Kili Drive & Water St. 20 inch Water Main

1990-07-23-OA-FEA

FILE COPY

February 1983

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

RECEIVED
90 JUL -3

DEPARTMENT MASTER APPLICATION FORM

FOR DLNR USE ONLY
Reviewed by
Date
Accepted by
Date
Docket/File No.
180-Day Exp.
EIS Required
PH Required
Board Approved
Disapproved
Well No.

(Print or Type)

I. LANDOWNER/WATER SOURCE OWNER (If State land, to be filled in by Government Agency in control of property)

Name Board of Water Supply

Address 630 S. Beretania Street

Honolulu, Hawaii 96843

Telephone No. 527-6138 (L. Whang)

SIGNATURE Kazu Hayashida
KAZU HAYASHIDA, Manager & Chief Engineer

Date 5/3/90

II. APPLICANT (Water Use, omit if applicant is landowner)

Name

Address

Telephone No.

Interest in Property

(Indicate interest in property; submit written evidence of this interest)

*SIGNATURE

Date

*If for a Corporation, Partnership, Agency or Organization, must be signed by an authorized officer.

III. TYPE OF PERMIT(S) APPLYING FOR

( ) A. State Lands

(X) B. Conservation District Use

( ) C. Withdraw Water From A Ground Water Control Area

( ) D. Supply Water From A Ground Water Control Area

( ) E. Well Drilling/Modification

IV. WELL OR LAND PARCEL LOCATION REQUESTED

District Makaha

Island Oahu

County Honolulu

Tax Map Key 8-4-2: 11

Area of Parcel 10 Acres
(Indicate in acres or sq. ft.)

Term (if lease)

V. Environmental Requirements

Pursuant to Chapter 343, Hawaii Revised Statutes, and in accordance with Title 11; Chapter 200, Environmental Impact Statement Rules for applicant actions, an Environmental assessment of the proposed use must be attached. the Environmental assessment shall include, but not be limited to the following:

(1) Identification of applicant or proposing agency;

(2) Identification of approving agency, if applicable;

(3) Identification of agencies consulted in making assessment;

(4) General description of the action's technical, economic, social, and environmental characteristics;

(5) Summary description of the affected environment, including suitable and adequate location and site maps;

(6) Identification and summary of major impacts and alternatives considered, if any;

(7) Proposed mitigation measures, if any;

(8) Determination;

(9) Findings and reasons supporting determination; and

(10) Agencies to be consulted in the preparation of the EIS, if applicable.

VI. Summary of Proposed Use (what is proposed)

Refer to the attached environmental assessment filed with the State Office of Environmental Quality Control

INFORMATION REQUIRED FOR ALL USES

I. Description of Parcel

A. Existing structures/Use. (Attach description or map).

B. Existing utilities. (If available, indicate size and location on map. Include electricity, water, telephone, drainage, and sewarage).

C. Existing access. (Provide map showing roadways, trails, if any. Give street name. Indicate width, type of paving and ownership).

D. Vegetation. (Describe or provide map showing location and types of vegetation. Indicate if rare native plants are present).

E. Topography; if ocean area, give depths. (Submit contour maps for ocean areas and areas where slopes are 40% or more. Contour maps will also be required for uses involving tall structures, gravity flow and other special cases).

F. If shoreline area, describe shoreline. (Indicate if shoreline is sandy, muddy, rocky, etc. Indicate cliffs, reefs, or other features such as access to shoreline).

G. Existing covenants, easements, restrictions. (If State lands, indicate present encumbrances.)

H. Historic sites affected. (If applicable, attach map and descriptions).

II. Description: Describe the activity proposed, its purpose and all operations to be conducted. (Use additional sheets as necessary).

III. Commencement Date: Upon Approval of CDUA

Completion Date: 18 months after the approval of CDUA

IV. TYPE OF USE REQUESTED (Mark where appropriate) (Please refer to Title 13, Chapter 2)

1. Permitted Use (exception occasional use); DLNR Title 13, Chapter 2, Section 14; Subzone G.

2. Accessory Use (accessory to a permitted use): DLNR Title 13, Chapter 2, Section _____; Subzone _____.

3. Occasional Use: Subzone _____.

4. Temporary Variance: Subzone _____.

5. Conditional Use: Subzone _____.

Area of Proposed Use 10 Acres
(Indicate in acres or sq. ft.)

Name & Distance of Nearest Town or Landmark
3 Miles Makaha Beach

Boundary Interpretation (If the area is within 40 feet of the boundary of the Conservation District, include map showing interpretation of the boundary by the State Land Use Commission).

Conservation District Subzone General (G)
County General Plan Designation Preservation

V. FILING FEE

1. Enclose $50.00. All fees shall be in the form of cash, certified or cashier's check, and payable to the State of Hawaii.

2. If use is commercial, as defined, submit additional public hearing fee of $50.00.

INFORMATION REQUIRED FOR CONDITIONAL USE ONLY

I. Plans: (All plans should include north arrow and graphic scale).

A. Area Plan: Area plan should include but not be limited to relationship of proposed uses to existing and future uses in abutting parcels; identification of major existing facilities; names and addresses of adjacent property owners.

B. Site Plan: Site plan (maps) should include, but not be limited to, dimensions and shape of lot; metes and bounds, including easements and their use; existing features, including vegetation, water area, roads, and utilities.

C. Construction Plan: Construction plans should include, but not be limited to, existing and proposed changes in contours; all buildings and structures with indicated use and critical dimensions (including floor plans); open space and recreation areas; landscaping, including buffers; roadways, including widths; offstreet parking area; existing and proposed drainage; proposed utilities and other improvements; revegetation plans; drainage plans including erosion sedimentation controls; and grading, trenching, filling, dredging or soil disposal.

D. Maintenance Plans: For all uses involving power transmission, fuel lines, drainage systems, unmanned communication facilities and roadways not maintained by a public agency, plans for maintenance shall be included.

E. Management Plans: For any appropriate use of animal, plant, or mineral resources, management plans are required.

F. Historic or Archaeological Site Plan: Where there exists historic or archaeological sites on the State or Federal Register, a plan must be submitted including a survey of the site(s); significant features; protection, salvage, or restoration plans.

II. Subzone Objective: Demonstrate that the intended use is consistent with the objective of the subject Conservation District Subzone (as stated in Title 13, Chapter 2).

INFORMATION REQUIRED FOR ALL USES

I. DESCRIPTION OF PARCEL
(See attached maps)

A. Existing Structures/Use

There is an existing 0.5 million gallon concrete reservoir within a 6-foot high chainlink fence enclosure at about the 250-foot elevation where the pipeline and access road terminates. The Makaha Shaft and existing control building is located approximately 270 feet below the reservoir at the 150-foot elevation.

B. Existing Utilities

Overhead and underground utility lines for telephone and electricity exist along the access road to the existing 272-foot reservoir, control building and Makaha Shaft.

C. Existing Access

The project site is accessible from Kili Drive via a paved access road to the existing Makaha 272-foot reservoir.

D. Vegetation

Plant life in the area includes Koa-haole, keawe, Aalii, Ala'ala-wa-a-nui, passion fruit, air plant, jade, indigo, common grasses and weeds.

E. Topography

The reservoir site is located at an elevation of approximately 250 feet above sea level and is located several hundred feet to the west of Kili Drive. The area is undeveloped and hilly with slopes of 10 to 25 percent.

F. Shoreline Area

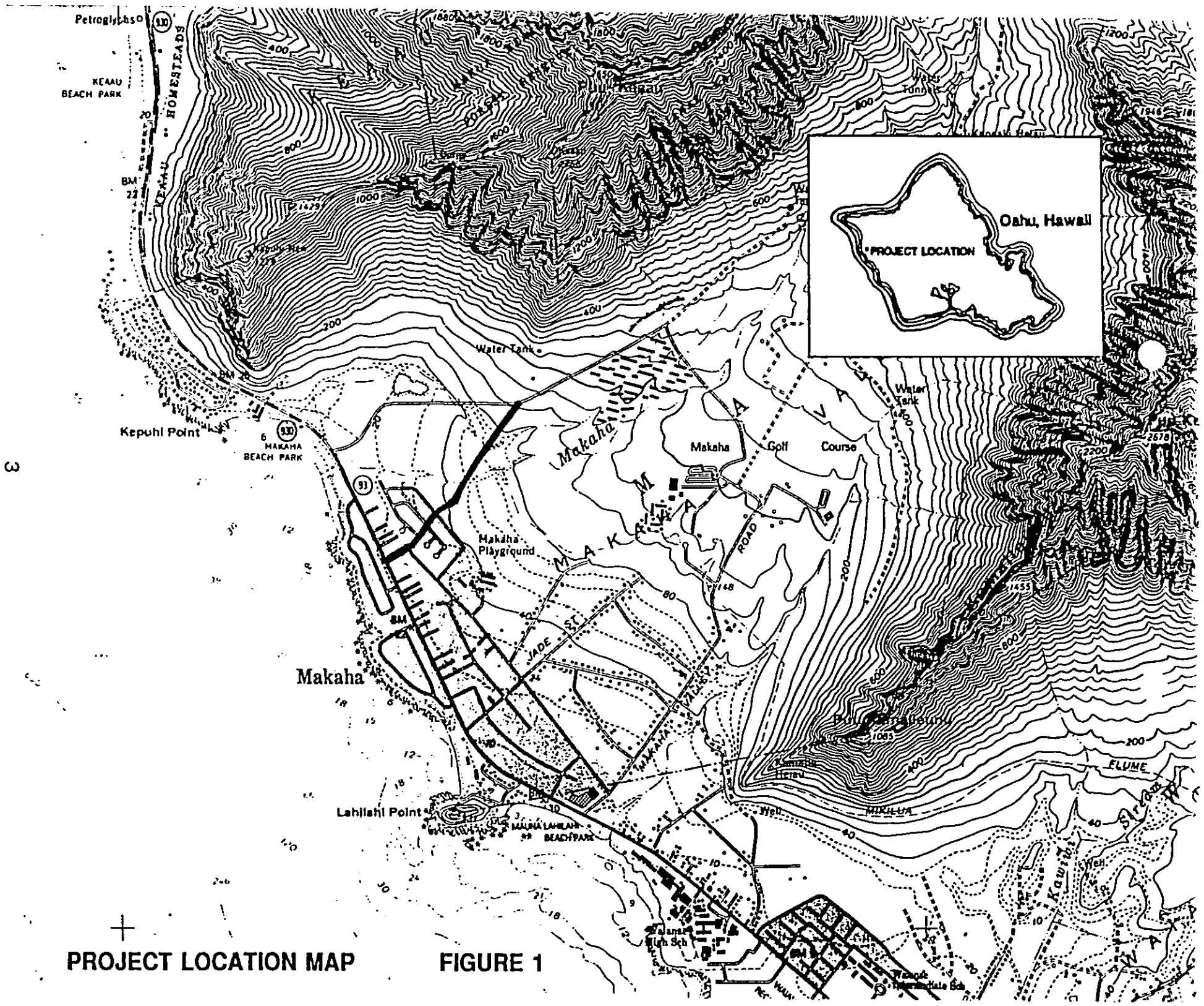
The project site is located about 1 mile from the shoreline.

G. Existing Covenants, Easements, Restrictions

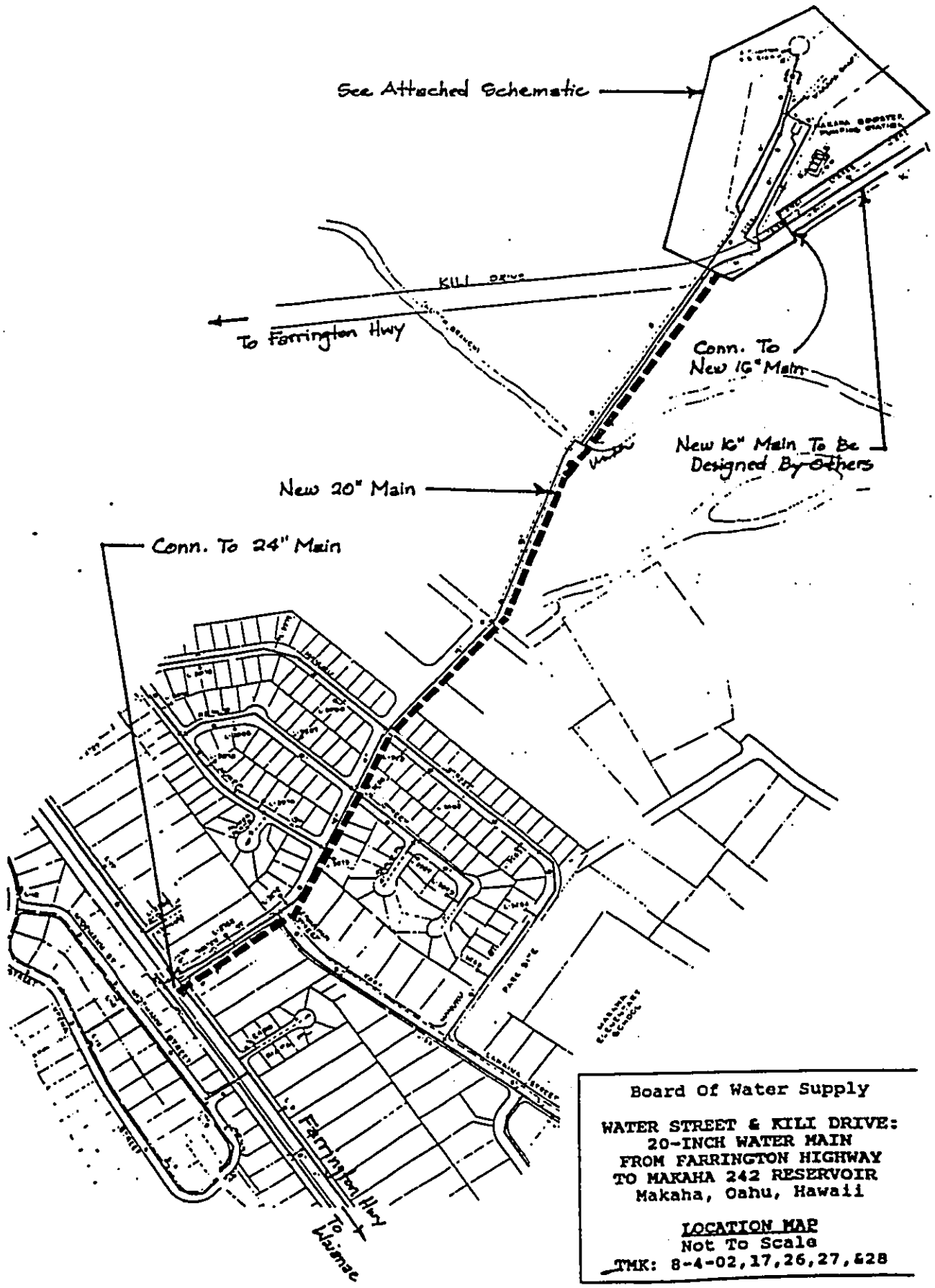
There are no covenants, easements or restrictions. The land is owned by the Board of Water Supply.

H. Historic Sites Affected

There are no sites in the immediate vicinity of the project area which are on the Federal Register of Historic Places or the State Register of Historic Sites.



PROJECT LOCATION MAP FIGURE 1



PROJECT SITE PLAN **FIGURE 2**

1/EI SECTION
NTS

BACKFILL NOTES:

TYPE "A"
BEACH SAND, EARTH, OR EARTH AND GRAVEL. THE MAXIMUM ROCK SIZE SHALL BE 3" AND THE MIXTURE SHALL CONTAIN NO MORE THAN 30 PERCENT BY VOLUME OF ROCK PARTICLES.

TYPE "B"
BEACH SAND, EARTH, OR EARTH AND GRAVEL. IF EARTH AND GRAVEL MIXTURE, MUST PASS A 1/2" MESH SCREEN AND CONTAIN NOT MORE THAN 20 PERCENT BY VOLUME OF ROCK PARTICLES.

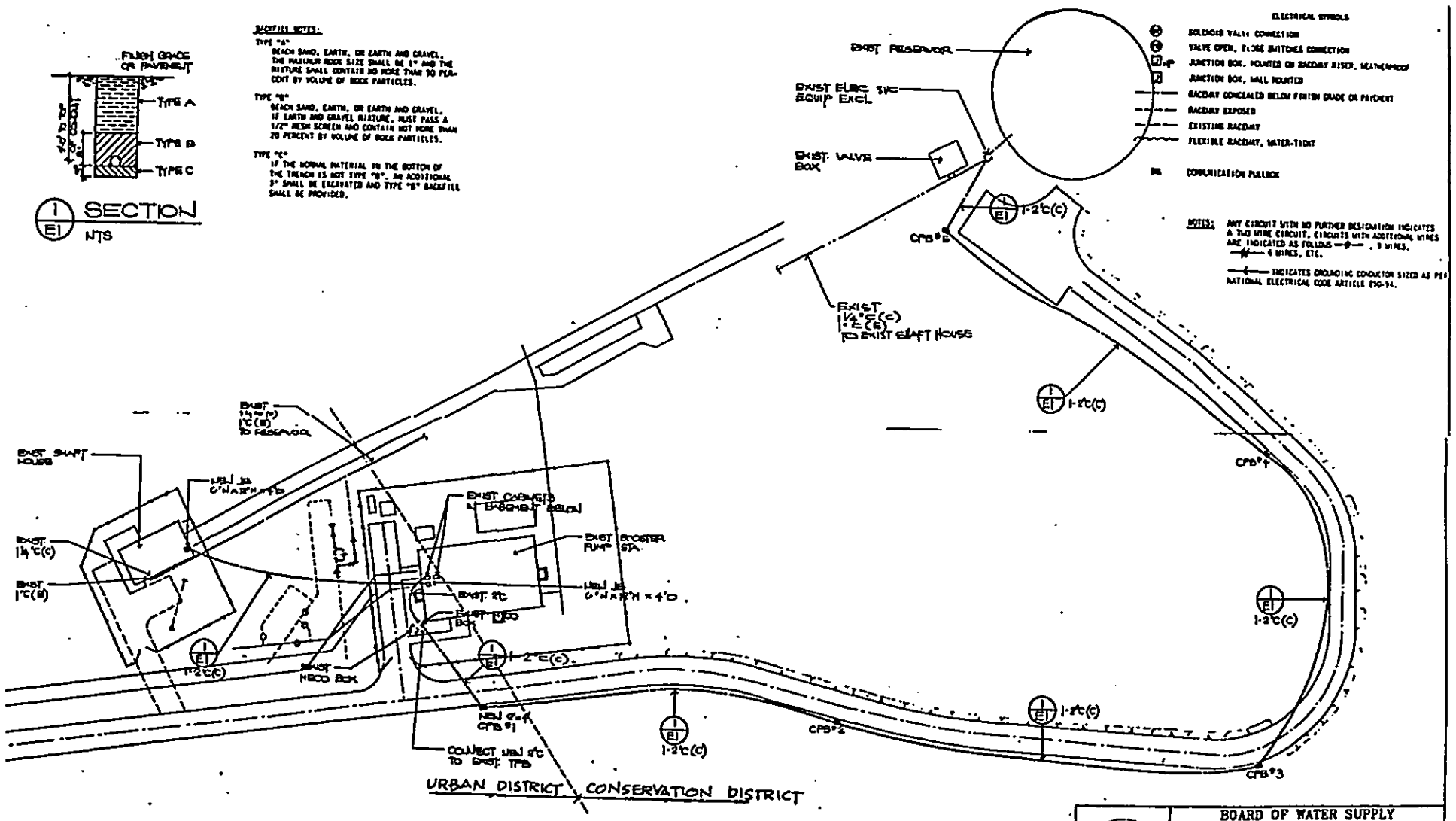
TYPE "C"
IF THE NORMAL MATERIAL IN THE BOTTOM OF THE TRENCH IS NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED AND TYPE "B" BACKFILL SHALL BE PROVIDED.

ELECTRICAL SYMBOLS

- SOLENOID VALVE CONNECTION
- VALVE OPEN, CLOSE SWITCHES CONNECTION
- JUNCTION BOX, MOUNTED ON RACEWAY RISER, WEATHERPROOF
- JUNCTION BOX, WALL MOUNTED
- RACEWAY CONCEALED BELOW FINISH GRADE OR PAVEMENT
- RACEWAY EXPOSED
- EXISTING RACEWAY
- FLEXIBLE RACEWAY, WATER-TIGHT
- PB COMMUNICATION PULLBOX

NOTES: ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUITS WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS —#— , 3 WIRES. —#— 4 WIRES, ETC.

—←— INDICATES GROUNDING CONDUCTOR SIZED AS PER NATIONAL ELECTRICAL CODE ARTICLE 250-94.

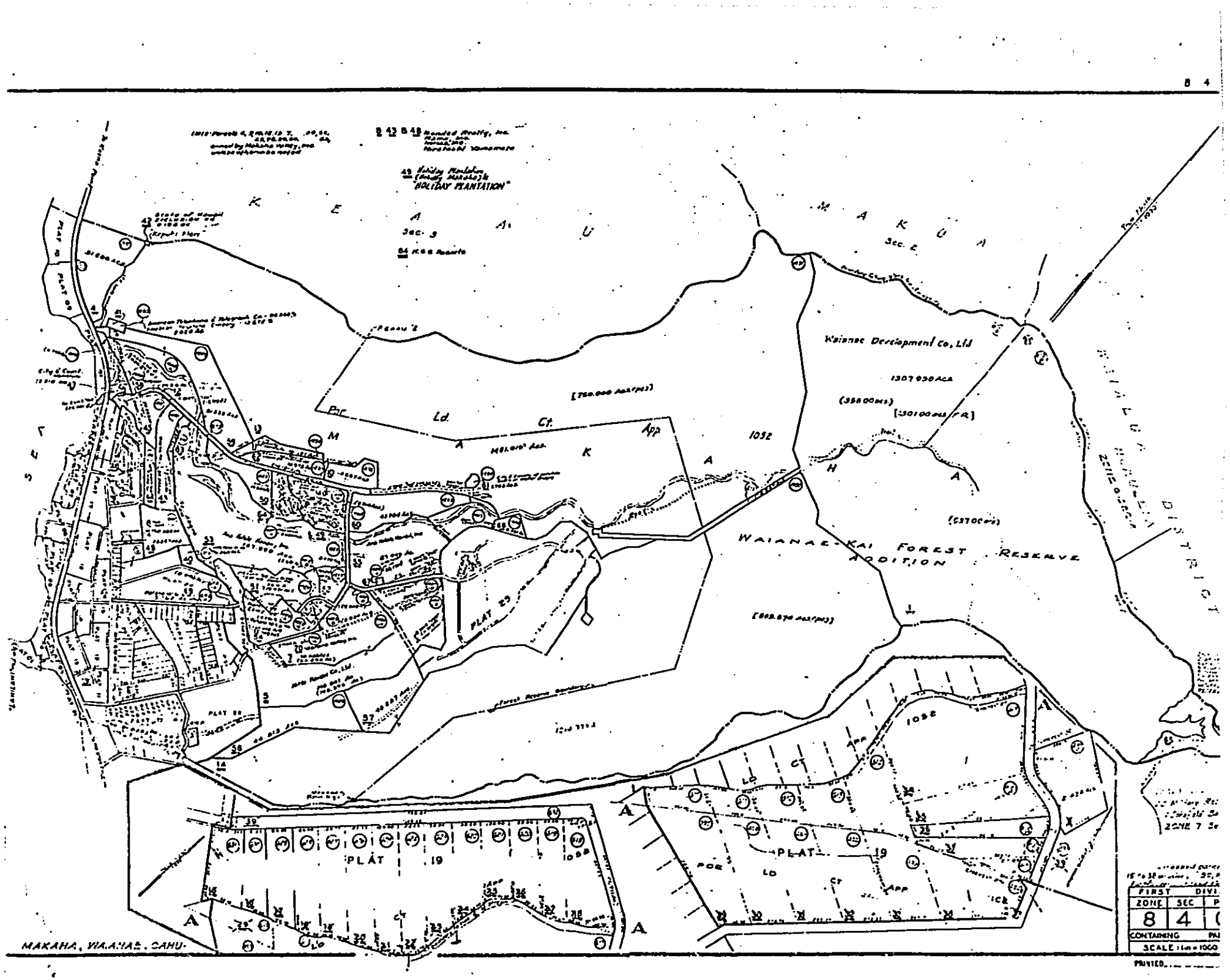


ELECTRICAL SITE PLAN
SCALE 1": 1"=20'-0"

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

JOB 90-113
KILI DRIVE AND WALTER STREET 20" WATER MAIN
WAIANA GAME, HAWAII
FLOW TUBE AND CONTROL VALVES AT WAIANA BOOSTERS STATION

DATE FEB. 1990
DRAWN FB CHECKED AC
APPROVED



8 4
K E A A U
M A K O A
Sec. 3
Sec. 2
"HOLIDAY PLANTATION"
Waianae Development Co, Ltd
1307.950 Acs
Par Ld. Ct. App
M A K A H A
1052
WAIANAE-KAI FOREST RESERVE ADDITION
PLAT 19
PLAT 19
MAKAHA, WAIANAE, OAHU
FIRST DIVI
ZONE SEC
8 4
CONTAINING
SCALE 1 in = 1000
PRINTED

OEQC FORM FOR PUBLICATION OF EIS DOCUMENTS IN THE OEQC BULLETIN

Project title: Kili Drive/Water Street 20-Inch Water Main

District: Waianae
Island: Oahu
Acreage:

Tax map key numbers: 8-4-2, 17, 26, 27 and 28

TO BE FILLED OUT BY THE AGENCY ONLY:

Type of action:
X Agency
__ Applicant

Please check all that apply. This document is a:

Chapter 205A document
__ EIS Preparation Notice
__ Draft EIS
__ Final EIS

NEPA document
__ FONSI
__ Notice of Preparation (NOP)
__ Draft EIS
__ Final EIS

Chapter 343 document
X Negative Declaration
__ EIS Preparation Notice
__ Draft EIS
__ Final EIS
__ Acceptance Notice

OEQC must receive 4 copies of the environmental assessment, 60 of the draft EIS, and 25 of the final EIS. Proposing agencies or applicants should deliver an appropriate number of draft and final EISs to the accepting authority before submitting copies to OEQC.

Accepting authority's address:

Contact: Phone:

Proposing agency or applicant's address: Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Contact: Lawrence Whang Phone: 527-6138

Consultant's address:

Contact: Phone:

Summary of the proposed action or project to be published in the bulletin. Please use complete sentences and write plainly and clearly. The description should be brief, but sufficiently detailed so that the full impact of the action can be determined.

The proposed project consists of the installation of 4,600 linear feet of a 20-inch water main along Kili Drive and Water Street from Farrington Highway to the Makaha Booster Station.

This project is part of the Board of Water Supply's goal to provide water for the increasing demand in the Waianae area.

Please check all that apply. Characteristics that made this action subject to the EIS law:

X Use of state or county lands or funds
X Use of conservation district lands
___ Use of shoreline setback area
___ Use of historic site or district
___ Use of lands in the Waikiki Special District
___ Amendment to a county general plan
___ Reclassification of conservation lands
___ Construction or modification of helicopter facilities
___ Other

Estimated project cost:

___	Federal funds
___	State funds
$1,900,000	County funds
___	Private funds
$1,900,000	TOTAL

Document preparation cost:

$3,000	Environmental assessment
___	Draft EIS
___	Final EIS
___	Supplemental final EIS
$3,000	TOTAL

KILI DRIVE/WATER STREET 20-INCH WATER MAIN

ENVIRONMENTAL ASSESSMENT

June 1989

Prepared by
Environmental Communications, Inc.

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I. SUMMARY

CHAPTER 343, HRS
ENVIRONMENTAL ASSESSMENT

Action:	Agency Board of Water Supply City and County of Honolulu
Project Name:	Kili Drive/Water Street 20-Inch Water Main
Project Description:	The proposed project consists of the installation of a 20-inch water main on Kili Drive and Water Street from Farrington Highway to the Makaha Booster Station. The alignment will be approximately 4,600 linear feet and will connect to the existing Makaha Booster suction line. The project will also include a control valve, an altitude valve and flow tube. The project will be constructed within an existing 30-foot wide easement. If any construction is required outside of this easement, a new easement paralleling the existing alignment will be required.
Project Location:	Kili Drive and Water Street, Makaha, Oahu, Hawaii
Area:	Approximately 4,600 linear feet
Tax Map Key:	8-4-02, 17, 26, 27 and 28
State Land Use:	Urban
Contact:	Larry Whang (527-6138)

II. PROJECT DESCRIPTION

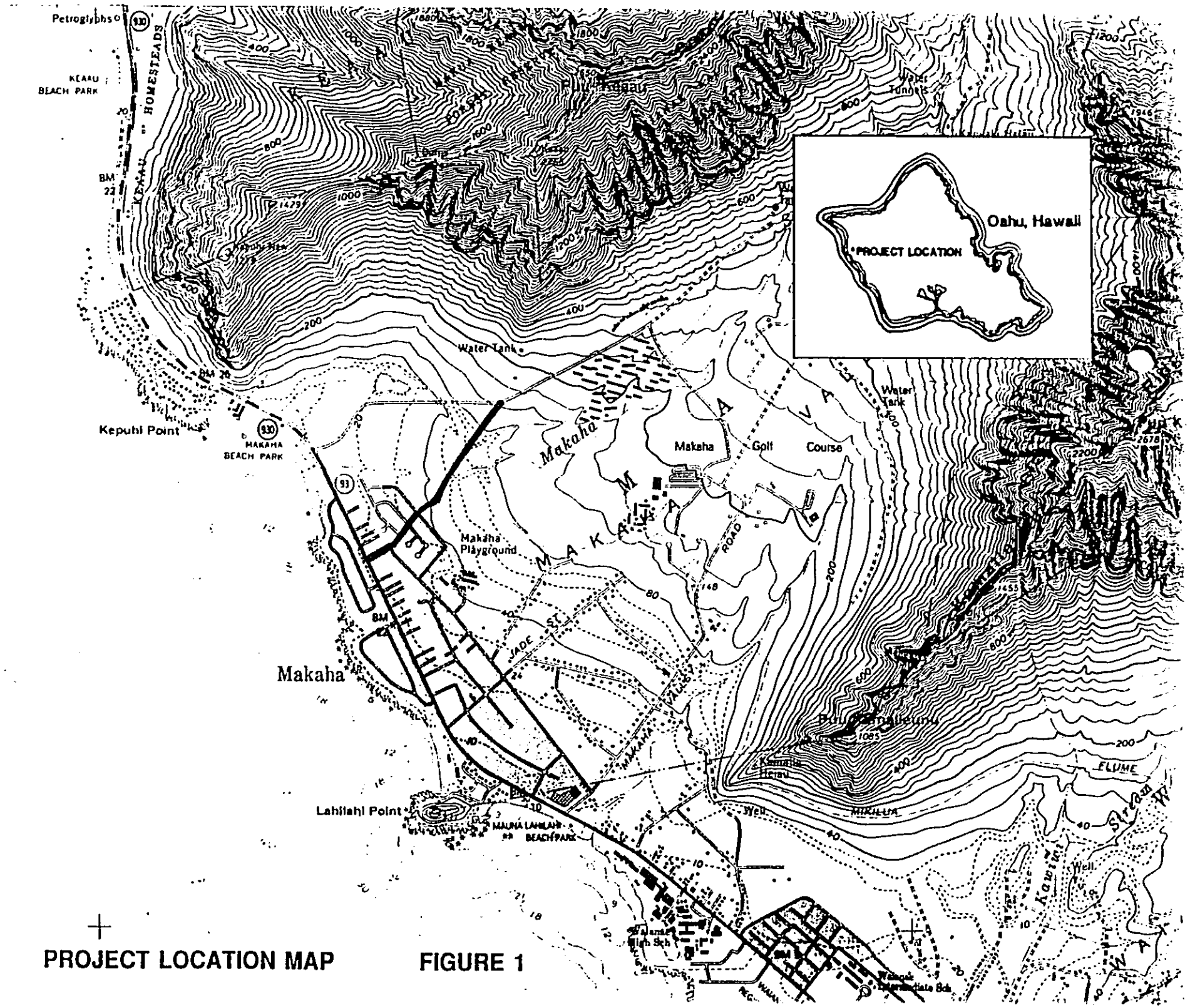
A. Technical Characteristics

The proposed project consists of the installation of a 20-inch water main at Water Street and Kili Drive in Makaha, Oahu (Figure 1). This water main, which will connect the Makaha Booster Station to Farrington Highway, will be contained within an alignment of approximately 4,600 linear feet (Figure 2).

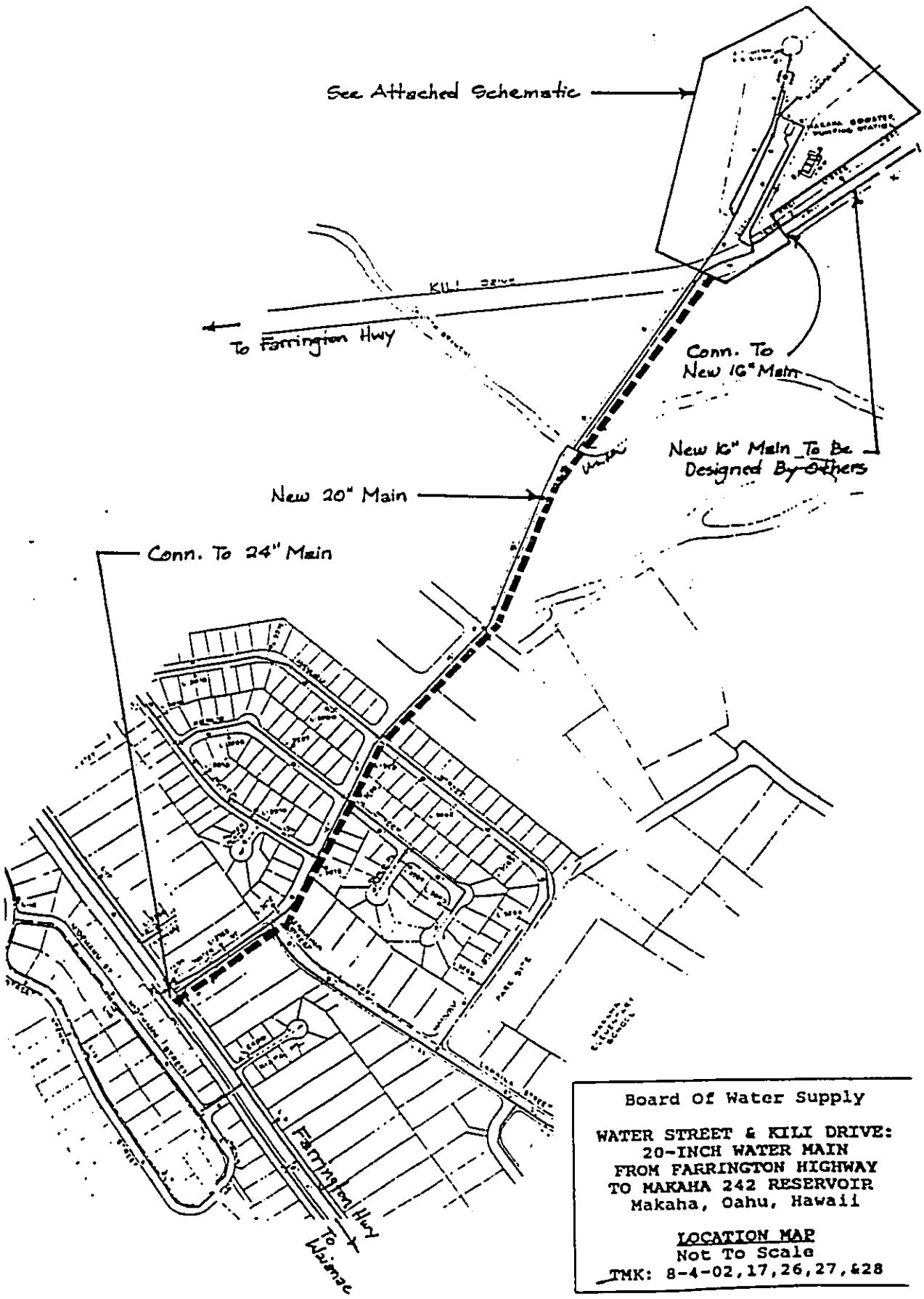
Specifically, the proposed project involves the connection of water sources; Makaha Well I and Reservoir 525, Reservoir 875 and Makaha Wells II, III, IV, and Makaha Well V, to the planned 20-inch water main (Figure 3). The water main and connection will also be fed by the Makaha shaft and Reservoir 24 through a 16-inch water main leading to a single-acting altitude valve with a bypass which will feed a down-sized 12-inch pipe connecting to the 20-inch main. All sources will then connect to a flow tube and a control valve and finally, flow into the 20-inch trunk line.

The existing easement for the water line is 30 feet wide. The project is expected to stay within this easement; however, in the event that construction outside of the existing easement is required, a new easement paralleling the existing easement will be constructed.

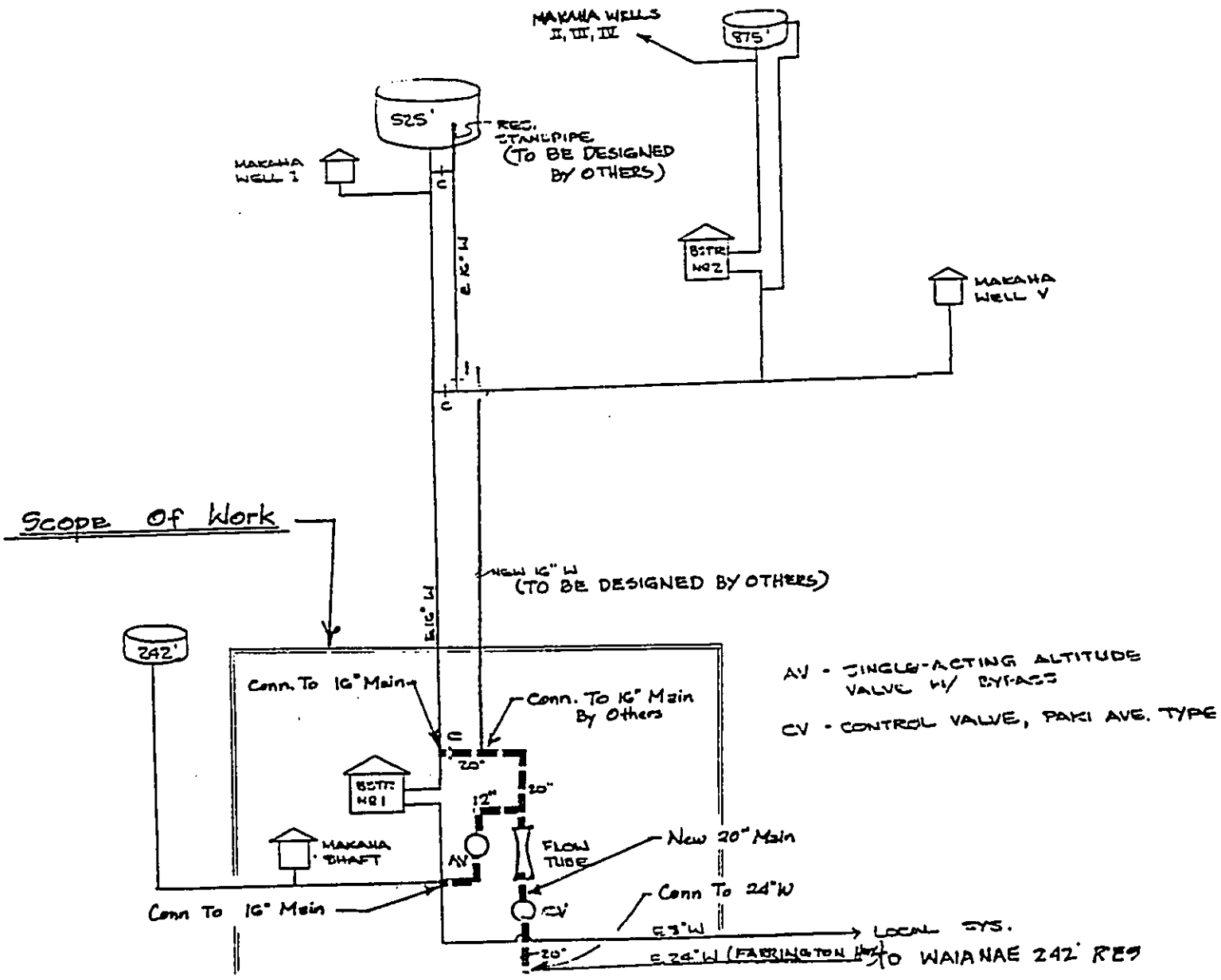
The water main will be constructed of either poly-wrapped ductile iron or concrete cylinder pipe.



PROJECT LOCATION MAP FIGURE 1



PROJECT SITE PLAN **FIGURE 2**



PROJECT SCHEMATIC FIGURE 3

B. Economic Characteristics

The project cost will be assumed by the Board of Water Supply. The proposed action is not expected to have any direct economic impacts on any other actions other than the subject project and services provided by the project.

C. Social Characteristics

The proposed project is not expected to have any significant social impacts other than some inconvenience to subdivision residents on Water Street who may be affected by minor traffic and noise impacts during the construction phase. Golf course use will be affected by construction however course play is not expected to cease or be significantly altered. Golfers will be permitted to drop without penalty if their golf ball enters the construction area..

D. Environmental Characteristics

The subject project is not expected to have any significant environmental impacts. Surface alterations resulting from excavation work will be temporary; these surfaces will be repaired or allowed to revert to their previous conditions.

III. AFFECTED ENVIRONMENT

A. Project Location

The proposed project is located on Water Street and Kili Drive in Makaha, Oahu, Hawaii. The project area is identified as TMK: 8-4-02, 17, 26, 27 & 28. The project, which runs from Farrington Highway to the Makaha 242 Reservoir, is approximately 4,600 feet in length.

The portion of the project located on Water Street is situated within a residential subdivision while the portion mauka of Water Street is located on vacant lands and a golf course within an existing 30 foot wide easement of approximately 1,250 feet. An additional easement width of 10 feet will be required along approximately 900 feet of the existing easement. The project alignment terminates at its' mauka most portion at Kili Drive.

B. Description of Topography

The project area is located on the lower most portion of Makaha Valley. The project easement lies on relatively flat land and crosses the Makaha and Makaha West streams. The makai portions are located within a developed subdivision road while the mauka portions below Kili Drive are vacant or in golf course use.

C. Soils

According to the United States Department of Agriculture Soil Conservation Service, the project site is comprised of three different soil types from the Haleiwa Series, Ewa Series, and Pulehu Series. A brief description of each of these soil types is presented below.

1. **Haleiwa Series**

This series consists of well-drained soils on fans and in drainageways along the coastal plains. These soils are on the islands of Oahu and Molokai. They developed in alluvium derived from basic igneous material. They are nearly level to strongly sloping. Elevations range from sea level to 250 feet. The annual rainfall amounts to 30 to 60 inches, most of which occurs between November and April. The mean annual soil temperature is 73 degrees F. Haleiwa soils are geographically associated with Waialua and Kawaihapai soils on Oahu and Kalaupapa soils on Molokai.

These soils are used for sugarcane, truck crops, and pasture. The natural vegetation consists of koa haole, lantana, guava, Christmas berry, bermudagrass, and fingergrass.

Haleiwa silty clay, 0 to 2 percent slopes (HeA). This soil occurs as large areas on alluvial fans or as long, narrow areas in drainageways. Included in mapping were small areas of poorly drained clayey soils in depressions, as well as small areas of moderately well drained clayey soils.

In a representative profile the surface layer is dark brown silty clay about 17 inches thick. The subsoil and substratum, to a depth of more than 5 feet, are dark brown and dark yellowish-brown silty clay that has subangular blocky structure. The soil is neutral to slightly acid.

Permeability is moderate. Runoff is very slow, and the erosion hazard is no more than slight. The available water capacity is about 1.9 inches per foot. In places

roots penetrate to a depth of 5 feet or more. The soil is subject to occasional non-damaging overflow in some places.

2. **Ewa Series**

This series consists of well-drained soils in basins and on alluvial fans on the islands of Maui and Oahu. These soils developed in alluvium derived from basic igneous rock. They are nearly level to moderately sloping. elevations range from near sea level to 150 feet. The annual rainfall amounts to 10 to 30 inches. Most of it occurs between November and April. The mean annual soil temperature is 73 degrees F. Ewa soils are geographically associated with Honouliuli, Mamala, Molokai, Pulehu, and Waiakoa soils.

These soils are used for sugarcane, truck crops, and pasture. The natural vegetation consists of fingergrass, kiawe, koa haole, klu, and uhaloa.

Ewa stony silty clay, 0 to 2 percent slopes (EwA). This soil has a profile like that of Ewa silty clay loam, except for the texture of the surface layer. Surface stones interfere with tillage but do not make intertilled crops impracticable. Runoff is very slow, and the erosion hazard is no more than slight. Included in mapping were a few small areas where the texture of the surface layer is silty clay loam.

This soil is used for sugarcane, truck crops, and pasture. (Capability classification IIs if irrigated, IVs if nonirrigated; sugarcane group 1; pasture group 2).

3. **Pulehu Series**

This series consists of well-drained soils on alluvial fans and stream terraces and in basins. These soils occur on the islands of Lanai, Maui, Molokai, and Oahu. They developed in alluvium washed from basic igneous rock. The soils are nearly level to moderately sloping. Elevations range from nearly sea level to 300 feet. The annual rainfall amounts to 10 to 35 inches. The mean annual soil temperature is 74 degrees F. Pulehu soils are geographically associated with Ewa, Jaucas, Kealia, Lualualei, Waialua, and Mala soils.

These soils are used for sugarcane, truck crops, pasture, homesites, and wildlife habitat. The natural vegetation consists of bermudagrass, bristly foxtail, fingergrass, kiawe, klu, lantana, koa haole, and sandbur.

Pulehu stony clay loam, 2 to 6 percent slopes (PuB). On this soil, there are sufficient stones to hinder tillage but not enough to make intertilled crops impracticable. Runoff is slow, and the erosion hazard is slight.

This soil is used for sugarcane, truck crops, and pasture. Capability classification IIe if irrigated, IVs if nonirrigated; sugarcane group 1; pasture group 2).

D. Surface Water

The Waianae Coast is a dry area, receiving less than 20 inches of rainfall per annum along the coastline and up to 30 inches in the lower valleys.

Makaha Stream is the main drainage within the vicinity of the project site. Located approximately 150 feet east of the wells, it is an intermittent stream in the lower reaches flowing after periods of heavy rainfall. The headwaters of the stream are

perennial, receiving their flow from discharge of high level groundwater and from drainage of Mt. Kaala.

E. Flood Plain

According to the National Flood Insurance Program Flood Insurance Rate Map, the project alignment lies in two different zone designations. The near stream areas are located in Zone A, a special flood hazard area inundated by 100-year floods, in which no base flood elevations have been determined. The inland areas are located in Zone X, areas determined to be outside the 500-year flood plain.

F. Wetlands Protection

The project site is not within a designated wetland area.

G. Coastal Zone Management

The site is not located within a coastal zone Special Management Area.

H. Biological Characteristics

The makai portion of the project alignment is located on Water Street and does not contain any flora or fauna habitats. Portions of the alignment inland of Water Street up to Kili Drive are undeveloped and vacant. The area consists primarily of noxious, weedy, shrubs and grasses. Fauna is expected to be limited to stray domestic animals, mongoose, rats, and mice. A variety of common and exotic avifauna can also be expected. There are no endangered species known to be located on the project alignment.

I. Historical and Archaeological Characteristics

There are a large number of archaeological sites in Makaha Valley. A number of archaeological surveys have included or specifically addressed the Valley. There are no sites in the immediate vicinity of the project area which are on the Federal Register of Historic Places or the State Register of Historic Sites. However, all sites in the valley are considered important. In the event that any archaeological remains are uncovered during project construction, all work will be stopped and the State Historic Preservation Office will be notified.

IV. SUMMARY OF MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

The proposed water main construction will not have any significant adverse impact on the environment. However, some temporary unavoidable effects will occur during the construction operations.

There will be an increase in airborne and noise emission levels from the construction equipment. The effect of noise will be mitigated by ensuring compliance with the provisions of Title II, Administrative Rules, Chapter 43, Community Noise Control for Oahu. Other mitigating measures will include restricting the hours of operation, minimizing the use of heavy vehicles in residential areas, and requiring that all construction equipment and vehicles be equipped with mufflers.

The project will not affect any existing State or County Land Use Plan. All State and County land use and zoning laws and ordinances have been followed in the development of the surrounding areas.

Traffic will not be significantly affected and any minor effects will be only temporary.

Energy in the form of fossil fuels will be used by the heavy equipment involved in construction of the proposed project. In addition, fuel and electricity will also be used by the equipment involved in operation and maintenance activities after construction.

It is anticipated that the construction of the proposed project will commit the necessary construction materials and human resources (in the form of planning, designing, engineering, construction labor, and landscaping). Some of the construction materials could be reused if and when the structures are demolished; however, at the present time and state of our economy, it is felt that the reuse of much of these materials is not practical. Labor expended for this

development is not retrievable. However, labor will be compensated during the various stages of the project.

The appearance of the project site will be temporarily altered from its present open unused appearance. The development will be visible but fairly unobtrusive to the surrounding areas.

V. ALTERNATIVES CONSIDERED

No alternatives were considered other than a no use alternative. The no use alternative would leave the project site as it presently exists; however, this alternative was rejected since it would not provide the needed facilities and would prevent water distribution as planned by the Board of Water Supply.

VI. DETERMINATION, FINDINGS AND REASONS SUPPORTING DETERMINATION

After completing an assessment of the potential environmental effects of the proposed project, it has been determined that an Environmental Impact Statement (EIS) is not required. Therefore, this document constitutes a Notice of Negative Declaration.

Reasons supporting the Negative Declaration determination are as follows, using as the criteria, the policy, guideline and provisions of Chapter 342, 343 and 344, HRS.

1. The proposed action will not adversely affect the physical and social environment.

2. There will be no permanent degradation of existing ambient air and noise levels. During construction operations, air quality and noise levels are expected to be affected, but these effects will be temporary and minor.

3. No residences of businesses will be displaced by this project.

4. There are no known endangered species of animal or plants within the project limits.

5. There are no known natural, historic or archaeological sites within the project limits.

6. The project is compatible with the General Plan and Development Plan for Oahu.

7. There are no secondary adverse effects on future development, population and public facilities.

8. The project conforms to the Land Use Ordinance (LUO) and is designed to be compatible with the residential and public facility uses surrounding the site.

9. The project will provide efficient delivery of water as required by the purpose and objectives of the Board of Water Supply.

VII. LIST OF CONSULTANTS

Environmental Communications, Inc.- Environmental Assessment

Shimabukuro, Endo & Yoshizaki, Inc.- Engineering