NOTE:
EXIST. KSBE WATER SYSTEM FACILITIES ALONG KAPALAMA AVENUE SHALL BE DECOMMISSIONED AFTER PHASE 2 PROJECT COMPLETED AND IN OPERATION.

LEGEND
- 920' RESERVOIR SERVICE LEVEL
- 740' RESERVOIR SERVICE LEVEL
- 565' RESERVOIR SERVICE LEVEL

CUT & PLUG EXIST. PIPELINE AFTER PHASE 2 PROJECT COMPLETED & IN OPERATION
<table>
<thead>
<tr>
<th>WATER SYSTEM CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maximum Daily Flow + Fire Flow with Residual Pressure of 20 PSI</td>
</tr>
<tr>
<td>2. Maximum Static or Pump Pressure = 125 PSI</td>
</tr>
<tr>
<td>3. 125 PSI = 288.75'</td>
</tr>
</tbody>
</table>

### KEOPUOLANI-UKA BLDG. GRD. EL. = 805' ±
- Pressure at GRD. = 50 PSI
- Pressure at 2nd FLR. = 45 PSI

### PRESSURE AT GRD. = 50 PSI
- Pressure at 2ND FLR. = 45 PSI

### PRESSURE AT 3RD FLR. = 90 PSI
- Pressure at 3RD FLR. = 90 PSI

### SERVICE LEVELS
- **740' RESERVOIR**
  - Upper Service Limit (EL = 840') = 121 PSI
  - Lower Service Limit (EL = 485') = 119 PSI
- **565' RESERVOIR**
  - Upper Service Limit (EL = 43 PSI)
  - Lower Service Limit (EL = 108 PSI)

### RESERVOIRS
- 920' 0.25 MG RESERVOIR
  - S.W. EL = 920.0'
- 740' 0.5 MG RESERVOIR
  - S.W. EL = 740.0'
- 565' 0.25 MG RESERVOIR
  - S.W. EL = 565.0'

### SYSTEM CRITERIA
- **KEKELAOKALANI BLDG.**
  - Pressure at GRD. = 100 PSI
  - Pressure at 3RD FLR. = 90 PSI

### LEGEND
- **920' RESERVOIR SERVICE LEVEL**
- **740' RESERVOIR SERVICE LEVEL**
- **565' RESERVOIR SERVICE LEVEL**
- **WELL PUMP (PROPOSED)**
- **BOOSTER PUMP**
- **GATE VALVE (GV)**
- **PRESSURE REDUCING VALVE (PRV)**
- **ALTITUDE VALVE**

### SCHEMATIC PROFILE

**February 6, 19**
WELL COMPLETION REPORT

1. STATE WELL NO. 2051-01 WELL NAME Kamehameha Well A ISLAND Oahu
2. LOCATION: Address Kapalama Heights Tax Map Key 1-6-227:1
3. DRILLING OR PUMP INSTALLATION CONTRACTOR Wai‘e‘ili Drilling & Development
4. CONTRACTOR’S C-57 LICENSE NUMBER C-16543
5. NAME OF DRILLER WHO PERFORMED WORK Thomas Helfrich
6. TYPE OF RIG/CONSTRUCTION Rotary
7. DATE OF WELL DRILLING COMPLETION July 5, 1995
8. GROUND ELEVATION (msl) 549.36 ft.
   Top of Drilling Platform (msl) 555.36 ft.
   Height of Drilling Platform above Ground surface 6 ft.
   Bench Mark and Method Used to Determine Ground Elevation
9. DRILLER’S LOG:
   Depth (ft.)
   Root Description, Remarks, Date
   Water Level
   Depth (ft.)
   Root Description, Remarks, Date
   Water Level
   0 to 324
   325 to 447 hard/soft zones
   448 to 565 hard
   566 to 606 hard/soft layers
   607 to 706
   (if more space is needed, continue on back)
10. TOTAL DEPTH OF WELL BELOW GROUND 705 ft.
11. HOLE SIZE: 20 inch dia. from 0 ft. to 605 ft. below ground
   12 ½ inch dia. from 606 ft. to 705 ft. below ground
   inch dia. from 705 ft. to 705 ft. below ground
12. CASING INSTALLED:
   14 in. I.D. x 3/8 in. wall solid section to 603 ft. below ground
   14 in. I.D. x 3/8 in. wall perforated section to 603 ft. below ground
   Type of Perforation none
13. ANNULUS:
   Grouted from 0 ft. below ground to 603 ft. below ground
   Gravel packed from none ft. below ground to 603 ft. below ground
14. INITIAL WATER LEVEL 527 ft. below ground.
15. INITIAL CHLORIDE
16. INITIAL TEMPERATURE
17. DATE OF PUMP INSTALLATION
18. PUMP INSTALLATION:
   Pump Type, Make, Serial No. Capacity gpm
   Motor type, H.P., Voltage, rpm
   Depth of Pump Intake Setting ft. below which elevation is ft.
   Depth of bottom of airline ft. below which elevation is ft.
   Pumping Head is ft.
19. PUMPING TESTS:
   Reference Point (R.P.) used: ground, which elevation is 549.36 ft.
   Date 6/26/95
   Start water level 527.75 ft. below R.P.
   End water level 529.48 ft. below R.P.
   Depth of well 705 ft. below R.P.
   Drawdown Time (hours) Rate (gpm) Initial Cl (ppm) Temp.
   0 to 48 800 1.73 60 71.6
   (if more space is needed, continue on back)
Remarks:

Contractor (print) MAILE STROMQUIST
Title PARTNER
Signature
Date JULY 14, 1995

For Official Use: Wall No.
For Order’s Use: Job No.

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

Instructions: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 2821, Honolulu, Hawaii 96820. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 808-681-0223.
PROPOSED 720' KAMEHAMEHA SCHOOL WELL "B" (STATE WELL NO. 2051-02)

EXISTING 545' KAMEHAMEHA SCHOOL WELL "A" (STATE WELL NO. 2051-01)

EXISTING KAMEHAMEHA SCHOOL WELL 2052-11

EXISTING KAMEHAMEHA SCHOOL WELL 2052-07

KAMEHAMEHA SCHOOLS/BISHOP ESTATE

DRILLING, CASING & TESTING TWO DEEP WELLS AND TWO DEEP WELL PUMP INSTALLATIONS

Kapalama Heights, Honolulu, Oahu, Hawaii

Tax Map Key: 1st Division - 1-6-22:1

U.S.G.S. QUAD MAP

SEPTEMBER 1995
PROPOSED 720' KAMEHAMEHA SCHOOL WELL "B"
(STATE WELL NO. 2051-02)

545' KAMEHAMEHA SCHOOL WELL "A"
(STATE WELL NO. 2051-01)

EXISTING KAMEHAMEHA SCHOOL WELL 2052-07

EXISTING KAMEHAMEHA SCHOOL WELL 2052-11

AKINAKA & ASSOCIATES, LTD.
WAIMEA WATER SERVICES, INC.

KAMEHAMEHA SCHOOLS/BISHOP ESTATE
DRILLING, CASING & TESTING TWO DEEP WELLS
AND TWO DEEP WELL PUMP INSTALLATIONS
Kapalama Heights, Honolulu, Oahu, Hawaii
Tax Map Key: 1st Division - 1-6-22:1

SEPTEMBER 1995
CUT & PLUG EXIST. PIPELINE
AFTER PHASE 1 PROJECT COMPLETED
& IN OPERATION

PROPOSED TRANSMISSION PIPELINE
PROPOSED INSTRUMENT HOl)
ACCESS ROAD BY OTHERS

CONNECT TO EXISTING TRANSMISSION MAIN
740' WELL "B"

PROPOSED 565' 0.25 MG RESERVOIR
PROPOSED 545' WELL PUMP "A"
PROPOSED WELL & BOOSTER PUMP
CONTROL BUILDING

LEGEND

740' RESERVOIR SERVICE LEV.
565' RESERVOIR SERVICE LEV.

WATER MASTER PLAN
WATER SYSTEM CRITERIA

1. MAXIMUM DAILY FLOW + FIRE FLOW
   WITH RESIDUAL PRESSURE OF 20 PSI
   @ CRITICAL HYDRANT.

2. MAXIMUM STATIC OR PUMP PRESSURE
   = 125 PSI.

3. 125 PSI = 288.75' W.S.

KEOPUOLANI-UKA BLDG. GRD. EL. = 805' ±
PRESSURE AT GRD. = 19 PSI
PRESSURE AT 2ND FLR. = 15 PSI

EXISTING 850' 0.5 M.G. RESERVOIR
S.W. EL. = 850.0'

FUTURE 740' 0.5 MG RESERVOIR
S.W. EL. = 740.0'

1. KEOPUOLANI-UKA BLDG. GRD. EL. = 805' ±
PRESSURE AT GRD. = 19 PSI
PRESSURE AT 2ND FLR. = 15 PSI

2. PRESSURE AT 2ND FLR. = 15 PSI

KEKELAKALANI BLDG. GRD. EL. = 333'
PRESSURE AT GRD. = 100 PSI
PRESSURE AT 3RD FLR. = 90 PSI

LEGEND

- 740' RESERVOIR SERVICE LEVEL
- 565' RESERVOIR SERVICE LEVEL
- WELL PUMP (PROPOSED)
- BOOSTER PUMPS (EXISTING)
- GATE VALVE (GV)
- PRESSURE REDUCING VALVE (PRV)
- ALTITUDE VALVE

SCHEMATIC PROFILE