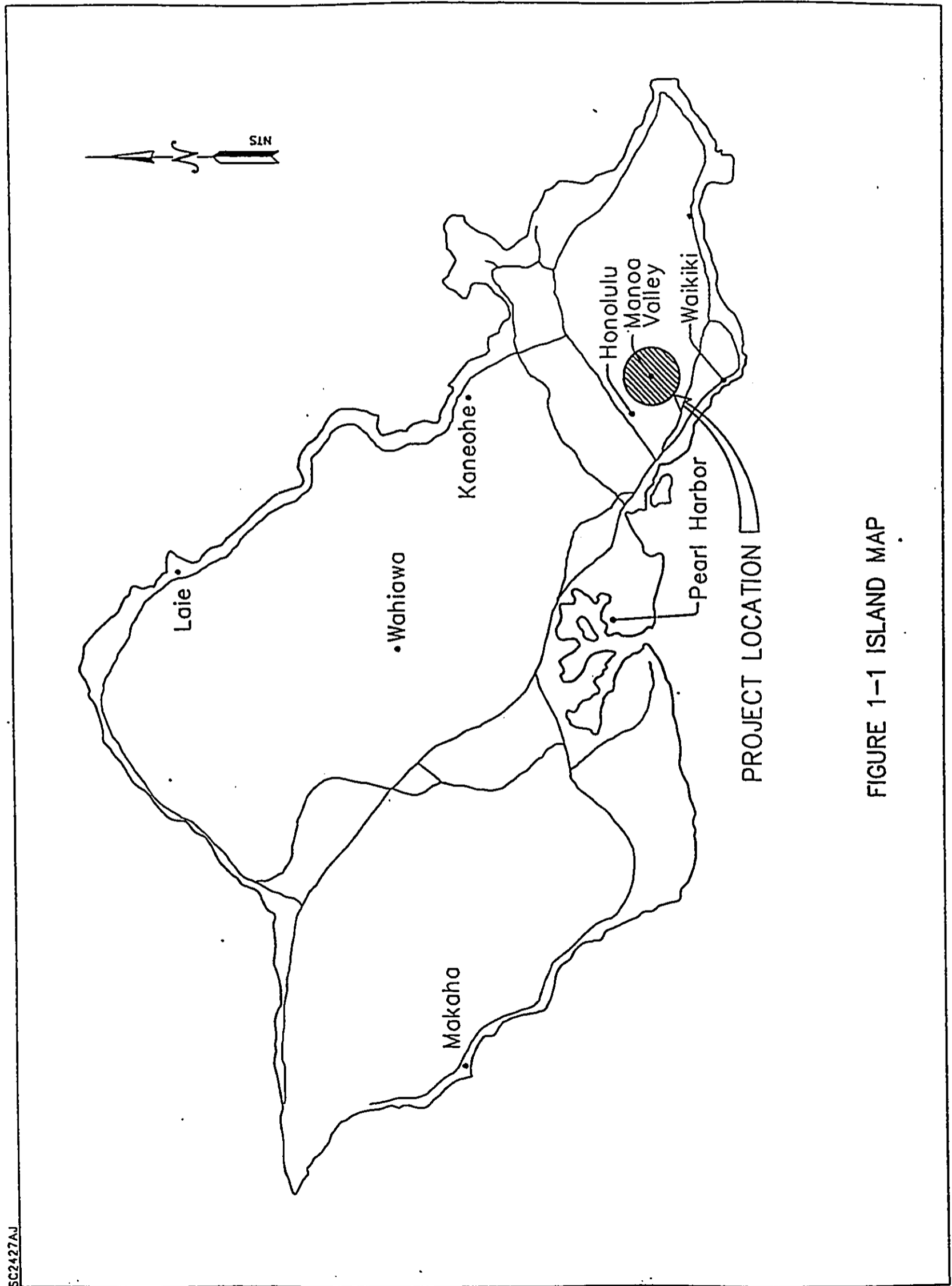


FIGURE 1-1 ISLAND MAP

SC2427AJ

0000 0025 2635

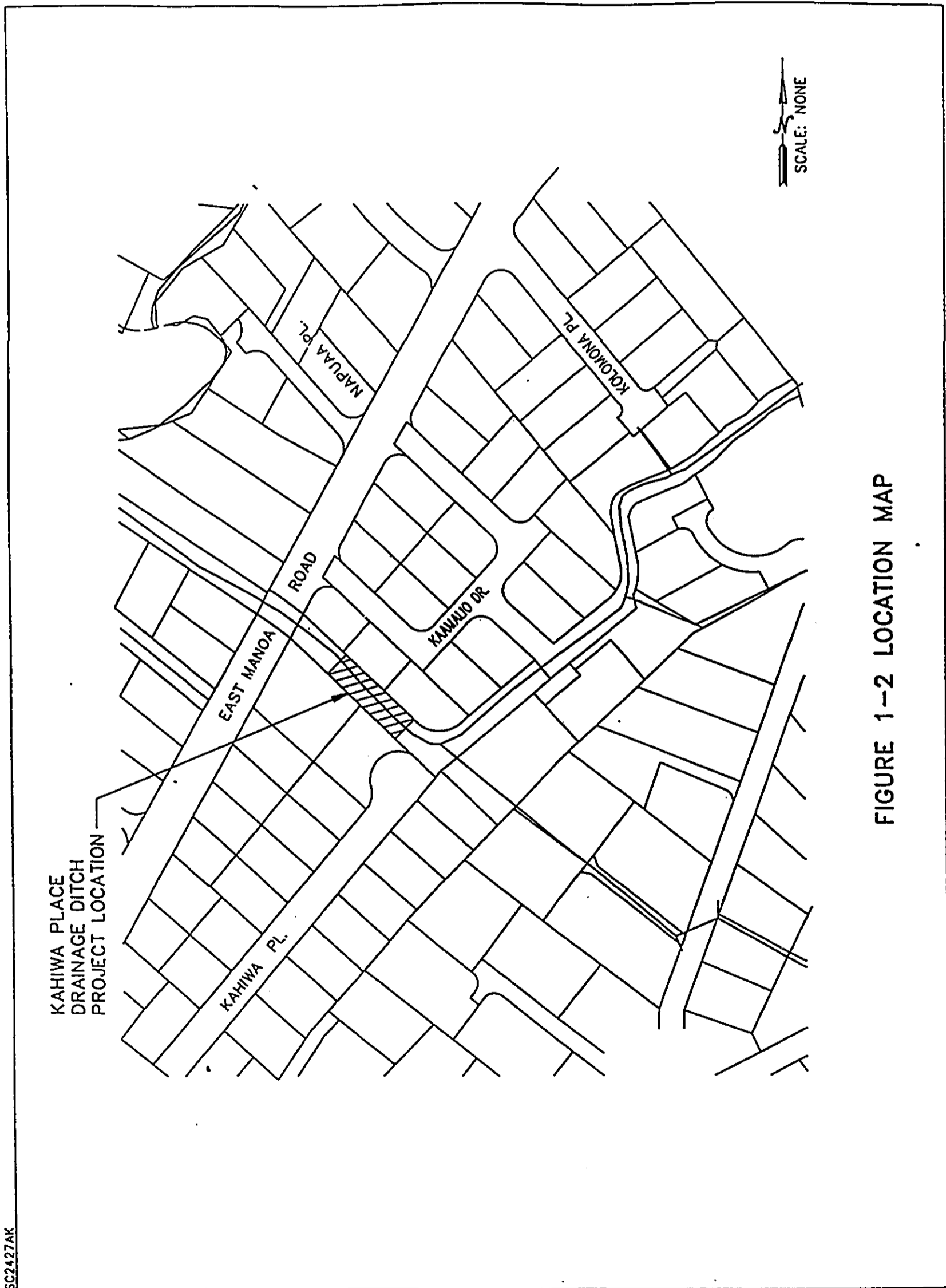


FIGURE 1-2 LOCATION MAP

SC2427AK

0000 0025 2637

1.6 APPLICABLE GOVERNMENTAL PERMITS

The following permits and approvals are anticipated for the project:

- State Department of Land and Natural Resources, Stream Channel Alteration Permit (SCAP)
- U.S. Army Corps of Engineers, Section 404 Permit (Nationwide Permit No. 13 - Bank Stabilization)
- Office of State Planning, Coastal Zone Management (CZM) Federal Consistency Determination
- State Department of Health, Clean Water Branch, National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Dewatering
- City and County of Honolulu, Department of Public Works, Construction Dewatering Permit

1.7 PROPOSING AGENCY

City and County of Honolulu, Department of Public Works.

1.8 APPROVING AGENCY

City and County of Honolulu, Department of Public Works

0000 0025 2638

SECTION 2
ALTERNATIVES TO THE PROPOSED ACTION

0000 0025 2639

SECTION 2 ALTERNATIVES TO THE PROPOSED ACTION

The two alternatives to the proposed project are the "no action", and the "delayed action" options. The consequences of these two alternatives are not favorable since a solution is needed to prevent further erosion from occurring on the embankment, thus reducing the potential for further damages to the residential properties adjacent to the ditch.

2.1 NO ACTION

A "no action" alternative will not be beneficial for the adjacent residents of TMK parcels 2-9-38:100 and 2-9-38:084 since the current erosive conditions are undermining their properties and causing subsidence of wall structures. Improvements are needed to halt this erosion process. If the "no action" alternative is taken, the City and County of Honolulu may have maintenance problems in the future, and will have to replace walls which fail.

2.2 DELAYED ACTION

A "delayed action" alternative will have similar consequences as a "no action" alternative since the damage caused to adjacent properties by the erosion process will increase in severity. Delay of the proposed improvements could also result in higher construction costs due to further degradation of the drainage ditch.

0000 0025 2640

SECTION 3
EXISTING CONDITIONS

SECTION 3 EXISTING CONDITIONS

The Kahiwa Place Drainage Ditch is owned and maintained by the City and County of Honolulu, Department of Public Works. The ditch is a portion of Woodlawn Stream, which is a tributary of Manoa Stream. The right-of-way of the ditch is approximately 30 feet wide.

Most of the makai side of the ditch's embankment is improved with cement rubble masonry (CRM) walls except for the 85-foot section to be improved as part of the proposed project. This unimproved section, as well as most of the mauka side of the ditch, currently consists of exposed and vegetated earth embankment.

Upstream from the proposed project site, a small section of concrete lining exists near the outlet of an existing 36-inch reinforced concrete pipe (RCP) storm drain. The ditch is also lined with concrete further upstream of the project site, mauka of the wooden bridge. Downstream of the project site a concrete bridge exists at the East Manoa Road crossing.

3.1 EXISTING LAND USE DESIGNATIONS

The existing land use designations at the project site are determined by the State of Hawaii and the City and County of Honolulu as follows:

1. City and County of Honolulu, Department of Land Utilization, Development Plan Land Use Designation: "Residential."
2. State Land Use Commission Designation: "Urban."
3. City and County of Honolulu, Department of Land Utilization, Zoning Designation: "R-7.5" (Residential).

The proposed project site is not located within the Special Management Area.

3.2 SURROUNDING LAND USE

The project site is surrounded exclusively by residential development. Other land uses located further downstream include both institutional (University of Hawaii, Manoa Campus, Noelani Elementary School, Mid-Pacific Institute) and commercial (Manoa Market Place) types. A Chinese Cemetery along Pakanu Street is the only significant non-residential land use located upstream of the project site. Waahila Ridge, the mountain range to the east of the project site, is designated as conservation.

3.3 LAND OWNERSHIP

The Kahiwa Place Drainage Ditch right-of-way is owned and maintained by the City and County of Honolulu. The adjacent properties along both sides of the stream banks are privately owned residences.

3.4 TOPOGRAPHY

The existing ditch section within the project site is relatively flat. The invert elevation is approximately 176 feet above mean sea level (MSL) at both the upstream and downstream boundaries. The "top of bank" elevations near the project site range from roughly 184 feet MSL to 186 feet MSL.

3.5 SOILS

The soils in the areas adjacent to the ditch are identified as Lolekaa silty clay and Hanalei silty clay in the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," prepared by the United States Department of Agriculture, Soil Conservation Service (August 1972).

In a representative profile of Lolekaa silty clay, the surface layer is dark-brown silty clay, about 10 inches thick. The subsoil ranges from 46 inches to more than 70 inches thick. The upper part is dark-brown silty clay that has a subangular blocky structure. The lower part is dark yellowish brown loam that has a similar subangular blocky structure. The substratum is strongly weathered gravel. The soil is strongly acid in the surface layer, and strongly acid to extremely acid in the subsoil. Permeability is moderately rapid, with a range of 2.0 to 6.3 inches per hour. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.3 inches per foot of soil. Soft, weathered gravel is common in the subsoil.

In a representative profile of Hanalei silty clay, the surface layer, about 10 inches thick, is dark gray and very dark gray silty clay, and has dark-brown and reddish mottles. The subsurface layer is very dark gray and dark-gray silty clay, about three inches thick. The subsoil, about 13 inches thick, is mottled dark gray and dark grayish brown silty clay loam, and has an angular blocky structure. The substratum is stratified alluvium. The soil is strongly acid to very strongly acid in the surface layer, and neutral in the subsoil. Permeability is moderate, with a range of 0.63 to 2.0 inches per hour. Runoff is very slow, and the erosion hazard is not more than slight. The available moisture capacity is about 2.1 inches per foot of soil.

3.6 HYDROLOGY

The contributory drainage area for this project site extends from the lower Woodlawn area of Manoa Valley to the crest of Waahila Ridge, with elevations ranging from approximately 1,100 feet to 1,750 feet. This total drainage area, containing approximately 526 acres, was determined by the Geographic Information System (GIS) topographic data obtained from the Department of Land Utilization, City and County of Honolulu. Two drainage sub areas are identified as DA₁ and DA₂, as shown in Figure 3-1. DA₁ contains approximately 408 acres and DA₂ contains approximately 118 acres.

The hydrologic criteria contained in the Storm Drainage Standards of the Department of Public Works, City and County of Honolulu require that a recurrence interval (T_m) of 100 years be used

0000 0025 2643

3.4 TOPOGRAPHY

The existing ditch section within the project site is relatively flat. The invert elevation is approximately 176 feet above mean sea level (MSL) at both the upstream and downstream boundaries. The "top of bank" elevations near the project site range from roughly 184 feet MSL to 186 feet MSL.

3.5 SOILS

The soils in the areas adjacent to the ditch are identified as Lolekaa silty clay and Hanalei silty clay in the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," prepared by the United States Department of Agriculture, Soil Conservation Service (August 1972).

In a representative profile of Lolekaa silty clay, the surface layer is dark-brown silty clay, about 10 inches thick. The subsoil ranges from 46 inches to more than 70 inches thick. The upper part is dark-brown silty clay that has a subangular blocky structure. The lower part is dark yellowish brown loam that has a similar subangular blocky structure. The substratum is strongly weathered gravel. The soil is strongly acid in the surface layer, and strongly acid to extremely acid in the subsoil. Permeability is moderately rapid, with a range of 2.0 to 6.3 inches per hour. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.3 inches per foot of soil. Soft, weathered gravel is common in the subsoil.

In a representative profile of Hanalei silty clay, the surface layer, about 10 inches thick, is dark gray and very dark gray silty clay, and has dark-brown and reddish mottles. The subsurface layer is very dark gray and dark-gray silty clay, about three inches thick. The subsoil, about 13 inches thick, is mottled dark gray and dark grayish brown silty clay loam, and has an angular blocky structure. The substratum is stratified alluvium. The soil is strongly acid to very strongly acid in the surface layer, and neutral in the subsoil. Permeability is moderate, with a range of 0.63 to 2.0 inches per hour. Runoff is very slow, and the erosion hazard is not more than slight. The available moisture capacity is about 2.1 inches per foot of soil.

3.6 HYDROLOGY

The contributory drainage area for this project site extends from the lower Woodlawn area of Manoa Valley to the crest of Waahila Ridge, with elevations ranging from approximately 1,100 feet to 1,750 feet. This total drainage area, containing approximately 526 acres, was determined by the Geographic Information System (GIS) topographic data obtained from the Department of Land Utilization, City and County of Honolulu. Two drainage sub areas are identified as DA₁ and DA₂, as shown in Figure 3-1. DA₁ contains approximately 408 acres and DA₂ contains approximately 118 acres.

The hydrologic criteria contained in the Storm Drainage Standards of the Department of Public Works, City and County of Honolulu require that a recurrence interval (T_m) of 100 years be used

NOT TO SCALE

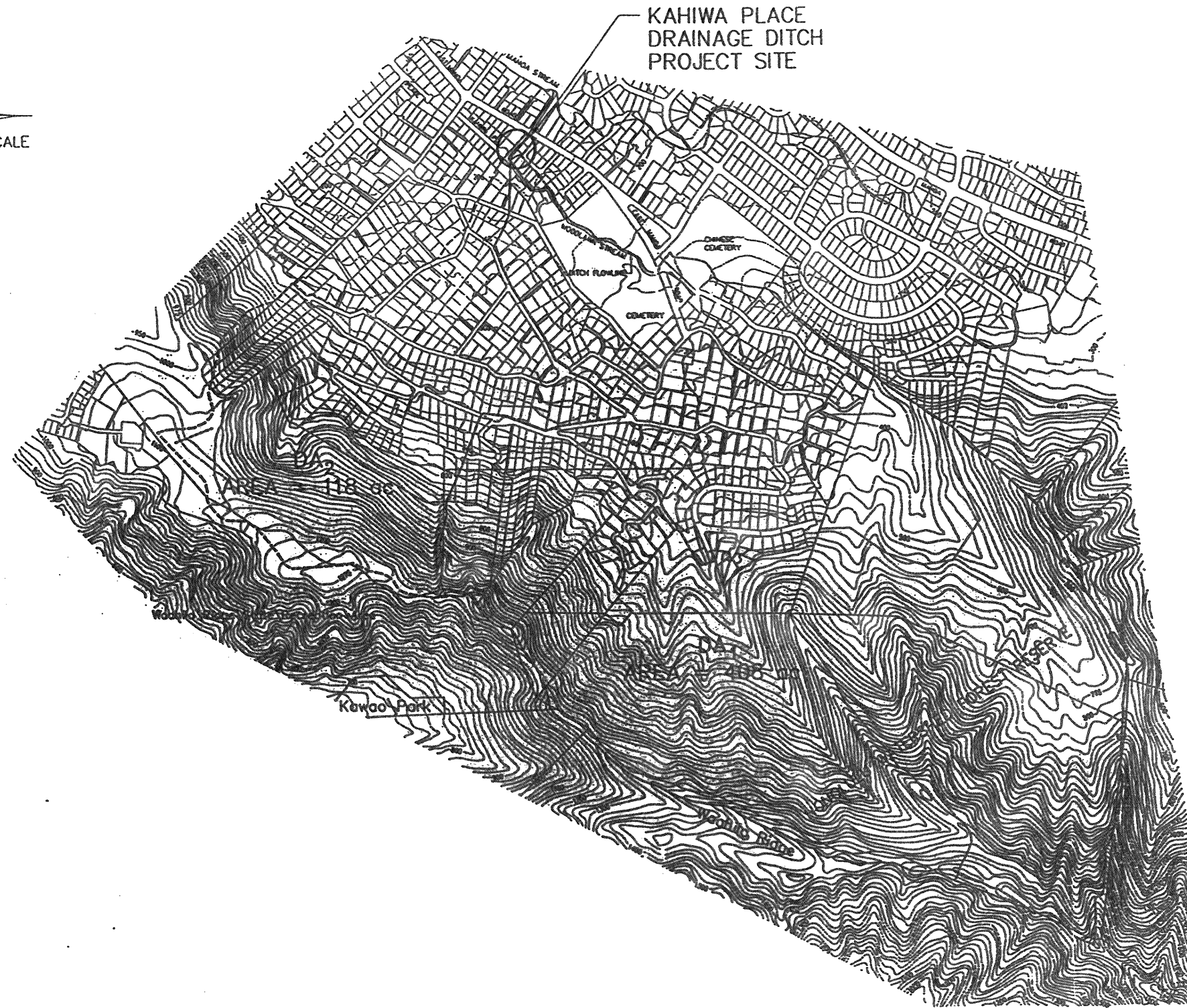


FIGURE 3-1 CONTRIBUTING DRAINAGE AREAS

SC2427AM

0000 0025 2645

for drainage areas greater than 100 acres and for all streams. Thus, Plate 6, "Design Curves for Peak Discharge vs. Drainage Area" was used to determine the required design runoff quantity. Utilizing the "Group B" curve, a peak discharge of approximately 2,500 cubic feet per second (cfs) was determined for the total drainage area.

A series of hydraulic calculations were performed to determine the maximum capacity of the ditch. Calculations were based on the condition that the flow within the ditch was restricted by the existing bridge at East Manoa Road. As a result, the maximum capacity of the existing ditch is 950 cfs.

3.7 FLOOD HAZARDS

Flood Insurance Rate Map Panel No. 150001 0120 C, generated by the Federal Emergency Management Agency (FEMA), indicates that the project site is located within areas determined to be outside the 500-year flood plain. The area immediately downstream of the project site, across East Manoa Road, is identified as "Zone X," which is defined as 1) areas within a 500-year flood plain; 2) areas of a 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; or 3) areas protected by levees from a 100-year flood.

3.8 FLORA AND FAUNA

The plant species around the Manoa Valley area are primarily introduced, and include various trees and miscellaneous shrub growth. A previous survey performed by Char (April 1986) described and inventoried the flora on a nearby project site located approximately one mile away. Fifty-nine species of plants were recorded during the survey, 88 percent of which were introduced species, with 12 percent found to be native. The native species were all indigenous, and are widely distributed throughout the islands in similar environmental habitats (Char 1986). No rare, threatened, or endangered flora and fauna species have been identified within the boundaries of the project site.

The fauna populations around the project site are small due to the residential development. However, mongooses, rats, and field mice are commonly observed around the stream area. According to the Department of Land and Natural Resources (DLNR), Division of Aquatic Resources, the aquatic species commonly found in the Kahiwa Place Drainage ditch contains mostly exotics, including: liberty mollies, swordtails, guppies, armored catfishes, dojos, and crayfishes. Small numbers of native 'O'opu nakea can also be found in the ditch on occasion with increasing numbers found downstream in the main channel of Manoa Stream.

As a part of Woodlawn Stream, the Kahiwa Place Drainage Ditch eventually enters Manoa Stream at a location approximately 200 yards makai of the Kahaloa Drive bridge. The freshwater vertebrae fauna that have been documented in Manoa Stream by DLNR include the following: swordtail (*Xiphophorus helleri*); toad (*Bufo marinus*); 'O'opu naniha (*Stenogobius hawaiiensis*); 'O'opu nopili (*Sicyopterus stimpsoni*); 'O'opu nakea (*Awaous guamensis*); 'Opae 'oeha'a (*Macrobrachium grandimanus*); Hapawai (*Theodoxus vespertinus*); 'O'opu akupa (*Eleotris sandvicensis*) and *Poecilia spp.*

0000 0025 2646

3.9 ARCHAEOLOGY

According to the DLNR, State Historic Preservation Division (SHPD), the Kahiwa Place Drainage Ditch project site contains no significant archaeological features. Therefore, a letter determination of "no effect" has been issued by SHPD.

3.10 PUBLIC UTILITIES

There are no existing public utilities within the project site, however, the utilities that do exist near the project site include one 36-inch RCP storm drain and a 10-inch sewer line. The RCP storm drain is shown on Figure 1-3 where the concrete channel bends. The existing 10-inch sewer line runs under the concrete bridge at East Manoa Road.

0000 0025 2647

SECTION 4
ENVIRONMENTAL IMPACTS
AND MITIGATIVE MEASURES

SECTION 4 ENVIRONMENTAL IMPACTS AND MITIGATIVE MEASURES

4.1 SHORT-TERM IMPACTS

The proposed project will generate both short-term and long-term impacts. Short-term impacts include: a temporary increase in turbidity downstream, nuisance dust and construction equipment emissions, noise, minor traffic disruptions, and a displacement of streambank vegetation and fauna habitats. Many of these impacts can be mitigated through careful construction methods and compliance with the applicable Federal, State, and City and County regulations.

4.1.1 Water Quality Impacts

Short-term water quality impacts include a temporary increase in turbidity during streambank excavation and fill placement. In order to reduce the amount of sediments transported to Woodlawn and subsequently Manoa Streams, construction will take place during the drier summer months to the extent practical. The Contractor shall also take the appropriate control measures to ensure that the water quality standards of the adjacent receiving water are maintained. These measures will be specified under the conditions of the Department of the Army Nationwide Permit No. 13 - Bank Stabilization. In addition to the conditions specified under the Army permit, a "Best Management Practices" (BMP) plan will be prepared in accordance with the Department of Health (DOH) National Pollutant Discharge Elimination System (NPDES) Construction Dewatering General Permit. The project's BMP plan will specify measures to preserve the water quality of the receiving waters. These measures will include erosion and sediment control devices such as diversion berms, sediment traps, and silt basins. The BMP plan will also specify measures that would help prevent cement products, fuel, oil and other harmful substances associated with the use of heavy machinery from entering the stream waters.

Other permits required include: a Stream Channel Alteration Permit (SCAP) from the State Department of Land and Natural Resources; a Coastal Zone Management Federal Consistency Determination from the Office of State Planning; and a City and County of Honolulu Department of Public Works Construction Dewatering Permit. By conforming to the requirements and conditions of these permits, the water quality of the Woodlawn and Manoa Streams should not be adversely affected during construction.

4.1.2 Air Quality

Short term impacts from dust and construction equipment emissions can be expected during construction activities. Residents adjacent to and near the project site may be temporarily inconvenienced during construction. Fugitive dust emissions can result from activities such as vehicular movement and soil excavation. However, adequate dust control can be provided through the implementation of proper dust controls at the project site. An increase in particulate emissions near the project site may also occur from construction equipment. Thus, all motorized construction equipment shall be maintained in good mechanical condition and equipped with emission controls to help preserve the ambient air quality around the project site.

0000 0025 2649

4.1.3 Noise Impacts

Noise is defined as any unwanted sound occurring in the ambient environment which may create short-term or long-term impacts to nearby populated areas or wildlife habitats. Short-term noise impacts are expected from construction activities and construction equipment. The residential homes located on either side of the Kahiwa Place Drainage Ditch will be temporarily impacted by construction noise associated with excavation and installation of the new cement rubble masonry (CRM) wall.

The use of mufflers on construction equipment, together with restricting construction activities to standard working hours, will help to mitigate the noise impacts. All operations will be in compliance with the State Department of Health's rules and regulations on noise control, Hawaii Administrative Rules (HAR) Title 11, Chapter 42, Vehicular Noise Control for O'ahu, and HAR Title 11, Chapter 46, Community Noise Control.

4.1.4 Land Ownership Impact

The properties along both sides of the ditch are privately owned residences. In order for the contractor to access the project site, a construction easement must be obtained adjacent to the project site. The City and County of Honolulu Department of Public Works will obtain a 7-foot wide construction easement along Tax Map Key parcels 2-9-38:100 and 2-9-38:084. The construction easement will allow the contractor temporary access to the project site for the duration of the construction period. Any damages resulting from the construction activities will be repaired by the Contractor to original or better condition.

4.1.5 Traffic Impacts

Minimal traffic impacts are expected from the proposed project since the main access to the site will be via Kahiwa Place, a cul-de-sac. Since heavy machinery and equipment will most likely be traversing Kahiwa Place, the affected residences shall be kept well informed of the construction activities in advance to minimize any temporary inconveniences. Additionally, maintaining pedestrian safety and convenient driveway access to the affected homes on Kahiwa Place will be a high priority.

4.1.6 Flora and Fauna Impacts

The proposed ditch improvements is expected to have a minimal impact on the local flora and fauna in and around the project site during construction. The City will be in compliance with the necessary permits to do any work within the Kahiwa Ditch right-of-way (as mentioned in Section 4.1.1), thus ensuring that the downstream water quality will be protected and maintained.

Some quiescent aquatic and stream bank habitats in or around the project site may be displaced due to the construction of the new CRM wall. However, the stream bank vegetation and aquatic life will likely be reestablished downstream in Woodlawn or Manoa Stream, or around the project

0000 0025 2650

site following construction. The presence of endangered or threatened species around the project site is also not expected.

4.1.7 Archaeological Impacts

According to the State Historic Preservation Division, there are no known archaeological resources within the project site. Should evidence of historic sites be encountered during construction, all activities in the area of the find shall cease, and the State Historic Preservation Division shall be notified immediately. The Division shall be provided sufficient time to assess the find and recommend appropriate mitigative measures. Any archaeological data recovery work that may be recommended by the Division shall be completed by a qualified archaeologist prior to the recommencement of construction work in the area of the find. Completion of the mitigation work shall be confirmed by the Division, and a report of the findings shall be prepared and submitted to the Division for review and acceptance. If human skeletal remains are inadvertently encountered during construction, procedures outlined in the Hawaii Revised Statutes 6E-43.6 shall be followed.

4.1.8 Impacts on Public Utilities

There will be no short-term impacts on the existing nearby 36-inch RCP storm drain, or the existing 10-inch sewer line since these utilities are not located within the project boundaries.

4.1.9 Socio-Economic Impacts

Aside from the temporary disruption of driveway access and on-street parking to residents of several streets, no significant short term socio-economic impacts are expected. The size of the project will not result in a significant increase in construction-related jobs in the community, nor will nearby retailers experience any positive or negative effects to their daily business.

4.2 LONG-TERM IMPACTS

Certain long-term impacts are expected to occur following the completion of the new CRM wall. Such long-term impacts include water quality impacts, impacts to the flora and fauna in or near the project site, visual impacts, bank erosion impacts, land ownership impacts, and socio-economic impacts which are all discussed in the following sections.

4.2.1 Water Quality Impacts

No significant impacts to the water quality of Kahiwa Ditch, Woodlawn Stream, or Manoa Stream should occur in the long term following the construction of the new CRM wall. If anything, water quality may improve since the new protected embankment would prevent additional soil erosion from entering the stream waters during heavy rain events.

0000 0025 265 1

4.2.2 Flora and Fauna Impacts

In the long term, any of the stream bank vegetation, aquatic life, or fauna around the project site that was disturbed or displaced during construction would most likely be reestablished downstream or around the project site following the completion of the CRM wall.

4.2.3 Visual Impacts

The new CRM wall will result in a positive long-term visual impact since it will replace the eroded embankment that currently exposes tree roots and the edges of the worn concrete slabs from the adjacent property's patio area. Over time, moss and other vegetation should grow on the new CRM wall section and in the wall crevices thereby causing it to blend in more naturally with the existing CRM walls adjacent to the project site.

4.2.4 Streambank Erosion Impacts

This existing section of the embankment along Kahiwa Ditch needs to be improved to halt the current erosion process that has been affecting the adjacent residential properties. Construction of the CRM retaining wall will prevent further erosion of the unimproved embankment section and thus minimize the potential for wall failures and property damage from occurring.

4.2.5 Land Ownership Impacts

Once constructed, portions of the CRM retaining wall will be outside of the City and County of Honolulu right-of-way. The City and County of Honolulu Department of Public Works will obtain a one-foot wide wall easement and a 4½-foot wide footing easement along the residential properties identified as TMK parcels 2-9-38:100 and 2-9-38:084. Although the residents of TMK parcels 2-9-38:100 and 2-9-38:084 will be giving up a portion of their property for the wall and footing easements, they will greatly benefit from the construction of the CRM wall. The CRM retaining wall will help to prevent further erosion of the embankment which is causing damage to their property.

4.2.6 Socio-Economic Impacts

A positive socio-economic impact from the proposed project is that the residents of TMK parcels 2-9-38:100 and 2-9-38:084 will greatly benefit from the new CRM wall. The new wall will help to prevent wall failures and damages to the respective properties which could have otherwise been costly for the owners. The City and County of Honolulu would also benefit in the long term since the costs spent now for the embankment protection would be far less than the repair and maintenance costs the City could potentially incur in the future if the section of unimproved embankment failed.

0000 0025 2652

SECTION 5
NOTICE OF FINDING OF
NO SIGNIFICANT IMPACT

SECTION 5 NOTICE OF FINDING OF NO SIGNIFICANT IMPACT

This Environmental Assessment document constitutes a Notice of Finding of No Significant Impact (FONSI). Although several potential negative impacts are expected from the proposed project during construction, these impacts are temporary and can be mitigated through measures identified in Section 4. The benefits that result from the proposed project are expected to outweigh the short-term negative impacts. As a result, an Environmental Impact Statement will not be required for the proposed improvements to the Kahiwa Place Drainage Ditch.

5.1 SIGNIFICANCE CRITERIA

The FONSI determination was made in accordance with the Hawaii Revised Statutes, Chapter 343 and the "Significance Criteria" listed in the Department of Health Rules (11-200-12). The proposed project would have a significant impact on the environment if it meets any one of the following "Significance Criteria":

5.1.1 Involves an Irrevocable Commitment to Loss or Destruction of Any Natural or Cultural Resources

The proposed project will not involve the loss or destruction of the natural or cultural resources in the area. The project site was not found to be the habitat for endangered or threatened species of native birds or mammals. Although the proposed project will result in the removal and destruction of some common stream bank vegetation and fauna habitats where the new cement rubble masonry (CRM) wall will be constructed, the vegetation and current inhabitants in the area can easily reestablish themselves in other parts of the ditch. New vegetation and fauna habitats may also eventually develop around the project site once construction is completed.

As previously noted, there were no findings of significant archaeological or historical sites in or around the proposed project site. If archaeological artifacts or bones are discovered during construction, work in the area will cease. The Department of Land and Natural Resources will be notified immediately to access the find and recommend the appropriate mitigative measures to be taken.

5.1.2 Curtails the Range of Beneficial Uses of the Environment

Kahiwa Place Drainage Ditch is located within a developed residential area in Manoa Valley. Most of the makai side of the ditch is already lined with CRM retaining walls. Adding approximately 85 lineal feet of CRM retaining wall to the existing walls will not significantly affect the appearance or limit the use of the area. According to residents near the project site, the ditch is often frequented by neighborhood children who catch fish or play in the water. Such recreational uses around the project site will be restricted during construction. However, following construction, access to the ditch will be returned to its normal condition.

0000 0025 2654

5.1.3 Conflicts With the State's Long-Term Environmental Policies or Goals and Guidelines as Expressed in Chapter 344, HRS; and Any Revisions Thereof and Amendments Thereto, Court Decisions, or Executive Orders

The proposed project is consistent with the State's Long-Term Environmental Policies established in Chapter 344, HRS.

5.1.4 Substantially Affects the Economic or Social Welfare of the Community or State

The proposed project will improve the economic and social welfare of the Manoa Valley residents, especially the homeowners of TMK parcels 2-9-38:100 and 2-9-38:084 that are adjacent to the project site. Current erosive conditions along the embankment are undermining adjacent residential properties and causing subsidence of wall structures. Construction of the proposed CRM retaining wall along the makai side of the drainage ditch will prevent further erosion of the embankment and subsequent wall failures or damages to the residential properties which could have otherwise been costly for the owners. By protecting the embankment now, the City and County of Honolulu would also prevent expensive repair and maintenance costs that would otherwise be incurred if the section of unimproved embankment failed in the future.

5.1.5 Substantially Affects Public Health

During the construction period, the ambient air quality, noise levels, and existing water quality of Kahiwa Ditch near the project site may be temporarily affected. As previously discussed in Section 4.1, the short term impacts anticipated during the construction of the CRM retaining wall include: nuisance dust; an increase in construction equipment emissions; an increase in noise levels due to construction activities; and a temporary increase in turbidity downstream of the project site. Such short term impacts can be mitigated through compliance with the applicable Federal, State, and City and County regulations. Following the completion of the new CRM wall, the environment around the project site should return to its normal conditions.

Benefits resulting from the proposed project are expected to outweigh the short term construction impacts. Delaying the project or proceeding with the "no action" alternative may increase the severity of the embankment erosion. Allowing the erosion to continue may result in failure of the existing embankment and potential damage to the adjacent residential properties.

5.1.6 Involves Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities

Construction of the proposed CRM retaining wall along the makai side of the drainage ditch will not generate substantial secondary impacts. No adverse impacts to existing public facilities are expected.

5.1.7 Involves a Substantial Degradation of Environmental Quality

The proposed project is not expected to degrade the environmental quality of the area

0000 0025 2655

substantially. However, the proposed project may temporarily affect the ambient air quality, noise levels, and existing water quality of Kahiwa Ditch during construction. The short term impacts anticipated during the construction of the CRM retaining wall include: nuisance dust; an increase in construction equipment emissions; an increase in noise levels due to construction activities; and a temporary increase in turbidity downstream of the project site. Such short term impacts can be mitigated through compliance with the applicable Federal, State, and City and County regulations.

Following the completion of the new CRM wall, the environment around the project site should return to normal. The quality of the stream water is expected to improve because of the reduction in soil erosion along the embankment. Benefits resulting from the proposed project are expected to outweigh the short term negative impacts. Delaying the project or proceeding with the "no action" alternative may result in failure of the existing embankment and damage to the adjacent residential properties. In addition, sediments in the stream water may increase during heavy rain events due to the erosion of the unprotected embankment.

5.1.8 Is Individually Limited But Cumulatively Has Considerable Effect on the Environment, or Involves a Commitment for Larger Actions

The purpose of constructing the CRM retaining wall along the makai side of the drainage ditch is to reduce soil erosion along the embankment and thus prevent further damage to the adjacent properties. Reducing soil erosion along the embankment will also reduce the sediments entering the stream and consequently improve the water quality in the long term. Once the retaining wall is complete, no immediate future improvements are planned for the ditch unless the City deems it necessary. Should improvements be warranted in the future, the condition of the ditch will be evaluated and the appropriate measures will be taken.

5.1.9 Substantially Affects a Rare, Threatened or Endangered Species or Its Habitat

The presence of any rare, threatened or endangered plant or animal species is not anticipated at or near the project site.

5.1.10 Detrimentially Affects Air or Water Quality or Ambient Noise Levels

The proposed project may temporarily affect the ambient air quality, noise levels, and water quality of Kahiwa Ditch during construction. Such short term impacts can be mitigated through compliance with the applicable Federal, State, and City and County regulations. A site specific Best Management Practices (BMP) plan would also be implemented during the construction phase of the project to minimize the short-term impacts to the environment. Following the completion of the new CRM wall, the environment around the project site should return to normal. The quality of the stream water is expected to improve because of the reduced soil erosion along the embankment. Benefits resulting from the proposed project are expected to outweigh the short-term negative impacts. Delaying the project or proceeding with the "no action" alternative may result in the failure of the existing embankment and damage to the adjacent residential properties. In addition, sediments in the stream water may increase during heavy rain events due

0000 0025 2656

to the erosion of the unprotected embankment.

5.1.11 Affects or is Likely to Suffer Damage by Being Located in an Environmentally Sensitive Area, Such as a Flood Plain, Tsunami Zone, Beach, Erosion-Prone Area, Geologically Hazardous Land, Estuary, Freshwater, or Coastal Waters.

The Kahiwa Place Drainage Ditch is not located in a flood plain, tsunami zone, beach erosion-prone area, geologically hazardous land, estuary or coastal waters. However, the proposed project will have an impact on nearby freshwater streams in Manoa Valley. The drainage ditch is a portion of Woodlawn Stream, which is a tributary of Manoa Stream. A temporary increase in the turbidity downstream of the project site should be expected during construction. This short-term impact can be mitigated through compliance with the applicable Federal, State, and City and County regulations. A BMP plan will also be implemented during the construction phase of the project to minimize impacts to the stream water quality.

Following the completion of the new CRM wall, the water quality of the stream should return to normal. Over the long term, the quality of the stream water is expected to improve due to the reduction in soil erosion along the embankment.

5.1.12 Substantially Affects Scenic Vistas and View Planes Identified in County or State Plans or Studies

The proposed project involves constructing approximately 85 feet of CRM retaining wall and chain link fence along the makai side of the drainage ditch. Most of the makai side of the embankment is already lined with CRM retaining walls. The proposed wall will be constructed between the two existing walls to connect and complete the CRM retaining wall along the makai side of the embankment. Therefore, the addition of the CRM retaining wall and chain link fence proposed in this project will not significantly change the current appearance of the drainage ditch. Over time, moss and other vegetation should grow on the new CRM wall section and in the wall crevices thereby causing it to blend in more naturally with the adjacent CRM walls.

5.1.13 Requires Substantial Energy Consumption

Construction of the proposed project will not require a substantial amount of energy. Once the CRM retaining wall and chain link fence are constructed, additional energy should not be required unless repairs to the structure is warranted in the future.

0000 0025 2657

SECTION 6
AGENCIES CONSULTED IN THE PREPARATION
OF THE ENVIRONMENTAL ASSESSMENT

SECTION 6
AGENCIES CONSULTED IN THE PREPARATION OF
THE ENVIRONMENTAL ASSESSMENT

The following agencies were consulted in the preparation of the Environmental Assessment (EA). Those agencies that responded with comments are indicated by an “ * ”. A copy of all the agency correspondence during the pre-assessment consultation period as well as the 30-day comment period has been included in Appendix B and C respectively.

6.1 FEDERAL GOVERNMENT

- *United States Government, Department of the Interior, Fish and Wildlife Service
United States Government, Department of Agriculture, Natural Resources Conservation Service
- *Department of the Army, United States Army Engineer District, Honolulu, Regulatory Branch

6.2 STATE GOVERNMENT

- *State of Hawaii, Department of Land and Natural Resources, Division of Aquatic Resources
- *State of Hawaii, Department of Land and Natural Resources, Historic Preservation Division
- *State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management
- *State of Hawaii, Department of Land and Natural Resources, Land Management Division
State of Hawaii, Department of Health, Clean Water Branch
- *State of Hawaii, Department of Health, Environmental Planning Office
- *State of Hawaii, Department of Business, Economic Development and Tourism, Office of Planning

6.3 CITY AND COUNTY OF HONOLULU

- *City and County of Honolulu, Department of Land Utilization
- *City and County of Honolulu, Planning Department
- *City and County of Honolulu, Department of Wastewater Management
- *Board of Water Supply

0000 0025 2659

6.4 OTHER PARTIES

State Senator, Brian Taniguchi
State Representative, Ed Case
City Council Member, Andy Mirikitani
Manoa Valley Neighborhood Board, Brian Baron
*Hawaiian Electric Company, Inc.
*Resident of TMK 2-9-38:084
*Resident of TMK 2-9-38:100
Resident of TMK 2-9-38:019
Resident of TMK 2-9-38:018
Resident of TMK 2-9-38:017
Resident of TMK 2-9-38:016
Resident of TMK 2-9-38:011
Resident of TMK 2-9-38:102
Resident of TMK 2-9-38:103
Resident of TMK 2-9-38:104
Resident of TMK 2-9-38:105
Resident of TMK 2-9-38:106
Resident of TMK 2-9-38:107
Resident of TMK 2-9-38:108
Resident of TMK 2-9-38:109
Resident of TMK 2-9-38:110
Resident of TMK 2-9-38:093
Resident of TMK 2-9-38:094
Resident of TMK 2-9-38:095
Resident of TMK 2-9-38:096
Resident of TMK 2-9-38:097
Resident of TMK 2-9-38:098
Resident of TMK 2-9-38:099

0000 0025 2660

REFERENCES

REFERENCES

1. Char, Winona. Flora Survey of Manoa Hillside Estates. Botanical Environmental Consultants, May 1986.
2. Department of Land and Natural Resources, Division of Aquatic Resources. 11/17/95 Memorandum to GMP Associates, Inc. Regarding Comments to Stream Channel Alteration.
3. Flood Insurance Rate Map, National Flood Insurance Program, Federal Emergency Management Agency, September 1990.
4. Fox, Jefferson and William Freeman. Management Plan for the Ala Wai Canal Watershed. East West Center Program on Environment, Honolulu, 1992.
5. Geographic Information System, Department of Land Utilization, City and County of Honolulu.
6. Krauss, Beatrice. Plants in Hawaiian Culture. University of Hawaii, Honolulu, 1993.
7. City and County of Honolulu Department of Public Works, Storm Drainage Standards, 1988.
8. GMP Associates, Engineering Report for Kahiwa Place Drainage Ditch Improvements, August 1995.
9. United States Department of Agriculture Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, August 1972.

0000 0025 2662

APPENDIX A
CONSTRUCTION PLANS

DEPARTMENT OF PUBLIC WORKS
 DIVISION OF ENGINEERING
 CITY & COUNTY OF HONOLULU
 JOB NO. —

KAHIWA PLACE DRAINAGE DITCH IMPROVEMENTS

TAX MAP KEY: 2-9-38:14
 HONOLULU, OAHU, HAWAII
 ISLAND OF OAHU

PREPARED BY:
GMP ASSOCIATES, INC.
 ENGINEERS/ARCHITECTS
 HONOLULU, HAWAII

VICINITY MAP	LOCATION MAP	SHEET INDEX	APPROVED																						
		<table border="1"> <thead> <tr> <th>SHEET NO.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>T-1</td> <td>TITLE SHEET</td> </tr> <tr> <td>C-1</td> <td>CIVIL NOTES, ABBREVIATIONS AND LEGEND</td> </tr> <tr> <td>C-2</td> <td>SITE PLAN</td> </tr> <tr> <td>C-3</td> <td>WALL PROFILE AND DITCH CROSS SECTIONS</td> </tr> <tr> <td>C-4</td> <td>CIVIL DETAILS</td> </tr> <tr> <td>S-1</td> <td>GENERAL NOTES, ABBREVIATIONS AND DETAILS</td> </tr> <tr> <td>S-2</td> <td>STRUCTURAL SECTIONS AND DETAILS</td> </tr> </tbody> </table>	SHEET NO.	DESCRIPTION	T-1	TITLE SHEET	C-1	CIVIL NOTES, ABBREVIATIONS AND LEGEND	C-2	SITE PLAN	C-3	WALL PROFILE AND DITCH CROSS SECTIONS	C-4	CIVIL DETAILS	S-1	GENERAL NOTES, ABBREVIATIONS AND DETAILS	S-2	STRUCTURAL SECTIONS AND DETAILS	<table border="1"> <thead> <tr> <th colspan="2">APPROVED</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td colspan="2"> DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU </td> <td></td> </tr> </tbody> </table>	APPROVED		DATE	DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU		
SHEET NO.	DESCRIPTION																								
T-1	TITLE SHEET																								
C-1	CIVIL NOTES, ABBREVIATIONS AND LEGEND																								
C-2	SITE PLAN																								
C-3	WALL PROFILE AND DITCH CROSS SECTIONS																								
C-4	CIVIL DETAILS																								
S-1	GENERAL NOTES, ABBREVIATIONS AND DETAILS																								
S-2	STRUCTURAL SECTIONS AND DETAILS																								
APPROVED		DATE																							
DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU																									

GENERAL NOTES:

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", SEPTEMBER 1986, AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY & COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.
- THE UNDERGROUND PIPES, CABLES, OR DUCTLINES KNOWN TO EXIST BY THE CONTRACTING OFFICER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL TONE THE AREA TO VERIFY THE LOCATIONS OF ALL UTILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHENEVER CONNECTIONS OR CROSSINGS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS OR CROSSINGS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- TOPOGRAPHIC SURVEY IS BASED UPON A SURVEY BY GMP ASSOCIATES, INC., IN AUGUST 1995. HORIZONTAL CONTROL IS BASED UPON FOUND CITY AND COUNTY STREET MONUMENTS ALONG EAST MANOA ROAD AS SHOWN ON SHEET C-2. PROJECT BENCHMARK IS STREET MONUMENT AT THE INTERSECTION OF EAST MANOA ROAD AND KAAMALIO DRIVE. TOP OF PIN ELEVATION = 190.49.
- NO BLASTING SHALL BE PERMITTED ON THIS PROJECT.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL RESPOND TO COMPLAINTS MADE BY THE PUBLIC AND NEARBY RESIDENTS REGARDING DUST AND NOISE POLLUTION RESULTING FROM HIS WORK.
- THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO AND FROM ALL DRIVEWAYS AND STREETS.
- THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER UPON UNCOVERING ANY POTENTIAL HISTORICAL ARTIFACTS OR ITEMS OF ARCHAEOLOGICAL SIGNIFICANCE.
- THE EXISTING IMPROVEMENTS IN ADJACENT AREAS THAT ARE NOT TO BE REMOVED SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND REPAIRED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE CHIEF ENGINEER OF PUBLIC WORKS AT THE EXPENSE OF THE CONTRACTOR.
- ALL EXISTING UTILITIES TO REMAIN IN USE, WHETHER OR NOT SHOWN ON THESE DRAWINGS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION UNLESS SPECIFIED ON THE DRAWINGS TO BE ABANDONED OR DEMOLISHED. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
- UNLESS RELOCATION IS CALLED FOR ON THESE DRAWINGS, EXISTING UTILITIES SHALL REMAIN IN SERVICE AND IN PLACE. IF RELOCATION OF EXISTING UTILITIES IS REQUIRED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER.
- VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THESE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CLARIFICATION.
- WHERE TIES TO THE PROPOSED STRUCTURES ARE SHOWN TO THE SIDES OF THE STRUCTURES, WHICH TIES ARE TO EXTERIOR WALL LINES, FOR EXACT DIMENSIONS OF THE STRUCTURES, SEE STRUCTURAL DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION SECTION, DIVISION OF ENGINEERING, DEPARTMENT OF PUBLIC WORKS AT 527-8311 TO ARRANGE FOR INSPECTORIAL SERVICES AND SUBMIT THREE (3) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
- THE CONTRACTOR SHALL HIRE AN INDEPENDENT LICENSED GEOTECHNICAL ENGINEER TO PERFORM A GEOTECHNICAL ENGINEERING INVESTIGATION, PERFORM LABORATORY TESTING, CONDUCT DETAILED ENGINEERING ANALYSIS, OBSERVE AND MONITOR SITE PREPARATION, GRADING, FOUNDATION SUBGRADE TREATMENT, AND WALL BACKFILL PLACEMENT AND COMPACTION.

GRADING NOTES:

- ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16 AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.
- NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL, OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATER COURSES. SHOULD VIOLATIONS OCCUR, THE COSTS INCURRED FOR ANY REMEDIAL ACTION BY THE CHIEF ENGINEER SHALL BE PAID BY THE CONTRACTOR.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN CHAPTER 11-60, "AIR POLLUTION CONTROL".
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
- ALL SLOPES AND EXPOSED AREAS SHALL BE SOODED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED, SHALL BE PLANTED.
- FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
- THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS OR HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE CHIEF ENGINEER, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH HAWAII ADMINISTRATIVE RULES, CHAPTER 11-43, "COMMUNITY NOISE CONTROL FOR OAHU".
- THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, CHAPTER 11-55, "WATER POLLUTION CONTROL" AND CHAPTER 11-54, "WATER QUALITY STANDARDS", AND IF APPLICABLE, THE NPDES PERMIT OF THE PROJECT.
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED UNTIL THE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING PERMIT.
- IF GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE PERMITTEE. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES.
- BUILDING PERMIT FOR RETAINING WALLS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF GRADING WORK ON SITE.
- FOR BENCH MARK, SEE SHEET C-2.

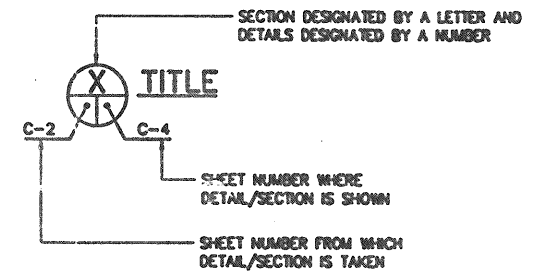
ABBREVIATIONS

A	ASPHALTIC CONCRETE
AC	AMERICAN CONCRETE INSTITUTE
ADJ	ADJACENT
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
B	
BB	BOTTOM OF BANK
BBW	BOTTOM OF BRIDGE WALL
BOT	BOTTOM
BRW	BOTTOM OF ROCK WALL
C	
CLR. CL	CLEAR CONCRETE
CONC	CONCRETE
CRM	CONCRETE RUBBLE MASONRY
D	
DWVY	DRIVEWAY
E	
E	EAST
ELEV	ELEVATION
EXST	EXISTING
G	
GP	GUY POLE
GRND	GROUND
H	
HORIZ	HORIZONTAL
I	
INV	INVERT
J	
JT	JOINT
L	
LG	LONG
N	
N	NORTH
NO. #	NUMBER
NTS	NOT TO SCALE
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
O	
OC	ON CENTER
O/S	OFFSET
P	
PC	POINT OF CURVATURE
PP	POWER POLE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCED
S	
SDMH	STORM DRAIN MANHOLE
STA	STATION
STY	STORY
T	
TBW	TOP OF BRIDGE WALL
TC	TOP OF CURB
TRK	THICK
TRK	TAX MAP KEY
TRW	TOP OF ROCK WALL
TW	TOP OF WALL
TYP	TYPICAL
U	
UBC	UNIFORM BUILDING CODE
V	
VERT	VERTICAL
W	
W/	WITH
WM	WATER METER
WV	WATER VALVE
OTHER	
&	AND
AT	BASELINE
CL	CENTERLINE
Ø	DIAMETER
%	PERCENT

LEGEND

EXISTING	NEW	DESCRIPTION
		CONCRETE
		CONTOUR
		EXISTING TREE
		SPOT ELEVATION
		FLOW LINE
		SHEET FLOW
		BASE LINE
		PROPERTY LINE
		CHAIN LINK FENCE
		WIRE FENCE
		WALLS (CRM OR ROCK)
		TILE WALLS
		LIMITS OF GRADING

DETAIL/SECTION TITLE



REVISION	DATE	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING KAHIWA PLACE DRAINAGE DITCH IMPROVEMENTS Honolulu, Oahu, Hawaii TWC: 2-9-3814			
CIVIL NOTES, ABBREVIATIONS, AND LEGEND			
DESIGNED BY	EMS	CHECKED BY	TAC
DRAWN BY	MDE	DATE	1/16/98
APPROVED:			
GMP ASSOCIATES, INC.			
JOB NO.			

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature _____

Draw. No. **C-1**

FILE	PROJECT	DATE	NO.
------	---------	------	-----

JOB NO. 2427492 PRELIM 14.41 01/06/98

GENERAL NOTES:

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", SEPTEMBER 1986, AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY & COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.
- THE UNDERGROUND PIPES, CABLES, OR DUCTLINES KNOWN TO EXIST BY THE CONTRACTING OFFICER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL TONE THE AREA TO VERIFY THE LOCATIONS OF ALL UTILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHENEVER CONNECTIONS OR CROSSINGS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS OR CROSSINGS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- TOPOGRAPHIC SURVEY IS BASED UPON A SURVEY BY GMP ASSOCIATES, INC., IN AUGUST 1995. HORIZONTAL CONTROL IS BASED UPON FOUND CITY AND COUNTY STREET MONUMENTS ALONG EAST MANOA ROAD AS SHOWN ON SHEET C-2. PROJECT BENCHMARK IS STREET MONUMENT AT THE INTERSECTION OF EAST MANOA ROAD AND KAAMALIO DRIVE. TOP OF PIN ELEVATION = 190.49.
- NO BLASTING SHALL BE PERMITTED ON THIS PROJECT.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL RESPOND TO COMPLAINTS MADE BY THE PUBLIC AND NEARBY RESIDENTS REGARDING DUST AND NOISE POLLUTION RESULTING FROM HIS WORK.
- THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO AND FROM ALL DRIVEWAYS AND STREETS.
- THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER UPON UNCOVERING ANY POTENTIAL HISTORICAL ARTIFACTS OR ITEMS OF ARCHAEOLOGICAL SIGNIFICANCE.
- THE EXISTING IMPROVEMENTS IN ADJACENT AREAS THAT ARE NOT TO BE REMOVED SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND REPAIRED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE CHIEF ENGINEER OF PUBLIC WORKS AT THE EXPENSE OF THE CONTRACTOR.
- ALL EXISTING UTILITIES TO REMAIN IN USE, WHETHER OR NOT SHOWN ON THESE DRAWINGS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION UNLESS SPECIFIED ON THE DRAWINGS TO BE ABANDONED OR DEMOLISHED. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
- UNLESS RELOCATION IS CALLED FOR ON THESE DRAWINGS, EXISTING UTILITIES SHALL REMAIN IN SERVICE AND IN PLACE. IF RELOCATION OF EXISTING UTILITIES IS REQUIRED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER.
- VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THESE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CLARIFICATION.
- WHERE TIES TO THE PROPOSED STRUCTURES ARE SHOWN TO THE SIDES OF THE STRUCTURES, SUCH TIES ARE TO EXTERIOR WALL LINES. FOR EXACT DIMENSIONS OF THE STRUCTURES, SEE STRUCTURAL DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION SECTION, DIVISION OF ENGINEERING, DEPARTMENT OF PUBLIC WORKS AT 527-6311 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT THREE (3) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
- THE CONTRACTOR SHALL HIRE AN INDEPENDENT LICENSED GEOTECHNICAL ENGINEER TO PERFORM A GEOTECHNICAL ENGINEERING INVESTIGATION, PERFORM LABORATORY TESTING, CONDUCT DETAILED ENGINEERING ANALYSIS, OBSERVE AND MONITOR SITE PREPARATION, GRADING, FOUNDATION SUBGRADE TREATMENT, AND WALL BACKFILL PLACEMENT AND COMPACTION.

GRADING NOTES:

- ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16 AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.
- NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL, OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATER COURSES. SHOULD VIOLATIONS OCCUR, THE COSTS INCURRED FOR ANY REMEDIAL ACTION BY THE CHIEF ENGINEER SHALL BE PAID BY THE CONTRACTOR.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN CHAPTER 11-60, "AIR POLLUTION CONTROL".
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
- ALL SLOPES AND EXPOSED AREAS SHALL BE SOODED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED, SHALL BE PLANTED.
- FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
- THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS OR HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE CHIEF ENGINEER, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH HAWAII ADMINISTRATIVE RULES, CHAPTER 11-43, "COMMUNITY NOISE CONTROL FOR OAHU".
- THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, CHAPTER 11-65, "WATER POLLUTION CONTROL" AND CHAPTER 11-54, "WATER QUALITY STANDARDS", AND IF APPLICABLE, THE NPOES PERMIT OF THE PROJECT.
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED UNTIL THE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING PERMIT.
- IF GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE PERMITTEE. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES.
- BUILDING PERMIT FOR RETAINING WALLS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF GRADING WORK ON SITE.
- FOR BENCH MARK, SEE SHEET C-2.

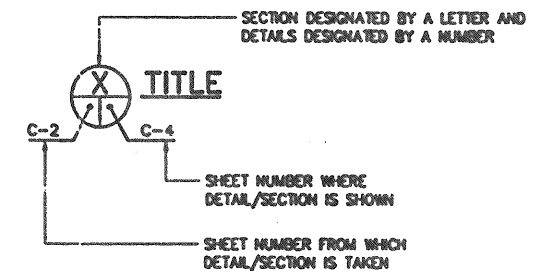
ABBREVIATIONS

A	ASPHALTIC CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
ADJ	ADJACENT
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
B	
BB	BOTTOM OF BANK
BBW	BOTTOM OF BRIDGE WALL
BOT	BOTTOM
BRW	BOTTOM OF ROCK WALL
C	
CLR, CL	CLEAR
CONC	CONCRETE
CRM	CONCRETE RUBBLE MASONRY
D	
DVWY	DRIVEWAY
E	
E	EAST
ELEV	ELEVATION
EXIST	EXISTING
G	
GP	GUY POLE
GRND	GROUND
H	
HORIZ	HORIZONTAL
I	
INV	INVERT
J	
JT	JOINT
L	
LG	LONG
N	
N	NORTH
NO.	NUMBER
NTS	NOT TO SCALE
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
O	
OC	ON CENTER
O/S	OFFSET
P	
PC	POINT OF CURVATURE
PP	POWER POLE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCED
S	
SDMH	STORM DRAIN MANHOLE
STA	STATION
STY	STORY
T	
TBW	TOP OF BRIDGE WALL
TC	TOP OF CURB
THK	THICK
TMK	TAX MAP KEY
TRW	TOP OF ROCK WALL
TW	TOP OF WALL
TYP	TYPICAL
U	
UBC	UNIFORM BUILDING CODE
V	
VERT	VERTICAL
W	
W	WITH
WM	WATER METER
WV	WATER VALVE
OTHER	
&	AND
@	AT
B	BASELINE
C	CENTERLINE
Ø	DIAMETER
%	PERCENT

LEGEND

EXISTING	NEW	DESCRIPTION
		CONCRETE
		CONTOUR
		EXISTING TREE
		SPOT ELEVATION
		FLOW LINE
		SHEET FLOW
		BASE LINE
		PROPERTY LINE
		CHAIN LINK FENCE
		WIRE FENCE
		WALLS (CRM OR ROCK)
		TILE WALLS
		LIMITS OF GRADING

DETAIL/SECTION TITLE



DESIGNED BY	EMS	CHECKED BY	TAC
DRAWN BY	MDE	DATE	1/16/98
APPROVED:			
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING KAHIIWA PLACE DRAINAGE DITCH IMPROVEMENTS Honolulu, Oahu, Hawaii Tel: 2-9-3814 CIVIL NOTES, ABBREVIATIONS, AND LEGEND			
GMP ASSOCIATES, INC. JOB NO.			

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature
 Date: C-1

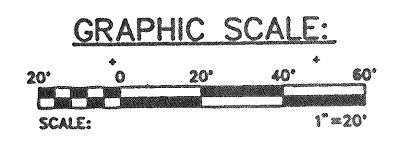
FILE	PROJECT	TABULAR	NO.
------	---------	---------	-----

JOB NO. 242700
 14-41 PRELIMINAL
 01/05/98 2427K492

NOTES:

1. PRIOR TO ANY CLEARING OR GRADING, THE CONTRACTOR SHALL:
 - A. INSPECT THE ENTIRE SITE AND VERIFY WITH THE CONTRACTING OFFICER ALL STRUCTURES TO BE REMOVED AND TO BE PRESERVED.
 - B. MEASURE WATER QUALITY OF THE DITCH FLOW AT OR NEAR STATIONS 10+50, 11+50, AND 12+50.
 - C. SUBMIT A PLAN AND INSTALL EROSION CONTROL DEVICES SUCH AS SILT CURTAINS OR OTHER EROSION CONTROL DEVICES AT OR NEAR STATION 10+75 TO CONTROL WATER POLLUTION DOWNSTREAM OF THE PROJECT SITE.
2. DURING CLEARING, GRADING AND CONSTRUCTION THE CONTRACTOR SHALL:
 - A. MAINTAIN AND REPAIR EROSION CONTROL DEVICES TO CONTROL WATER POLLUTION DOWNSTREAM OF THE PROJECT SITE.
 - B. REMOVE SILT AND DEBRIS TRAPPED BY EROSION CONTROL DEVICES AS DIRECTED BY THE CONTRACTING OFFICER.
 - C. MEASURE WATER QUALITY OF THE DITCH FLOW AT OR NEAR STATIONS 10+50, 11+50, AND 12+50.
 - D. INSURE THAT ALL VEHICLES LEAVING THE SITE WILL BE FREE OF MUD.
 - E. SWEEP AND MAINTAIN EXISTING PAVED AREAS 2-3 TIMES DAILY DURING WORK PERIODS AND AS DIRECTED BY THE CONTRACTING OFFICER.
3. THE CONTRACTOR SHALL MONITOR THE WATER QUALITY OF THE DITCH FLOW AS REQUIRED BY THE DEPARTMENT OF HEALTH'S SECTION 401 WATER QUALITY CERTIFICATION.
4. EROSION CONTROL DEVICES SHALL REMAIN UNTIL ALL CONSTRUCTION WORK IS COMPLETED.
5. REMOVE AND DISPOSE OF OFFSITE THE EROSION CONTROL DEVICES WHEN THE PROJECT IS COMPLETED.

CURVE DATA		
	①	②
Δ	82°44'10"	82°44'10"
Δ/2	41°22'05"	41°22'05"
R	55.00'	40.00'
CH	72.70'	52.87'
T	48.43'	35.23'
L.C.	79.42'	57.76'



REVISION	DATE	BY	APPROVED

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
DIVISION OF ENGINEERING
**KAHIWA PLACE
DRAINAGE DITCH IMPROVEMENTS**
Honolulu, Oahu, Hawaii
TMC 2-9-36-14

SITE PLAN

DESIGNED BY: EMS
CHECKED BY: TAC
DRAWN BY: MDC
DATE: 1/16/98
APPROVED: [Signature]

DATE: 01/13/98

GMP ASSOCIATES, INC.

JOB NO. _____

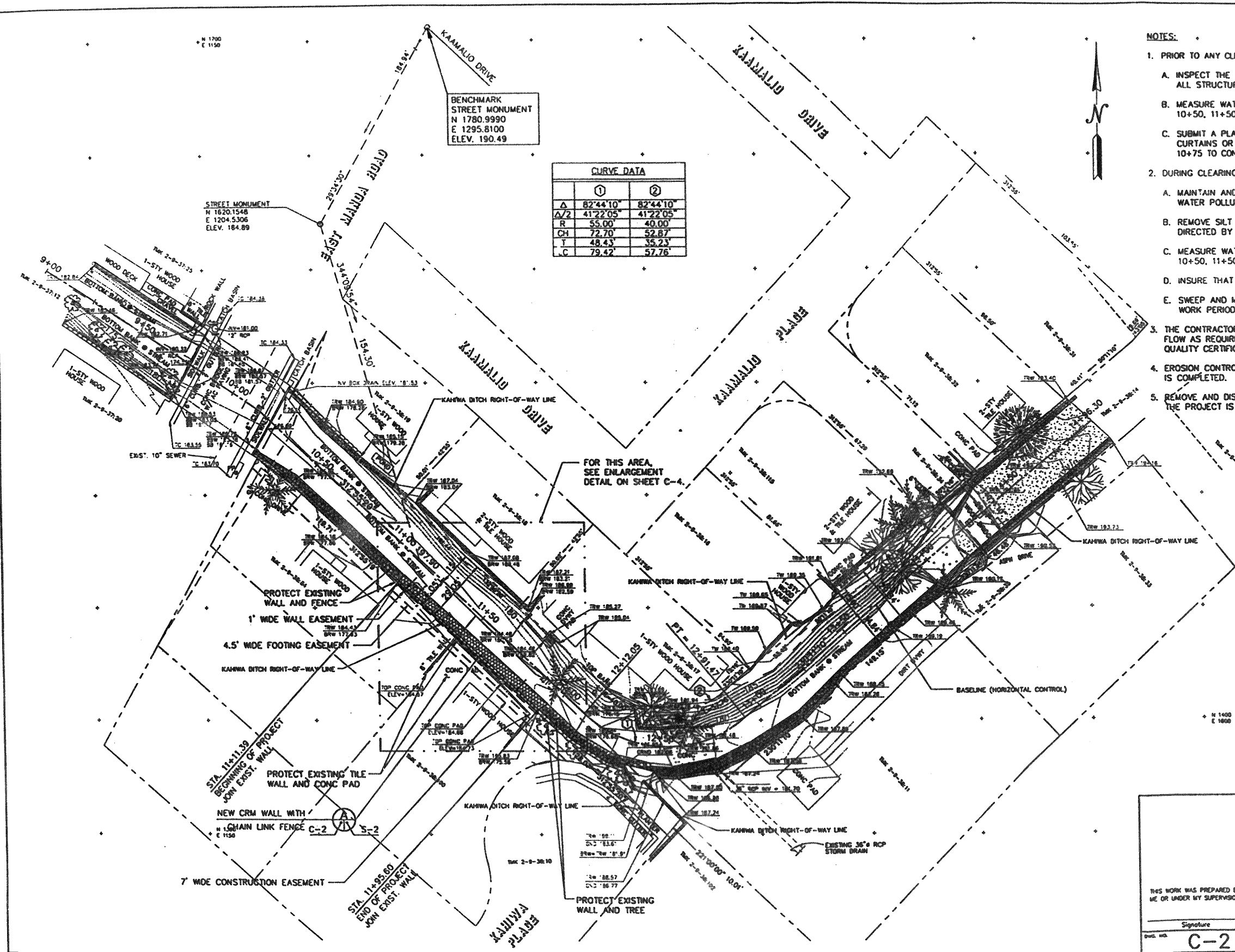
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature _____

DATE: _____

C-2

FILE	PROJECT	SCALE	NO.



N 1700
E 1150

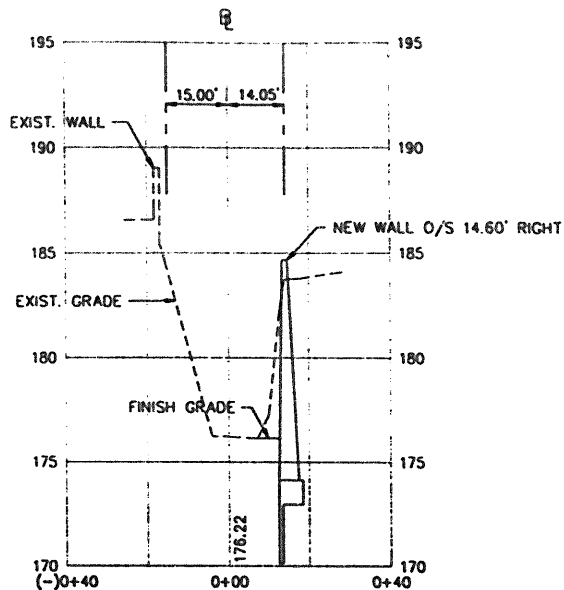
N 1700
E 1700

BENCHMARK
STREET MONUMENT
N 1780.9990
E 1295.8100
ELEV. 190.49

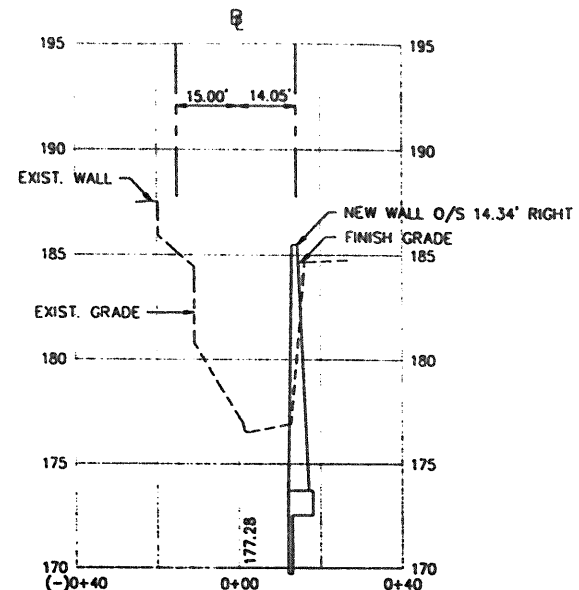
STREET MONUMENT
N 1620.1548
E 1204.5306
ELEV. 184.89

FOR THIS AREA,
SEE ENLARGEMENT
DETAIL ON SHEET C-4.

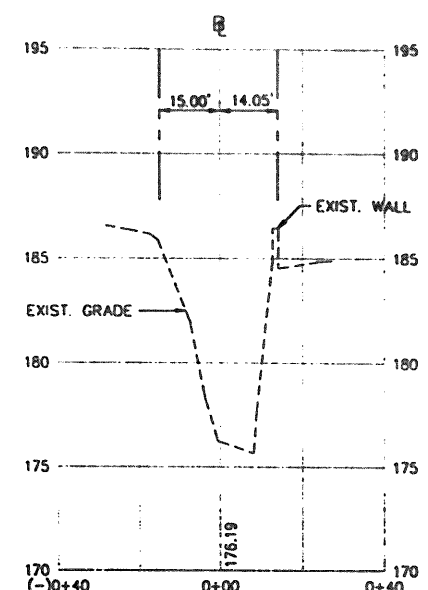
N 1400
E 1600



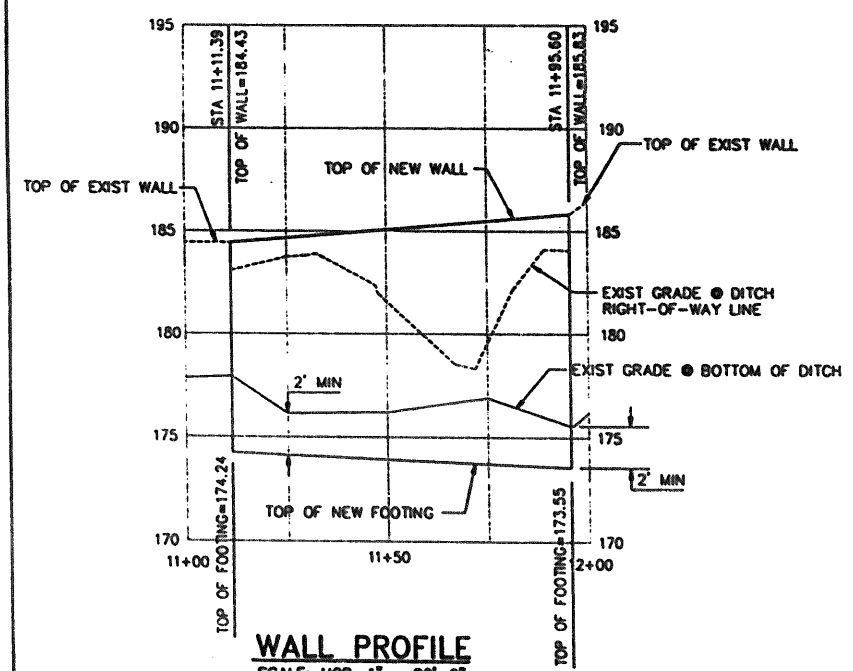
DRAINAGE DITCH @ STA 11+25
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"



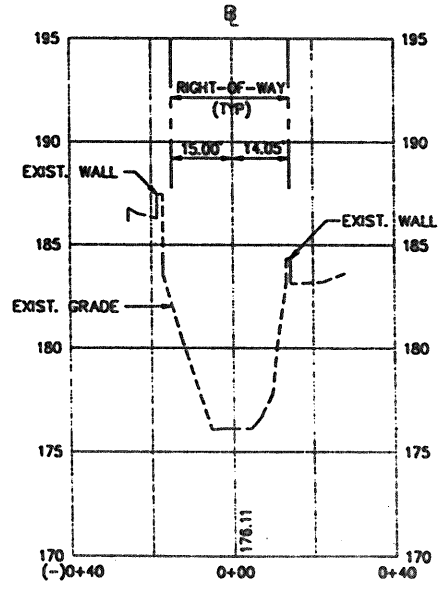
DRAINAGE DITCH @ STA 11+75
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"



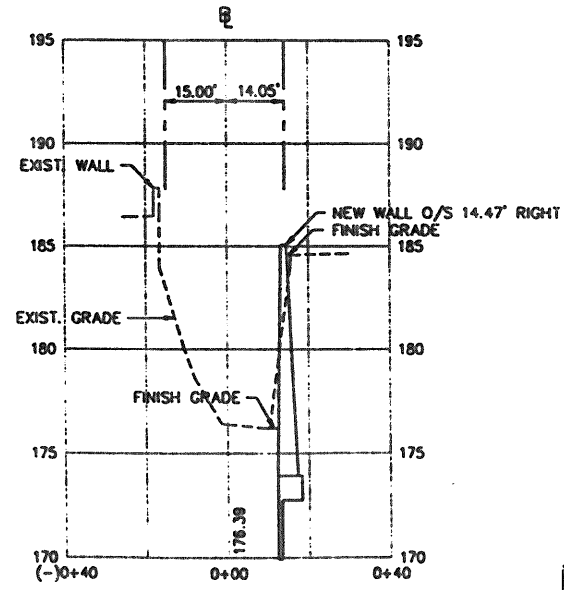
DRAINAGE DITCH @ STA 12+00
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"



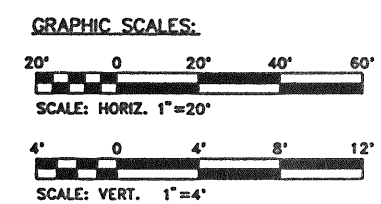
WALL PROFILE
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"



DRAINAGE DITCH @ STA 11+00
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"

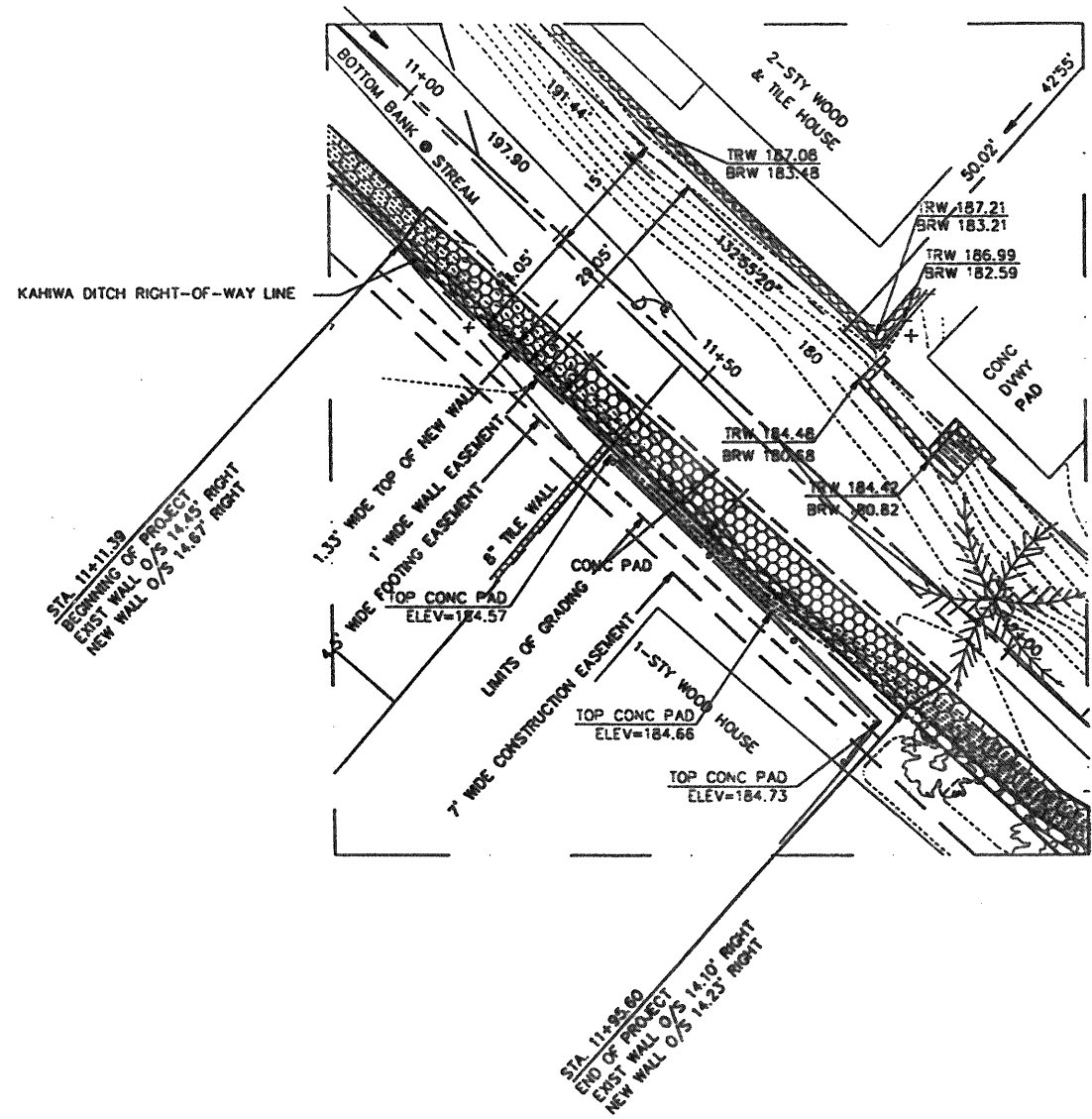


DRAINAGE DITCH @ STA 11+50
 SCALE: HOR: 1" = 20'-0"
 VERT: 1" = 4'-0"



REVISION	DATE	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING KAHIWA PLACE DRAINAGE DITCH IMPROVEMENTS Honolulu, Oahu, Hawaii TMC: 2-9-38:14			
WALL PROFILE AND DITCH CROSS SECTIONS			
DESIGNED BY	EMS	CHECKED BY	TAC
DRAWN BY	MDE	DATE	1/16/98
APPROVED:			
Signature _____ DATE _____		GMP ASSOCIATES, INC. JOB NO. _____	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.



GRAPHIC SCALE:



REVISION	DATE	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING KAHIWA PLACE DRAINAGE DITCH IMPROVEMENTS Honolulu, Oahu, Hawaii TAC: 2-9-38-14 CIVIL DETAILS			
DESIGNED BY	EMS	CHECKED BY	TAC
DRAWN BY	MDE	DATE	1/16/98
APPROVED:			
GMP ASSOCIATES, INC. JOB NO.			

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature

DWG. NO. **C-4**

GENERAL NOTES:

1. **GENERAL:**
 - A. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SEPT 1986) HOWEVER, WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.
 - B. THE CONTRACTOR SHALL COMPARE THE CIVIL AND STRUCTURAL DRAWINGS WITH EACH OTHER AND REPORT IN WRITING TO THE CONTRACTING OFFICER ALL INCONSISTENCIES OR OMISSIONS.
 - C. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING THE WORK. REPORT IN WRITING TO THE CONTRACTING OFFICER ALL ERRORS, INCONSISTENCIES OR OMISSIONS.
 - D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.
 - E. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER FOUR (4) WORKING DAYS PRIOR TO CONCRETE POURS.
 - F. DETAILS NOTED AS TYPICAL ON STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS NOTED OTHERWISE.

2. **DESIGN CRITERIA:**

- A. SEISMIC ZONE 2A
- B. BASIC WIND SPEED 80 MPH, EXPOSURE B

3. **FOUNDATION:**

A. PRIOR TO START OF CONSTRUCTION, A GEOTECHNICAL ENGINEER SHALL BE HIRED TO:

1. CONFIRM GEOTECHNICAL DATA.
2. EVALUATE DIFFERENTIAL SETTLEMENT.
3. PROVIDE DESIGN DATA FOR SHORING.
4. PROVIDE RECOMMENDATIONS FOR BACKFILL BEHIND THE WALL.

THIS GEOTECHNICAL ENGINEER SHALL ALSO BE RETAINED TO DO CONSTRUCTION MONITORING. IF GEOTECHNICAL DATA OR RECOMMENDATION DIFFER, NOTIFY CONTRACTING OFFICER SINCE REDESIGN MAY BE NECESSARY.

GEOTECHNICAL DATA:

1. ALLOWABLE BEARING PRESSURE 1500 PSF
2. ACTIVE EQUIVALENT FLUID PRESSURE 45 PCF
3. PASSIVE PRESSURE 150 PSF
4. FRICTION COEFFICIENT 0.3

B. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING AND SHORING NECESSARY TO PRESERVE EXCAVATIONS AND EARTH BANKS AND ADJACENT STRUCTURES AND PROPERTY FROM DAMAGE.

C. EXCAVATIONS FOR FOOTINGS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER WHEN EXCAVATION IS READY FOR INSPECTION. THE GEOTECHNICAL ENGINEER SHALL SUBMIT A LETTER OF COMPLIANCE.

D. EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND THE RETAINING WALL BEFORE THE WALL HAS ATTAINED FULL DESIGN STRENGTH.

4. **REINFORCING STEEL:**

A. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.

B. CLEAR CONCRETE COVERAGE FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

1. FOOTINGS CAST AGAINST EARTH 3"
2. FOOTINGS/WALLS FORMED AND EXPOSED TO EARTH 2"

C. SPLICES:

1. REINFORCING STEEL SHALL BE SPLICED ONLY WHEN INDICATED ON PLANS. PROVIDE LAP SPLICE LENGTH EQUAL TO 48 BAR DIAMETERS UNLESS OTHERWISE NOTED.
2. BAR BENDS AND HOOK SHALL BE "STANDARD HOOKS" IN ACCORDANCE WITH ACI 318.

5. **CONCRETE:**

A. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, CLASS "AAA".

6. **SPECIAL INSPECTION:**

A. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SPECIAL INSPECTION OF PORTIONS OF THE WORK, REQUIRED BY THE BUILDING CODE OF THE CITY AND COUNTY OF HONOLULU, BE MADE AT THE APPROPRIATE TIME. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR SPECIAL INSPECTION WITH AN ENTITY SELECTED BY THE CITY AND COUNTY. THE CONTRACTOR SHALL GIVE TIMELY NOTICE OF WHEN AND WHERE INSPECTIONS ARE TO BE MADE AND PROVIDE ACCESS FOR THE INSPECTOR. THE CONTRACTOR SHALL CORRECT DEFECTIVE WORK AT NO ADDITIONAL COST TO THE OWNER AND PAY FOR REINSPECTION.

B. THE FOLLOWING STRUCTURAL WORK FOR THIS PROJECT REQUIRES SPECIAL INSPECTION:

- a. CONCRETE
- b. REINFORCING STEEL

7. **KEYS:**

A. KEYS SHALL HAVE A WIDTH OF 1/3 THE ELEMENT THICKNESS AND 1-1/2" DEEP UNLESS OTHERWISE SHOWN ON THE PLANS.

ABBREVIATIONS

SYMBOL	DESCRIPTION
⊙	AT
AB	ANCHOR BOLT
AC	ASPHALTIC CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
ADJ.	ADJACENT
ALT.	ALTERNATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
B, BOT.	BOTTOM
BAL	BALANCE
BTWN	BETWEEN
CC	CENTER TO CENTER
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CL, ⚡	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CRM	CEMENT RUBBLE MASONRY
DET	DETAIL
DIA, ⬤	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG, DWGS.	DRAWING, DRAWINGS
DWL	DOWEL
EF	EACH FACE
ELEV	ELEVATION, ELEVATOR
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION, EXPANSIVE
EXSTG	EXISTING
FDN	FOUNDATION
FIN	FINISH
FLR	FLOOR
FW	FACE OF WALL
FS	FINISH SLAB
FT	FEET
FTG	FOOTING
H, HOR	HORIZONTAL
HT	HEIGHT
INV	INVERT
JT	JOINT
L	LENGTH
LONG	LONGITUDINAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH.	MECHANICAL
MET	METAL
MID	MIDDLE
MIN	MINIMUM
MPH	MILES PER HOUR
NTS	NOT TO SCALE
#	NUMBER
OC	ON CENTERS
OPEN'G	OPENING
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REBAR	REINFORCING BAR
REINF	REINFORCEMENT

ABBREVIATIONS

SYMBOL	DESCRIPTION
REQD	REQUIRED
SCHED.	SCHEDULE
SEC	SECTION
SHT	SHEET
SPC	SPACE
SPCD	SPACED
SPCG	SPACING
SPECS	SPECIFICATIONS
STRUCT	STRUCTURAL, STRUCTURE
STD	STANDARD
SQ	SQUARE
SYMM	SYMMETRICAL
T	TOP
THK	THICK, THICKNESS
T.O.W.	TOP OF WALL
TRANS	TRANSVERSE
TYP	TYPICAL
V, VERT	VERTICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
W	WALL, WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WF	WALL FOOTING
WWF	WELDED WIRE FABRIC

REVISION	DATE	DATE	BY	APPROVED

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
DIVISION OF ENGINEERING
KAHIWA PLACE
DRAINAGE DITCH IMPROVEMENTS
Honolulu, Oahu, Hawaii
TMC 2-9-38-14

GENERAL NOTES AND ABBREVIATIONS

DESIGNED BY BK CHECKED BY BK
DRAWN BY DATE 1/16/98
APPROVED:

GMP ASSOCIATES, INC.

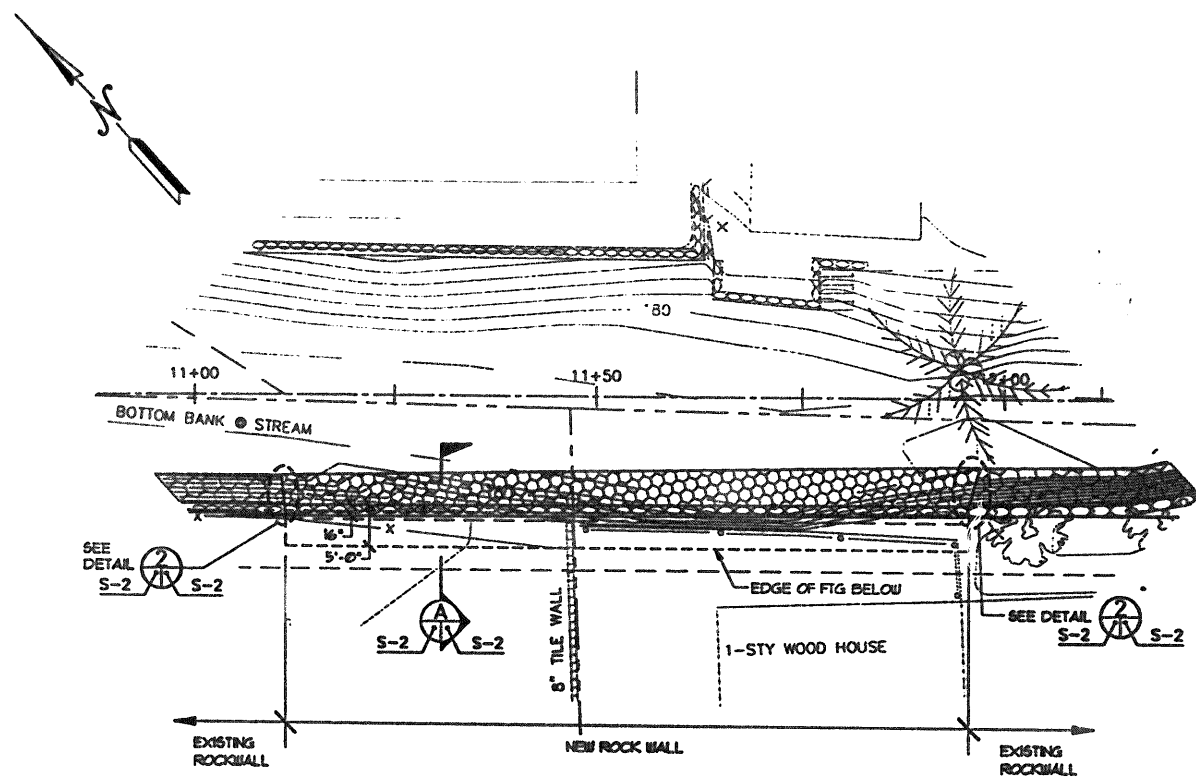
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature _____

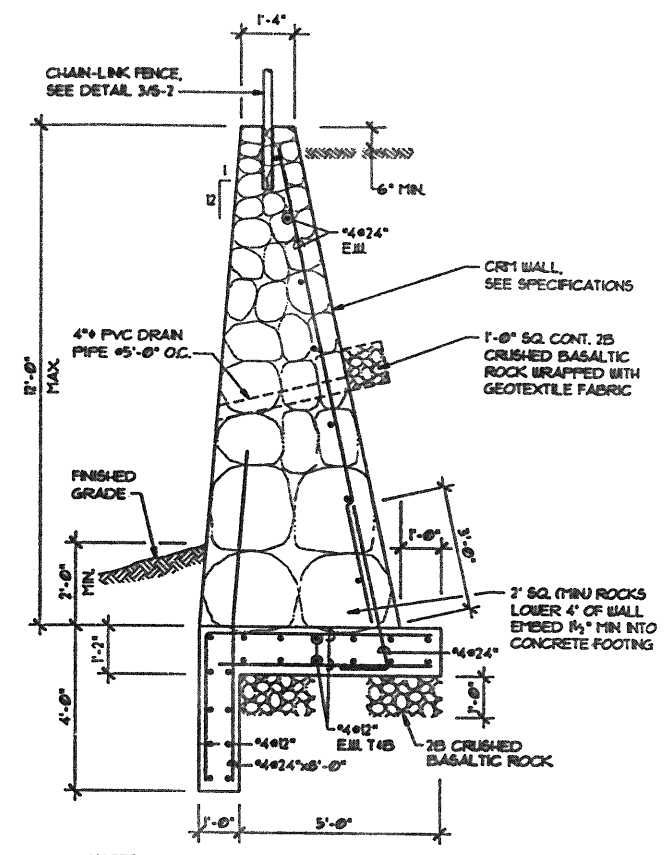
DWG. NO. S-1

FILE	PROJECT	FOLDER	NO.

24275080 01/15/98 14.03 PRELIMINAL

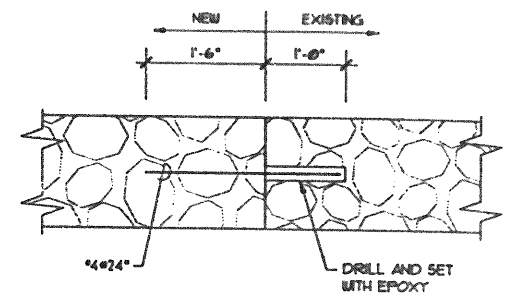


1 PLAN
SCALE: 1"=10'-0"
S-2 S-2

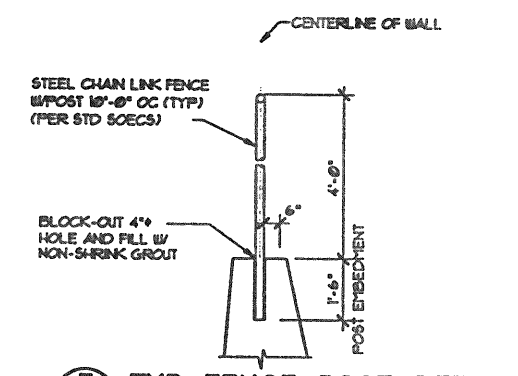


NOTES
1- THE SLOPE AT THE STREAM SIDE OF THE WALL SHALL MATCH THE ADJACENT WALLS
2- THE WHEEP HOLE ELEVATION SHALL MATCH ADJACENT WALLS.

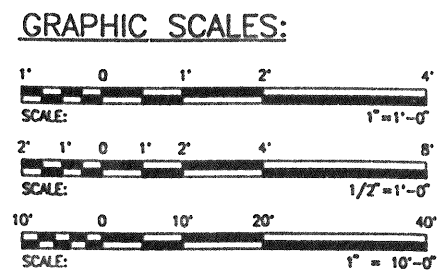
A TYPICAL SECTION
SCALE: 1/2"=1'-0"
S-2 S-2
C-2



2 DETAIL
SCALE: 1"=1'-0"
S-2 S-2



3 TYP FENCE POST DETAIL
SCALE: NONE
S-2 S-2



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature
S-2

REVISION	DATE	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF ENGINEERING KAHWA PLACE DRAINAGE DITCH IMPROVEMENTS Honolulu, Oahu, Hawaii TMC: 2-9-38:14 STRUCTURAL DETAILS			
DESIGNED BY	DK	CHECKED BY	DK
DRAWN BY		DATE	1/16/98
APPROVED:			
GMP ASSOCIATES, INC. JOB NO.			

0000 0025 2671

APPENDIX B
AGENCY CORRESPONDENCE
DURING THE PRE-ASSESSMENT
CONSULTATION PERIOD

0000 0025 2672

SAMPLE REQUEST FOR REVIEW LETTER

0000 0025 2673



ASSOCIATES, INC.

February 13, 1998

Engineers/Architects

Pacific Islands Administrator
U.S. Department of the Interior
Fish and Wildlife Service
P.O. Box 50088
Honolulu, HI 96850

Re: Pre-Assessment Consultation for the
Kahiwa Place Drainage Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii (TMK: 2-9-38:14)

Dear Sir/Madam:

The City and County of Honolulu, Department of Public Works intends to pursue an environmental assessment (EA) for the Kahiwa Place Drainage Ditch Improvements project located in Manoa, Hawaii. The purpose of this project is to prevent further erosion of the embankment, thereby alleviating the potential for wall failures and further damages to the adjacent residential properties.

The proposed project involves the construction of approximately 85 lineal feet of a concrete rubble masonry (CRM) retaining wall along a segment of the Kahiwa Place Drainage Ditch as shown in Exhibit A. A 4-foot high chain link fence will be installed on the new CRM wall as part of the project. The retaining wall and fence will be located along the west embankment of Kahiwa Ditch, adjacent to Tax Map Key parcels 2-9-38:100 and 2-9-38:84.

This letter seeks to inform you of the proposed project and to solicit your comments prior to the preparation of the Draft EA. Please direct any comments you may have by February 27, 1998 to the following address:

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813
ATTN.: Ms. Anna Lee

A copy of the Draft EA will be sent to you upon completion. Should you have any question or need additional information, please call me at 521-4711.

Sincerely,

GMP ASSOCIATES, INC.

Anna S. F. Lee
Project Engineer

Enclosure



SCALE: 1"=40'

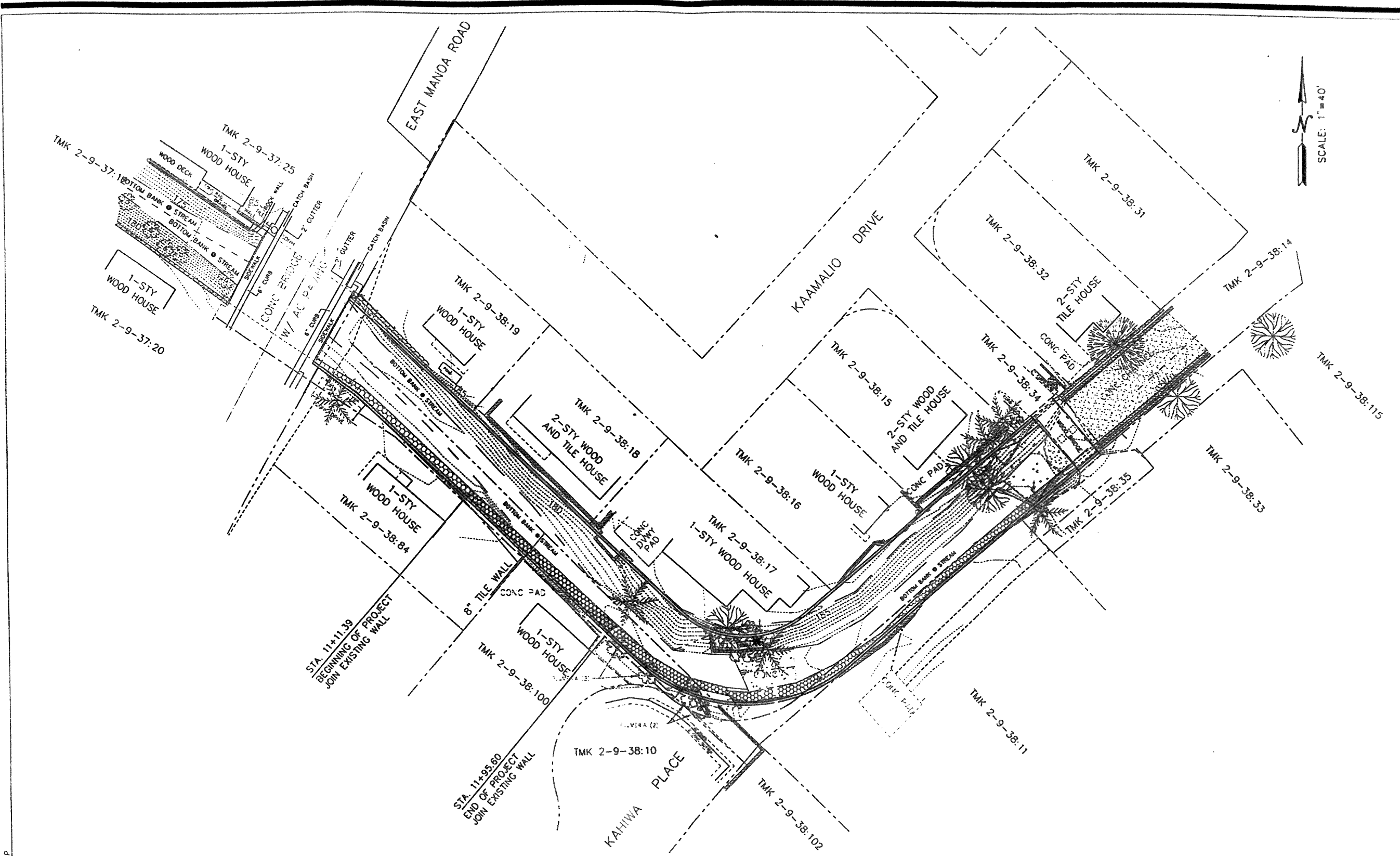


EXHIBIT A PROJECT SITE

SC2427AP

0000 0025 2675

INCOMING CORRESPONDENCE

0000 0025 2676

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIKE
DIRECTOR OF HEALTH

RECEIVED
3 4 1998 8 26 AM

'98 MAR 6 AM 8 26

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

In reply, please refer to.

March 2, 1998

98-033/epo

Ms. Anna S. F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Dear Ms. Lee:

Subject: Pre-Assessment Consultation
Kahiwa Place Drainage Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii
TMK: 2-9-38: 14

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

Water Pollution

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. If a federal permit is required, then a Section 401 Water Quality Certification is required from the State Department of Health, Clean Water Branch (CWB).
2. Also, please describe in the Draft Environmental Assessment the measures that might be necessary to mitigate soil runoff into the stream during construction.

If you have any questions, please call Mr. Alec Wong of the CWB at 586-4309.

Sincerely,

Handwritten signature of Bruce S. Anderson.

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

c: CWB

0000 0025 2677

BENJAMIN J. CAYLTANO
GOVERNOR OF HAWAII



RECEIVED
3000 405-STATE-110

'98 Mar 12 AM 9 55 STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

March 5, 1998

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

Anna S. F. Lee, Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

RESOURCES ENFORCEMENT

CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION

DIVISION

LAND DIVISION
STATE PARKS
WATER AND LAND DEVELOPMENT

LOG NO: 21125 ✓
DOC NO: 9802EJ18

Dear Ms. Lee:

**SUBJECT: Chapter 6E-8 Historic Preservation Review -- Pre-Assessment
Consultation for the Kahiwa Place Drainage Ditch Improvements Project
Manoa, Kona, O'ahu
TMK: 2-9-38:14**

We commented in February 1996, on the proposed drainage ditch improvements at this location. Our comments included the following:

A review of our records shows that there are no known historic sites at the project location. Because this project proposes improvements and modifications to an existing drainage channel, where it is unlikely that historic sites remain, we believe that this project will have "no effect" on historic sites.

Our comments regarding the current project (the proposed construction of approximately 85 linear feet of concrete rubble masonry retaining wall along a segment of the Kahiwa Place drainage ditch) remain the same.

If you have any questions please call Elaine Jourdane at 587-0015.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

EJ:jk

0000 0025 2678

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843
PHONE (808) 527-6180
FAX (808) 533-2714



JEREMY HARRIS, Mayor
WALTER O. WATSON, JR., Chairman
MAURICE H. YAMASATO, Vice Chairman
KAZU HAYASHIDA
MELISSA Y.J. LUM
FORREST C. MURPHY
JONATHAN K. SHIMADA, PhD
BARBARA KIM STANTON

RAYMOND H. SATO
Manager and Chief Engineer

Ms. Anna S.F. Lee
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

Subject: Your Letter of February 13, 1998 on the Pre-Assessment Consultation Phase for the Kahiwa Place Drainage Ditch Improvements Project, Manoa, Oahu, TMK: 2-9-38: 14

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

We have no objections to the project. The construction plans should be submitted for our review and comment. We reserve further comment until the Draft Environmental Assessment and plans are submitted.

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

Very truly yours,

FOR RAYMOND H. SATO
Manager and Chief Engineer

0000 0025 2679

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



GMP ASSOCIATES, INC.

'98 FEB 20 PM 2:00
STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

February 19, 1998

Anna S. F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

Thank you for soliciting our input prior to preparation of a Draft EA for the Kahiwa Place Drainage Ditch Improvement Project. Although the stated purpose of the project is to prevent damage to residential properties, we note that stabilization of the bank will also improve stream water quality in the long term.

Although the Kahiwa Drainage Ditch is a heavily modified environment, small numbers of the native o'opu nakea reside in the ditch, with somewhat larger numbers occurring downstream in the main channel of Manoa Stream. It is therefore important that the Draft EA address the mitigative measures that will be taken to minimize erosion and siltation during construction of the project.

Sincerely,

William S. Devick
Acting Administrator

MICHAEL D. WILSON
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY DIRECTOR
GILBERT S. COLOMA-AGARAN

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

0000 0025 2680

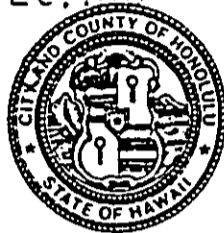
DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 527-6663 • FAX: (808) 527-6675

RECEIVED

GMP ASSOCIATES, INC.

'98 FEB 24 HM



JEREMY HARRIS
MAYOR

KENNETH E. SPRAGUE, P.E., Ph.D.
DIRECTOR

CHERYL K. OKUMA-SEPE, ESQ.
DEPUTY DIRECTOR

In reply refer to:
WCC 98-29

February 20, 1998

Ms. Anna S.F. Lee
GMP ASSOCIATES, INC.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

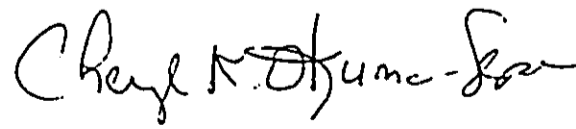
Dear Ms. Lee:

Subject: **Pre-Assessment Consultation for the
Kahiwa Place Drainage Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii
TMK: 2-9-38: 14**

We have no objection to the construction of a retaining wall and fence between Kahiwa Ditch and Tax Map Key Parcels 2-9-38:100 and 2-9-38:84. There are no sewer lines in the immediate area.

If you have any questions, please contact Ms. Tessa Ching of the Service Control Branch at 523-4956.

Sincerely,

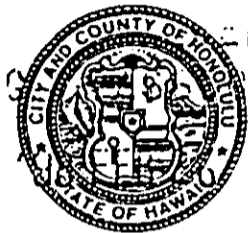

KENNETH E. SPRAGUE
Director

0000 0025 2681

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4414 • FAX: (808) 527-6743

JEREMY HARRIS
MAYOR



RECEIVED
GMP ASSOCIATES, INC

FEB 26
AM 9 19

JAN NAOE SULLIVAN
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

98-01204 (DT)

February 24, 1998

Ms. Anna S.F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Dear Ms. Lee:

Special Management Area Review

Tax Map Key : 2-9-38: 14
Type of Project: Construct approximately 85 lineal feet
of concrete rubble masonry retaining
wall along a portion of Kahiwa Place
Drainage Ditch and install a 4-foot
high chain-link fence

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

- Is not within the Special Management Area.
- Is within the Special Management Area, but is not defined as "development" and is therefore, exempt (Section 25-1.3 [2][], Chapter 25, Revised Ordinances of Honolulu).

Should you have any questions, please contact the Environmental Review Branch at 523-4077.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Jan Naoe Sullivan".

JAN NAOE SULLIVAN
Director of Land Utilization

JNS:am

g:ppd\9801204.djt

0000 0025 2682



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

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

OFFICE OF PLANNING

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

Tel.: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-7222 '98 Mail 5 AM 9 42

February 23, 1998

Ms. Anna S.F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

Subject: Pre-Assessment Consultation for the Kahiwa Place Drainage Improvements
Project, Manoa Valley, Honolulu, Hawaii (TMK:2-9-38:14)

We have reviewed the proposed Kahiwa Place drainage improvements project. The project will prevent further erosion of the embankment. We are very interested in the mitigation measures that will be used to control polluted runoff from the project site during and after construction of the drainage ditch. You may find some of our recommended mitigation measures in the "Management Measures for Urban Areas" section of our report entitled, "Hawaii's Coastal Nonpoint Pollution Control Plan." We look forward to reviewing the Draft Environmental Assessment.

If you have questions, please contact Steve Olive of our Coastal Zone Management Program at 587-2877.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick Egged".

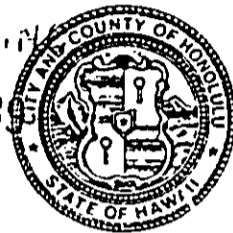
Rick Egged
Director
Office of Planning

0000 0025 2683

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 8TH FLOOR • HONOLULU, HAWAII 96813-3017
PHONE: (808) 523-4533 • FAX (808) 523-4950

RECEIVED
GMP ASSOCIATES, INC.
'98 MAR 5 AM 9 39



PATRICK T. ONISHI
CHIEF PLANNING OFFICER

DONA L. HANAIKE
DEPUTY CHIEF PLANNING OFFICER

RR 2/98-0321

February 26, 1998

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Attn: Ms. Anna Lee

Gentlemen:

Pre Assessment Consultation for the Kahiwa Place
Drainage Ditch Improvement Project
Manoa Valley, Honolulu Hawaii, TMK: 2-9-38: 14

We have reviewed the proposed project and have no comments to offer prior to the preparation of the draft EA. Should you have any questions in this regards, please contact Robert Reed of my staff at 523-4402.

Yours very truly,


PATRICK T. ONISHI
Chief Planning Officer

PTO:js

0000 0025 2684



REPLY TO
ATTENTION OF

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

RECEIVED

March 25, 1998 HATES, INC

'98 APR 1 AM 9 07

Operations Branch

Ms. Anna S. F. Lee
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

This is in regard to your letter of February 13, 1998 requesting comments on the proposed Kahiwa Place Drainage Ditch Improvements Project. The project will involve construction of approximately 85 lineal-feet of a concrete rubble masonry (CRM) retaining wall along a segment of the Kahiwa Place Drainage Ditch (adjacent to TMK 2-9-38: 84,100). The project site drawing (Exhibit A) accompanying your letter shows the CRM wall extending to the bottom bank of the stream. Based on the information you provided, I have determined that the project will involve work in waters of the U.S. and will require a Department of the Army (DA) permit. The work may qualify for authorization under our Nationwide permit program.

If you have any questions or need further information concerning this determination, please contact Mr. Peter Galloway of my staff at 438-9258, extension 15. Please refer to File No. 980000054.

Sincerely,

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

0000 0025 2685

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

RECEIVED
GMP ASSOCIATES, INC



'98 MAR 18 11 10 15 AM
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR 17 1998

MICHAEL D. WILSON
CHAIRPERSON

ROBERT G. GIRALD
DAVID A. NOBRIGA
LAWRENCE H. MIIKE
RICHARD H. COX
HERBERT M. RICHARDS, JR.

EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813
Attention: Ms. Anna S. F. Lee

Dear Ms. Lee:

This is in response to your letter dated February 13, 1998, requesting a determination if a Stream Channel Alteration Permit (SCAP) would be required for the proposed construction of approximately 85 feet of concrete rubble masonry retaining wall along the west embankment of Kahiwa Ditch, Manoa, Oahu. Thank you for faxing a copy of a typical cross section of the proposed work. Site inspections were conducted by a member of our Commission staff on March 2 & 5, 1998. The inspections confirmed that this watercourse is a tributary of Manoa Stream, has flowing water and pools, and has abundant aquatic life. The proposed work involves the bed and bank of this stream; therefore, a Stream Channel Alteration Permit would be required.

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

Sincerely,

Edwin T. Sakoda
EDWIN T. SAKODA
Acting Deputy Director

SKS:fc

c: Dennis Toyama, Engineering

0000 0025 2686

APPENDIX C
AGENCY CORRESPONDENCE
DURING THE 30-DAY COMMENT PERIOD

0000 0025 2687

SAMPLE REQUEST FOR REVIEW LETTER

0000 0025 2688



ASSOCIATES, INC.

Engineers/Architects

April 2, 1998

Pacific Islands Administrator
U.S. Department of the Interior
Fish and Wildlife Service
P.O. Box 50088
Honolulu, HI 96850

Re: Draft Environmental Assessment for the
Kahiwa Place Drainage Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii (TMK: 2-9-38:14)

Dear Sir/Madam:

A copy of the Draft Environmental Assessment (EA) for the Kahiwa Place Drainage Ditch Improvements project has been completed and is enclosed for your review and comments. The Draft EA has been submitted to the Office of Environmental Quality Control (OEQC) for publishing in the April 8, 1998 OEQC Bulletin. You are welcome to submit comments during the 30-day comment period, which ends on May 8, 1998. Please address your comments to the following address:

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813
ATTN.: Ms. Anna Lee

If you have any questions or need additional information, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

GMP ASSOCIATES, INC.

Anna S.F. Lee
Project Engineer

Enclosure

0000 0025 2689

INCOMING CORRESPONDENCE AND RESPONSE LETTERS

0000 0025 2690

RECEIVED
GMP ASSOCIATES, INC

April 17, 1998

'98 APR 20 AM 9 54
Ms Anna Lee
GMP Associates, Inc.
841 Bishop St, Suite 1501
Honolulu, Hawaii 96813

Dear Ms Lee:

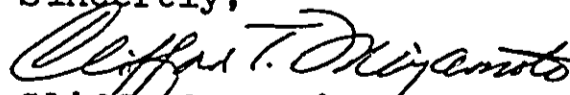
Thank you for the copy of the Draft EA.

I have the following comments:

1. Please provide details of the connection between the existing 8" CMU wall and the new fence. Present condition does not allow personnel entry into my property.
2. Likewise for the new fence and the existing fence adjacent to the garage.
3. Please notate in the General Notes that any damages to existing structures, such as building, wall, concrete slab, fence be repaired or replaced.
4. In Dwg S-2, Typical Section, can I assume that the material 6" below the top of the wall in my property is concrete?

Please provide responses to my comments. Thank you.

Sincerely,



Clifford T. Miyamoto
3144 Kahiwa Place
Honolulu, HI 96822

0000 0025 2691



ASSOCIATES, INC.

Engineers/Architects

June 1, 1998

Mr. Clifford T. Miyamoto
Resident of TMK 2-9-38:100
3144 Kahiwa Place
Honolulu, HI 96822

Re: Response to Comments on the
Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements
Honolulu, Oahu, Hawaii (TMK: 2-9-38: 14)

Dear Mr. Miyamoto:

Thank you for your letter dated April 17, 1998, during the 30-day comment period on the proposed improvements to the Kahiwa Place Drainage Ditch. We offer the following responses to your comments:

1. COMMENT: "Please provide details of the connection between the existing 8" CMU wall and the new fence. Present condition does not allow personnel entry into my property."

RESPONSE: *The damaged portion of the existing 8" CMU wall resulting from the construction activities will be repaired by the contractor to as good or better condition. The restored CMU wall will be extended to the new CRM wall. The construction plans shall be revised to include a note requiring the extension of the restored CMU wall.*

The City and County of Honolulu Department of Public Works will obtain a 7' wide construction easement to allow the contractor access to the project site. The construction easement is indicated on Dwg C-2 and Dwg C-4.

2. COMMENT: "Likewise for the new fence and the existing fence adjacent to the garage."

RESPONSE: *The new fence will be constructed to tie in with the existing fence. The construction plans shall be revised to indicate the connection of the new fence with the existing fence.*

3. COMMENT: "Please notate in the General Notes that any damages to existing structures, such as building, wall, concrete slab, fence be repaired or replaced."

RESPONSE: *Item 8 under the General Notes reads: "THE EXISTING IMPROVEMENTS IN ADJACENT AREAS THAT ARE NOT TO BE REMOVED SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND REPAIRED TO ORIGINAL*

0000 0025 2692



ASSOCIATES, INC.

Engineers/Architects

Mr. Clifford Miyamoto
June 1, 1998
Page 2

CONDITION OR BETTER, TO THE SATISFACTION OF THE CHIEF ENGINEER OF PUBLIC WORKS AT THE EXPENSE OF THE CONTRACTOR."

In addition to Item 8 under the General Notes, Dwg C-4 shall be revised to include an additional note for the contractor to restore damaged areas to original or better condition.

4. COMMENT: "In Dwg S-2, Typical Section, can I assume that the material 6" below the top of the wall in my property is concrete?"

RESPONSE: *Yes. In Dwg S-2, the material 6" below the top of the wall along your property (TMK: 2-9-38:100) is concrete. The construction plans will be revised to indicate this change.*

We hope that our responses have adequately addressed your comments. Should you have any question, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

Anna S.F. Lee
Project Engineer

cc: Tyler Sugihara, DPW

0000 0025 2693

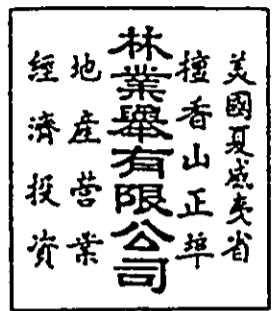
TAN TEK LUM
EXECUTIVE VICE PRESIDENT
WING TEK LUM
SECRETARY
MELISSA YI JEN LUM
ASSISTANT VICE PRESIDENT
JEFFREY MING CHIH LUM
ASSISTANT VICE PRESIDENT

LUM YIP KEE, LIMITED

REAL ESTATE INVESTMENTS
80 NORTH KING STREET
HONOLULU, HAWAII 96817-5109, U.S.A.
TELEPHONE: (808) 531-5200 TELECOPIER: (808) 521-7710

G.M.P. ASSOCIATES, INC.

30 MAY 32 AM 9 11



May 26, 1998

Ms. Anna S.F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

RE: Draft Environmental Assessment
For Kahiwa Place Drainage
Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii
(TMK: 2-9-38:14)

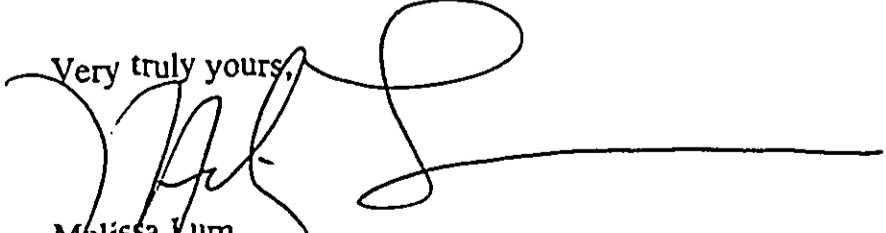
Dear Ms. Lee:

Thank you for forwarding to our offices a copy of the above-referenced Draft Environmental Assessment report. We have had the opportunity to review the report and would like to make the following suggestion.

We noted in your report that a chain link fence will be installed on top of the proposed retaining wall. We would like to request that for safety reasons you extend the installation of the chain link fence to include the City and County's existing retaining wall which currently runs along the front portion of TMK 2-9-38:84. The current wall was built many years ago by the City and County and most likely was not subject to present day safety standards. It seems logical today, however, that to ensure the safety of the wall, the chain link fence should run the length of the entire retaining wall.

Once you have had the chance to review our request, we would appreciate it if you would give us a call at 531-5200.

Thank you for your assistance.

Very truly yours,

Melissa Lum
Assistant Vice President

MYJL/adf

0000 0025 2694



Engineers/Architects

June 2, 1998

Melissa Lum, Assistant Vice President
Lum Yip Kee, Limited
80 North King Street
Honolulu, Hawaii 96817-5109

Re: Response to Comments on the
Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements
Honolulu, Oahu, Hawaii (TMK: 2-9-38: 14)

Dear Ms. Lum:

Thank you for your letter dated May 26, 1998 in response to our request for comments on the Draft Environmental Assessment (DEA) for the Kahiwa Place Drainage Ditch Improvements project.

In response to your suggestion to extend the installation of the chain link fence atop the CRM retaining wall to include the City's existing CRM retaining wall adjacent to your property at TMK: 2-9-38:84, the City will investigate the appropriateness of installing fencing at this location. As you are aware, the existing CRM retaining wall was constructed many years ago and will need to be evaluated for its ability to safely accommodate the new fencing. If deemed appropriate and within the budget constraints of this project, the City may include the additional fencing as part of this project.

We hope that our response have adequately addressed your concerns. Should you have any questions, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

Anna S.F. Lee
Project Engineer

cc: Tyler Sugihara, DPW

0000 0025 2695



REPLY TO
ATTENTION OF

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

May 13, 1998 RECEIVED
GMP ASSOCIATES, INC

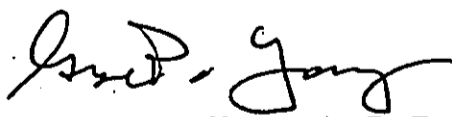
'98 MAY 18 PM 3 19

Operations Branch

Ms. Anra S.F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

This is in reply to your request dated April 2, 1998, for comments on the draft Environmental Assessment Notice for the proposed construction of improvements to the Kahiwa Place Drainage Ditch, located at Manoa Valley (TMK 2-9-38: 14), Oahu Island, Hawaii. Based on the information provided, it is correctly stated that the proposed activity will require a Department of the Army (DA) permit. When the applicant, the City and County of Honolulu Department of Public Works, is ready to proceed, consultation should take place with our Operations Branch at 438-9258 to begin Department of the Army permit processing. Please refer to File Number 980000202 in future correspondence regarding this project.


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

0000 0025 2696



ASSOCIATES, INC.

Engineers/Architects

June 1, 1998

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

Re: Response to Comments on the
Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements
Honolulu, Oahu, Hawaii (TMK: 2-9-38: 14)

Dear Mr. Young:

Thank you for your letter dated May 13, 1998, in response to our request for comments on the Draft Environmental Assessment (DEA) for the Kahiwa Place Drainage Ditch Improvements project. The application for the Department of the Army (DA) permit was submitted by the City and County of Honolulu Department of Public Works on May 13, 1998 for your review. We believe that coverage under the Department of the Army's Nationwide Permit (NWP) No. 13 - Bank Stabilization is appropriate for this work. Should you have any questions, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

Anna S.F. Lee
Project Engineer

cc: Tyler Sugihara, DPW

0000 0025 2697

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIIKE
DIRECTOR OF HEALTH

RECEIVED
GMP ASSOCIATES, INC

'98 MAY 19 PM 2 36

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

In reply, please refer to:

May 14, 1998

98-077/epo

Ms. Anna S. F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Dear Ms. Lee:

Subject: Draft Environmental Assessment (DEA)
Kahiwa Place Drainage Ditch Improvements
Manoa Valley
Honolulu, Hawaii
TMK: 2-9-38: 14

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

Water Pollution

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. If a federal permit is required, then a Section 401 Water Quality Certification is required from the State Department of Health, Clean Water Branch.
2. A National Pollutant Discharge Elimination System (NPDES) general permit is required for the following discharges to waters of the State:
 - a. Storm water discharges relating to construction activities, such as clearing, grading, and excavation, for projects equal to or greater than five acres;
 - b. Storm water discharges from industrial activities;
 - c. Construction dewatering activities;
 - d. Noncontact cooling water discharges less than one million gallons per day;

0000 0025 2698

Ms. Anna S. F. Lee
May 14, 1998
Page 2

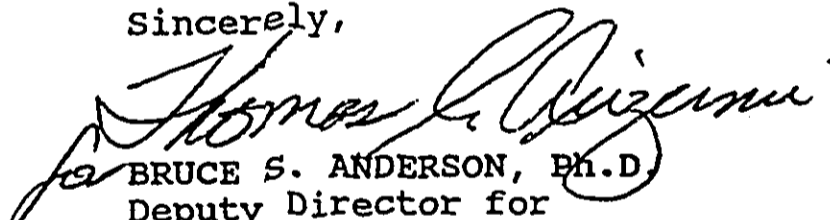
98-077/epo

- e. Treated groundwater from underground storage tank remedial activities;
- f. Hydrotesting water;
- g. Treated effluent from petroleum bulk stations and terminals; and
- h. Treated effluent from well drilling activities.

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

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

Sincerely,


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

c: CWB

0000 0025 2699



Engineers/Architects

June 1, 1998

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

Re: Response to Comments on the
Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements
Honolulu, Oahu, Hawaii (TMK: 2-9-38: 14)

Dear Dr. Anderson:

Thank you for your letter dated May 14, 1998 in response to our request for comments on the Draft Environmental Assessment (DEA) for the Kahiwa Place Drainage Ditch Improvements project. We offer the following responses to your comments:

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

RESPONSE: *The Army Corps of Engineers have been notified of the proposed project and has determined that a Department of Army permit is required. The Department of Health, Clean Water Branch will be consulted for the Section 401 Water Quality Certification requirements.*

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

0000 0025 2700



ASSOCIATES, INC.

Engineers/Architects

Dr. Bruce S. Anderson, Ph.D.

June 1, 1998

Page 2

- f. Hydrotesting water;
- g. Treated effluent from petroleum bulk stations and terminal; and
- h. Treated effluent from well drilling activities.

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

RESPONSE: *The applicable NPDES general permit application(s) will be filed with the State Department of Health's Clean Water Branch at least 30 days prior to the commencement of the discharge(s) as required.*

We hope that our responses have adequately addressed your comments. Should you have any question, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

Anna S.F. Lee
Project Engineer

cc: Tyler Sugihara, DPW

0000 0025 2701



STATE OF HAWAII, INC
DEPARTMENT OF LAND AND NATURAL RESOURCES

'98 MAY 13 1 37
LAND DIVISION
P.O. BOX 621

HONOLULU, HAWAII 96809

May 12, 1998

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

LD-NAV

Ref.: EAKAHIWA.RCM

Ms. Anna S. F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Dear Ms. Lee:

SUBJECT: Review : Draft Environmental Assessment (DEA)
Applicant: GMP Associates, Inc., on behalf of, the
Department of Public Works, City and County
of Honolulu
Project : Kahiwa Place Drainage Improvements
Location : 500 feet northeast of the intersection of East
Manoa Road and Kahaloa Drive along the west
embankment of Kahiwa Ditch adjacent to
TMKS : 1st/ 2-9-38: 100 and 2-9-38: 84

Thank you for the opportunity to review and comment on the proposed project. We offer the following comments:

Commission on Water Resource Management:

The Department of Public Works, City and County of Honolulu acknowledges that a stream channel alteration permit (HRS Chapter 174C-71) is required for the project (pages 1 to 5 of the DEA).

Division of Aquatic Resources:

Small o'opu nakea reside in the Kahiwa Drainage Ditch, along with somewhat larger numbers occurring downstream in the main channel of Moana Stream. It is important that the proposed work be scheduled during periods of low water flow, and that appropriate mitigative measures be employed during construction to minimize erosion and siltation to the extent possible.

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: Land Boards Members
Oahu District Land Office

0000 0025 2702



ASSOCIATES, INC.

Engineers/Architects

June 1, 1998

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

Re: Response to Comments on the
Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements
Honolulu, Oahu, Hawaii (TMK: 2-9-38: 14)

Dear Mr. Uchida:

Thank you for your letter dated May 12, 1998 in response to our request for comments on the Draft Environmental Assessment (DEA) for the Kahiwa Place Drainage Ditch Improvements project. We offer the following responses to your comments:

1. COMMENT: "Commission on Water Resource Management:

The Department of Public Works, City and County of Honolulu acknowledges that a stream channel alteration permit (HRS Chapter 174C-71) is required for the project (pages 1 to 5 of the DEA)."

RESPONSE: *We are currently in the process of preparing a stream channel alteration permit application for the proposed project. The Department of Public Works will submit the completed application to the Department of Land and Natural Resources Commission on Water Resources Management for approval.*

2. COMMENT: "Division of Aquatic Resources:

Small o'opu nakea reside in the Kahiwa Drainage Ditch, along with somewhat larger numbers occurring downstream in the main channel of Manoa Stream. It is important that the proposed work be scheduled during periods of low water flow, and that appropriate mitigative measures be employed during construction to minimize erosion and siltation to the extent possible."

RESPONSE: *Construction of the cement rubble masonry (CRM) wall will be scheduled during the drier summer months to the extent practical to minimize the impact to the water quality downstream of the project site. The Contractor will also take the appropriate control measures to preserve the water quality of the Kahiwa Place Drainage Ditch. These control measures will be specified under the conditions of the Department of the Army Nationwide*

0000 0025 2703



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

P.O. Box 50004
Honolulu, HI
96850

Our People...Our Islands...In Harmony

'98 MAY 27 PM 1 59
May 22, 1998

Ms. Anna S.F. Lee, Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Dear Ms. Lee:

Subject: Draft Environmental Assessment for the Kahiwa Place Drainage Ditch
Improvements Project, Manoa Valley, Honolulu, Hawaii

We have reviewed the above mentioned document and have no comments to offer at
this time.

Thank you for the opportunity to review this document.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth M. Kaneshiro".

KENNETH M. KANESHIRO
State Conservationist

0000 0025 2704



ASSOCIATES, INC.

Engineers/Architects

Mr. Dean Y. Uchida
June 1, 1998
Page 2

Permit No. 13 - Bank Stabilization. In addition to the conditions specified under the Army Permit, a "Best Management Practices" plan will also be prepared in accordance with the Department of Health National Pollutant Discharge Elimination System (NPDES) Construction Dewatering General Permit. By conforming to the requirements and conditions of these permits, the water quality of the receiving waters and its inhabitants should not be adversely affected

We hope that our responses have adequately addressed your comments. Should you have any question, please call me at 521-4711. Thank you for your time and attention.

Sincerely,

Anna S.F. Lee
Project Engineer

cc: Tyler Sugihara, DPW
Edwin Sakoda, DLNR Commission on Water Resource Management
William Devick, DLNR Division of Aquatic Resources

0000 0025 2705

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



RECEIVED
GMP ASSOCIATES, INC.

'98 APR 21 AM 10:11

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809

MICHAEL D. WILSON
CHAIRPERSON

ROBERT G. GIRALD
DAVID A. NOBRIGA
LAWRENCE H. MIKE
RICHARD H. COX
HERBERT M. RICHARDS, JR.

EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

Ms. Anna Lee, Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

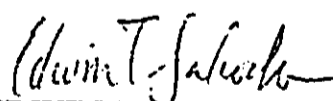
Dear Ms. Lee:

Thank you for allowing us to review and comment on the Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements Project.

Our staff visited the site of the proposed drainage modifications and we concur that a stream channel alteration permit is required for the project as acknowledged on page 1-5.

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

Sincerely,


EDWIN T. SAKODA
Acting Deputy Director

DH:ss

0000 0025 2706

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



MICHAEL D. WILSON
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY DIRECTOR
GILBERT S. COLOMA-AGARAN

RECEIVED
GMP ASSOCIATES, INC

198 APR 15 4 09 51
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

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

April 9, 1998

Anna S. F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Dear Ms. Lee:

This responds to your letter of 2 April 1998, requesting comments on the Draft Environmental Assessment (EA) for the Kahiwa Place Drainage Ditch Improvement Project in Manoa Valley.

As I indicated earlier, although the Kahiwa Drainage Ditch is heavily modified, small numbers of the native o'opu nakea reside in the ditch, along with somewhat larger numbers occurring downstream in the main channel of Manoa Stream. Our primary concern, therefore, is to minimize erosion and siltation to the extent possible during construction of the project.

We would therefore like to withhold our comments until we can review the mitigative measures specified in the project's "Best Management Practice" (BMP) plan that would be required under the Department of the Army's Section 404 permit, the Department of Health's 401 Water Quality Certification, and the DOH National Pollution Discharge Elimination System (NPDES) Construction Dewatering General Permit.

Thank you for providing us with the opportunity to comment on the Draft EA for the Kahiwa Place Drainage Ditch Improvements Project.

Sincerely,

William S. Devick
Acting Administrator

0000 0025 2707

Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001



RECEIVED
GMP ASSOCIATES, INC
'98 APR 21 AM 10 22

April 17, 1998

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, HI 96813
Attention: Ms. Anna Lee

Dear: Ms. Lee

Subject: Kahiwa Place Drainage Ditch Improvements Project

Thank you for the opportunity to comment on your March 1998 Draft EA for the Kahiwa Place Drainage Ditch Improvements Project, as proposed by the City and County of Honolulu Department of Public Works. We have reviewed the subject document and have no comments at this time.

HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this draft environmental assessment.

Sincerely,

Donn T. Fukuda
Principal Environmental Scientist

WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP



0000 0025 2708

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843
PHONE (808) 527-6180
FAX (808) 533-2714



May 8, 1998

JEREMY HARRIS, Mayor

WALTER O. WATSON, JR., Chairman
EDDIE FLORES, JR.
KAZU HAYASHIDA
JAN M. L. Y. AMII
FORREST C. MURPHY
JONATHAN K. SHIMADA, PhD
BARBARA KIM STANTON

BROOKS H. M. YUEN, Acting
Manager and Chief Engineer

RECEIVED
GMP ASSOCIATES, INC

'98 MAY 15 PM 1 30

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Attention: Anna Lee

Gentlemen:

Subject: Your Transmittal of April 2, 1998 Regarding the Draft Environmental Assessment for the Proposed Kahiwa Place Drainage Ditch Improvements Project, Manoa Valley, Honolulu, Hawaii, TMK: 2-9-038: 014

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed Kahiwa Place Drainage Ditch Improvements project.

We have no objections to the proposed project. We have no water facilities along the project limits.

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

Very truly yours,

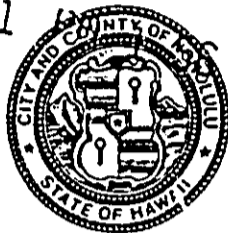
BROOKS H. M. YUEN
Acting Manager and Chief Engineer

0000 0025 2709

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 8TH FLOOR, HONOLULU, HAWAII 96813-3017
PHONE: (808) 523-4533 FAX: (808) 523-4950

GMP ASSOCIATES, INC
98 MAY 11



JEREMY HARRIS
MAYOR

PATRICK T. ONISHI
CHIEF PLANNING OFFICER
DONA L. HANAIKE
DEPUTY CHIEF PLANNING OFFICER

RR 4/98-0776

May 6, 1998

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

Attention: Ms. Anna Lee

Gentlemen:

Draft Environmental Assessment (DEA) for the Kahiwa Place Drainage Ditch
Improvements Project, Manoa Valley, Honolulu, Hawaii (TMK: 2-9-38:14)

In response to GMP Associates, Inc. request on behalf of the Department of Public Works, City and County of Honolulu, we have reviewed the above DEA with regard to the proposed project's impacts on the City and County of Honolulu's General Plan and the Primary Urban Center Development Plan and its Special Provisions.

The project involves the construction of a retaining wall to prevent further erosion of an existing unlined slope located approximately 500 feet northeast of the intersection of East Manoa Road and Kahaloa Drive.

We find the project to be consonant with the overall intent and visions of the General Plan and the Development Plan and does not present any adverse effects to these plans.

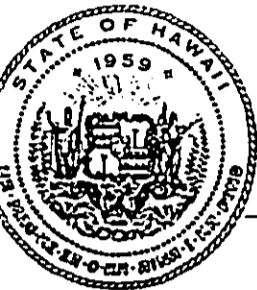
Should you have any questions, please contact Robert Reed of our staff at 523-4402.

Yours very truly,

PATRICK T. ONISHI
Chief Planning Officer

PTO:ft

0000 0025 27 10



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

OFFICE OF PLANNING

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

Ref. No. P-7411

April 30, 1998

GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Attn: Ms. Anna Lee, Project Engineer

Gentlemen:

Subject: Draft Environmental Assessment for the Kahiwa Place Drainage
Improvements Project, Manoa Valley, Honolulu, Hawaii
(TMK 2-9-38:14)

We do not have any comments on the proposed project.

If you have questions, please contact Steve Olive of our Coastal Zone
Management Program at 587-2877.

Sincerely,

Rick Egged
Director
Office of Planning

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

Tel.: (808) 587-2846
Fax: (808) 587-2824

0000 0025 2711

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4414 • FAX: (808) 527-6743



JEREMY HARRIS
MAYOR

JAN NAOE SULLIVAN
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR
98-02452 (DT)

RECEIVED
GMP ASSOCIATES, INC
98 APR 16 PM 9 31

April 15, 1998

Ms. Anna S.F. Lee
Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

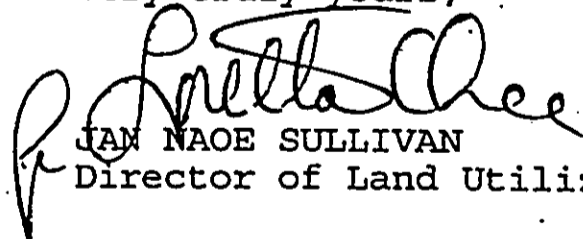
Dear Ms. Lee:

Draft Environmental Assessment (EA)
Kahiwa Place Drainage Ditch Improvements
Tax Map Key: 2-9-38: 14

We have reviewed the above-referenced EA and have no comments to add to our letter to you dated February 24, 1998. Thank you for the opportunity to comment.

If you have any questions regarding this letter, please contact Ms. Dana Teramoto of our staff at 523-4648.

Very truly yours,


JAN NAOE SULLIVAN
Director of Land Utilization

JNS:dt

cc: Department of Public Works

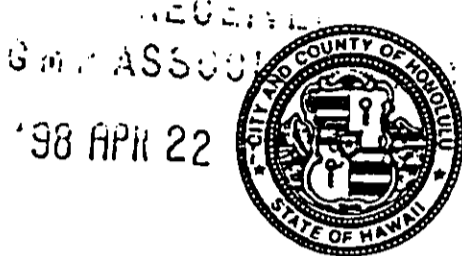
9802452.djt

0000 0025 27 12

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 527-6663 • FAX: (808) 527-6675

JEREMY HARRIS
MAYOR



KENNETH E. SPRAGUE, P.E., Ph.D.
DIRECTOR

CHERYL K. OKUMA-SEPE, ESO.
DEPUTY DIRECTOR

In reply refer to:
WCC 98-78

April 20, 1998

Ms. Anna S.F. Lee
GMP ASSOCIATES, INC.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

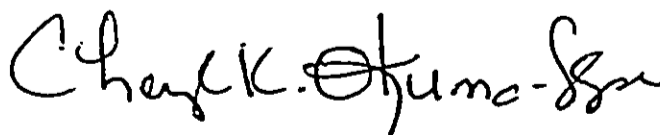
Dear Ms. Lee:

**Subject: Draft Environmental Assessment for the
Kahiwa Place Drainage Ditch Improvements Project
Manoa Valley, Honolulu, Hawaii
TMK: 2-9-38: 14**

We have no objection to the construction of a retaining wall and fence between Kahiwa Ditch and Tax Map Key Parcels 2-9-38:100 and 2-9-38:84. There are no sewer lines in the immediate area.

If you have any questions, please contact Ms. Tessa Ching of the Service Control Branch at 523-4956.

Sincerely,



KENNETH E. SPRAGUE
Director

0000 0025 27 13

BENJAMIN J. CAYLTANO
GOVERNOR OF HAWAII



RECEIVED
G.M.P. ASSOCIATES, INC.
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813
APR 21 9 49

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND DIVISION
STATE PARKS
WATER AND LAND DEVELOPMENT

April 20, 1998

Anna S. F. Lee, Project Engineer
GMP Associates, Inc.
841 Bishop Street, Suite 1501
Honolulu, Hawaii 96813-3915

LOG NO: 21372 ✓
DOC NO: 9804EJ09

Dear Ms. Lee:

SUBJECT: Chapter 6E-8 Historic Preservation Review -- Draft Environmental Assessment for the Kahiwa Place Drainage Ditch Improvements Project Manoa, Kona, O'ahu
TMK: 2-9-38:14

The DEA correctly incorporates our comments that we believe that this project will have "no effect" on historic sites (Appendix B).

If you have any questions please call Elaine Jourdane at 587-0015.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

EJ:jk