

North Kohala Water  
System Imp.



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

25 AUPUNI STREET • HILO, HAWAII 96720  
TELEPHONE (808) 961-8660 FAX (808) 961-8657

September 18, 1998

RECEIVED  
'98 SEP 22 P2:56


OFF. OF ENVIRONMENTAL  
QUALITY CONTROL

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

NORTH KOHALA WATER SYSTEM IMPROVEMENTS  
FINAL ENVIRONMENTAL ASSESSMENT

We are forwarding 4 copies of the revised Final Environmental Assessment (FEA) which addresses comments made by your staff via fax dated September 3, 1998.

Should you have any questions on this matter, please contact our consultant, Mr. Edward Harada of M&E Pacific, Inc., at (808) 961-2776 or Mr. Keith Okamoto of our staff at (808) 961-8660.

  
Milton D. Pavao, P.E.  
Manager

KKO:gms

Enc.

copy - (w/o enc.) Mr. Edward Harada, M&E Pacific, Inc.

... Water brings progress...

105

1998-09-08 - HI-PEA - North Kohala  
Water System Improvements

SEP 8 1998

**FILE COPY**

**FINAL ENVIRONMENTAL ASSESSMENT**

**NORTH KOHALA WATER SYSTEM  
IMPROVEMENTS**

**NORTH KOHALA, HAWAII ISLAND,  
STATE OF HAWAII**

August, 1998

Department of Water Supply  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

**FINAL ENVIRONMENTAL ASSESSMENT**  
**NORTH KOHALA WATER SYSTEM IMPROVEMENTS**

**NORTH KOHALA DISTRICT, HAWAII ISLAND, STATE OF HAWAII**

**APPLICANT:**

Hawaii County Department of Water Supply  
25 Aupuni Street  
Hilo, Hawaii 96720

**CONSULTANT:**

M&E Pacific, Inc.  
100 Pauahi Street, Suite 212  
Hilo, Hawaii 96720

**APPROVING AGENCY:**

Milton Pavao, Manager  
Department of Water Supply  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

**CLASS OF ACTION:**

Use of County Funds and Lands

This document is prepared pursuant to the Hawaii Environmental Protection Act,  
Chapter 343, Hawaii Revised Statutes (HRS), and  
Title 11, Chapter 200, Hawaii Department of Health Administrative Rules (HAR).

## TABLE OF CONTENTS

	<u>Page Number</u>
Chapter 1: ACTION DESCRIPTION	1
1.1 Project Location	1
1.2 Need for Project	1
1.3 Project Description and Objectives	4
1.4 Timetable and Cost Estimate	13
1.5 Alternatives	13
1.6 Ownership and Land Use Designation and Controls	14
1.7 Consultation with Agencies, Organizations and Individuals	14
 Chapter 2: ENVIRONMENTAL SETTING	 15
2.1 Geographic Setting	15
2.2 Physical Environment	15
2.2.1 Climate	15
2.2.2 Drainage	15
2.2.3 Geology and Hazards	15
2.2.4 Flora and Fauna	15
2.2.5 Air Quality and Noise	16
2.2.6 Archaeological Resources	16
2.3 Socio-Economic Characteristics	16
2.3.1 Population Setting	16
2.3.2 Economic Aspects	17
2.4 Public Facilities, Utilities and Services	17
2.4.1 Roads and Traffic	17
2.4.2 Overhead Utilities	17
2.4.3 Water Supply	17

**TABLE OF CONTENTS**  
(cont.)

	<u>Page Number</u>
2.5 Relationship to Plans, Policies and Controls	18
2.5.1 Hawaii State Plan	18
2.5.2 Water Master Plan, Island of Hawaii	18
2.5.3 Hawaii County Water Use and Development Plan	18
2.5.4 Hawaii County General Plan	18
2.5.5 Required Permits	19
 Chapter 3: DETERMINATION	 19
 Chapter 4: SUPPORTING FINDINGS AND REASONS	 19
 Appendix: COMMENT LETTERS TO DRAFT ENVIRONMENTAL ASSESSMENT AND RESPONSES	

## LIST OF FIGURES

		<u>Page Number</u>
Figure 1	Island of Hawaii Location Map	2
Figure 2	Detailed Location Map	3
Figure 2a	(1) Install solenoid control valve and telemetering requirements for the Halaula 0.10 MG Reservoir.	5
Figure 2b	(2) Install Pressure Reducing Valve for the Halaula Reservoir System.	6
Figure 2c	(3) Install 1,200 linear feet of new 6-inch Ductile Iron pipe to Kynnersley Reservoir.	7
	(5) Replace existing 1-inch Pressure Reducing Valve with new 4-inch x 2-inch Pressure Reducing Valve unit in Kynnersley Road.	7
Figure 2d	(4) Replace 300 linear feet of existing 4-inch Asbestos Cement waterline with new 6-inch Ductile Iron water pipe with Kynnersley Road.	8
Figure 2e	(6) Reconnect existing 6-inch water pipe from Maekawa Pressure Reducing Valve to Kaauhuhu No. 2 Reservoir.	9
Figure 2f	(7) Replace 1,150 linear feet of 6-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within State Highway near Kynnersley Road.	10

LIST OF FIGURES  
(cont.)

		<u>Page Number</u>
	(9) Replace 6,100 linear feet of existing 8-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within Kynnersley Road.	10
	(10) Replace 2,300 linear feet of existing 4-inch and 6-inch Asbestos Cement pipe with new 6-inch Ductile Iron pipe on Kynnersley Road makai of the State Highway toward Union Camp including Pressure Reducing Valve.	10
Figure 2g	(8) Install 3,000 linear feet of parallel 8-inch Ductile Iron Pipe within State Highway.	11
Figure 3	Location of Hawi Aquifer No. 80101	12

FINAL ENVIRONMENTAL ASSESSMENT  
NORTH KOHALA WATER SYSTEM IMPROVEMENTS

Chapter 1 Action Description

1.1 Project Location

The proposed projects are within the North Kohala District on the Island of Hawaii (Figure 1). Specifically, the projects are located at various sites within the district as noted on Figure 2.

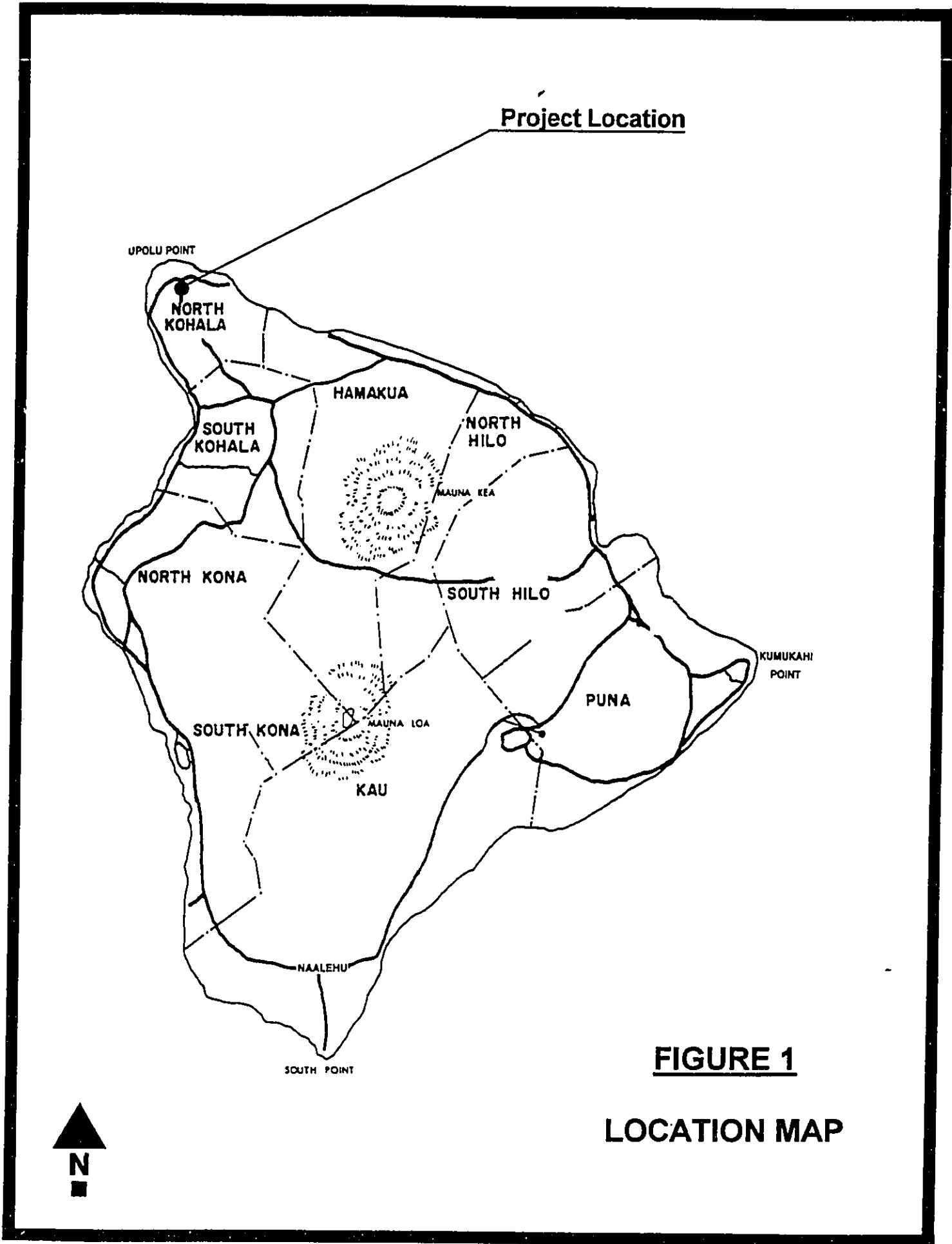
1.2 Need for Project

The existing water system serving various areas of North Kohala was installed many years ago and in need of replacement and improvement. For example, many sections of existing pipelines to be replaced consist of asbestos cement pipe which is presently not acceptable to the Department of Water Supply. Other improvements are proposed to improve water service to the community.

This project will eliminate the tunnel sources, Watt, Bond, Hapahapai, and Lindsey, which are aggressive and corrosive to the water distribution system. The pH for these sources range from a low of 6 to a high of 6.8. The more critical factor in the source is the lack of minerals, especially silica which prohibits corrosion. This action will bring the Department of Water Supply in compliance with the United States Environmental Protection Agency's (EPA's) Lead and Copper Rule and avoid establishing and maintaining expensive treatment facilities as required by EPA's Surface Water Treatment Rule. The abandoned tunnel sources will be utilized as emergency drinking water sources during drought situations. The runoff from the spring sources may restore the streams in the area but in a very minor capacity.

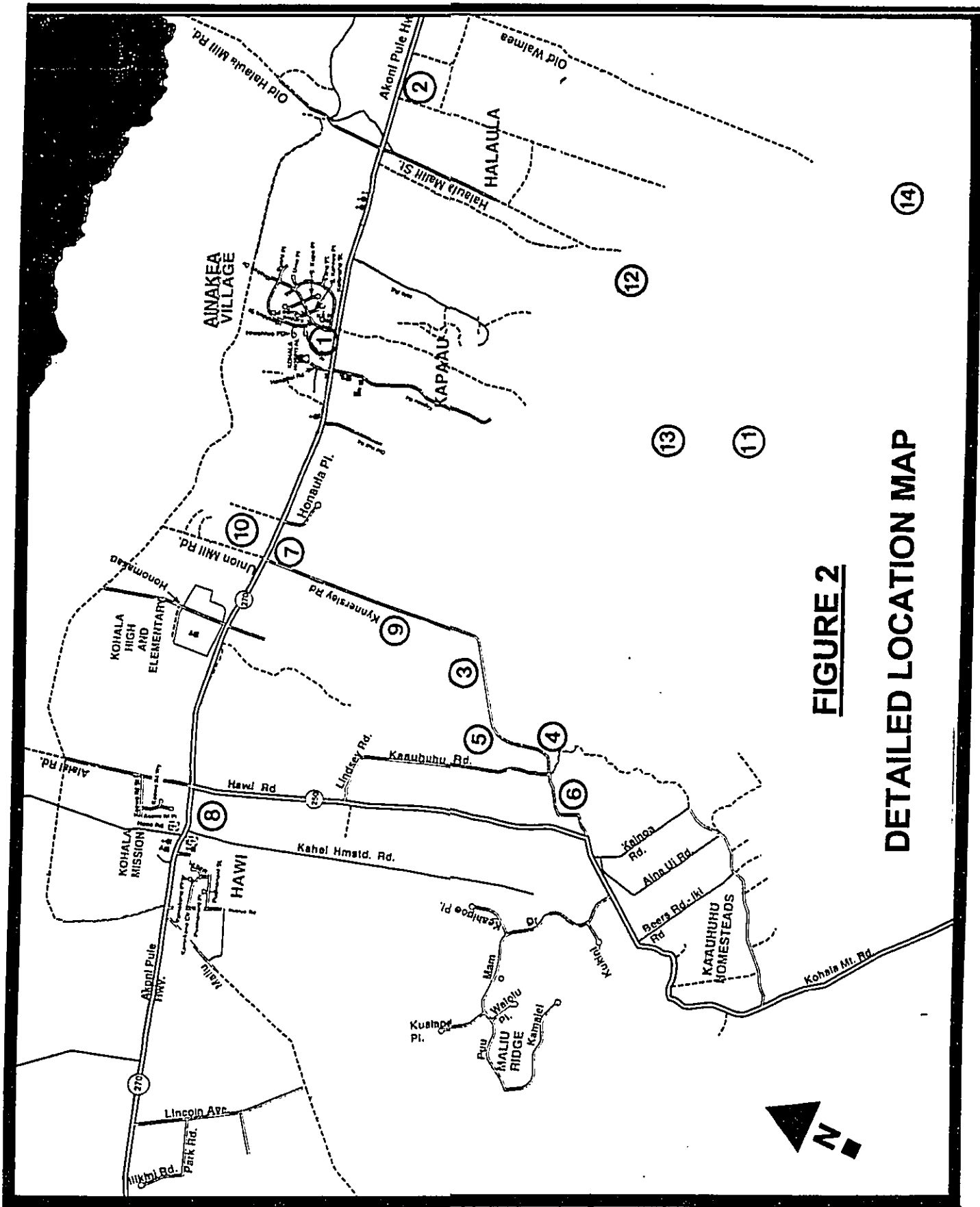
Currently, the Hawi Well is pumping approximately 300,000 gallons per day (gpd) which is fifty-two percent (52%) of its capacity (576,000 gpd). Based on consumption records, the North Kohala area consumes an average of approximately 500,000 gpd. Therefore, approximately 200,000 gpd is provided by existing spring sources. This consumption will be accommodated by the excess capacity of the Hawi Well as well as by the use of the new Hawi Well No. 2 that the Department of Water Supply has





**FIGURE 1**

**LOCATION MAP**



**FIGURE 2**

**DETAILED LOCATION MAP**

recently completed. Hawi Well No. 2 has a capacity of 1,008,000 gpd. The combined use of the two (2) wells will provide the primary source of water for the Department's North Kohala Water System. The underlying aquifer is No. 80101, Hawi, which has a sustainable yield of 27 mgd (Figure 3).

### 1.3 Project Description and Objectives

#### Project Description

The Hawaii County Department of Water Supply (DWS) plans to replace and improve its existing water system as follows and as indicated on Figure 2, and as detailed on Figures 2a through 2g.:

- (1) Install solenoid control valve and telemetering requirements for the Halaula 0.10 MG Reservoir. The telemetering system will control the operation of the Halaula reservoir (Figure 2a).
- (2) Install Pressure Reducing Valve for the Halaula Reservoir System (Figure 2b).
- (3) Install 1,200 linear feet of new 6-inch Ductile Iron pipe to Kynnersley Reservoir (Figure 2c).
- (4) Replace 300 linear feet of existing 4-inch Asbestos Cement waterline with new 6-inch Ductile Iron water pipe within Kynnersley Road (Figure 2d).
- (5) Replace existing 1-inch Pressure Reducing Valve with new 4-inch x 2-inch Pressure Reducing Valve unit in Kynnersley Road (Figure 2c).
- (6) Reconnect existing 6-inch water pipe from Maekawa Pressure Reducing Valve to Kaauhuhu No. 2 Reservoir (Figure 2e).
- (7) Replace 1,150 linear feet of 6-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within State Highway near Kynnersley Road (Figure 2f).
- (8) Install 3,000 linear feet of parallel 8-inch Ductile Iron Pipe within State Highway (Figure 2g).

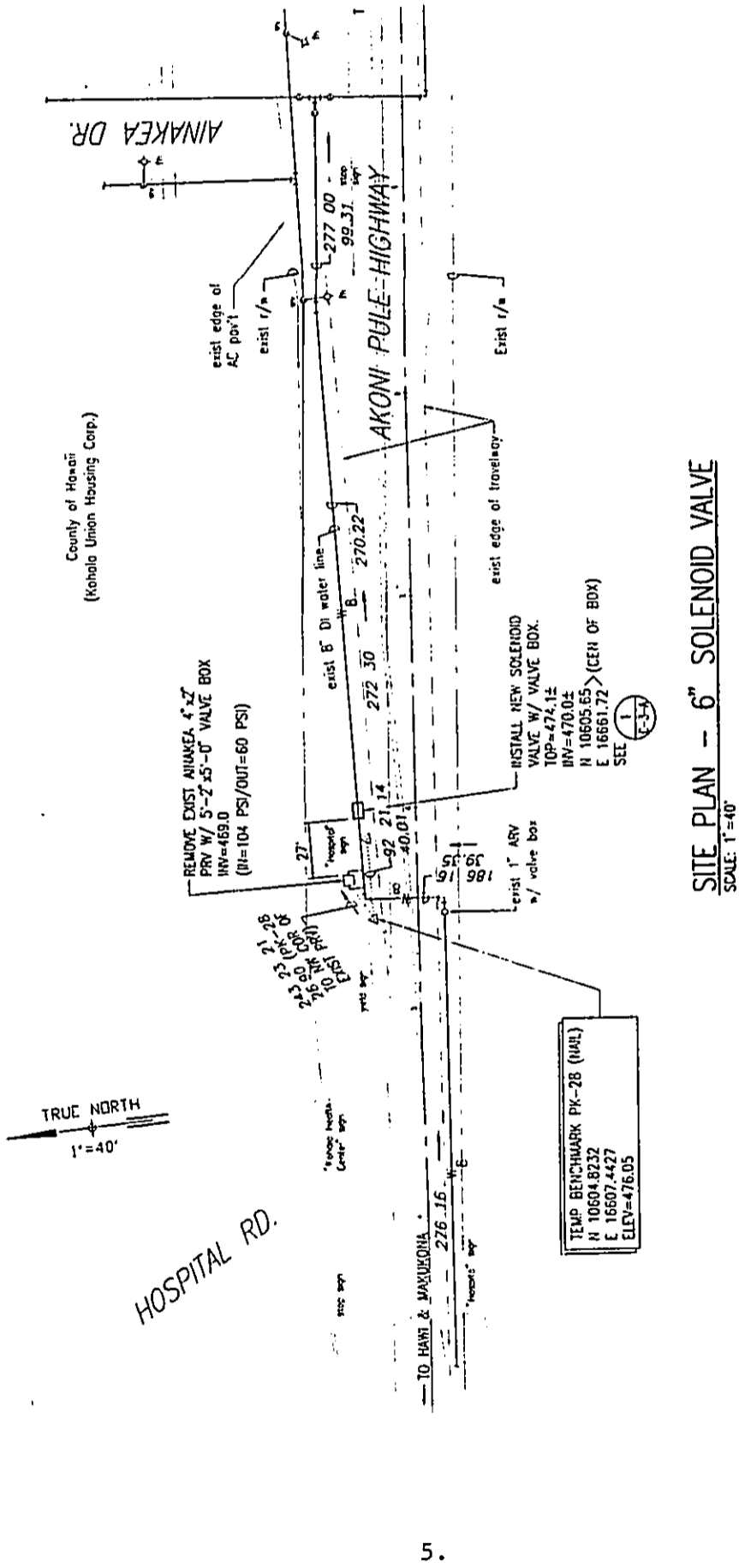


FIGURE 2a

- (1) Install solenoid control valve and telemetering requirements for the Halaula 0.10 MG Reservoir. The telemetering system will control the operation of the Halaula reservoir.

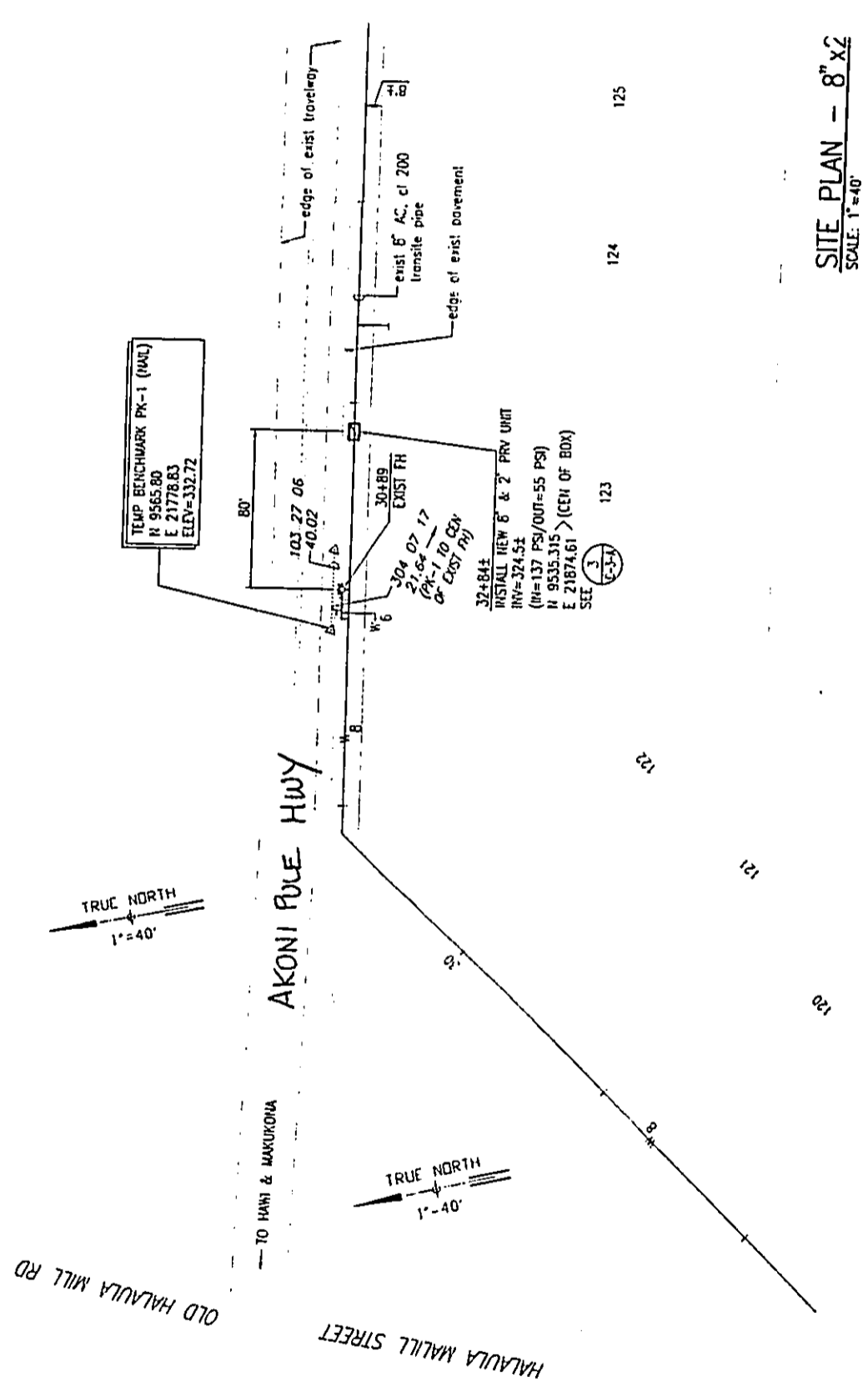
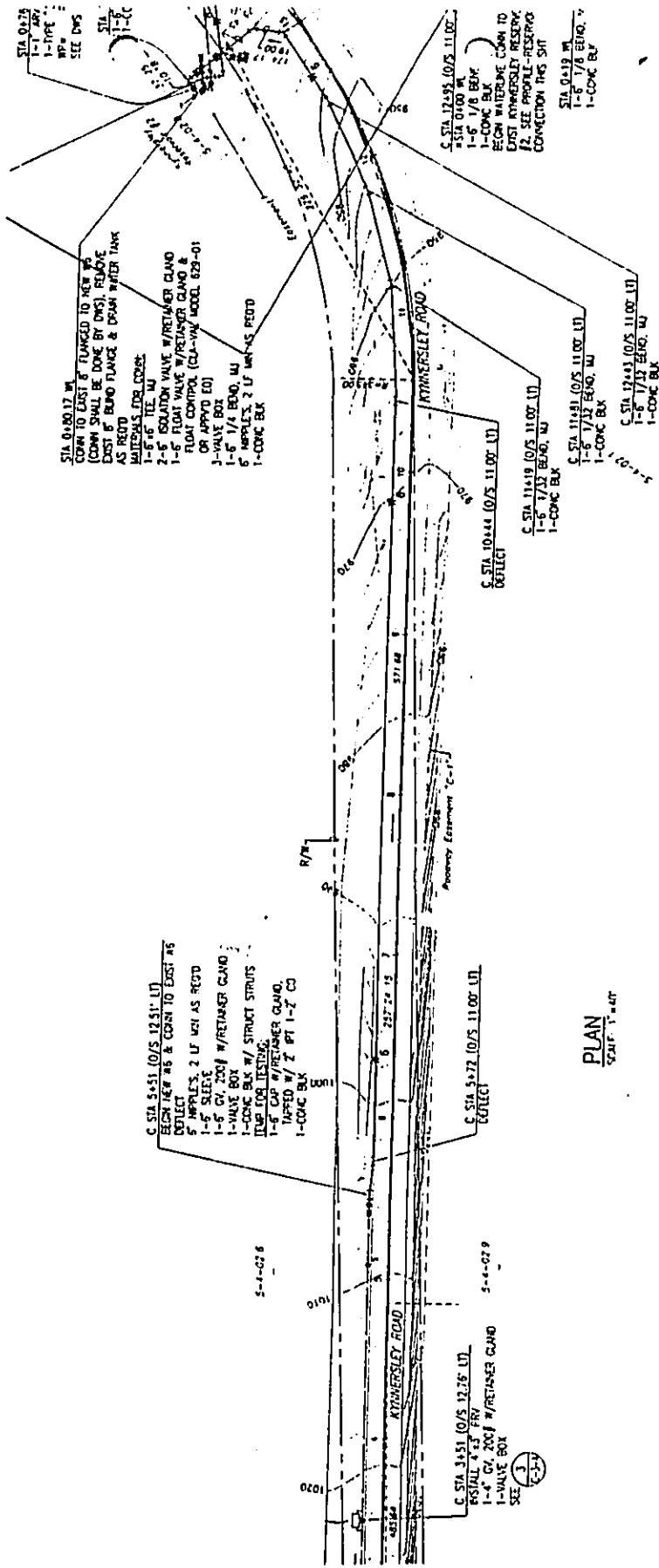


FIGURE 2b

(2) Install Pressure Reducing Valve for the Halaula Reservoir System.



**FIGURE 2c**

- (3) Install 1,200 linear feet of new 6-inch Ductile Iron pipe to Kynnersley Reservoir.
- (5) Replace existing 1-inch Pressure Reducing Valve with new 4-inch x 2-inch Pressure Reducing Valve unit in Kynnersley Road.

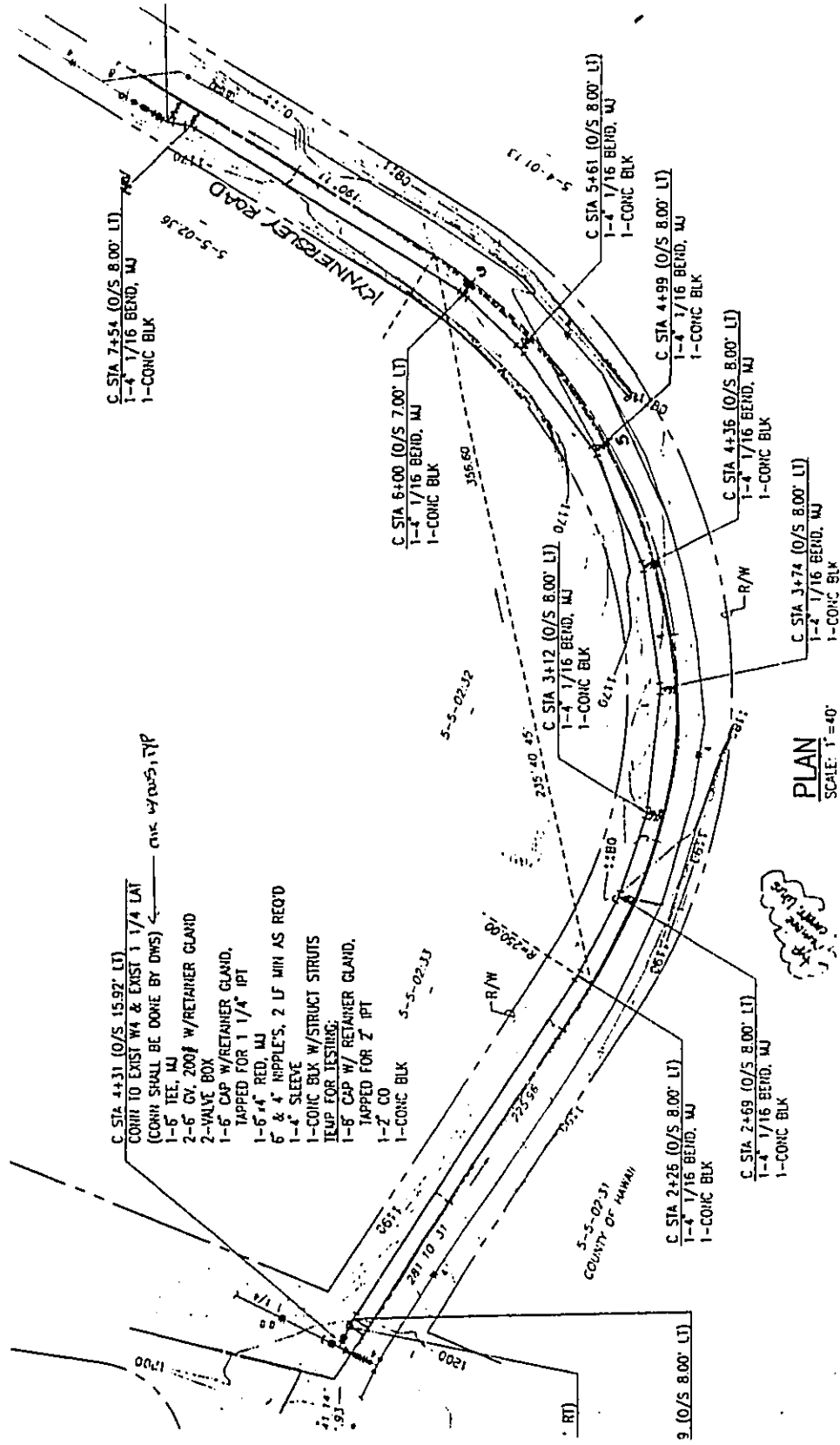
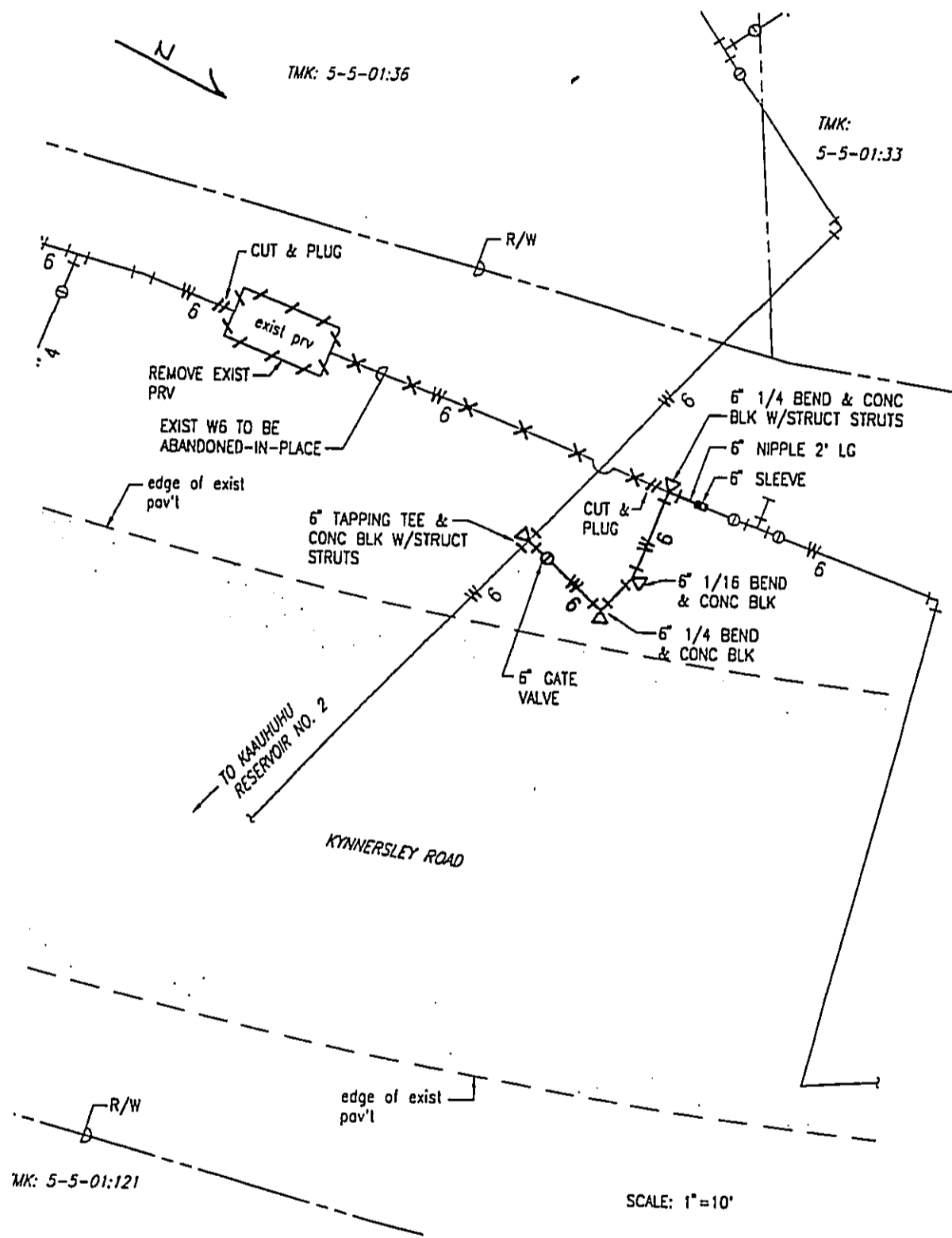


FIGURE 2d

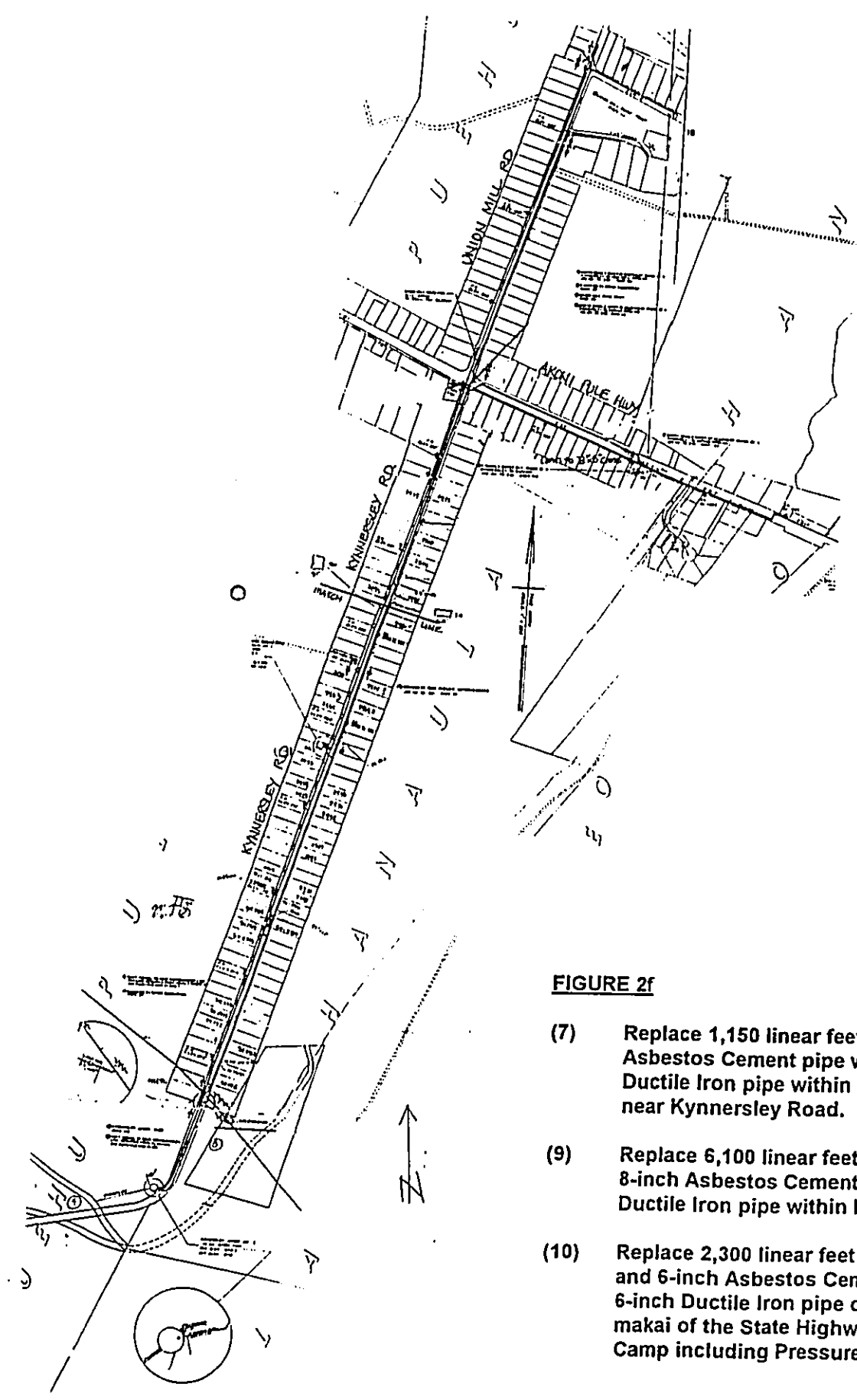
- (4) Replace 300 linear feet of existing 4-inch Asbestos Cement waterline with new 6-inch Ductile Iron water pipe within Kynnersley Road.



**FIGURE 2e**

- (6) Reconnect existing 6-inch water pipe from Maekawa Pressure Reducing Valve to Kaauhuhu No. 2 Reservoir.





**FIGURE 2f**

- (7) Replace 1,150 linear feet of 6-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within State Highway near Kynnersley Road.
- (9) Replace 6,100 linear feet of existing 8-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within Kynnersley Road.
- (10) Replace 2,300 linear feet of existing 4-inch and 6-inch Asbestos Cement pipe with new 6-inch Ductile Iron pipe on Kynnersley Road makai of the State Highway toward Union Camp including Pressure Reducing Valve

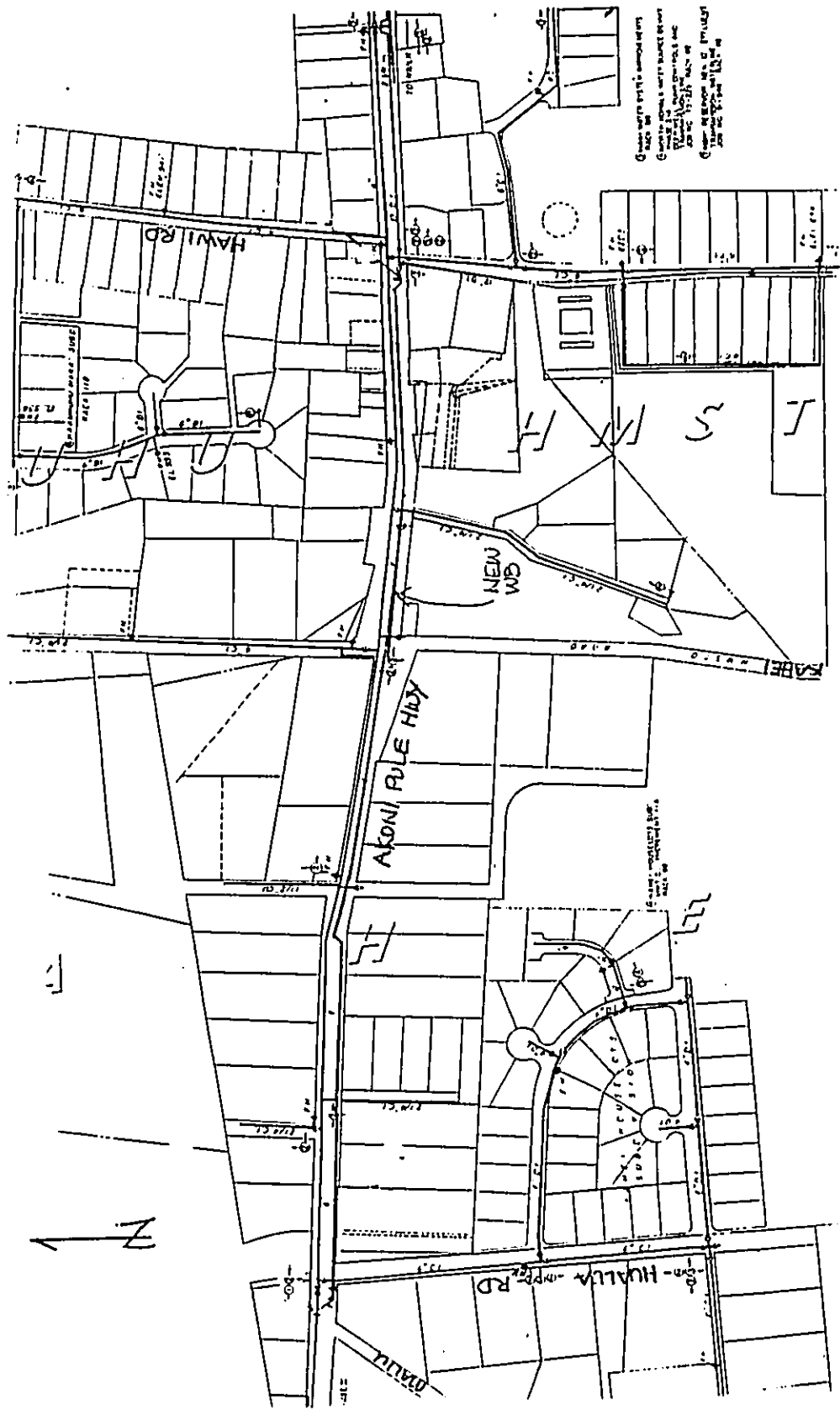
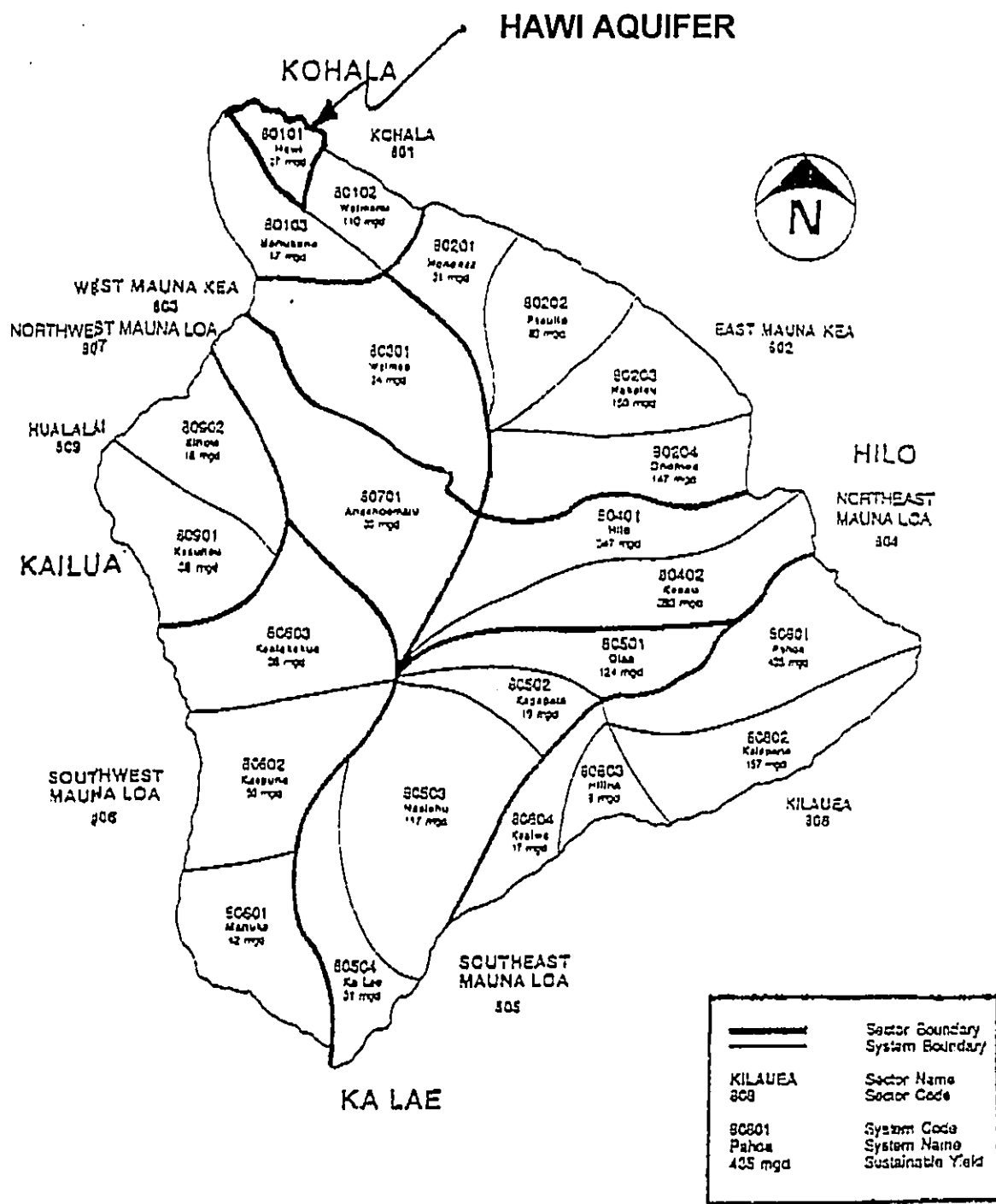


FIGURE 2g

(8) Install 3,000 linear feet of parallel 8-inch Ductile Iron Pipe within State Highway.



**FIGURE 3**  
**LOCATION OF HAWI AQUIFER NO. 80101**

- (9) Replace 6,100 linear feet of existing 8-inch Asbestos Cement pipe with 8-inch Ductile Iron pipe within Kynnersley Road (Figure 2f).
- (10) Replace 2,300 linear feet of existing 4-inch and 6-inch Asbestos Cement pipe with new 6-inch Ductile Iron pipe on Kynnersley Road makai of the State Highway toward Union Camp including Pressure Reducing Valve (Figure 2f).
- (11) Eliminate Watt Tunnel source.
- (12) Eliminate Bond Tunnel source.
- (13) Eliminate Hapahapai Tunnel source.
- (14) Eliminate Lindsey Tunnel source.

#### Project Objectives

The primary objectives of the project are to 1) replace existing old and out-dated waterlines, 2) install parallel or new pipeline where required, 3) improve the system's efficiency and reliability with installation of a telemetering system and replacement of pressure reducing valves where necessary and 4) be in compliance with EPA's Lead and Copper Rule and avoid establishing and maintaining treatment facilities as required by EPA's Surface Water Treatment Rule and other proposed drinking water regulations.

#### 1.4 Timetable and Cost Estimate

The DWS proposes to begin construction by early next year and develop the improvements based on funding availability. The estimated construction cost for the project is \$2.3 million.

#### 1.5 Alternatives

##### No Action

If no action is taken to improve the system as described in Section 1.3, customers in the district would continue to be served by a domestic water system that is old and inefficient. Additionally, improved reliability of the system would not be realized.

No action will impact customers of four subsystems in the district, namely Kaaunahu, Hawi-Kokoiki, Kynnersley-Kapaau, and Halaula. Elevated levels of lead and copper will persist with the use of these aggressive tunnel sources. No action will also financially impact the Department of Water Supply above and beyond the projected cost of this project. Expensive treatment facilities will be required to be established and maintained by existing and proposed EPA regulations.

1.6 Ownership and Land Use Designation and Controls

The areas in which the activity will take place are within road rights-of-way of the County and State of Hawaii and are not identified by tax map key. County zoning and State Land Use Districts in road rights-of-way utilize the same designations as the adjacent property. The proposed improvements are permitted uses within the designations.

1.7 Consultation with Agencies, Organizations and Individuals

Notice of the availability of the Draft Environmental Assessment by the Hawaii State Office of Environmental Quality Control was published in the Environmental Notice. This notice initiated a 30-day comment period during which the public was invited to respond to the Draft Environmental Assessment. A copy of the Draft was also placed in the Bond Memorial Library in Kapaau.

The following agencies and organizations were contacted/consulted in the process of preparing the Environmental Assessment.

- State of Hawaii
  - Department of Transportation, Highways Division
- County of Hawaii
  - Planning Department
  - Department of Public Works
- Organizations
  - North Kohala Merchants Association

Responses received from the above noted agencies/organizations and those received subsequent to the publication of the Draft Environmental Assessment are reproduced in the Appendix.

## Chapter 2 Environmental Setting

### 2.1 Geographic Setting

The project is located at various locations within the North Kohala District with improvements confined to within County and State highway rights-of-way (Figure 2).

### 2.2 Physical Environment

#### 2.2.1 Climate

Rainfall for the district averages 40 inches per year with average temperatures ranging from 76°F along the leeward coastline to 60°F on the mountain top.

#### 2.2.2 Drainage

The area is classified on the FIRM maps as Zone X, or areas identified as being outside the 500-year flood plain. No known areas of problem flooding exist within the project areas. Because of this, potential impacts are expected to be minimal and mitigable by compliance with permits and approvals such as the National Pollutant Discharge Elimination System (NPDES) permit.

#### 2.2.3 Geology and Hazards

Tsunami, earthquakes and subsidence, and lava flow represent the major natural hazards on the island of Hawaii. None of these natural hazards appear to be overly applicable to this site.

#### 2.2.4 Flora and Fauna

All of the projects proposed are located within County and State of Hawaii road rights-of-way. Accordingly, vegetative considerations will not apply and no commissioned formal study was conducted at the project sites. According to records, the project areas do not have any history of serving as habitats for rare or endangered animal life.

### 2.2.5 Air Quality and Noise

The North Kohala district has limited air pollution impact, both from natural and man-made elements. Those associated with automobile and other vehicles are man-made, although the more significant one is natural, coming from the fumes of on-going volcanic activity. Volcanic emission of sulfur dioxide convert into particulate sulfate which causes a volcanic haze when trade winds are not present.

The project will cause no long-term air quality impacts and only minor potential for impacts during construction. Adherence to proper control measures should prevent substantial impacts.

Construction would produce noise from grading, trenching, compressors, vehicles and equipment engines and other sources. The State Department of Health requires contractors engaged in such activities to conform to Title 11, Chapter 46, Community Noise Control. Appropriate permits will be required and mitigation measures may be imposed such as restriction of equipment type, restricted hours and noise barriers. These measures will be imposed by the State Department of Health prior to construction.

### 2.2.6 Archaeological Resources

No archaeological inventory survey was conducted for the project since all of the improvements will occur along existing highway rights-of-way within the pavement and shoulder sections of the roadway. Should any unanticipated archaeological features be uncovered during the course of the construction activity, work will be halted and the appropriate governmental agency notified.

## 2.3 Socio-Economic Characteristics

### 2.3.1 Population Setting

The population of North Kohala has remained relatively stable despite the closing of its major employer Kohala Sugar Co. a number of years ago. This is a result of new employment opportunities available to the community due to the high level of resort activity in the neighboring South Kohala District.

### 2.3.2 Economic Aspects

The estimated construction cost for the project is \$2.3 million. This should greatly benefit the construction industry over the near term by the creation of construction related employment.

## 2.4 Public Facilities, Utilities and Services

### 2.4.1 Roads and Traffic

The project is located within existing County and State of Hawaii highway rights-of-way. The construction may involve lane closures and delays. Standard construction mitigation measures will be employed, including safety markings, traffic control and restricted work hours.

### 2.4.2 Overhead Utilities

Electric and telephone poles are located at the edge of the road right-of-way in which the proposed projects will be located. Care will be taken during construction to ensure that no unnecessary disruption to utility services will occur.

### 2.4.3 Water Supply

The Department of Water Supply obtains its water for the North Kohala District from high level tunnels in the Kohala Mountains and a groundwater deep well source located in Hawi. The district is served by four subsystems: Kaauhuhu, Hawi-Kokoiki, Kynnersley-Kapaau and Halaula with a total of approximately 1,200 service accounts.

The proposed improvements will improve the reliability of the existing system by replacement of old waterlines as well as to provide other improvements to the system. The proposed project represents orderly and planned improvements to meet the needs of the community.

The proposed improvements will allow the Department of Water Supply to eliminate the high-level tunnel sources and improve water quality for the mentioned four subsystems in the district.



## 2.5 Relationship to Plans, Policies and Controls

### 2.5.1 Hawaii State Plan

The Plan, adopted in accordance with HRS, Chapter 226, as amended, establishes a set of goals, objectives and policies to guide the State's growth and development plans. The proposed project is consistent with these goals and objectives which call for provision of water to adequately accommodate domestic, agricultural, commercial, recreational and other needs within resource capacities. The proposed projects support all relevant objectives and policies of the Hawaii State Plan.

### 2.5.2 Water Master Plan, Island of Hawaii

The County Department of Water Supply Water Master Plan provides a long-range plan for public systems on the island. The proposed projects are consistent with the objectives and goals of the plan.

### 2.5.3 Hawaii County Water Use and Development Plan

The plan was prepared in response to the mandate of the State Water Code (Chapter 174C, HRS) to provide an integrated program for the protection, conservation and management of the waters of the State. The plan has yet to be officially adopted. The proposed projects are consistent with the language of the plan to "improve and replace inadequate distribution mains and storage facilities."

### 2.5.4 Hawaii County General Plan

The County of Hawaii General Plan is a document expressing the goals and policies for the long-range development of the island. The plan, adopted in 1989, is organized into 13 elements with objectives, policies and standards for each. Among the goals, policies and standards for water and development for the North Kohala District is:

- improve and replace inadequate water systems.

The proposed project satisfies the goals and objectives related to the improvements of water service to meet public needs.

#### 2.5.5 Required Permits

No Federal permits will be required for the project. County and State of Hawaii permits will be required for work within these agency's roads right-of-way. In addition, NPDES permits from the State Department of Health may be required as applicable.

#### Chapter 3 Determination

The proposed project is not expected to cause significant impacts to the environment pursuant to the significant criteria established by the State Environmental Commission as discussed below. As such, the determination is to issue a finding of no significant impact (FONSI).

#### Chapter 4 Supporting Findings and Reasons

Chapter 11-200-12, Hawaii Administrative Rules, outlines those factors agencies must consider when determining whether a project has significant effects:

- 4.1 *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* The area to be affected by the proposed project consists of highway rights-of-way which have been disturbed by other projects. Therefore, the sites upon which the proposed projects would occur would not have any significant natural or cultural resources.
- 4.2 *The proposed project will not curtail the range of beneficial uses of the environment.* The proposed project would make joint use of the road right-of-way which is also dedicated to other uses including transportation and utility and thus promotes efficient use of limited space.
- 4.3 *The proposed project will not conflict with the State's long-term environmental policies.* The State's long term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. A number of specific guidelines support these goals. No aspect of the proposed project conflicts with these guidelines. The project is consistent with all elements of the State's long-term environmental policies.
- 4.4 *The proposed project will not substantially affect the economic or social welfare of the community or State.* The purpose of the project is to improve

water service for residents of a portion of North Kohala and would not significantly affect the social welfare of the community. Economically, the projects would create construction related employment.

- 4.5 *The proposed project does not substantially affect public health in any detrimental way.* The project improves public health by providing a reliable source of domestic water. No other effects would occur.
- 4.6 *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* The project would result in improved delivery of water service and would not be associated with secondary impacts usually related to water improvement projects such as population growth.
- 4.7 *The proposed project will not involve a substantial degradation of environmental quality.* The project would not contribute to environmental degradation. Any environmental impact should be negligible.
- 4.8 *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* No rare, threatened or endangered species of flora or fauna are known to exist at the project sites.
- 4.9 *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.
- 4.10 *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* The proposed project will produce only minor and temporary impacts to noise and air quality during construction. No impact to water quality is anticipated.
- 4.11 *The project does not affect or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* The project is not located near coastal or inland waters and would not likely be exposed to environmentally sensitive hazards.
- 4.12 *Substantially affects scenic or viewplanes.* The proposed project will not impact scenic vistas and viewplanes as the work involves the installation of buried waterlines.

- 4.13 *Requires substantial energy consumption.* The proposed project involving the installation and replacement of waterlines will not impact energy consumption.

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

**APPENDIX**

**COMMENT LETTERS TO  
DRAFT ENVIRONMENTAL ASSESSMENT AND RESPONSES**

**M & E Pacific, Inc.**  
Engineers & Architects

8th Island Circle  
100 Puuhou St., Suite 202  
Halo, Hawaii 96720  
Telephone (808) 961-3378  
Fax (808) 935-5324

BENJAMIN J. CAVETANO  
Contractor



STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

335 SOUTH BENTLEY STREET  
SUITE 102  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 586-4188  
FACSIMILE (808) 586-4188

GARY GELL  
DIRECTOR

April 30, 1998

July 8, 1998

Mr. Milton D. Pavao, Manager  
Hawaii County Department of Water Supply  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Mr. Pavao:

Subject: Draft Environmental Assessment for the North Kohala Water  
Systems Improvements, Hawaii


Bond Memorial Public Library  
P. O. Box 248  
Kapaau, Hawaii 96755

Re: Draft Environmental Assessment  
North Kohala Water System Improvements

Attached is a copy of the Draft Environmental Assessment for the North Kohala  
Water System Improvements. Notice of the project for public review and  
comment will be published in the May 23, 1998 OEQC Environmental Notice.

Please call me at 961-2776 should you have any questions.

Sincerely,

  
Edward K. Harada  
Manager

Attachment

cc: Mr. Keith Okamoto, DWS CoH  
Mr. Alan Tomita

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


1. Please include a site plan that shows all the proposed  
improvements.
2. The environmental assessment states that "this project will  
eliminate tunnel sources . . . which are aggressive and  
corrosive to the water distribution system." Please describe  
the specific agents in the water which cause the problems  
described above.
3. This project will close high level tunnel sources. Please  
describe what will happen to the water from the above sources.  
Will the water be used to restore streams in the area?
4. This project will increase water pumping of the existing  
groundwater deep well source in Havi. Please describe the  
current and proposed water use totals for the Havi well. What  
is the sustainable yield of the underlying aquifer?
5. Please consult with nearby groups and individuals who may be  
affected by the proposed project.
6. Please list all federal, state and county permits that would  
be required for this project.
7. Please note that the term "negative declaration" has been  
replaced by the term "finding of no significant impact."

Mr. Pavao  
Page 2

8. A determination "to issue a negative declaration" is listed on page 10. The EIS law prohibits a finding of no significant impact (FONSI) before the end of the 30-day public review period and prior to receipt, response and analysis of all written comments. For a draft EA the proper determination is anticipated FONSI.

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

Sincerely,

  
Gary Gill  
Director

c: W&E



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

25 AUPUHI STREET • HILO, HAWAII 98720  
TELEPHONE (808) 961-8860 • FAX (808) 961-8857

July 31, 1998

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

DRAFT ENVIRONMENTAL ASSESSMENT (DRAFT EA)  
NORTH KOHALA WATER SYSTEM IMPROVEMENTS

Thank you for your review comments dated July 8, 1998 regarding the Draft EA for the subject project. Your comments will be addressed as follows:

1. A site plan of the proposed improvements will be included.
2. A description of the specific agents in the water which cause the problems of aggressive and corrosive spring sources in the area will be included. The obvious agent in the water that plays a part in the aggressive and corrosive nature of the spring sources is pH. PH for these sources range from a low of 6 to a high of 6.8. The more critical factor for the sources being aggressive and corrosive is not the specific agents in the source water but what is not in the source water. The spring sources lack the minerals, especially silica, which prohibits corrosion. The spring sources are naturally very soft water (low total dissolved solids) and in turn, very aggressive and corrosive.
3. A description on the future use of the abandoned spring sources will be included. The spring sources will be used as emergency drinking sources when the primary sources are inoperable and during times of drought. The runoff from the spring sources may restore the streams in the area but in a minor capacity.
4. A description of the current and future use of the Hawi Well will be provided. Currently, the Hawi Well is pumping approximately 300,000 gallons per day (gpd) which is fifty-two percent (52%) of its capacity (576,000 gpd). Based on consumption records, the North Kohala area consumes an average of approximately

... *Water brings progress* ...

Mr. Gary Gill, Director  
Page 2  
July 31, 1998

500,000 gpd. Therefore, approximately 200,000 gpd is provided by existing spring sources. This consumption will be accommodated by the excess capacity of the Hahi Well as well as by the use of the new Hahi Well No. 2 that the Department of Water Supply has recently completed. Hahi Well No. 2 has a capacity of 1,008,000 gpd. The combined use of the two (2) wells will provide the primary source of water for the Department's North Kohala system. Estimates of the sustainable yield of the underlying aquifer will be researched and documented.


5. We have received and will respond to inquiries from interested parties residing in Kohala who were made aware of the project by its notice in the Environmental Notice or by referring to a copy of the Draft EA in the Bond Memorial Public Library in Kapaa. We attempted to solicit comments from the North Kohala Community Association but found that this organization is presently inactive. We have been informed that there is a North Kohala Merchants Association. We will be sending the Draft EA to that group for their comments.

6. No Federal permits will be required for the project. State Department of Transportation and County of Hawaii Department of Public Works permits will be required for work within these agencies' road rights-of-way before construction can begin. In addition, NPDES permits from the State Department of Health may be required if applicable.

7. We acknowledge that the term "negative declaration" is replaced by "finding of no significant impact."

8. The term "to issue a negative declaration" will be clarified to indicate that such findings can only be made after the thirty (30)-day public review period allowing for the receipt, response, and analysis of all written comments.

Please contact Mr. Keith Okamoto of our Water Resources and Planning Branch at (808) 961-8660 if you have any further comments or questions.

  
Milton D. Pavao, P.E.  
Manager

KKO:gms

copy - DWS Operations Division  
DWS MicroLab

Mr. Edward Harada, M&E Pacific, Inc. ✓

## M&E Pacific, Inc.

Engineers & Architects

Date: June 16, 1998  
To: Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96812

Attention: Luis Maza-Lique  
Subject: North Kohala Water System Improvements

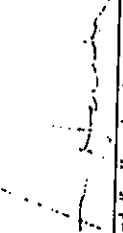
We transmit:  herewith  under separate cover  
the following:  calculations  letter (of authorization)  
 filing fee  legal descriptions  plans and specifications  
 legal descriptions  permits  reports  
 shop drawings  payment  
 tracings  quotation  
   signature

for:  approval information  review & comments  
 use  construction files  
 recordation  
 signature

Remarks:

As requested by Keith Okamoto, Department of Water Supply, County of Hawaii, attached is a copy of the Draft Environmental Agreement prepared for the North Kohala Water System Improvements project.

Please call should you have any questions.

By:   
cc. Mr. Keith Okamoto, Manager  
Attachment

Main Office: Suite 500, Pauahi Tower, 1001 Bishop St., Honolulu, Hawaii 96813

Big Island Office  
100 Pauahi St., Suite 212  
Hilo, Hawaii 96720  
Telephone (808) 941-2776  
Fax: (808) 935-9834



PHONE (808) 594-1888




STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPIOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

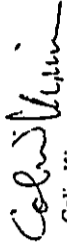
FAX (808) 594-1865

Letter to Mr. Edward K. Harada  
June 19, 1998  
Page 2

Please contact Colin Kippen (594-1938), LNR Officer, or Luis Manrique (594-1758), should you have any questions on this matter.

Sincerely yours,

  
Randall Ogata  
Administrator

  
Colin Kippen  
Officer,  
Land and Natural  
Resources Division

cc: Board of Trustees  
CAC, Island of Hawaii

cc: Ms. Keith Okamoto  
Ms. Amy Tennant

June 19, 1998

Mr. Edward K. Harada  
Manager  
M&E Pacific, Inc.  
100 Pauahi St., Suite 212  
Hilo, HI 96720

Doc. Permit No. 85

Subject: Draft Environmental Assessment (DEA) for North Kohala Water System Improvements, Kohala District, Island of Hawaii

Dear Mr. Harada:

Thank you for the opportunity to review the Draft Environmental Assessment (DEA) for North Kohala Water System Improvements, North Kohala District, Island of Hawaii. The County of Hawaii is planning to (i) replace existing old and outdated waterlines, (ii) install parallel or new pipelines where required, (iii) improve the system's efficiency and reliability, and (iv) comply with EPA water regulations.

The Office of Hawaiian Affairs (OHA) has reviewed the DEA and has no concerns at this time to the proposed improvements. These improvements will occur within County and State highway rights-of-way areas and apparently have no adverse impacts on nearby natural or cultural resources. Furthermore, these improvements will significantly increase the quality of the water deliverance system by eliminating asbestos cement pipes.

**M&E Pacific, Inc.**  
*Engineers & Architects*

Big Island Office  
100 P. A. UAHU ST., Suite 212  
HAWAII, HAWAII 96720  
Telephone (808) 961-2775  
Fax (808) 935-5324

**M&E Pacific, Inc.**  
*Engineers & Architects*

Big Island Office  
100 P. A. UAHU ST., Suite 212  
HAWAII, HAWAII 96720  
Telephone (808) 961-2775  
Fax (808) 935-5324

July 14, 1998

Mr. Randall Ogata  
Administrator  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Mr. Colin Kippen  
Officer, Land and Natural Resources  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Dear Messrs. Ogata & Kippen:

Re: North Kohala Water System Improvements  
Draft Environmental Assessment

Thank you for reviewing the Draft Environmental Assessment for the North Kohala Water System Improvements and your letter dated June 19, 1998.

Please contact me should you have any further questions or comments.

Sincerely,



Edward K. Harada  
Manager

cc: Mr. Keith Okamoto, DWS

Attachment

cc: Mr. Keith Okamoto, DWS

July 14, 1998

Mr. Bob Martin, President  
North Kohala Merchants Association  
P. O. Box 2  
Hawi, Hawaii 96719

Dear Mr. Martin:

Re: Draft Environmental Assessment for the  
North Kohala Water System Improvements

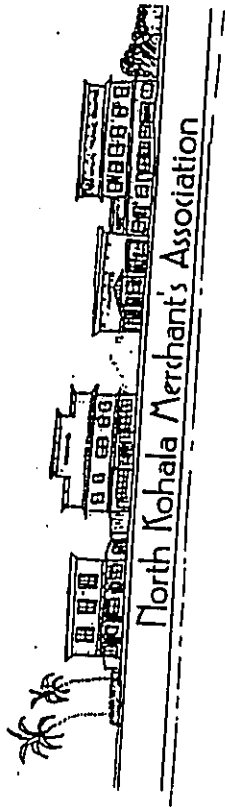
Attached is a copy of the Draft Environmental Assessment for the North Kohala Water System Improvements project for your review and comment. Notice of the project was published in The Environmental Notice on June 8, 1998.

Your early review of the document will be sincerely appreciated.

Sincerely,



Edward K. Harada  
Manager



**M & E Pacific, Inc.**  
Engineers & Architects

Big Island Office  
100 Pauahi St., Suite 212  
Hilo, Hawaii 96720  
Telephone (808) 961-2776  
Fax (808) 935-5934

July 20, 1998

July 17, 1998

Mr. Edward K. Harada  
Manager  
M & E Pacific, Inc.  
100 Pauahi St., Suite 212  
Hilo, HI 96720

Dear Mr. Harada,

Thank you for sharing the draft Environmental Assessment for the North Kohala Water System improvements.

I have reviewed the document and have no objections to the Determination in this draft, nor the supporting findings and reasons presented in Chapter 4 of the document.

Also, I am not aware of any objections to this project among our members. Should objections surface in the coming weeks, I will let you know.

Sincerely,

R. B. Martin  
President

cc: Mr. Keith Okamoto, DWS

Mr. Bob Martin, President  
North Kohala Merchants Association  
P. O. Box 2  
Hawi, Hawaii 96719

Dear Mr. Martin:

Re: North Kohala Water System Improvements  
Draft Environmental Assessment

Thank you for reviewing the Draft Environmental Assessment for the North Kohala Water System Improvements and your letter dated July 17, 1998

Please contact me should you have any further comments or questions

Sincerely,

Edward K. Harada  
Manager

cc: Mr. Keith Okamoto, DWS

Main Office Suite 200 Paohahi Tower 100 Pauahi St. Hilo, HI 96720

**M & E Pacific, Inc.**  
Engineers & Architects

Big Island Office  
100 Pauahi St., Suite 212  
Hilo, Hawaii 96720  
Telephone (808) 961-3778  
Fax (808) 933-5933

Stephen K. Yamashiro  
Manager



Virginia Goldstein  
Director  
Russell Kikutani  
Deputy Director

**County of Hawaii**

PLANNING DEPARTMENT  
25 Aupuni Street, Room 104 • Hilo, Hawaii 96720-1572  
(808) 941-8288 • Fax (808) 941-8742

July 27, 1998

August 5, 1998

Planning Department  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Mr. Edward K. Harada  
Manager  
M&E Pacific, Inc.  
100 Pauahi Street, Suite 212  
Hilo, HI 96720

Dear Mr. Harada:

Re: North Kohala Water System Improvements  
Draft Environmental Assessment

Attached is a copy of the Draft Environmental Assessment for the North Kohala Water System Improvements project, for your review and comment.

Draft Environmental Assessment and Notice of Anticipated Determination  
for the North Kohala Water System Improvement Project, North Kohala, Hawaii

Thank you for transmitting a copy of the above-described environmental assessment for our review and comment.


Please call should you have any questions.

According to information contained within the assessment, the proposed water system improvements will be limited to the following:

1. Installation or replacement of pressure reducing valves at existing water reservoirs;
2. Installation of new Ductile Iron pipelines within existing road rights-of-way;
3. Replacement of existing asbestos cement pipeline with new ductile iron pipeline, all located within existing road rights-of-way; and
4. Termination of use of various surface water sources.

The maintenance of existing water systems are activities which are permitted by, or consistent with the State Land Use Law, Hawaii County General Plan, and the Hawaii County Zoning Code. According to the location map and discussion provided within the assessment, all proposed improvements appear to be situated outside of the County's Special Management Area (SMA).

Sincerely,

  
Edward K. Harada  
Manager

Attachment

Mr. Edward K. Harada  
Manager  
M&E Pacific, Inc.  
Page 2  
August 5, 1998

**M & E Pacific, Inc.**  
*Engineers & Architects*

Big Island Office  
100 Palani St., Suite 212  
Hilo, Hawaii 96720  
Telephone (808) 941-2778  
Fax (808) 935-5354

Based on the information provided, we have no objections to the information contained with the assessment and concur with the anticipated finding of no significant impact (FONSI).

Please contact Daryn Arai of this office should you have any questions.

Sincerely,

  
VIRGINIA GOLDSTEIN  
Planning Director

DSA:pak  
f:\wp60\czm\Ch343\LDWS01.dsa

c: Office of Environmental Quality Control  
Department of Water Supply

August 11, 1998

Mrs. Virginia Goldstein  
Planning Director  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720


Dear Mrs. Goldstein:

Re: North Kohala Water System Improvements  
Draft Environmental Assessment

Thank you for your review of the Draft Environmental Assessment for the North Kohala Water System Improvements and your letter dated August 5, 1998.

Please contact me should you have any further comments or questions.

Sincerely,

  
Edward K. Harada  
Manager

cc: Mr. Keith Okamoto, DWS