

Olaa Station Water
System Imp.



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

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RECEIVED

September 10, 1998

'98 SEP 14 P3:36

DEPT. OF
QUALITY CONTROL

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

FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR OLAA STATION NO. 5
TO OLAA STATION NO. 6 WATER SYSTEM IMPROVEMENTS
TAX MAP KEY 1-7-13:066 (OLAA STATION NO. 5)
MOUNTAIN VIEW, PUNA DISTRICT, HAWAII

The Department of Water Supply has reviewed the comments received during the 30-day public comment period which began on August 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 September 23, 1998 Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the Final EA. Please call Mr. Kurt Inaba at (808) 961-8660 if you have any questions.

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

Milton D. Pavao, P.E.
Manager

KYI:pt

Encs.

... Water brings progress...

111

1998-09-23-HI- FEA- Olaa Station
Water System Improvements

SEP 23 1993

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

***OLA'A STATION NO. 5 TO OLA'A STATION NO. 6
WATER SYSTEM IMPROVEMENTS***
Ola'a, Puna District, Hawaii

Prepared for:
Department of Water Supply
County of Hawaii

Prepared by:
BK Inc.
and
Gerald Park Urban Planner

FINAL ENVIRONMENTAL ASSESSMENT

***OLA'A STATION NO. 5 TO OLA'A STATION NO. 6
WATER SYSTEM IMPROVEMENTS***

Ola'a, Puna District, Hawaii

Prepared in Partial Fulfillment of the Requirements
of Chapter 343, Hawaii Revised Statutes, Title 11,
Chapter 200, Hawaii Administrative Rules,
Department of Health, State of Hawaii

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

Prepared by:
BK Inc.
675 Kinoole Street
Hilo, Hawaii 96720

and

Gerald Park Urban Planner
1400 Rycroft Street, Suite 876
Honolulu, Hawaii 96814

September, 1998

SUMMARY INFORMATION

Project: Ola'a Station No. 5 to Ola'a Station No. 6
Water System Improvements

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

Approving Agency: Department of Water Supply
for Mayor, County of Hawaii

Tax Map Key: No Tax Map Key for Roadway
Land Area: Not Determined

Tax Map Key: Ola'a Station No. 5: 1-7-13: 66
Land Area: Ola'a Station No. 5: 0.593 acres

Land Owners:
Volcano Road: State of Hawaii
Old Volcano Road: County of Hawaii
Ola'a Station No. 5: County of Hawaii
Private Road: Various

Existing Use: Roads
Ola'a Station No. 5: Booster Pumping Station, Water Reservoir

State Land Use Designation: Agricultural, Urban
General Plan: Orchard, Low Density
Zoning: Ag-1, Ag-5, Ag-20
R-20, RA-.5

Special Management Area: Outside SMA

Need for Assessment: Use of State Land
Use of County Lands and Funds

Contact Person: Kurt Inaba
Department Water Supply
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Telephone: (808) 961-8660

Note: Revisions to the Draft Environmental Assessment appear in *bold italic* type. Deleted text is shown in brackets.

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SECTION 1

DESCRIPTION OF THE PROPOSED PROJECT

The Department of Water Supply, County of Hawaii, proposes to construct improvements to sections of its water system near the town of Mountain View, Ola'a, Puna District, Hawaii. The project area includes an existing water storage/booster pump station---Ola'a Station No. 5--- and the rights-of-way of the Volcano Road, a section of Old Volcano Road, and a private road off Old Volcano Road. Except for Ola'a Station No. 5 (TMK: 1-7-13: 66), there are no tax map keys by which to identify a "project site" for the waterline corridor. A Location Map is shown in Exhibit 1.

A. Purpose of the Project

The purpose of the project is to upgrade the Mountain View water system. Customers serviced by Ola'a Station No. 5 and Ola'a Station No. 6 periodically experience insufficient water volume and pressures during the dry months of the year and during periods of drought like conditions. The proposed project will improve the pumping and storage capacity of one of the two stations. It is one of several projects planned by the Department of Water Supply to improve the entire water system serving the town of Mountain View and the Ola'a area.

B. Technical Characteristics

The proposed project includes constructing a new water storage reservoir and pump facilities at Ola'a Station No. 5 and installing new waterlines along Volcano Road (also known as the Hawaii Belt Road or Highway 11). The project is separated into three parts and actions comprising each part are described below.

1. Part 1: Ola'a Station No. 5

Ola'a Station No. 5 is located on the mauka side of Volcano Road at its intersection with Kukui Camp Road. Existing Department of Water Supply facilities on the rectangular shaped parcel include an existing 30,000 gallon water storage reservoir, booster pumps, and a control building. These facilities will be replaced by a new 300,000 gallon storage reservoir, a booster pump pad and pumps, and a motor control building (See Exhibit 2). The circular shaped reservoir is approximately 17 high and 61 feet (outside wall) in diameter and will be constructed of reinforced concrete. The bottom of the reservoir is set at elevation 1,127 feet (See Exhibit 3). Overflow from the reservoir would be discharged into a drywell (8'W X 6'D) to be constructed between the reservoir and the east property line..

Two 4-inch above ground vertical turbine pumps with appurtenant valves and piping will be installed on a 245 square feet (10'X 24'6") booster pump pad. The pumps, appurtenant piping, and concrete pad will not be covered.

A single-story control building will be constructed on the west side of the new reservoir. The motor control building will house electric equipment and control panels to start and stop the booster pumps and instruments to record pump flow and reservoir water level. The concrete block structure will be erected on a concrete slab foundation, roof framed with wood trusses, and topped by corrugated metal roofing. The 192 square foot structure (16'X12') will be ADA accessible. Electrical power for the pumps will be brought to the control building from an existing power pole along Volcano Road.

Engineering calculations demonstrate that the new pumps and larger waterline are more energy efficient. The size of the existing waterline restricts flow thus increasing friction loss creating a low volume low efficiency situation. A larger waterline reduces friction loss and the pumps can work more efficiently thus reducing energy costs.

A new, 18-foot wide paved asphalt concrete driveway will access the site from Kukui Camp Road. The driveway will be located about 100 feet mauka of Volcano Road/Kukui Camp Road intersection and secured by a 14-foot drive gate. A 10-foot "No Access" planting screen easement precludes access from Volcano Road.

Construction of the on-site improvements will require clearing and grubbing the western half of the site, grading, and filling to design elevation. Fill material will include structural fill, base course, and soil in areas to be landscaped. Trenching and excavation are required for the dry well and reservoir overflow line, electrical ductlines and pullboxes, and booster pump piping. The entire site will be enclosed by a 6-foot high chain link fence. The grounds will be landscaped with common ornamentals and the reservoir, pumps, and control building will be painted to blend with the surrounding vegetation.

2. Part 2: Waterline Corridor

Approximately 7,510 LF of 12-inch ductile iron pipe will be installed along Volcano Road and Old Volcano Road between Ola'a Station No. 5 on the east and Ola'a Station No. 6 on the west. A high pressure 6-inch ductile iron waterline will be installed in roughly the same trench and alignment as the 12-inch line between Enos Road and North Kulani Road, a distance of approximately 3,520 LF. For most of its length, the 12-inch waterline will be placed entirely within the Volcano Road right-of-way and both 6-inch and 12-inch lines will be placed in the right-of-way of Old Volcano Road. The waterline is routed along Old Volcano Road to avoid a large gulch passing under Volcano Road.

Approximately 960 feet of high pressure 6-inch ductile iron pipe will be installed from Ola'a Station No. 5 to the entry road to the Hawaii-Iki Subdivision to the east of the station.

Beginning at Old Volcano Road, approximately 1,150 LF of 6-inch ductile iron pipe will be installed in a 15-foot wide easement along an unnamed private road that runs in a north-south direction. The water line alignment is shown in Exhibit 4.

New fire hydrants or existing fire hydrants will be removed from existing lines and reinstalled on the new waterlines. The fire hydrants are spaced per requirements of the Hawaii County Fire Department.

Existing water meters within road rights-of-way and in the easement over the private road will be relocated outside of the right-of-way and inside the property being serviced. Service connections to the new line and connections to relocated water meters will be performed at no cost to the customer.

A cut and cover construction method is assumed with excavated material hauled by truck to a stockpile site. Excavation will precede laying of the waterline and the contractor will coordinate the interaction between excavation, material delivery to the work site, and waterline installation. The waterlines will be placed in a 2-foot wide trench at a minimum depth of 4 feet. Shut off valves will be placed about every 1,000 lineal feet which also allows the line to be tested under pressure. Prior to testing, the waterline and trench will be backfilled to road grade. After testing, the trench and adjoining area will be restored to pre-construction condition or better.

The waterline will be filled with water and tested under pressure. After testing, the pipe will be chlorinated and testing water discharged into earth swales along the roadway. The volume of testing water is estimated at 6,000 gallons/1,000 feet of 12" pipe and 1,500 gallons/1,000 feet of 6" pipe.

3. Part 3: Facility Removal and Demolition

The final segment of the project will be to remove the existing steel tank, motor control center, and pump station at Ola'a Station No. 5. A Phase I Environmental Site Assessment found the steel tank, valves, piping, and pumps to be painted with lead based paints and the motor control center built of asbestos containing cement board walls and roofing. The consulting hazardous waste specialists (Muranaka, 1998) recommended that the steel tank and cement board panels be removed and disposed of intact and painted valves and piping also should be removed intact and demolished. Removal and disposal will be performed as recommended and in accordance with applicable rules and regulations.

C. Economic Characteristics

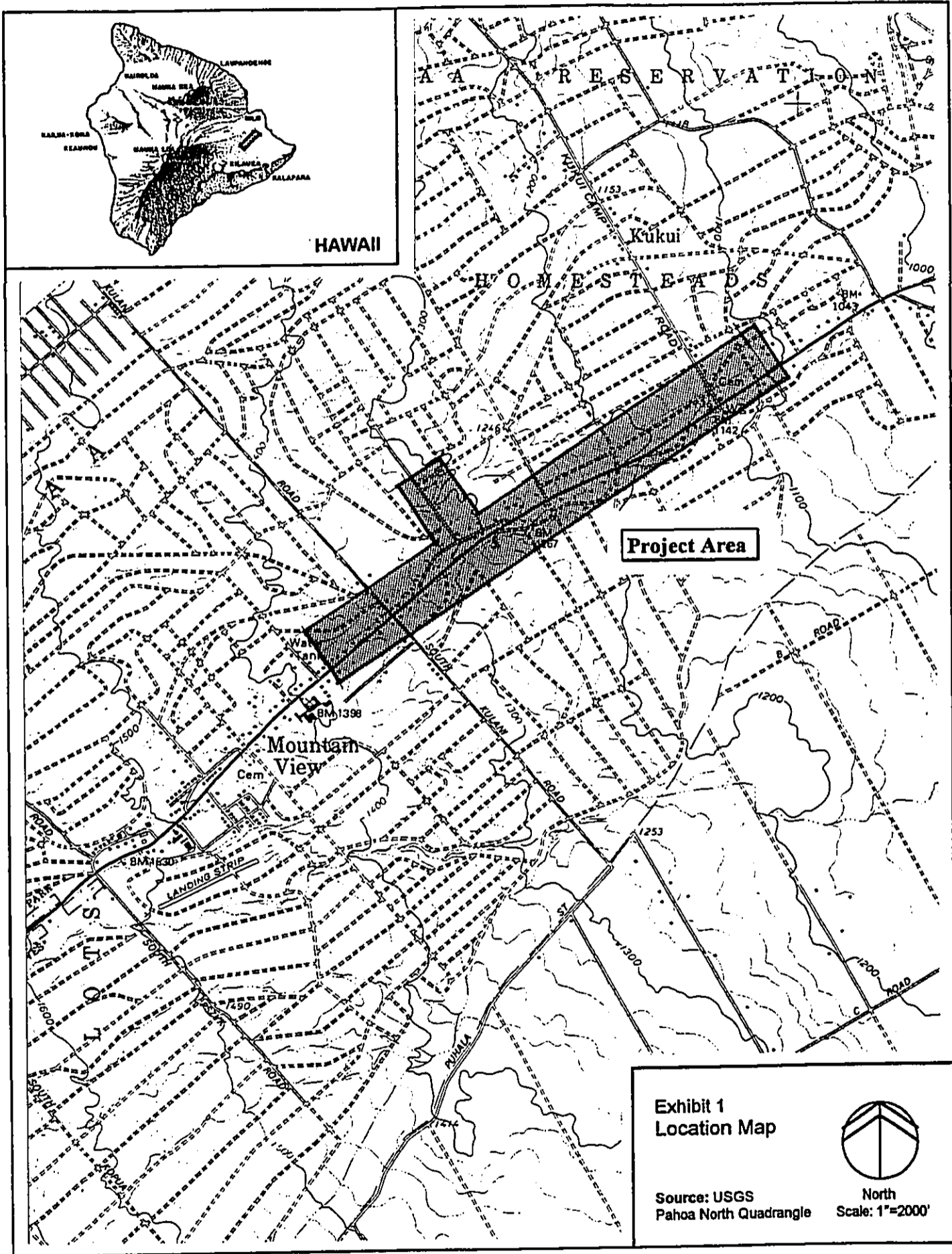
1. Cost and Phasing

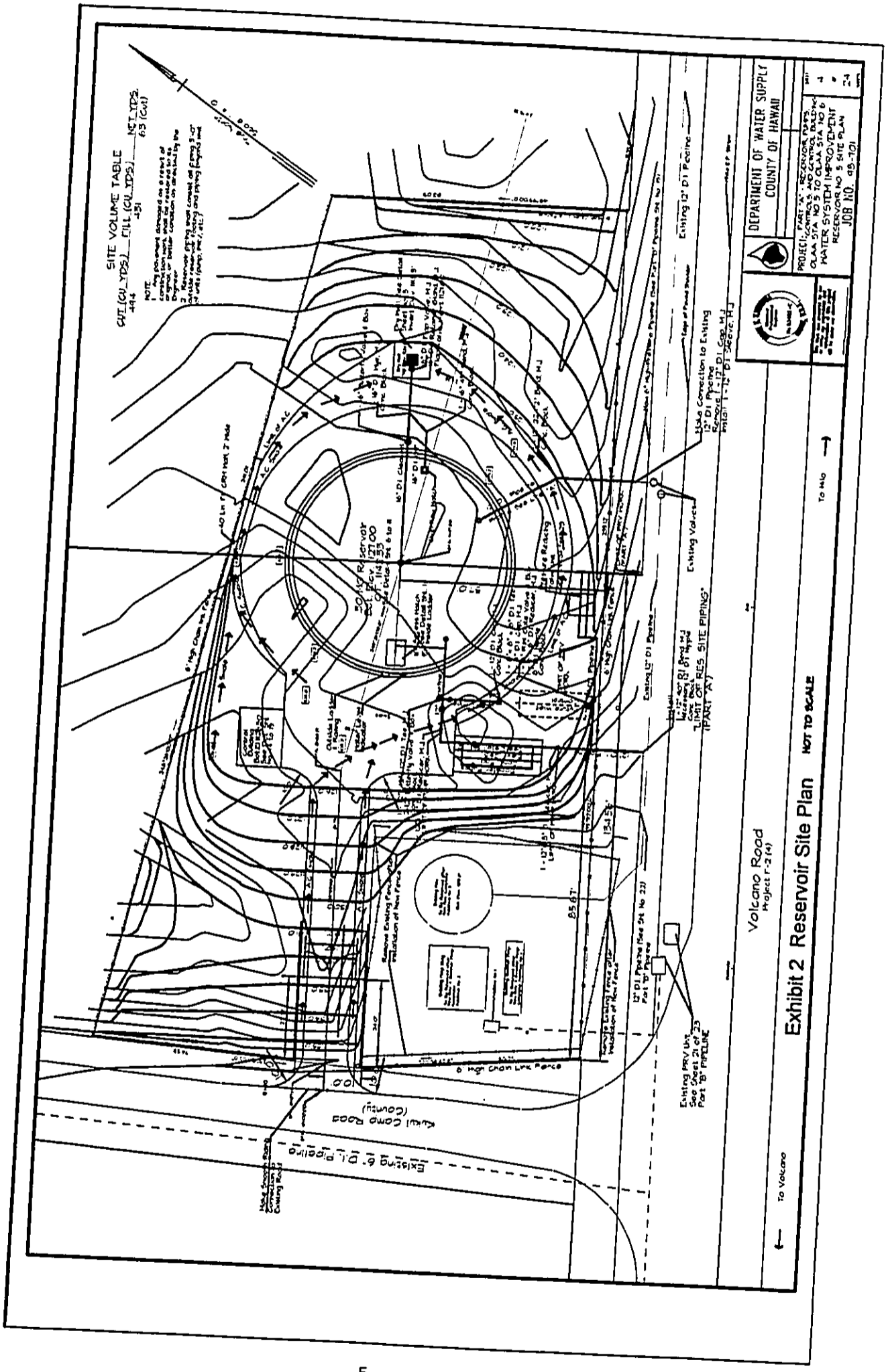
The cost of the project is estimated at \$ 1.5 million and will be funded by the County of Hawaii and the Federal Emergency Management Agency. Construction is projected to commence in early 1999 and should be completed within one year. Three construction parts are anticipated but construction start times have not been determined.

- Part 1 Construct Improvements at Ola'a Station No. 5
- Part 2 Construct Waterline
- Part 3 Remove Existing Tank and Improvements at Ola'a Station No. 5

2. Land Ownership

The 0.593 acre Ola'a Station No. 5 site (TMK: 1-7-13: 66) is owned by the County of Hawaii and under the jurisdiction of the Department of Water Supply. Volcano Road is a State owned facility and Old Volcano Road is owned by the County of Hawaii. The spur road off Old Volcano Road is privately owned. Along the private road, the waterline will be installed in a 15-foot wide easement in favor of the Department of Water Supply.





SITE VOLUME TABLE

CUT (CU. YDS.)	FILL (CU. YDS.)	NET YDS.
444	431	63 (Cut)

NOTE: All quantities shown on sheets of this plan are based on a 10% allowance for shrinkage of fill. The quantities shown on sheets of this plan are based on a 10% allowance for shrinkage of fill. The quantities shown on sheets of this plan are based on a 10% allowance for shrinkage of fill.

DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

PROJECT: RESERVOIR NO. 5 TO OLAHA STATION
WATER SYSTEM IMPROVEMENT
RESERVOIR NO. 5 SITE PLAN
JOB NO. 95-701

Volcano Road
Project R-214

Exhibit 2 Reservoir Site Plan NOT TO SCALE

← To Volcano

To Mānoa →

SECTION 2

DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Existing Conditions

The section of the Mountain View/Ola'a Water System served by Ola'a Stations Nos. 5 and 6 were built in the early 1950's. The system has not been improved since that time although new waterlines have been installed and service provided off the new lines to other portions of the service area.

Presently, there are between 95-100 connections to the system. Customers have experienced low water pressure and on occasion inadequate flow. The shortcomings are not water source related but due to inefficiencies in the existing system to store water and to distribute water under pressure.

Department of Water Supply records show an average daily demand of 37,000 gallons per day and a maximum demand of 55,600 gallons per day. The reservoir at Ola'a Station No. 5 has a capacity of 30,000 gallons which is insufficient for the system when compared to average daily and maximum daily demand.

B. Climate

Rainfall in the project area averages about 180 inches per year which is more than the annual rainfall recorded for Hilo. Monthly rainfall ranges between 10 to 20 inches with the most rainfall occurring between December and February. Temperature is relatively cool with monthly lows averaging 60° F and, on occasion the 50's, to highs in the low 80's. Relative humidity (recorded at Hilo) is typically between 60 to 90 percent.

C. Topography

Ground elevation at Ola'a Station No. 5 ranges from a high of 1,135 feet at Kukui Camp Road to a low of 1,120 at the eastern end of the property a distance of about 240 feet. The property slopes west to east and in the direction of the Belt Road. There is about an 8 foot difference in elevation between the existing pump/reservoir site and the location of the proposed improvements.

D. Soils

The Soil Conservation Service (1973) maps one soil--Ohia extremely stony clay loam (OID)--over the entire project area. Typically the soil is about 20 to 30 inches deep and underlain by fragmented Aa lava. Runoff is slow to medium and the erosion hazard slight to moderate.

E. Drainage

The pump station lot is well drained. Somewhat contrary to the grade of the lot which slopes west to east, a natural swale conveys runoff over the property in a northerly direction. Although not observed, runoff supposedly discharges into an underground opening on an adjoining lot.

Surface runoff from the highway and adjoining lands discharges into a semi-improved drainage ditch along the mauka side of Volcano Road and gravity flows in a easterly direction. Its construction varies from a well dimensioned (2'W X 3'D) lined ditch in developed areas to a shallow earthen swale in agricultural areas.

F. Natural Hazards

The Flood Insurance Rate Map panel for this area designates the site of Ola'a Station No. 5 and all areas along the waterline alignment Zone "X" which is defined as "areas determined to be outside the 500 year flood plain (FEMA, 1970)".

According to the 1994 Uniform Building Code, the Island of Hawaii is placed in Seismic Zone 3. Zone '0' designates areas with the least seismic activity while Zone 4 designates areas with the greatest seismic activity.

Lava Flow Hazard Maps (USGS, No Date) divides the Island of Hawaii into "zones that are ranked from 1 [highest] to 9 [lowest] based on the probability of coverage by lava flows". The District of Puna is placed in Zones 1, 2 and 3 in which the probability of lava hazards are high. Most of the Puna District is susceptible to lava hazards from Kilauea, Hawaii's youngest and, in modern times, most active volcano. Mountain View is placed in Zone 3 and subject to lava hazard from Mauna Loa rather than Kilauea.

G. Surface Water

There are no standing or flowing bodies of water on or near the project area despite the high rainfall.

H. Historical Features

There are no archaeological or cultural features on either the Ola'a Station No. 5 site or along the waterline alignment. A cemetery---Japanese 14 Mile Cemetery---borders the pump station on the north. Most of the lot is covered with tall vegetation, however, several headstones were observed in a small clearing beneath a guava tree about 40 feet from Kukui Camp Road and within 15 feet of the north property line.

I. Flora and Fauna

Ola'a Station No. 5 at one time was planted in sugar cane. The station site was completely graded when the pump station was built in 1951-52. Vegetation present on the site are limited to ti (red and green species) and guava. The western half is unimproved with assorted vegetation including guava, strawberry guava, California grass, sugar cane, maile pilau, gunpowder plant, and wayside shrubs and weeds.

Along the waterline alignment, most if not all the vegetation are common ornamentals or plants found in the local area. Guava, lauhala, an occasional ohia tree, dracaena, guava, ti, heliconia, gardenia, monstera, various ferns grow are planted alongside the affected roads.

A faunal survey was not conducted. Given the many residences along the three roads, dogs, cats, and rodents are probably the most common animals present. Chirping birds were heard but not seen.

J. Land Use Controls

State and County land use controls governing the use of the property adjacent to the pump station and the waterline are:

State Land Use Designation: Agricultural and Urban
County of Hawaii General Plan: Orchard and Low Density
Zoning: Ag-1, Ag-5, Ag-20, R-20, RA-.5,
Special Management Area: Outside Special Management Area

Most properties adjoining the roads are in residential and agricultural uses. Isolated commercial activities were noted and several roadside stands are set up in conjunction with an agricultural activity.

K. Public Facilities

There are no municipal sewer or drainage systems in the project area.

Volcano Road is the major *north-south* thoroughfare linking North and South Hawaii and points beyond. The two-way, two-lane, all weather surface road lies within an 80-foot right-of-way. The posted speed limit ranges between 40-55 mph in the project area.

The Belt Road is also a utility corridor for overhead telephone and electrical systems. Telephone and electrical power poles are located in the road right-of way on the mauka and makai sides, respectively.

SECTION 3

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS

A. Assessment Process

The scope of the project was discussed with the consulting engineer and staff of the Department of Water Supply. State and County agencies were contacted for information relative to their areas of jurisdiction and expertise. Time was spent noting field conditions in the vicinity of Ola'a Station No. 5 and the waterline alignment. The sum total of consultations and field investigations helped to identify existing conditions and features which could affect or be affected by the project.

- No change in the use of land is proposed;
- The waterline will be confined to improved road rights-of-way;
- No rare, threatened, or endangered flora or fauna were observed;
- There are no recorded archaeological or cultural resources on the site of Ola'a Station No. 5 and in the affected road rights-of-way; and
- The improvements are not located in a flood hazard area.

B. Short-term Impacts

Two methods are expected to be used to construct the project. The first method is typical to erecting structures on unimproved property such as the pump station. The site will be cleared and grubbed of vegetation, graded (or filled) to design elevation, trenches excavated for utilities and foundation work, the structure(s) erected, impervious surfaces put in place, and the open areas landscaped.

For the waterline, construction will be accomplished using cut and cover methods or variations thereof as determined by field conditions. In its simplest application, a trench will be dug to a specific depth (a minimum of 4 feet), surface and subsurface materials removed, pipe sections laid and joined in the trench, and fill placed along or under the pipe to prevent movement off-line or off-grade. The pipe would then be tested for leaks, the trench back filled, compacted, and the ground surface restored to pre-construction conditions or better. Trenching work will be limited to 150-200 LF in advance of pipelaying. For the most part, construction will be confined to within the shoulder of Volcano Road except where work outside the shoulder cannot be avoided. Reasonable efforts will be taken to avoid damaging the drainage ditch/swale alongside the road.

Unlike improvements at Ola'a Station No. 5 which are site specific, the waterline is route specific. Construction progresses from one location to another along a staked or pre-determined alignment. Thus, construction impacts, although repetitive over the distance of the waterline, are temporary at any one location.

Site work is a persistent source of fugitive dust. Site contractors are aware that dust is a nuisance to both workers and people living or working near to work sites and it is imperative for them to maintain stringent dust controls. Frequent water sprinkling is probably the most effective dust control measure given the size of the site and the type and scale of proposed improvements. The Contractor, however, may choose to implement other measures based on their experience with similar projects and job sites. Being located in an area of heavy rainfall, frequent showers also may help in controlling fugitive dust.

The Contractor will be responsible for general housekeeping of the site and for keeping adjacent training areas free of mud, sediment, and construction litter and debris. Pollution control measures will comply with Chapter 60.1, Air Pollution Control regulations of the State Department of Health. Like fugitive dust, construction noise cannot be avoided. The pump station is bounded by residential uses on two sides and many residences are located along the affected roadways. Residential properties are considered noise sensitive areas. Construction noise will be audible in these areas but exposure to noise will vary by construction phase, the duration of each phase, and the type of equipment used during the different phases.

Maximum sound levels in the range of 82-96 db(A) measured at 50 feet from the source would be generated by heavy machinery and pneumatic impact equipment. Noise is most pronounced and therefore most annoying during the site work phase of any project. Reductions in sound levels, frequency, and duration can be expected during actual building construction and post-construction phases.

Construction noises may annoy nearby residents but they already are exposed to noise throughout the day emanating from large trucks, buses, and automobile traffic on Volcano Road. For residences along the highway, there is no real quiet and sounds of nature associated with agricultural land.

Community Noise Control regulations establish maximum permissible sound levels for construction activities occurring within "acoustical" zoning districts. Based on residential and agricultural uses in the area, the project is considered to be located in the Class A zoning district for noise control purposes. The maximum permissible daytime sound level in the district is 55 dBA between the hours of 7:00 AM to 10:00 PM and 45 dBA between 10:00 PM and 7:00 AM (Chapter 46, Community Noise Control, 1996).

In general, construction activities cannot exceed the permissible noise levels for more than ten percent of the time within any twenty minute period except by permit or variance. Any noise source that emits noise levels in excess of the maximum permissible sound levels cannot be operated without first obtaining a noise permit from the State Department of Health. Although the permit does not attenuate noise per se it regulates the hours during which excessive noise is allowed.

The general contractor will be responsible for obtaining the permit and complying with conditions attached to the permit. Work will be scheduled for normal working hours (7:00 AM to 3:30 PM) Mondays through Fridays. The contractor will also ensure that motors are properly equipped with mufflers in good operating condition.

Site work will expose soil thus creating opportunities for runoff and erosion. Grading will be performed in accordance with erosion control ordinances of the County of Hawaii and approved grading plans. Best Management Practices (BMPS) for erosion and drainage control during construction will be prepared for review and approval by the Department of Public Works.

Should archaeological or cultural features be unearthed, work in the immediate area will cease and historic authorities promptly notified for disposition of the finds.

The flora observed at Ola'a Station No. 5 and along the waterline alignment are common to the Island and State of Hawaii. None are considered rare, threatened, or endangered or proposed for such status.

Construction in the right-of-way will interrupt through traffic, result in slightly longer travel times, and generally inconvenience motorists and pedestrians. These impacts cannot be avoided and are expected to be more pronounced on Volcano Road rather than on Old Volcano Road. Traffic lanes on both roads will not be closed but traffic will be diverted to one side of the road. Traffic cones or other directional devices will be placed in the roadway to guide vehicles around work areas. Traffic tie-ups cannot be avoided and the contractor will implement measures to provide access past work sites and minimize the inconvenience to the general public. Traffic control plans will be submitted to respective authorities for review and approval. Measures to be taken to mitigate traffic impacts include but are not limited to:

- Posting warning signs on both sides of the work area to alert motorists of road work and to slow traffic speed;
- Positioning traffic cones or other directional devices in the roadway to guide vehicles around work areas;
- Posting flagmen to assist in traffic control;
- Providing alternative access if driveway closings cannot be avoided;
- Limiting construction to between 8:00 AM and 2:30 PM, Monday through Friday.

For safety purposes, trenches will be covered with traffic plates during non-working hours and safety devices and signs posted for the duration of construction. Work on the Belt Road will be coordinated with the Highways Division, Department of Transportation, State of Hawaii and work on Old Volcano Road coordinated with the Department of Public Works, County of Hawaii.

Material deliveries will be scheduled during non-peak traffic hours to minimize impacts on local traffic. Flagmen will be posted for traffic control during material loading and off-loading. Traffic delays can be expected but should not last more than a few minutes.

Overhead utilities should not be affected by installation of the waterlines. Construction plans will be submitted for review and construction operations coordinated with the respective utility providers. In the event of accidental breakage emergency crews will be summoned immediately to repair the breakage and affected residents and businesses notified of the disruption. If extensive repair work is required, the contractor will take reasonable effort to provide service to affected residents and businesses.

Temporary interruptions in service to residences and businesses are expected when existing water connections are disconnected and water meters relocated. Affected customers will be notified in advance of the disruption and the contractor will complete the necessary connections in a timely fashion to minimize inconvenience to water customers.

Sections of the pipeline will be pressure tested with water during construction and, following construction disinfected with a chlorine solution prior to being placed online. Testing water and chlorinated water will be discharged into existing swales along the highway (or into a seepage pit at Ola'a Station No. 5) and allowed to percolate into the ground. Disinfection will be performed according to Department standards and should not pose a threat to public health and safety.

[Testing water discharged from the pipeline will be allowed to percolate into the ground.] The project area is located between 1,150 to 1,400 feet above mean sea level and about 15.5 inland and uphill of the nearest shoreline. Based on elevation above the basal aquifer and distance from the nearest shoreline, it is anticipated discharged chlorinated water will not affect either resource.

C. Long-Term Impacts

The project will improve the delivery of water to users connected to the system. Water supply problems and shortages due to insufficient storage capacity and inadequate water pressure should not but may periodically occur. The latter occurrence would result from shortcomings in other parts of the Mountain View-Ola'a System all of which are part of an interconnected system. The Department of Water Supply is in the process of upgrading the entire system and projects similar to this action can be expected subject to funding and Capital Improvement Program priorities.

The buried waterlines will not result in long-term adverse impacts on air quality, the acoustical environment, historic features, and flora and fauna. The waterlines will not be seen thus no impacts on scenic resources or open space quality are anticipated.

The Department of Water Supply should realize savings in electricity costs. Engineering calculations show that the larger waterline will enhance pump efficiency which should reduce energy consumption and cost.

The new, larger concrete reservoir at Ola'a Station No. 5 will present a new feature to be seen by people living and working nearby and passersby on Volcano Road. The reservoir will appear taller than it actually is when viewed from Volcano Road due to its location close to the road. The tank is setback 25 feet from the front property line and a farther setback is not possible because the lot is too narrow. The height of the tank is less than the height of the existing tank and the allowable height of structures in the agricultural zoning district. It will be painted to blend with its setting and would be similar in appearance to a similar reservoir located about 1½ miles further east. Landscaping the perimeter of the property will conceal the new motor control building and the above ground booster pumps. Over time, it is expected that the facilities will become an accepted feature on the landscape.

The availability of water for land development around the town of Mountain View will depend in part on Department of Water Supply policies in effect at the time of development application. It is anticipated that existing undeveloped lands may be improved for either agricultural and residential uses based on the zoning of the affected parcels and the availability of water. Land developed according to its zoning will aid in implementing the County of Hawaii General Plan Land Use Pattern Allocation Guide Map for the area and the objectives and policies of the General Plan. Changes in land uses also may be requested but whether such uses materialize will depend in part on their consistency with County and State land use and functional plans and policies for the area and the acceptance of land use changes by the community.

SECTION 4

ALTERNATIVES TO THE PROPOSED ACTION

A. No Action

The no action alternative would maintain the status quo and preclude the occurrence of environmental impacts, short and long-term, beneficial and adverse described in this Assessment. The Department of Water Supply does not consider the No Action alternative to be a prudent course of action.

SECTION 5

PERMITS AND APPROVALS

Permits and approvals listed below are indicative of rather than a comprehensive listing of all permits that may be required to implement the project.

<u>Permit</u>	<u>Authority</u>
Environmental Assessment	Department of Water Supply
Building Permits (Various)	Department of Public Works
Grading, Grubbing, and Stockpiling	Department of Public Works
Best Management Practices	Department of Public Works
Construction Within County Highway	Department of Public Works
Noise Permit	State Department of Health
NPDES General Permit	State Department of Health
Construction Within State Highway	State Department of Transportation

SECTION 6

AGENCIES AND ORGANIZATIONS TO BE CONSULTED

*The Draft Environmental Assessment for Ola'a Station No. 5 to Ola'a Station No. 6 Water system Improvements was published in the Office of Environmental Quality Control Environmental Notice of August 8, 1998 and August 23, 1998. Public in the Environmental Notice initiated a 30-day public review period which ended on September 8, 1998. The Draft Environmental Assessment was mailed to agencies and organizations listed below. An asterisk * identifies agencies and organizations that submitted written comments during the comment period. All comment letters and responses are found in Appendix A.*

State of Hawaii

- *Department of Health
- Department of Land and Natural Resources
 - Historic Sites Division
- *Department of Transportation
 - Highways Division
- Civil Defense
- *Office of Environmental Quality Control

County of Hawaii

- *Department of Public Works
- *Planning Department
- *Police Department
- Fire Department

Others

- Hawaii Electric Light Company
- GTE Hawaiian Tel
- Mt. View Public Library (Draft EA Placed in Library)

SECTION 7

DETERMINATION OF SIGNIFICANCE

Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, establishes criteria for determining whether an action may have significant effects on the environment (§ 11-200-12). The relationship of the proposed project to these criteria is discussed below.

- 1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

There are no natural or cultural resources in the project area to be affected by the project.

- 2) Curtails the range of beneficial uses of the environment;

The proposed project is not proposing uses so different from uses that which now exist on the pump station site and waterlines in the affected roadways.

- 3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

The project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawaii.

- 4) Substantially affects the economic or social welfare of the community or State;

The project will provide a reliable water delivery system to residents of the Mountain View and Ola'a area who have had to put up with shortcomings in the existing system for many years.

- 5) Substantially affects public health;

The proposed action will not adversely affect public health. On occasion, construction noise in the vicinity of residential properties will exceed the allowable noise standards at the property line. However, noise will be temporary at any one location and should not endanger public health.

- 6) Involves substantial secondary impacts, such as population changes or effects on public facilities,

The project will not result in substantial secondary impacts. The project is intended to better serve customers connected to the existing water system. As a single action, the project will not foster population changes or adverse impacts on public facilities.

- 7) Involves a substantial degradation of environmental quality;

Environmental quality will not be degraded as a result of this project. Construction generally is confined to improved land and road rights-of-way.

- 8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed project does not involve a commitment for a larger action. However, the Department of Water Supply is planning similar type projects to upgrade the entire Mountain View/Ola'a water system. Planning and construction of future improvements will depend on availability of public funds and Capital Improvement Program priorities.

- 9) Substantially affects a rare, threatened or endangered species, or its habitat;

There are no rare, threatened or endangered flora or fauna or habitat in the project area.

- 10) Detrimently affects air or water quality or ambient noise levels; or

Ambient air quality may be affected by fugitive dust and combustion emissions but can be controlled by measures stipulated in this Assessment. Construction noise will be pronounced during site work but should diminish as the structures are erected and the waterline placed underground. All construction activities will comply with air quality and noise pollution regulations of the State Department of Health. Best Management Plans will be prepared to minimize construction runoff.

- 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, fresh water, or coastal waters.

The proposed action is not located in a flood hazard area, tsunami zone, beach, erosion prone area, or adjacent to fresh and coastal water bodies.

The town of Mountain View and surrounding areas are located in an area subject to lava inundation.

- 12) Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or

The proposed improvements will not substantially affect scenic vistas and view planes

- 13) Requires substantial energy consumption.

Replacing the existing pumps and waterline will improve energy efficiency.

Based on the above criteria, the proposed Ola'a Station No. 5 to Ola'a Station No. 6 Water System Improvements will not result in significant adverse environmental impacts and an Environmental Impact Statement should not be required.

REFERENCES

BK Inc. 1998. *Plans for the Construction of the Ola'a Station No. 5 to Ola'a Station No. 6 Water System Improvements*. Job No. 98-701. Prepared for Department of Water Supply, County of Hawaii.

Federal Emergency Management Agency. 1970 (amended). *Flood Insurance Rate Map, County of Hawaii*. Community Panel No. 155166 1125C.

Muranaka Environmental, Inc. 1998. *Ola'a Station No. 5 to Ola'a Station No. 6 Water System Improvements*. Prepared for BK Inc. MEC Project No. 970893.

Park, Gerald. 1998. *Field Observation*.

Planning Department, County of Hawaii. *County of Hawaii General Plan (As Amended)*.

Zoning Map.

U.S. Department of Agriculture, Soil Conservation Service. 1973. *Soil Survey of Hawaii*. In Cooperation with The University of Hawaii Agricultural Experiment Station. U.S. Government Printing Office, Washington D.C.

U.S. Department of the Interior, Geological Survey. No Date. *Volcanic and Seismic Hazards on the Island of Hawaii*. Written by Christina Heliker. U.S. Government Printing Office.

APPENDIX A
COMMENT LETTERS AND RESPONSES

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTORS
BRIAN K. UHUKU
OLEWIA M. ODOMOTO

IN REPLY REFER TO
STP 8.8735

RECEIVED
8/15/98



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

August 13, 1998

RONALD L. CAVETANO
GOVERNOR

Wayne G. Carvalho
Police Chief
James S. Correa
Deputy Police Chief



County of Hawaii

POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3398
(808) 935-3311 • Fax (808) 961-2702

RECEIVED
8/10/98

Stephen K. Yamashiro
Mayor

August 6, 1998

Mr. Gerald Park
Gerald Park Urban Planner
1400 Rycroft Street, Suite 876
Honolulu, HI 96814-3021

Dear Mr. Park:

SUBJECT: OLA'A STATION NO. 5 TO OLA'A STATION NO. 6 WATER IMPROVEMENTS
TMK: 1-7-13: 66 (OLA'A STATION NO. 5)
MOUNTAIN VIEW, PUNA DISTRICT, HAWAII

Traffic concerns have been addressed within the above-referenced draft environmental assessment. We have no objections or further comments to offer at this time.

Thank you for the opportunity to comment.

Sincerely,

Wayne G. Carvalho
WAYNE G. CARVALHO
POLICE CHIEF

EO:lk

Mr. Gerald Park
Urban Planner
1400 Rycroft Street, Suite 876
Honolulu, Hawaii 96814-3021

Dear Mr. Park:

Subject: Ola'a Station No. 5 to Ola'a Station No. 6 Water System Improvements
Draft Environmental Assessment
TMK: 1-7-13: 66 (Ola'a Station No. 5)

Thank you for your transmittal of July 29, 1998.

Plans for any construction work within the State highway right-of-way must be submitted to our Highways Division for review and approval.

We appreciate the opportunity to provide comments.

Very truly yours,

Kazu Hayashida
KAZU HAYASHIDA
Director of Transportation

c: Mr. Kurt Inaba, Hawaii Department of Water Supply

WILLIAM J. CAITANO
Governor of Hawaii



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

LAWRENCE BIRGE
DIRECTOR OF HEALTH

In reply, please refer to

RECEIVED
8-20-98

August 18, 1998

98-167/epo

Mr. Gerald Park
Urban Planner
1400 Rycroft Street, Suite 876
Honolulu, Hawaii 96814-3021

Dear Mr. Park:

Subject: Draft Environmental Assessment
Water System Improvements
Ola'a Station No. 5 to Ola'a Station No. 6
Mountain View, Puna District, Hawaii
TKK: 1-7-13: 66

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

Sincerely,

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

Stephen K. Yamashiro
Mayor



County of Hawaii

PLANNING DEPARTMENT

25 Airport Street, Room 109 • Hilo, Hawaii 96720-4122
(808) 941-8228 • Fax (808) 941-8742

August 20, 1998

Mr. Gerald Park
1400 Rycroft Street, Suite 876
Honolulu, HI 96814-3021

Dear Mr. Park:

Draft Environmental Assessment for the Ola's Station No. 5 to Ola's Station No. 6
Water System Improvements
TMK: 1-7-13: 66 & Volcano Old Volcano Road Rights-of-way, Ola's, Puna, Hawaii

Thank you for your letter dated July 29, 1998, transmitting a copy of the above-described draft environmental assessment for our review and comment. According to the submittal, the proposed project will consist of the following improvements:

1. Construction of a new 300,000 gallon water storage reservoir, booster pumps, motor control building and access improvements adjacent to the existing 30,000 gallon Ola's No. 5 reservoir and related facilities situated on approximately .593 acre of land identified as TMK: 1-7-13: 66. The existing water reservoir and related facilities will be removed.
2. Installation of approximately 7,510 lineal feet of 12-inch ductile iron pipe along Volcano Road and the Old Volcano Road between the Ola's Station No. 5 site (Parcel 66) and the existing Ola's Station No. 6 site to the west. A high pressure 6-inch ductile iron waterline will be installed in the same trench and alignment as the 12-inch pipe, but limited to the area between Enos Road and North Kulani Road, a distance of approximately 3,520 lineal feet.
3. Additional waterline improvements will occur within existing road rights-of-way and utility easements in the immediate area as well as the installation of fire hydrants.

The information contained within the draft environmental assessment, relative to Land Use Controls (Section J), is accurate. The Ola's Station No. 5 site (Parcel 66), is designated

Virginia Goldstein
Director

Russell Kukuluba
Deputy Director



Mr. Gerald Park
Page 2
August 20, 1998

Agricultural by the State Land Use Commission and zoned Agricultural-20 acres (A-20a) by the County. The development of public utility facilities is a permitted use on State and County-designated Agricultural lands. The replacement and installation of waterlines within existing road rights-of-way are also permitted by state and county land use laws.

In summary, we have no objections to the anticipated Finding of No Significant Impact (FONSI) as detailed within Section 7 of the draft environmental assessment.

Thank you for allowing our office the opportunity to comment on the draft environmental assessment. Should you have any questions, please feel free to contact Daryn Arai at 961-8233.

Sincerely,

VIRGINIA GOLDSTEIN
Planning Director

DSA:jc
f:\wpwin60\joan\gpark.dsa

c: Department of Water Supply (DWS)
Office of Environmental Quality Control (OEQC)

Stephen K. Yamashiro
Mayor



Donna Fay K. Kiyozaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer



County of Hawaii

DEPARTMENT OF PUBLIC WORKS

25 Airport Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-4331 • Fax: (808) 961-4630

August 19, 1998

GERALD PARK URBAN PLANNER
1400 RYCROFT STREET SUITE 876
HONOLULU HAWAII 96814-3021

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
OLAA STATION NO. 5 & 6 WATER SYSTEM IMPROVEMENTS**
Mountain View, Puna, Hawaii
TMK: 3 / 1-7-13: 68

We acknowledge receipt of your letter concerning the subject matter, and provide you with our comments as follows:

1. Building construction shall conform to all requirements of code and statutes of the County of Hawaii.
2. All development generated runoff shall be disposed on site and shall not be directed toward any adjacent properties.
3. All earthwork and grading shall be in conformance with Chapter 10, Erosion and Sediment Control, of the Hawaii County Code.
4. Any work within a County right-of-way shall be in conformance with Chapter 22, Streets and Sidewalks, of the Hawaii County Code.
Kukui Camp Road and the Old Volcano Highway are under the jurisdiction to the County of Hawaii. Water line improvements within these right-of-ways may be subjected to the complete resurfacing of the roadway pavements.
5. The Volcano Highway is under the jurisdiction of the Hawaii Department of Transportation (HDOT). Comments and requirements concerning this roadway should be directed to the HDOT.

DRAFT EA
August 19, 1998
Page 2 of 2

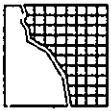
6. Building improvements shall be located beyond the future road widening setback established by the Planning Department.

Should there be any questions concerning this matter, please feel free to contact Mr. Casey Yanagihara in our Engineering Division at (808)961-8327.

Galen M. Kuba, Division Chief
Engineering Division

CKY

copy: DWS (K. Inaba)



September 10, 1998

GERALD PARK
Urban Planner

Doana Kiyosaki
Chief Engineer

County of Hawaii

Department of Public Works
25 Aupuni Street, Room 202
Hilo, Hawaii 96720

Planning
Land Use
Research
Environmental
Studies

Attn: Galen Kuba

1400 Byron Street
Suite 876
Honolulu, Hawaii
96814-3021

Dear Ms. Kiyosaki:

Subject: Draft Environmental Assessment
Ola'a Station No. 5 & 6 Water System Improvements
Mountain View, Puna, Hawaii

Phone/Fax
808 942-7484

Thank you for reviewing the subject document. We offer the following responses to your comments in the order they were presented.

1. Construction shall conform to all requirements of codes and statutes of the County of Hawaii.
2. Runoff generated from construction activities at Ola'a Station No. 5 shall be disposed on-site.
3. All earthwork shall conform with Chapter 10 of the Hawaii County Code.
4. Work in the County right-of-way shall conform with Chapter 22 of the Hawaii County Code.
Engineers from the Department of Water Supply will consult with you and your staff concerning complete resurfacing of Old Volcano Highway and Kukui Camp Road.
5. Construction drawings and traffic management plans for Volcano Highway will be submitted to the State Department of Transportation for review and approval prior to construction.
6. Building improvements at Ola'a Station No. 5 shall be located beyond the road widening setback established by the Planning Department

Your comments and our responses will be included in the Final Environmental Assessment. We thank the Department of Public Works for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

cc: K. Inaba, DWS

BENJAMIN J. CAVETANO
DIRECTOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

214 SOUTH KEMERMAN STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 534-1118
FACSIMILE (808) 534-1119

GARY GILL
DIRECTOR

RECEIVED
1-5-98

September 3, 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 Olaa Station
No. 5 to Station No. 6 Water System Improvements, Hawaii

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

1. This project proposes to install: 1) a 300,000 gallon water storage reservoir; 2) pumping facilities; and 3) waterlines. According to the environmental assessment, "it is one of several projects planned by the Department of Water Supply to improve the entire water system serving the town of Mountain View and the Ola'a area.
Section 11-200-7, Hawaii Administrative Rules, states that "a group of actions proposed by an agency or applicant shall be treated as a single action when: (1) the component actions are phases or increments of a larger total undertaking; (2) an individual project is a necessary precedent for a larger project; (3) an individual project represents a commitment to a larger project; or (4) the actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole."
Accordingly, in preparing environmental assessments, the Department of Water Supply must consider every phase of a proposed action as a single action. Therefore, we recommend that a single environmental assessment be prepared for all phases of this project.
2. A circular shaped reinforced concrete reservoir approximately 17 feet high and 61 feet in diameter is proposed next to Volcano Road. Please illustrate the visual impacts of the proposed structure from public places such as roads and

Mr. Pavao
Page 2

lookouts. Photos of existing conditions taken from public view points are helpful in evaluating visual impacts. Renderings of the future structure superimposed on photos of existing views should be provided. We recommend constructing and painting the reservoir with materials and colors that blend with the surroundings. We also recommend landscaping with native Hawaiian plants to reduce the visual impacts.

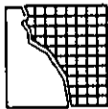
3. Please clarify the following statement which was printed on page 13 of the draft environmental assessment, "Resting water discharged from the pipeline will be allowed to percolate into the ground."
4. Please consult with nearby groups and individuals who may be affected by the proposed project.

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

Sincerely,

Gary Gill
Director

c: Gerald Park Urban Planner



GERALD PARK
Urban Planner

Planning
Land Use
Recreation
Environmental
Studies

1400 Kuykendall Street
Suite 876
Honolulu, Hawaii
96814-3021

Phone/Fax
(808) 942-7484

September 10, 1998

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

Dear Mr. Gill:

Subject: Draft Environmental Assessment
Ola'a Station No. 5 & 6 Water System Improvements
Mountain View, Puna, Hawaii

Thank you for reviewing the subject document. We offer the following responses to your comments in the order they were presented.

1. The proposed action is one of several Capital Improvement Projects proposed by the Department of Water Supply in the Mountain View Area. Other projects under consideration include Ola'a Station No. 6 Replacement, Happy Homes Subdivision Pipeline Replacement, and Exploratory Water Well at Ola'a Station No. 7.

The Department is not attempting to segment water system improvements into smaller projects. However, the Department cannot prepare environmental assessments for projects that have not been funded. The subject project is the only project in the Mountain View area that has been approved and funds made available for design (to include preparation of the Environmental Assessment) and construction.

2. We acknowledge that the new reservoir will have visual impacts when viewed from Volcano Road. Measures to mitigate this impact were prescribed in the Environmental Assessment to include appropriate setback from Volcano Highway (and future road widening), the relatively low height of the reservoir, painting the improvements to blend with its surroundings, and landscaping the perimeter of the property.

3. Sections of the pipeline will be pressure tested with water during construction and, following construction, disinfected with a chlorine solution prior to being placed online. Testing water and chlorinated water will be discharged into existing swales along the highway (or into a seepage pit at Ola'a Station No. 5) and allowed to percolate into the ground. Disinfection will be performed according to Department standards and should not pose a threat to public health and safety.

4. The Draft Environmental Assessment was placed in the Mountain View Public Library for review.

Your comments and our responses will be included in the Final Environmental Assessment. We thank the Office of Environmental Quality Control for participating in the environmental assessment review process.

Gary Gill
September 10, 1998
Page 2

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

Gerald Park

cc: K. Inaba, DWS