

JOHN WAHEE  
GOVERNOR OF HAWAII



1844  
KEITH W. AHUE, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES  
JOHN P. KEPPELER, II  
DONA L. HANA'IKE

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'94 JUL 29 A6:40

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621  
HONOLULU, HAWAII 96809

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

OFFICE OF  
QUALITY

REF:OCEA:SKK

In reply, please refer

to: FILE NO.: KA-4/14/94-2710  
DOC. NO.: 4419

JUL 28 1994

MEMORANDUM

TO: Dr. Bruce S. Anderson, Ph.D., Acting Director  
Office of Environmental Quality Control

FROM: Keith W. Ahue, Chairperson *KAH*  
Department of Land and Natural Resources

SUBJECT: Document for Publication in the OEQC Bulletin - Final  
Environmental Assessment for Conservation District Use  
Application KA-4/14/94-2710 for a New Potable Water Well  
at Hanalei, Kauai, TMK: 5-3-01: 16

The above mentioned Chapter 343 document was reviewed and a negative declaration was declared based upon the final environmental assessment provided with the CDUA.

Please feel free to call me or Roy Schaefer of our Office of Conservation and Environmental Affairs, at 587-0377, if you have any questions.

97

1994-08-23-KA-FEA-Princeville Water Well

AUG 23 1994

**FINAL  
ENVIRONMENTAL ASSESSMENT  
PROPOSED WATER WELL  
PRINCEVILLE, HAWAII  
TMK: 4-5-3-01:16**

The proposed action involves the development of a potable water well approximately one (1) mile mauka of the Princeville resort community for the purpose of establishing a new ground water source for Princeville Utilities Company, Inc./Princeville Water Systems current and future requirements.

The subject site is located at the eastern edge of the conservation district on a plateau overlooking Hanalei Valley (see Exhibits A and B). The proposed action requires consultation with appropriate State and County agencies and the filing of a Conservation District Use Application. A permit from the Department of Land and Natural Resources Water Use Commission has already been received. The proposed project is not located in a designated ground water control area and is not in the County's SMA.

**I. PROPOSING AGENCY**

Princeville Water Systems, Inc.  
Princeville, Kauai, Hawaii

**II. APPROVING AGENCY**

Department of Land and Natural Resources  
State of Hawaii

**III. PARTIES CONSULTED**

Department of Water  
County of Kauai

Department of Land and Natural Resources  
Division of Water and Land Management  
State of Hawaii

Department of Land and Natural Resources  
State Historic Preservation Division  
State of Hawaii

**IV. PROJECT OBJECTIVE AND NEED**

The objective of this project is to drill, pump test and establish a new ground water source to supply the existing and future domestic water demands of the Princeville Resort. Current demand is approximately 0.8 MG per day. However, average daily demand is expected to increase to about 1.0 MG or more when all customers have completed Hurricane Iniki reconstruction and the system is normalized. Based on historic demand and pumping data, this is near the maximum capacity of PWS's existing well system, and an additional source is required now.

Based on hydrogeologic studies, the potential for developing a new source at this location is good. Installation of a permanent 1500 gallons per minute pump, underground electric lines from abutting Kapaka Street, and a 2 mile long 12 inch transmission main and appurtenances such as air relief valves to connect to the existing PWS system would be a part of this project if the pump test results are positive.

#### **V. PROJECT DESCRIPTION**

The proposed project will be implemented in three stages.

1. The first stage will require the drilling of an exploratory hole for the Well. Drilling of the proposed exploratory well will involve the following:
  - (a) Drilling depth is estimated to be a depth where significant water is located. This is expected to be about 750 feet from ground level.
  - (b) A 16 inch casing will be installed.
  - (c) The upper 300 feet of annular space will be grouted; the balance of the annular space will be open.
2. In stage two, a pumping test will be conducted. A decision on this test will be made after drilling and water level results are obtained. Funds for the exploratory well and testing will be provided by Princeville Corporation, parent to PWS.
3. If the pumping tests proves successful, i.e, the well demonstrates it is capable of sustaining a sufficient yield, the project will move to the third stage. This will involve converting the exploratory well into an operational or production well. The following are the actions and improvements required to outfit the well for production.
  - (a) Installation of a permanent 1,500 gpm submersible electric pump with 250 rated horsepower.
  - (b) Installation of approximately 10,000 lineal feet of 12 inch ductile iron pipe which will connect the well to the existing transmission system. Construction will be in accordance with the County's standard for pipeline construction (Exhibits B and C).
  - (c) Above ground improvements at the well site including a 6'x12'x2' concrete pad and piping at the well shaft opening, a 15'x30' concrete block building to house the chlorination and control equipment, an electrical switching gear and a six feet high chain link fence around the site. See Exhibit D.

The first two stages are expected to be completed within 6 months of the projects initial drilling. If pump tests show positive results, development of the operational or production well will begin immediately and be completed in 6 months for a total of 12 months barring unforeseen circumstances. This well will supplement the existing two PWS wells.

## **VI. THE ENVIRONMENT**

**Boundaries and Jurisdictions:** The project site is located in the Hanalei district of the County of Kauai, on land owned by Princeville Corporation, parent of applicant. Applicant has a right of entry agreement to conduct drilling activities. This will either be converted to a perpetual easement or property will be subdivided and sold to PWS if the project proves successful. The location is classified Conservation by the State Land Use Commission. The Conservation District subzone is Resource. The County zoning ordinance designates the site open. Applicant holds an extended permit from the Commission on Water Resource Management (see Exhibit C dated March 23, 1994).

**Assess:** Access to the site is via Kapaka Street, a paved roadway developed as part of the Princeville Agriculture Subdivision by Consolidated Oil and Gas Company (COG). The State of Hawaii is the current title holder of this roadway. PWS has easement rights across the roadway for utility purposes.

**Physical Features:** The project site is on an open, gently sloping ridge. It is covered with native grasses interspersed with wild guava and was formerly used as a pasture. Drainage is over the adjacent pali, or to the Kapaka Road drainage system.

The soil overlaying the area is reddish brown Makapili clay. Rainfall ranges from 60-80 inches per year.

**Fauna:** The proposed well site will cover about 15,000 square feet. This minimal area should not significantly affect any wildlife habitat.

**Archeology:** The site has been previously cultivated and most recently used as a cattle pasture. Due to past uses, its historic significance is minimal.

**Socio-economic:** The surrounding area is a growing resort community with increasing potable water demands. This well would satiate some of that demand.

## **VII. ASSESSMENT PROCESS**

The Department of Land and Natural Resources of the State of Hawaii will assess the anticipated environmental effects of the proposed project and determine if there are any significant adverse effects.

## VIII. APPROVALS REQUIRED

The following approvals/permits will be required:

1. State Conservation District Use Permit from DLNR;
2. State Department of Health testing and clearance of the water.

## IX. PROBABLE IMPACTS AND MITIGATIVE MEASURES

Drilling and test pumping of the well will temporarily produce construction noise and some increased traffic. Consequent activities, if the well proves adequate for domestic use, would include installation of a permanent pump, controls, chlorinator, chain link fence, connective underground power lines and water transmission pipeline.

**Construction Effects:** By the very nature of the proposed action, the well drilling will not generate any significant traffic to or from the project site as a three man drilling crew is anticipated to be onsite daily.

There are no residences close to the project.

There should be no significant adverse impacts on vegetation or on the bird and wildlife in the area.

**Operational Effects:** If the proposed well proves suitable, it will be connected to the Princeville water system to supplement the existing supply. There should be no significant impacts from operations as a submersible electric pump is proposed to be installed. The nominal noise generated from this type of equipment will therefore be generated underground. Visually, a paved driveway, parking pad, electric transformer and a small structure for chlorination equipment, all surrounded by a chain link fence, will replace the current open field. Maintenance personnel will be required to visit the facility periodically. No public funds will be required.

**Alternative Action:** Should the proposed well site prove unsatisfactory, it will be properly sealed so as not to cause any detrimental effect to the ground water resource of the region. It will however, be maintained as a monitoring well to aid in hydrogeologic surveying of the area. Another site would then be chosen for a well.

**No Action Alternative:** Should the status quo be maintained, the Princeville Water System would still serve its present customers, but requests for additional water service may be held in abeyance until additional sources are found and developed.

**X. SUMMARY**

No significant adverse impacts are anticipated from the proposed well drilling and testing. There will be significant beneficial effects if the well is successful as it will provide much needed water for the present and future domestic needs of Princeville Water System customers. Construction and operational impacts will be minimal.

If deemed unsuitable as a ground water source, the unsuccessful well will have no impact on ground water resources in the area.

The proposed project will be consistent with the objective of the Resource Subzone of the Conservation District. Valuable resources of the designated area will not be adversely affected. An environmental assessment has been conducted and site selection for the proposed well has been performed based on minimum impact to the environment and high probability of success.

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DOCUMENT CAPTURED AS RECEIVED

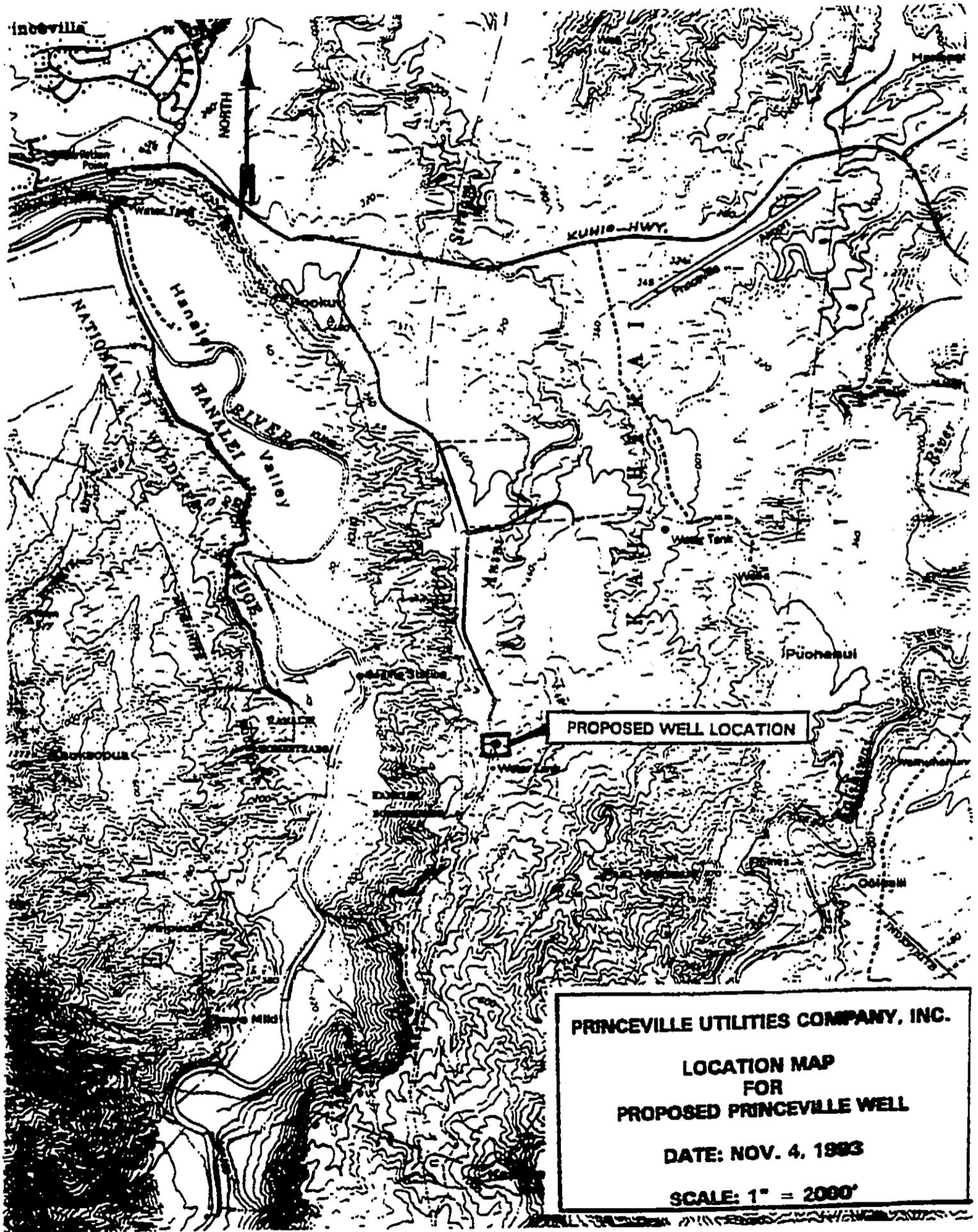


EXHIBIT A

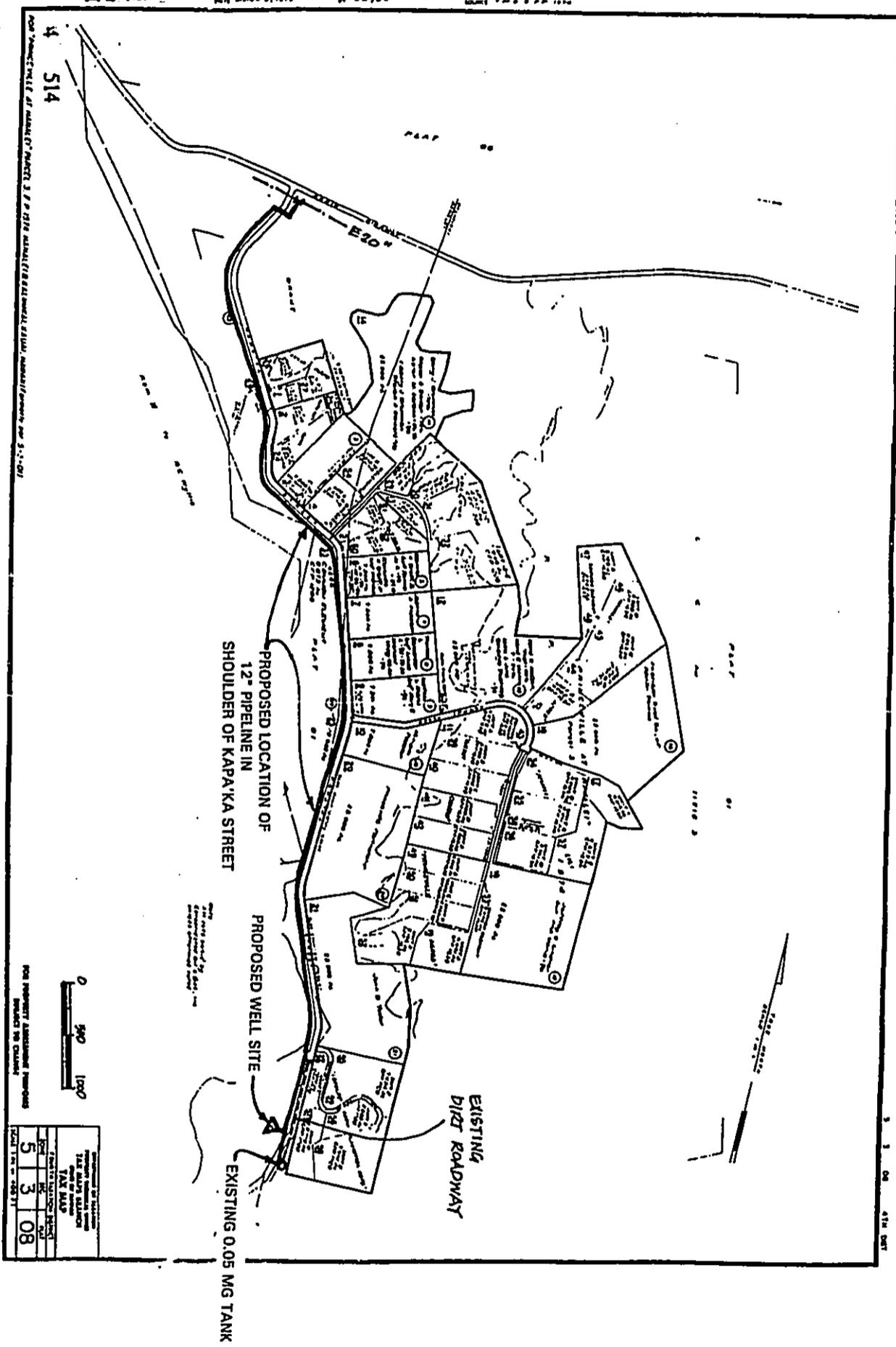


EXHIBIT B

JOHN WAINEE  
GOVERNOR OF HAWAII



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

KEITH W. AHUE  
CHAIRPERSON  
JOHN C. LEWIN, M.D.  
ROBERT S. NAKATA  
J. DOUGLAS INO, ESQ.  
RICHARD H. COX, P.E.  
GUY K. FUJIMURA  
RAE M. LOUI, P.E.  
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**RECEIVED**  
MAR 25 1980  
PRINCEVILLE CORPORATION

EXTENSION  
WELL CONSTRUCTION PERMIT

for

Princeville Well 2  
(Well No. 1127-02)  
Princeville, Kauai

TO: Princeville Water Systems, Inc.  
P.O. Box 3040  
Princeville, HI 96722

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test Princeville Well 2 (Well No. 1127-02), is approved subject to the following conditions:

1. The Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.
2. The permit shall be for construction and testing of the well only. The applicant shall coordinate with the Commission and conduct a pumping test in accordance with the protocol established by the Commission. A one-inch diameter (minimum) galvanized pipe shall be permanently installed, in a manner acceptable to the Commission, to accurately measure water levels. No permanent pump may be installed and no water withdrawn from the well without first obtaining a pump installation permit from the Commission.
3. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct a well shall not constitute a determination of correlative water rights.
4. The following shall be submitted to the Commission within 30 days after completion of the work:
  - a. Well Completion Report.
  - b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
  - c. As-built sectional drawing of the well.

EXHIBIT C

WELL CONSTRUCTION PERMIT  
Well No. 1127-02

- d. Plot plan and map showing the exact location of the well.
- e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.
5. The applicant shall comply with all applicable laws, rules, and ordinances.
6. The permit application and staff submittal approved by the Commission at its meeting on March 16, 1994 shall be incorporated herein by reference.
7. The applicant shall contact the State Historic Preservation Division (Telephone: 587-0006) before starting any work on the project. The applicant shall obtain a written statement from the State Historic Preservation Division indicating that their concerns have been addressed, and a copy of that statement shall be sent to the Commission before work is started on the project.
8. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit approval.

  
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KEITH W. AHUE, Chairperson  
Commission on Water Resource Management

MAR 23 1994  
Date of Issuance

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

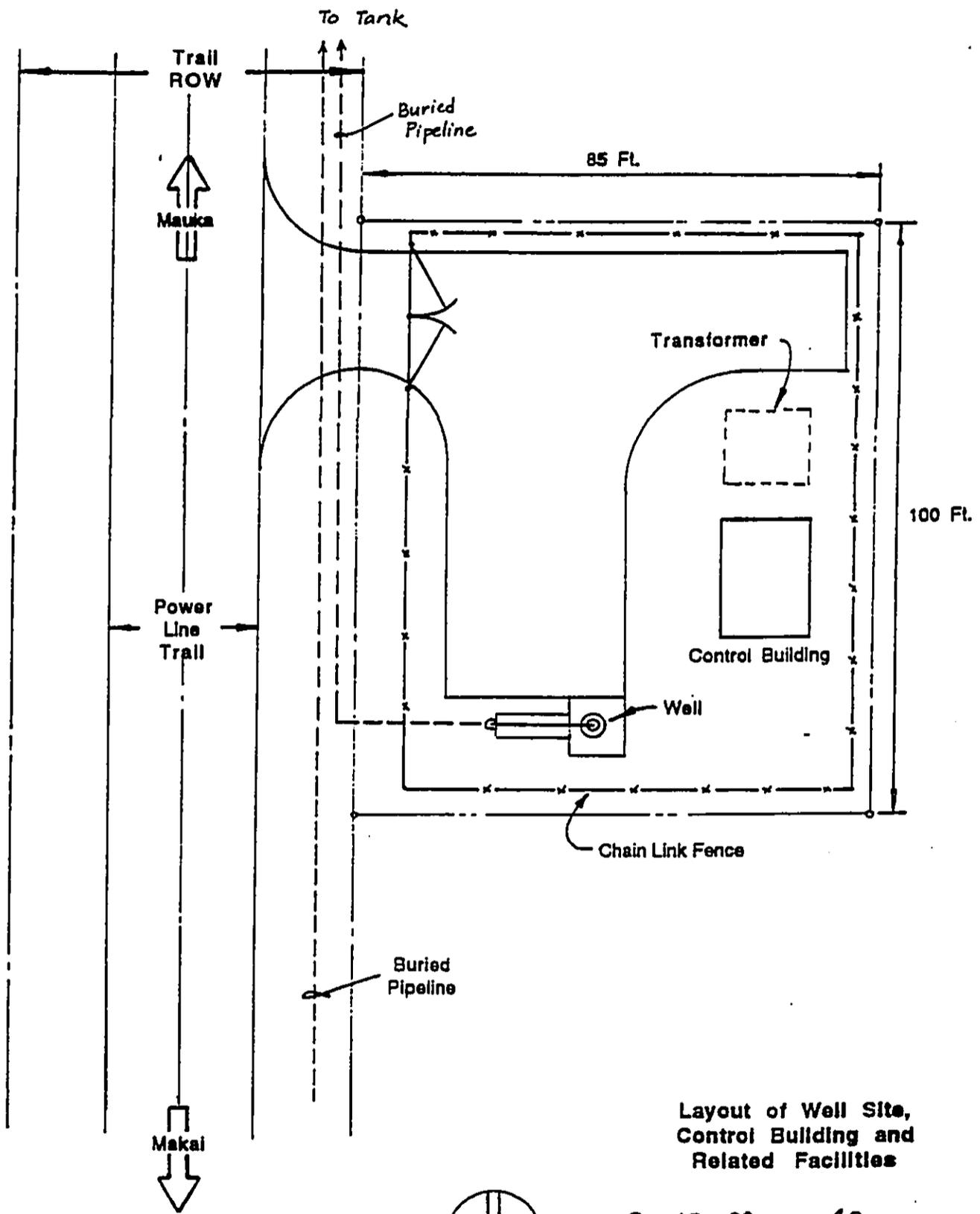
Applicant's Signature Michaelynn Lo Date: 29 March 1994

Printed Name: Michaelynn Lo

Firm or Title: V.P.

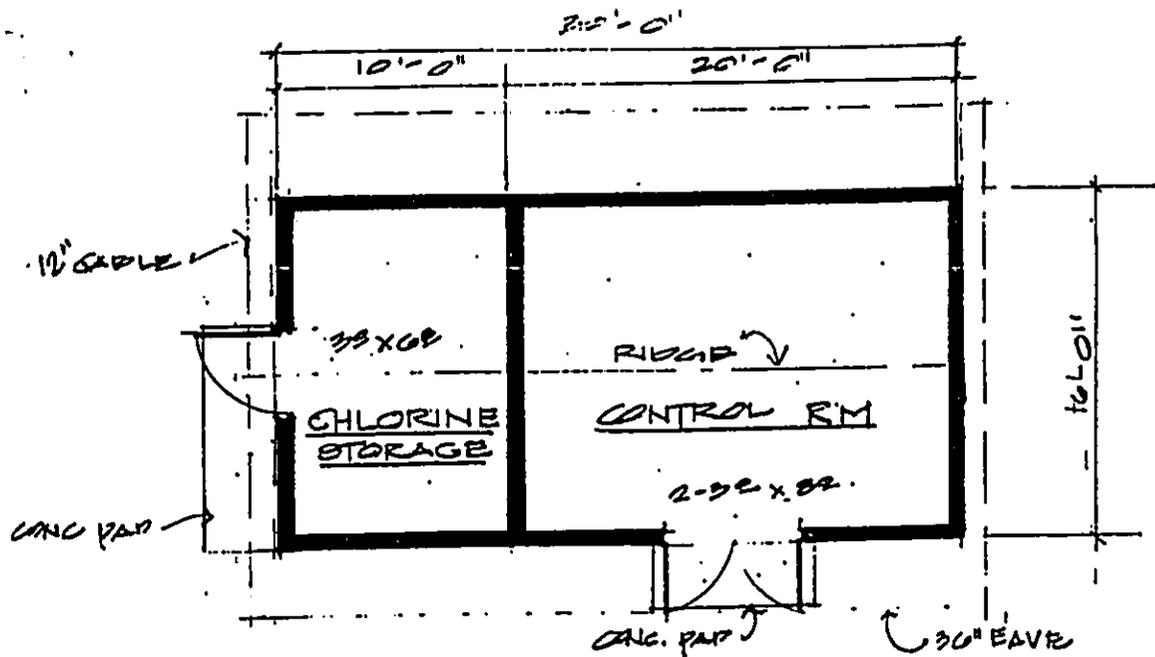
Please sign and return one copy of this permit to the Commission and retain a copy for your record.

cc: USGS  
Department of Health  
Safe Drinking Water Branch  
Wastewater Branch  
Ground Water Protection Program  
Kauai Department of Water  
Tom Nance Water Resources Engineering

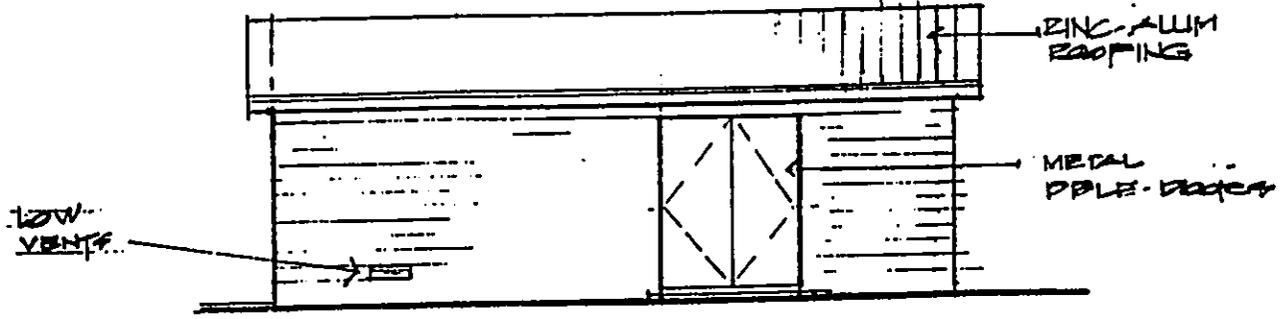


Layout of Well Site,  
Control Building and  
Related Facilities

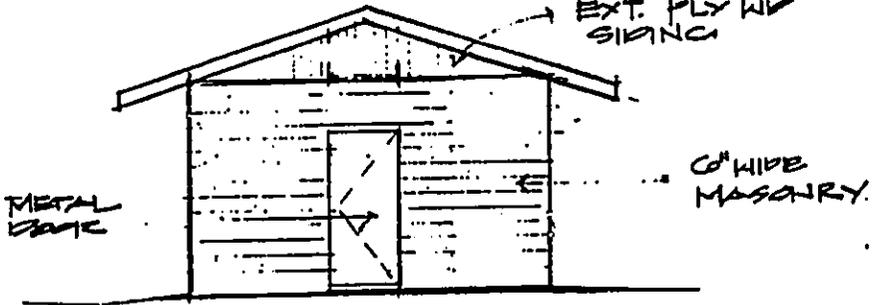
EXHIBIT D



FLOOR PLAN SCALE: 1/8" = 1'-0"



FRONT REAR SIMILAR W/OUT DOORS



LEFT SIDE RIGHT SIDE SIMILAR W/OUT DOOR

DA/RJ. DEC 93

PROPOSED MASONRY BUILDING  
FOR  
PRINCETON WATER SYSTEM INC.