

SP78-312 - CASTLE & COOKE, INC. (WAIPIO)

<b>SPECIAL PERMIT</b>	
Petition Received	<u>7/27/78</u>
Maps	_____
Action Span	<u>7/27/78 - 9/10/78</u>
Action Date	_____
Recordation	<u>1/17/79</u>



In the Matter of the  
Petition for Special Permit  
of CASTLE & COOKE, INC.

CASTLE & COOKE, INC.

NOV 21 1978  
Date

by

**Executive Officer**

FINDINGS OF FACT, CONCLUSIONS OF LAW,  
AND DECISION AND ORDER



BEFORE THE LAND USE COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the	)	SP78-312
Petition for Special Permit	)	
of CASTLE & COOKE, INC.	)	FINDINGS OF FACT,
	)	CONCLUSIONS OF LAW, AND
	)	DECISION AND ORDER

---

The Land Use Commission of the State of Hawaii having duly considered the entire record in the above-entitled matter, makes the following findings of fact and conclusions of law:

FINDINGS OF FACT

1. The Petition for Special Permit was filed by Castle & Cooke, Inc., to allow the construction of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu.

2. The subject property is located along the western border of the H-2 Freeway at Waipio, Oahu, Tax Map Key 9-4-06: portion of parcel 1.

3. The proposed water system is to support the Waipio/Gentry development and includes four (4) deep wells and two (2) reservoirs. The deep wells are on land designated for urban use where a Special Permit is not required. Establishment of the water reservoirs require a Special Permit since they are to be situated within the Agricultural District.



4. The two (2) reservoirs are to each have a 1.5 million gallon capacity. Construction of the first reservoir is expected immediately upon approval of the Special Permit, while the second water reservoir will be constructed when the daily water demand of the Waipio/Gentry development reaches 1.0 million gallons.

5. The County's Detailed Land Use Map designates the subject area for Agricultural use. Present County Zoning is AG-1 Restricted Agriculture.

6. The subject site and surrounding land area are principally under pineapple cultivation.

7. The Board of Water Supply, State Department of Health, Department of Agriculture, and County Department of Public Works had no objections to the proposed use.

8. A public hearing on the Special Permit application was held by the City Planning Commission on June 13, 1978. Testimony in opposition to the request was presented by Life of the Land and Neighborhood Board No. 25, while the Petitioner's representatives testified in support of the application.

#### CONCLUSIONS OF LAW

1. "Unusual and reasonable" uses other than those which are permitted in a agricultural district may be permitted by special permit pursuant to HRS Chapter 205-6, and State Land Use Commission District Regulation, Part V.

2. The use described in the special permit is not contrary to the objectives sought to be accomplished by the Land Use Law and Regulations.



3. The desired use will not adversely affect surrounding property.

4. The petitioned use will not unreasonably burden public agencies to provide services or improvements.

5. Unusual conditions, trends and needs have arisen since the district boundaries and regulations were established.

6. The use described in the petition is an unusual and reasonable use pursuant to HRS Chapter 205-6 and State Land Use Commission District Regulation, Part V.

#### DECISION AND ORDER

IT IS HEREBY ORDERED that Special Permit Number 78-312, for the establishment of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu, Hawaii, Tax Map Key 9-4-06: portion of Parcel 1, be approved subject to the following conditions:

1. The submitted Preliminary Location Map, Grading Plan and Landscape Plan marked Exhibit 1, stamped January 16, 1978, and acceptable to the Board of Water Supply shall be part of the permit. This permit is for construction of the two 1.5 million gallon reservoirs only. Any future reservoir construction on this site will be subject to further agency review and Special Permit approval.

2. The entire water system shall be constructed in accordance with the Water Master Plan dated November,



1976 by William Hee and Associates and the requirements of the Board of Water Supply. The site plan, grading plan and landscape plan shall be modified to provide additional setback and/or buffer landscape material to soften the structures' visual impact on H-2 Highway. Such modification shall require the approval of the Director of Land Utilization prior to issuance of a Building Permit.

3. The applicant shall be required to incorporate all of the conditions set forth herein as part of the restrictive covenants running with the land.


4. The applicant/developer of the property encompassed by this Special Permit shall be required to file with the Bureau of Conveyances of the State of Hawaii, a declaration of the above-mentioned restrictive conditions.

5. In the event all conditions as set forth herein are not complied with, the Director of Land Utilization may take action to terminate the use or halt its operation until such time full compliance is obtained.

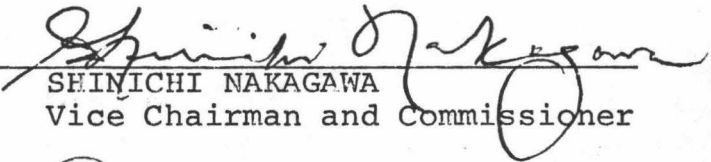
6. The Director of Land Utilization may approve any request for modifying the submitted plans which he considers to be consistent with the spirit of the approved plans.

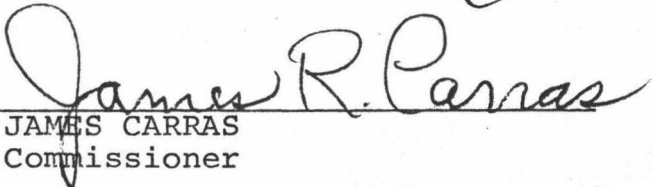
7. That the construction of the first water reservoir commence within one (1) year from the effective date of the Special Permit.

DATED: Honolulu, Hawaii, November 9, 1978.

By   
C. W. DUKE  
Chairman and Commissioner




By   
SHINICHI NAKAGAWA  
Vice Chairman and Commissioner

By   
JAMES CARRAS  
Commissioner

By   
SHINSEI MIYASATO  
Commissioner

By   
GEORGE PASCUA  
Commissioner

By   
CAROL WHITESELL  
Commissioner

By   
EDWARD K. YANAI  
Commissioner

PS Form 3800, Apr. 1976  
SP76-248 C&C BLDG. DEPT., SP78-312

Castle & Cooke

974775

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

SENT TO			
EUGENE B. CONNELL			
STREET AND NO.			
650 S. King St.			
P.O., STATE AND ZIP CODE			
Honolulu, Hi. 96813			
POSTAGE			\$ .67
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	.80 ¢
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	.45 ¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
		SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢

TOTAL POSTAGE AND FEES

\$1.92

POSTMARK OR DATE

SP77-273  
Cable Corp.





**STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,  
CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)**

1. If you want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, **leaving the receipt attached**, and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
2. If you do not want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, date, detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified-mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.

- SENDER: Complete items 1, 2, and 3.  
Add your address in the "RETURN TO" space on reverse.

## 1. The following service is requested (check one).

- ☒ Show to whom and date delivered . . . . . \$  
☐ Show to whom, date, and address of delivery . . . . . \$  
☐ RESTRICTED DELIVERY  
 Show to whom and date delivered . . . . . \$  
☐ RESTRICTED DELIVERY  
 Show to whom, date, and address of delivery . \$  
 (CONSULT POSTMASTER FOR FEES)

## 2. ARTICLE ADDRESSED TO:

EUGENE B. CONNELL

## 3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	974775	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4.

DATE OF DELIVERY

POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S  
INITIALS

SP 78-312, SP 76-248

☆GPO: 1977-0-249-595



UNITED STATES POSTAL SERVICE  
OFFICIAL BUSINESS

**SENDER INSTRUCTIONS**

Print your name, address, and ZIP CODE in the space below.

- Complete items 1, 2, and 3 on the reverse.
- Moisten gummed ends and attach to front of article if space permits. Otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

**RETURN  
TO**



State of Hawaii  
**LAND USE COMMISSION**  
Suite 1795, Pacific Trade Center  
190 South King Street  
Honolulu, Hawaii 96813

PENALTY FOR PRIVATE  
USE TO AVOID PAYMENT  
OF POSTAGE, \$300



\_\_\_\_\_  
(Name of Sender)

\_\_\_\_\_  
(Street or P.O. Box)

\_\_\_\_\_  
(City, State, and ZIP Code)

**No.****974776****RECEIPT FOR CERTIFIED MAIL****NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL****(See Reverse)****SENT TO****CASTLE & COOKE, INC.****STREET AND NO.****Financial Plaza****P.O., STATE AND ZIP CODE****Honolulu, Hi. 96813****POSTAGE****\$ .41****CERTIFIED FEE****.80 ¢****SPECIAL DELIVERY****¢****RESTRICTED DELIVERY****¢****SHOW TO WHOM AND DATE  
DELIVERED****.45 ¢****SHOW TO WHOM, DATE, AND  
ADDRESS OF DELIVERY****¢****SHOW TO WHOM AND DATE  
DELIVERED WITH RESTRICTED  
DELIVERY****¢****SHOW TO WHOM, DATE AND  
ADDRESS OF DELIVERY WITH  
RESTRICTED DELIVERY****¢****TOTAL POSTAGE AND FEES****\$ 1.66****POSTMARK OR DATE****SP78-312 Castle & Cooke, Inc.****PS Form 3800, Apr. 1976**

**STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,  
CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)**

1. If you want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, **leaving the receipt attached**, and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
2. If you do not want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, date, detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified-mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.



- SENDER: Complete items 1, 2, and 3.  
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).

- ☐ Show to whom and date delivered . . . . . \$  
☒ Show to whom, date, and address of delivery . . . . . \$  
☐ RESTRICTED DELIVERY  
 Show to whom and date delivered . . . . . \$  
☐ RESTRICTED DELIVERY  
 Show to whom, date, and address of delivery . \$ \_\_\_\_\_  
 (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

CASTLE & COOKE, INC.

3. ARTICLE DESCRIPTION:

REGISTERED NO.

CERTIFIED NO.

INSURED NO.

974776

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE

☐ Addressee

☐ Authorized agent

*R. McKee*

4.

DATE OF DELIVERY

NOV 27 1978

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S  
INITIALS



UNITED STATES POSTAL SERVICE  
OFFICIAL BUSINESS

**SENDER INSTRUCTIONS**

Print your name, address, and ZIP CODE in the space below.

- Complete items 1, 2, and 3 on the reverse.
- Moisten gummed ends and attach to front of article if space permits. Otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE  
USE TO AVOID PAYMENT  
OF POSTAGE, \$300



**RETURN  
TO**



State of Hawaii  
**LAND USE COMMISSION**  
Suite 1795, Pacific Trade Center  
190 South King Street  
Honolulu, Hawaii 96813

---

(Name of Sender)

---

(Street or P.O. Box)

---

(City, State, and ZIP Code)

BEFORE THE LAND USE COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the	)	
Petition for Special Permit	)	SP78-312
of CASTLE & COOKE, INC.	)	CASTLE & COOKE, INC.
_____	)	


CERTIFICATE OF SERVICE

I hereby certify that a copy of the Land Use  
Commission's Decision and Order was served upon the  
following by certified mail:

Eugene B. Connell, Executive Secretary  
City Planning Commission  
Honolulu Municipal Building  
650 South King Street  
Honolulu, Hawaii 96813

Castle & Cooke, Inc.  
Financial Plaza of the Pacific  
Honolulu, Hawaii 96813

Dated: Honolulu, Hawaii, this 21st day of November, 1978.

  
GORDAN Y. FURUTANI  
Executive Officer  
Land Use Commission



August 17, 1978

City Planning Commission  
Honolulu Municipal Building  
650 South King Street  
Honolulu, Hawaii 96813

Attention: Mr. Eugene B. Connell, Executive Secretary to  
the Planning Commission

Gentlemen:

At its meeting on August 15, 1978, the Land Use Commission voted to approve a Special Permit request by Castle and Cooke, Inc. (SP78-312) to allow the construction of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu, Tax Map Key 9-4-6: portion of 1. Approval of this Special Permit is subject to the conditions imposed by the City Planning Commission and the additional condition as follows:

7. That the construction of the first water reservoir commence within one (1) year from the effective date of the Special Permit.

Please be advised that the petitioner's failure to comply with any of the delineated conditions of approval, particularly those relating to time, shall be reason for termination of the Special Permit. The Land Use Commission will not consider any request for time extension which is filed after the stipulated commencement or expiration dates.

A copy of the staff memorandum is herewith enclosed for your information. The Land Use Commission's Decision and Order on (SP78-312) will be forwarded to you at a later date.

Sincerely,

GORDAN Y. FURUTANI  
Executive Officer

Encls.  
cc: Castle & Cooke, Inc.

Ramon Duran, Dept. of Gen. Planning  
George Moriguchi, Dept. of Land Utilization

August 17, 1978

Department of Planning and  
Economic Development  
State of Hawaii  
250 South King Street  
Honolulu, Hawaii 96813

Attention: Mr. Hideto Kono, Director

Gentlemen:

At its meeting on August 15, 1978, the Land Use Commission voted to approve a Special Permit request by Castle and Cooke, Inc. (SP78-312) to allow the construction of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu, Tax Map Key 9-4-6: portion of 1. Approval of this Special Permit is subject to the conditions imposed by the City Planning Commission and the additional condition as follows:

7. That the construction of the first water reservoir commence within one (1) year from the effective date of the Special Permit.

Please note that a copy of the Land Use Commission's Decision and Order on this matter is on file at the Commission's office.

Sincerely,

GORDAN Y. FURUTANI  
Executive Officer

Encl.

cc: Dept. of Taxation, Tax Maps  
Recorder

Property Technical Office, Dept. of Taxation  
Real Property Tax Assessor, Dept. of Taxation  
Office of Environmental Quality Control  
Division of Land Management, DLNR



August 21, 1978

Castle & Cooke, Inc.  
Financial Plaza of the Pacific  
Honolulu, Hawaii 96813

Gentlemen:

The original of the attached letter is on file in the office of the Department of General Planning, City and County of Honolulu, 650 South King Street, Honolulu, Hawaii.

Please be advised that failure to comply with any of the delineated conditions of approval, particularly those relating to time, shall be reason for termination of the Special Permit. The Land Use Commission will not consider any request for time extension which is filed after the stipulated commencement or expiration dates.

A copy of the staff memorandum is herewith enclosed for your information. The Land Use Commission's Decision and Order on SP78-312 will be forwarded to you at a later date.

Sincerely,

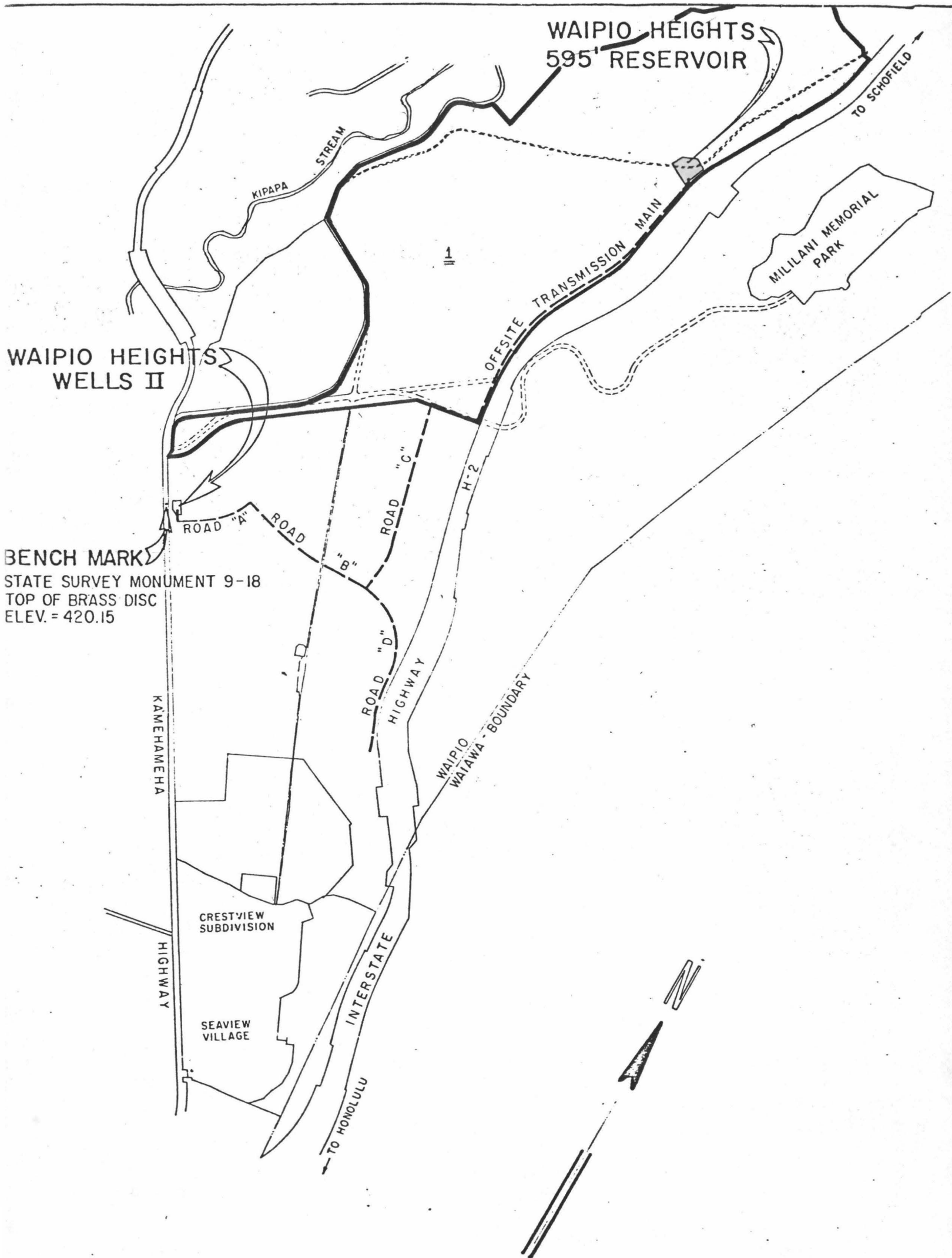
GORDAN Y. FURUTANI  
Executive Officer

Encls.



SP 78-312 CASTLE & COOKE, INC.

TMK : 9-4-06 : PORS. 1



STATE OF HAWAII  
LAND USE COMMISSION

Minutes of Meeting

State Conference Rooms A & B  
3060 Eiwa Street  
Lihue, Kauai

*Approved*  
OCT 19 1978

August 15, 1978 - 9:30 a.m.

COMMISSIONERS PRESENT: Charles Duke, Chairman  
Shinichi Nakagawa, Vice Chairman  
James Carras  
Shinsei Miyasato  
George Pascua  
Carol Whitesell  
Edward Yanai

COMMISSIONERS ABSENT: Colette Machado  
Mitsuo Oura

STAFF PRESENT: Gordan Furutani, Executive Officer  
Daniel Yasui, Planner  
Allan Kawada, Deputy Attorney General  
Dora Horikawa, Chief Clerk  
  
Ray Russell, Court Reporter

The meeting was called to order by Chairman Duke.

ACTION

SP76-248 - CITY & COUNTY OF HONOLULU, BUILDING DEPARTMENT  
REQUEST FOR A ONE YEAR TIME EXTENSION TO COMMENCE CONSTRUCTION  
OF A FIRE AND POLICE TRAINING FACILITY AT WAIPIO PENINSULA, OAHU

Mr. Daniel Yasui, staff planner, presented a resume of the staff memorandum and pointed out the area on the map.

In response to a request for clarification, Mr. Kawada expressed his opinion that the subject request was for a time extension of one year to commence construction and did not refer to the 5-year completion date of the project.

Chairman Duke suggested that the Commission add another condition to the Special Permit clearly stating that the project be completed within 5 years from original date of approval. It was his feeling that a fire and police training center was a much needed facility. He criticized the lack of funding by the City which was causing the delay in completing this project.

Commissioner Carras moved that the Special Permit be approved, subject to the conditions imposed by the Hawaii County Planning Commission. The motion was seconded by Vice Chairman Nakagawa and unanimously carried.

SP78-311 - FRATERNAL ORDER OF EAGLES  
SPECIAL PERMIT TO ALLOW THE ESTABLISHMENT OF A FRATERNAL HOME  
AT KEAAU, PUNA, HAWAII

A resume of the staff memorandum relevant to the subject request was presented by Mr. Yasui. The area was also pointed out on the maps.

Commissioner Carras moved that the Special Permit be approved, subject to the conditions stipulated by the Hawaii County Planning Commission. The motion was seconded by Commissioner Pascua and unanimously approved.

✓ SP78-312 - CASTLE & COOKE, INC.  
SPECIAL PERMIT TO ALLOW THE ESTABLISHMENT OF A WATER RESERVOIR  
SYSTEM AT WAIPIO, OAHU

Mr. Furutani presented a summary of the staff memorandum and located the property on the maps and oriented it with various surrounding landmarks. Two exhibits were circulated; one of the water system master plan and the other showing the landscaping and grading plans submitted by the petitioner. A brief explanation of the two exhibits was offered by Mr. Furutani.

Vice Chairman Nakagawa moved that the Special Permit be approved, subject to the conditions imposed by the City Planning Commission and the 7th condition recommended by staff that construction of the first water reservoir commence within one year from the effective date of the Special Permit. The motion was seconded by Commissioner Carras.

Commissioner Whitesell went on record to indicate that the Commission was concerned with the overall water situation--the availability, the direct impact, the overdraft situation, etc., in the Central Oahu area.

The motion was unanimously carried.

STATE OF HAWAII  
LAND USE COMMISSION

VOTE RECORD

SP78-312  
ITEM CASTLE & COOKE, INC. (OAHU)

DATE August 15, 1978

PLACE State Conf. Rooms A&B  
Lihue, Kauai

TIME 9:30 a.m.

NAME	YES	NO	ABSTAIN	ABSENT
MIYASATO, SHINSEI	X			
PASCUA, GEORGE R.	X			
MACHADO, COLETTE				X
YANAI, EDWARD	X			
OURA, MITSUO				X
S CARRAS, JAMES	X			
M NAKAGAWA, SHINICHI				
WHITESELL, CAROL	X			
DUKE, CHARLES	X			

Comments: I move that the Special Permit be approved, subject to the conditions imposed by the City Planning Commission, and subject also to the additional condition as follows:

"That construction of the first water reservoir commence within one (1) year from the effective date of the Special Permit."



STATE OF HAWAII  
LAND USE COMMISSION  
Suite 1795  
Pacific Trade Center  
190 S. King Street  
Honolulu, Hawaii 96813

August 8, 1978

Mr. Ramon Duran  
Chief Planning Officer  
Department of General Planning  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Duran:

Enclosed is a Notice of Land Use Commission meeting and the Agenda for the Meeting.

Please note that petition

✓ SP76-248 - City & County of Honolulu, Building Dept. (Time Extension)  
✓ SP78-312 - Castle & Cooke, Inc. (Waipio)

will be acted on at that time.

Should you have any questions on this matter, please contact this office.

Very truly yours,



GORDAN FURUTANI  
Executive Officer

Enclosure - Agenda

STATE OF HAWAII  
LAND USE COMMISSION  
Suite 1795  
Pacific Trade Center  
190 S. King Street  
Honolulu, Hawaii 96813

August 8, 1978

Mr. George S. Moriguchi, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Moriguchi:

Dear

Enclosed is a Notice of Land Use Commission meeting and the  
Agenda for the Meeting.

Please note that petition

SP78-312 - CASTLE & COOKE, INC. (WAIPIO)

---

will be acted on at that time.

Should you have any questions on this matter, please contact  
this office.

Very truly yours,



GORDAN FURUTANI  
Executive Officer

Enclosure - Agenda

STATE OF HAWAII  
LAND USE COMMISSION  
Suite 1795  
Pacific Trade Center  
190 S. King Street  
Honolulu, Hawaii 96813

August 8, 1978

Castle & Cooke, Inc.  
Financial Plaza of the Pacific  
Honolulu, Hawaii 96813

Dear Sirs:

Enclosed is a Notice of Land Use Commission meeting and the Agenda for the Meeting.

Please note that petition

SP78-312 - CASTLE & COOKE, INC. (WAIPIO)

will be acted on at that time.

Should you have any questions on this matter, please contact this office.

Very truly yours,



GORDAN FURUTANI  
Executive Officer

Enclosure - Agenda



STATE OF HAWAII  
LAND USE COMMISSION

NOTIFICATION OF LAND USE COMMISSION MEETING

DATE, TIME & PLACE

August 15, 1978 - 9:30 a.m.  
State Conference Rooms A & B  
3060 Eiwa Street  
Lihue, Kauai

A G E N D A

I. ACTION

1. SP76-248 - City & County of Honolulu, Building Department (Time Extension)

To allow a one (1) year time extension to commence construction of a fire and police training facility within the State Land Use Agricultural District at Waipio Peninsula, Oahu.

2. SP78-310 - County of Hawaii Fire Department (Hawaii)

To allow the construction of water storage tanks for volunteer fire fighting purposes on approximately one (1) acre of land situated within the State Land Use Agricultural District at Hawaiian Ocean View Estates Subdivision, Kahuku, Kau, Hawaii.

3. SP78-311 - Fraternal Order of Eagles (Hawaii)

To allow the establishment of a fraternal home on one (1) acre of land situated within the State Land Use Agricultural District at Keaau, Puna, Hawaii.

✓ 4. SP78-312 - Castle & Cooke, Inc. (Oahu)

To allow the establishment of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu.

II. HEARING

1. A78-438 - Grove Farm Company, Inc. (Kauai)

To reclassify approximately 61 acres of land from the Agricultural District to the Urban District at Lihue, Kauai, for the development of a multi-phase regional, mall-type shopping center.

III. MISCELLANEOUS

MAY 26 1978

8/9/78 - A COPY OF THIS AGENDA WAS MAILED TO ALL PERSONS AND ORGANIZATIONS ON THE ATTACHED MAILING LISTS;

1. STATEWIDE  
5. MAUI

2. OAHU  
6. MOLOKAI

3. HAWAII

4. KAUAI



STATE OF HAWAII  
LAND USE COMMISSION

MEMORANDUM

TO: Land Use Commission August 15, 1978  
FROM: Staff  
SUBJECT: SP78-312 - Castle and Cooke, Inc.

The petitioner, Castle and Cooke, Inc., is requesting a Special Permit to allow the construction of a water reservoir system on approximately 1.9 acres of land situated within the State Land Use Agricultural District at Waipio, Oahu, Tax Map Key 9-4-6: portion of parcel 1. The subject property is situated along the western border of the H-2 Freeway at Waipio, Oahu (see attached location map).

The proposed water system includes four (4) deep wells and two (2) reservoirs. The deep wells are on land designated for urban use where a Special Permit is not required. The two reservoirs each have a 1.5 million gallon capacity and are proposed for construction in two phases. Construction of the first reservoir is expected immediately upon approval of the Special Permit. The second reservoir will be constructed when the daily water demand of the Waipio/Gentry development reaches 1.0 million gallons.

The County's Detailed Land Use Map designates the subject area for Agricultural use. Present County Zoning is AG-1 Restricted Agriculture.

The subject site and surrounding land area are principally under pineapple cultivation.

Pertinent comments from governmental agencies:

Honolulu Board of Water Supply

The Board of Water Supply approved the applicant's Master Plan on February 10, 1977 subject to rechecking of the finalized water distribution system drawings within the industrial areas and water main locations being limited to roadways.

Other cooperating agencies, including the State Department of Health, Department of Public Works, and State Department of Agriculture had no objections to the Special Permit request.

In reviewing the Special Permit, the Department of Land Utilization noted the following:

"The water system represents a support facility designed to serve the 510 acre Waipio-Gentry lands recently designated for urban uses. 263 of these acres have been rezoned to allow various developments.

"For adequate water pressure and fire protection, the reservoir must be located at a minimum elevation of approximately 100 feet higher than the area to be served. The only areas within reasonable distance for the reservoir are designated for agricultural use. The site was selected makai of H-2 Highway to avoid construction of a water main across the highway. It was selected to abut H-2 Highway to be least disruptive to agricultural operations and whatever future uses which may be undertaken on Castle & Cooke's land.

"Each reservoir structure is 24 feet high and 120 feet in diameter. The Phase I structure is set back approximately 14 feet from a H-2 Highway embankment. This embankment is approximately 10 feet high and the structure would be highly visible from the highway. The Phase II structure is set back approximately 58 feet from the top of the highway embankment and would be less visible from the highway. The Landscape Plan shows trees and hedging abutting the agricultural use. Landscape buffer material has not been proposed to soften the visual impact of the proposed structures on the highway. Additional setbacks and/or landscape treatment would be required to soften the visual impact of the structures as viewed from the H-2 Highway."

The Department of Land Utilization recommended approval of the Special Permit, as it was determined that:

"The proposal supports the objective of urban use for the Waipio-Gentry land to be served by the water system.

"The water reservoir use is compatible with abutting agricultural uses.

"The use does not require any public services and the Board of Water Supply and Departments of Health, Public Works and Agriculture do not object to the proposal.

"The trend towards urbanization of the Waipio-Gentry land has created the need for additional water since the agricultural district boundaries and regulations were established.

"The Department of Agriculture comments that the amount of prime agricultural land which is lost to the proposed project is inconsequential."

A public hearing on the Special Permit request was held by the City Planning Commission on June 13, 1978. Discussion of the Planning Commission principally concerned the water supply situation of the Pearl Basin. Mr. Herbert Minakami of the Board of Water Supply testified that the permit request would not adversely affect available water supply in the region. Mr. George Hudes, representing Life of the Land, testified in opposition to the Special Permit. Mr. Hudes stated that several hydrological investigations have shown that the Pearl Basin area is already being significantly overdrafted. Mr. Tom Gentry, representing the petitioner, testified in support of the request.

Written testimony in opposition to the Special Permit was submitted by Neighborhood Board No. 25. Excerpts from a May, 1978 Environmental Impact Statement prepared for the expansion of Mililani Town was also submitted by Mr. Hudes. These two documents, including the hearing transcript of June 13, 1978 have been attached.

On July 25, 1978, the City Planning Commission voted to recommend approval of the Special Permit to the Land Use Commission subject to the following conditions:

- "1. The submitted Preliminary Location Map, Grading Plan and Landscape Plan marked Exhibit 1, stamped January 16, 1978 and as acceptable to the Board of Water Supply shall be part of the permit. This permit is for construction of the two 1.5 million gallon reservoirs only. Any future reservoir construction on this site will be subject to further agency review and Special Permit approval;
- "2. The entire water system shall be constructed in accordance with the Water Master Plan dated November, 1976 by William Hee and Associates and the requirements of the Board of Water Supply. The site plan, grading plan and landscape plan shall be modified to provide additional setback and/or buffer landscape material to soften the structures' visual impact on H-2 Highway. Such modification shall require the approval of the Director of Land Utilization prior to issuance of a Building Permit;
- "3. The applicant shall be required to incorporate all of the conditions set forth herein as part of the restrictive covenants running with the land;
- "4. The applicant/developer of the property encompassed by this Special Permit shall be required to file with the Bureau of Conveyances of the State of Hawaii, a declaration of the above-mentioned restrictive conditions;

"5. In the event all conditions as set forth herein are not complied with, the Director of Land Utilization may take action to terminate the use or halt its operation until such time full compliance is obtained; and

"6. The Director of Land Utilization may approve any request for modifying the submitted plans which he considers to be consistent with the spirit of the approved plans."

For the Commission's information, the meeting minutes of July 25, 1978 have been attached.

In accordance with Section 9-3, Subsection (2) of the Land Use Commission's Rules and Regulations which in part states that "The County Planning Commission shall establish, among other conditions, a reasonable time limit suited to establishing the particular use, which time limit, among other conditions shall be a condition of the Special Use Permit", staff recommends that if the Commission is to approve the subject request, an additional condition be imposed as follows:

"That construction of the first water reservoir commence within one (1) year from the effective date of the Special Permit."





1000 0 1000  
SCALE IN FEET

LOCATION  
MAP

EXCERPT  
Meeting of the Planning Commission  
Minutes  
June 13, 1978

JUN 13 1978  
OFFICE OF THE  
COMMISSIONER  
3 10 40 PM '78

The Planning Commission held a meeting on Tuesday, June 13, 1978 at 1:40 p.m., in the Conference Room of the City Hall Annex, Chairman Randall Kamiya presided.

PRESENT:

Randall Kamiya, Chairman  
Charles Izumoto, Vice Chairman  
Yuklin Kuna (present at 2:15 p.m.)  
Jacqueline Lee  
Joseph Macapinlac (present at 3:00 p.m.)  
Charles Sarber

ABSENT:

Marion Kagan  
Melvin Kaneshige  
Gertrude Zane

DEPARTMENT  
REPRESENTATIVES:

Ramon Duran, Chief Planning Officer  
Eugene B. Connell, Executive Secretary  
Roger Moseley, Deputy Corporation Counsel  
Henry Eng, Staff Planner  
Gerald Henniger, Staff Planner  
Art Muraoka, Staff Planner  
Ben Torigoe, Staff Planner

MINUTES:

The Minutes of May 30, 1978 were approved, on motion by Mr. Izumoto, seconded by Mr. Sarber and carried.

PUBLIC HEARING  
STATE SPECIAL USE PERMIT  
(RESERVOIR SYSTEM IN  
AGRICULTURE DISTRICT)  
WAIPIO  
CASTLE & COOKE, INC.  
(FILE #78/SUP-1 GH)

A public hearing was held to consider a request for a State Special Use Permit for a Water Reservoir System situated on 1.916 acres of Agriculture land in Waipio abutting the H-2 Freeway, Tax Map Key: 9-4-06: Portion of 1.

Publication was made in The Honolulu Advertiser on Saturday, June 3, 1978. Copy of a letter from Neighborhood Board No. 25 against the project is attached and made a part of these minutes.

Mr. Gerald Henniger presented the Director's report recommending approval of the request, subject to the conditions in the report.

There were no questions of Mr. Henniger regarding the Director's report. Questions regarding the water situation in the area were directed to Mr. Herbert Minakami from the Board of Water Supply.

Upon advice of Corporation Counsel, those testifying either for or against the proposal were permitted to cross-examine one another. Following is a transcript of the hearing on this matter.

Mr. Herbert Minakami, representative from the Board of Water Supply

IZUMOTO: Could you expand on the one percent overdraft, what that would mean?

MINAKAMI: In regard to when we talk about overdrafting condition, we are considering whether /there are various estimates as to what the recharge rate is. In regard to that particular basin, there is a base proposal. We do come up with an estimate and then looking at the pumpages, from records that we collect, from private wells, from military and what the Board of Water Supply pumps out of that particular basin, we have concluded where we commented on the Waipio/Gentry Master Plan that we plan to pump is just about one percent of what our estimates are in regard to draft and what we plan to is only one percent of redraft out of the whole basin area.

So, it's not going to have that much depending on the draft condition in that basin plus we recognize there are in regard to the recharge condition of that basin.

IZUMOTO: Backing up a bit, when you speak of overdraft such as in this case, how do you arrive at the overdraft situation?

MINAKAMI: Overdraft is what we talk about how much water is recharged into the basin and we look at the pumpages if they match up or if these pumpages exceed recharge then you have an overdraft condition. It's just like if you fill water into a cup at a constant rate, for instance, if everybody had a straw and they sucked at the rate in which the water is filling into the cup, you have an equilibrium condition but if you have no water being fed into the cup then you've got an overdraft condition.

DURAN: What does the future hold for this area? If you've got a 1% overdraft at this time, what does the future look like for water for this development as well as any other development in this area?

MINAKAMI: In regard to that 1% here too, it's an each-year judgment. This is why we're expanding our studies to get more data in regard to what's happening over there. But, in regard to that particular basin, I believe we're right on the basis of an each-year judgment. We will be or have been reaching the point where we come into the limit of reaching the draft there.

DURAN: But at this time the request before us will in no way in your opinion adversely affect the water supply?

MINAKAMI: That's right because of the fact it will add maybe at the most, about 1%. So, there is a lot of room for judgment.

DURAN: So, this same question asked in the future will depend upon the results of your pending study.

MINAKAMI: Right, it will.

SARBER: I'm not clear in my own mind what the 1% refers to. Does the 1% refer to the usage of this particular development, usage of your recharge capacity or is it the 1% of an existing overdraft? I missed just what the 1% was.

MINAKAMI: In regard to let's say that the recharge of that particular basin is 250+ gallons per day and right now we're talking about let's say 250, and this request is coming in for X number of million gallons, that X number of million gallons represent only 1%, an additional 1%.

SARBER: In your example, there was 250 being recharged and 250 being pumped.

MINAKAMI: Correct.

SARBER: And this 1% was what, the 2.5? Is that the number we're talking about?

MINAKAMI: Right, an estimate. It's about 1% of what is being recharged into that basin.

SARBER: You happened to use this as an example, 250 in and 250 out. Forgetting about this project, are we saying we have as much recharge as we have pumpage requirement so that there is no overdraft?

MINAKAMI: Well, right now what we will be recharging into that basin, and this is only an estimate now, so whether we add 250 out or 250 in, I mean we know how much we're taking out but we don't know what is being recharged. But, based upon our best judgment that what's going to be additionally taken out by this particular project is only going to be about 1% of each year of our recharge estimate.

SARBER: I think I understand that. But going back, ignoring this project, right now in the judgment of the Board, is there an overdraft situation now?

MINAKAMI: I don't think I can say really if in the Board's opinion there is--my personal feeling is--we can authoritatively say we have an overdraft condition because of the fact that there is too many factors unknown of the recharge rate of that basin. So, I can't comment to say we have an overdraft condition.

SARBER: I can understand that. Can you comment that there is not an underdraft situation?

MINAKAMI: I would say we are right at the point of either being a little underdraft or a little overdraft. It's hard to comment on those things. In the Pearl Harbor area, we are getting to that point or we are at that point.



CHAIRMAN: Further questions? If not, thanks Herb.

Before we receive testimony, maybe Roger can explain the procedure that we will use today.

ROGER MOSELY, DEPUTY CORPORATION COUNSEL: The procedure we will use today is that the people that are testifying should be able to cross-examine the other witnesses. We will take all the testimony and give people a chance to cross-examine the other to be sure that everyone has a fair chance of giving their testimony.

CHAIRMAN: The Commission will receive testimony for, then they will receive testimony against, followed by time for cross-examination.

Anyone to testify for?

RESPONSE FROM AUDIENCE: Mr. Gentry had proposed to come in here but he's not here yet.

CHAIRMAN: Okay. The Commission will receive testimony against Mr. George Hudes.

GEORGE HUDES: Most of my comments cover the water supply situation. I have some different conclusions and comments that I would like to share with you.

I am opposed to granting the permit for the reservoir because in my opinion - and my opinion is based on a number of hydrological investigations that were done for the Board of Water Supply. The Pearl Basin area is already being significantly overdrafted.

I have five copies, two pages of a recent EIS done by Belt, Collins and Associates for the proposed Mililani Town expansion. It's a different project. I believe the water overdraft conclusions to that EIS are relevant to this particular situation.

CHAIRMAN: George, before you proceed, would you state your name and who you are representing?

HUDES: I am George Hudes and I am here giving testimony on behalf of Life of The Land.

In this EIS, pages 17, 20 and 21 from Belt Collins study, they refer to basically three estimates that have been done of the capacity of the Pearl Basin groundwater aqueduct. They refer to that done by Mr. Bolls, one done by Mr. Mink and the in-house estimate by the FWS Hydrologist, Chester Lau. Mr. Lau's estimates of the amount of water available from the Pearl Basin is, by far, the highest. His estimate is approximately 270 mgd sustainable yield. Tha compared to Mr. Mink's estimate which by the way was done as consultant to BWS, Mr. Mink figures a total recharge in the area of 245 ngd. By the way, total recharge is not the equivalent safe yield. Most cases our hydrologists here in Hawaii



have estimated that the safe yield for groundwater body on Oahu is approximately 70% or 80% total recharge. You can't take it all out without adversely affecting the water. I do agree with Mr. Minakami that these are difficult estimates to make. Probably the most difficult part of it is - the severe data shortage at the present time concerns the amount of water that is lost, in other words, the rainfall that is lost through evaporation and transpiration by plants. We have very little data on that. Records are being made on perhaps what they don't have right now.

But in any case, any of the three estimates listed, the area is being overdrafted at present.

In 1974, a study by Mr. Mink he says that the area had been overdrafted at approximately 10% for over 10 years.

The approval of the well for the Waipio/Gentry project which occurred subsequent to the initial EIS, there was nothing stated in the EIS that the wells would have to be drilled through the project. The only statement the original EIS which would state approval of the project was that according to the Board's projection, 20/20 plan, there was enough water to take care of this. There was nothing said about drilling wells, no detailed investigation about tapping the Pearl Basin.

We see approval of these wells by BWS as a real problem because if this only represents 1% of the total withdrawal from the basin, well if you keep adding 1% and another 1% and another 1%, in this Belt Collins EIS it's stated while the proposed wells have already been approved by BWS - these are different wells now which will add another 1.64 mgd - the present water situation of Oahu particularly in the Pearl Harbor area, is particularly critical that a fairly detailed consideration of the problem, in effect both withdrawals is warranted. Now, of course, this is just Belt Collins' statement. But, I'm saying at what point can we say another 1% will be too much?

Now, the Mink study in 1974 indicated that the area was being overdrawn by 10%. At that time, total withdrawals were 264 mgd. Today, total withdrawals are 285.6 mgd. So it's closer to 15% overdraft according to the Mink study in 1974. And, if the Mililani Town expansion and the Gentry/Waipio project is allowed, my question is when is this going to stop? I think we are overdue for the type of thorough determination as to whether we can supply any more water for development in that area. What's happening is that since the developers are drilling their own wells, we don't have any basis for saying that there are public funds so there must be an EIS performed. But what happens is the developer drills the well and turns it over to the BWS. It's a kind of loophole for getting away from the EIS required in State law. We feel that there has been a considerable amount of buckpassing.

Life of The Land has been going throughout the agencies now for approximately two years trying to get indepth consideration. The problem is every time they say well, you're talking to the wrong people.

Well, we'd like to see the buck stop here, if possible, and we don't feel the reservoir which will be receiving overdrafted waters should be approved unless it can be shown that these wells will not exacerbate an already existing problem.

DURAN: When did Mr. Lao do this study?

HUDES: This estimate was a private communication to Mr. Larry Chun at Belt Collins Associates in 1978. There is no public statement on record. That, in effect, is a statement to the BWS saying that overdraft does exist. That is the highest estimate available. The Board's, who makes the estimates, are considerably lower.

Maybe I should read to you some statements that came out in 1973 - that's going back quite a ways - concerning the water situation in the Pearl Basin area. These were statements made by the Honolulu BWS at that time under George Yuen and by Oahu Sugar Corporation to the Environmental Protection Association. This concerned an application by Hawaiian Electric Company - the coastal waters for cooling rather than groundwaters for cooling.

The one from Oahu Sugar stated "Hydrologists who have studied the Pearl Harbor Water Basin are in accord that have reached or nearly settled a safe yield point. In view of salinity problems we are experiencing, we conclude it has exceeded the safe-yield point and are being forced into the Basin."

The statement from the BWS: "The information indicates that the natural input is already in a precarious balance compared to groundwater withdrawal."

Mr. Mink's conclusion was: "In reality, a negative balance has become established in both the Honolulu and Pearl Harbor regions in recent years which if allowed to continue will in the longrun cause deterioration in the quality of water withdrawn in the groundwater aquifers. Unless draft is controlled, it will continue to fall, strength flow will decrease and worsen in quality. In general, this equilibrium will prevail."

Let me remind the members that we are right now in a situation where I would imagine the BWS has asked the Board to improve regulations for mandatory water quality. This is based primarily on data from wells in the Pearl Basin area.

It is Life of The Land's position that the present water problems in the Pearl Basin area are not into drought. Because, droughts are predictable and droughts are typical in the history of Oahu. The present problems that the wells experience are due to considerable overdraft over a long period of time.

SARBER: What would be involved in the detailed consideration, detailed kind of study that would be necessary to come up with some of the answers?

HUDES: That's the extensive study we're talking about here. There's a number of things that have been done already. There is a

study being conducted by the Water Research Center. It's called the Resident of Basal Groundwater Study. But basically, they are dating the age of water being withdrawn from the Basin. The period that this water is being withdrawn is old water. We're talking of ages up to 500 years old. What we're doing is withdrawing water that has been down there for a long time which is over and beyond what is recharging there. In other words, if they are taking out old water, this is an indication that we are overdrafting the aquifer. Initial results of that study indicated that we were taking quite a bit of old water but that study is ongoing and they have not come out with any conclusion.

Another thing which should be done would be to drill some more deep observation wells. We have very few deep observation wells on Oahu. Deep observation wells are expensive to drill because they go all the way down to the fresh water land to the zone of mixing, and they may monitor just how fast the salt is coming up and that can also give us a better indication of just how much and where we are overdrawing the aquifer.

Another type of study - and I think there's funding being made available to us now - is more detailed investigation of transpiration and evaporation in the Pearl Basin area or transpiration and evaporation which affect the total recharge of that basin.

So, these are three things that could be done. I guess they would either confirm what a number of other studies have already indicated that they are overdrafting or they would come up with these conclusions which in my opinion are very unlikely because hydrology seems to be in accord there. There seems to be an overdrafting. I think with the exception of the BWS, unless we look at Mr. Lao's statement as authoritative - and according to his figures it is being overdrafted.

Those three things could be done.

SARBER: Are these the kinds of studies that would take years or a matter of months?

HUDES: I think we're talking about a minimum of another year. But I think there is a good basis for stopping any additional withdrawals of water over and above what has been withdrawn already until those studies have been completed. Because, once you make a commitment of water, it is practically impossible to reverse it. Once they go in there, put the people there, you can't reverse it. Unfortunately, we can't import much water into the Pearl Basin very easily. There's not much water left on the entire island that can be imported. We're not talking about something that can be done in a month. I should indicate that according to the CIP and the BWS for the upcoming fiscal year, money will be appropriated for an EIS to be done on planned additional wells in Honouliuli which also draw water from the Pearl Basin. I don't know how extensive that EIS will be. Life of The Land is hoping to get money to bring in our own consulting hydrologist.

So, there will be an EIS done within the next fiscal year. It should not just be on the Honouliuli Wells but total consideration of the Pearl Basin aquifer is necessary. Maybe Mr. Minakami should comment on that more extensively. I do think there is a basis for the land especially since this whole water thing was not included in the original EIS.

DURAN: I'm impressed with your discussion on water. Are you a geologist or hydrologist?

HUDES: No, I'm not. Most of my training is self-trained. My area is in law and economics. Basically my work has been in research studies. I guess I've been reading hydrology for four or five years now.

DURAN: So research.

HUDES: Yeah.

(There were no further questions of Mr. Hudes.)

CHAIRMAN: Before proceeding any further, Mr. Gentry the applicant is here. Do you have anything to testify on?

TOM GENTRY: Well, I expect this is a rather routine matter. I did hear Life of The Land's testimony. We'd like to make a couple of comments. It's rather meaningless as far as we're concerned.

We have gone through exhaustive analysis along with the different departments of the City to determine where population should be placed. This experience has taken us over the six years now. It has been determined that the population is allowed on our property.

Now, this application today is just for constructing an off-site storage facility for our wells which have been approved already. I would like our engineer to go into that in more detail.

I do point out, in all due respect to Life of The Land, our engineer is not a hydrologist but an engineer.

Our population problem is simply the responsibility of determining-- is something that we should pay a lot of attention in. However, I do point out that the island itself does utilize one of the same areas for this resource and the issue is population rather than location of a particular well.

It's interesting to note that the wells we're drilling are really not considered a loophole in the law but are a contribution to the overall system. The water we are pumping is directly to meet the property we are developing. We utilize about the same amount of water per acre as sugar does.



So, the decision here, as I see it, has little to do with who owns the property or all right to pump it or whether or not we're circumventing through some loophole system our ability to circumnavigate law for this water. The water is for the use of the people. Much of this water is exported to other areas of the island. Maybe for some infinite wisdom of mine can determine why this exportation is correct or sensible or whether or not the issue is using less water for agriculture or whether or not the population should be limited to a set number of gallons for personal usage or possibly whether some of the things I think we are a little more strongly for is really our ability to build this reservoir or the recharging of the aquifer, or new design system and run-off structure or a lot of other things I'm not qualified to say on agriculture to get the water down where its needed.

So, I guess what I'm really saying is I don't know whether I can answer these charges, if you will, or if Life of The Land's request for delay but it just seems, inasmuch as you've asked me, I'm trying to answer to the best of my ability, what I understand is a permit for storage. The storage also allows BWS to utilize that storage facility.

I really take objection to the fact that it's considered an impact.

If there's any questions, I'll be happy to respond.

CHAIRMAN: Commissioners, any questions? If not, thank you very much, Mr. Gentry.

Anyone else to testify AGAINST?

(NO RESPONSE)

Anyone to testify FOR?

(NO RESPONSE)

If not, the Commission will provide time for cross-examination. Anyone that testified FOR would like to cross-examine anyone else, or anyone who testified AGAINST?

Herb?

HERB MINAKAMI: Let me clarify one thing. In regard to what Mr. Hudes said regarding Mililani Town, in regard to that chart, we did discuss with Belt-Collins and we pointed out that the figures are wrong. This is why right now we're revising those figures. Because, when we discussed this with Belt-Collins, we criticized them because the way they came up with the figures was sloppy. Like in regard to Chester Lau, his estimate of 270, Belt-Collins got that over the telephone. They were calling directly to Mr. Lau. We said to Belt-Collins that whenever they do a report like this where much of the figures have to come from BWS, we have to sit down with them and go over the figures to make sure that they are accurate. You know, these

figures are all in our files--sanitation, pumpage records, military. There are errors. I'm not justifying it. I just want to point that out.

COMMISSIONER LEE: The new revised figures, do you have it with you?

MINAKAMI: No. We are in the process of revising it now. So, we will be commenting on their EIS with the revised figures.

COMMISSIONER LEE: How soon do you expect to have those revised figures?

MINAKAMI: I have those on my desk right now so I haven't started to evaluate or review those figures yet. It will take a week or so. We will try to get it out as soon as possible.

CHAIRMAN: Thank you very much.

George?

GEORGE HUDES: One thing I forgot that's rather important. In the file is a letter to Mr. Moriguchi from Mr. Hirata, a letter dated May 5th. Mr. Hirata stated: "We will require an EIS. That statement applies only for construction of deep wells." Now that letter, Mr. Hirata requires construction of those wells. Now, somewhere between May 5th and today that requirement has disappeared. This is what sparked Life of The Land's concern because when we first read that BWS was requiring an EIS, we said fine. That's what we'd like to see. But, I am not aware of the reason why that requirement was dropped. At least for March, April and May, the BWS held the position in these letters that they would require an EIS. Now I don't know what new data has come up since that time that led them to determine that an EIS is not required. So, there seems to be confusion here between the Board's original determination, and the confusion about just what the water budget is in the Pearl Basin area.

ROGER MOSELEY: Mr. Hudes, do you have any particular questions for any of the witnesses? You could cross-examine any of the witnesses if you'd like.

HUDES: No I don't because Mr. Minakami really has not given any factual statement.

MOSELEY: Maybe you'd like to ask him what happened to the requirement?

HUDES: Do you know why that requirement for the EIS dropped?

MINAKAMI: With regard to that, the Board does have a policy. Hereafter, all these wells that will be permitted by BWS or will be dug by private developers which will eventually be taken over by

BWS, will require an EIS. My feeling right now is that there must have been - I don't know, maybe there was a misunderstanding because the project was already - construction plans were already approved by BWS. The project was already underway. How can we go back and place a requirement that should have been placed when the project was first conceived? To me, I look at it as a error. For me, personally, I admit it's an error.

MOSELEY: Do you have any questions?

MINAKAMI: No.

MOSELEY: Mr. Gentry, do you have any questions of the witnesses?

GENTRY: My question would be inappropo, really. This is a sizable project. We've worked on it a number of years. The question I would ask is, why now?

We're trying to get a permit on a water facility which was somehow overlooked.

MOSELEY: Would you like to ask that question of Mr. Hudes?

GENTRY: Well yes.

HUDES: My point is not trying to sabotage something coming in at the last minute. The original EIS gave no indication of additional wells being required. When we found out that additional wells would be drilled, we noted that the BWS would be requiring an EIS. Now we notice there's no requirement for an EIS. We're saying there have been new developments and we are only commenting on the developments that have taken place within the last few months. That concerns the drilling of new wells and the decision not to require an EIS. Both of those are fairly recent decisions which post date the original EIS and approval of the project.

GENTRY: I guess my question, rephrased, would be that this is not a question of whether or not the wells are permitted, we have the permit on that. The question is why you object to our storage facility which we are building for the City and County which is what the application is for.

HUDES: We object to storage facilities because that will receive over-pumped waters as we see it, not in uses for approving a reservoir - I could make an analogy which seems a little harsh and I don't mean to use ulterior motives. That's not my reason for being here. But, if somebody sells me some goods and I have reason to believe that they were acquired illegally, it's my responsibility not to receive those goods, receiving stolen goods.

I kind of see building a reservoir for waters that shouldn't be pumped to begin with, I see that as incorrect. I think the Commission has

responsibility to ask what waters are going to fill this reservoir because it is part of the total water development supply plan for the project in which there has been revisions made over the past few months. We don't see the reservoir as an isolated thing in this project. We see it very closely tied to problems of concern in the whole area and very closely tied to drilling of new wells.

GENTRY: I'm not an attorney so I can't respond to the legality of the study but again, this application is for a reservoir and storage of waters for Honouliuli. The water will be coming from under this particular project. I guess our answer is if this type of thing were to continue and Life of The Land were to object to some legal loophole, which I have to suggest might be that we would try to determine why we would be unable to use this water which is really under our property.

My business is not to hurt the public but to shop for people who need houses. We have explained it over and over again what we're really trying to do there. Our project is underway and an enormous amount of money has been approved, committed and is working in the project now. Who has the right to have this reservoir? I look at it as a very difficult problem and I'm not trying to hedge the law. The real problem here is on population which we addressed ourselves to in earlier Planning Commission discussions.

If there is a question that I could answer or that is necessary, I would be happy to get people here to do that. Our planner is in California right now. I really feel down inside that this is unnecessary harrassment.

LEE: You are saying that the water is under your ground and you would have every right to use it. After you use every available water, where does the rest come from?

GENTRY: Well, I don't believe we have the right to utilize the water under our property.

LEE: Isn't that what you said?

GENTRY: No I said we would question why we would be unable to use the water under our property. I believe all the water rights belong to the state.

What I probably indicated here was as far as the people who inhabit these islands, that this is the best possible location for this type of development only because it's the least expensive required of capital expenditure to transport this water. Our system is very economical to supply this need.

I guess my statement could be misinterpreted that it's our water but it's not. Here again, our project is not the case. Our system is to get it from one person and return it to someone else.



CONNELL: Mr. Gentry, the wells which you are required to put in, who required you to put those in?

GENTRY: The City and County's requirement. We have a contract and it was agreed by Council.

CONNELL: The approving agency was the Board of Water Supply?

GENTRY: The Board of Water Supply.

CONNELL: Did BWS require you to also put in a reservoir?

GENTRY: Yes they did.

CONNELL: Have you or your agents asked the Board of Water Supply to let you out of the EIS?

GENTRY: No Sir.

CONNELL: And so the decision was made by the Board of Water Supply?

GENTRY: That's correct.

CONNELL: Did BWS ask you to change any of your plans in terms of the wells or putting in the reservoir?

GENTRY: No Sir. Not to my knowledge.

CONNELL: So to your knowledge, BWS is still asking you to do the same thing it asked you to do a year ago.

GENTRY: Yes it did.

CHAIRMAN: Anyone else that would like to cross-examine or give further testimony?

(NO RESPONSE)

CHAIRMAN: If not, Commissioners?

IZUMOTO: I move the public hearing be closed.

LEE: I second.

CHAIRMAN: It's been moved and seconded to close the public hearing. All in favor, raise your right hand?

(The motion failed to carry.)

AYES - Izumoto, Lee, Kamiya, Sarber

NAYES - Kuna

ABSENT - Kagan, Kaneshige, Macapinlac, Zane



TESTIMONY (78/SUP-1) PLANNING COMMISSION JUNE 13, 1978

Mr. Chairman, Members of the Commission:

I. We were opposed to the Gentry-Waipio development General Plan amendment because:

1. It uses prime agricultural land;
2. It does not provide housing in the price range most needed by the residents of Oahu;
3. It directs growth to Central Oahu rather than Ewa; and
4. The required studies were not made by the City.

II. We were opposed to the Zoning Change for the project because:

1. The existing Kam Highway is inadequate to serve the project and the State has no plans to expand it;
2. The sewage effluent will be spread on the ground at the Ted Makalena Golf Course and pollute Pearl Harbor;
3. There is no long-range dependable water source to serve the project; and
4. Other public facilities in the Mililani and Crestview areas are already ten years behind schedule.

III. We are opposed to the Special Use Permit because:

1. The water reservoirs are an integral part of the overall water system required by the Board of Water Supply (BWS);
2. Without a water supply, neither the General Plan amendment nor the Zoning amendment were proper;
3. The BWS has said that the project will aggravate an already existing overdraft condition of the underground water supply;
4. The sugar company has said that it will not give up any water;
5. Serious technical difficulties are being encountered trying to use sewage effluent to irrigate cane;
6. In short, there is no water to serve the project at the present time, and alternative water supplies are only dreams of the future;
7. The costs of desalting water are prohibitive, and we may not have the energy resources to do it;
8. The BWS recently disapproved a well drilling permit in Waipio in the area of the Pineapple Research farm.

We would like to review a few facts concerning the Planning Commission and this project.

1. When the Gentry-Waipio General Plan amendment was proposed, it was not reviewed by the Department of General Planning as is indicated in

JUN 13 1978

Mililani/Waipio/Melemanu Board No. 25  
Testimony (78/SUP-1) Planning Commission  
June 13, 1978  
Page 2

the City Charter. We feel that this was illegal. You refused to act upon the General Plan amendment because the City Council did not provide you with sufficient information on which to act. The Council passed the amendment regardless of your desires, and in the absence of a Planning Commission recommendation. You were snubbed and ignored. We feel that this was also illegal.

2. Faced with the General Plan approval, you were asked to review the Zoning Amendment. You recommended to the City Council that only 300 units be built. They approved approximately 1500 units, again you were ignored.
3. The Mayor vetoed both the General Plan amendment and the Zoning Amendment, but Council overrode the vetos. We are glad that the Mayor was listening.
4. Now you are asked to ignore all that has transpired and rubber stamp a request for a Special Use Permit which will allow all that you have objected to in the past. Now it is your turn to be listened to. It is not too late as some would have you think. The developer has known of the water problem from the beginning, and knows of the possibility that a Special Use Permit could be denied. He has had, therefore, no guarantee that he would be allowed to continue development.

We recommend the following:

1. You disapprove the request for the permit at the present time;
2. Renew your request to City Council for the long-range studies that you requested as a basis to review the overall development;
3. Ask the BWS to indicate the time period and the costs at which alternative sources of water can be provided;
4. Order the Corporation Counsel to obtain a cease and desist order against any further well drilling in the Central Oahu area until alternate sources of water are actually made available.

We wish to thank you for your consideration, and hope that you will support our interest in "good" planning for Central Oahu, and join us in our effort to see that the development of Oahu is directed in the proper amounts to the proper place, at the proper time. If you approve this request, other proposals for an additional 16,000 people are only a few weeks behind. Since the BWS has admitted that an overdraft condition exists, now is the time to draw the line.

Respectfully Submitted,  
THE ENTIRE BOARD

would flow onto the agricultural fields of central Oahu rather than into Pearl Harbor's Class "AA" waters. This would bring the facility into compliance with Federal standards except during extended periods of unusually high rainfall. At such times, effluent flows might exceed irrigation use and the reservoir storage capacity, thus requiring discharge of secondarily treated effluent into Kipapa Stream under an approved emergency discharge permit. According to the EIS for the system, it is believed that this would occur so infrequently, and circumstances would provide sufficient dilution of waste water with peak volumes of storm runoff water, that the impact on the quality of receiving waters would be insignificant. If approved, the project would be completed by 1982. A short-term extension of the NPDES Permit has already been tentatively approved by the Department of Health should this plan be implemented.

Mililani Town, Inc. is currently proceeding on the assumption that this plan, proposed by the City and County of Honolulu Department of Public Works, will be approved and acted upon. If it is, discharge into Pearl Harbor would be almost totally eliminated. Moreover, in conjunction with good water conservation practices, the water effluent from the plant would be reused.

If unexpected problems were to preclude the proposed effluent disposal method, it is unlikely that an alternative solution could be found in time to comply with the existing NPDES permit. This is true regardless of whether or not the Mililani Sewage Treatment Plant is serving only development that has already been approved or the additional units included in the present zoning request as well. Furthermore, since approval of subdivision is contingent upon the availability of adequate treatment capacity, development of the proposed increment could be halted as soon as it became evident that the City and County's plan was not going to materialize.

#### WATER WITHDRAWALS

In 1977, average water use at Mililani was about 2.8 mgd (see Table IV-6). All of this water was pumped from four existing on-site wells that tap the Pearl Harbor basal lens. The proposed project would increase average water use by an estimated 1.64 mgd, and, based on present plans, this water would be supplied by additional wells drilled to the basal lens. While the proposed wells have already been approved by the Honolulu Board of Water Supply, the present water situation on Oahu, and particularly in the Pearl Harbor area, is sufficiently critical that a fairly detailed consideration of the probable effects of the proposed withdrawals is warranted.

#### Groundwater in Central Oahu

**General** In general, the groundwater underlying central Oahu is of two different types: basal water and high-level dike water. As shown in Figure IV-2, the basal water body is split into two hydrologically distinct compartments (Pearl Harbor and Waialua-Haleiwa) by the geologic structures associated with the Schofield high-level water. Because of recharge from rainfall, the upper part of the basal water body is commonly fresh (i.e., has a lower salinity than seawater); this fresh water is in the form of a lens that floats atop the denser seawater which saturates the highly permeable lavas that make up the island to an unknown depth. This lens of fresh water provides Oahu with a major source of potable water.



The impact of the proposed project on Oahu's groundwater resources can best be addressed by a consideration of the water budget for the Pearl Harbor basal lens. The critical issue here is the relationship between recharge and withdrawals. By determining the net loss or gain to the Pearl Harbor aquifer anticipated as a result of the proposed project, and assessing the effect that this would have on the fresh/salt water interface within the aquifer, it is possible to gain at least a qualitative understanding of the project's probable impacts on the island's groundwater system.

**Available Fresh Water** The additional wells proposed in support of this project would tap the Pearl Harbor aquifer from surface elevations of 865 feet and 685 feet (see Figure I-7). The elevation of the water table varies through the aquifer, with water levels generally rising as one proceeds inland. In the vicinity of the proposed wells, it is at an elevation of about 26 feet above mean sea level.

Because of its importance to Oahu's overall water supply, numerous hydrologic studies have been made to determine the safe sustainable yield of the Pearl Harbor basal lens. On the basis of historical records of spring flow, pumping rates, and water table levels, Visser and Mink (1964) concluded that as much as 195 to 230 mgd might be withdrawn from the Pearl Harbor lens without resulting in a significant increase in saltwater intrusion into the lens. The higher figure would, however, require use of wells drilled inland of the existing Pearl Harbor springs rather than simply tapping their present flow.

Bowles (1973) estimated that the maximum safe yield of the aquifer is on the order of 200 mgd. His estimate was based on the belief that the recharge to the aquifer from both natural and human sources (e.g. irrigation return water) was about 250 mgd, and that about three-quarters of this could be withdrawn without affecting the long-term viability of the source. More recently, Mink (1974) and others have found evidence that, given the present conditions, it might be possible to take 85 percent of the flow. If this is correct, the Bowles estimate could be raised to about 215 mgd.

Chester Lao (1978) of the Honolulu Board of Water Supply estimates that, under existing conditions, the sustainable yield of the aquifer is about 270 mgd. This estimate is based on an examination of well pumping records and water level data from observation wells.

As indicated by the net pumpage figures for various years that are summarized in Table IV-7, average net pumpage from the Pearl Harbor basal lens for the years 1975, 1976, and 1977 was 285.6 mgd. The highest withdrawal for any year on record was the 293.6 mgd average recorded in 1977, but this was a drought year, and it is almost certainly above the long-term average at the present level of development. The 285 mgd figure is, perhaps, more representative of the long-term average, but even it is significantly higher than the 270 mgd rate that Lao states is the sustainable yield. It is from 45 to 90 mgd above the sustained yield estimates of Bowles and Visser. Clearly, then, a continuation at the present rate of withdrawals implies increasing saltwater intrusion into the aquifer and the possible slow degradation of the source.

Table IV-7. Estimated Water Usage In The Pearl Harbor Area

User	Net Pumpage (mgd)		
	<u>1972<sup>1</sup></u>	Average: <u>1963-1973<sup>2</sup></u>	Average: <u>1975-1977<sup>3</sup></u>
Agricultural	137	140	
HECO	9		
BWS	63	60	
U.S. Government	<u>24</u>	<u>20</u>	<u>      </u>
TOTAL	233	220	285.6

<sup>1</sup>Bowles (1973). Oahu Land Study. Castle and Cooke, Inc.: Honolulu.

<sup>2</sup>Mink, John (1974). Proceedings of the Oahu Groundwater Users Conference. Honolulu Board of Water Supply: Honolulu.

<sup>3</sup>Chester Lao (1978). Personal communication.

#### Impact of the Proposed Project on Groundwater Supply

Theoretically, the proposed expansion of Mililani Town has the potential to affect the Pearl Harbor basal lens in two different ways. First, by changing the surface of the land it could change the amount of recharge entering the aquifer. Second, withdrawals of water for domestic use could reduce residual flow. Both of these potential effects are discussed below.

**Changes in Recharge** While agricultural return water is of some importance to the Pearl Harbor basal lens, the primary source of recharge is rainfall. In this respect, it is very important to recognize that rainfall is very unevenly distributed across the half-million acre recharge area of the aquifer (see Figure IV-3). It approaches an average of 300 inches per

EXCERPT  
PLANNING COMMISSION MINUTES  
JULY 25, 1978

UNFINISHED BUSINESS  
STATE SPECIAL USE PERMIT  
(RESERVOIR SYSTEM IN  
AGRICULTURE DISTRICT)  
WAIPIIC  
CASTLE & COOKE, INC.  
(FILE #78/SUP-1 GH)

The public hearing held June 13 was closed and the matter deferred for a statutory period of 15 days. Action at the July 11, 1978 meeting was deferred due to a lack of quorum.

No discussion followed.

ACTION: The Commission accepted the Director's recommendation and recommended approval of the Special Use Permit, subject to the conditions in the Director's report, on motion by Mr. Sarber, seconded by Mr. Izumoto and carried.

AYES - Izumoto, Kagan, Kamiya, Macapinlac, Sarber, Zane  
NAYES - Kuna  
ABSENT - Kaneshige, Lee

AUG 3 10 40 AM '78  
LAND USE COMMISSION  
STATE OF HAWAII

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



RAMON DURAN  
CHIEF PLANNING OFFICER

78/SUP-1 (GH)

August 2, 1978

Mr. Charles Duke, Chairman  
State Land Use Commission  
Pacific Trade Center #1795  
190 S. King Street  
Honolulu, Hawaii 96813

Dear Charlie:

Attached are the materials that are pertinent to the Special Use Permit request of Castle and Cooke for the installation of a reservoir required by the Gentry-Waipio project. Included in these materials is the report from the Director of Land Utilization, pertinent maps, and excerpts from the Planning Commission Minutes of June 13, 1978, July 11 and 25, 1978.

The Planning Commission Minutes of July 25, 1978 will be approved at the meeting on August 8, 1978. Upon the approval of the Minutes, you will be officially notified of their approval.

As indicated in our previous letter on this subject, the Planning Commission on July 25, 1978 approved the Special Use Permit application by a vote of 6 to 1. The Commission found that the report and analysis prepared by the Director of Land Utilization gave sufficient evidence to support the granting of the permit.

Sincerely,

A handwritten signature in black ink, reading "Ramon Duran", is written over a faint, circular official stamp.

RAMON DURAN  
Chief Planning Officer

RD:hb1  
Attachments

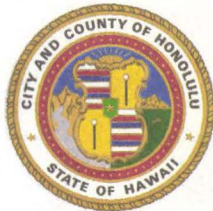


3785

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



RAMON DURAN  
CHIEF PLANNING OFFICER

78/SUP-1 (GH)

July 27, 1978

JUL 31 11 50 AM '78  
LAND USE COMMISSION  
STATE OF HAWAII

Mr. Charles Duke, Chairman  
State Land Use Commission  
Pacific Trade Center #1795  
Honolulu, Hawaii 96813

Dear Charlie:

This is to inform you that in two weeks we will be transmitting the full record of the Planning Commission, City and County of Honolulu, on the State Special Use Permit application of Castle and Cooke, Inc., for a water reservoir system on the property identified by Tax Map Key: 9-4-06: Portion of 1 to service the Waipio-Gentry development. The Planning Commission, on July 25, 1978 by a vote of 6 to 1, approved the application.

Sincerely,

*Ramon Duran*

RAMON DURAN  
Chief Planning Officer

RD:hb1

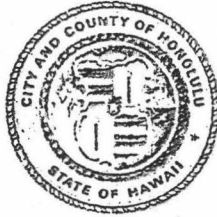
2 wks  
Aug 10

Commented  
FLOWER BOND

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



RAMON DURAN  
CHIEF PLANNING OFFICER

July 27, 1978

Mr. Charles Duke, Chairman  
State Land Use Commission  
Suite 1795  
Pacific Trade Center  
Honolulu, Hawaii 96813

Dear Mr. Duke:

This is to inform you that in two weeks we will be transmitting the full record of the Planning Commission of the City and County of Honolulu on the State Special Use Permit application of Castle and Cooke, Inc. for a water reservoir system on the property identified by Tax Map Key 9-4-06: Portion of 1 to service the Waipio-Gentry development. The Planning Commission, on July 25, 1978 by a vote of 6 to 1, approved the application.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ramon Duran", is written over the typed name.

RAMON DURAN  
Chief Planning Officer

RD:hbl

DEPARTMENT OF LAND UTILIZATION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

Authorization	<u>6/30</u>
Advertisement	<u>6/3/78</u>
Public Hearing	<u>6/13/78</u>

FRANK F. FASI  
MAYOR



GEORGE S. MORIGUCHI  
DIRECTOR

78/SUP-1 (GH)

May 31, 1978

MEMORANDUM

TO : PLANNING COMMISSION  
FROM : GEORGE S. MORIGUCHI  
SUBJECT: STATE SPECIAL USE PERMIT REQUEST - WAIPIO

Transmitted herewith for appropriate action is my report on a request by Castle & Cooke, Inc., for a State Special Use Permit to construct a water reservoir system.

A handwritten signature in cursive script, reading "George S. Moriguchi".  
GEORGE S. MORIGUCHI  
Director of Land Utilization

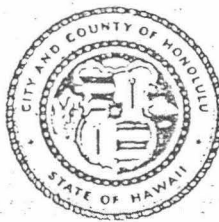
GSM:st

Attach.

DEPARTMENT OF LAND UTILIZATION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



GEORGE S. MORIGUCHI  
DIRECTOR

78/SUP-1(GH)

May 31, 1978

DIRECTOR'S REPORT  
STATE SPECIAL USE PERMIT  
Water Reservoir System in the Agriculture  
District, Waipio, Oahu, Hawaii

APPLICANT/LANDOWNER	:	Castle & Cooke, Inc.
TAX MAP KEY	:	9-4-06: Portion of 1
LOCATION	:	Waipio abutting H-2 Freeway
AREA	:	1.916 Acres
STATE LAND USE DISTRICT:		Agriculture
DETAILED LAND USE MAP	:	Agriculture
DEVELOPMENT PLAN	:	None
ZONING	:	AG-1 Restricted Agriculture
PROPOSAL	:	The applicant proposes to construct a water reservoir system to include two 1.5 million gallon reservoirs.



### Project Description

The proposed water system includes four deep wells and two reservoirs. The deep wells are on land designated for urban use where a special permit is not required. The two reservoirs are 1.5 million gallon capacity each and are proposed for construction in two phases. Construction of the first reservoir will begin immediately upon approval of the special permit. Construction of the second reservoir will begin when the daily demand by the Waipio/Gentry development reaches 1.0 million gallon.

### Existing Land Use

The proposed site and its environs is in use for pineapple production.

### Synopsis of Agencies Review

The Departments of Public Works, Health, Agriculture and the Board of Water Supply have no objection to the proposal.

The Board of Water Supply approved the applicant's Master Plan on February 10, 1977 subject to rechecking of the finalized water distribution system drawings within the industrial areas and water main locations being limited to roadways.

### Community Concerns

The abutting property is owned by Castle & Cooke, Ltd. Public officials and community organizations representing Council District No. 2, including the Mililani Neighborhood Board No. 25, were notified of the proposal on May 5, 1978. No comments have been received.

Director's Comments

The water system represents a support facility designed to serve the 510 acre Waipio-Gentry lands recently designated for urban uses. 263 of these acres have been rezoned to allow various developments. Two deep wells, as part of the initial system, are proposed on land designated for urban use and do not require a special permit.

For adequate water pressure and fire protection, the reservoir must be located at a minimum elevation of approximately 100 feet higher than the area to be served.

The only areas within reasonable distance for the reservoir are designated for agricultural use. The site was selected makai of H-2 Highway to avoid construction of a water main across the highway. It was selected to abut H-2 Highway to be least disruptive to agricultural operations and whatever future uses which may be undertaken on Castle & Cooke's land.

Each reservoir structure is 24 feet high and 120 feet in diameter. The Phase I structure is set back approximately 14 feet from a H-2 Highway embankment. This embankment is approximately 10 feet high and the structure would be highly visible from the highway. The Phase II structure is set back approximately 58 feet from the top of the highway embankment and would be less visible from

the highway. The Landscape Plan shows trees and hedging abutting the agricultural use. Landscape buffer material has not been proposed to soften the visual impact of the proposed structures on the highway.

Additional setbacks and/or landscape treatment would be required to soften the visual impact of the structures as viewed from the H-2 Highway.

#### Tests to be Applied

Certain "unusual and reasonable" uses within Agricultural and Rural Districts other than those for which the District is classified may be allowed through the Special Permit application with the application of certain tests as follows:

- (1) "Such use shall not be contrary to the objectives sought to be accomplished by the Land Use Law and Regulations."

The proposal supports the objective of urban use for the Waipio-Gentry land to be served by the water system.

- (2) "That the desired use would not adversely affect surrounding property."

The water reservoir use is compatible with abutting agricultural uses. Proposed setback from H-2 Highway and landscape buffer treatment is inadequate to soften the visual impact of the reservoir tanks as viewed from H-2 Highway. This can be corrected with additional setbacks and/or landscaping.

- (3) "Such use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection."

The use does not require any public services and the Board of Water Supply and Departments of Health, Public Works and Agriculture do not object to the proposal.

- (4) "Unusual conditions, trends and needs have arisen since the district boundaries and regulations were established."

The trend towards urbanization of the Waipio-Gentry land has created the need for additional water since the agricultural district boundaries and regulations were established.

- (5) "That the land upon which the proposed use is sought is unsuited for the uses permitted within the District."

The Department of Agriculture comments that the amount of prime agricultural land which is lost to the proposed project is inconsequential.

#### Recommendation

Based on the applicant's meeting the Tests to be Applied, the Director recommends approval of the State Special Permit to construct two 1.5 million gallon reservoirs at Tax Map Key 9-4-06: Portion of 1, subject to conditions as follows:


1. The submitted Preliminary Location Map, Grading Plan and Landscape Plan marked Exhibit 1, stamped January 16, 1978 and as acceptable to the Board of Water Supply shall be part of the



permit. This permit is for construction of the two 1.5 million gallon reservoirs only. Any future reservoir construction on this site will be subject to further agency review and Special Permit approval;

2. The entire water system shall be constructed in accordance with the Water Master Plan dated November 1976 by William Hee and Associates and the requirements of the Board of Water Supply. The site plan, grading plan and landscape plan shall be modified to provide additional setback and/or buffer landscape material to soften the structures' visual impact on H-2 Highway. Such modification shall require the approval of the Director of Land Utilization prior to issuance of a Building Permit;
3. The applicant shall be required to incorporate all of the conditions set forth herein as part of the restrictive covenants running with the land;
4. The applicant/developer of the property encompassed by this Special Use Permit shall be required to file with the Bureau of Conveyances of the State of Hawaii, a declaration of the above-mentioned restrictive conditions;

5. In the event all conditions as set forth herein are not complied with, the Director of Land Utilization may take action to terminate the use or halt its operation until such time full compliance is obtained; and
6. The Director of Land Utilization may approve any request for modifying the submitted plans which he considers to be consistent with the spirit of the approved plans.

  
GEORGE S. MORIGUCHI  
Director of Land Utilization

GSM:st



## LEGEND

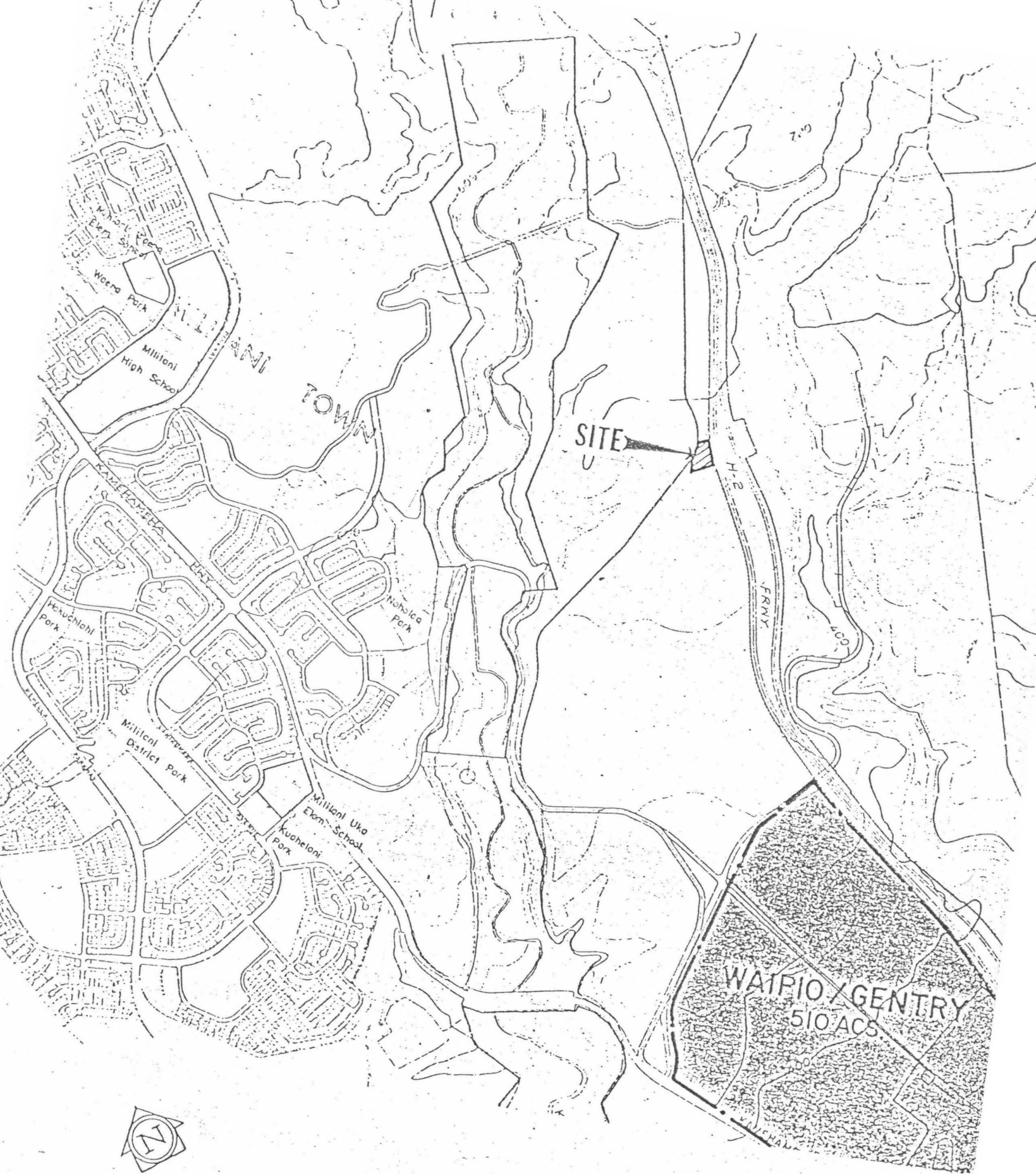
A - Agricultural  
C - Conservation  
U - Urban



STATE  
LAND USE

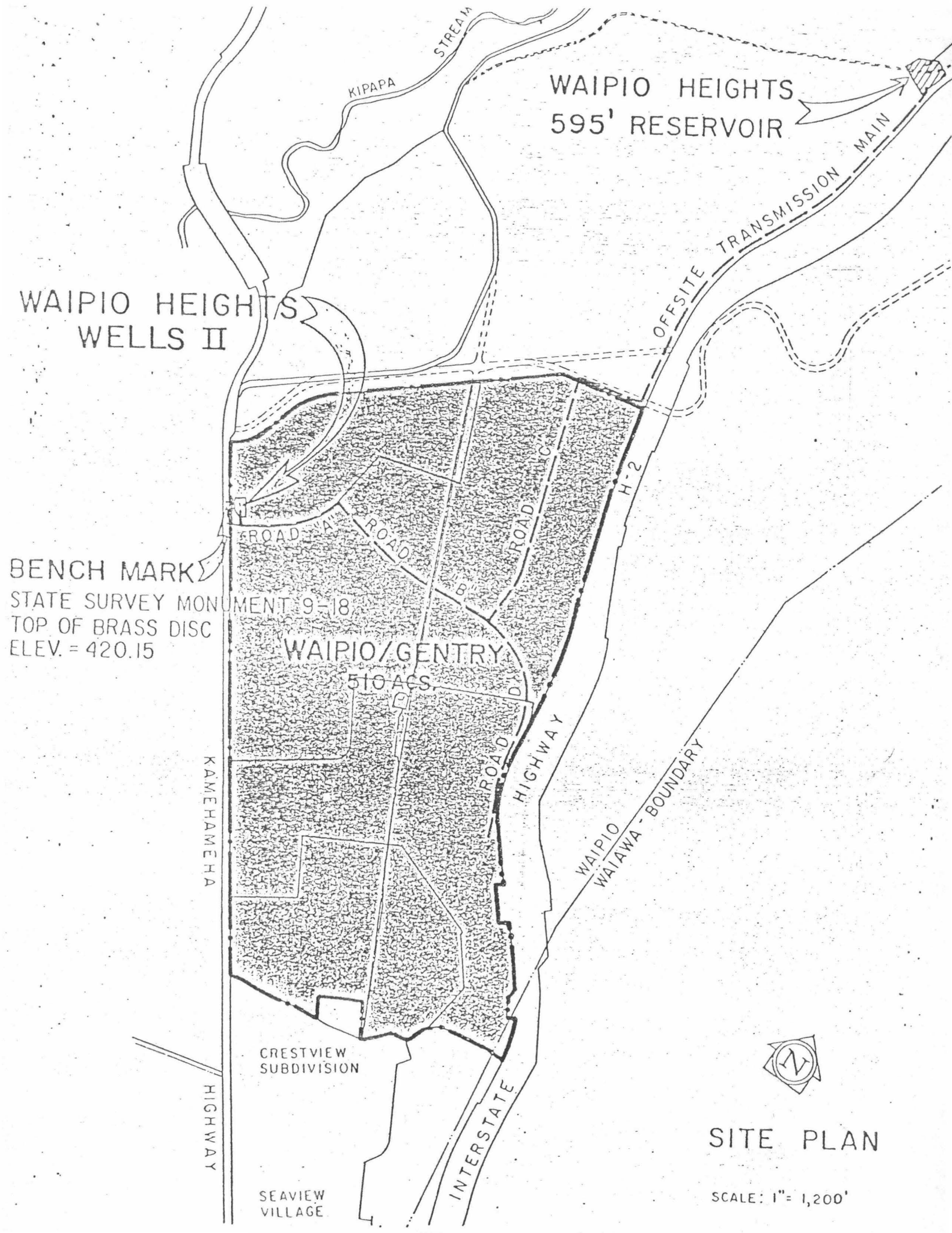
SCALE : 1:62,500





LOCATION  
MAP





WAIPIO HEIGHTS  
595' RESERVOIR

WAIPIO HEIGHTS  
WELLS II

BENCH MARK  
STATE SURVEY MONUMENT 9-18  
TOP OF BRASS DISC  
ELEV. = 420.15

WAIPIO/GENTRY  
510 ACS.

KAMEHAMEHA

CRESTVIEW  
SUBDIVISION

SEAVIEW  
VILLAGE

INTERSTATE

HIGHWAY

WAIPIO  
WAIAWA - BOUNDARY

OFFSITE TRANSMISSION  
MAIN



SITE PLAN

SCALE: 1" = 1,200'



DETAILED  
LAND USE  
MAP

SCALE 1"=1000'

JUN 13 1978  
COMMISSION  
OF HAWAII  
3 10 40 AM '78

EXCERPT  
Meeting of the Planning Commission  
Minutes  
June 13, 1978

The Planning Commission held a meeting on Tuesday, June 13, 1978 at 1:40 p.m., in the Conference Room of the City Hall Annex, Chairman Randall Kamiya presided.

PRESENT:

Randall Kamiya, Chairman  
Charles Izumoto, Vice Chairman  
Yuklin Kuna (present at 2:15 p.m.)  
Jacqueline Lee  
Joseph Macapinlac (present at 3:00 p.m.)  
Charles Sarber

ABSENT:

Marion Kagan  
Melvin Kaneshige  
Gertrude Zane

DEPARTMENT  
REPRESENTATIVES:

Ramon Duran, Chief Planning Officer  
Eugene B. Connell, Executive Secretary  
Roger Moseley, Deputy Corporation Counsel  
Henry Eng, Staff Planner  
Gerald Henniger, Staff Planner  
Art Muraoka, Staff Planner  
Ben Torigoe, Staff Planner

MINUTES:

The Minutes of May 30, 1978 were approved, on motion by Mr. Izumoto, seconded by Mr. Sarber and carried.

PUBLIC HEARING  
STATE SPECIAL USE PERMIT  
(RESERVOIR SYSTEM IN  
AGRICULTURE DISTRICT)  
WAIPIO  
CASTLE & COOKE, INC.  
(FILE #78/SUP-1 GH)

A public hearing was held to consider a request for a State Special Use Permit for a Water Reservoir System situated on 1.916 acres of Agriculture land in Waipio abutting the H-2 Freeway, Tax Map Key: 9-4-06: Portion of 1.

Publication was made in The Honolulu Advertiser on Saturday, June 3, 1978. Copy of a letter from Neighborhood Board No. 25 against the project is attached and made a part of these minutes.

Mr. Gerald Henniger presented the Director's report recommending approval of the request, subject to the conditions in the report.

There were no questions of Mr. Henniger regarding the Director's report. Questions regarding the water situation in the area were directed to Mr. Herbert Minakami from the Board of Water Supply.

Upon advice of Corporation Counsel, those testifying either for or against the proposal were permitted to cross-examine one another. Following is a transcript of the hearing on this matter.



Mr. Herbert Minakami, representative from the Board of Water Supply

IZUMOTO: Could you expand on the one percent overdraft, what that would mean?

MINAKAMI: In regard to when we talk about overdrafting condition, we are considering whether there are various estimates as to what the recharge rate is. In regard to that particular basin, there is a base proposal. We do come up with an estimate and then looking at the pumpages, from records that we collect, from private wells, from military and what the Board of Water Supply pumps out of that particular basin, we have concluded where we commented on the Waipio/Gentry Master Plan that we plan to pump is just about one percent of what our estimates are in regard to draft and what we plan to is only one percent of redraft out of the whole basin area.

So, it's not going to have that much depending on the draft condition in that basin plus we recognize there are in regard to the recharge condition of that basin.

IZUMOTO: Backing up a bit, when you speak of overdraft such as in this case, how do you arrive at the overdraft situation?

MINAKAMI: Overdraft is what we talk about how much water is recharged into the basin and we look at the pumpages if they match up or if these pumpages exceed recharge then you have an overdraft condition. It's just like if you fill water into a cup at a constant rate, for instance, if everybody had a straw and they sucked at the rate in which the water is filling into the cup, you have an equilibrium condition but if you have no water being fed into the cup then you've got an overdraft condition.

DURAN: What does the future hold for this area? If you've got a 1% overdraft at this time, what does the future look like for water for this development as well as any other development in this area?

MINAKAMI: In regard to that 1% here too, it's an each-year judgment. This is why we're expanding our studies to get more data in regard to what's happening over there. But, in regard to that particular basin, I believe we're right on the basis of an each-year judgment. We will be or have been reaching the point where we come into the limit of reaching the draft there.

DURAN: But at this time the request before us will in no way in your opinion adversely affect the water supply?

MINAKAMI: That's right because of the fact it will add maybe at the most, about 1%. So, there is a lot of room for judgment.

DURAN: So, this same question asked in the future will depend upon the results of your pending study.



MINAKAMI: Right, it will.

SARBER: I'm not clear in my own mind what the 1% refers to. Does the 1% refer to the usage of this particular development, usage of your recharge capacity or is it the 1% of an existing overdraft? I missed just what the 1% was.

MINAKAMI: In regard to let's say that the recharge of that particular basin is 250+ gallons per day and right now we're talking about let's say 250, and this request is coming in for X number of million gallons, that X number of million gallons represent only 1%, an additional 1%.

SARBER: In your example, there was 250 being recharged and 250 being pumped.

MINAKAMI: Correct.

SARBER: And this 1% was what, the 2.5? Is that the number we're talking about?

MINAKAMI: Right, an estimate. It's about 1% of what is being recharged into that basin.

SARBER: You happened to use this as an example, 250 in and 250 out. Forgetting about this project, are we saying we have as much recharge as we have pumpage requirement so that there is no overdraft?

MINAKAMI: Well, right now what we will be recharging into that basin, and this is only an estimate now, so whether we add 250 out or 250 in, I mean we know how much we're taking out but we don't know what is being recharged. But, based upon our best judgment that what's going to be additionally taken out by this particular project is only going to be about 1% of each year of our recharge estimate.

SARBER: I think I understand that. But going back, ignoring this project, right now in the judgment of the Board, is there an overdraft situation now?

MINAKAMI: I don't think I can say really if in the Board's opinion there is--my personal feeling is--we can authoritatively say we have an overdraft condition because of the fact that there is too many factors unknown of the recharge rate of that basin. So, I can't comment to say we have an overdraft condition.

SARBER: I can understand that. Can you comment that there is not an underdraft situation?

MINAKAMI: I would say we are right at the point of either being a little underdraft or a little overdraft. It's hard to comment on those things. In the Pearl Harbor area, we are getting to that point or we are at that point.

CHAIRMAN: Further questions? If not, thanks Herb.

Before we receive testimony, maybe Roger can explain the procedure that we will use today.

ROGER MOSELY, DEPUTY CORPORATION COUNSEL: The procedure we will use today is that the people that are testifying should be able to cross-examine the other witnesses. We will take all the testimony and give people a chance to cross-examine the other to be sure that everyone has a fair chance of giving their testimony.

CHAIRMAN: The Commission will receive testimony for, then they will receive testimony against, followed by time for cross-examination.

Anyone to testify for?

RESPONSE FROM AUDIENCE: Mr. Gentry had proposed to come in here but he's not here yet.

CHAIRMAN: Okay. The Commission will receive testimony against. Mr. George Hudes.

GEORGE HUDES: Most of my comments cover the water supply situation. I have some different conclusions and comments that I would like to share with you.

I am opposed to granting the permit for the reservoir because in my opinion - and my opinion is based on a number of hydrological investigations that were done for the Board of Water Supply. The Pearl Basin area is already being significantly overdrafted.

I have five copies, two pages of a recent EIS done by Belt, Collins and Associates for the proposed Mililani Town expansion. It's a different project. I believe the water overdraft conclusions to that EIS are relevant to this particular situation.

CHAIRMAN: George, before you proceed, would you state your name and who you are representing?

HUDES: I am George Hudes and I am here giving testimony on behalf of Life of The Land.

In this EIS, pages 17, 20 and 21 from Belt Collins study, they refer to basically three estimates that have been done of the capacity of the Pearl Basin groundwater aqueduct. They refer to that done by Mr. Bolls, one done by Mr. Mink and the in-house estimate by the FWS Hydrologist, Chester Lau. Mr. Lau's estimates of the amount of water available from the Pearl Basin is, by far, the highest. His estimate is approximately 270 mgd sustainable yield. Tha compared to Mr. Mink's estimate which by the way was done as consultant to BWS, Mr. Mink figures a total recharge in the area of 245 ngd. By the way, total recharge is not the equivalent safe yield. Most cases our hydrologists here in Hawaii

have estimated that the safe yield for groundwater body on Oahu is approximately 70% or 80% total recharge. You can't take it all out without adversely affecting the water. I do agree with Mr. Minakami that these are difficult estimates to make. Probably the most difficult part of it is - the severe data shortage at the present time concerns the amount of water that is lost, in other words, the rainfall that is lost through evaporation and transpiration by plants. We have very little data on that. Records are being made on perhaps what they don't have right now.

But in any case, any of the three estimates listed, the area is being overdrafted at present.

In 1974, a study by Mr. Mink he says that the area had been overdrafted at approximately 10% for over 10 years.

The approval of the well for the Waipio/Gentry project which occurred subsequent to the initial EIS, there was nothing stated in the EIS that the wells would have to be drilled through the project. The only statement the original EIS which would state approval of the project was that according to the Board's projection, 20/20 plan, there was enough water to take care of this. There was nothing said about drilling wells, no detailed investigation about tapping the Pearl Basin.

We see approval of these wells by BWS as a real problem because if this only represents 1% of the total withdrawal from the basin, well if you keep adding 1% and another 1% and another 1%, in this Belt Collins EIS it's stated while the proposed wells have already been approved by BWS - these are different wells now which will add another 1.64 mgd - the present water situation of Oahu particularly in the Pearl Harbor area, is particularly critical that a fairly detailed consideration of the problem, in effect both withdrawals is warranted. Now, of course, this is just Belt Collins' statement. But, I'm saying at what point can we say another 1% will be too much?

Now, the Mink study in 1974 indicated that the area was being overdrawn by 10%. At that time, total withdrawals were 264 mgd. Today, total withdrawals are 285.6 mgd. So it's closer to 15% overdraft according to the Mink study in 1974. And, if the Mililani Town expansion and the Gentry/Waipio project is allowed, my question is when is this going to stop? I think we are overdue for the type of thorough determination as to whether we can supply any more water for development in that area. What's happening is that since the developers are drilling their own wells, we don't have any basis for saying that there are public funds so there must be an EIS performed. But what happens is the developer drills the well and turns it over to the BWS. It's a kind of loophole for getting away from the EIS required in State law. We feel that there has been a considerable amount of buckpassing.

Life of The Land has been going throughout the agencies now for approximately two years trying to get indepth consideration. The problem is every time they say well, you're talking to the wrong people.



Well, we'd like to see the buck stop here, if possible, and we don't feel the reservoir which will be receiving overdrafted waters should be approved unless it can be shown that these wells will not exacerbate an already existing problem.

DURAN: When did Mr. Lao do this study?

HUDES: This estimate was a private communication to Mr. Larry Chun at Belt Collins Associates in 1978. There is no public statement on record. That, in effect, is a statement to the BWS saying that overdraft does exist. That is the highest estimate available. The Board's, who makes the estimates, are considerably lower.

Maybe I should read to you some statements that came out in 1973 - that's going back quite a ways - concerning the water situation in the Pearl Basin area. These were statements made by the Honolulu BWS at that time under George Yuen and by Oahu Sugar Corporation to the Environmental Protection Association. This concerned an application by Hawaiian Electric Company - the coastal waters for cooling rather than groundwaters for cooling.

The one from Oahu Sugar stated "Hydrologists who have studied the Pearl Harbor Water Basin are in accord that have reached or nearly settled a safe yield point. In view of salinity problems we are experiencing, we conclude it has exceeded the safe-yield point and are being forced into the Basin."

The statement from the BWS: "The information indicates that the natural input is already in a precarious balance compared to groundwater withdrawal."

Mr. Mink's conclusion was: "In reality, a negative balance has become established in both the Honolulu and Pearl Harbor regions in recent years which if allowed to continue will in the longrun cause deterioration in the quality of water withdrawn in the groundwater aquifers. Unless draft is controlled, it will continue to fall, strength flow will decrease and worsen in quality. In general, this equilibrium will prevail."

Let me remind the members that we are right now in a situation where I would imagine the BWS has asked the Board to improve regulations for mandatory water quality. This is based primarily on data from wells in the Pearl Basin area.

It is Life of The Land's position that the present water problems in the Pearl Basin area are not into drought. Because, droughts are predictable and droughts are typical in the history of Oahu. The present problems that the wells experience are due to considerable overdraft over a long period of time.

SARBER: What would be involved in the detailed consideration, detailed kind of study that would be necessary to come up with some of the answers?

HUDES: That's the extensive study we're talking about here. There's a number of things that have been done already. There is a



study being conducted by the Water Research Center. It's called the Resident of Basal Groundwater Study. But basically, they are dating the age of water being withdrawn from the Basin. The period that this water is being withdrawn is old water. We're talking of ages up to 500 years old. What we're doing is withdrawing water that has been down there for a long time which is over and beyond what is recharging there. In other words, if they are taking out old water, this is an indication that we are overdrafting the aquifer. Initial results of that study indicated that we were taking quite a bit of old water but that study is ongoing and they have not come out with any conclusion.

Another thing which should be done would be to drill some more deep observation wells. We have very few deep observation wells on Oahu. Deep observation wells are expensive to drill because they go all the way down to the fresh water land to the zone of mixing, and they may monitor just how fast the salt is coming up and that can also give us a better indication of just how much and where we are overdrawing the aquifer.

Another type of study - and I think there's funding being made available to us now - is more detailed investigation of transpiration and evaporation in the Pearl Basin area or transpiration and evaporation which affect the total recharge of that basin.

So, these are three things that could be done. I guess they would either confirm what a number of other studies have already indicated that they are overdrafting or they would come up with these conclusions which in my opinion are very unlikely because hydrology seems to be in accord there. There seems to be an overdrafting. I think with the exception of the BWS, unless we look at Mr. Lao's statement as authoritative - and according to his figures it is being overdrafted.

Those three things could be done.

SARBER: Are these the kinds of studies that would take years or a matter of months?

HUDES: I think we're talking about a minimum of another year. But I think there is a good basis for stopping any additional withdrawals of water over and above what has been withdrawn already until those studies have been completed. Because, once you make a commitment of water, it is practically impossible to reverse it. Once they go in there, put the people there, you can't reverse it. Unfortunately, we can't import much water into the Pearl Basin very easily. There's not much water left on the entire island that can be imported. We're not talking about something that can be done in a month. I should indicate that according to the CIP and the BWS for the upcoming fiscal year, money will be appropriated for an EIS to be done on planned additional wells in Honouliuli which also draw water from the Pearl Basin. I don't know how extensive that EIS will be. Life of The Land is hoping to get money to bring in our own consulting hydrologist.

So, there will be an EIS done within the next fiscal year. It should not just be on the Honouliuli Wells but total consideration of the Pearl Basin aquifer is necessary. Maybe Mr. Minakami should comment on that more extensively. I do think there is a basis for the land especially since this whole water thing was not included in the original EIS.

DURAN: I'm impressed with your discussion on water. Are you a geologist or hydrologist?

HUDES: No, I'm not. Most of my training is self-trained. My area is in law and economics. Basically my work has been in research studies. I guess I've been reading hydrology for four or five years now.

DURAN: So research.

HUDES: Yeah.

(There were no further questions of Mr. Hudes.)

CHAIRMAN: Before proceeding any further, Mr. Gentry the applicant is here. Do you have anything to testify on?

TOM GENTRY: Well, I expect this is a rather routine matter. I did hear Life of The Land's testimony. We'd like to make a couple of comments. It's rather meaningless as far as we're concerned.

We have gone through exhaustive analysis along with the different departments of the City to determine where population should be placed. This experience has taken us over the six years now. It has been determined that the population is allowed on our property.

Now, this application today is just for constructing an off-site storage facility for our wells which have been approved already. I would like our engineer to go into that in more detail.

I do point out, in all due respect to Life of The Land, our engineer is not a hydrologist but an engineer.

Our population problem is simply the responsibility of determining-- is something that we should pay a lot of attention in. However, I do point out that the island itself does utilize one of the same areas for this resource and the issue is population rather than location of a particular well.

It's interesting to note that the wells we're drilling are really not considered a loophole in the law but are a contribution to the overall system. The water we are pumping is directly to meet the property we are developing. We utilize about the same amount of water per acre as sugar does.

So, the decision here, as I see it, has little to do with who owns the property or all right to pump it or whether or not we're circumventing through some loophole system our ability to circumnavigate law for this water. The water is for the use of the people. Much of this water is exported to other areas of the island. Maybe for some infinite wisdom of mine can determine why this exportation is correct or sensible or whether or not the issue is using less water for agriculture or whether or not the population should be limited to a set number of gallons for personal usage or possibly whether some of the things I think we are a little more strongly for is really our ability to build this reservoir or the recharging of the aquifer, or new design system and run-off structure or a lot of other things I'm not qualified to say on agriculture to get the water down where its needed.

So, I guess what I'm really saying is I don't know whether I can answer these charges, if you will, or if Life of The Land's request for delay but it just seems, inasmuch as you've asked me, I'm trying to answer to the best of my ability, what I understand is a permit for storage. The storage also allows BWS to utilize that storage facility.

I really take objection to the fact that it's considered an impact.

If there's any questions, I'll be happy to respond.

CHAIRMAN: Commissioners, any questions? If not, thank you very much, Mr. Gentry.

Anyone else to testify AGAINST?

(NO RESPONSE)

Anyone to testify FOR?

(NO RESPONSE)

If not, the Commission will provide time for cross-examination. Anyone that testified FOR would like to cross-examine anyone else, or anyone who testified AGAINST?

Herb?

HERB MINAKAMI: Let me clarify one thing. In regard to what Mr. Hudes said regarding Mililani Town, in regard to that chart, we did discuss with Belt-Collins and we pointed out that the figures are wrong. This is why right now we're revising those figures. Because, when we discussed this with Belt-Collins, we criticized them because the way they came up with the figures was sloppy. Like in regard to Chester Lau, his estimate of 270, Belt-Collins got that over the telephone. They were calling directly to Mr. Lau. We said to Belt-Collins that whenever they do a report like this where much of the figures have to come from BWS, we have to sit down with them and go over the figures to make sure that they are accurate. You know, these

figures are all in our files--sanitation, pumpage records, military. There are errors. I'm not justifying it. I just want to point that out.

COMMISSIONER LEE: The new revised figures, do you have it with you?

MINAKAMI: No. We are in the process of revising it now. So, we will be commenting on their EIS with the revised figures.

COMMISSIONER LEE: How soon do you expect to have those revised figures?

MINAKAMI: I have those on my desk right now so I haven't started to evaluate or review those figures yet. It will take a week or so. We will try to get it out as soon as possible.

CHAIRMAN: Thank you very much.

George?

GEORGE HUDES: One thing I forgot that's rather important. In the file is a letter to Mr. Moriguchi from Mr. Hirata, a letter dated May 5th. Mr. Hirata stated: "We will require an EIS. That statement applies only for construction of deep wells." Now that letter, Mr. Hirata requires construction of those wells. Now, somewhere between May 5th and today that requirement has disappeared. This is what sparked Life of The Land's concern because when we first read that BWS was requiring an EIS, we said fine. That's what we'd like to see. But, I am not aware of the reason why that requirement was dropped. At least for March, April and May, the BWS held the position in these letters that they would require an EIS. Now I don't know what new data has come up since that time that led them to determine that an EIS is not required. So, there seems to be confusion here between the Board's original determination, and the confusion about just what the water budget is in the Pearl Basin area.

ROGER MOSELEY: Mr. Hudes, do you have any particular questions for any of the witnesses? You could cross-examine any of the witnesses if you'd like.

HUDES: No I don't because Mr. Minakami really has not given any factual statement.

MOSELEY: Maybe you'd like to ask him what happened to the requirement?

HUDES: Do you know why that requirement for the EIS dropped?

MINAKAMI: With regard to that, the Board does have a policy. Hereafter, all these wells that will be permitted by BWS or will be dug by private developers which will eventually be taken over by



BWS, will require an EIS. My feeling right now is that there must have been - I don't know, maybe there was a misunderstanding because the project was already - construction plans were already approved by BWS. The project was already underway. How can we go back and place a requirement that should have been placed when the project was first conceived? To me, I look at it as a error. For me, personally, I admit it's an error.

MOSELEY: Do you have any questions?

MINAKAMI: No.

MOSELEY: Mr. Gentry, do you have any questions of the witnesses?

GENTRY: My question would be inappropo, really. This is a sizable project. We've worked on it a number of years. The question I would ask is, why now?

We're trying to get a permit on a water facility which was somehow overlooked.

MOSELEY: Would you like to ask that question of Mr. Hudes?

GENTRY: Well yes.

HUDES: My point is not trying to sabotage something coming in at the last minute. The original EIS gave no indication of additional wells being required. When we found out that additional wells would be drilled, we noted that the BWS would be requiring an EIS. Now we notice there's no requirement for an EIS. We're saying there have been new developments and we are only commenting on the developments that have taken place within the last few months. That concerns the drilling of new wells and the decision not to require an EIS. Both of those are fairly recent decisions which post date the original EIS and approval of the project.

GENTRY: I guess my question, rephrased, would be that this is not a question of whether or not the wells are permitted, we have the permit on that. The question is why you object to our storage facility which we are building for the City and County which is what the application is for.

HUDES: We object to storage facilities because that will receive over-pumped waters as we see it, not in uses for approving a reservoir - I could make an analogy which seems a little harsh and I don't mean to use ulterior motives. That's not my reason for being here. But, if somebody sells me some goods and I have reason to believe that they were acquired illegally, it's my responsibility not to receive those goods, receiving stolen goods.

I kind of see building a reservoir for waters that shouldn't be pumped to begin with, I see that as incorrect. I think the Commission has

responsibility to ask what waters are going to fill this reservoir because it is part of the total water development supply plan for the project in which there has been revisions made over the past few months. We don't see the reservoir as an isolated thing in this project. We see it very closely tied to problems of concern in the whole area and very closely tied to drilling of new wells.

GENTRY: I'm not an attorney so I can't respond to the legality of the study but again, this application is for a reservoir and storage of waters for Honouliuli. The water will be coming from under this particular project. I guess our answer is if this type of thing were to continue and Life of The Land were to object to some legal loophole, which I have to suggest might be that we would try to determine why we would be unable to use this water which is really under our property.

My business is not to hurt the public but to shop for people who need houses. We have explained it over and over again what we're really trying to do there. Our project is underway and an enormous amount of money has been approved, committed and is working in the project now. Who has the right to have this reservoir? I look at it as a very difficult problem and I'm not trying to hedge the law. The real problem here is on population which we addressed ourselves to in earlier Planning Commission discussions.

If there is a question that I could answer or that is necessary, I would be happy to get people here to do that. Our planner is in California right now. I really feel down inside that this is unnecessary harrassment.

LEE: You are saying that the water is under your ground and you would have every right to use it. After you use every available water, where does the rest come from?

GENTRY: Well, I don't believe we have the right to utilize the water under our property.

LEE: Isn't that what you said?

GENTRY: No I said we would question why we would be unable to use the water under our property. I believe all the water rights belong to the state.

What I probably indicated here was as far as the people who inhabit these islands, that this is the best possible location for this type of development only because it's the least expensive required of capital expenditure to transport this water. Our system is very economical to supply this need.

I guess my statement could be misinterpreted that it's our water but it's not. Here again, our project is not the case. Our system is to get it from one person and return it to someone else.

CONNELL: Mr. Gentry, the wells which you are required to put in, who required you to put those in?

GENTRY: The City and County's requirement. We have a contract and it was agreed by Council.

CONNELL: The approving agency was the Board of Water Supply?

GENTRY: The Board of Water Supply.

CONNELL: Did BWS require you to also put in a reservoir?

GENTRY: Yes they did.

CONNELL: Have you or your agents asked the Board of Water Supply to let you out of the EIS?

GENTRY: No Sir.

CONNELL: And so the decision was made by the Board of Water Supply?

GENTRY: That's correct.

CONNELL: Did BWS ask you to change any of your plans in terms of the wells or putting in the reservoir?

GENTRY: No Sir. Not to my knowledge.

CONNELL: So to your knowledge, BWS is still asking you to do the same thing it asked you to do a year ago.

GENTRY: Yes it did.

CHAIRMAN: Anyone else that would like to cross-examine or give further testimony?

(NO RESPONSE)

CHAIRMAN: If not, Commissioners?

IZUMOTO: I move the public hearing be closed.

LEE: I second.

CHAIRMAN: It's been moved and seconded to close the public hearing. All in favor, raise your right hand?

(The motion failed to carry.)

AYES - Izumoto, Lee, Kamiya, Sarber

NAYES - Kuna

ABSENT - Kagan, Kaneshige, Macapinlac, Zane

CHAIRMAN: Motion does not carry. The public hearing remains open. Yuki, you have any reason for not closing the public hearing?

KUNA: The report says we don't have anything from the Neighborhood Board. Then we have this from Neighborhood Board 25. Is that the Neighborhood Board?

CONNELL: Mr. Chairman, that's the only Neighborhood Board in that particular area.

KUNA: I don't know if there's someone here from the Neighborhood Board that gave testimony.

CONNELL: There's someone here from the Neighborhood Board. No, they have not given testimony other than what you have received.

CHAIRMAN: Motion to reconsider?

MOSELEY: Mr. Gentry, have you had a chance to see this which was submitted by the Neighborhood Board?

GENTRY: No, I have not.

I would only point out to the Neighborhood Board that they have been against us for sometime. I don't believe there's any response to be given. We've responded to all items.

DURAN: I think number 3 really gets in on the SUP.

GENTRY: Okay. Number 1, the water reservoirs are an integral part of the overall water system required by BWS. We agree with that.

Two, without a water supply, neither the General Plan amendment nor the Zoning amendment were proper. That's true.

Three, BWS has said that the project will aggravate an already existing overdraft condition of the underground water supply. I would comment that BWS is requiring us to put that reservoir in and we're following up on that.

Four, the sugar company has said that it will not give up any water. That's not an issue that indicates a condition. I pointed out that water is approximately the same per acre. The sugar company is something I have no control over.

Number five, serious technical difficulties are being encountered trying to use sewage effluent to irrigate cane.

That again is not our issue. It's an issue that the Board of Health will allow private treatment of sewage. That's not an issue which we should necessarily address ourselves to.



Six, in short, there is no water to serve the project at the present time, and alternative water supplies are only dreams of the future.

We started this project with contract that the water would be pumped from directly under the property and have followed through. The comments made earlier are appropro. The fact that there isn't water is because there isn't pressure. There are water tanks on the property right now. It's a water volume problem. The water belongs to all the people.

Seven, the costs of desalting water are prohibitive, and we may not have the energy resources to do it.

I would agree with that. As a general statement, if water were to be desalted and used in the islands, it probably would be wiser to use it for personalized use at an elevation because of the energy cost to pump the water. There are certain areas of the island where this could be done but otherwise energy costs to pump this water could be prohibitive.

Eight, the BWS recently disapproved a well drilling permit in Waipio in the area of the Pineapple Research farm.

The BWS would have to look into that.

MOSELEY: You don't have any questions regarding their testimony?

GENTRY: I'm trying to look at something we can answer that we can do something about. They wrote a letter with regard to our final zoning to Council which goes on and on about these different issues. They have a right to do that. Some of these questions deal with population. We are developers. We have a lot of suggestions when it comes to recharging that water source. We would be a help there. Again I have to say that the issue here is a storage facility which we are under contract with the City and County to build.

IZUMOTO: Mr. Chairman, Corporation Counsel has been conducting some questioning here. The format we're operating under today is one which I question. I have been on this board simply for over three years. We have never engaged in a situation where the witness has been allowed to cross-examine another witness. I think in this instance it's totally unfair for those people without being present should be cross-examined by Mr. Gentry.

MOSELEY: I understand that the president of the Neighborhood Board is here. That's why I've asked if he had specific questions about this testimony. I think the determination of who exactly is a party is so far, at least, left a little unclear by the court. What I'd like to insure is that everybody has the optimum chance to say their piece and view, to ask questions of those who are testifying so that the board can make a fair decision.

IZUMOTO: Mr. Chairman, my question would then be, if that is the desire, is this to be allowed on all future hearings?

CHAIRMAN: This procedure will be used primarily for the State Special Use Permit which by law requires this judicial procedure that has to be used.

SARBER: I too have a number of reservations which Charlie has raised.

CHAIRMAN: Roger has brought this point up very clearly because they did go to court over another SUP. So to prevent such happenings, we're making sure that we get the optimum--

IZUMOTO: May I remind the Chairman that should have been explained at the outset of the hearing so that there would be an understanding amongst all of us.

CHAIRMAN: I'm sorry if I did not explain that about the SUP.

KUNA: If we close the public hearing, can we still receive comments from BWS?

CHAIRMAN: We can close and still ask specifically for BWS comments.

CONNELL: The question should be what further comments can the BWS give? It would certainly be in order to ask them now.

CHAIRMAN: You have any specific questions now?

KUNA: Well, this question was already asked, why it does not require an EIS.

CHAIRMAN: Well, is it a question that can be answered?

KUNA: I have another question, whether or not planning had an EIS given what's come up?

CONNELL: Mr. Chairman, I think DLU can give further clarification on this but BWS has indicated the EIS is not required. I find nothing in the State Law regarding the SUP which requires an EIS for a reservoir. The BWS doesn't feel so either. The wells are not an issue which is before the Commission. The SUP is only for the reservoir. Gentry is not the applicant. The sugar company is the applicant. They are requesting an SUP for a reservoir on their property.

SARBER: I thought I heard the BWS representative saying that they were going to request EIS on wells but what happened was that they discovered the wells were already under construction. Did I misunderstand?

CONNELL: Well, I understand they're talking about projects in the future. Apparently in terms of the Gentry project, it was discovered by BWS that they already had their permit and they were already under construction. The barn door apparently had been left open. Perhaps we can get clarification from BWS now.

MINAKAMI: As I indicated, the Board has recently adopted a policy that all future well projects by developers that will be turning the wells over to us, an EIS shall be required. Here again, the Gentry project plans were already approved. The drilling of the wells were already underway. If that matter was lifted then it was lifted in error. The EIS is required in future wells.

KUNA: Is that effective now, that policy?

MINAKAMI: That policy became effective a couple of months ago. We have a number of well projects but the initial phase will be preparation of the EIS.

CONNELL: Mr. Chairman, while the BWS representative is here, just for the record, is the BWS still giving their approval, not their approval but their request for this reservoir to be built?

MINAKAMI: Yes, because this is part of the requirement for the water system to serve the development.

CONNELL: Is there water available to serve this project?

MINAKAMI: Yes, we have already approved the well project so water will be available for the project.

CONNELL: The testimony received from Neighborhood Board 25 indicated BWS disapproved of a well drilling permit in Waipio in the area of the Pineapple Research farm. You have any knowledge of that permit?

MINAKAMI: In regard to that, the land up there was occupied by the Pineapple Research. There was a number of proposals that came to the Board. One of the proposals that I remember was to subdivide that land into agricultural subdivision. Another proposal was rather than the well, was them coming to request to connect to our line that we have along the main highway. We also indicated that they should look into the possibility of getting water from developer that has the development right above it because they have development plans and we did give them approval to drill wells in their proposal. So as I can remember, the request was to get water from our existing line. I don't know what the answer was. That was one proposal. Also in the reply, we try to work jointly with the developer.

CONNELL: To your knowledge, was turning down the permit have anything to do with lack of water in the area?

MINAKAMI: Well, I don't know whether it was lack of water because we ourselves with Wahiawa who have developed water sources in that area transporting water to the Pearl City/Honolulu area. I can't reply to that question.

CONNELL: I wonder if you could go back in your records, look up that particular drilling permit and supply that information to the Commission.

I believe the other thing the Commission might be interested in is the fact that BWS is looking into alternative water supply wells in Wahiawa. If there are alternative water supplies, I'm sure the Commission would like to have a report on that.

MINAKAMI: In regard to our alternative water supply, there are wells that can be developed on this particular island and that there are adequate water supply to carry us to the year 2000. We have made that statement not only to City Council but also to the State Water Commission. That's based on estimates.

Now up to the year 2000, we feel the land groundwater supply can be developed. Beyond that, we are looking at brackish water on this island that can be developed. We're also looking at exchange of water from the sugar plantation. Right now they're using 50 million gallons of potable water for irrigation purposes. This is why we are conducting a study of sewerage effluent to see if we can exchange that water with the sugar plantation.

CONNELL: When you say there will be sufficient water up to the year 2000, what population is that projected upon?

MINAKAMI: This is based on a projection of 350,000 to the year 2000. This is based on the recent DPED population projection of 917,400.

CONNELL: So is it the position of BWS that we have adequate water to meet the needs of a population of that size up to the year 2000?

MINAKAMI: Up to the year 2000, right.

CONNELL: What happens then?

MINAKAMI: That is when we have to go to alternative sources of water looking to the possibility of stream waters. We're looking to the possibility of stream water in the Windward area, Punaluu Stream. We plan to do an EIS on that project the next fiscal year. We are also looking to brackish water. We will be working with the USGS who conducted an indepth study of all brackish water available on this island that we can convert for potable use.

CHAIRMAN: Okay, I believe we've had enough discussion.

MACAPINLAC: Mr. Chairman, I would move for reconsideration of the motion to close the public hearing.

IZUMOTO: Second the motion.



CHAIRMAN: All in favor of reconsideration, raise your right hand.

(The motion was unanimously carried. Commissioner Kuna dissented.)

AYES - Izumoto, Kamiya, Lee, Macapinlac, Sarber

NAYES - Kuna

ABSENT - Kagan, Kaneshige, Zane

CHAIRMAN: A motion is in order.

IZUMOTO: Mr. Chairman, I move that the public hearing be closed.

MACAPINLAC: Second.

CHAIRMAN: Any discussion?

(NO RESPONSE)

CHAIRMAN: All in favor to close the public hearing, raise your right hand.

(The motion to close the public hearing was carried. Commissioner Kuna dissented.)

AYES - Izumoto, Kamiya, Lee, Macapinlac, Sarber

NAYES - Kuna

ABSENT - Kagan, Kaneshige, Zane

The matter was deferred for a statutory period of 15 days.

PUBLIC HEARING  
BILL FOR AN ORDINANCE TO  
AMEND CHAPTER 22, R.O.  
1969, AS AMENDED, BY  
AMENDING SECTION 22-7.2  
BY ADDING DEFINITIONS OF  
"PUBLIC ELDERLY HOUSING"  
& "PUBLIC LOW & MODERATE  
INCOME HOUSING" & SECTION  
22-7.4 RELATING TO  
EXCEPTIONS FOR PUBLIC  
ELDERLY HOUSING & PUBLIC  
LOW & MODERATE INCOME  
HOUSING (AM)

A public hearing was held to consider a Bill for an Ordinance to amend Chapter 22, R. O. 1969, as amended, by amending Section 22-7.2 by adding definitions of "Public Elderly Housing" and "Public Low and Moderate Income Housing" and Section 22-7.4 relating to exceptions for Public Elderly Housing and Public Low and Moderate Income Housing.

Publication was made in The Honolulu Advertiser on Saturday, June 3, 1978. No letters of protest were received.

Mr. Art Muraoka presented the Director's report recommending approval of the proposed amendment.

Discussion followed.

CONNELL: At whose request was the proposed amendment initiated at Council?

MILILANI, WAIPIO/MELEMANU NEIGHBORHOOD BOUND NO. 25  
 c/o WAHIAWA SATELLITE CITY HALL  
 830 CALIFORNIA AVE.  
 WAHIAWA, HAWAII 96786



TESTIMONY (78/SUP-1) PLANNING COMMISSION JUNE 13, 1978

Mr. Chairman, Members of the Commission:

I. We were opposed to the Gentry-Waipio development General Plan amendment because:

1. It uses prime agricultural land;
2. It does not provide housing in the price range most needed by the residents of Oahu;
3. It directs growth to Central Oahu rather than Ewa; and
4. The required studies were not made by the City.

II. We were opposed to the Zoning Change for the project because:

1. The existing Kam Highway is inadequate to serve the project and the State has no plans to expand it;
2. The sewage effluent will be spread on the ground at the Ted Makalena Golf Course and pollute Pearl Harbor;
3. There is no long-range dependable water source to serve the project; and
4. Other public facilities in the Mililani and Crestview areas are already ten years behind schedule.

III. We are opposed to the Special Use Permit because:

1. The water reservoirs are an integral part of the overall water system required by the Board of Water Supply (BWS);
2. Without a water supply, neither the General Plan amendment nor the Zoning amendment were proper;
3. The BWS has said that the project will aggravate an already existing overdraft condition of the underground water supply;
4. The sugar company has said that it will not give up any water;
5. Serious technical difficulties are being encountered trying to use sewage effluent to irrigate cane;
6. In short, there is no water to serve the project at the present time, and alternative water supplies are only dreams of the future;
7. The costs of desalting water are prohibitive, and we may not have the energy resources to do it;
8. The BWS recently disapproved a well drilling permit in Waipio in the area of the Pineapple Research farm.

We would like to review a few facts concerning the Planning Commission and this project.

1. When the Gentry-Waipio General Plan amendment was proposed, it was not reviewed by the Department of General Planning as is indicated in

JUN 13 1978

Mililani/Waipio/Melemanu Board No. 25  
Testimony (78/SUP-1) Planning Commission  
June 13, 1978  
Page 2

the City Charter. We feel that this was illegal. You refused to act upon the General Plan amendment because the City Council did not provide you with sufficient information on which to act. The Council passed the amendment regardless of your desires, and in the absence of a Planning Commission recommendation. You were snubbed and ignored. We feel that this was also illegal.

2. Faced with the General Plan approval, you were asked to review the Zoning Amendment. You recommended to the City Council that only 300 units be built. They approved approximately 1500 units, again you were ignored.
3. The Mayor vetoed both the General Plan amendment and the Zoning Amendment, but Council overrode the vetos. We are glad that the Mayor was listening.
4. Now you are asked to ignore all that has transpired and rubber stamp a request for a Special Use Permit which will allow all that you have objected to in the past. Now it is your turn to be listened to. It is not too late as some would have you think. The developer has known of the water problem from the beginning, and knows of the possibility that a Special Use Permit could be denied. He has had, therefore, no guarantee that he would be allowed to continue development.

We recommend the following:

1. You disapprove the request for the permit at the present time;
2. Renew your request to City Council for the long-range studies that you requested as a basis to review the overall development;
3. Ask the BWS to indicate the time period and the costs at which alternative sources of water can be provided;
4. Order the Corporation Counsel to obtain a cease and desist order against any further well drilling in the Central Oahu area until alternate sources of water are actually made available.

We wish to thank you for your consideration, and hope that you will support our interest in "good" planning for Central Oahu, and join us in our effort to see that the development of Oahu is directed in the proper amounts to the proper place, at the proper time. If you approve this request, other proposals for an additional 16,000 people are only a few weeks behind. Since the BWS has admitted that an overdraft condition exists, now is the time to draw the line.

Respectfully Submitted,  
THE ENTIRE BOARD

would flow onto the agricultural fields of central Oahu rather than into Pearl Harbor's Class "AA" waters. This would bring the facility into compliance with Federal standards except during extended periods of unusually high rainfall. At such times, effluent flows might exceed irrigation use and the reservoir storage capacity, thus requiring discharge of secondarily treated effluent into Kipapa Stream under an approved emergency discharge permit. According to the EIS for the system, it is believed that this would occur so infrequently, and circumstances would provide sufficient dilution of waste water with peak volumes of storm runoff water, that the impact on the quality of receiving waters would be insignificant. If approved, the project would be completed by 1982. A short-term extension of the NPDES Permit has already been tentatively approved by the Department of Health should this plan be implemented.

Mililani Town, Inc. is currently proceeding on the assumption that this plan, proposed by the City and County of Honolulu Department of Public Works, will be approved and acted upon. If it is, discharge into Pearl Harbor would be almost totally eliminated. Moreover, in conjunction with good water conservation practices, the water effluent from the plant would be reused.

If unexpected problems were to preclude the proposed effluent disposal method, it is unlikely that an alternative solution could be found in time to comply with the existing NPDES permit. This is true regardless of whether or not the Mililani Sewage Treatment Plant is serving only development that has already been approved or the additional units included in the present zoning request as well. Furthermore, since approval of subdivision is contingent upon the availability of adequate treatment capacity, development of the proposed increment could be halted as soon as it became evident that the City and County's plan was not going to materialize.

#### WATER WITHDRAWALS

In 1977, average water use at Mililani was about 2.8 mgd (see Table IV-6). All of this water was pumped from four existing on-site wells that tap the Pearl Harbor basal lens. The proposed project would increase average water use by an estimated 1.64 mgd, and, based on present plans, this water would be supplied by additional wells drilled to the basal lens. While the proposed wells have already been approved by the Honolulu Board of Water Supply, the present water situation on Oahu, and particularly in the Pearl Harbor area, is sufficiently critical that a fairly detailed consideration of the probable effects of the proposed withdrawals is warranted.

#### Groundwater in Central Oahu

**General** In general, the groundwater underlying central Oahu is of two different types: basal water and high-level dike water. As shown in Figure IV-2, the basal water body is split into two hydrologically distinct compartments (Pearl Harbor and Waialua-Haleiwa) by the geologic structures associated with the Schofield high-level water. Because of recharge from rainfall, the upper part of the basal water body is commonly fresh (i.e., has a lower salinity than seawater); this fresh water is in the form of a lens that floats atop the denser seawater which saturates the highly permeable lavas that make up the island to an unknown depth. This lens of fresh water provides Oahu with a major source of potable water.



The impact of the proposed project on Oahu's groundwater resources can best be addressed by a consideration of the water budget for the Pearl Harbor basal lens. The critical issue here is the relationship between recharge and withdrawals. By determining the net loss or gain to the Pearl Harbor aquifer anticipated as a result of the proposed project, and assessing the effect that this would have on the fresh/salt water interface within the aquifer, it is possible to gain at least a qualitative understanding of the project's probable impacts on the island's groundwater system.

**Available Fresh Water** The additional wells proposed in support of this project would tap the Pearl Harbor aquifer from surface elevations of 865 feet and 685 feet (see Figure I-7). The elevation of the water table varies through the aquifer, with water levels generally rising as one proceeds inland. In the vicinity of the proposed wells, it is at an elevation of about 26 feet above mean sea level.

Because of its importance to Oahu's overall water supply, numerous hydrologic studies have been made to determine the safe sustainable yield of the Pearl Harbor basal lens. On the basis of historical records of spring flow, pumping rates, and water table levels, Visser and Mink (1964) concluded that as much as 195 to 230 mgd might be withdrawn from the Pearl Harbor lens without resulting in a significant increase in saltwater intrusion into the lens. The higher figure would, however, require use of wells drilled inland of the existing Pearl Harbor springs rather than simply tapping their present flow.

Bowles (1973) estimated that the maximum safe yield of the aquifer is on the order of 200 mgd. His estimate was based on the belief that the recharge to the aquifer from both natural and human sources (e.g. irrigation return water) was about 250 mgd, and that about three-quarters of this could be withdrawn without affecting the long-term viability of the source. More recently, Mink (1974) and others have found evidence that, given the present conditions, it might be possible to take 85 percent of the flow. If this is correct, the Bowles estimate could be raised to about 215 mgd.

Chester Lao (1978) of the Honolulu Board of Water Supply estimates that, under existing conditions, the sustainable yield of the aquifer is about 270 mgd. This estimate is based on an examination of well pumping records and water level data from observation wells.

As indicated by the net pumpage figures for various years that are summarized in Table IV-7, average net pumpage from the Pearl Harbor basal lens for the years 1975, 1976, and 1977 was 285.6 mgd. The highest withdrawal for any year on record was the 293.6 mgd average recorded in 1977, but this was a drought year, and it is almost certainly above the long-term average at the present level of development. The 285 mgd figure is, perhaps, more representative of the long-term average, but even it is significantly higher than the 270 mgd rate that Lao states is the sustainable yield. It is from 45 to 90 mgd above the sustained yield estimates of Bowles and Visser. Clearly, then, a continuation at the present rate of withdrawals implies increasing saltwater intrusion into the aquifer and the possible slow degradation of the source.

Table IV-7. Estimated Water Usage In The Pearl Harbor Area

User	Net Pumpage (mgd)		
	<u>1972<sup>1</sup></u>	Average: <u>1963-1973<sup>2</sup></u>	Average: <u>1975-1977<sup>3</sup></u>
Agricultural	137	140	
HECO	9		
BWS	63	60	
U.S. Government	<u>24</u>	<u>20</u>	<u>      </u>
TOTAL	233	220	285.6

<sup>1</sup>Bowles (1973). Oahu Land Study. Castle and Cooke, Inc.: Honolulu.

<sup>2</sup>Mink, John (1974). Proceedings of the Oahu Groundwater Users Conference. Honolulu Board of Water Supply: Honolulu.

<sup>3</sup>Chester Lao (1978). Personal communication.

#### Impact of the Proposed Project on Groundwater Supply

Theoretically, the proposed expansion of Mililani Town has the potential to affect the Pearl Harbor basal lens in two different ways. First, by changing the surface of the land it could change the amount of recharge entering the aquifer. Second, withdrawals of water for domestic use could reduce residual flow. Both of these potential effects are discussed below.

**Changes in Recharge** While agricultural return water is of some importance to the Pearl Harbor basal lens, the primary source of recharge is rainfall. In this respect, it is very important to recognize that rainfall is very unevenly distributed across the half-million acre recharge area of the aquifer (see Figure IV-3). It approaches an average of 300 inches per

EXCERPT  
LANNING COMMISSION MINUTE  
JULY 11, 1978

JUL 11 1978

Action on the following two Unfinished Business items were deferred to the next meeting on July 25, 1978 for lack of quorum.

1. WAIPIO--STATE SPECIAL USE PERMIT--78/SUP-1(GH)

TAX MAP KEY: 9-4-06: Portion of 1

Applicant/Landowner: Castle & Cooke, Inc.  
Location: Waipio abutting H-2 Freeway  
Area: 1.916 acres  
SLU Desig: Agriculture  
Int. Zoning: Agriculture  
DLUM: Agriculture  
Develop. Plan: None adopted  
Exist. Zoning: AG-1 Restricted Agriculture  
REQUEST: State Special Use Permit for a Water Reservoir System in the Agricultural District.  
PROPOSAL: The applicant proposes to construct a water reservoir system to include two 1.5 million gallon reservoirs.  
REMARKS: The public hearing held June 13 was closed and the matter deferred for a statutory period of 15 days.

2. A BILL FOR AN ORDINANCE TO AMEND CHAPTER 22, R. O. 1969, AS AMENDED BY AMENDING SECTION 22-7.2 BY ADDING DEFINITIONS OF "PUBLIC ELDERLY HOUSING" AND "PUBLIC LOW AND MODERATE INCOME HOUSING" AND SECTION 22-7.4 RELATING TO EXCEPTIONS FOR PUBLIC ELDERLY HOUSING AND PUBLIC LOW AND MODERATE INCOME HOUSING.

The purpose of the amendment is to exempt the Public Elderly and Public Low and Moderate Income Housing Projects from requirements of the Park Dedication Ordinance. (Initiated by City Council P&Z Committee Report No. 1708, dated Aug. 31, 1977--AM)

REMARKS: The public hearing held on June 13, 1978 was closed and the matter deferred for further study by the Commission.

ADJOURNMENT: The meeting adjourned at 5:00 p.m.

Respectfully submitted,

*Henrietta B. Lyman*

Henrietta B. Lyman  
Secretary-Reporter

LAND USE COMMISSION  
STATE OF HAWAII  
AUG 3 10 40 AM '78

EXCERPT  
PLANNING COMMISSION MINUTES  
JULY 25, 1978

UNFINISHED BUSINESS  
STATE SPECIAL USE PERMIT  
(RESERVOIR SYSTEM IN  
AGRICULTURE DISTRICT)  
WAIPIC  
CASTLE & COOKE, INC.  
(FILE #78/SUP-1 GH)

The public hearing held June 13 was closed and the matter deferred for a statutory period of 15 days. Action at the July 11, 1978 meeting was deferred due to a lack of quorum.

No discussion followed.

ACTION: The Commission accepted the Director's recommendation and recommended approval of the Special Use Permit, subject to the conditions in the Director's report, on motion by Mr. Sarber, seconded by Mr. Izumoto and carried.

AYES - Izumoto, Kagan, Kamiya, Macapinlac, Sarber, Zane  
NAYES - Kuna  
ABSENT - Kaneshige, Lee

LAND USE COMMISSION  
STATE OF HAWAII  
AUG 3 10 40 AM '78



*Received 1/17/78*  
January 18, 1978

Mr. George Moriguchi, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii

Dear Mr. Moriguchi:

Subject: Application for State Special Use Permit for  
Water Reservoir  
Waipio, Ewa, Oahu, Hawaii  
Tax Map Key : 9-4-06: portion of 1  
Landowner : Castle & Cooke, Inc.  
Engineer-Petitioner: Community Planning, Inc.

On behalf of the owner, application is made for Special Use Permit for a water reservoir site within the State "A" Agricultural District as described above.

Plans and specifications have been completed and require a reservoir site special use permit from the State Land Use Commission for final approval of the Gentry-Waipio water system.

Enclosed please find two copies of the following items:

- ✓ 1. Special Use Permit application for a water reservoir site and construction of a 1.5 M. G. reservoir
2. Preliminary subdivision map showing the project location
- ✓ 3. Water system master plan approved by Board of Water Supply with addendum and maps
4. Construction plans showing site plan, landscaping plan and reservoir and instrument house details *shds. 1, 7, 10, 12 & 17*
5. Letter from the landowner authorizing Community Planning, Inc. to act as petitioner on its behalf in the submittal and processing of the Special Use Permit

*PRELIM. PLANS AS  
OF 1-16-78*

Also enclosed is the application fee of \$100.

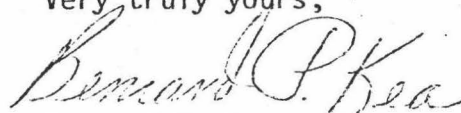
In accordance with the requirements of State Land Use District Regulations, Part V, Section 5-2, Test to be Applied for Special Use Permits, we submit the following information:

January 18, 1978

1. The land area for the water reservoir site is confined to only 1.916 acres within the State Agricultural District and would not be contrary to the objectives of the State Land Use Law and Regulations. The reservoir is proposed within the AG-1 Restricted Agricultural zoning district and is a permitted use by the City and County of Honolulu.
2. Construction of a 1.5 M. G. water reservoir will not adversely affect the surrounding property but will improve the existing water system in the adjoining urban district by providing better fire protection. The reservoir site will be graded, constructed, landscaped and maintained in accordance with all applicable State and County laws and regulations.
3. The reservoir site will be dedicated to the Board of Water Supply to provide the City with an added and needed water storage facility. Adequate access will be provided from a public roadway, and the construction of the reservoir should not create an additional burden to other governmental agencies.
4. Current plans for the Gentry-Waipio Project require a reservoir site be located in the State Agricultural District, at the 595-foot elevation to adequately service the proposed urban development. The 1.9-acre site has been designed to provide for an additional 1.5 M. G. reservoir within its boundaries for the subsequent second phase of the Gentry development.
5. Removal of 1.9 acres of existing agricultural use will not seriously affect the remaining parcel as a majority of the 461 acres is usable for fruit production and the proposed reservoir site is located only on one edge of the pineapple field.

Your cooperation and assistance in expediting this application will be greatly appreciated. Please feel free to contact us if additional information is required.

Very truly yours,



Bernard P. Kea

BPK:do

Enclosures

cc: Norman Dyer  
Castle & Cooke, Inc.  
SLUC

CASTLE & COOKE, INC. P. O. BOX 2990 HONOLULU, HAWAII 96802

February 3, 1978

Mr. Bernard P. Kea, President  
Community Planning, Inc.  
700 Bishop Street, Suite 608  
Honolulu, Hawaii 96813

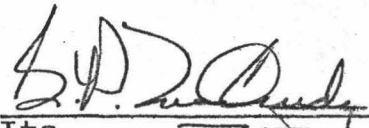
Dear Mr. Kea:

Subject: Gentry-Waipio Water System  
Waipio, Ewa, Oahu, Hawaii  
Tax Map Key : 9-4-06: 1  
Owner : Castle & Cooke, Inc.  
Surveyor-Engineer: Community Planning, Inc.

This letter will authorize Community Planners, Inc. to act in our behalf as agent and petitioner to submit and obtain a State Special Use Permit for the construction of the Gentry reservoir facility at Waipio, Ewa, Oahu.

Very truly yours,

CASTLE & COOKE, INC.

  
Its VICE PRESIDENT

cc: Norman Dyer

STATE OF HAWAII  
LAND USE COMMISSION  
State Kamamalu Bldg.  
P. O. Box 2359  
Honolulu, Hawaii

This space for official use

Date Application and Fee  
Received by LUC \_\_\_\_\_

APPLICATION FOR SPECIAL PERMIT

(We) hereby request approval of a special permit to use certain property located in the County of Honolulu, Island of Oahu, Land Use Commission District Boundary map number and/or name 0-9, Waipahu, for the following described purpose: Special permit for water reservoir use within the State "A" Agricultural District.

Description of property: Portion of Lot 4204-B, Land Court Application 1000, at Waipio, Ewa, Oahu, Hawaii. Tax Map Key 9-4-06: por. 1. Area = 1.916 Acres.

Petitioner's interest in subject property: Agent for owner (see attached letter of authorization).

Petitioner's reason(s) for requesting special permit: Construction of 1.5 M. G. water reservoir to serve present needs of the Gentry-Waipio Project.

COMMUNITY PLANNING, INC.

Signature

Bernard P. Kea  
Bernard P. Kea, Pres.

700 Bishop St. Ste. 608

Owner: Castle & Cooke, Inc.  
P. O. Box 2990  
Honolulu, HI 96802

Address: Honolulu, HI 96813

Telephone: 521-7491

Date: February 7, 1978

This space for official use

The property is situated in a(n) \_\_\_\_\_ district, whose regulations adopted by the Land Use Commission prohibit the desired use.

Signature(s) \_\_\_\_\_

For (agency) \_\_\_\_\_



GENTRY      WAIPIO

# WATER      SYSTEM MASTER      PLAN

At Waipio, Ewa, Oahu, Hawaii

Lots 4206-A-1, A-2 and A-3

Land Court Application 1000

Tax Map Key: 1st Division 9-4-06: 08

**WILLIAM HEE  
& ASSOCIATES, INC.**



ENGINEERS • SURVEYORS • PLANNERS

REVISION NO. 1 - ADDENDUM TO WATER SYSTEM - MASTER PLAN

Guideline for Construction Schedule:

1. Initial Construction
  - a) One - 1.5 MG reservoir and
  - b) Two - 1050 gpm deepwells (up to 0.675 mgd, average day demand)
2. When average day demand reach 0.675 mgd, construct 3rd 1050 gpm deepwell.
3. When average day demand reach 1.0 mgd, construct 2nd 1.5 MG reservoir.
4. When average day demand reach 1.35 mgd, construct 4th 1050 gpm deepwell.

NOTE:

These guidelines are based entirely on the development of housing units and are therefore tentative. Construction of the Industrial Areas may require an adjustment of these guidelines depending on their actual time of implementation.

GENTRY WAIPIO

# WATER SYSTEM MASTER PLAN

At Waipio, Ewa, Oahu, Hawaii

Tax Map Key: 1st Division 9-4-06-08

Prepared For:

GENTRY-PACIFIC, LTD.  
Suite 1804, 130 Merchant Street  
Honolulu, Hawaii 96813

Prepared By:

WILLIAM HEE & ASSOCIATES, INC.  
Engineers - Surveyors - Planners  
1020 Auahi Street, Bldg. 1, Room 1  
Honolulu, Hawaii 96814

November 1976

### NARRATIVE:

On August 11, 1976 the General Plan for the subject property was approved by the City Council of the City & County of Honolulu.

The land uses and acreages are as shown on Exhibit A appended to this report.

The original acquisition of the Developer totaled 696 acres. Fifty acres were subsequently taken for a portion of H-2 Freeway. Of the remaining acreage, 510 acres were redesignated to various urban uses on the General Plan/Detailed Land Use Map approved by the Council. In these 510 acres, the land uses involve 268 acres in residential encompassing some 3,700 dwelling units, 120 acres in light industry, 14 acres in commercial, 34 acres as open space, 40 acres in roadways and 24 acres for public facilities.

### LOCATION:

The property is located approximately one mile north of the Waiawa Interchange. It is contiguous to Crestview Subdivision and bounded by Kamehameha Highway, Mililani Memorial Road and the H-2 Freeway.

### TOPOGRAPHY:

The property is generally a gentle plateau with a 3% - 5% grade excepting for the areas in a gulch.



[illegible]

DIAMOND HEAD

## WATER MASTER PLAN:

In determining the transmission and distribution mains for the project, several trials were made from the new reservoir (spillway at 595) to the project, and through the project.

In selecting the size of the transmission mains, the criteria of respecting a minimum of 20 psi at the hydrant while flowing under fire requirements and maximum daily demand. A check against the minimum pressure in the main of 40 psi while under peak hour flow was made.

The layout as shown on Exhibit B is the finale of our trials and refinements. We have shown the mains on a copy of the DLUM/General Plan of the project approved by the City Council on August 11, 1976. The Exhibit B illustrates the land use, acreage, expected number of units and flow.

The following is our tabulation of the criteria used in considering the consumption indicated on Exhibit B.

1.) POPULATION:

Residential	4.0 persons/unit
Apartment	2.5 persons/unit
Hotel	Not Applicable

2.) AVERAGE DAILY CONSUMPTION:

Residential	125 gal/capita/day
Apartment	140 gal/capita/day
Light Industry	4,000 gal/acre/day
Schools	60 gal/capita/day or 4,000 gal/capita/day
Commercial	4,000 gal/acre/day

3.) FIRE FLOWS AND HYDRANT SPACING:

Single Family Residences.	1,000 gpm for 1 hour
Duplex Buildings	1,000 gpm for 1 hour
Town Houses (Gentry Plan)	1,500 gpm for 1 hour
P. U. D. 's	1,500 gpm for 1 hour
Low Density Apartment	1,500 gpm for 1 hour
School Site	2,000 gpm for 2 hours
Commercial Area	2,000 gpm for 2 hours

Medium Density Apartments

2,000 gpm for 2 hours

Light Industry

4,000 gpm for 3 hours

4.) FIRE HYDRANT SPACING:

Single Family Residences

350 feet

Duplex Buildings

350 feet

Town Houses (Gentry Plan)

350 feet

P. U. D. 'S

250 feet

Low Density Apartment

250 feet

School Site

250 feet

Commercial Area

250 feet

Medium Density Apartments

250 feet

Light Industry

250 feet

5.) DEMAND FACTORS:

Maximum Daily Demand =  $1.5 \times$  Average Day

Peak Hour =  $3 \times$  Average Day.



6.) PIPELINE CONTROLLING CONDITIONS:

Critical Hydrant: 20 psi residual pressure at Maximum Daily Flow

Minimum Pressure = 40 psi at Peak Hour Flow

C Values:

<u>Pipe Size</u>	<u>"C" Value</u>
6"	100
8"	110
12"	110
16"	120

Permitted velocity exclusive of fire flow = 6 fps

7.) RESERVOIR SIZING:

- a. Meet maximum day consumption when full without inflow during a 24-hour period.
- b. Meet maximum day flow for duration of fire plus fire flow during period while reservoir is at 3/4 full at beginning of fire. Credit to be considered for inflow from pumps. As a test, one large size pump to be off.

## COMPUTATIONS FOR RESERVOIR SIZING:

1. Test reservoir size required for one maximum day without inflow for one day.

$$\begin{aligned}\text{Maximum Day} &= 1.5 \times \text{Average Day} \\ &= 1.5 \times 1549 \text{ gpm} \\ &= 2324 \text{ gpm}\end{aligned}$$

$$\begin{aligned}\text{One Whole Day} &= 2324 \text{ gpm} \times 60 \text{ min/hr} \times 24 \text{ hr/day} \\ &= 3,345,840. \text{ gallons per day}\end{aligned}$$

So, a 3.0 million gallon storage is required.

2. Test reservoir size to meet maximum day plus fire flow for duration.

$$\begin{aligned}\text{Maximum Day} &= 1.5 \times \text{Average Day} \\ &= 1.5 \times 1549 = 2324 \text{ gpm}\end{aligned}$$

In industrial zoned areas, fire flow is the greatest which is 4000 gpm for 3 hours.

So, the storage requirements becomes;

$$\begin{aligned}\text{Maximum Day} &= 2324 \text{ gpm} \\ \text{Fire Flow} &= \underline{4000 \text{ gpm}} \\ &= 6324 \text{ gpm} \times 3 \text{ hours} \times 60 \text{ min/hr.} \\ &= 1,138,320 \text{ gallons}\end{aligned}$$

When reservoir is at 3/4 full, the size reservoir needed will be

$$\frac{1,138,320}{.75} = 1.52 \text{ MG}$$

If pumps operate during the period, there are 4 pumps rated at 1050 gpm each.

Assume only 3 pumps are operating, the flow is 3150 gpm. If this happens,

the inflow for the 3 hours fire =  $3 \times 3150 \times 60 = 567,000$  gallons.

Then  $1,518,000$  requirement

$$- \frac{567,000 \text{ inflow}}{=} =$$

$1,000,000$  gallons (nearly) so a 1.0 MG reservoir would suffice.

Since Case 1 is greater than Case 2, so a 3.0 million gallon storage is needed

as it is the larger of the two.

## PIPE LINE COMPUTATIONS :

Exhibit D is a copy of the Detailed Land Use Map approved by the City Council. It shows the land use together with the acreage, number of units, and average day consumption in gpm computed from criteria previously set forth in this report.

From the average day consumption calculations, the flows at various points were considered. These points are illustrated on Exhibit B for clarity, since there is already so much information on Exhibit D. Also shown on Exhibit B are the major pipe lines looping the project and cutting through at various locations forming the major network. Calculations of maximum day plus fire flows were made to test the residual pressure at the critical hydrants. It was found that the worse case would be at Point 2 where there is a 4000 gpm fire flow and the elevation was the highest in the tract (480' MSL). See Exhibit C for a summary of the calculations. A test was made at other points and Line D also shows the residual pressure at the 20 psi minimum. Because of the looping network of Lines r, c, and q, it is felt that the losses as calculated would in actuality not be so bad. So would it be elsewhere in the system.

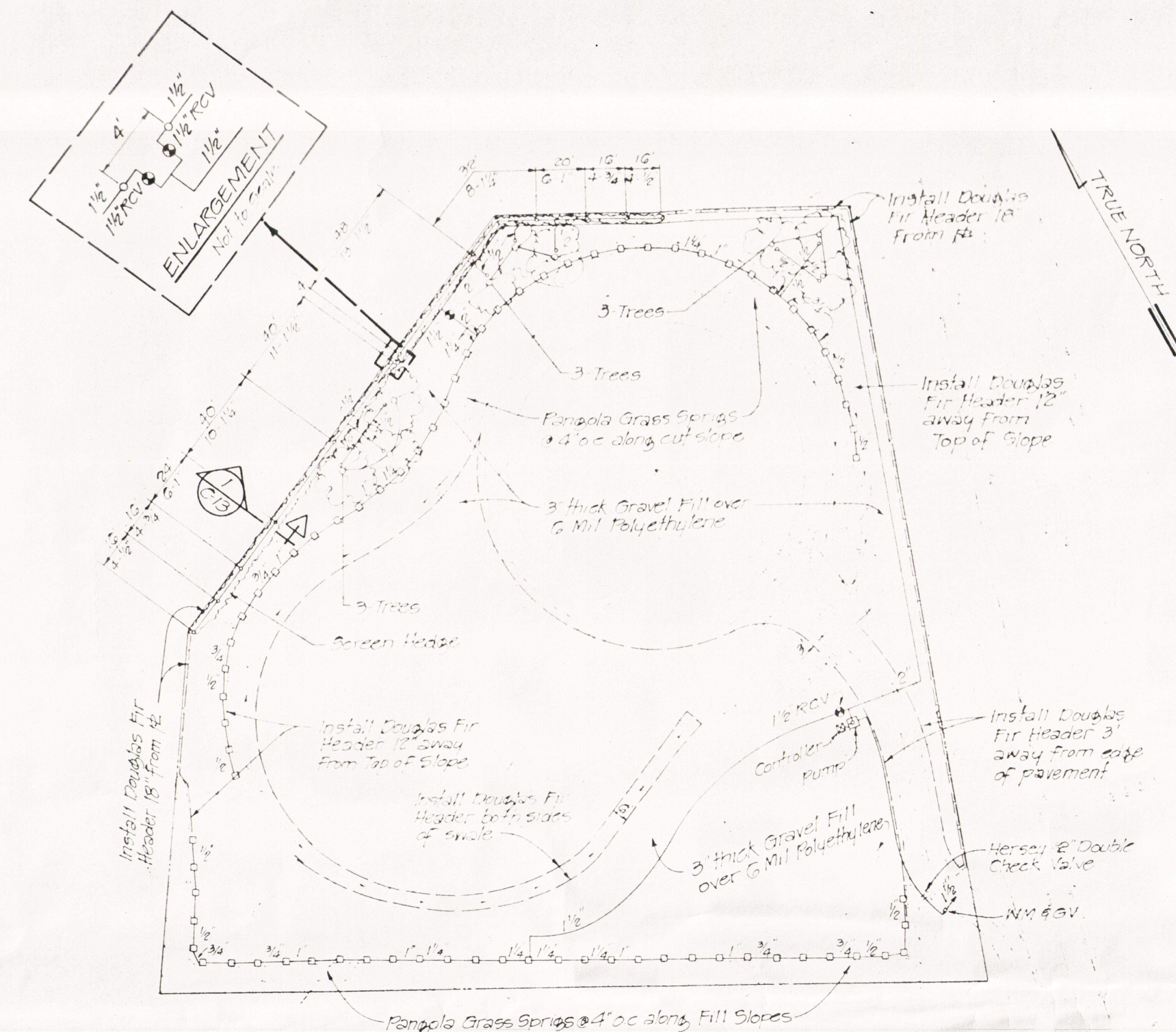
The peak hour flow which is 3 times the average day flow is so much lower than the fire flow plus maximum day that by inspection, it was concluded that the



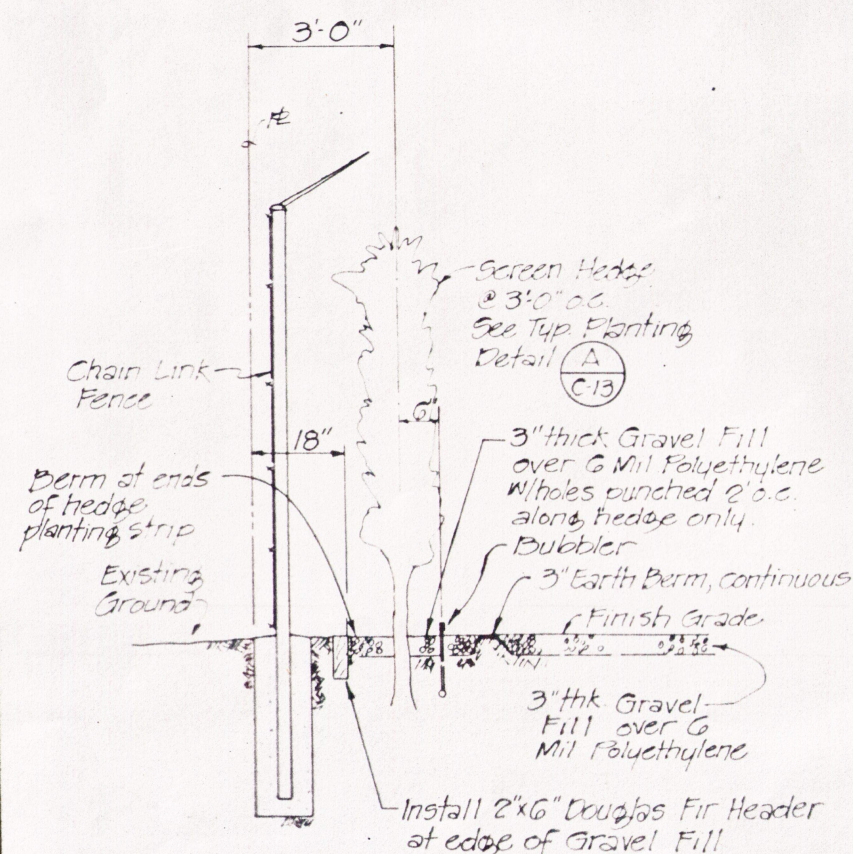
mains set forth in Exhibit D and again in Exhibit C would carry the peak hour flow with sufficient residual pressures in the main.

This report considered the primary mains for the entire development. When the individual tracts are laid out, tests for adequacy must be made and proper loops designed to provide the flow and pressures set forth in the criteria contained herein.

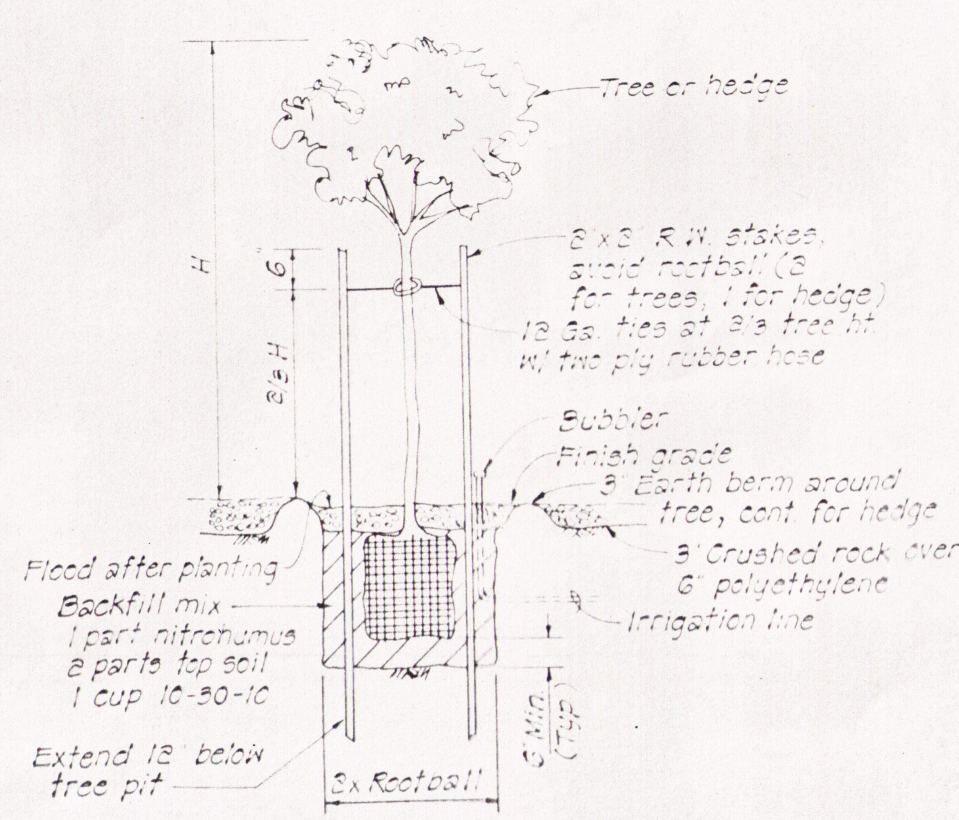




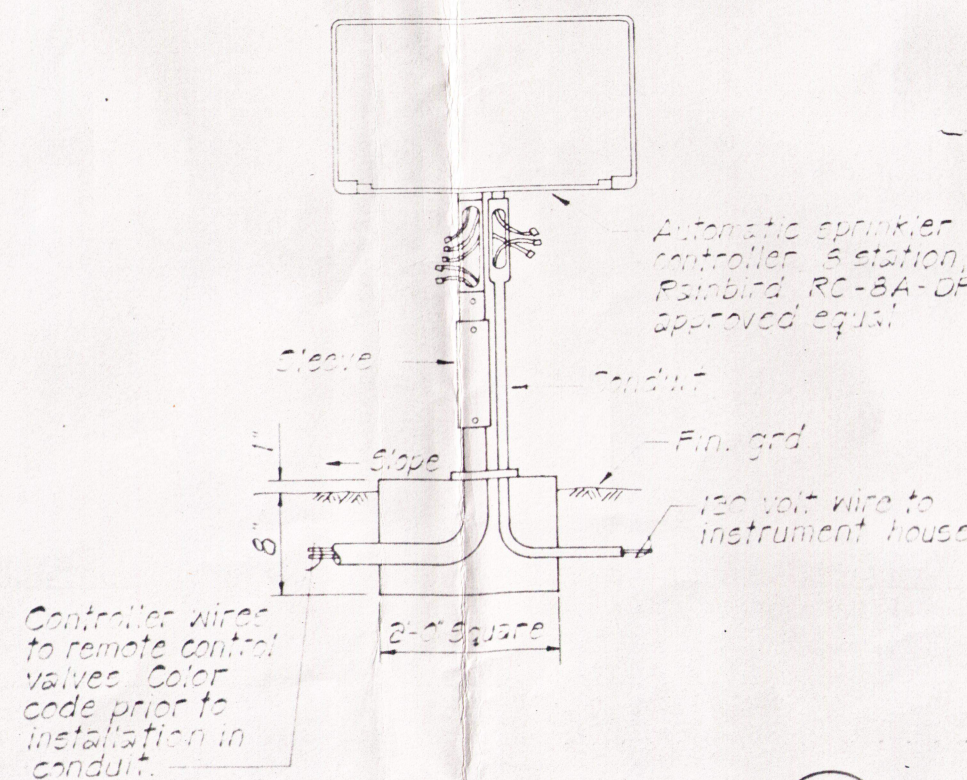
**IRRIGATION & LANDSCAPING PLAN**  
Scale 1"=40'



**SECTION I**  
NOT TO SCALE C-13



**TYPICAL PLANTING DETAIL A**  
NOT TO SCALE C-13

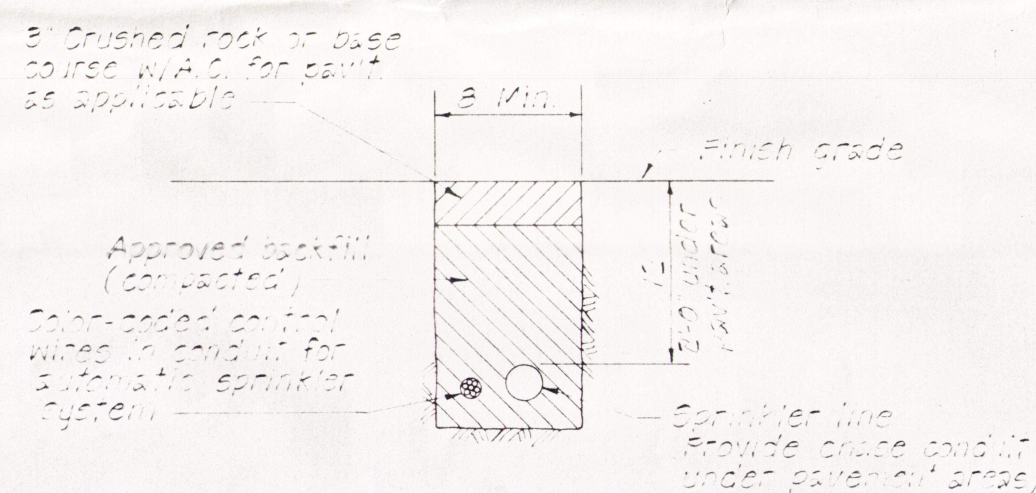


**AUTOMATIC CONTROLLER DETAIL B**  
NOT TO SCALE C-13

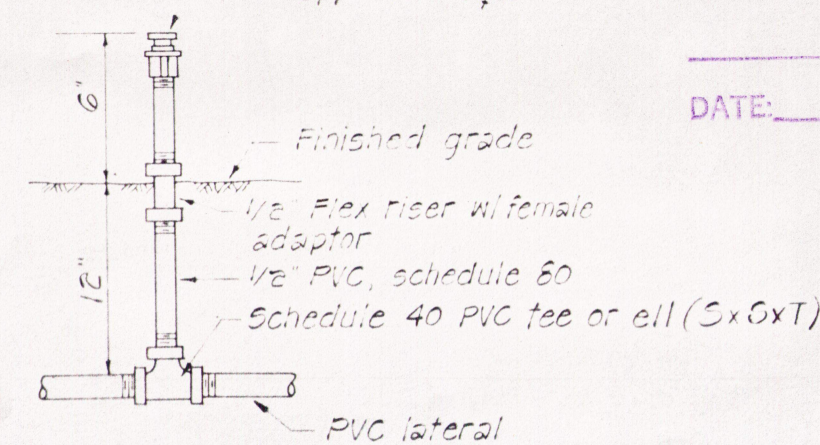
**TYPICAL DOUGLAS FIR HEADER INSTALLATION F**  
NOT TO SCALE C-13

**Notes**

1. Bubbler Heads to be placed near base of hedge 3' 4" o.c. 1-bubbler for every 2-plants
2. Bubbles to be set @ 1-GPM ea



**TYPICAL TRENCH DETAIL D**  
NOT TO SCALE C-13



**SPRAY OR BUBBLER HEAD DETAIL C**  
NOT TO SCALE C-13

**LANDSCAPING AND IRRIGATION NOTES:**

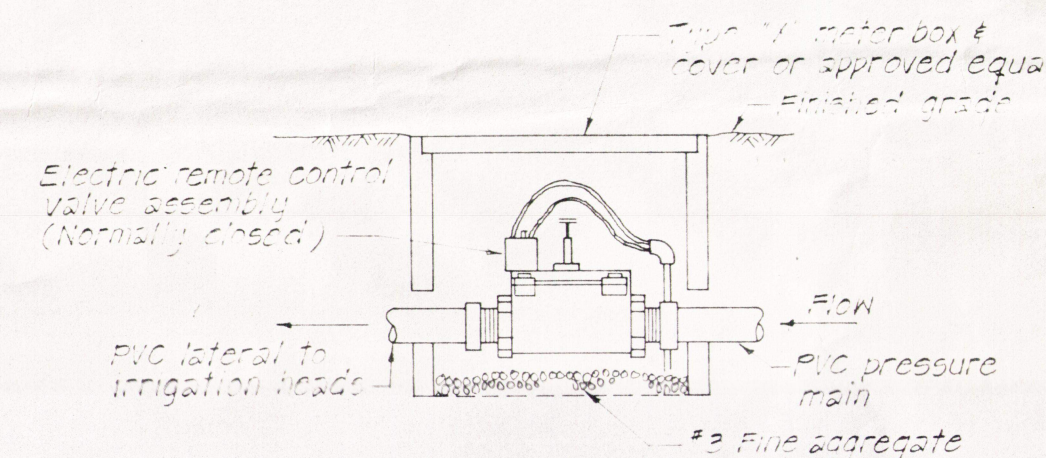
1. CONTRACTOR SHALL STAKE OUT THE LOCATION OF PLANTS PRIOR TO FINAL PLANTING AND SHALL PERFORM FINAL PLANTING ONLY AFTER RECEIVING THE APPROVAL OF THE MANAGER.
2. IRRIGATION SYSTEM SHOWN IS ESSENTIALLY DIAGRAMMATIC. CONTRACTOR SHALL STAKE OUT AND FLAG IRRIGATION HEADS AND VALVES FOR APPROVAL OF THE MANAGER PRIOR TO FINAL INSTALLATION.
3. CONTRACTOR SHALL PROVIDE 120 DAYS MAINTENANCE PERIOD FOR ALL PLANTING.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES.
5. ALL PIPES AND FITTINGS SHALL BE PVC SCHEDULE 40 EXCEPT WHERE OTHERWISE INDICATED.
6. ALL THREADED PVC PIPE SHALL BE SCHEDULE 80.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE "WATER SYSTEM STANDARDS" OF THE BOARD OF WATER SUPPLY, C & C OF HONOLULU, DATED MARCH 1977.

**PLANT LIST**

ITEM	COMMON/LATIN NAME	SIZE & SPACING	HEIGHT	CALIPER	QUANTITY
TREE	FORMOSAN KOA/ACACIA CONFUSA	15 GAL. WHERE SHOWN	12'	1 1/2"	9 EACH
SCREEN HEDGE	PODOCAPUS/NERIFOLIUS	2 1/2 GAL @ 2' O.C.			138 EACH
GRASS	PANGOLA/DIGITARIA DECUMBENS	0 PRIGS @ 4' O.C.			5600 SF

**IRRIGATION EQUIPMENT LIST**

QUANTITY	SYMBOL	DESCRIPTION	MANUFACTURER-NO.	OPERATING PRESSURE (PSI)	FLOW (GPM)	RADIUS (FT.)
74	□	HALF CIRCLE SHRUB HEAD	RAINBIRD 2400 FLT-H	15	0.90	1.0
78	○	BUBBLER HEAD	RAINBIRD 2300	20	1.0	
4	●	1 1/2" ELECTRIC REMOTE CONTROL VALVE (GLOBE)	RAINBIRD 1150 EFA			
1	⊠	AUTOMATIC CONTROLLER (B STATION)	RAINBIRD RC-8A-0P			
1	++	2" DOUBLE CHECK VALVE	HERSEY NO 1			
4		TYPE "X" VALVE BOX	H.C. & D.			
1	⊞	2HP END SUCTION, CENTRIFUGAL PUMP	CRANE DEMING, 3911			



**ELECTRIC REMOTE CONTROL VALVE E**  
NOT TO SCALE C-13

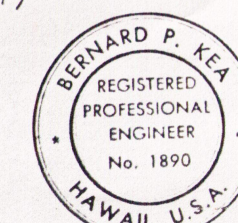
DO NOT REMOVE

FOLDER NO: 78 SUP-1

APPROVED EXHIBIT: 1 OF

APPROVED BY: [Signature]

DATE: 8/14/78



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

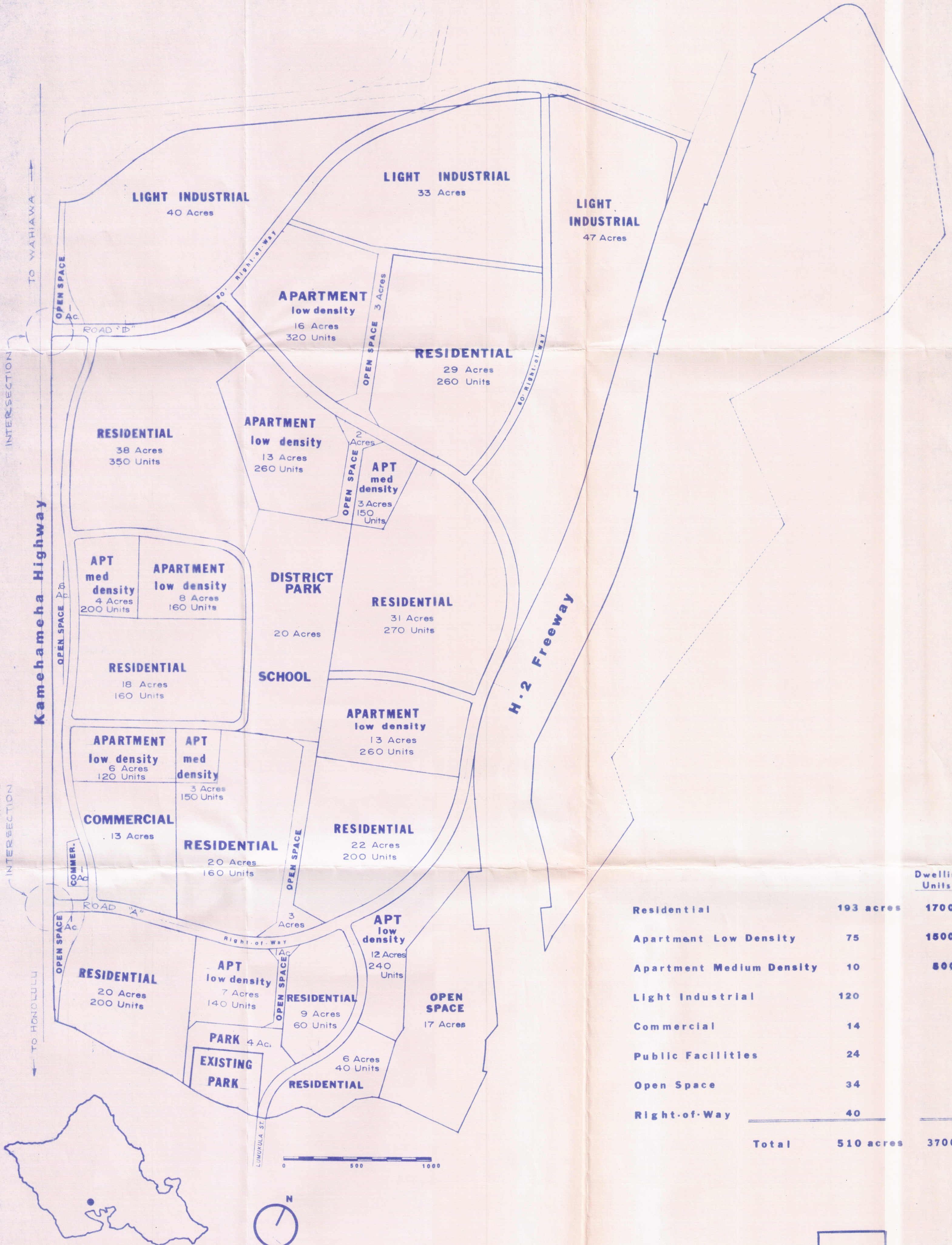
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
COMMUNITY PLANNING INCORPORATED CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS			
<b>GENTRY - WAIPIO PROJECT</b> AT WAIPIO, EWA, OAHU, HAWAII DEVELOPER: GENTRY WAIPIO, A JOINT VENTURE TAX MAP KEY: 9-4-06, PORS 1 & B			
WAIPIO HEIGHTS 595' RESERVOIR			
<b>LANDSCAPING AND IRRIGATION PLAN</b>			
APPROVED: [Signature] CHIEF, PLANNING AND ENGINEERING, B.W.S. DATE: [Signature]			

C-13

SHEET 12 OF 22 SHEETS

EXHIBIT 1





		Dwelling Units
Residential	193 acres	1700
Apartment Low Density	75	1500
Apartment Medium Density	10	500
Light Industrial	120	
Commercial	14	
Public Facilities	24	
Open Space	34	
Right-of-Way	40	
Total	510 acres	3700

PROPOSED DETAILED LAND USE MAP

GENTRY WAIPIO

EXHIBIT  
A

Tax Map Key 9-4-06-08

norman dyer a.i.a. and associates architects & planning consultants 6/76

Site Area 510 Acres



TABULATION OF COMPUTATIONS

Point #	Elevation (MSL)	Length of Line (ft.)	Pipe Diameter (Inches)	Line Number	MAXIMUM DAY WITH FIRE FLOW								REMARKS
					Average Day gpm	Maximum Day gpm	Fire Flow gpm	Maximum Day + Fire Flow gpm	Head Loss ft. Per 1000 Ft.	Head Lost ft.	Spillway - Hdl. Lost - Flow, Grit, Hyd. = Residual Hdl. ft.	Convert to Residual Pressure psi	
8	310	1350	12	H									Test for apt. flow Resid.
9	330	1300	12	I									
10	370	1475	12	J-1	583	876	2000	2876	23 (12)	34	77	33	
			12	J			1000	1876	11.9 (12)	18	93	40	
11	410	1050	16	K	793	1190	4000	5190	15.4	16	71	31	
12	420	700	16	L	871	1307	4000	5307	15.4	11	93	40	
13	440	1300	16	M	871	1307	4000	5307	15.4	20	84	36	



## TABULATION OF COMPUTATIONS

[illegible]





3.0 Million Gallon Reservoir  
Spillway Elev. = 595'



		Dwelling Units
Residential	193 acres	1700
Apartment Low Density	75	1500
Apartment Medium Density	10	500
Light Industrial	120	
Commercial	14	
Public Facilities	24	
Open Space	34	
Right-of-Way	40	
Total	510 acres	3700

NOTE: MAINTENANCE ACCESS SHALL BE PLACED OVER ALL WATER MAINS IN EASEMENT AREAS.

# PROPOSED DETAILED LAND USE MAP

Tax Map Key 9-4-06-08

GENTRY WAIPIO

norman dyer a.i.a. and associates architects & planning consultants Dec. 14, 1976

EXHIBIT  
**D**

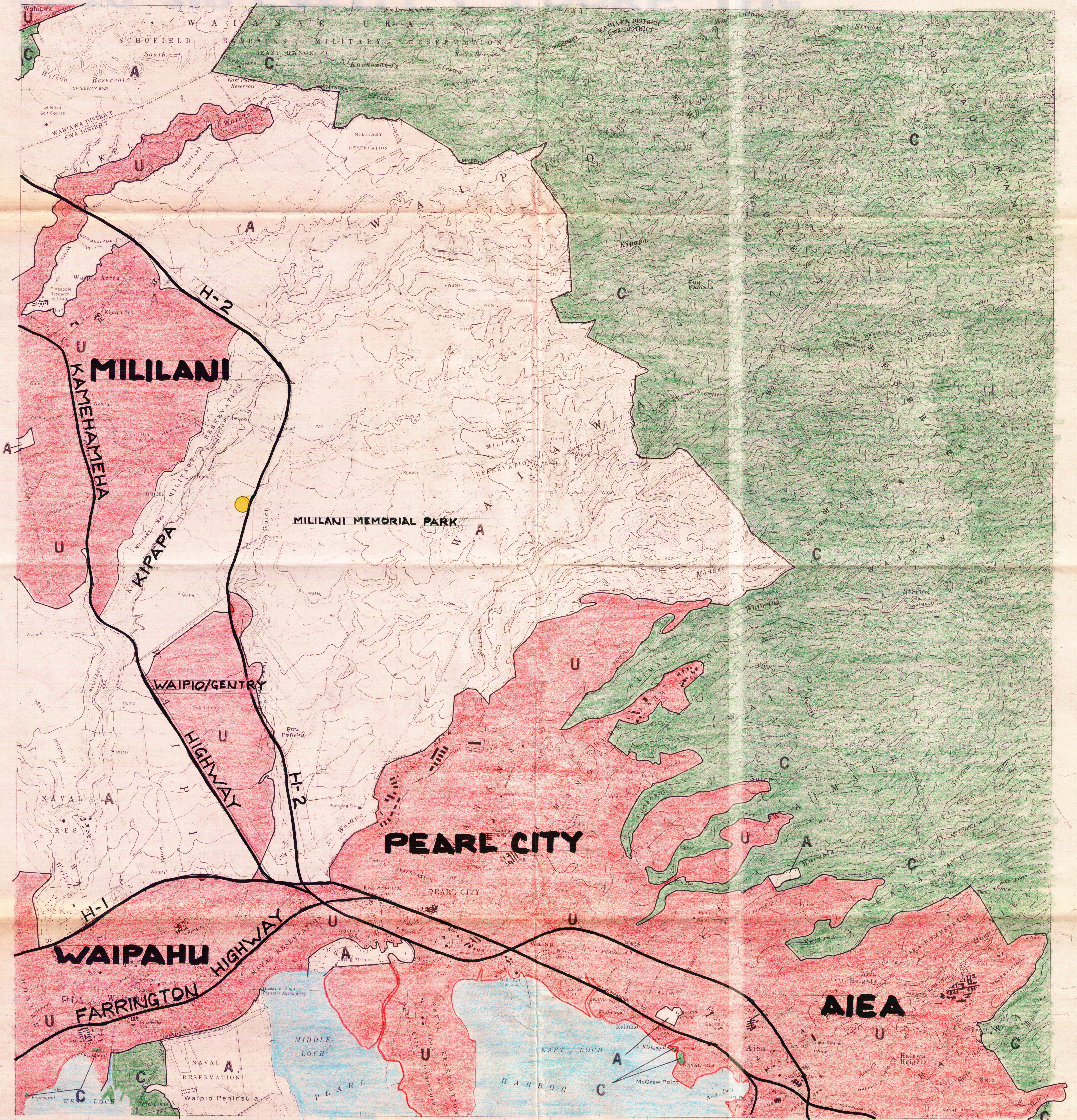
# WATER SYSTEM MASTER PLAN



BEFORE FIELD COMPLETION  
This is a copy of a U. S. Geological Survey manuscript compiled by photogrammetric methods. It does not include information to be obtained during field completion surveys.

LAND USE DISTRICT BOUNDARIES		
DISTRICT MAP	STATE OF HAWAII LAND USE COMMISSION DEPT. OF PLANNING & ECONOMIC DEVELOPMENT EFFECTIVE DATE: DEC 20 1974	DISTRICTS U = URBAN R = RURAL A = AGRICULTURAL C = CONSERVATION
0-9		

WAIPAHU QUADRANGLE



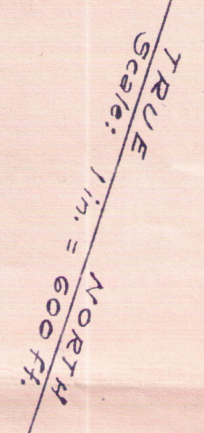
SP78-312 CASTLE & COOKE, INC.

0-9

WAIPAHU, HAWAII  
N2122.5-W15754.7.5



WALP10 UKA



NOTICE: Owner's, lessee's and names recorded by this conveyance may not be current. Please refer to the Official Record of the County of Santa Clara, 1986, as amended by RPP Record dated July 2, 1976.

**NOTICE:** Owner's, lessee's and vendee's names recorded on this tax map print may not be current. Reversion Administrative Directive 24-68 (Rev.) dated November 2, 1968, as amended by RPP Procedure 4-7, dated July 2, 1976.

Dropped Barrels: 4, 6,

FIRST	DIVISION	
ZONE	SEC.	TRACT
9	4	06
CONTAINING		PARCELS
SCALE: 1 in. = 600 FT.		

SCALE: 1 in. = 600 Ft.

PRINTED  
AUG 2

640

2-4-13:14



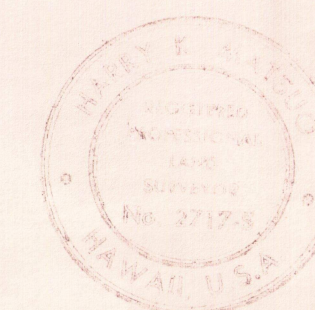


**LAND COURT**  
STATE OF HAWAII

**LAND COURT APPLICATION 1000**

SUBDIVISION OF LOT 4204-B  
AS SHOWN ON MAP  
INTO LOTS 4204-B-1 AND 4204-B-2  
AND DESIGNATION OF EASEMENT B  
OVER AND ACROSS LOT 4204-B-2  
AT WAIPIO, EWA, OAHU, HAWAII

700 Bishop Street, Suite 608  
Honolulu, Oahu, Hawaii



COMMUNITY PLANNING, INC.  
BY: Harry K. Matsuo  
Registered Professional Surveyor  
Certificate Number 2717  
Land Court Surveyor Certificate Number 162

OWNER: Castle and Cooke, Inc.  
OWNER'S CERTIFICATE OF TITLE:

AUTHORIZED AND APPROVED BY ORDER OF THE JUDGE  
OF THE LAND COURT DATED \_\_\_\_\_  
BY ORDER OF THE COURT.

REGISTRAR OF THE LAND COURT

NOTE:  
Area of Easement B = 131,123 Sq. Ft.

--- denotes no access permitted  
--- denotes limited access as noted on plan



# CONSTRUCTION PLANS FOR GENTRY - WAIPIO PROJECT

1.5 M.G. RESERVOIR, DEEP WELLS,  
WATERLINES AND ACCESS ROAD  
AT WAIPIO, EWA, OAHU, HAWAII

OWNER AND DEVELOPER: GENTRY WAIPIO,  
A JOINT VENTURE

COMMUNITY PLANNING, INC.

CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS

700 BISHOP ST., HONOLULU, HAWAII

PRELIMINARY PLAN  
JAN 16 1978  
SUBJECT TO CHANGE

*Bernard P. Kea*

## INDEX

DESCRIPTION	SHEET NO.
TITLE SHEET	1
WAIPIO HEIGHTS WELLS II, PLAN AND DETAILS	2 - 8 (C-1 To C-7)
WAIPIO HEIGHTS 595' RESERVOIR, PLAN AND DETAILS	9 - 12 (C-8 To C-11)
WAIPIO HEIGHTS WELLS II, LANDSCAPE, WATER AND IRRIGATION PLAN	13 (C-12)
WAIPIO HEIGHTS 595' RESERVOIR, LANDSCAPE AND IRRIGATION PLAN	14 (C-13)
WAIPIO HEIGHTS WELLS II, SOUND ATTENUATING ENCLOSURE FOR VERTICAL TURBINE PUMPS	15 - 16 (C-14 To C-15)
CHAIN LINK FENCE AND DRIVE GATE DETAILS	17 (C-16)
SECURITY LATCHSET STANDARD	18 (C-17)
WAIPIO HEIGHTS 595' RESERVOIR, 1.5 M. G. RESERVOIR DETAILS	19 - 23 (R-1 To R-5)
WAIPIO HEIGHTS WELLS II, CONTROL BUILDING	
ARCHITECTURAL PLANS AND DETAILS	24 - 27 (A-1 To A-4)
STRUCTURAL PLANS AND DETAILS	28 - 29 (S-1 To S-2)
PLUMBING PLAN AND DIAGRAMS	30 (M-1)
WAIPIO HEIGHTS WELLS II AND WAIPIO HEIGHTS 595' RESERVOIR	
ELECTRICAL PLAN AND DETAILS	31 - 42 (E-1 To E-12)
GENERAL NOTES	43
TYPICAL ROAD SECTIONS	44 - 45
WATERLINE AND ACCESS ROAD - PLAN AND PROFILE	
ROAD "A"	46 - 47
ROAD "B"	48 - 49
ROAD "C"	50 - 52
ROAD "D"	53 - 55
TRANSMISSION MAIN AND ACCESS ROAD - PLAN AND PROFILE	56 - 60
TYPE "A" MANHOLE DETAILS	61
ELECTRICAL CONDUIT TRENCH, MANHOLE AND MISCELLANEOUS DETAILS	62

## APPROVED:

MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY

DATE

DIRECTOR & CHIEF ENGINEER, DEPT. OF PUBLIC WORKS

DATE

CHIEF, LAND TRANSPORTATION FACILITIES, DIVISION,  
STATE OF HAWAII (APPROVAL GRANTED FOR WORK WITHIN STATE R/W ONLY)

DATE

CHIEF, ENVIRONMENTAL PROTECTION & HEALTH SERVICES DIV

DATE

DO NOT REMOVE

FOLDER NO: 78 SUP-1

APPROVED EXHIBIT: 1 OF

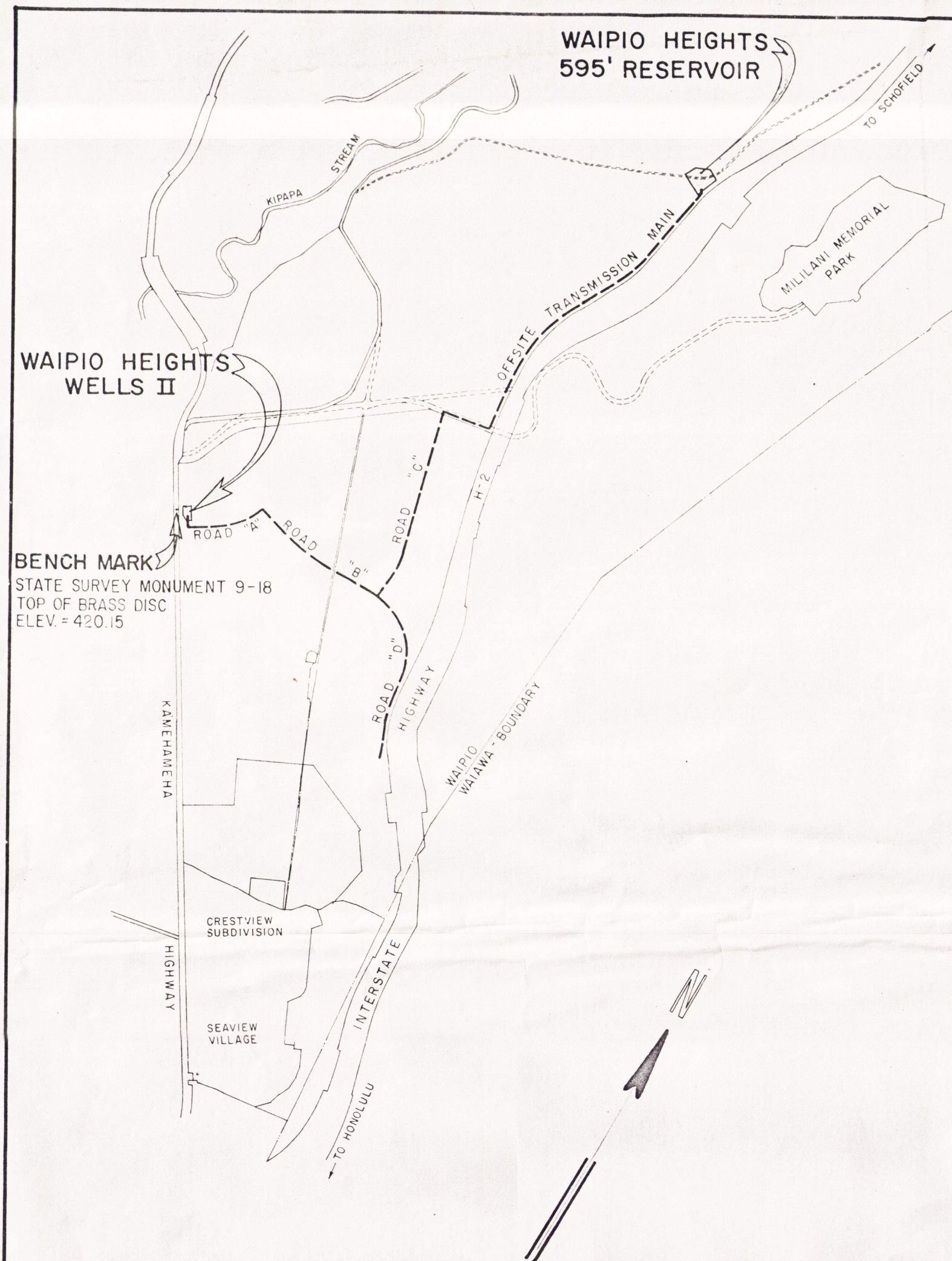
APPROVED BY: *G. Jennings*

NO.

DATE: 7/14/78

SHEET 1 OF 62 SHEETS

EXHIBIT 1

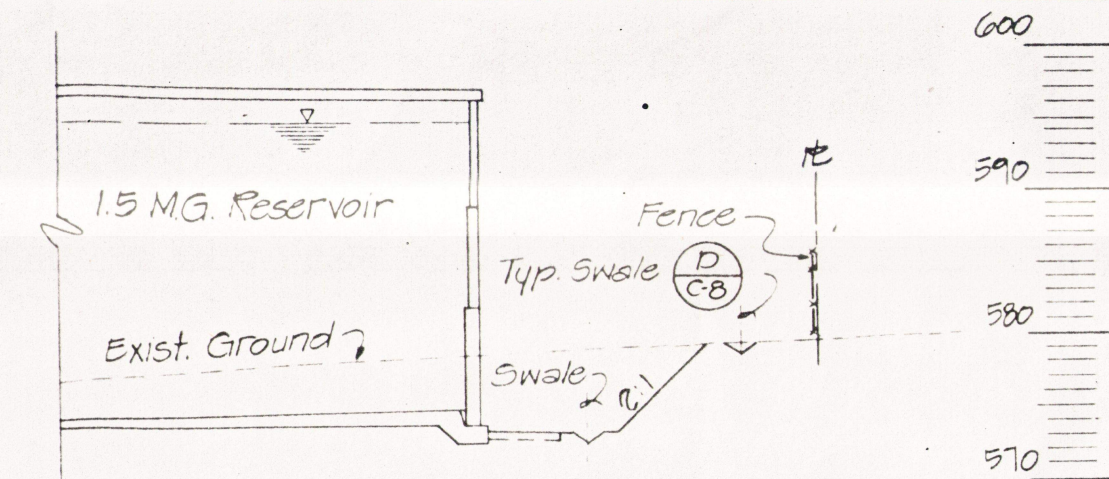
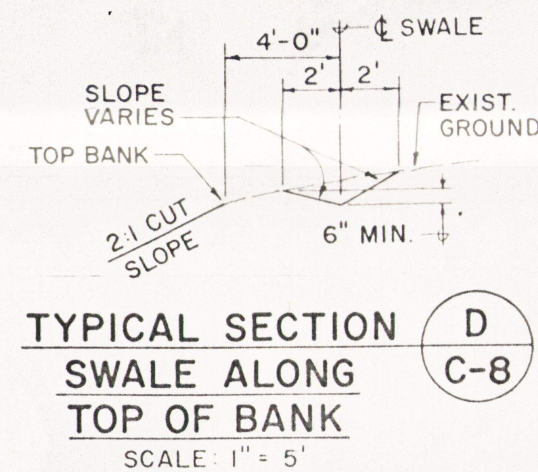


LOCATION MAP

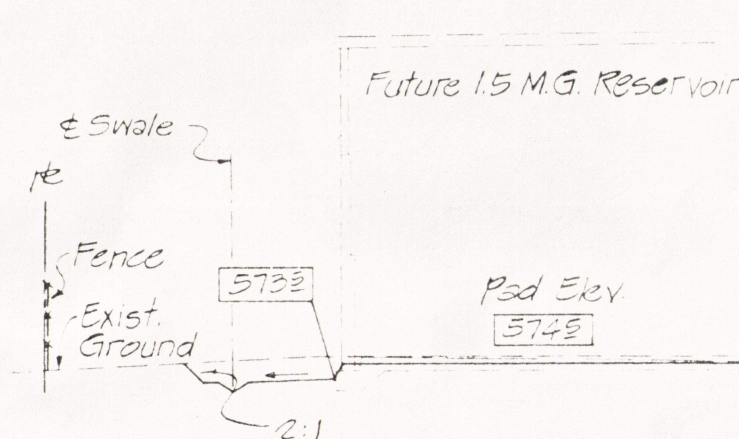
SCALE: 1" = 1200'

TAX MAP KEY 9-4-06 PORS 188

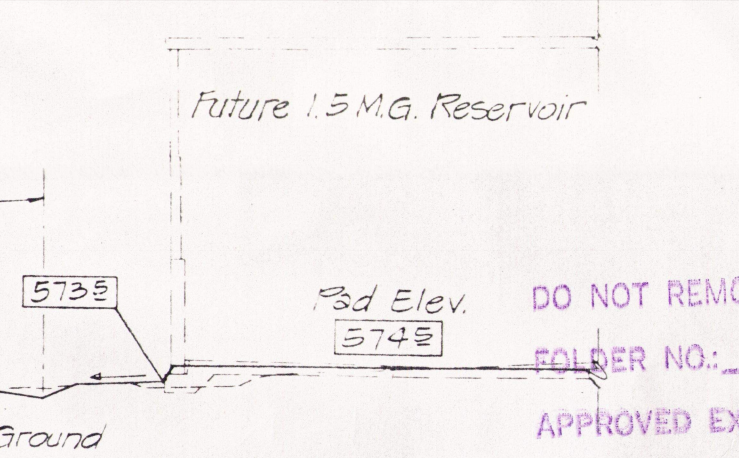




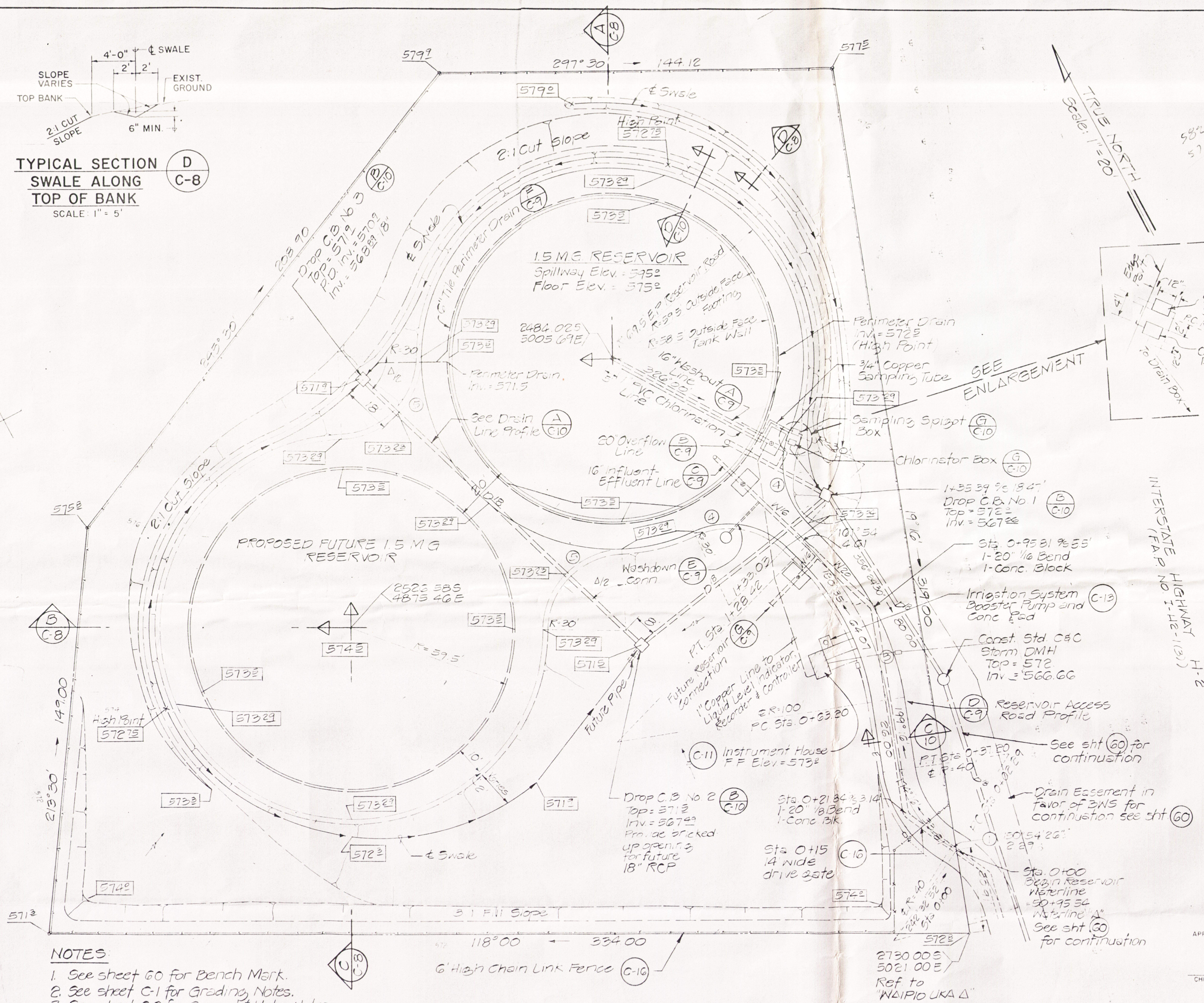
SECTION A C-8  
SCALE: HOR. 1" = 20'  
VERT. 1" = 10'



SECTION B C-8  
SCALE: HOR. 1" = 20'  
VERT. 1" = 10'



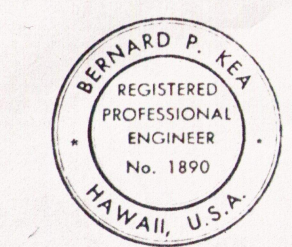
SECTION C C-8  
SCALE: HOR. 1" = 20'  
VERT. 1" = 10'



**EARTHWORK QUANTITIES**  
 EXCAVATION = 3,547 C.Y.  
 EMBANKMENT = 485 C.Y.  
 AREA TO BE GRADED = 1.92 ACS.

**LEGEND**  
 572.2 Finish Grade  
 571.2 Existing Ground

CURVE DATA					
Curve	(1)	(2)	(3)	(4)	(5)
Δ	3°16'52"	50°00'	31°22'	68°47'19"	81°00'50"
Δ/2	1°38'26"	25°00'	15°41'	34°23'39"	40°30'25"
R	40.00	40.00	100.00	30.00	30.00
T	1.14	18.65	33.81	20.34	28.47
C	2.29	33.81	64.07	33.89	41.31
Lc	2.29	34.91	65.22	36.02	45.56



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

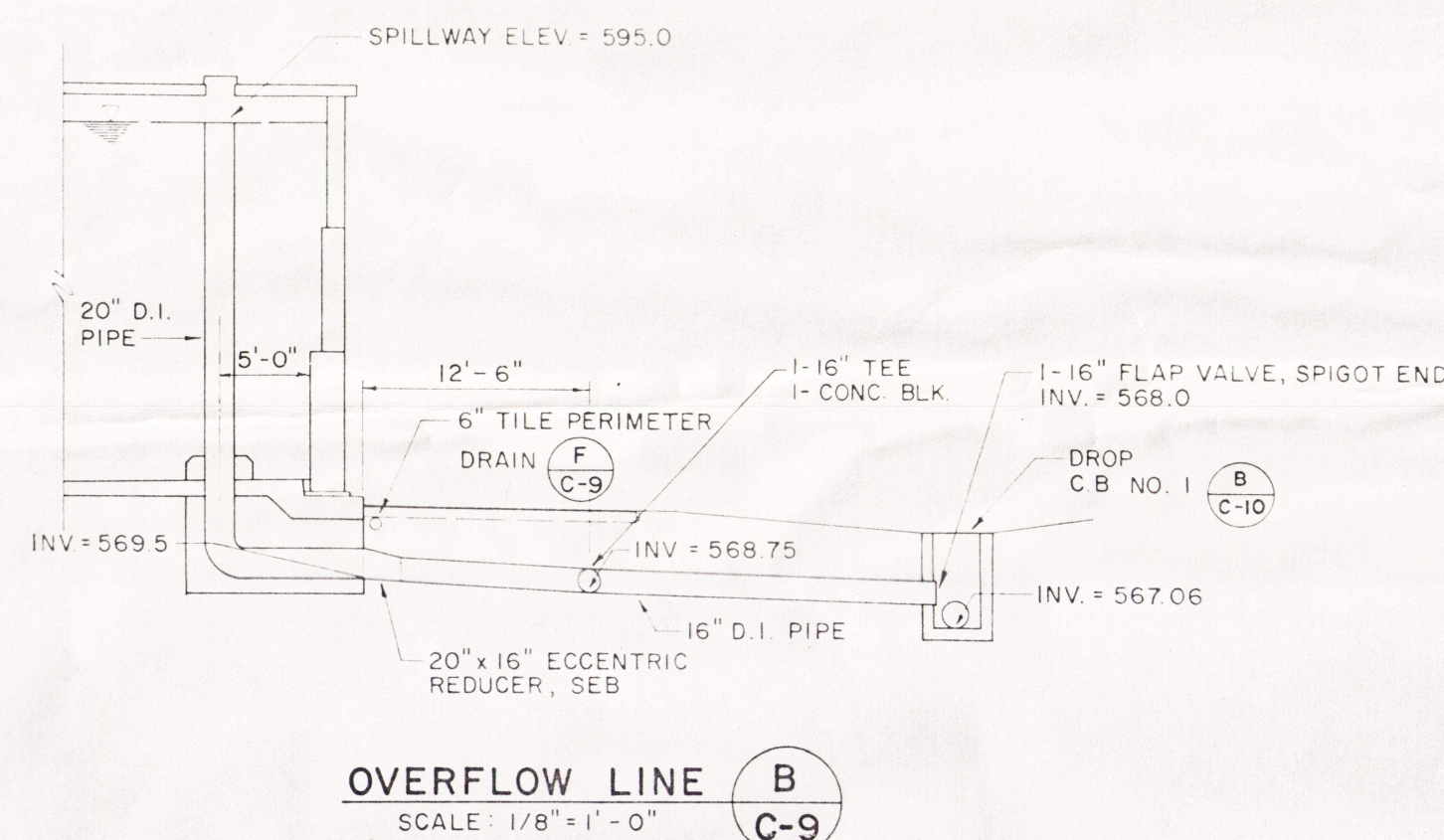
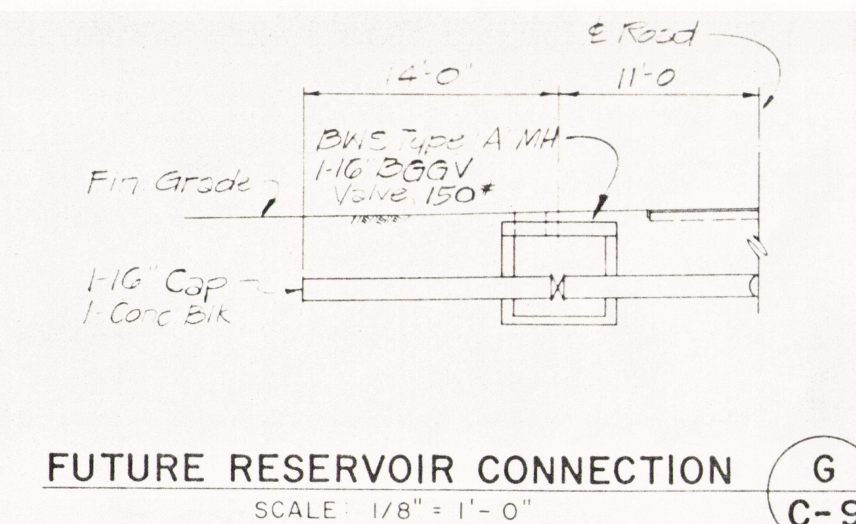
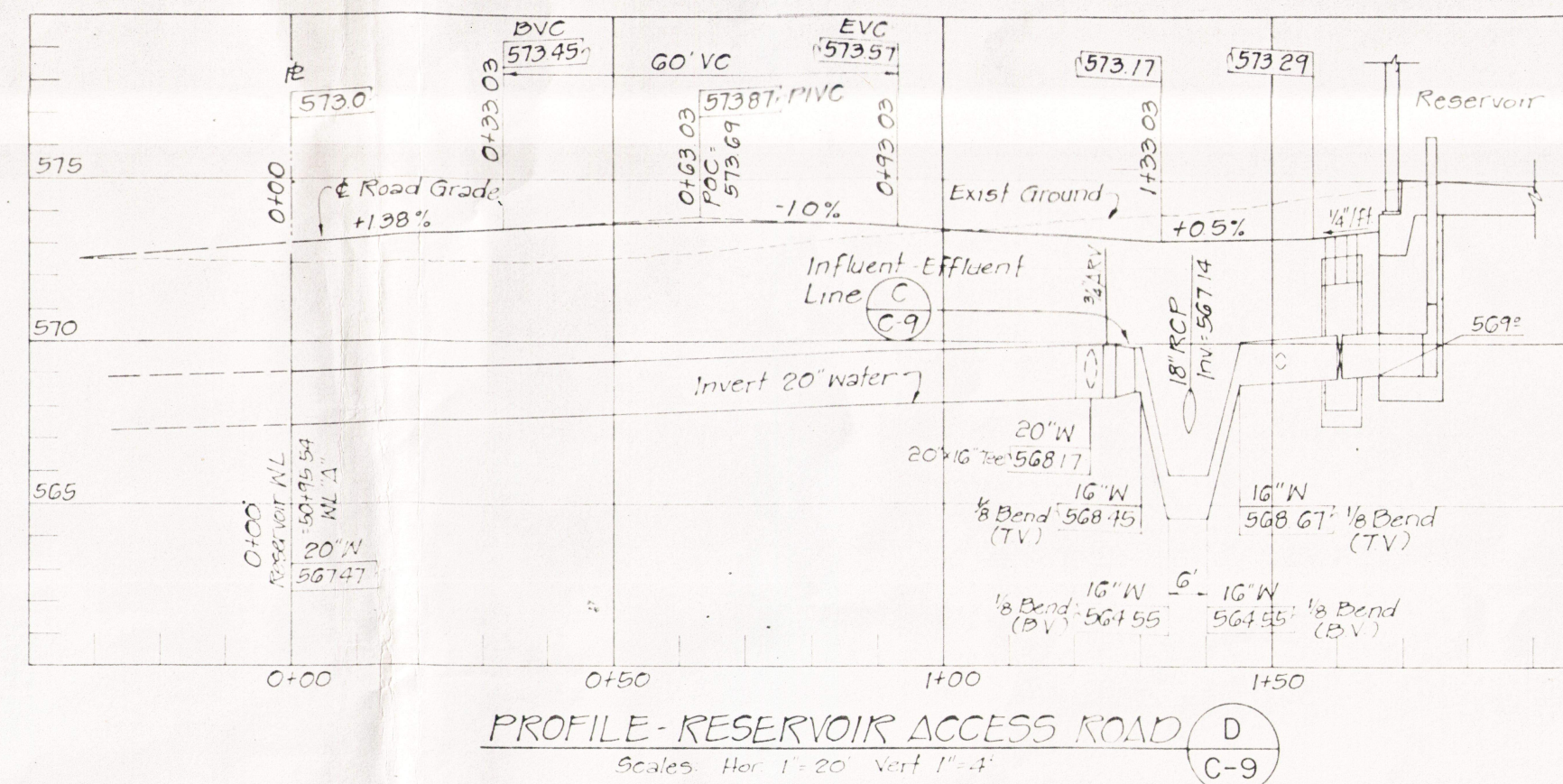
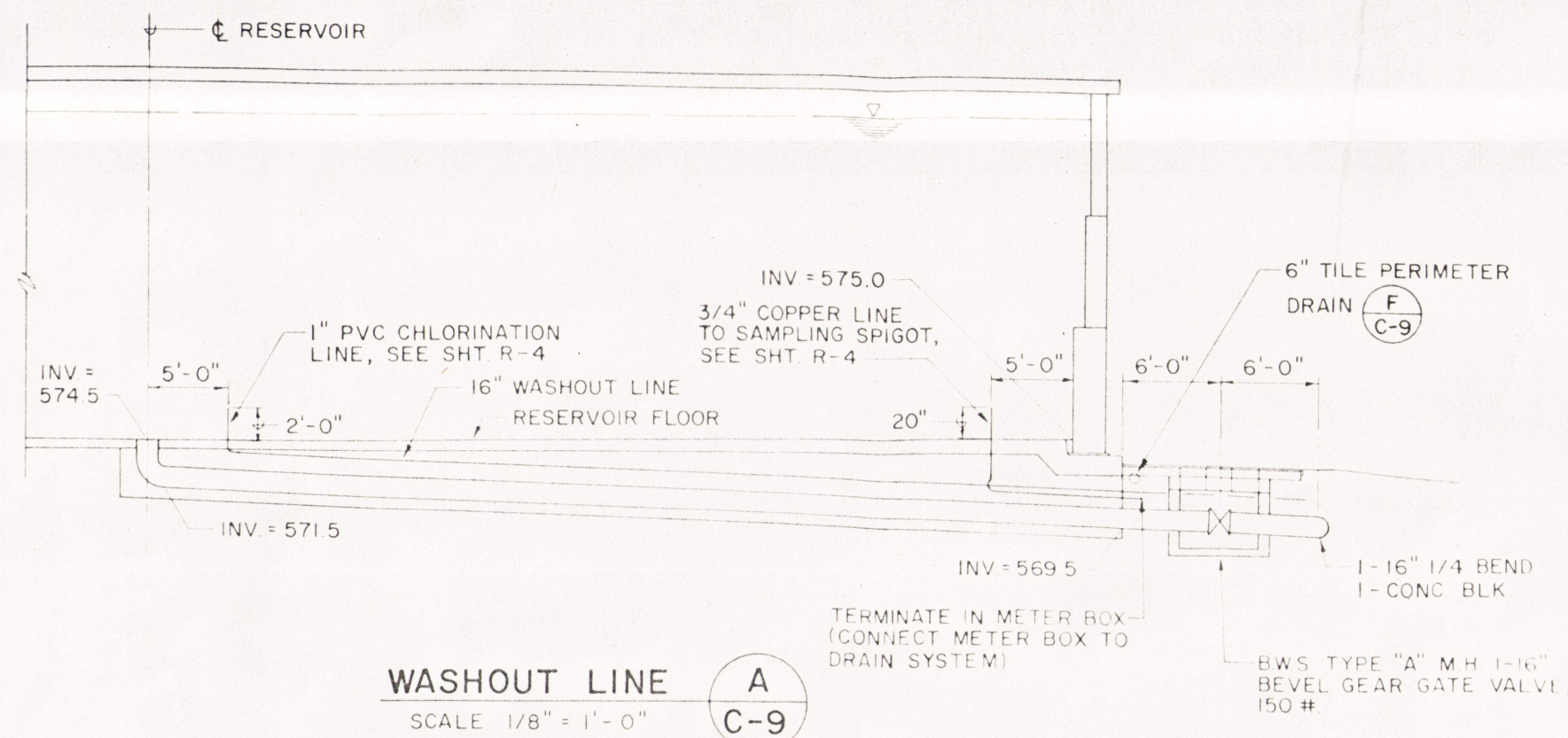
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
COMMUNITY PLANNING INCORPORATED CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS			
<b>GENTRY - WAIPIO PROJECT</b> AT WAIPIO, EWA, OAHU, HAWAII DEVELOPER: GENENTRY WAIPIO, A JOINT VENTURE TAX MAP KEY: 9-4-06: PORS. 1 & 8			
WAIPIO HEIGHTS 595' RESERVOIR <b>GRADING &amp; SITE PLAN</b> <b>AND SECTIONS</b>			
APPROVED: <i>Bernard P. Kea</i> CHIEF, PLANNING AND ENGINEERING, B.W.S. DATE: 8/14/78 REG. ENGR. CERT. NO. 1890			
FILE	POCKET	FOLDER	NO.

C-8

SHEET 9 OF 22 SHEETS

EXHIBIT 1

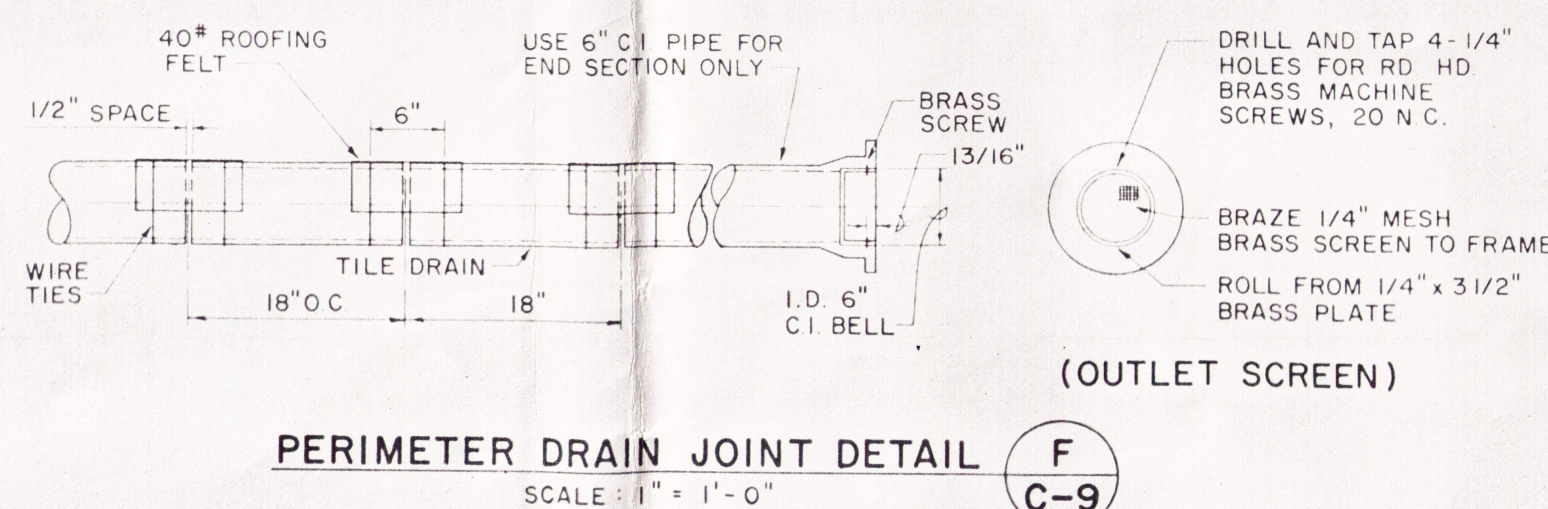
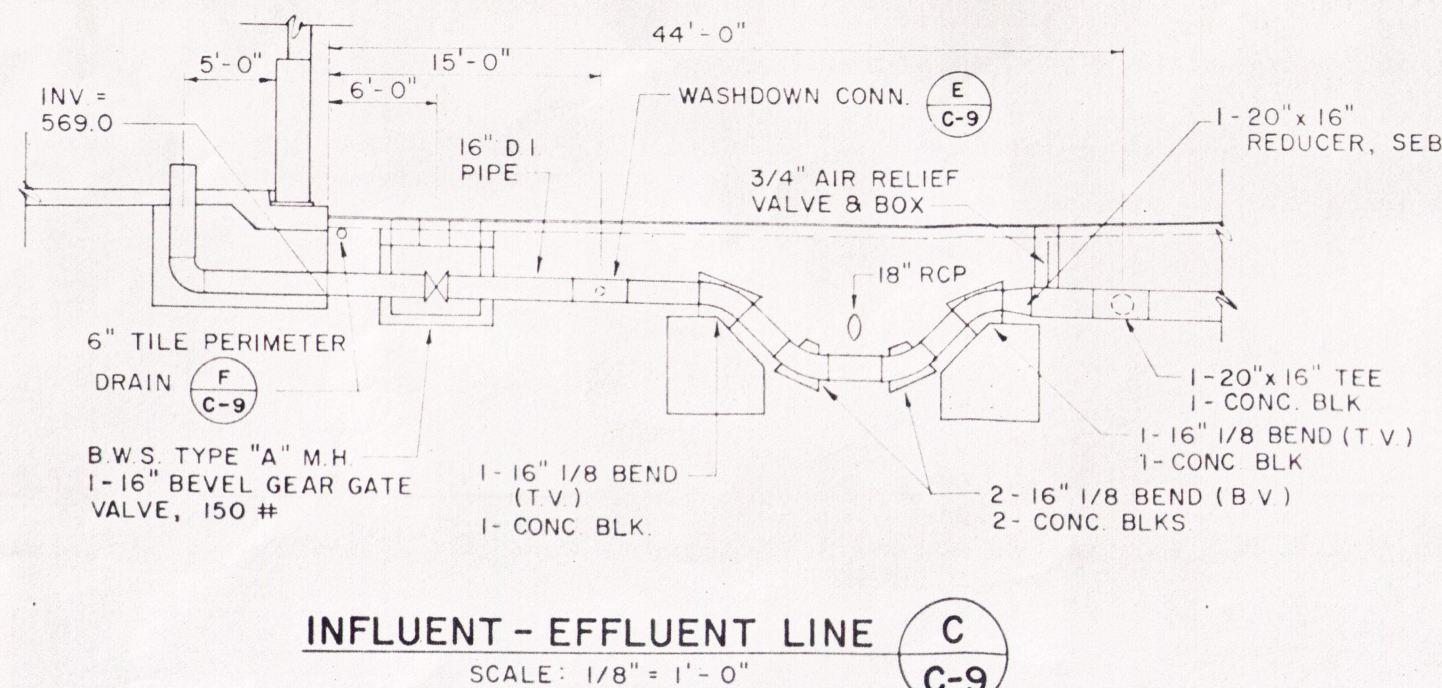
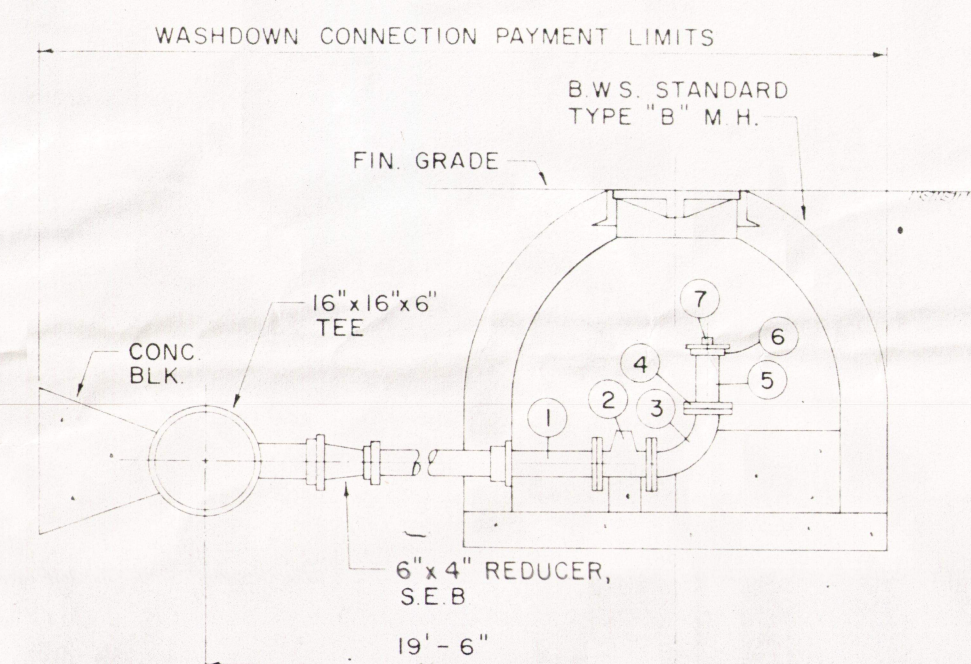




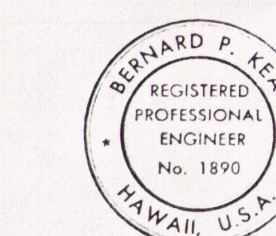
**LIST OF FITTINGS**

ITEM NO.	DESCRIPTION
1	4" x 18" F.S. PIPE
2	4" FLANGED G.V. W/HAND WHEEL
3	4"-1/4 BEND FL. LONG PATTERN
4	4" COMPANION FLANGE
5	4" x 9" DBL-X GALV. PIPE
6	4" x 4 1/4" BRASS HOSE NIPPLE POWHATAN BRASS & IRON WORKS 155 FEMALE END 4" STANDARD PIPE THREAD MALE END 4 1/2" HOSE THREAD (HON. FIRE DEPT. STANDARD)
7	4 1/2" HOSE CAP 126 POWHATAN BRASS & IRON WORKS HON FIRE DEPT. STANDARD

**NOTE:**  
ALL FLANGES FACE & DRILLED FOR  
ASA CLASS 125, B16.1



DO NOT REMOVE  
FOLDER NO.: \_\_\_\_\_  
APPROVED EXHIBIT: \_\_\_\_\_ OF \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION,

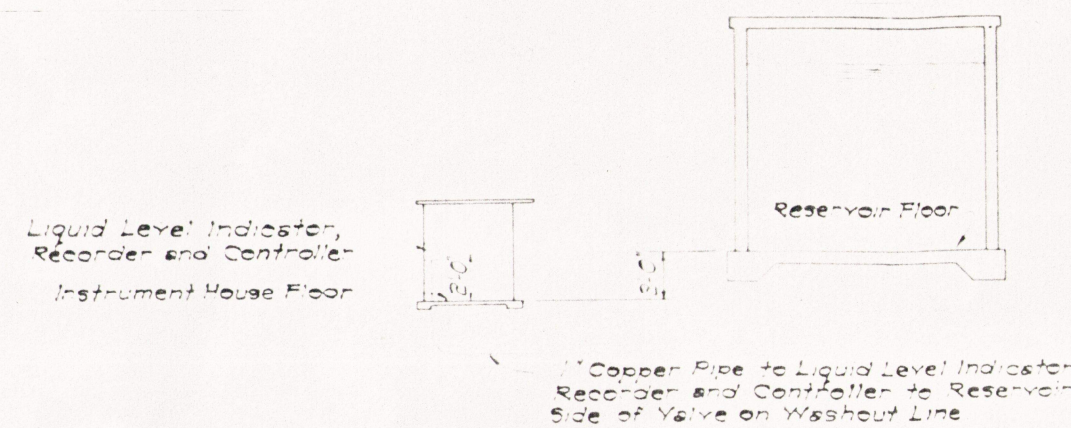
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
COMMUNITY PLANNING INCORPORATED CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS			
<b>GENTRY - WAIPIO PROJECT</b> AT WAIPIO, EWA, OAHU, HAWAII DEVELOPER: GENENTRY WAIPIO, A JOINT VENTURE TAX MAP KEY: 9-4-06: PORS 1 & 8			
WAIPIO HEIGHTS 595' RESERVOIR <b>MISCELLANEOUS DETAILS AND SECTIONS</b>			
APPROVED CHIEF, PLANNING AND ENGINEERING, B.W.S. DATE <i>Bernard P. Kea</i> REG. ENGR. CERT. NO. 1890			

C-9

SHEET 10 OF 22 SHEETS

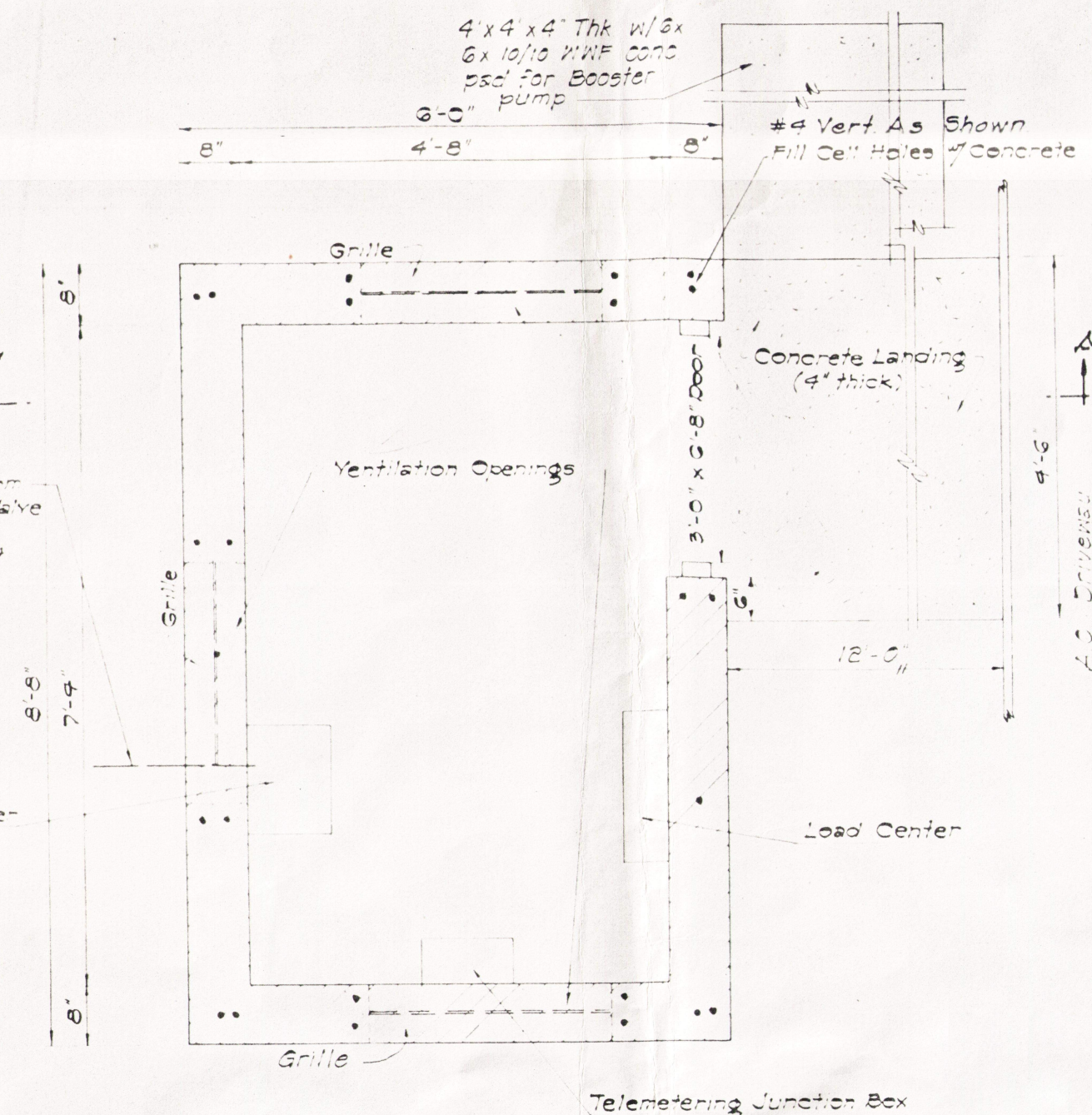
FILE	POCKET	FOLDER	NO.
------	--------	--------	-----



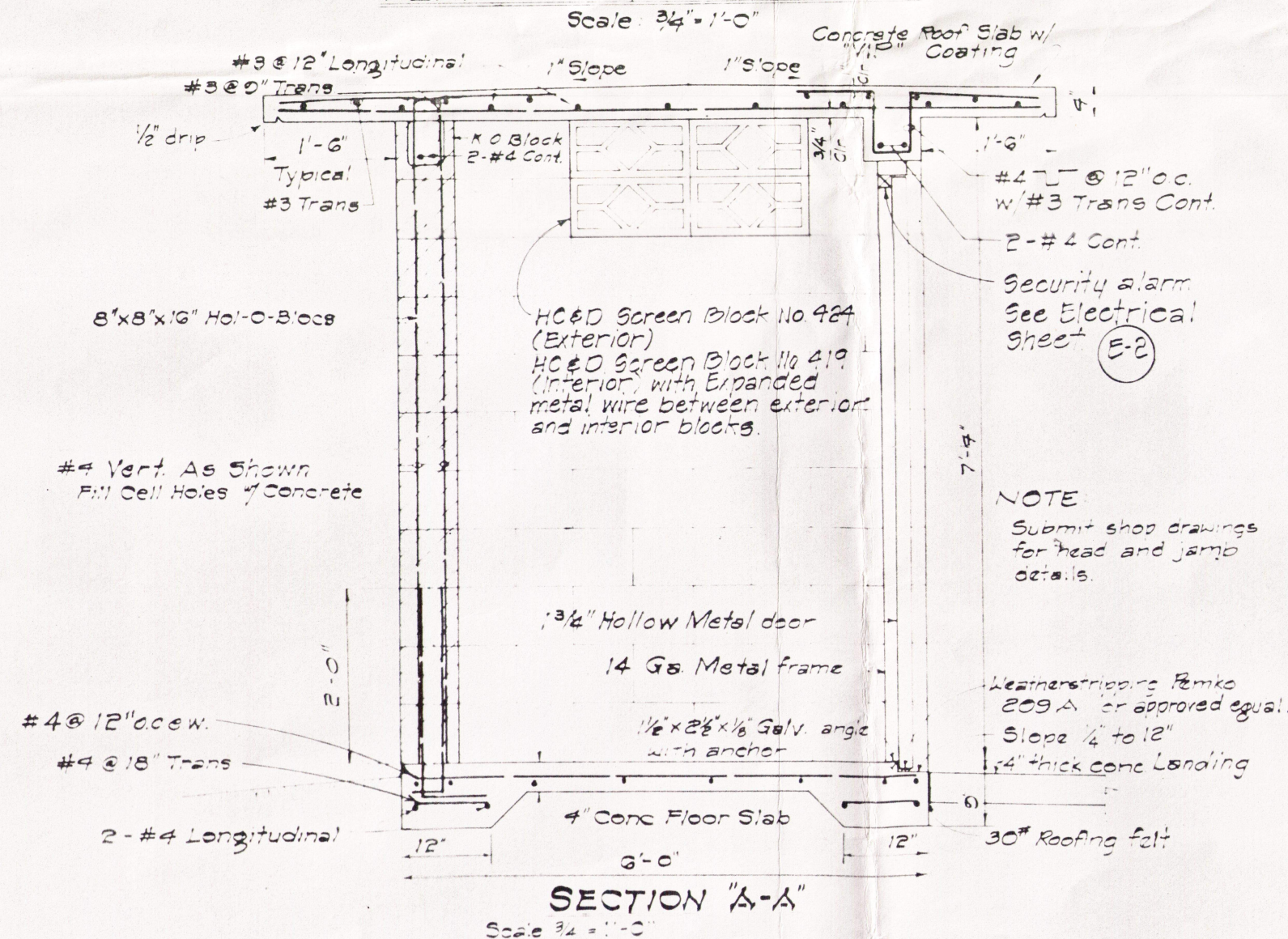


**SCHEMATIC LAYOUT OF INSTALLATION**  
Not to Scale

Liquid Level Indicator,  
Recorder and Controller  
(Foxboro or Equal)  
See Specifications



**PLAN OF INSTRUMENT HOUSE**  
Scale 3/4" = 1'-0"



NOTE  
Submit shop drawings  
for head and jamb  
details.

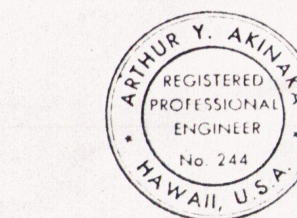
Leatherstripping Remko  
229-A or approved equal.  
Slope 1/4" to 12"

**INSTRUMENT HOUSE NOTES:**

1. MOUNT LIQUID LEVEL INDICATOR, RECORDER AND CONTROLLER AT THE SAME OR LOWER ELEVATION AS THE BOTTOM OF THE RESERVOIR.
2. FLOOR OF THE INSTRUMENT HOUSE SHALL BE 2'-0" BELOW THE BOTTOM OF THE RESERVOIR.
3. ELIMINATE FOUR 8"x 8"x 16" HOL-O-BLOCKS AND PLACE SCREEN BLOCKS (HC & D NO. 424 AND 419) ON THREE SIDES AS SHOWN.
4. WALLS OF INSTRUMENT HOUSE BELOW GROUND LEVEL SHALL BE MADE WATERPROOF, AS REQUIRED.
5. INSTALL PERIMETER DRAINS, AS REQUIRED.
6. DOOR TO BE 1-3/4" THICK, 16 GAGE HOLLOW METAL WITH MINERAL WOOL CORE (DOOR SIZE 3'-0" x 6'-8"), SHALL MEET UL "B" LABEL REQUIREMENTS AND DESIGNED FOR USE WITH STANDARD BUILDER'S HARDWARE AND 14 GAGE DOOR FRAME. LOCKSET SHALL BE SARGENT 7815 EC WITH SECURITY LATCHSET. BUTTS SHALL BE STANLEY FBB 199 STSD 4-1/2 x 4-1/2, WMP. SHOP DRAWINGS REQUIRED BEFORE FABRICATION.
7. CONDUITS FOR INCOMING POWER AND TELEMETERING CABLE SHALL BE 2". LOCATION OF CONDUITS SHALL BE DETERMINED BY THE MANAGER.
8. SURFACE MOUNT WESTINGHOUSE TYPE NLAB 04 3AB 050 LOAD CENTER, 4'-6" FROM FLOOR TO CENTER WITH 10"x 12"x 6" JUNCTION BOX BELOW AND CONNECTED TO LOAD CENTER WITH 2 - 1-1/2" CONDUITS.
9. SURFACE MOUNT 10"x 12"x 6" JUNCTION BOX FOR TELEMETERING 4'-6" FROM FLOOR TO CENTER AND INTERCONNECT TO LOAD CENTER JUNCTION BOX WITH 3/4" CONDUIT.
10. RUN 3/4" CONDUITS, ONE EACH TO LOAD CENTER AND TO TELEMETERING BOX FROM LIQUID LEVEL INDICATOR, RECORDER AND CONTROLLER.
11. MOUNT TWO DUPLEX OUTLETS 12" ABOVE FLOOR.
12. INTERIOR LIGHT SHALL BE BENJAMIN HEAVY DUTY WATERTIGHT NO. 6801 WITH GLOBE AND GUARD.
13. RUN 1" COPPER PIPE FROM RESERVOIR SIDE OF VALVE ON WASHOUT LINE AND CONNECT TO LIQUID LEVEL INDICATOR, RECORDER AND CONTROLLER WITH BRASS FITTINGS, UNION COCK AND RAY PRESSURE SNUBBER WITH #3 INSERT.
14. SEE SHEET E-2 FOR ELECTRICAL PLAN.

DO NOT REMOVE  
FOLDER NO: \_\_\_\_\_  
APPROVED EXHIBIT: \_\_\_\_\_ OF \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
COMMUNITY PLANNING INCORPORATED CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS			
<b>GENTRY - WAIPIO PROJECT</b> AT WAIPIO, EWA, OAHU, HAWAII DEVELOPER: GENTRY WAIPIO, A JOINT VENTURE TAX MAP KEY: 9-4-06: PORS 1 & 8			
WAIPIO HEIGHTS 595' RESERVOIR <b>INSTRUMENT HOUSE</b>			
APPROVED: _____			
CHIEF, PLANNING AND ENGINEERING, B.S.W. DATE <i>Bernard P. Kea</i> CIVIL ENGINEER NO. 1890			



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

*Arthur Y. Arinaka*



