JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

August 9, 2001

Ms. Genevieve Salmonson,
Director
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL
DEPARTMENT OF HEALTH
235 S. Beretania Street, #702
Honolulu, Hawaii 96813

SUBJECT: WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS; TMK 3-8-01:188

Dear Ms. Salmonson:

In accordance with the provisions of the Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200 of the Administrative Rules of the State Department of Health, a Final Environmental Assessment (EA) has been prepared for the proposed project.

As the approving agency, the County of Maui, Department of Public Works and Waste Management believes that there will be no significant impacts as a result of the proposed action, and is filing a Finding of No Significant Impact (FONSI).

✓

110

Enclosed is one (1) copy of the OEQC Publication form and four (4) copies of the Final EA. In addition, please be advised that the Project Summary has not changed since the publication of the Draft EA. We respectfully request that notice of the availability of the Final EA be published in the next edition of the Environmental Notice.

Sincerely,

for David Goode
Director of Public Works & Waste Management

DG:
cc: Dave Taylor, Department of Public Works and Waste Management
Jeff Pearson, Brown and Caldwell
Glenn Tadaki, Munekiyo & Hiraga, Inc.
b&clw-kwrl\dpwwm.fea

2001-08-23-MA-FEA-

Final Environmental Assessment

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS

Prepared for:

County of Maui,
Department of Public
Works and Waste Management

August 2001

MUNEKIYO & HIRAGA, INC.

Final
Environmental Assessment

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS

Prepared for:

County of Maui,
Department of Public
Works and Waste Management

August 2001

MUNEKIYO & HIRAGA, INC.

CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

b&cw-kwr\drafttoa.rpt

Preface

The County of Maui, Department of Public Works and Waste Management is proposing to undertake various modifications to the Wailuku-Kahului Wastewater Reclamation Facility. In addition to tsunami mitigation improvements, modifications are proposed to the facility's headworks, aeration facilities, dewatering system, chlorination system, and electrical system. The proposed improvements are intended to improve process performance, reduce operation and maintenance requirements, and address the threat to system operations due to tsunami hazard.

This Environmental Assessment has been prepared in accordance with the requirements of Chapter 343, Hawaii Revised Statutes, due to the use of County funds, the use of State lands and the use of land in the State Conservation District.

Chapter I

Project Overview

I. PROJECT OVERVIEW

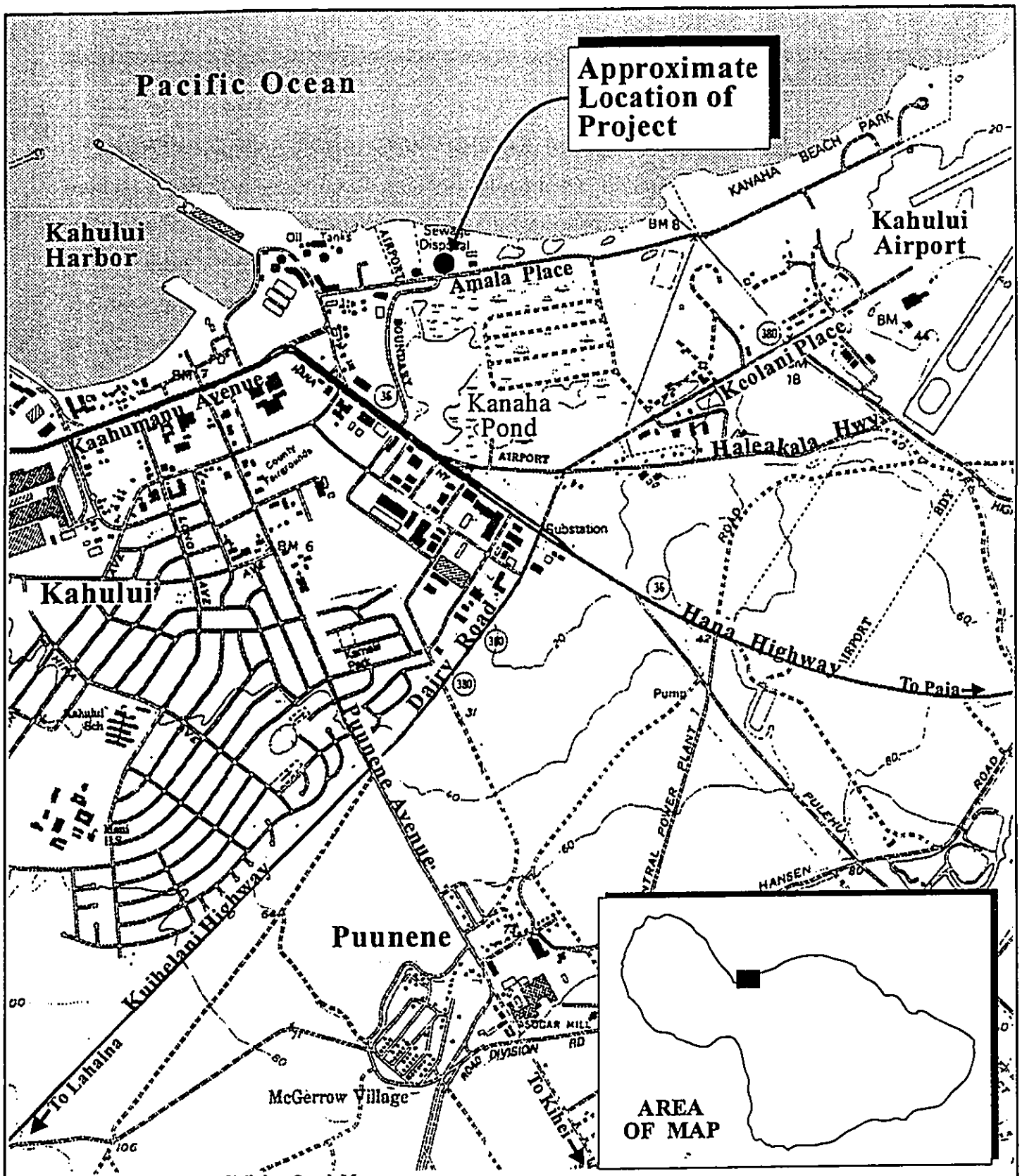
A. PROPERTY LOCATION, BACKGROUND AND LAND OWNERSHIP

The Wailuku-Kahului Wastewater Reclamation Facility (WWRF) is located adjacent to the shoreline in Kahului, Maui approximately 0.5 mile east of Kahului Harbor and 1.0 mile west of Kahului Airport. See Figure 1. The WWRF is situated on 18.75 acres of land identified as Tax Map Key 3-8-01:188. The land on which the WWRF is situated upon is owned by the State of Hawaii.

Immediate uses in the vicinity of the WWRF include Kahului Bay to the north and the Kanaha Pond Wildlife Sanctuary to the south. The area immediately west of the WWRF is zoned for industrial use and existing uses include oil tank farms, auto storage yards, warehouses, and a Maui Electric Company (MECO) power plant. Kahului Harbor and its port facilities are located approximately 0.5 mile west of the WWRF. Land uses to the east of the WWRF include Kanaha Beach Park and Kahului Airport.

The Wailuku-Kahului WWRF was constructed in 1973 and modified in the early 1990's. The facility serves as a regional wastewater treatment plant for Wailuku, Kahului, Spreckelsville, and Paia. The WWRF is equipped with preliminary treatment, secondary treatment, filtration, and chlorination facilities, and has a design average flow capacity of 7.9 million gallons per day (mgd).

The WWRF site is encircled by a 6-foot high chainlink fence. With the exception of the shoreline area, as well as some other open, undeveloped areas on the site, the majority of the project site is occupied by the existing WWRF structures and facilities. Existing site improvements include an administration building, an operations building, a chlorine



Source: USGS Paia and Wailuku Quad Maps

Figure 1 Wailuku-Kahului Wastewater Reclamation Facility Modifications

Regional Location Map

0 1000 Feet
500 2000

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.

building, a chlorine storage building, a garage/maintenance shop building, internal access roads, paved parking areas, a septage receiving station, a headworks and headworks building, two (2) aeration basins, two (2) aerobic digester tanks, a pipe gallery, seven (7) secondary clarifiers, three (3) filter tanks, two (2) chlorine contact tanks, an effluent meter structure, two (2) concrete sludge holding tanks, a sewage pump station, a 2.6-acre earthen holding pond with asphalt liner, and eight (8) underground injection wells for effluent disposal. A berm along the ocean side of the parcel borders the WWRF to the north, while a partially landscaped earthen berm along the southern boundary of the site visually shields portions of the facility from Amala Place. Access to the project site is provided via Amala Place.

The project site is situated within the limits of the State Conservation District and, accordingly, is not zoned by the County of Maui. The majority of the site is designated for Public/Quasi-Public use by the Wailuku-Kahului Community Plan, except for an approximately 100 foot wide strip of land that parallels the shoreline which is designated for Park use.

B. ***PROPOSED ACTION***

The County of Maui, Department of Public Works and Waste Management is proposing to undertake various modifications to the Wailuku-Kahului WWRF. See Appendix A. The proposed improvements are intended to improve process performance, reduce operation and maintenance requirements, and mitigate potential damage and process disruption in the event of tsunami flooding. No increase in capacity is proposed. Modifications to the facility's headworks, aeration facilities, dewatering system, chlorination system, and electrical system are proposed, as well

as improvements to address the potential effects of tsunami flood inundation. The proposed modifications include the following:

1. ***Headworks***

The existing bar screens and dewatering facilities are proposed to be replaced with new equipment. The existing climber bar screens will be replaced with two (2) new traveling grid-type bar screens. The new bar screens will discharge debris into a new stainless steel screenings sluicing channel (12" width x 12" depth) which will be cut into the existing headworks operating deck. The new sluicing channel will be installed to span the screenings channels downstream of the new bar screens. From this point, screenings will be sluiced to new screenings washer/compactors which will be located on a new operating deck positioned midway between the headworks and grade level in order to accommodate the discharge from the new sluicing channel. To accommodate the platform for the new washer/compactors, the existing bar screens and headworks stairs will be demolished. A new set of stairs will be constructed to provide access to the headworks.

2. ***Aeration Facilities***

A new flexible aeration basin (FAB) of approximately 10,000 square feet will be constructed to the west of the two (2) existing aeration basins. The new FAB, which will be identical in size to the existing aeration basins, will be configured to operate in series or in parallel with the existing basins. For example, when all three (3) aeration basins are in service, the FAB will operate in series with the two (2) existing basins. With one (1) aeration basin out of service, the remaining two (2) basins can be operated in series or parallel.

The two (2) existing aeration basins will be modified by adding fine bubble ceramic diffusers and by providing grouted floors that slope to the center of each pass. To facilitate cleaning, a 2 foot wide, straight open path for diffuser piping will be provided at the low point of the sloped floors. In addition, the first aeration basin will be modified to function as a flexible aeration basin during the maintenance of the new FAB.

Due to its corroded condition, the existing aeration piping will be replaced with new aeration piping. The new aeration piping system will serve the new FAB, as well as the existing aeration basins and aerobic digester tanks; pipe gallery improvements will be implemented accordingly. In addition, the existing aeration blowers will be relocated from the existing operations building to a new blower building (about 38 feet in height and approximately 3,800 square feet in area) which will be constructed in the northwest quadrant of the site. Of the five (5) blowers, two (2) diesel engine-driven blowers will be refitted with new motors when relocated. The floor level of the new blower building will be above the 100-year tsunami wave height. The existing operations building, which currently houses the blowers, will be utilized for storage and to accommodate maintenance activities.

3. Dewatering System

Three (3) new double-disc diaphragm style pumps and new redundant sludge grinders will be installed in the existing garage/maintenance shop building. The suction piping will be re-routed from the existing digested sludge storage tanks into the garage/maintenance shop building. To provide flexibility with the centrifuge feed pumping discharge, piping valves and fittings will be

installed to enable each pump to discharge to any of the three (3) centrifuges. Additional modifications include an approximately 300 square foot air conditioned control room, for the electrical system controls and drives for all the solids equipment, which will be provided on the centrifuge mezzanine at the west end of the existing operations building.

4. ***Chlorine Distribution***

The existing chlorine building will be modified to include an oxidation-reduction potential (ORP) system to control the disinfection rate of the facility's effluent. This system will control the chlorine dose based on changes in the ORP of the effluent and the effluent flow rate.

5. ***Electrical System***

Electrical and instrument control system improvements will parallel the process modifications. New power and controls will be required for equipment at the headworks, aeration basins, and the chlorination system. The most significant change to the electrical power system will be associated with the new blower building. A new 12 kilovolt/480 volt power feed and metering connection from MECO will be installed at the new blower building. A new 1500 kilowatt standby generator capable of powering the entire facility, will be installed in the new blower building. This new generator will allow the WWRF to operate the entire WWRF independent of MECO.

6. ***Tsunami Mitigation***

To minimize the potential effects of tsunami inundation, the aeration blowers and the main electrical equipment for the WWRF,

which will be housed in the new blower building, will be elevated above the wave height of a tsunami event with a 100-year recurrence interval. Similarly, the new dewatering control room, which will be located on the centrifuge mezzanine of the existing operations building, will also be elevated above the 100-year tsunami wave height.

7. ***Miscellaneous Improvements***

Additional improvements include a new transformer pad and a 6,000 gallon capacity above-ground diesel fuel storage tank which are to be located in the vicinity of the new blower building. Chainlink fencing and a paved utility apron are also proposed in the same area. The new pad will be for a 12 kilovolt/480 volt MECO transformer that will provide primary power to the WWRF, while the tank will provide diesel fuel storage for the new standby generator. Chainlink fencing, with a 15 foot wide swing gate, as well as a 3,000 square foot paved utility apron will be provided to control and facilitate access to the new FAB and pipe gallery extension. The new raw sewage bypass line (from the headworks screenings channel to aeration basin No. 1) that was originally proposed has been deleted from the project.

The proposed project is estimated to cost approximately $9.8 million; construction is anticipated to commence in early 2002 and is expected to take about 14 months. The construction of the project will be phased and sequenced to ensure that implementation of the project does not significantly disrupt WWRF operations.

Chapter II

Description of the Existing Environment

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The project site is located in Kahului, the island of Maui's center of commerce. Kahului is home to Kahului Harbor, the island's only deep water port, and the Kahului Airport, the second busiest airport in the State. With its proximity to the harbor and airport, the Kahului region has emerged as the focal point for heavy industrial, light industrial and commercial activities and services such as warehousing, baseyard operations, automotive sales and maintenance, and retailing for equipment and material suppliers. Kahului is considered Central Maui's commercial retailing center with the Queen Kaahumanu Center, Maui Mall and Kahului Shopping Center located within the region.

2. Climate

Like most areas of Hawaii, Maui's climate is relatively uniform year-round. Characteristic of Hawaii's climate, the project site experiences mild and uniform temperatures year round, moderate humidity and a relatively consistent northeasterly tradewind. Variation in climate on the island is largely due to local terrain.

Average temperatures at the project site (based on temperatures recorded at Kahului Airport) range from lows in the 60's to highs in the 80's. August is historically the warmest month, while January and February are the coolest. Rainfall at the project site averages approximately 20 inches per year. Winds in the Kahului region are predominately out of the north-northeast and northeast.

3. ***Topography and Soil Characteristics***

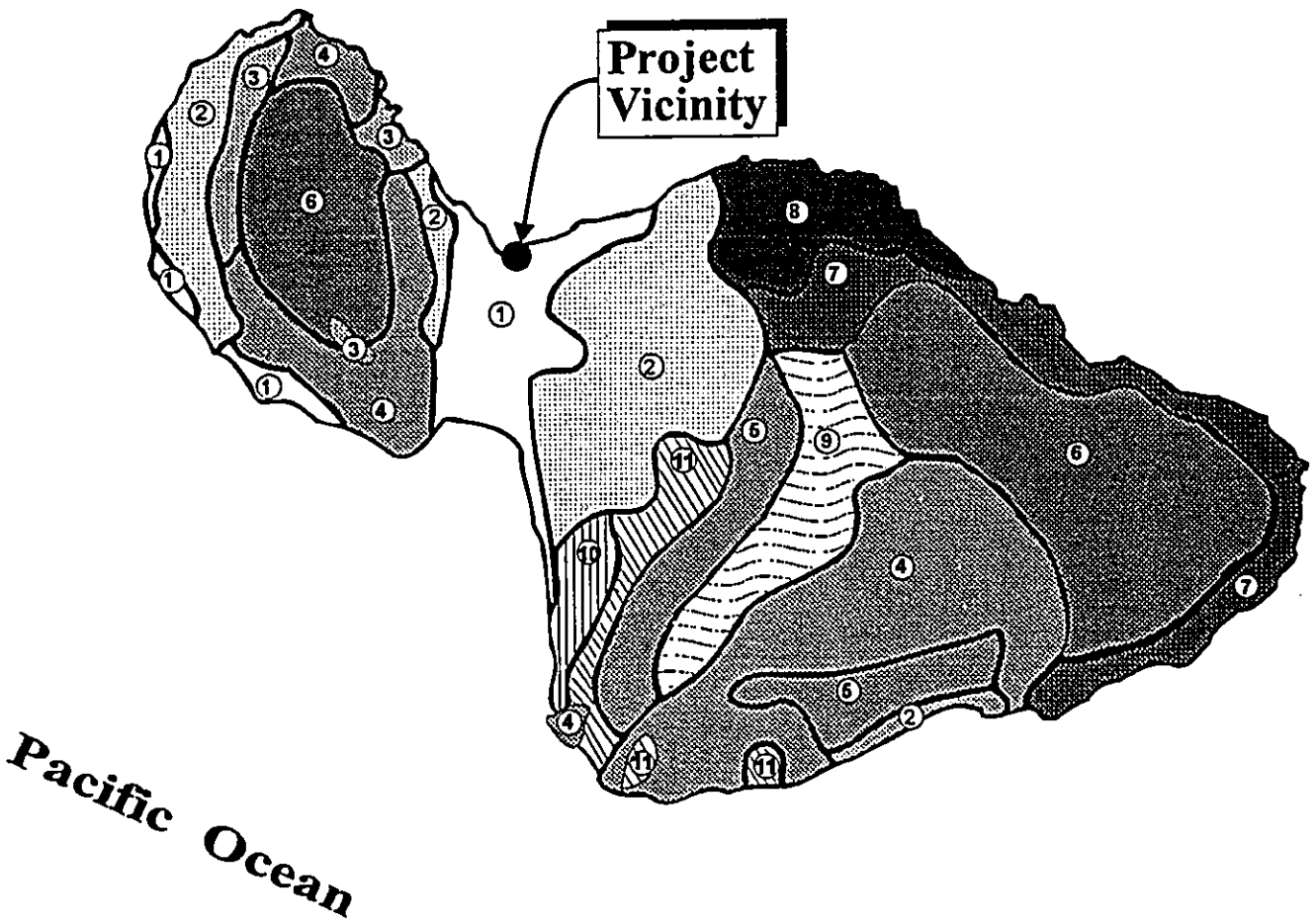
The project site ranges in elevation from approximately 5 to 20 feet above sea level. The majority of the site is relatively level, while the vacant, undeveloped portions of the property are characterized by mildly sloping terrain. Underlying the project site are soils of the Pulehu-Ewa-Jaucas soil association and the Jaucas and Beaches soil series. See Figure 2 and Figure 3. The Pulehu-Ewa-Jaucas soil association occurs in basins and on alluvial fans and is characterized by well-drained and excessively drained soils that have a moderately fine to coarse-textured subsoil or underlying material. The Jaucas soil series consist of excessively drained soils that occur as narrow strips on coastal plains adjacent to the ocean. The soil type specific to the project site is Jaucas sand, saline, 0 to 12 percent slopes (JcC). This soil type occurs near the ocean in areas where the water table is near the surface and salts have accumulated. Beaches (BS) occur as sandy, gravelly, or cobbly areas and consist mainly of light-colored sands derived from coral and seashells.

4. ***Flood and Tsunami Hazards***

According to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency, the project site and adjoining lands are situated in an area designated Zone V23 with base flood elevations of 17 to 23 feet. See Figure 4. "V" designated zones include areas subject to 100-year coastal flooding with velocity (wave action). As indicated by the FIRM, the base flood elevation for the subject property reflects a maximum height of 20 feet.

LEGEND

- ① Pulehu-Ewa-Jaucas association
- ② Waiakoa-Keahua-Molokai association
- ③ Honolua-Olelo association
- ④ Rock land-Rough mountainous land association
- ⑤ Puu Pa-Kula-Pane association
- ⑥ Hydrandepts-Tropaquods association
- ⑦ Hana-Makaalae-Kailua association
- ⑧ Pauwela-Haiku association
- ⑨ Laumaia-Kaipoipoi-Olinda association
- ⑩ Keawakapu-Makena association
- ⑪ Kamaole-Oanapuka association



Map Source: USDA Soil Conservation Service

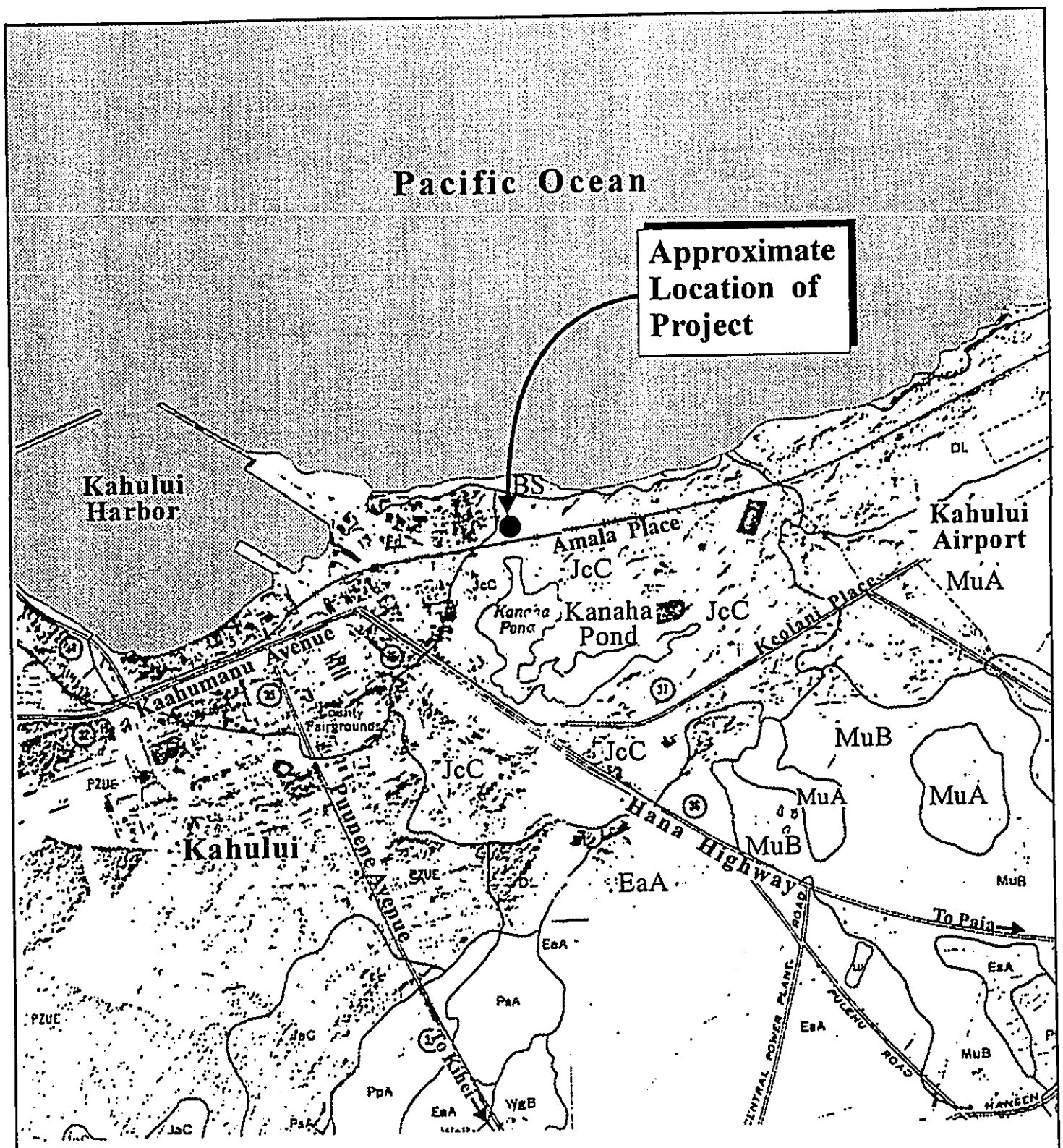
Figure 2 Wailuku-Kahului Wastewater Reclamation Facility Modifications

Soil Association Map

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.



Source: USDA Soil Conservation Service

Figure 3 Wailuku-Kahului Wastewater Reclamation Facility Modifications

Soil Classification Map

1000 Feet
0 500 2000

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.

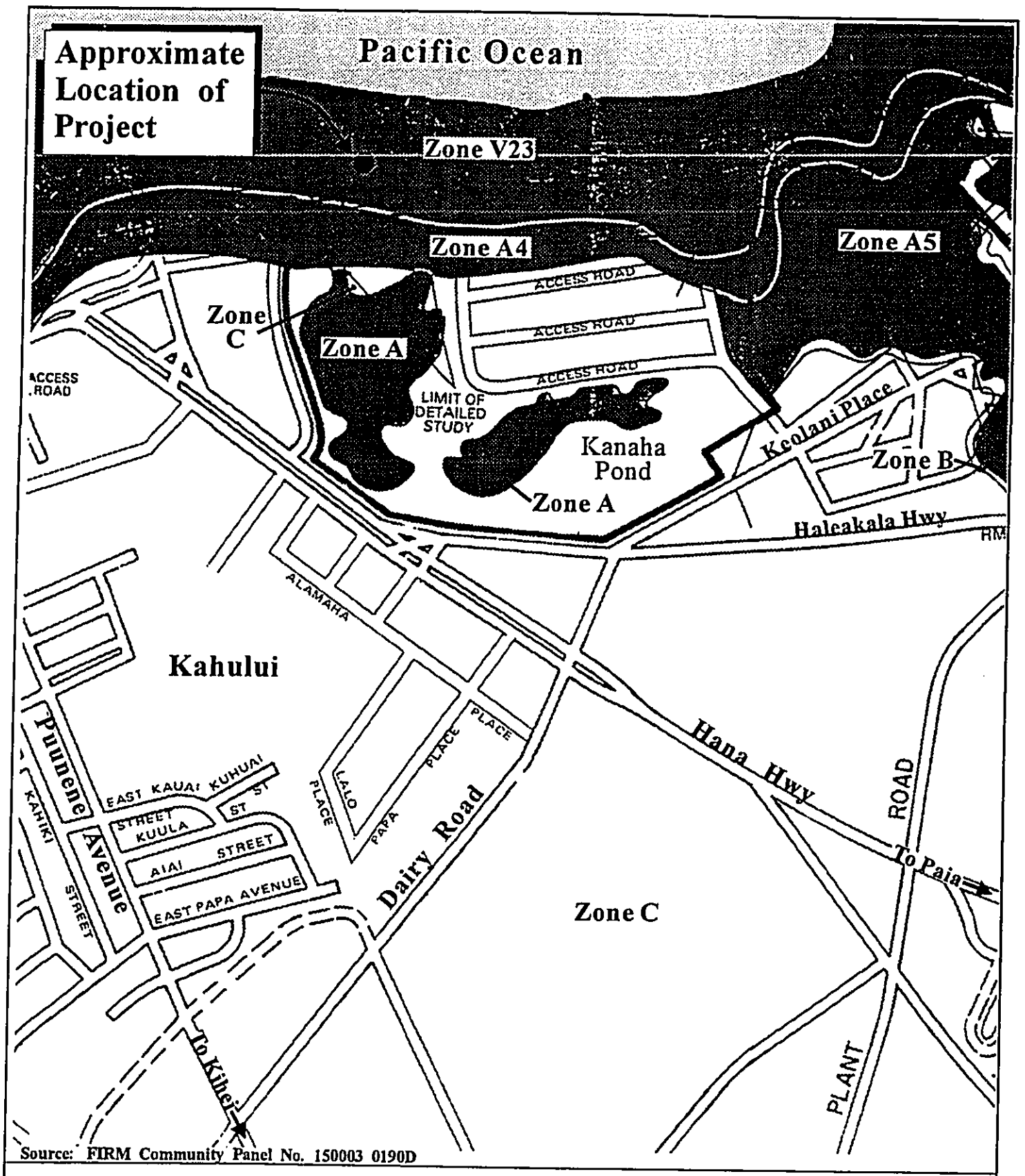


Figure 4 Wailuku-Kahului Wastewater Reclamation Facility Modifications

Flood Insurance Rate Map

0 250 500 1000 Feet

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.

A report titled "Evaluation of Expansion of Wailuku-Kahului and Kihei Wastewater Reclamation Facilities" prepared in September 1991 calculated the shoreline wave heights for various recurrence intervals. The calculated wave heights for the various recurrence intervals are as shown in Table 1.

Table 1

TSUNAMI RECURRENCE INTERVAL AND WAVE HEIGHTS	
Recurrence Interval	***Wave Height***
10 Year	4.1 Foot
25 Year	10.5 Foot
50 Year	15.5 Foot
100 Year	20.1 Foot

The Preliminary Engineering Report (90% submittal) for the proposed improvements determined that the Wailuku-Kahului Wastewater Reclamation Facility (WWRF) would not be impacted by a 10-year recurrence interval tsunami. Treatment plant operations would be slightly impacted by a 25-year recurrence event, however as long as the watertight doors to the pipe gallery are sealed properly, no damage is expected.

With a 50-year recurrence event, disruption to WWRF operations would likely result. The operations building and administration building would be flooded to depths of 0.5 foot and 1.4 feet, respectively. Flooding of the pipe gallery would be dependent upon proper sealing of the watertight doors and the water tightness of pipe penetrations. Because the operations building houses the

electrical control room and blowers, the WWRF's electrical system and blowers would not be safe to operate if the bases of the units are underwater.

A tsunami event of 100-year recurrence is a major event that would shut down WWRF operations for an extended period of time. MECO would likely shut off power to the plant and major wastewater pump stations, such as Wailuku Pump Station and Kahului Pump Station, would also be without permanent power. In addition, an event of this magnitude could impair the County water department's ability to distribute water; as a result, flow to the facility may be affected.

5. ***Flora and Fauna***

Plant life typically associated with lands in the vicinity of the project site include kiawe, koa haole, finger grass, bermuda grass, bristly foxtail, and Australian saltbush. With the exception of beach naupaka, which occupies the shoreline area, onsite vegetation consists of lowlying grasses and weeds, as well as pine trees and miniature palms that are situated throughout the site.

Terrestrial fauna in the vicinity of the project site include introduced species such as rats, feral cats, and mongoose. Avifauna typically found in this area include the Mynah, Spotted Dove, Barred Dove, Japanese White-Eye, Cardinal, and Red Crested Cardinal. The Kanaha Pond Wildlife Sanctuary, situated to the south of the project site, provides refuge for migratory birds and the threatened Hawaiian Black-Crowned Night Heron, as well as the endangered Hawaiian Stilt and the Hawaiian Coot.

There are no known rare, threatened, or endangered species of flora and fauna located on the project site. In addition, there are no wetland areas located within the limits of the site.

6. ***Archaeological Resources***

The project site does not contain any known archaeological or historic resources. Due to the developed nature of the site and previous ground-disturbing activity, it is unlikely that any subsurface archaeological resources are present.

7. ***Water Quality***

Water resources in the vicinity of the project site include the Pacific Ocean to the north and Kanaha Pond to the south. The State Department of Health, Water Quality Standards, designates Kanaha Pond as Class 1.a Inland waters and coastal waters in the vicinity of the project site as Class A Marine waters. According to the Department of Health Administrative Rules, Chapter 54, it is the objective of Class 1.a. waters that "they remain in their natural state as nearly as possible with an absolute minimum of pollution from human-caused source." In addition, Class 1.a. waters are to be protected for "scientific and educational purposes, protection of native breeding stock, baseline references from which human-caused changes can be measured, compatible recreation, aesthetic enjoyment, and other non-degrading uses which are compatible with the protection of the ecosystems associated with waters of this class." The objective of the Class A Marine classification is to protect water quality for recreational purposes, including swimming, bathing, and other water-contact sports and aesthetic enjoyment. Generally, discharges which have not received the best degree of treatment or control are not allowed in Class A waters.

8. *Air Quality*

Air quality in the Wailuku-Kahului region is considered to be good as emissions from point sources, including Maui Electric Company's (MECO) power plant and Hawaiian Commercial & Sugar Company's (HC&S) sugar mill, and non-point sources such as automobile emissions, do not generate problematic concentrations of pollutants. The relatively high air quality can also be attributed to the region's constant exposure to winds which quickly disperse concentrations of emissions.

The State of Hawaii, Department of Health maintains two (2) air quality monitoring stations on the island of Maui, one in Paia and the second in Kihei. Both sites monitor for particulate matter less than or equal to 10 micrometers (PM_{10}). According to data collected at the stations, in 1998 the annual average concentration of PM_{10} at the Kihei and Paia stations were 33 $\mu g/m^3$ and 17 $\mu g/m^3$, respectively. This is well below the national and state standard of 150 $\mu g/m^3$. Although levels of particulate matter increase when agricultural burning takes place, prevalent tradewinds from the north and northeast minimize nuisance air quality problems in the Wailuku-Kahului area.

9. *Noise*

Traffic noise from neighboring roadways is the predominant source of background noise in the vicinity of the project site. In addition, distant noise from Kahului Airport and aircraft flying near the project site contributes to ambient noise levels.

10. *Scenic and Open Space Resources*

Scenic resources in the vicinity of the project site include Iao Valley and the West Maui Mountains to the west, Haleakala and Kahului Harbor to the east, the Pacific Ocean to the north, and Kanaha Pond Wildlife Sanctuary to the south. The majority of undeveloped lands in the Central Maui isthmus are utilized for sugar cane cultivation. The vast expanse of sugar cane fields establishes and dominates the open space character of the region. The existing WWRF structures and facilities occupy most of the subject property, while the shoreline area and other open, undeveloped areas on the property comprise the remainder of the site. A partially landscaped earthen berm along the southern boundary of the property screens portions of the WWRF from Amala Place, while a berm along the northern portion of the site shields the WWRF from view along the coast line.

B. *SOCIO-ECONOMIC ENVIRONMENT*

1. *Population*

The population of the County of Maui has exhibited relatively strong growth over the past decade with the 1990 population of 100,504 increasing by 27.6 percent to 128,241 in the year 2000 (U.S. Census Bureau, Census 2000). Growth in the County is expected to continue, with the resident population for the year 2010 projected to increase by 9 percent to 140,060.

Just as the County's population has grown, the resident population of the island of Maui and the Wailuku-Kahului region has increased dramatically over the past two (2) decades. Population gains were especially pronounced in the 1970's due to the growth of the visitor industry. The year 2000 population estimates for the island and

the Wailuku-Kahului region are 112,349 and 40,452, respectively. By the year 2010, the population for the island of Maui and the Wailuku-Kahului region are projected to be 127,670 and 46,026, respectively.

2. *Economy*

The Kahului region is the island's center of commerce. Combined with the neighboring region of Wailuku, the Wailuku-Kahului region encompasses a broad range of commercial, service, and governmental activities. In addition, the region is surrounded by significant acreages of agricultural lands including sugar cane fields and pineapple fields. The vast expanse of agricultural land, managed by HC&S, is considered a key component of the local economy.

C. *PUBLIC SERVICES*

1. *Recreational Facilities*

The Wailuku-Kahului region provides a full range of recreational opportunities, including shoreline and boating activities at the Kahului Harbor and nearby beach parks, as well as individual and organized athletic activities at numerous County parks. Kanaha Beach Park, a popular County facility, occupies the coastline in the area adjacent to, and east of, the project site.

2. *Police and Fire Protection*

Police protection for the Wailuku-Kahului region is provided by the Maui County Police Department headquartered in Wailuku, approximately 2.0 miles from the project site.

Fire prevention, suppression, and protection services for the Wailuku-Kahului region are provided by the Maui County Fire Department's Kahului Station and Wailuku Station, located approximately 2.0 and 3.0 miles from the project site, respectively.

3. ***Solid Waste***

Single-family residential solid waste collection service is provided by the County of Maui on a once-a-week basis. Residential solid waste collected by County crews is disposed at the County's 55-acre Central Maui Landfill, located 4.0 miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

4. ***Health Care Facilities***

Maui Memorial Medical Center, the only major medical facility on the island, services the Wailuku-Kahului region. Acute, general and emergency care services are provided by the approximately 200-bed facility. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

5. ***Educational Facilities***

The Wailuku-Kahului region is served by the State Department of Education's public school system, as well as several privately operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the Kahului area include Lihikai and Kahului Schools (Grades K to 5), Maui Waena Intermediate School (Grades 6 to 8), and Maui High School (Grades 9 to 12). Existing facilities in the Wailuku area

include Wailuku Elementary School (Grades K to 5), Iao Intermediate School (Grades 6 to 8), and Baldwin High School (Grades 9 to 12). Maui Community College (MCC), a part of the University of Hawaii (UH) system, offers a broad array of higher education options for island residents. Degrees and certificates are offered in 15 technical-occupational areas. In addition, MCC provides non-credit programs which are offered three (3) times a year. Through distance education technologies (internet, interactive television) provided by its UH Center, MCC offers residents access to bachelors and graduate programs from throughout the UH system.

D. INFRASTRUCTURE

1. Roadways

The Wailuku-Kahului region is served by a roadway network which includes arterial, collector and local roads. Major roadways in the vicinity of the project site include Hana Highway, Kaahumanu Avenue and Puunene Avenue. Access to the Wailuku-Kahului WWRF is via Amala Place, a two-lane County roadway with a posted speed limit of 30 miles per hour. In addition to bike lanes, Amala Place has a pavement width of approximately 20 feet.

2. Wastewater

The Wailuku-Kahului WWRF serves as the regional wastewater treatment plant for Kahului and Wailuku, as well as outlying areas extending from Kuau to Waihee. The WWRF is equipped with preliminary treatment, secondary treatment, filtration, and chlorination facilities and has a design average flow capacity of 7.9 million gallons per day (mgd).

3. ***Water***

Domestic water for the Wailuku-Kahului region is provided by the Board of Water Supply's (BWS) Central Maui Water System. The major source of water for this system is the Iao aquifer which has a sustainable yield of 20 million gallons per day (mgd). As of March 2001, the annual average rate of groundwater withdrawal from the Iao aquifer was 17.075 mgd. The Department of Water Supply is implementing a plan to bring new water sources on-line in the Wailuku-Kahului region. Since 1997, three (3) new wells with a total capacity of 13.5 mgd have been developed in North Waihee and provide water to the Wailuku-Kahului region. Extending from Hobron Avenue to the west, to a point midway along the project site, an existing 8-inch distribution line within the Amala Place right-of-way provides domestic water service to the WWRF. An existing standpipe near the VIP Cash & Carry outlet provides fire protection for properties in the immediate vicinity. Treated effluent from the WWRF is utilized for onsite landscape irrigation, as well as for applicable WWRF operational uses.

4. ***Drainage***

There are no drainage improvements on the subject property or in the surrounding area. The property ranges in elevation from about 5 to 20 feet above mean sea level (amsl). The project site is relatively level, sloping slightly to the west. The existing ground in the area of the proposed improvements consists of mottled tan and brown silty sand, of medium dense condition, mixed with basalt gravel.

Surface runoff from the subject property follows the existing drainage pattern. Onsite runoff collects in lowlying areas on the

property and is dissipated through percolation and evaporation. A berm along the ocean side of the property prevents runoff from entering coastal waters. See Appendix B.

5. ***Electrical and Communications Systems***

Electrical and telephone service to the project site are available through MECO and Verizon Hawaii, respectively, via distribution lines suspended from existing wooden utility poles placed within the Amala Place right-of-way.

Chapter III

Potential Impacts and Mitigation Measures

III. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The existing Wailuku-Kahului Wastewater Reclamation Facility (WWRF) is located in an urbanized area adjacent to industrial and open space uses. Since the proposed improvements will be contained within the existing WWRF property and are not anticipated to generate any long-term adverse impacts, no impact on surrounding land uses is anticipated.

2. Topography and Soil Characteristics

Clearing, grading and excavation activities will be required for construction of the new blower building and flexible aeration basin. However, because the project site has been extensively modified by prior development and because the finish grade of disturbed areas will be similar to the existing grade, no significant impact is anticipated.

3. Flood and Tsunami Hazards

Relocation of the aeration blowers, plant power feed, and standby emergency generator to the proposed new blower building will minimize damage and disruption to plant operations in the event of a tsunami. The blowers and electrical control room are presently installed in the operations building at an elevation of 15 feet, which makes them susceptible to a 50-year tsunami recurrence event. The floor of the new blower building will be about 21.5 feet above sea level, which is above the 100-year recurrence tsunami flood level. In addition, the new dewatering control room, which will be located on the centrifuge mezzanine of the existing operations building, will be similarly elevated above the 100-year tsunami

wave height. The proposed improvements will be designed and constructed in accordance with the applicable provisions of Chapter 19.62 of the Maui County Code pertaining to Flood Hazard Areas.

4. ***Flora and Fauna***

There are no known significant habitats or rare, threatened, or endangered species of flora or fauna located within the project site. In addition, the proposed improvements are not anticipated to impact wetland areas or wildlife at the Kanaha Pond Wildlife Sanctuary. As such, the proposed project is not anticipated to have an adverse impact on flora or fauna resources.

5. ***Archaeological Resources and Cultural Impact Considerations***

All of the improvements will be constructed within the existing WWRF site. Due to the developed nature of the site, the proposed improvements are not anticipated to result in the discovery of any archaeological resources. In the event that historic remains are discovered during construction, work will promptly cease in the immediate area and the State Historic Preservation Division will be immediately notified to ensure that proper mitigation measures are implemented in compliance with Chapter 6E, HRS.

The archaeological inventory survey contained in the Draft Environmental Impact Statement for the Kahului Airport Improvements notes that the subject property lies in the traditional ahupua'a of Wailuku, which includes the coastal areas of Kahului Bay, as well as all of Iao Valley and the northern half of the Central Maui isthmus (Edward K. Noda & Associates, March 1996). It was not until the mid-1800's that the lands around the project area were documented in any historical records. As noted in the survey, the

Kahului Railroad Company line from Kahului to Paia, which was built in 1880, runs along the coast. Around this same time, the area is described as "a complete desert, a great, barren stretch of sand and dust spread from Wailuku to Paia, except for a little cattle grazing around the present location of Spreckelsville". An 1881 map of this area shows "undulating sand hills" crossed only by dirt roads and the railroad line to Paia, while a 1910 map shows the seaward half of the area as "pasture". In 1942, the U.S. Government annexed 3,800 acres at Puunene and Kahului for the construction of naval air stations. At Kahului, 1,350 acres were leased from HC&S for Naval Air Station Kahului (NASKA). In the early 1950's NASKA was taken over by civilian authorities for public airport purposes. In recent decades, the Kahului Airport has expanded. Remnants from Navy use of the area still remain.

Insofar as the project site is concerned, based on an inspection of the project site, as well as discussions with the current land owner, there is no indication that the site has been, or is currently utilized for cultural resource purposes. In light of the foregoing, the proposed action is not anticipated to have an adverse effect on the cultural practices of the community or State. Existing public access to and along the shoreline is provided from the adjacent Kanaha Beach Park.

6. ***Water Quality***

A report prepared by the United States Geological Survey in 1977 when the WWRF was initially constructed, investigated the impact that the WWRF's injection wells would have on Kanaha Pond and groundwater quality. The study found that because the injected wastewater is less dense than the groundwater in that zone, it

initially rises and then spreads radially, forming a roughly conical plume within the lava sequence underlying the treatment plant. In response to the seaward flow of freshwater at the top of the aquifer, the top of the plume is displaced slightly seaward. The modeling determined that no injected wastewater is expected to enter Kanaha Pond and little, if any, of the injected wastewater reaches the upper part of the unconfined aquifer landward of the WWRF. Ultimately, the injected effluent enters the ocean 2,000 to 3,000 feet from the shoreline. Consequently, the WWRF has no impact on Kanaha Pond or potable groundwater resources.

7. ***Air Quality***

Localized air quality impacts from construction vehicles and grading activities may occur during construction of the proposed improvements. Potential air quality impacts during construction will be mitigated by complying with the provisions of the State Department of Health (DOH) Administrative Rules, Title 11, Chapter 60, Air Pollution. Measures which may be taken to reduce air quality impacts include water spraying and sprinkling of loose or exposed soil, and revegetating or paving exposed areas as soon as practicable. Exhaust emissions from construction vehicles are anticipated to have a negligible impact on regional air quality as the emissions would be relatively small and readily dissipated.

No significant long-term air quality impacts are anticipated as a result of the proposed project. Coordination with the DOH will be undertaken to modify the existing air quality permit for the WWRF to include provisions for the new standby diesel generator. In addition, the proposed headworks improvements are anticipated to provide for the more efficient handling of screenings. Since the

proposed improvements are intended to improve performance of the WWRF rather than increase capacity, no increase in odors from the WWRF is anticipated.

8. ***Noise***

During construction of the proposed project, construction noise will be unavoidable. Operation of construction equipment such as backhoes, trucks, and generators will raise ambient noise levels in the vicinity of the project site. Construction noise impacts will be mitigated by complying with the provisions of the State of Hawaii, Department of Health (DOH) Administrative Rules, Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in the Chapter 46 rules. It is the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within allowable regulatory limits. Construction will be limited to daylight working hours.

No significant long-term noise impacts are anticipated to result from the proposed project as the proposed improvements are not anticipated to increase the level of noise emitted from the WWRF.

9. ***Scenic and Open Space Resources***

Since the floor of the new blower building is proposed to be elevated above the 100-year recurrence tsunami flood level, the building will rise above the existing structures at the WWRF. The proposed blower building, however, will be architecturally and structurally similar to the existing chlorine storage building and set back approximately 300 feet from Amala Place, thereby reducing

its visual impact. The proposed improvements will not intrude upon viewplanes of Haleakala, the West Maui Mountains, or other visual resources, nor will the existing open space character of the surrounding area be impacted.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population and Economy

The proposed project is anticipated to have no impact on regional population. Since the proposed modifications will not increase capacity of the WWRF, the project will not stimulate or accommodate population growth.

On a short-term basis, the proposed project will have positive economic impacts by providing construction employment and supporting construction-related services and suppliers. In the long term, the proposed project will improve sewage processing functions, as well as overall WWRF operations, which in turn, will benefit the community at large.

2. Police, Fire and Medical Services

Medical, emergency, and police and fire protection services will not be impacted by the proposed project as the existing WWRF is within existing service area limits.

3. Recreational and Educational Facilities

The proposed action is not considered a population generator. As such, the proposed modifications will not place any new demand on recreational facilities. Similarly, school enrollments or facilities will not be affected by the proposed improvements.

4. Solid Waste

Waste from construction activities will be transported to the Central Maui Landfill and/or to an appropriate construction waste or recycling site for disposal. The proposed action is not anticipated to adversely impact the County's solid waste disposal facilities.

C. INFRASTRUCTURE

1. Roadways

In the short term, traffic on roadways in the vicinity of the project site may increase slightly due to construction-related traffic entering and leaving the project site. No long-term traffic impacts are anticipated as the proposed improvements will not generate an increase in vehicular traffic.

2. Water

The existing WWRF is presently served by the County of Maui, Board of Water Supply's (BWS) distribution system. No impact to the County's system is anticipated as the proposed improvements are not expected to significantly increase potable water demand. Fire protection requirements for the new blower building and any other relevant improvements will be coordinated with the Department of Water Supply (DWS). In addition, it is anticipated that reclaimed water will be utilized for the modifications involving primary and secondary treatment functions. Domestic water, fire protection, and irrigation calculations will be submitted to the DWS for review and approval in connection with the project's building permit applications process.

3. ***Wastewater***

The proposed project involves modifications to the existing WWRF which will improve processing capability and reliability, as well as provide the facility with protection against the potential effects of tsunami inundation. In this light, the proposed action will have a positive effect on WWRF operations, as well as benefit the community at large.

4. ***Drainage and Soil Erosion Control***

No major site work is expected as the areas in which the proposed modifications are planned have been previously cleared and graded in connection with the development of the existing WWRF. Site work is expected to involve minor grading for the establishment of structural foundations, including a new paved utility apron of about 3,000 square feet, a new blower building of approximately 3,800 square feet and a new flexible aeration basin of about 10,000 square feet, as well as for utility lines and connections. No drainage improvements are proposed. Surface runoff will be contained onsite and will collect in lowlying areas on the property where it will be dissipated through percolation and evaporation.

The flexible aeration basin will be open and collect any rain, eliminating runoff. The blower building and paving will increase runoff slightly. Because the overall area for runoff is reduced, and the increase in runoff due to the improvements is minimal, there should be no adverse effects to adjacent and downstream properties due to the proposed improvements. Refer to Appendix B.

Appropriate mitigative measures and Best Management Practices (BMPs) will be implemented during construction to minimize the effects of soil loss and erosion. Some examples of these measures include:

1. Minimize the time of construction;

2. Retain existing ground cover as long as possible in order to minimize dust and erosion during construction;

3. Early construction of drainage control features;

4. Use temporary area sprinklers in non-active construction areas when ground cover is removed;

5. Utilize onsite water wagons for immediate sprinkling, as needed, in active construction areas (weekends and holidays included);

6. Use temporary berms and cut-off ditches, where needed, to control soil erosion;

7. Water graded areas thoroughly after construction activity has ceased for the day and on weekends and holidays; and

8. All cut and fill slopes shall be sodded or planted immediately after grading work has been completed.

All necessary drainage systems will be designed in accordance with the "Rules for the Design of Storm Drainage Facilities in the County of Maui" to ensure that the proposed modifications will not adversely affect downstream and adjacent properties. In addition, a detailed drainage report and erosion control plan with BMPs, will be submitted to the Department of Public Works and Waste Management for review and approval, as necessary, in conjunction with the processing of the building permit applications for the project.

5. ***Electrical and Telephone Systems***

Relocation of the electrical system to the new blower building will require that a new plant power feed and metering connection be installed by Maui Electric Company. However, the proposed improvements are not anticipated to appreciably increase energy use nor will they have an impact on telephone service.

Chapter IV

Relationship to Governmental Plans, Policies and Controls

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

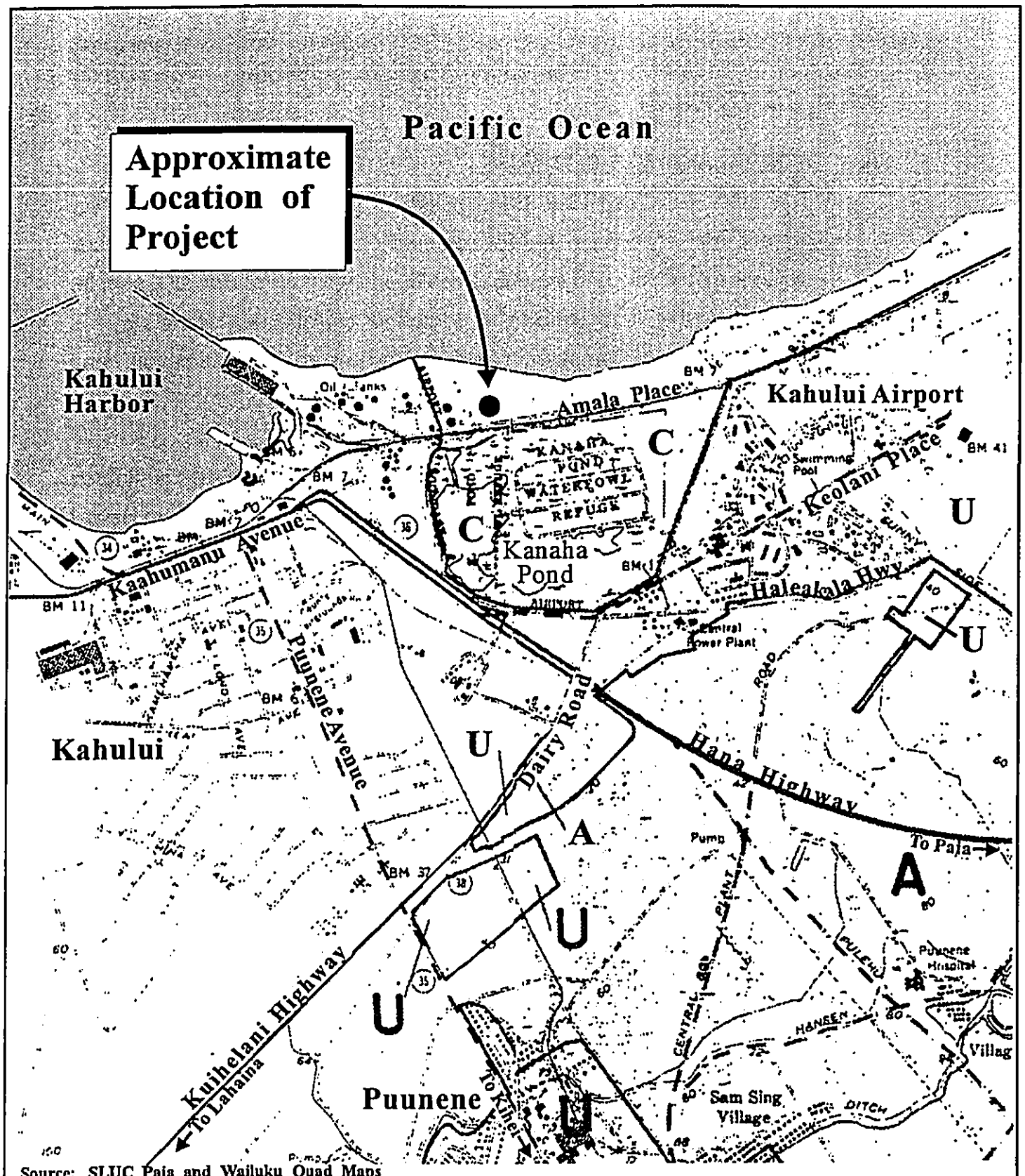
A. STATE LAND USE DISTRICTS

The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaii's people. All lands in the State are classified into four (4) land use districts by the State Land Use Commission: Urban, Agricultural, Conservation, and Rural.

The Wailuku-Kahului Wastewater Reclamation Facility (WWRF) is situated upon "Conservation" designated lands. See Figure 5. Pursuant to Hawaii Administrative Rules (HAR), Section 15-15-20, lands of the Conservation District are regulated by the State Department of Land and Natural Resources (DLNR). The DLNR's, HAR Section 13-5-22, sets forth that public purpose uses undertaken by the State of Hawaii or the counties to fulfill a mandated governmental function, activity, or service for public benefit are permitted uses, provided that a board permit is obtained from the Board of Land and Natural Resources. As required by HAR Section 13-5-22, a Conservation District Use Permit will be procured from the Board of Land and Natural Resources prior to construction of the proposed improvements.

B. STATE CONSERVATION DISTRICT

Lands within the State Conservation District are categorized into five (5) subzones: protective, limited, resource, general, and special. The WWRF site is located within the limits of the Conservation District's Limited subzone. As noted in HAR Section 13-5-12, the objective of this subzone is "to limit uses where natural conditions suggest constraints on human activities". In addition, all land uses identified for the Protective



Source: SLUC Paia and Wailuku Quad Maps

Figure 5 Wailuku-Kahului Wastewater Reclamation Facility Modifications

State Land Use District Designations

0 500 1000 2000 Feet

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.

subzone also apply to the Limited subzone. As reflected by HAR Section 13-5-22, one of the identified land in the Protective subzone is for public purpose uses. This use encompasses:

> "land uses undertaken by the State of Hawaii or the counties to fulfill a mandated governmental function, activity, or service for public benefit and in accordance with public policy and the purposes of the conservation district. Such land uses may include transportation systems, water systems, communications systems, and recreational facilities".

It is noted that on April 9, 1980, the Governor of the State of Hawaii, through Executive Order No. 3006, set aside the subject property for sewage treatment plant purposes and vested control and management of the property with the County of Maui, Department of Public Works and Waste Management.

The proposed modifications on the subject property are in consonance with the identified land uses for the Limited subzone and are also in keeping with the use of the property for sewage treatment plant purposes as provided for by the Executive Order.

C. ***MAUI COUNTY GENERAL PLAN***

The 1990 update of the Maui County General Plan establishes broad objectives and policies to guide the long-range development of the County. As indicated by the Maui County Charter, "The purpose of the General Plan is to recognize and state the major problems and opportunities concerning the needs and development of the County and social, economic, and environmental effects of such development and set forth the desired sequence, patterns, and characteristics of future development."

The proposed project is in consonance with the following General Plan objective relating to Liquid and Solid Waste:

> To provide efficient, safe and environmentally sound systems for the disposal and reuse of liquid and solid wastes.

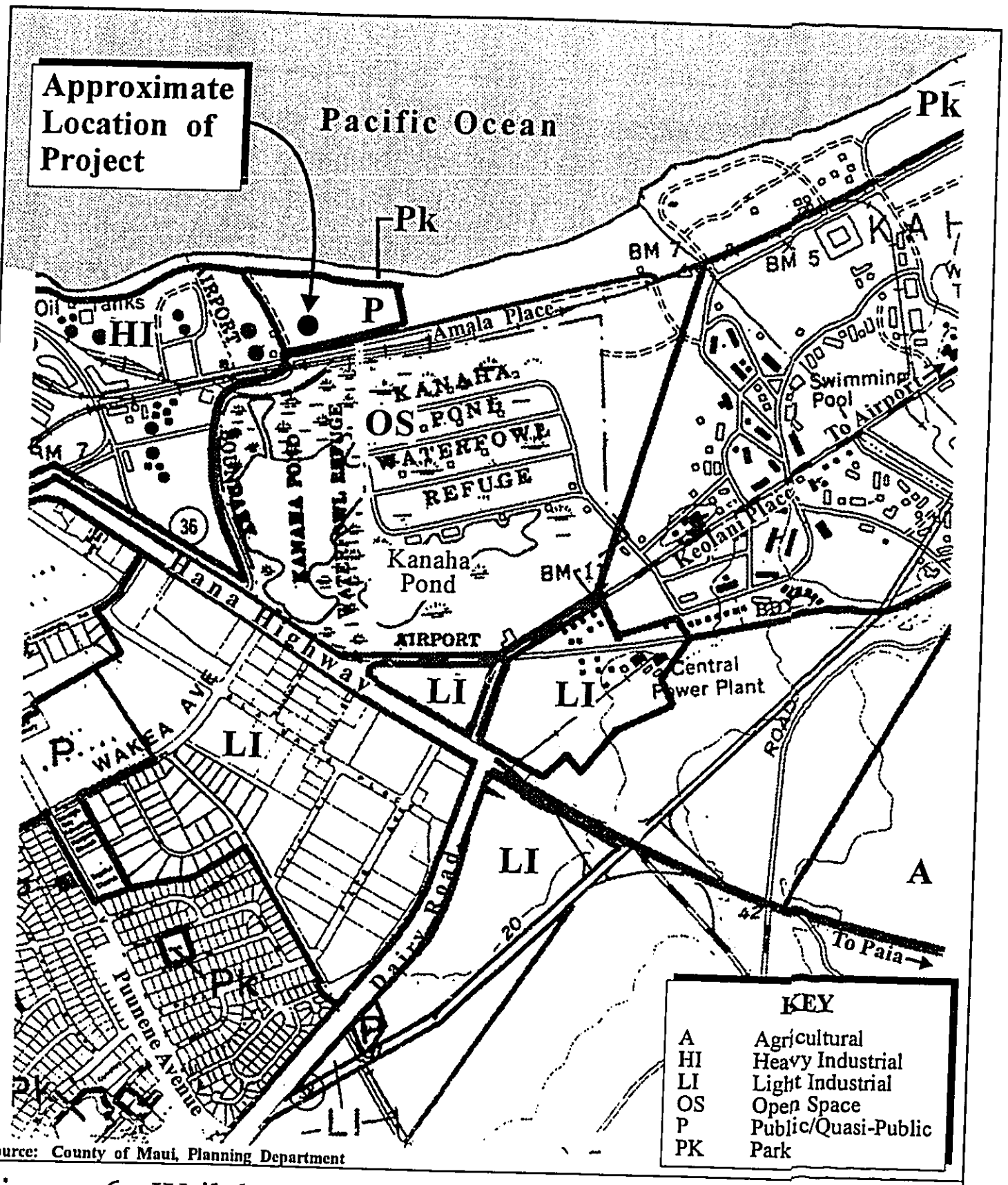
D. *WAILUKU-KAHULUI COMMUNITY PLAN*

The County of Maui is divided into nine (9) Community Plan regions, each of which guide planning in their respective region and implement the policies of the Maui County General Plan. Each Community Plan contains recommendations and standards that guide the sequencing, patterns and characteristics of future development in the region.

The project site is located within the Wailuku-Kahului Community Plan region. The majority of the site is designated for "Public/Quasi-Public" use by the community plan, except for an approximately 100-foot wide strip of land that parallels the coastline. See Figure 6. The Wailuku-Kahului Community Plan addresses the need to develop appropriate support systems to accommodate the pattern of development called for in the plan. The proposed improvements are consistent with the policy of providing a liquid waste disposal system that meets the requirements of the Wailuku-Kahului Community Plan area. In addition, the project is in consonance with the land use designated for the site by the community plan.

E. *ZONING*

As previously indicated, lands within the State Conservation District fall within the purview of the DLNR and, as such, are not zoned by the counties. Prior to implementing the project, a Conservation District Use Permit will be obtained from the Board of Land and Natural Resources.



Source: County of Maui, Planning Department

Figure 6 Wailuku-Kahului Wastewater Reclamation Facility Modifications

Wailuku-Kahului Community Plan Land Use Map

0 250 500 1000 Feet

Prepared for: County of Maui, Department of Public Works and Waste Management

MUNEKIYO & HIRAGA, INC.

F. *COUNTY OF MAUI SPECIAL MANAGEMENT AREA*

Pursuant to the Hawaii Coastal Zone Management Act, Chapter 205A, Hawaii Revised Statutes (HRS), all of the counties have enacted ordinances establishing Special Management Areas (SMA). The project site is located within the County of Maui's Special Management Area (SMA). Pursuant to Chapter 205A, HRS, and the Rules and Regulations of the Maui Planning Commission, actions proposed within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A, HRS and the Rules and Regulations of the Maui Planning Commission.

(1) Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

- (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
- (ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;
- (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
- (iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of Section 46-6, HRS.

Response: The proposed improvements will be contained within the existing WWRF property and will not intrude into the shoreline setback area nor will it encroach upon the adjacent lands designated for park and open space uses by the Wailuku-Kahului Community Plan. Based on an earlier shoreline certification survey, the shoreline setback is estimated to be 134 feet from the shoreline. The closest existing structures that are proposed for interior modifications are the existing chlorine building and the existing garage/maintenance shop building which are located approximately 145 feet from the shoreline. The nearest new exterior structure that is proposed to be constructed is the new blower building which will be situated about 270 feet from the shoreline. It should be noted that, as applicable, a shoreline certification survey will be conducted and submitted to the County of Maui, Department of Planning. The proposed action will have no impact on recreational opportunities available to the public, nor will

it have a detrimental effect on public access to and along the shoreline.

(2) ***Historical/Cultural Resources***

Objective: Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

(A) Identify and analyze significant archeological resources;
(B) Maximize information retention through preservation of *remains and artifacts or salvage operations; and*
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Response: The subject property has been previously disturbed in connection with the construction of the existing WWRF. As such, the proposed action is not anticipated to have an adverse impact on historical or cultural resources. Should human remains be inadvertently discovered during earth moving activities, work shall cease at once in the immediate area of the find, and the find shall be protected from further damage. The State Historic Preservation Division shall be immediately notified and procedures for the treatment of inadvertently discovered human remains shall be implemented pursuant to Chapter 6E, HRS.

(3) ***Scenic and Open Space Resources***

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

Response: The proposed improvements are anticipated to have no impact on scenic and open space resources. Although the proposed blower building will be taller than existing structures at the WWRF, it will be architecturally and structurally similar to the existing chlorine storage building and set back approximately 300 feet from Amala Place, thereby reducing its visual impact. The proposed improvements will not intrude upon viewplanes of Haleakala, the West Maui Mountains, or other visual resources.

(4) ***Coastal Ecosystems***

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

(A) Improve the technical basis for natural resource management;

(B) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Response: The proposed improvements are not expected to adversely impact coastal ecosystems. According to a report prepared by the United States Geological Survey in 1977 when the WWRF was initially constructed, no injected wastewater was expected to enter Kanaha Pond and little, if any, of the injected wastewater reaches the upper part of the unconfined aquifer landward of the WWRF. Injected effluent from the WWRF enters the ocean 2,000 to 3,000 feet from the shoreline.

(5) Economic Uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

Response: The existing Wailuku-Kahului WWRF is well situated to serve the Wailuku and Kahului communities and is compatible with the surrounding heavy industrial and open space land uses. The proposed improvements will be contained within the existing WWRF property and will not encroach upon surrounding land uses.

(6) Coastal Hazards

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program;
(D) Prevent coastal flooding from inland projects; and
(E) Develop a coastal point and nonpoint source pollution control program.

Response: Relocation of the aeration blowers, plant power feed, and standby emergency generator to the proposed new blower building will minimize damage and disruption to plant operations in the event of a tsunami. Similarly, the new dewatering control room, which will be located on the centrifuge mezzanine of the existing operations building, will also be elevated above the 100-year tsunami wave height. The blowers and electrical control room are presently installed in the operations building at an elevation of 15 feet, which makes them susceptible to a 50-year tsunami

recurrence event. The floor of the new blower building will be about 21.5 feet above sea level, which is above the 100-year recurrence tsunami flood level. The proposed improvements will be designed and constructed in accordance with the appropriate flood hazard area development standards established by the County of Maui.

(7) ***Managing Development***

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Response: This Environmental Assessment has been prepared for public review in accordance with Chapter 343, HRS, and Chapter 200 of Title 11, Administrative Rules, Environmental Impact Statement Rules.

In addition, applicable State and County requirements will be adhered to in the design and construction of the proposed project.

(8) ***Public Participation***

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

(A) Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and

(C) Organize workshops, policy dialogues, and site-specific medications to respond to coastal issues and conflicts.

Response: Public awareness and participation for this project is facilitated through the Chapter 343, HRS environmental review process, as well as the Conservation District Use Permit and SMA Use Permit processes. The proposed project is not contrary to the objective of public awareness, education and participation.

(9) ***Beach Protection***

Objectives: Protect beaches for public use and recreation.

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The proposed improvements will be contained within the existing WWRF property and will not encroach upon surrounding open space uses. Based on a previous shoreline certification survey, the shoreline setback is estimated to be 134 feet from the shoreline. The closest existing structures that are proposed for interior modifications are the existing chlorine building and the existing garage/maintenance shop building which are situated about 145 feet from the shoreline. The nearest new exterior structure that is proposed to be constructed is the new blower building which will be located approximately 270 feet from the shoreline. It should be noted that a shoreline certification survey will be prepared and provided to the Department of Planning, as necessary. No development is proposed within the shoreline setback area and no erosion protection structures are proposed.

(10) Marine Resources

Objectives: Implement the State's ocean resources management plan.

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(C) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

(D) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(E) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order

to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(F) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Response: The proposed project is not anticipated to have adverse effects upon marine and coastal resources in the vicinity. The proposed improvements do not increase the capacity of the WWRF and consequently, will not increase the quantity of effluent disposed of by the WWRF.

Chapter V

Summary of Adverse Environmental Effects Which Cannot Be Avoided

V. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The development of the proposed project will result in some construction-related impacts as described in Chapter III, Potential Impacts and Mitigation Measures.

Potential effects include noise generated impacts occurring from construction activities. In addition, there may be temporary air quality impacts associated with dust generated from construction activities, and exhaust emissions discharged by construction equipment.

The proposed project is not anticipated to create any long-term adverse environmental effects.

Chapter VI

Alternatives to the Proposed Action

VI. ALTERNATIVES TO THE PROPOSED ACTION

A. PREFERRED ALTERNATIVE

The "preferred" alternative represents the proposed action. The proposed WWRF modifications are intended to improve process performance, as well as reduce the facility's operational and maintenance requirements. Additionally, the proposed improvements are intended to mitigate damage and process disruption in the event of tsunami flooding. Modifications to the existing preliminary and secondary treatment systems, as well as the dewatering system, are necessary in order to address corrosion and reliability concerns. Improvements to the chlorine delivery system are also needed in order to reduce operational requirements and chlorine use. Primary and standby electrical system improvements are needed to allow the WWRF to operate essential treatment facilities on an independent basis in the event of MECO power failure or tsunami flooding. In addition, key process facilities that are susceptible to damage or disruption need to be improved in order to maintain process performance in the event of tsunami inundation. In light of the foregoing, the action as proposed is recommended and is deemed necessary toward improving current WWRF operations.

B. NO ACTION ALTERNATIVE

The "no action" alternative calls for retaining the WWRF in its current condition. This alternative would be detrimental to current WWRF operations and would not benefit the community at large since the existing condition would still prevail. In this light, retaining the facility in its current condition is not considered a viable option. Accordingly, the "no action" alternative was deleted from consideration.

C. *DEFERRED ACTION ALTERNATIVE*

A "deferred action" alternative will have similar consequences as a "no action alternative" in that maintenance, process performance, reliability, and tsunami inundation issues relating to present WWRF operations will continue to persist and potentially increase. Deferring the proposed modifications may also result in higher implementation costs in the future due to inflation. As with the "no action" alternative, the "deferred action" alternative is not deemed appropriate.

D. *DESIGN ALTERNATIVES*

During the project's preliminary development phase, "as-built" drawings and other pertinent documents for the WWRF were examined. Site visits and meetings with County and State agencies were also held to gather data and to further define project needs, as well as identify regulatory requirements. In addition, requests for proposals for design services for the proposed WWRF modifications were solicited from consultants by the County of Maui, Department of Public Works and Waste Management (DPWWM) for the preparation of a Preliminary Engineering Report (PER) for the project. The scope of work for design services involved a detailed investigation of the existing facility, the preparation of alternatives, recommendations, and cost estimates, as well as establishing criteria for design and preparing reports in line with the scope of work. In addition, a critical task identified by the scope of work included the scheduling and sequencing of each work element to avoid disruptions to ongoing WWRF operations. After the selection of a consultant, a PER was prepared and review meetings involving the County and the consultant were held upon completion of the 50 and 90 percent PER submittals. In addition to examining design criteria, the PER submittals evaluated options to accomplish the work, preliminary layouts, preliminary cost estimate and analysis, permit requirements, construction requirements, and

recommendations. Upon the completion of this design review process, the proposed WWRF modifications were identified by the DPWWM as the preferred alternative.

Chapter VII

Irreversible and Irretrievable Commitments of Resources

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed action would involve a commitment of fuel, labor, funding and material resources. No other irreversible or irretrievable commitments of resources resulting from the project are anticipated.

Chapter VIII

Findings and Conclusions

VIII. FINDINGS AND CONCLUSIONS

The "Significance Criteria", Section 12 of the Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed project will have significant impacts to the environment. The following analysis is provided:

1. ***No Irrevocable Commitment to Loss or Destruction of any Natural or Cultural Resource Would Occur as a Result of the Proposed Project***

The proposed action will not result in any adverse environmental impacts. There are no known rare, threatened, or endangered species of flora, fauna or avifauna located within the project site.

The subject property has been previously disturbed in connection with the construction of the existing WWRF. Accordingly, the proposed modifications are not expected to result in any adverse impacts to cultural resources. Should any cultural artifacts or human remains be encountered during construction, work will stop in the immediate vicinity of the find and the State Historic Preservation Division will be immediately notified to establish an appropriate mitigation strategy.

2. ***The Proposed Action Would Not Curtail the Range of Beneficial Uses of the Environment***

The proposed improvements would not curtail the range of beneficial uses of the environment.

3. ***The Proposed Action Does Not Conflict with the State's Long-term Environmental Policies or Goals or Guidelines as Expressed in Chapter 334, Hawaii Revised Statutes***

The State's Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes (HRS). The proposed action does not contravene provisions of Chapter 344, HRS.

4. ***The Economic or Social Welfare of the Community or State Would Not be Substantially Affected***

The proposed action would have a direct beneficial effect on the local economy during construction. In the long term, the proposed modifications will improve process performance, as well as reduce the WWRF's operational and maintenance requirements. Additionally, the proposed improvements will mitigate damage and process disruption in the event of tsunami flooding.

5. ***The Proposed Action Does Not Affect Public Health***

No adverse impacts to the public's health and welfare are anticipated as a result of the proposed action.

6. ***No Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities are Anticipated***

No significant population changes are anticipated as a result of the proposed modifications.

From a land use standpoint, the proposed action complements the existing use of the site and is compatible with surrounding land uses.

No adverse impacts to public facilities such as roadway, water, sewer, or drainage systems are anticipated. Onsite surface runoff will maintain

existing drainage patterns and collect in lowlying areas on the site where it will dissipate through evaporation or percolation. The proposed action is not expected to significantly impact public services such as police, fire, and medical services. No adverse impacts upon educational, recreational, and solid waste collection and disposal facilities and services are anticipated.

7. ***No Substantial Degradation of Environmental Quality is Anticipated***

During the construction phase of the project, there will be short-term air quality and noise impacts as a result of construction activities. In the long term, effects upon air quality and ambient noise levels should be minimal. The proposed action is not anticipated to significantly affect the open space and scenic character of the area.

No substantial degradation of environmental quality resulting from the proposed modifications is anticipated.

8. ***The Proposed Action Does Not Involve a Commitment to Larger Actions, Nor Would Cumulative Impacts Result in Considerable Effects on the Environment***

The proposed action is considered a stand alone project that will be developed in a single phase. The proposed action does not represent a commitment to larger actions. In addition, the proposed action is not expected to result in any cumulative impacts that would adversely affect the environment.

9. ***No Rare, Threatened or Endangered Species or Their Habitats Would be Adversely Affected by the Proposed Action***

There are no rare, threatened or endangered species of flora, fauna, avifauna or their habitats at the project site that will be adversely affected by the proposed action.

10. ***Air Quality, Water Quality or Ambient Noise Levels Would Not be Detrimentally Affected by the Proposed Project***

Construction activities will result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, will be implemented, as necessary, to minimize wind-blown emissions. Noise impacts will occur primarily from construction-related activities. It is anticipated that construction will be limited to daylight working hours. Water quality is not expected to be affected.

In the long term, the proposed action is not anticipated to have a significant impact on air and water quality or ambient noise levels.

11. ***The Proposed Project Would Not Affect Environmentally Sensitive Areas, Such as Flood Plains, Tsunami Zones, Erosion-prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters***

To mitigate the potential effects of tsunami inundation on WWRF operations, key improvements, such as the aeration blowers and the main electrical equipment in the new blower building, as well as the dewatering control room in the existing operations building, will be elevated above the 100-year tsunami wave height. The proposed modifications will comply with the applicable provisions of Chapter 19.62 of the Maui County Code pertaining to Flood Hazard Areas.

12. ***The Proposed Action Would Not Substantially Affect Scenic Vistas and Viewplanes Identified in County or State Plans or Studies***

The proposed action will occur on a site that has been previously developed for wastewater treatment plant purposes. The project site is not identified as a scenic vista or viewplane. The proposed action will not affect scenic corridors and coastal scenic and open space resources.

13. ***The Proposed Action Would Not Require Substantial Energy Consumption***

The proposed improvements will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this use is not anticipated to result in a substantial consumption of energy resources. In the long term, the proposed modifications may create an additional demand for electricity. However, this demand is not deemed substantive or excessive within the context of the region's overall energy consumption.

Based on the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

Chapter IX

List of Permits and Approvals

IX. LIST OF PERMITS AND APPROVALS

The following permits and approvals will be required prior to the implementation of the project.

State of Hawaii

1. Conservation District Use Permit
2. Community Noise Permit

County of Maui

1. Special Management Area Use Permit
2. Special Flood Hazard Area Development Permit
3. Construction Permits (Grading, Building, Electrical, Plumbing)

Chapter X

Agencies Consulted During the Preparation of the Draft Environmental Assessment

X. AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT

The following agencies were consulted during the preparation of the Draft Environmental Assessment. Agency comments and responses to substantive comments are also included in this section.

1. Neal Fujiwara, Soil Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, Hawaii 96793-2100

2. George Young, Chief Regulatory Branch
Department of the Army
U.S. Army Engineer District, Hnl.
Attn: Operations Division
Bldg. T-1, Room 105
Fort Shafter, Hawaii 96858-5440

3. Robert P. Smith
Pacific Islands Manager
U. S. Fish and Wildlife Service
P.O. Box 50167
Honolulu, Hawaii 96850

4. Gary Gill, Deputy Director
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

5. Herbert Matsubayashi
District Environmental Health Program Chief
State of Hawaii
Department of Health
54 High Street
Wailuku, Hawaii 96793

6. Gilbert Coloma-Agaran
State of Hawaii
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

7. Don Hibbard
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawaii 96707

8. Robert Siarot, Maui District Engineer
State of Hawaii
Department of Transportation
Highways Division
650 Palapala Drive
Kahului, Hawaii 96732

9. Colin Kippen, Deputy Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

10. Clayton Ishikawa, Chief
County of Maui
Department of Fire Control
200 Dairy Road
Kahului, Hawaii 96732

11. John Min, Director
County of Maui
Department of Planning
250 South High Street
Wailuku, Hawaii 96793

12. David Goode, Director
County of Maui
Department of Public Works and Waste Management
200 South High Street
Wailuku, Hawaii 96793

13. Floyd Miyazono, Director
County of Maui
Department of Parks and Recreation
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

14. Tom Phillips, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

15. David Craddick, Director
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

16. Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawaii 96732

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C Kaahumanu Avenue, Wailuku, Hawaii 96793

FEB 2 0 2001

JAMES "KIMO" APANA
Mayor
FLOYD S. MIYAZONO
Director
ELIZABETH D. MENOR
Deputy Director

(808) 270-7230
FAX (808) 270-7934

February 21, 2001

Mr. Glenn Tadaki, Planner
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS: TMK 3-8-01:188

Thank you for the opportunity to comment on the above subject matter. We have no comments at this time regarding the proposed modifications.

Should you have any questions please contact me at 270-7626 or Patrick Matsui at 270-7931.

Sincerely,

Elizabeth Menor
FLOYD S. MIYAZONO
for Director, Department of Parks & Recreation

c: Patrick Matsui, Chief of Planning & Development
p:\ltr\278

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732

March 12, 2001

Brian K. Minaai
Director
DEPUTY DIRECTORS
Jadine Y. Urasak
GLENN M. OKIMOTO

IN REPLY REFER TO:

HWY-M 2.078-01

Mr. Glenn Tadaki
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS, TMK: 3-8-01:188

Thank you for the opportunity to offer comments to the proposed action for the referenced project. Based upon our review, it appears that the work site will be located out of our right-of-way jurisdiction, and should not impact our facilities. Therefore, we have no objection to the proposed project.

If there are any questions or concerns, please call me or Paul M. Chung at 873-3535.

Very truly yours,

ROBERT O. SIAROT
District Engineer, Maui

PMC:mh

MAR 2 0 2001

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

March 16, 2001

Regulatory Branch

Mr. Glen Tadaki, Planner
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

This responds to your request for review comments on proposed modifications to the Wailuku-Kahului Wastewater Reclamation Facility, Maui (TMK 3-8-01:188). We have reviewed the general project summary with respect to the Corps' authority to issue Department of the Army (DA) permits under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

There is not sufficient information in the project summary to enable determination of DA permit requirements for the proposed activity. The Environmental Assessment should identify and describe any activities which will occur in waters of the U.S., including adjacent wetlands.

Should you have questions concerning this response, please contact Mr. Peter Galloway of my staff at 438-8416 (fax 438-4060). File number 200100145 has been assigned to this project.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

MAR 2 2 20[illegible]

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

March 6, 2001

Glenn Tadaki, Planner
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Subject: Wailuku-Kahului Wastewater Reclamation Facility
Modifications: TMK 3-8-01:188

Dear Mr. Tadaki:

Thank you for the opportunity to comment on the above referenced project.

At this time, the Office of Hawaiian Affairs has no comments on the proposed modifications to the Wailuku-Kahului Wastewater Reclamation Facility. We look forward to completing a thorough review of the environmental assessment, special management area use permit application, and conservation district use application.

If you have any questions, please contact Sharla Manley, assistant policy analyst at 594-1944, or e-mail her at sharlam@oha.org.

Sincerely,

Colin C. Kippen, Jr.
Deputy Administrator

CK: sam

cc: Board of Trustees
Randall K. Ogata
Maui CAC

MAR 2 2 2001

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE
ty
YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
Fax (808) 244-6411

March 14, 2001

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Tadaki:

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications; TMK 3-8-01:188

Thank you for your letter of February 20, 2001 requesting comments on the above subject.

We have reviewed the proposed summary and have no comments or recommendations at this time. Thank you for giving us the opportunity to comment on this proposed project.

Very truly yours,

Assistant Chief Robert Tam Ho
for: Thomas M. Phillips
Chief of Police

c: John E. Min, Planning Department

MAR 2 2 2001

JAMES "KIMO" APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

March 19, 2001

MEMO TO: DAVE GOODE, DIRECTOR OF PUBLIC WORKS & WASTE MANAGEMENT

F R O M: ANDY HIROSE, SOLID WASTE DIVISION CHIEF Andy Hirose

SUBJECT: WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS: TMK 3-8-01:188

Thank-you for the opportunity to comment on the above projecf.

Solid Waste Division has no comments at this time.

cc: Glenn Tadaki, Planner, Munekiyo & Hiraga, Inc. ✓

Maui Electric Company, Ltd. 210 West Kamehameha Avenue • P.O. Box 398 • Kahului, Maui, HI 96732-0398 • (808) 871-8461

MAR 2 3 2

March 21, 2001

Mr. Glenn Tadaki
Planner
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Tadaki:

Subject: Wailuku-Kahului Wastewater Reclamation Facility Modifications
(TMK: 3-8-01:188, Kahului)

Thank you for allowing us to comment on the subject project.

In reviewing the information transmitted and our records, Maui Electric Company (MECO) at this time has no objections to the proposed project.

MECO encourages the project's consultant meet with us as soon as practical so that we may discuss the electrical requirements of this project.

If you have any questions or concerns, please call Fred Oshiro at 872-3202.

Sincerely,

Edward Reinhardt

Edward Reinhardt
Manager, Energy Delivery

ER/fo:lkh

MAR 2 8 2001

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-6109
Telephone (808) 270-7816 • Fax (808) 270-7833

March 20, 2001

Mr. Glenn Tadaki
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications; TMK 3-8-01:188

Dear Mr. Tadaki,

Thank you for the opportunity to provide comments in the preparation of the Environmental Assessment. We provide the following information:

The EA should include the sources and expected increases in potable and non-potable water usage. This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of March 1, 2000 were 17.017 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. If rolling annual average withdrawals exceed 20 MGD, the State Commission on Water Resource Management will designate Iao Aquifer. The Department is implementing a plan to bring new sources on-line and to mitigate withdrawals. Two wells in North Waihee were brought on-line in 1997 and another two adjacent wells were brought on-line during 2000. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. Nevertheless, the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments. Water availability will be reviewed at the time of application for meter or meter reservation.

The applicant will be required to provide water service and fire protection to standards. Domestic, fire, and irrigation calculations will be reviewed during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991.

Where possible, brackish and/or reclaimed water should be used for all non-potable uses. Where appropriate, the applicants should consider these measures:

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low flow water fixtures and devices in faucets, showerheads, urinals, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available.

Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 5. In the event of any landscaping renovations, please refer to the "Maui County Planting Plan", and to the attached document. We encourage using climate-adapted and salt-tolerant native plants for all landscaping purposes. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

The project overlies the Kahului aquifer. The Department of Water Supply strives to protect the integrity of surface water and groundwater resources by encouraging applicants to adopt best management practices (BMPs) relevant to potentially polluting activities. We list a few BMP references here. Additional information can be obtained from the State Department of Health.

"The Megamanual - Nonpoint Source Management Manual - A Guidance Document for Municipal Officials." Massachusetts Department of Environmental Protection.

"Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters." United States Environmental Protection Agency, Office of Water.

If you need additional information, please call our Water Resources and Planning Division at 270-7199.

Sincerely,

David Craddick
Director

emb

cc: engineering division

attachments:

1) "The Costly Drip"
2) "Saving Water in the Yard: What & How to Plant in Your Area"
3) Ordinance 2108 - "An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"

C:\WPdocs\EAs EISs\Wailuku Kahului wastewater EA.wpd

By Water All Things Find Life

EARLY CONSULTATION COMMENTS RECEIVED AFTER THE COMMENT PERIOD DEADLINE

Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

June 19, 2001

Mr. David Goode, Director
Department of Public Works and Waste Management
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Goode:

RE: Wailuku-Kahului Wastewater Reclamation Facility Modifications,
TMK: 3-8-01:188

Thank you for the opportunity to comment on the above-referenced project. The Maui Planning Department (Department) recommends that the Environmental Assessment and Special Management Area Permit application specifically address the future threat to the wastewater reclamation facility from coastal erosion in the area immediately makai of and adjacent to the present location of the facility, including future shore protection measures that may be required if the present location of the facility is maintained and which may be contrary to current State and County policy regarding such protection. Given the apparent absence of a long-range plan for the relocation of the facility, an assessment of current and historical shoreline trends in the area, along with the anticipated life span of the current facility will yield a prediction as to the nature of future shore protection measures that may be required by the facility should it remain in its present location and the effect these measures may have on the coastline in the area.

Coastal erosion data for the area were collected in a 1991 aerial photograph analysis funded by the Hawaii Coastal Zone Management Program. The study indicates that the shoreline fronting the western edge of the facility has eroded 160 feet between 1950 and 1988, the most recent year for which data was available for the study. The shoreline to the immediate east of the facility has eroded 195 feet during the same time period. These trends translate into average erosion rates of slightly greater than four (4) and five (5) feet per year for the shoreline fronting the western edge of the facility and the area immediately east of the facility, respectively. These trends have serious implications for the facility if historical erosion rates continue—in 30 years the shoreline fronting the facility may be 120-150 feet inland

of its current position and portions of the facility are currently located less than 150 feet from the shoreline.

Given these erosion trends, as well as the facility's close proximity to the current position of the shoreline, the Department recommends that the Environmental Assessment for this project address the history of severe coastal erosion in the area and the apparent likelihood that future shore protection measures will be required should the facility remain in its current location.

Thank you for your cooperation. If additional clarification is required, please contact Matt Niles, Staff Planner, of this office at 270-7735.

Very truly yours,

JOHN E. MIN
Planning Director

JEM:MCN:cmb
c: Clayton I. Yoshida, AICP, Deputy Planning Director
Glenn Tadaki, Munekiyo & Hiraga, Inc.
Dave Taylor, Dept. of Public Works and Waste Management
Matt Niles, Staff Planner
Project File
General File
S:\ALL\Matt\sm1\Wastewater Facility\EA_comments.wpd

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

June 26, 2001

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

MEMO TO: JOHN E. MIN, DIRECTOR OF DEPARTMENT OF PLANNING

FROM: DAVID GOODE, DIRECTOR OF PUBLIC WORKS AND WASTE MANAGEMENT

SUBJECT: **WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY (WWRF) MODIFICATIONS; TMK 3-8-01:188**

Thank you for your June 19, 2001 letter providing early consultation comments on the above-referenced project. In response to your comments, we would like to note the following.

The proposed modifications are intended to improve process reliability and performance, reduce operation and maintenance requirements, and mitigate potential damage and process disruption in the event of tsunami flooding. It should be emphasized that the closest exterior structure proposed for construction is the blower building which will be situated approximately 270 feet from the shoreline. No modifications are proposed within the shoreline setback area, nor are any improvements proposed makai of the existing plant facilities. Thus, we do not believe that the proposed project will affect beach processes.

With regard to the longer term issues of facility location and coastal erosion, the Department of Public Works and Waste Management has been monitoring beach processes at the WWRF site and will continue to do so. We would like to note that since the plant has been in operation from 1972, we have seen no appreciable increase in coastal erosion for the adjacent shoreline and have not seen the average erosion rates of 4-5 feet per year extrapolated in the Hawaii CZM study.

The issue of ultimately moving the existing WWRF to a new Central Maui location represents a large fiscal impact to the County of Maui and its residents. The relocation of the WWRF to a new site is beyond the current 10-year planning horizon for County-funded capital improvement projects.

Thank you again for providing us with your comments.

DG:to
b&cw-kwf\planmtr.001

cc: Dave Taylor, Department of Public Works and Waste Management
Jeff Pearson, Brown and Caldwell
Glenn Tadaki, Munekiyo & Hiraga, Inc.

Chapter XI

Letters Received During the Draft Environmental Assessment Public Comment Period and Responses to Substantive Comments

XI. LETTERS RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

Pursuant to the requirements of the environmental review process, letters received during the Draft Environmental Assessment public comment period, as well as responses to substantive comments, are included in this section.

MAY 2 9 2001

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

May 23, 2001

Mr. David Goode, Director
Department of Public Works and Waste Management
County of Maui
200 South High Street
Wailuku, Hawai'i 96793

Dear Mr. Goode:

Subject: Wailuku-Kahului Wastewater Reclamation Facility Modifications, Maui

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

1. What is the status of the facility's compliance with DOH and EPA regulations and enforcement actions?

2. Please report the number and extent of odor complaints related to the wastewater operations. What will be done to minimize such complaints?

3. Please describe the mitigation measures that will be taken to reduce impacts of any spills from the proposed above-ground diesel fuel storage tank..

4. Please describe the facility's impact on the nearby coastal waters. What mitigation measures are proposed to minimize any impacts?

5. Please describe how sewage sludge is presently handled and whether there would be any changes in volume or disposal methods under the new plan.

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

Sincerely,

Genevieve Salmonson

Genevieve Salmonson
Director

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA A.I.C.P.
Deputy Director

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

Solid Waste Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

June 12, 2001

Ms. Genevieve Salmonson, Director
State of Hawaii, Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson,

SUBJECT: **WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS**

Thank you for your input on the project. We have reviewed your comments and questions and offer the following responses:

1. *What is the status of the facility's compliance with DOH and EPA regulations and enforcement actions?*

   The County continues to coordinate with the State DOH and EPA regarding regulations and enforcement actions. The current project was initiated by the County to improve the reliability of plant operations, not as the result of an enforcement action.

2. *Please report the number and extent of odor complaints related to the wastewater operations. What will be done to minimize such complaints?*

   In the past year, there have been no odor complaints relating to plant operations. We anticipate no additional odors to be generated as a result of the current project.

3. *Please describe the mitigation measures that will be taken to reduce impacts of any spills from the proposed above-ground diesel fuel storage tank.*

   The above ground diesel fuel storage tank is currently in service at the facility

and will be relocated as part of the project. The tank was installed less than two years ago and complies with all current regulations relating to spill mitigation appurtenances.

4. *Please describe the facility's impact on the nearby coastal waters. What mitigation measures are proposed to minimize any impacts?*

The proposed modifications will create no additional impacts to nearby coastal waters.

5. *Please describe how sewage sludge is presently handled and whether there would be any changes in volume or disposal methods under the new plan.*

All biosolids from the plant are transported to the composting facility at the Central Maui Landfill. The proposed modifications will not increase the volume and will not alter the disposal methods of biosolids from the facility.

We appreciate your input on the project. If you have any questions or wish to discuss this matter further, please contact Dave Taylor, the County engineer for the project at (808) 270-7428.

Sincerely,

for David Goode, Director
Department of Public Works
and Waste Management

c: Jeff Pearson

DT(dt01056)

BENJAMIN J. CAYETANO
GOVERNOR

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

LORRIN W. PANG, M.D., M.P.H.
MAUI DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
ENVIRONMENTAL PROTECTION AND HEALTH SERVICES
54 HIGH STREET, ROOM 300
WAILUKU, MAUI, HAWAII 96793

July 10, 2001

Mr. John Min
Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawai'i 96793

Dear Mr. Min:

Subject: **Wailuku-Kahului Wastewater Reclamation Facility Modifications**
TMK: (2) 3-8-001: 188
SM1 2001/0008

Thank you for the opportunity to comment on the Special Management Area Permit application. We have no comments to offer at this time.

Should you have any questions, please call me at 984-8230.

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: Phillip Dendel

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

2[illegible] Imi Kala St.
S[illegible]te 209
Wailuku, HI 96793

USDA

01 JUL 12 P3:10

Our People...Our Islands...In Harmony

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

DATE: July 11, 2001

Mr. John E. Min, Director
Department of Planning
County of Maui
250 S. High Street
Wailuku, Hawaii 96793

Dear Mr. Min,

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications
TMK: 3-8-001: 188
I.D. SM1 2001/0008

We have no comment on the subject application.

Thank you for the opportunity to comment.

Sincerely,

Neal S. Fujiwara

Neal S. Fujiwara
District Conservationist

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO ATTENTION OF

July 12, 2001

'01 JUL 16 P2:34

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

Civil Works Technical Branch

Mr. Matt Niles, Staff Planner
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui 96793

Dear Mr. Niles:

Thank you for the opportunity to review and comment on the Special Management Area Application and Draft Environmental Assessment (DEA) for the Wailuku-Kahului Wastewater Reclamation Facility Modifications Project, Wailuku, Maui (TMK 3-8-1: 188). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit will not be required for the project.

b. The flood hazard information provided on page 9 of the DEA is correct.

Should you require additional information, please contact Ms. Jessie Dobinchick of my staff at (808) 438-8876.

Sincerely,

James Pennaz

James Pennaz, P.E.
Chief, Civil Works
Technical Branch

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
54 South High Street, Room 101
Wailuku, Hawaii 96793-2198

'01 JUL 16 P2:35

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

MEMORANDUM

DATE: July 12, 2001

TO: Mr. Matt Niles, Staff Planner
County of Maui, Planning Department

FROM: Louis Wada, Land Agent
Maui District Land Office

SUBJECT: SM1 2001/0008 TMK: 3-8-001: 188
Wailuku-Kahului Wastewater Reclamation Facility Modifications

The Maui District Land Office of the Department of Land and Natural Resources has no comments on the subject Special Management Area application at this time.

Thank you for allowing us to review the subject application.

c: Maui Land Board Member
Nick Vaccaro
District Files

POLICE DEPARTMENT

COUNTY OF MAUI

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE
ty
YOUR REFERENCE

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

July 13, 2001

MEMORANDUM

TO : JOHN E. MIN, PLANNING DIRECTOR

FROM : THOMAS M. PHILLIPS, CHIEF OF POLICE

SUBJECT : I.D. SM1 2001/008
TMK: (2) 3-8-001:188
Project Name: Wailuku-Kahului Wastewater Reclamation Facility Modifications
Applicant: Mike Munekiyo

X No further recommendation or comment is necessary or desired.

____ Refer to enclosed comments and/or recommendations.

Thank you for giving us the opportunity to comment on this project. We are returning the Application which was submitted for our review.

Assistant Chief Robert Tam Ho
For: THOMAS M. PHILLIPS
Chief of Police

Enclosure

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

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

01 JUL 19 P3:11

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

IN REPLY REFER TO:
STP 8.9957

July 16, 2001

Mr. John E. Min
Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawaii 96793

Dear Mr. Min:

Subject: Wailuku-Kahului Wastewater Reclamation Facility Modification
Special Management Area Use Permit (SMA)
TMK: (2) 3-8-001: 188

Thank you for your transmittal requesting our review of the subject project.

The proposed development will not impact our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-6109
Telephone (808) 270-7816 • Fax (808) 270-7833

July 17, 2001

Mr. John Min, Director
County of Maui
Planning Department
250 South High Street
Wailuku, Maui, Hawaii 96793

I.D.: SM1 2001/0008
TMK: 3-8-01:188
Project Name: Wailuku-Kahului Wastewater Reclamation Facility Modifications

Dear Mr. Min,

Thank you for the opportunity to provide comments to this application.

As stated in the application material, this project is served by the Central Maui System for which the major source of water is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of June 1, 2001 were 17.671 mgd. The regulatory sustainable yield of this aquifer is 20 mgd. If rolling annual average withdrawals exceed 20 mgd, the State Commission on Water Resource Management will designate Iao Aquifer. The Department is implementing a plan to bring new sources on line and to mitigate withdrawals. Two wells in North Waihee were brought on-line in 1997 and another two adjacent wells were brought on-line during 2000. It should be noted that the capacity of the three wells in Waihee currently in use is about 4.8 mgd, or about 6.5 mgd with the fourth well already developed, and not 13.5 mgd as stated in the project material.

The applicant will be required to provide water service and fire protection to standards. Fire protection system improvements will be required for the proposed improvements. Domestic, fire, and irrigation calculations will be reviewed during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer.

We are pleased to note that reclaimed water is proposed for applicable operational and landscape uses. This measure significantly mitigates impact on the potable water system. Where appropriate, the applicants should consider these additional conservation measures:
Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low flow water fixtures and devices in faucets, showerheads, urinals, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available.
Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of

hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 5. In the event of any landscaping renovations, please refer to the "Maui County Planting Plan", and to the attached document. We encourage using climate-adapted and salt-tolerant native plants for all landscaping purposes. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

The project overlies the Kahului aquifer. The Department of Water Supply strives to protect the integrity of surface water and groundwater resources by encouraging applicants to adopt best management practices (BMPs) relevant to potentially polluting activities. Attached are a few BMPs for your reference. Additional information can be obtained from the State Department of Health.

Should you have any questions, please call our Water Resources and Planning Division at 270-7199.

Sincerely,

David Craddick
Director

emb

cc: engineering division

attachments:

1) "The Costly Drip"
2) "Saving Water in the Yard: What & How to Plant in Your Area"
3) Ordinance 2108 - "An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
4) "The Megamanual - Nonpoint Source Management Manual - A Guidance Document for Municipal Officials." Massachusetts Department of Environmental Protection.
50 "Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters." United States Environmental Protection Agency, Office of Water.

C:\WPdocs\Permcomm\Wailuku Kahului wastewater.wpd

MUNEKIYO HIRAGA, INC.

August 3, 2001

David Craddick, Director
Department of Water Supply
County of Maui
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications (SM1 2001/0008); TMK 3-8-001:188

Dear Mr. Craddick:

Thank you for your July 17, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, the County of Maui, Department of Public Works and Waste Management, we would like to note that water service and fire protection requirements for the proposed modifications will be coordinated with the Department of Water Supply (DWS). Domestic, fire, and irrigation calculations will also be submitted to the DWS for review in connection with the processing of the project's building permit applications.

In addition, the advisory comments set forth in the department's letter concerning water conservation and Best Management Practices have been duly noted for consideration.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:cc
cc: Matt Niles, Department of Planning
Dave Taylor, Department of Public Works and Waste Management
Jeff Pearon, Brown & Caldwell Consultants

b&clw-kwr\dws.ltr

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

PB:MA

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

John E. Min, Director
Department of Planning and Permitting
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Min:

Subject: SMA permit for Wailuku-Kahului Wastewater Reclaimation Facility Modifications. [TMK 2-3-8-01:188]

It is our understanding that the County of Maui, Department of Public Works and Waste Management is proposing to undertake various modifications to the Wailuku-Kahului Wastewater Reclamation Facility. The subject property was set aside for sewage treatment purposes by Executive Order 3006. These proposed improvements include: modifications to the facility's headworks, aeration facilities, dewatering system, clorination system and electrical system as well as tsunami mitigation improvements.

It is our understanding that the subject facility is located within the Limited Subzone of the Conservation District. Thus the proposed project needs to obtain a Conservation District Use Permit from the State of Hawaii Department of Land and Natural Resources. As the proposed project will need to go through the Land Division's CDUA permitting process our staff will be reviewing the projects application and Environmental Assessment when processing the permit.

The Land Division Planning staff would be very interested in any findings or conclusions of County of Maui Planning Department's SMA permit review of this project. Any documentation of the analysis or issues arising during your review process would be greatly appreciated by our staff.

Thank you for this opportunity to comment. Please feel free to contact Masa Alkire of our Planning Branch at 587-0385.

Aloha,

Harry Yada
Acting Administrator

Cc: Maui District Land Agent
Maui Board Member

MUNEKIYO HIRAGA, INC.

August 3, 2001

Harry Yada, Acting Administrator
Land Division
Department of Land and Natural
Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications (SM1 2001/0008); TMK 3-8-001:188

Dear Mr. Yada:

Thank you for your July 23, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, the County of Maui, Department of Public Works and Waste Management, we would like to note that a Conservation District Use Application for the proposed modifications was submitted to the department on July 7, 2001 for the necessary processing.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:cc
cc: Matt Niles, Department of Planning
Dave Taylor, Department of Public Works and Waste Management
Jeff Pearson, Brown & Caldwell Consultants

b&cw-kwrf\dlnr.ltr

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Co[illegible] Administration

RON R. [illegible]ISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

July 23, 2001

MEMO TO: JOHN E. MIN, PLANNING DIRECTOR

FROM: for DAVID GOODE, DIRECTOR OF PUBLIC WORKS AND WASTE MANAGEMENT

SUBJECT: SPECIAL MANAGEMENT AREA PERMIT APPLICATION
WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY MODIFICATIONS
TMK: (2) 3-8-001:188
SM1 2001/0008

We reviewed the subject application and have the following comments:

1. Off-street parking, loading spaces and landscaping shall be provided per Maui County Code, Chapter 19.36.

2. Pursuant to Hawaii Revised Statues, Section 103-50, all plans and specifications shall be reviewed by the Disabilities and Communications Access Board (formally known as the Commissions on Persons with Disabilities).

If you have any questions, please call Milton Arakawa at 270-7845.

MA:jso
s:\LUCA\CZM\wwrdfacility

MUNEKIYO & HIRAGA, INC.

August 3, 2001

David Goode, Director
Department of Public Works
and Waste Management
County of Maui
250 South High Street
Wailuku, Hawaii 96793

SUBJECT: Wailuku-Kahului Wastewater Reclamation Facility Modifications (SM1 2001/0008); TMK 3-8-001:188

Dear Mr. Goode:

Thank you for your July 23, 2001 letter providing comments on the above-referenced project. We would like to note that the standard comments set forth in the department's letter are acknowledged and will be addressed as applicable.

Thank you again for providing us with your comments.

Very truly yours

Glenn Tadaki, Planner

GT:cc
cc: Matt Niles, Department of Planning
Dave Taylor, Department of Public Works and Waste Management
Jeff Pearson, Brown & Caldwell Consultants
b&clw-kwn\dpwwm2.ltr

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

BENJAMIN J. CAYETANO
GOVERNOR

WAYNE H. KIMURA
COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING
AND GENERAL SERVICES
SURVEY DIVISION
P. O. BOX 119
HONOLULU, HAWAII 96810

RESPONSE REFER TO:

FILE NO. _____

July 31, 2001

MEMORANDUM

TO: Mr. John E. Min, Planning Director
Maui County Planning Department

ATTN.: Mr. Matt Niles, Staff Planner

FROM: Randall M. Hashimoto, State Land Surveyor

SUBJECT: I.D.: SM1 2001/0008
TMK: 3-8-001:188
Project Name: Wailuku-Kahului Wastewater Reclamation Facility Modifications
Applicant: Mike Munekiyo

The subject proposal has been reviewed and confirmed that no Government Survey Triangulations and Benchmarks are affected. The Survey Division has no objections to the proposed project.

Should you have any questions, please call me at 586-0390.

for RANDALL M. HASHIMOTO
State Land Surveyor

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

Mayor
FLOYD S. MIYAZONO
Director

ELIZABETH D. MENOR
Deputy Director

(808) 270-7230
FAX (808) 270-7934

'01 AUG -1 P12:49

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

July 27, 2001

MEMO TO: John E. Min, Planning Director

Patrick T. Matsui

FROM: FLOYD S. MIYAZONO, Director

SUBJECT: WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITY
SM 1 2001/0008

We have reviewed the subject application and have no comments to submit at this time.

Thank you for the opportunity to review and comment. Please contact me or Mr. Patrick Matsui, Chief of Planning and Development, at extension 7387 if there are any questions.

c: Patrick Matsui, Chief-Planning and Development

References

References

Brown and Caldwell Consultants, Environmental Assessment and Negative Declaration - Wailuku-Kahului Wastewater Reclamation Facilities Additions and Modifications, December 7, 1990.

Community Resources, Inc., Maui County Community Plan Update Program Socio-Economic Forecast Report, January 1994.

County of Maui, The General Plan of the County of Maui, September 1990 Update.

County of Maui, Wailuku-Kahului Community Plan, December 1987.

County of Maui, Office of Economic Development, Maui County Data Book, June 2000.

Personal communication with Patrick Matsui, County of Maui, Department of Parks and Recreation, April 17, 2001.

Personal communication with Charlene Shibuya, County of Maui, Department of Public Works and Waste Management, February 5, 2001.

Personal communication with Myles Fujinaka, County of Maui, Department of Water Supply, February 5, 2001.

Edward K. Noda and Associates, Inc., Draft Environmental Impact Statement - Kahului Airport Improvements (Volume III), March 1996.

Federal Emergency Management Agency, Flood Insurance Rate Map - Maui County, Hawaii, Community - Panel Number 150003/0190D, March 16, 1995.

Munekiyo & Hiraga, Inc., Draft Environmental Assessment - Kahului Airport Hotel, January 2001.

Munekiyo, Arakawa & Hiraga, Inc., Final Environmental Assessment - Maui Community College Building "P", December 1999.

Personal communication with Louie Wada, State Department of Land and Natural Resources, April 12, 2001.

U.S. Census Bureau, Census 2000.

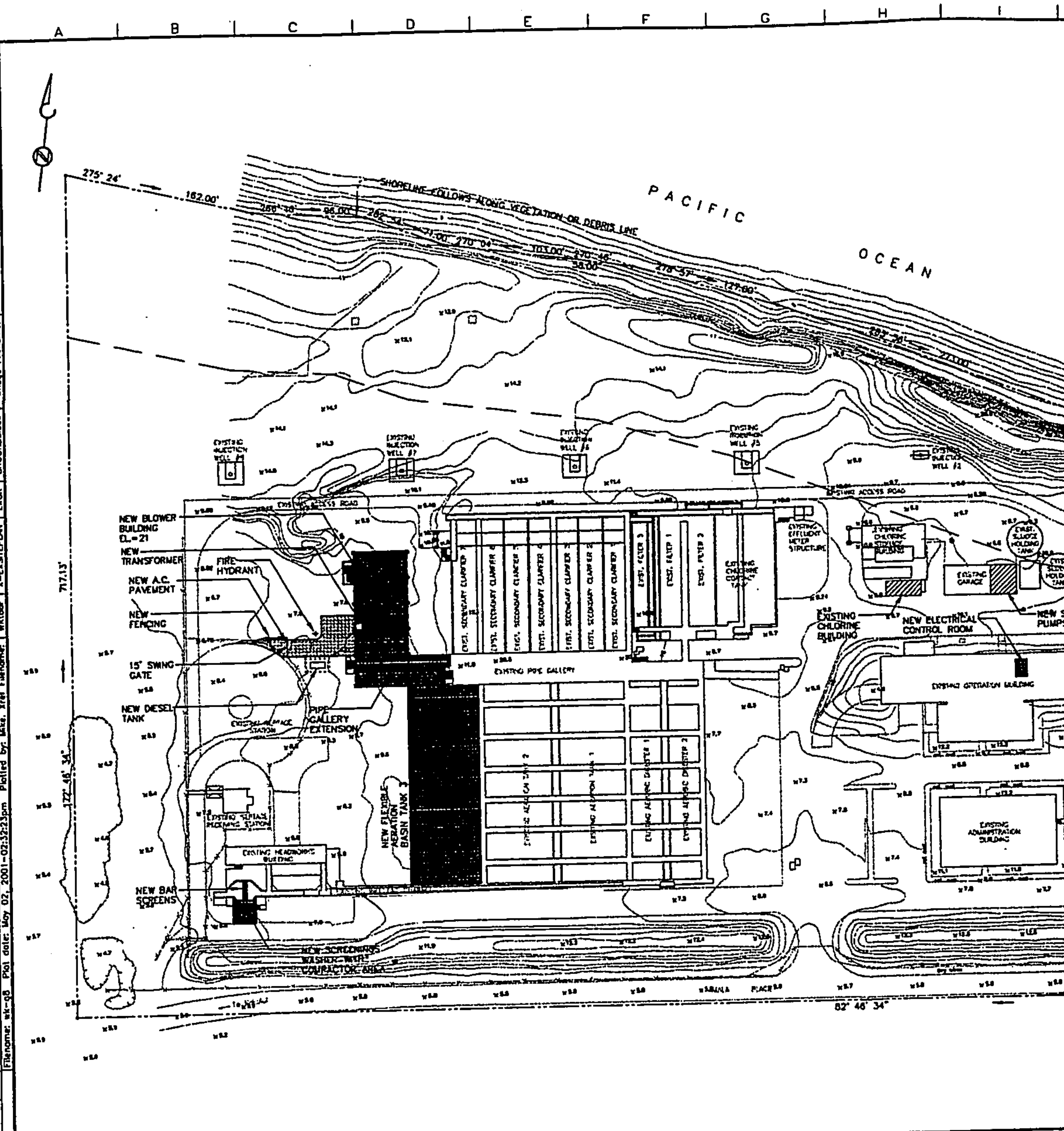
U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, August 1972.

University of Hawaii, Land Study Bureau, Detailed Land Classification Island of Maui, May 1967.

University of Hawaii, Department of Geography, Atlas of Hawaii, Third Edition, 1998.

Appendix A

Preliminary Development Plans



BROWN AND CALDWELL

SUBMITTED: ______ PROJECT MANAGER DATE: ______

APPROVED: ______ BROWN AND CALDWELL DATE: ______

APPROVED: ______ DATE: ______

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 19296

DRAWN Metc.

DESIGNED ______

CHECKED ______

CHECKED ______

PRELIMINARY

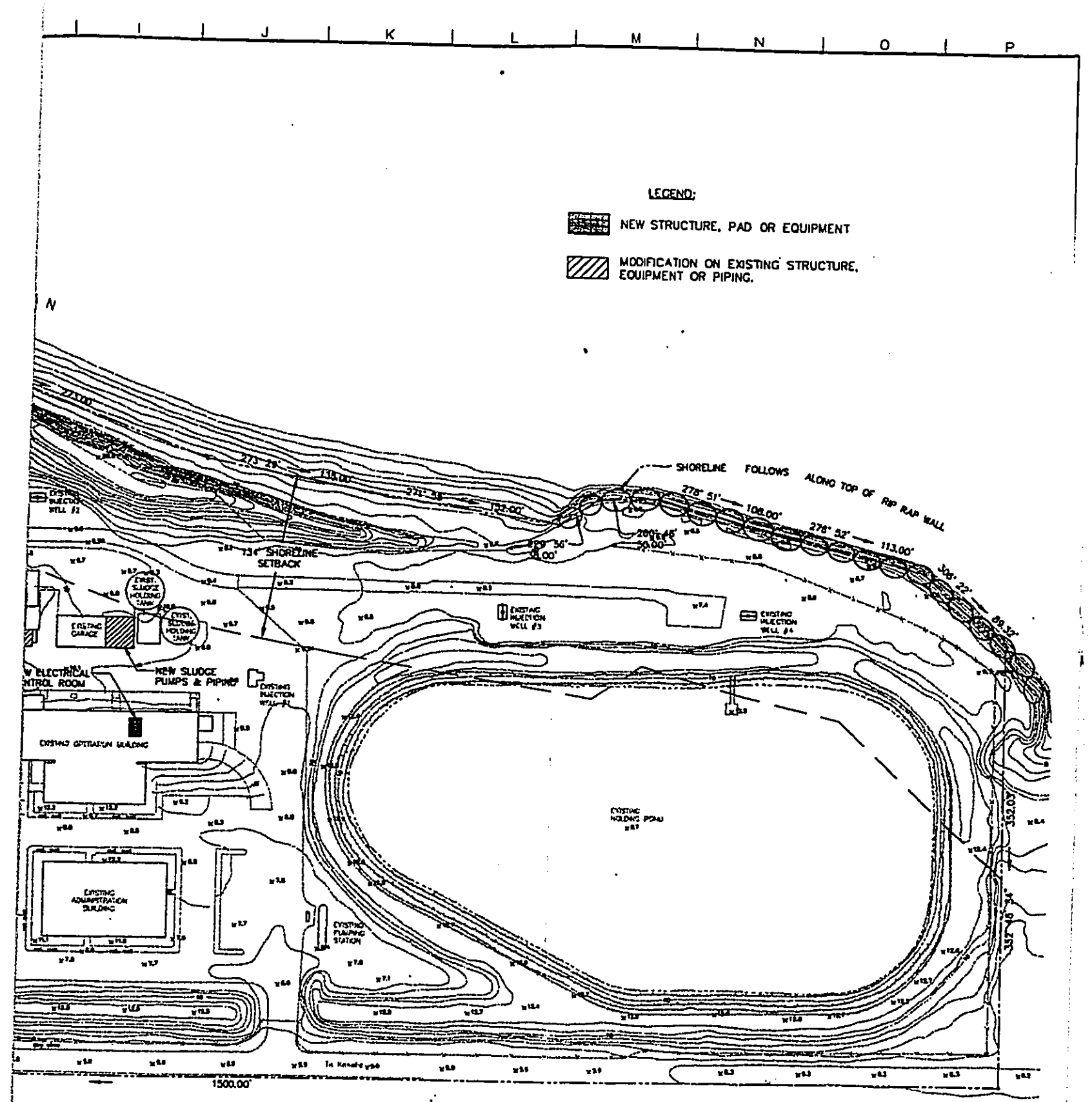
THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS

ZONE	REV	DESCRIPTION	BY	DATE	APP

D

WAIL



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

GENERAL

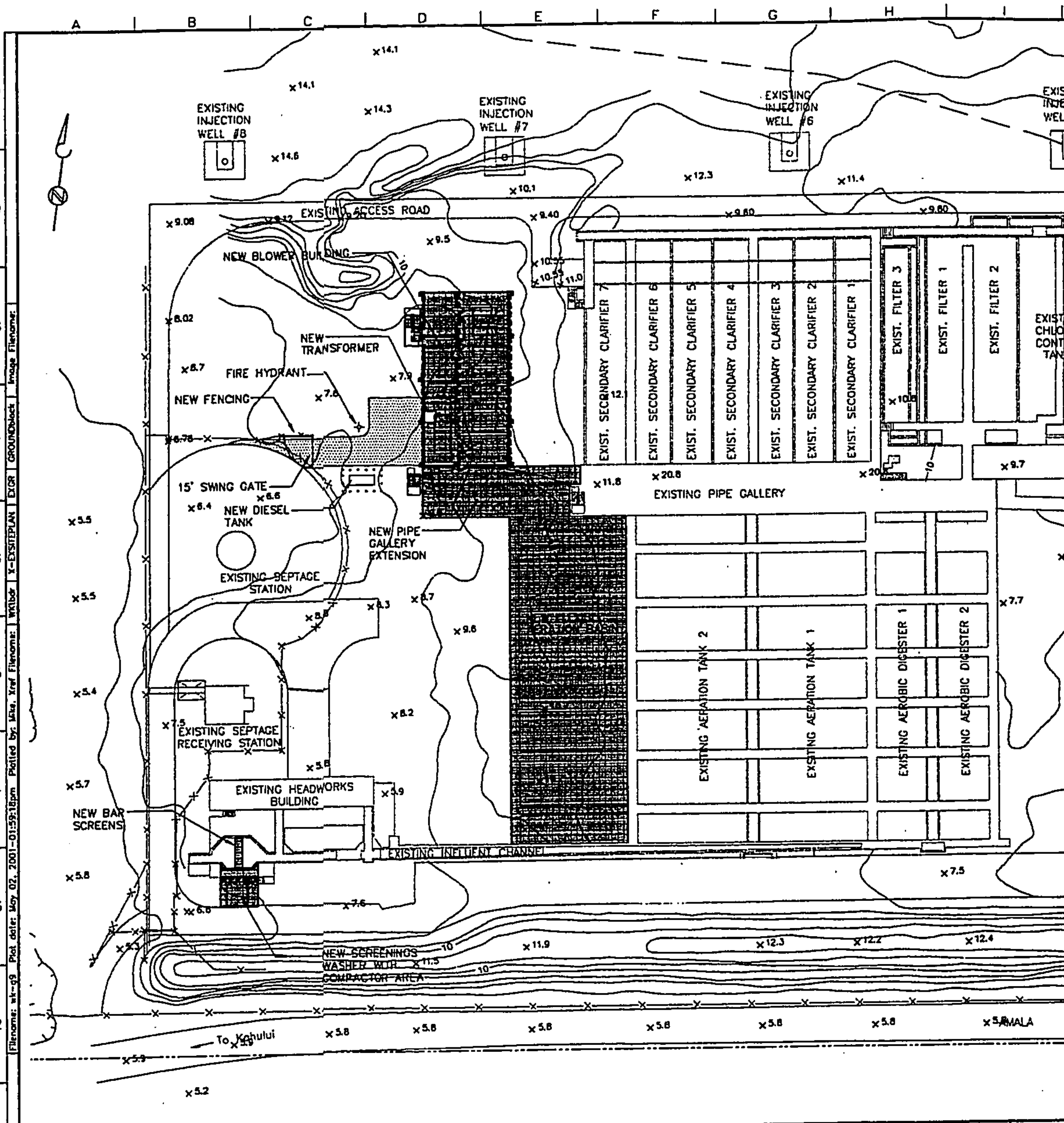
SITE PLAN

SCALE
1" = 50'

DRAWING NUMBER
G8

SHEET NUMBER
_ OF _

I J K L M N O P



BROWN AND CALDWELL

SUBMITTED: ______ PROJECT MANAGER DATE: ______
APPROVED: ______ BROWN AND CALDWELL DATE: ______
APPROVED: ______ DATE: ______

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 19296
DRAWN Metc.
DESIGNED
CHECKED
CHECKED

PRELIMINARY

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

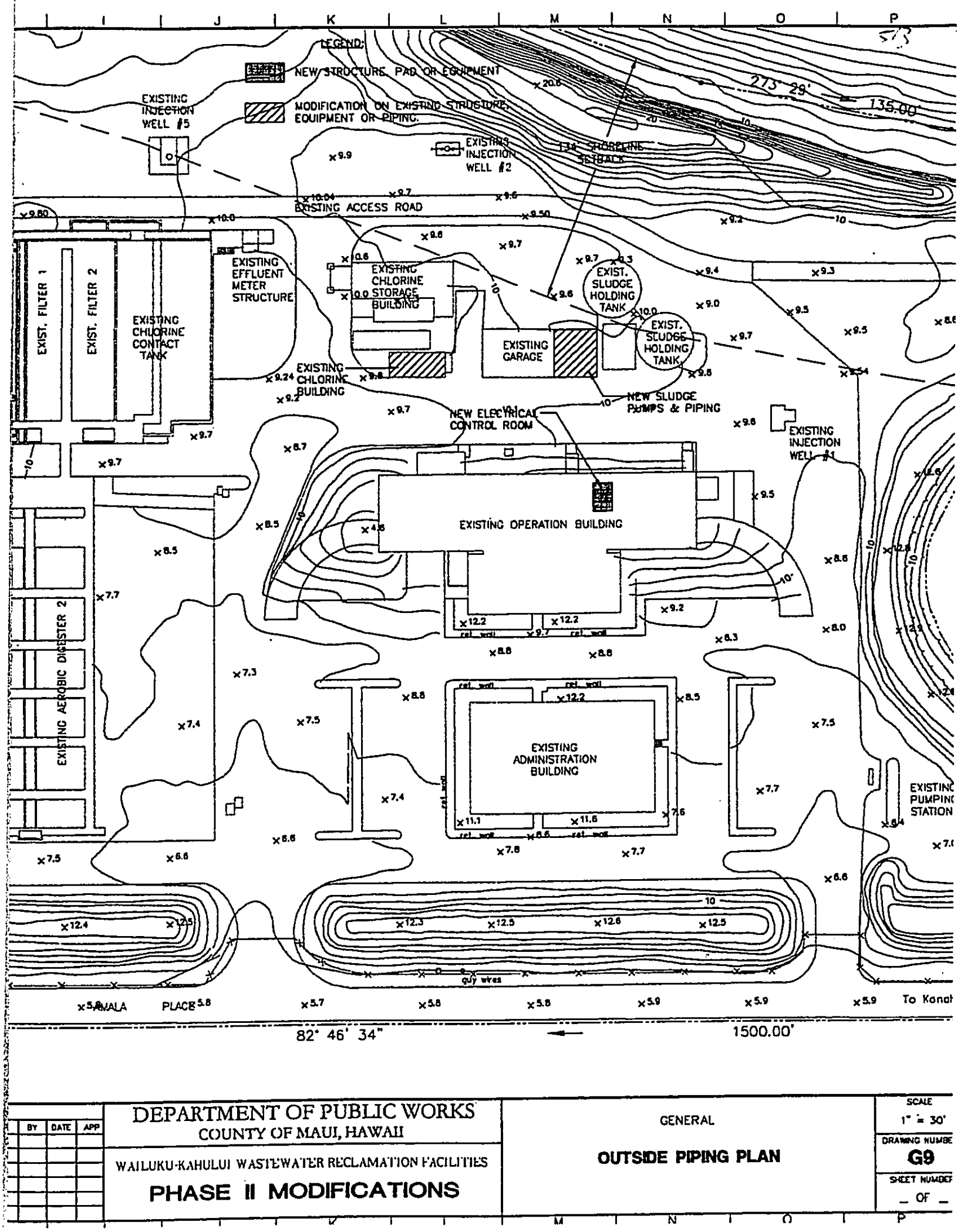
REVISIONS

ZONE	REV	DESCRIPTION	BY	DATE	APP

DE

WAILU

F



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

GENERAL

OUTSIDE PIPING PLAN

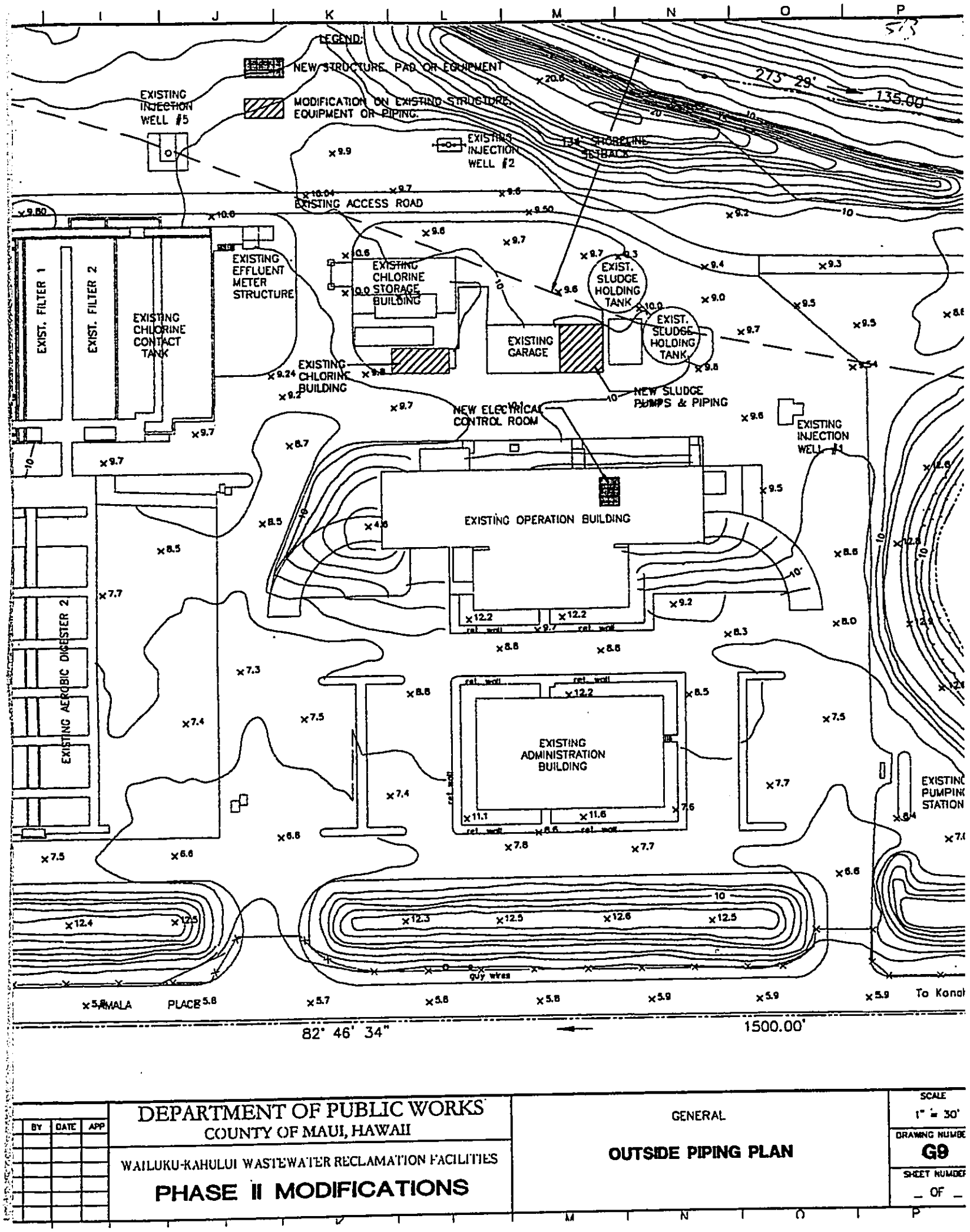
SCALE
1" = 30'

DRAWING NUMBER
G9

SHEET NUMBER
_ OF _

CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

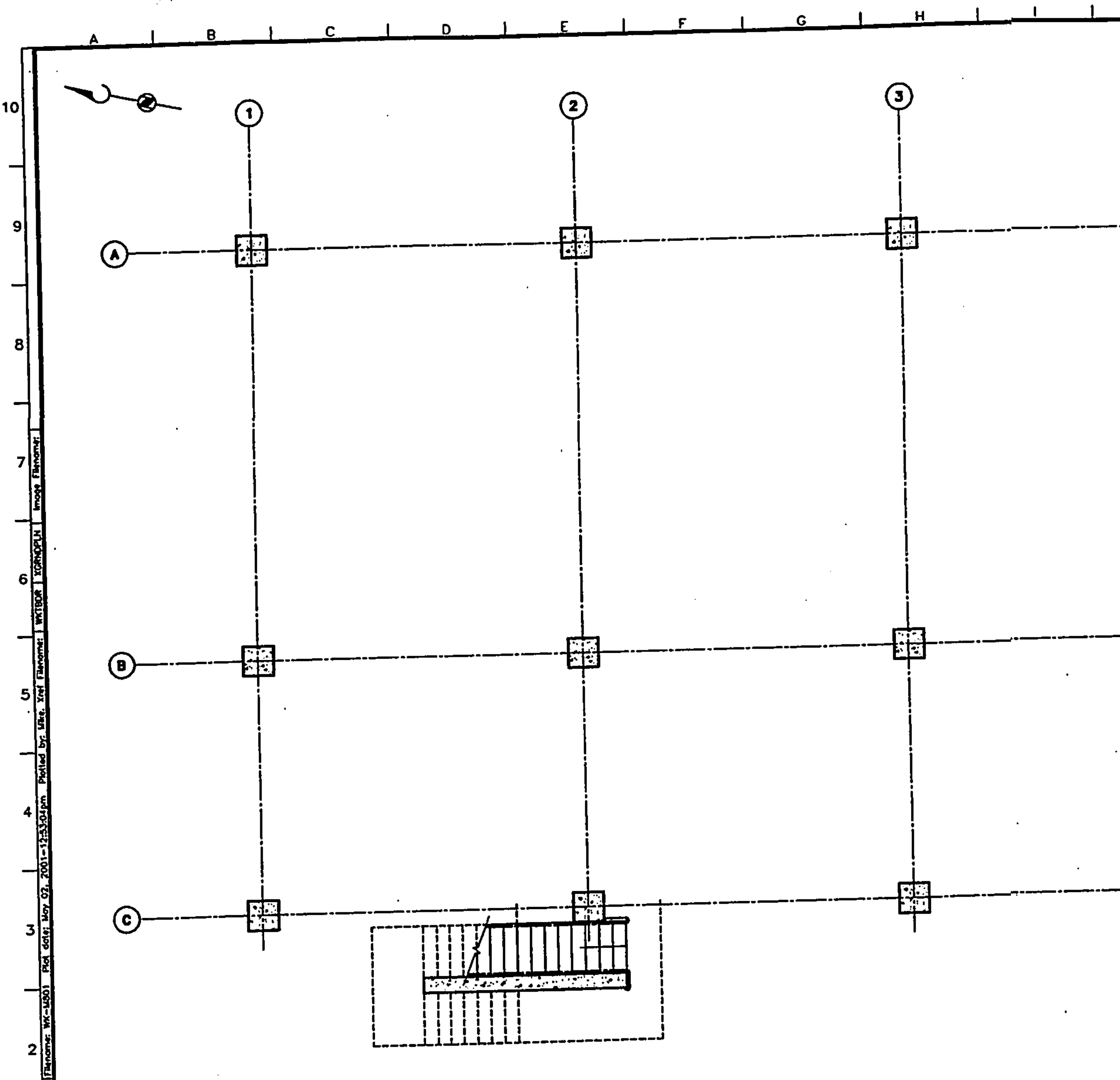
GENERAL

OUTSIDE PIPING PLAN

SCALE
1" = 30'

DRAWING NUMBER
G9

SHEET NUMBER
_ OF _



PLAN

SCALE: 1/4" = 1'-0

BROWN AND CALDWELL

SUBMITTED:	PROJECT MANAGER	DATE:
APPROVED:	BROWN AND CALDWELL	DATE:
APPROVED:		DATE:

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 20927
DRAWN MBC
DESIGNED JB/MBC
CHECKED
CHECKED

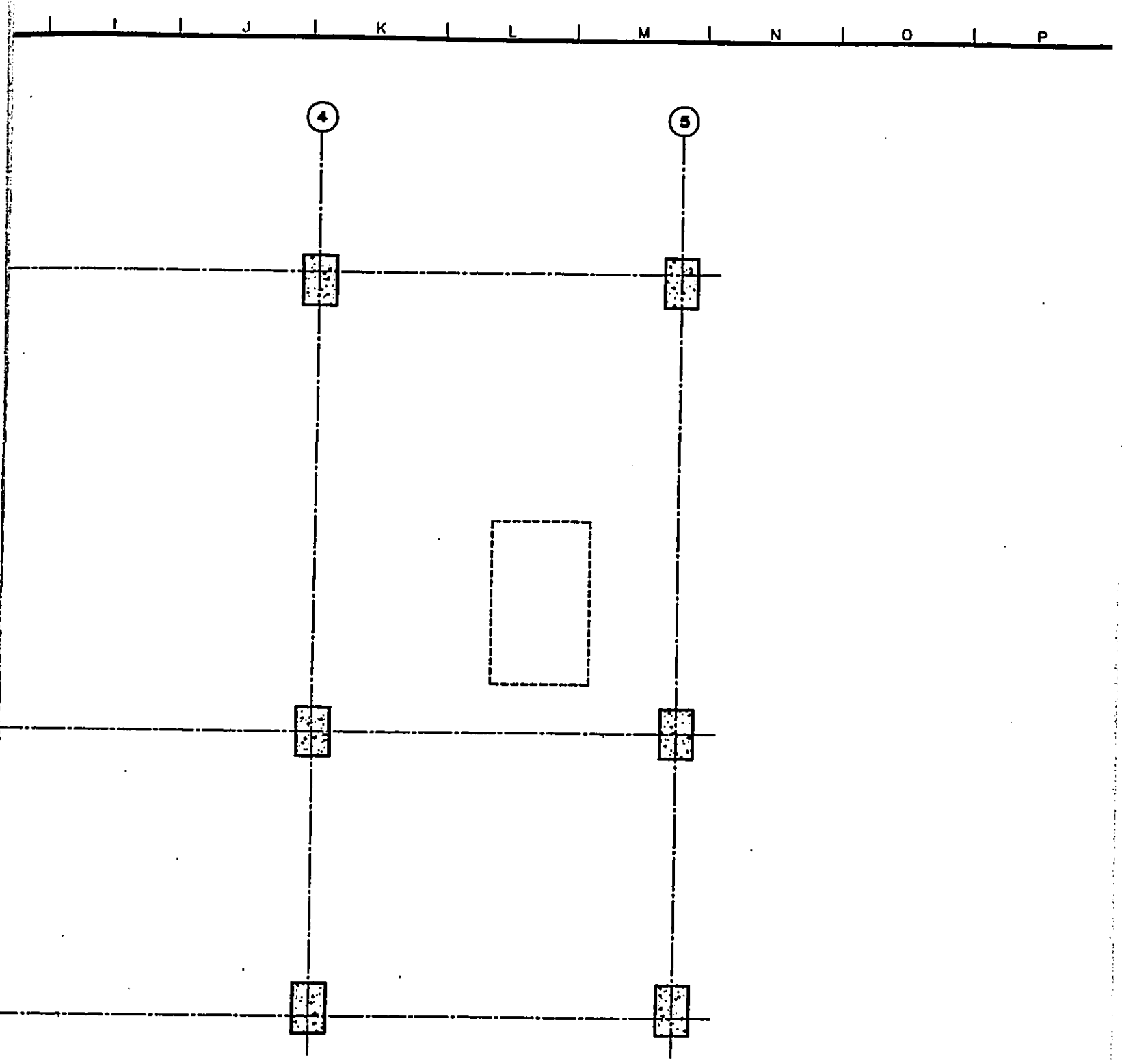
PRELIMINARY

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS

ZONE	REV	DESCRIPTION	BY	DATE	APP

DE
WAILUK
P



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

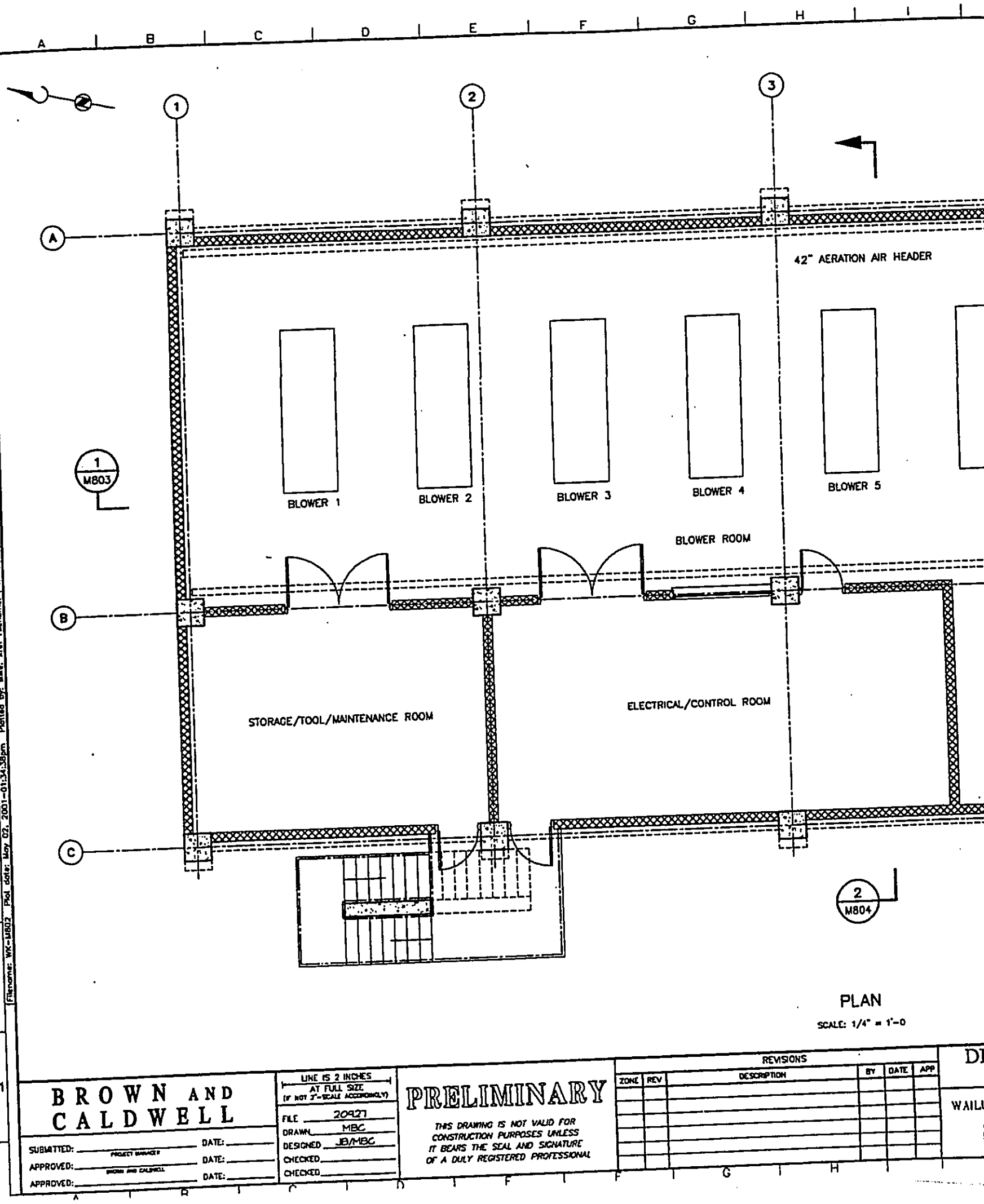
BLOWER BUILDING

GROUND FLOOR PLAN

SCALE
AS SHOWN

DRAWING NUMBER
M801

SHEET NUMBER
_ OF _



PLAN

SCALE: 1/4" = 1'-0

Filename: WK-M802 Plot date: May 02, 2001-01:34:38pm Plotted by: Mike. Xref filenames: WKTBDR | XFLRPLN | XEOPPE | Image filenames:

BROWN AND CALDWELL

SUBMITTED: _____ DATE: _____
PROJECT MANAGER
APPROVED: _____ DATE: _____
BROWN AND CALDWELL
APPROVED: _____ DATE: _____

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 20927
DRAWN MBC
DESIGNED JB/MBC
CHECKED _____
CHECKED _____

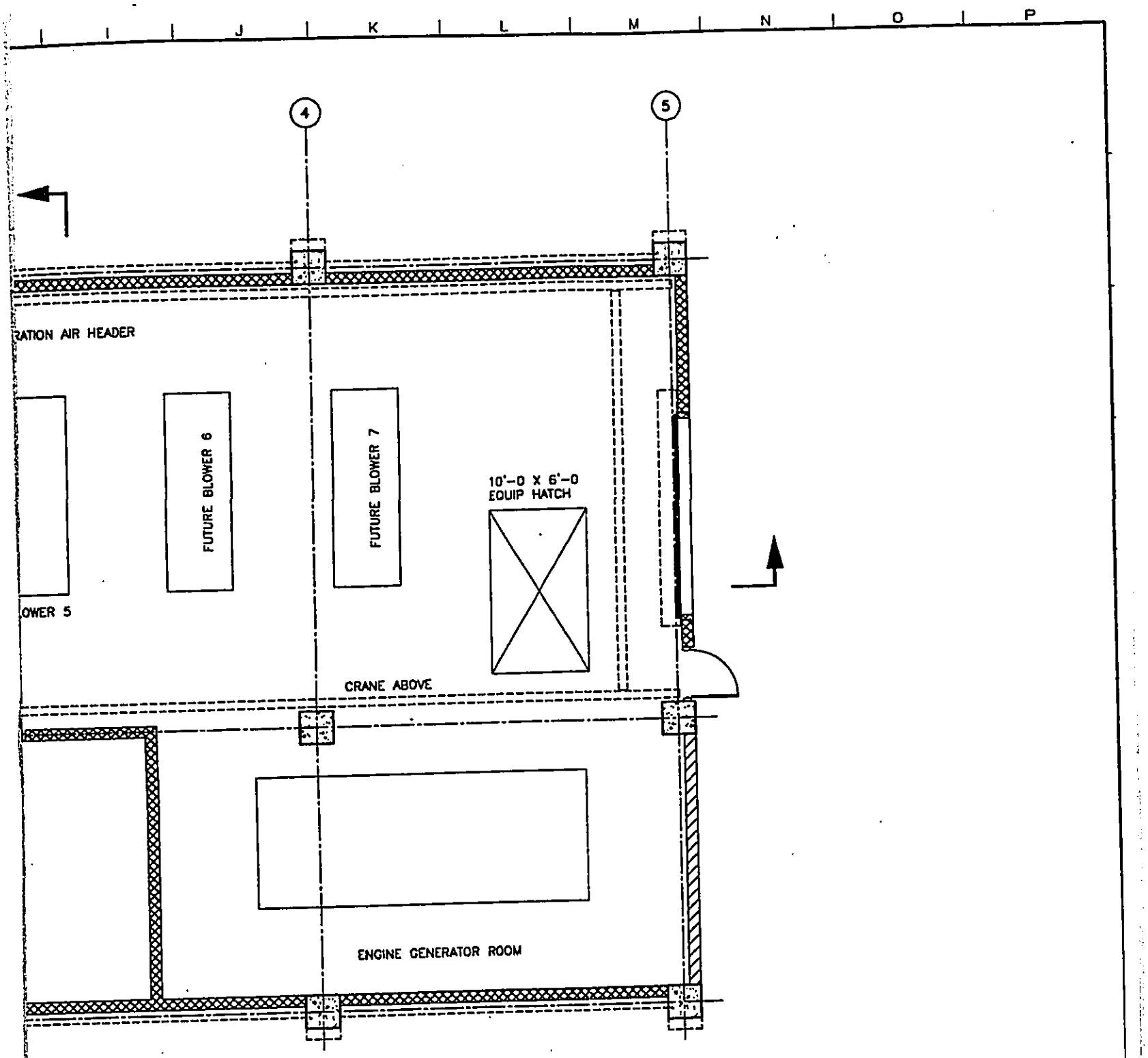
PRELIMINARY

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DI

WAILU



LAN

1/4" = 1'-0

BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

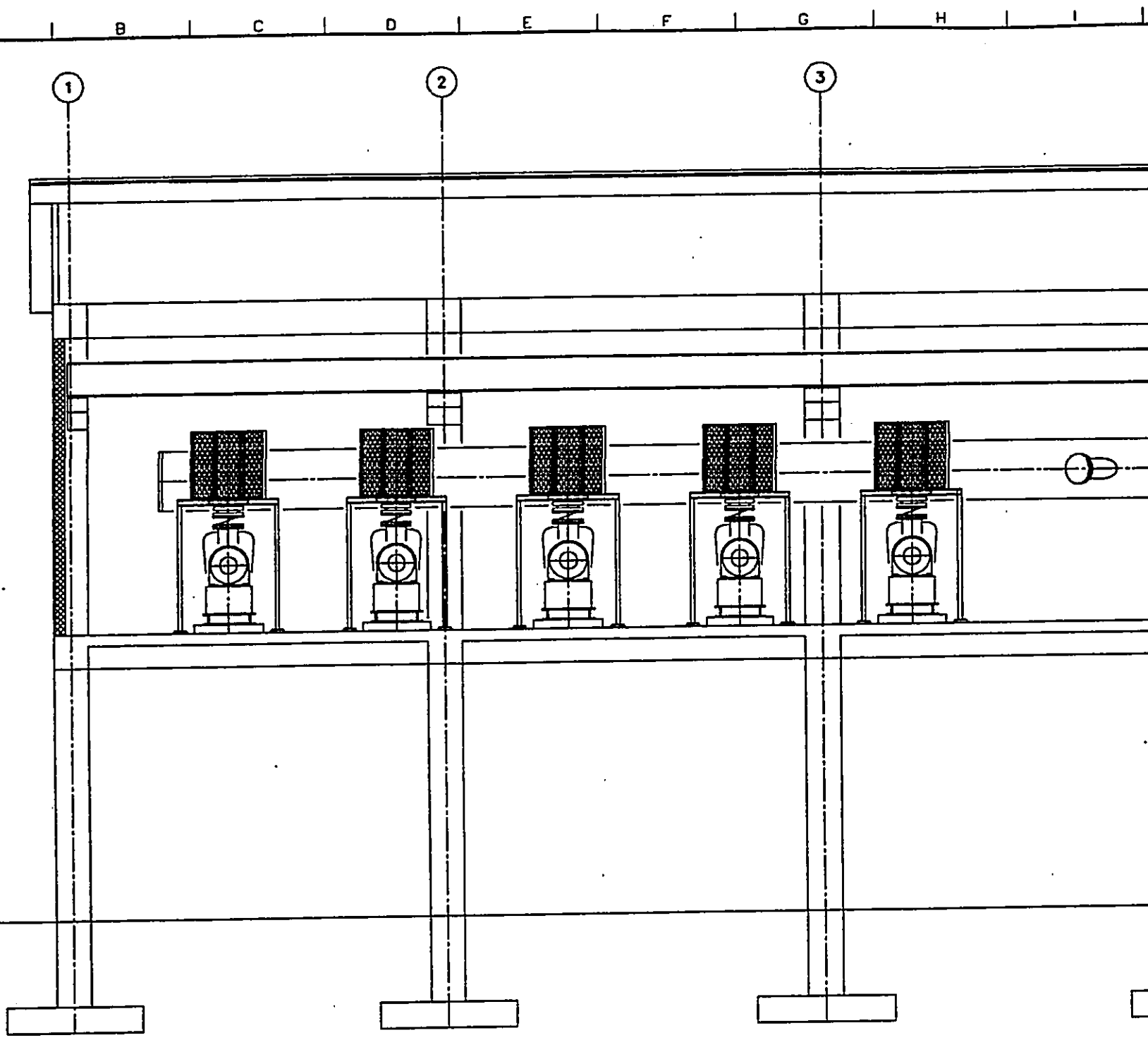
BLOWER BUILDING

FIRST FLOOR PLAN

SCALE
AS SHOWN

DRAWING NUMBER
M802

SHEET NUMBER
_ OF _



SECTION 1/MB01 1/MB02

SCALE: 1/4" = 1'-0

BROWN AND CALDWELL

SUBMITTED: _____ DATE: _____ (PROJECT MANAGER)

APPROVED: _____ DATE: _____ (BROWN AND CALDWELL)

APPROVED: _____ DATE: _____

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 20927

DRAWN MBC

DESIGNED MBC

CHECKED _____

CHECKED _____

PRELIMINARY

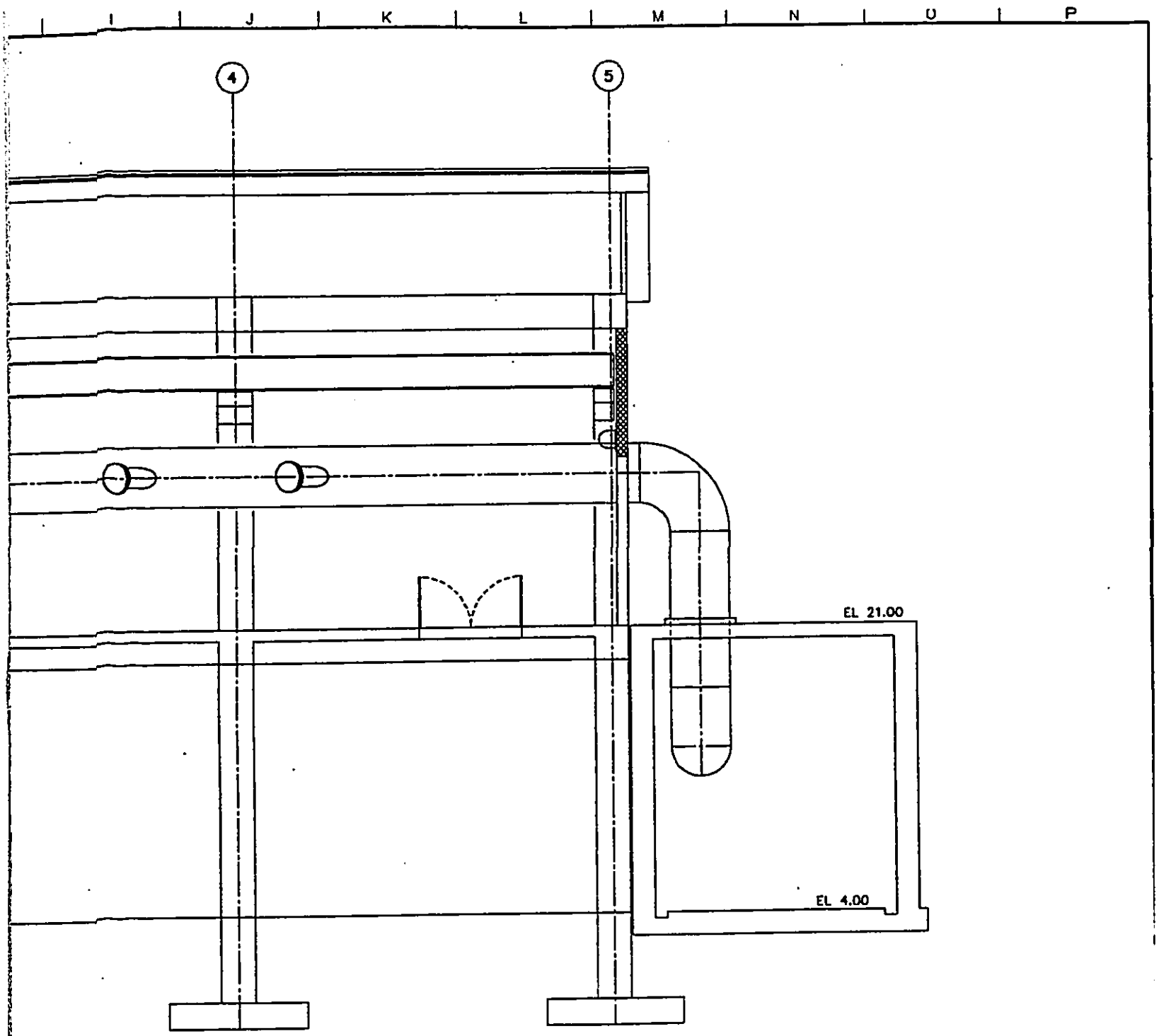
THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DE

WAILU

F



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

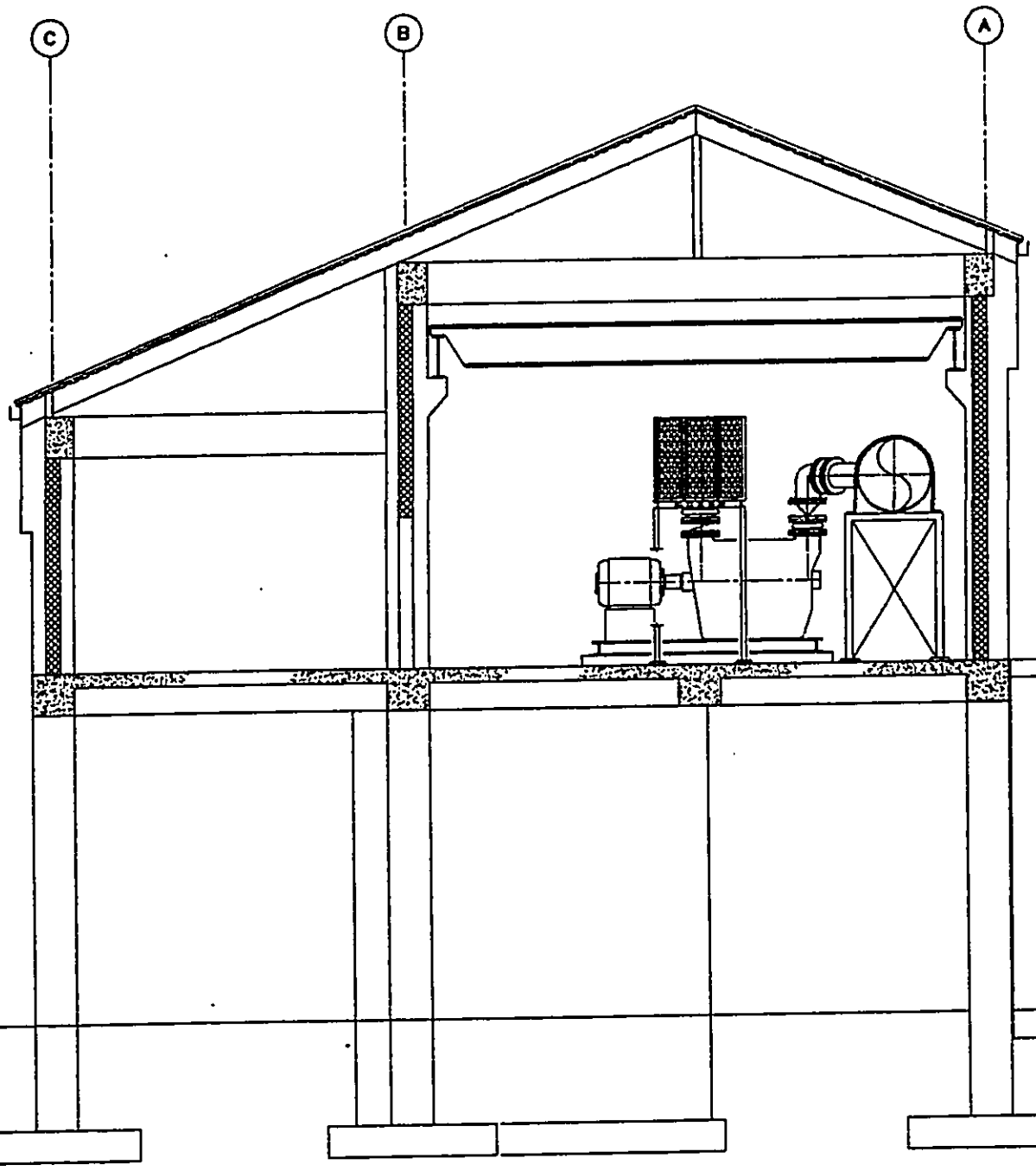
BLOWER BUILDING

SECTION

SCALE
AS SHOWN

DRAWING NUMBER
M803

SHEET NUMBER
_ OF _



SECTION 2/M801 2/M802

SCALE: 1/4" = 1'-0

BROWN AND CALDWELL

SUBMITTED: _____ PROJECT MANAGER DATE: _____

APPROVED: _____ BROWN AND CALDWELL DATE: _____

APPROVED: _____ DATE: _____

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 20927

DRAWN MBC

DESIGNED _____

CHECKED _____

CHECKED _____

PRELIMINARY

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

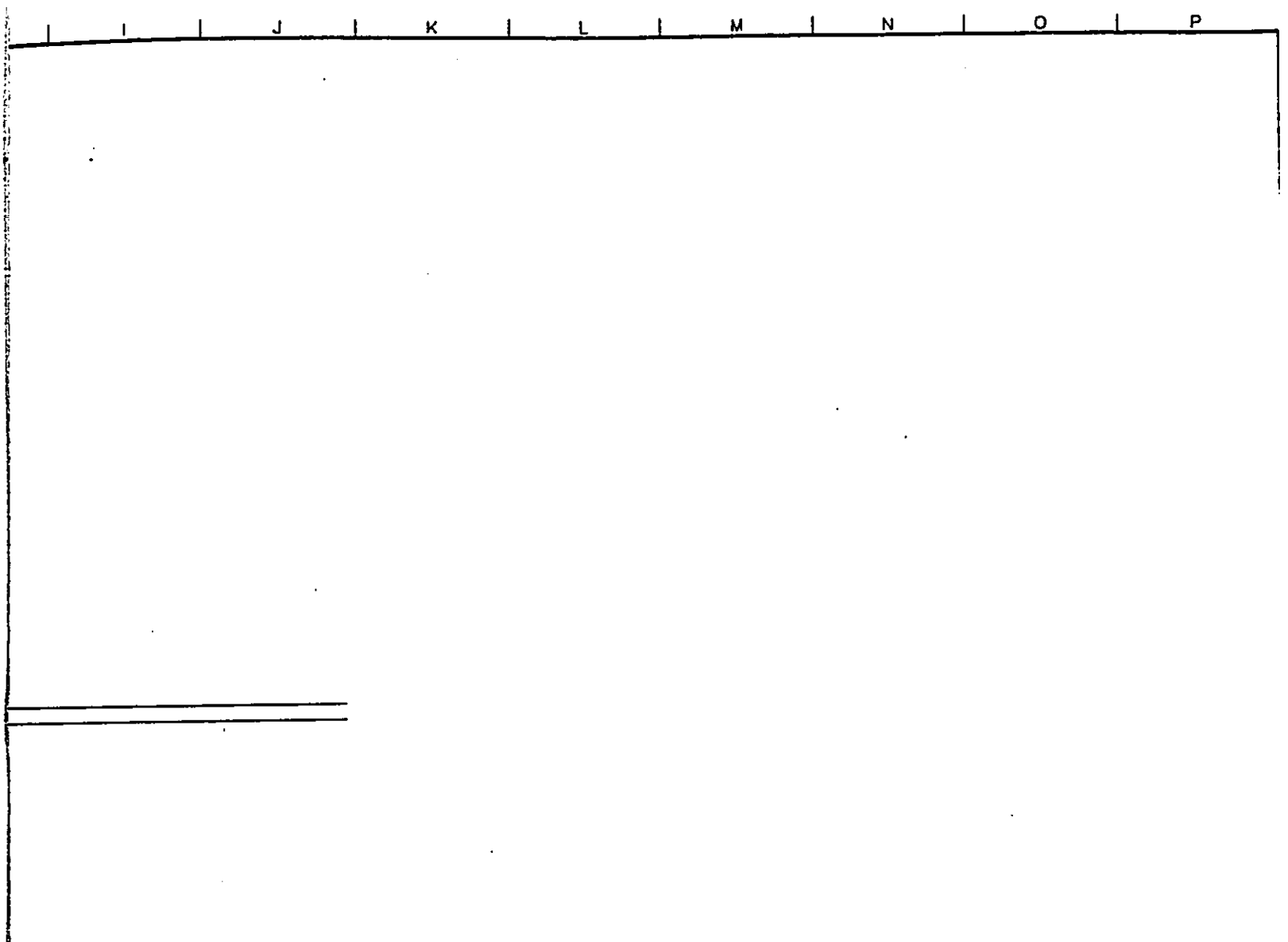
REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DEI

WAILUKU

PI

Filename: WK-M804 Plot date: May 02, 2001-01:37:25pm Plotted by: Mike. Xref Filename: WKTBDR Image Filename:



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

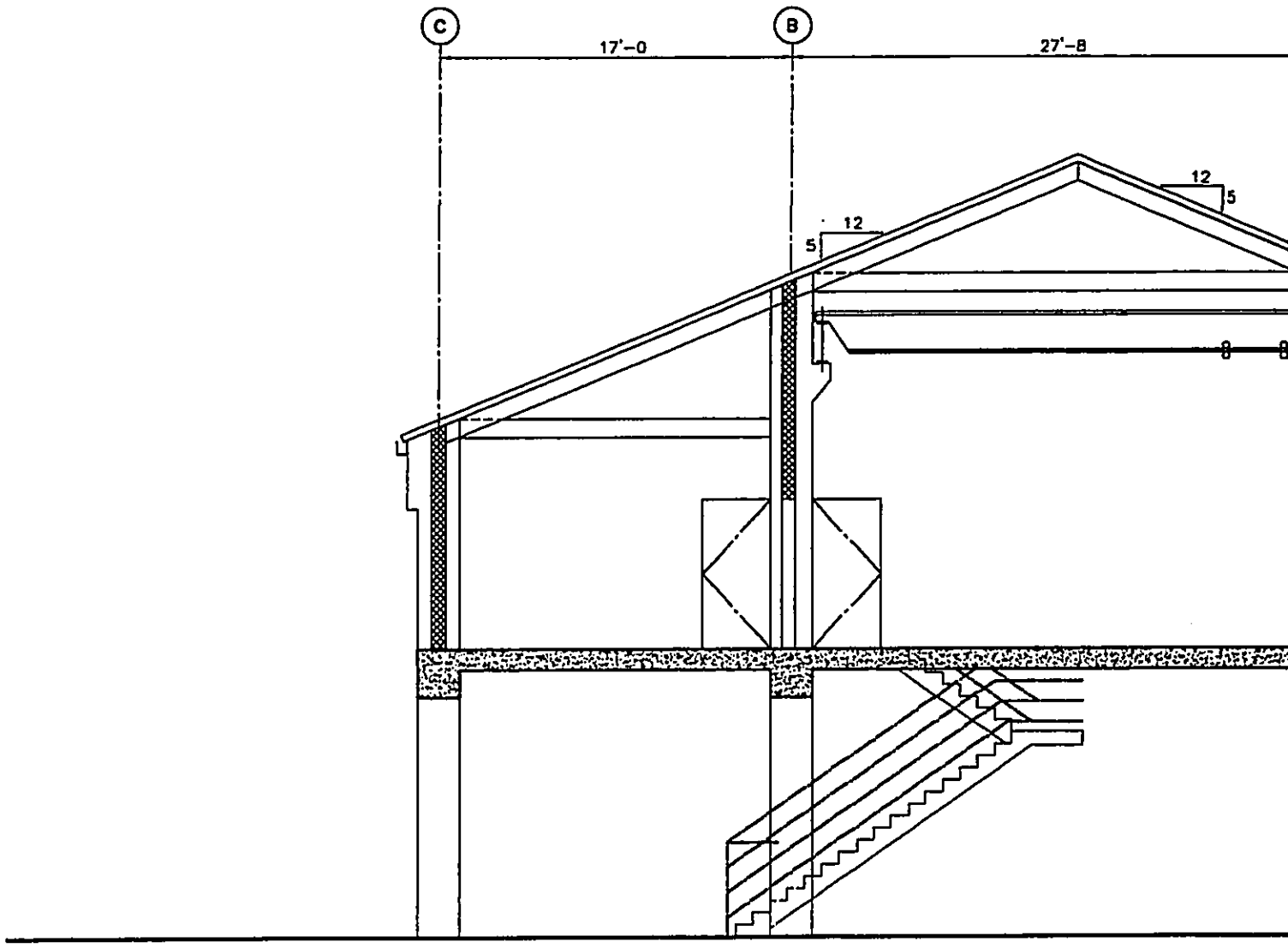
BLOWER BUILDING

SECTION

SCALE
AS SHOWN

DRAWING NUMBER
M804

SHEET NUMBER
_ OF _



SECTION 1/A801 1/A802 1/A803

SCALE: 1/4" = 1'-0

BROWN AND CALDWELL	LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)
SUBMITTED: _____ PROJECT MANAGER DATE: _____	FILE 20927
APPROVED: _____ BROWN AND CALDWELL DATE: _____	DRAWN HK
APPROVED: _____ DATE: _____	DESIGNED HK
	CHECKED _____
	CHECKED _____

PRELIMINARY

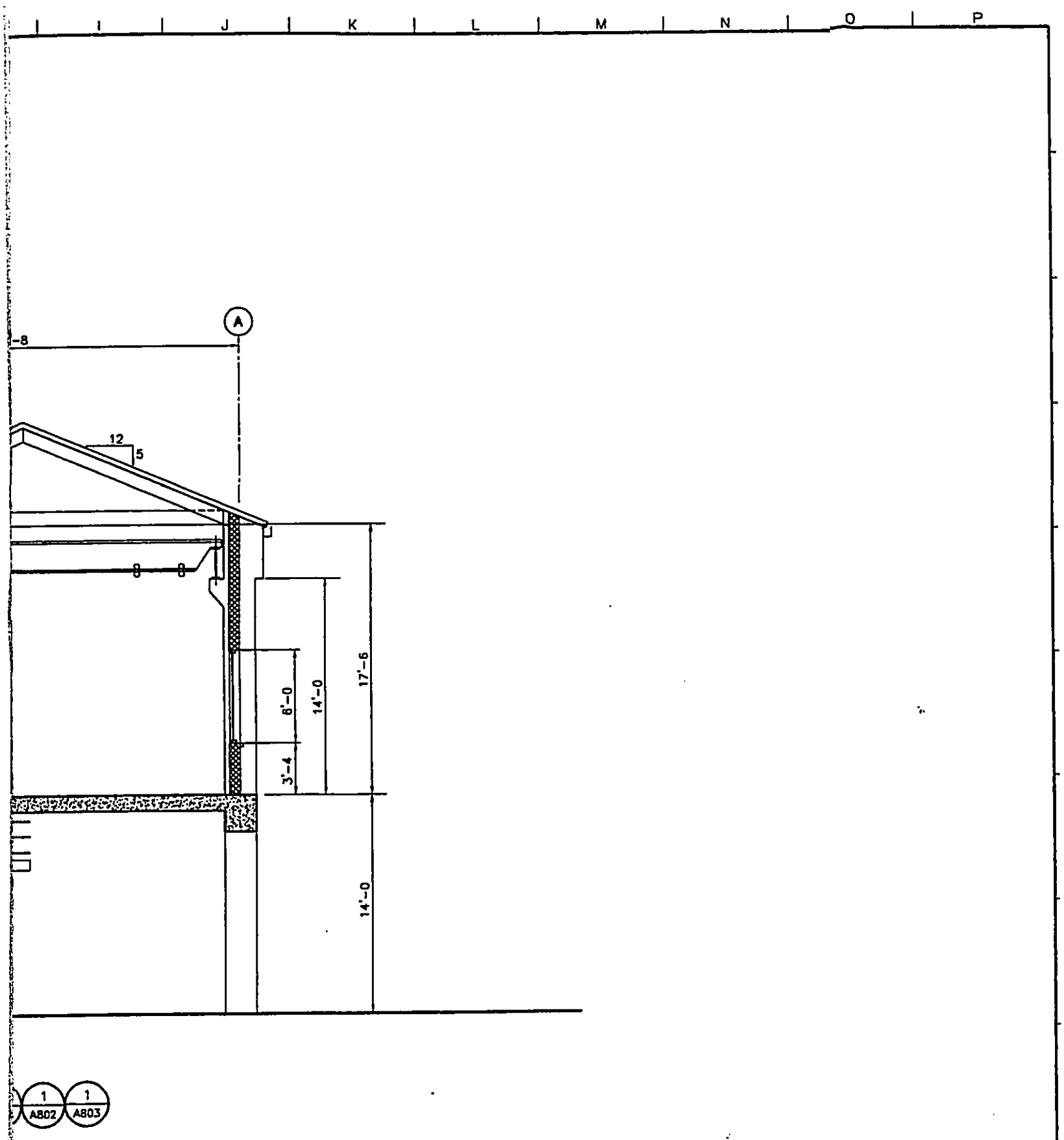
THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DEPA

WAILUKU–KA

PH



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU–KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

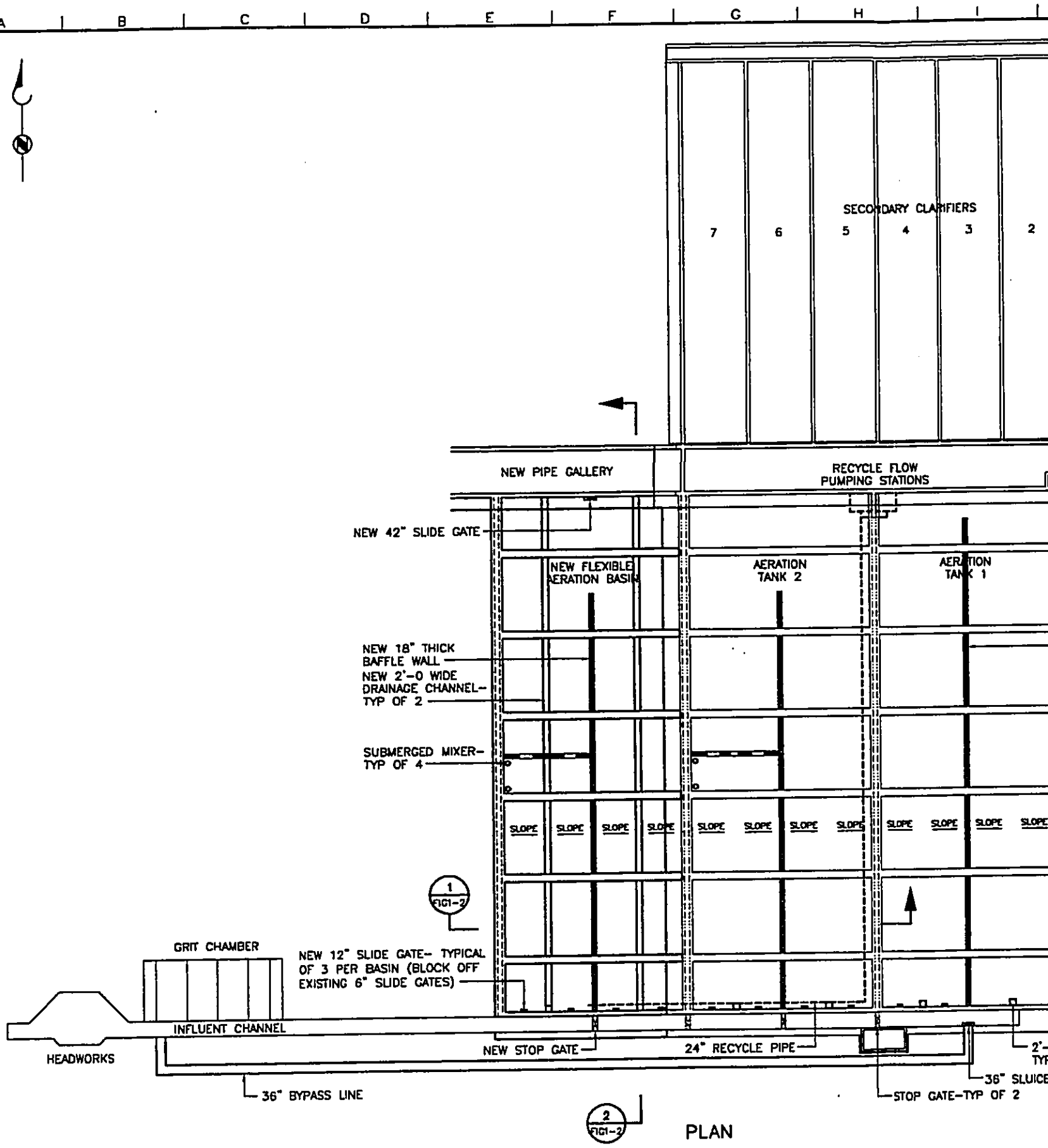
BLOWER BUILDING

SECTION

SCALE
AS SHOWN

DRAWING NUMBER
A804

SHEET NUMBER
_ OF _



PLAN

SCALE: 1" = 20'

Filename: Fig3-2 Plot date: Mar 30, 2001-01:05:21pm Plotted by: Mike, Xref Filename: X-BASE1 19296BOR Image Filename:

BROWN AND CALDWELL

SUBMITTED: _____ (PROJECT MANAGER) DATE: _____

APPROVED: _____ (BROWN AND CALDWELL) DATE: _____

APPROVED: _____ DATE: _____

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE: 19296
DRAWN: CEC/MBC
DESIGNED: TB
CHECKED: RA
CHECKED: JB

PRELIMINARY

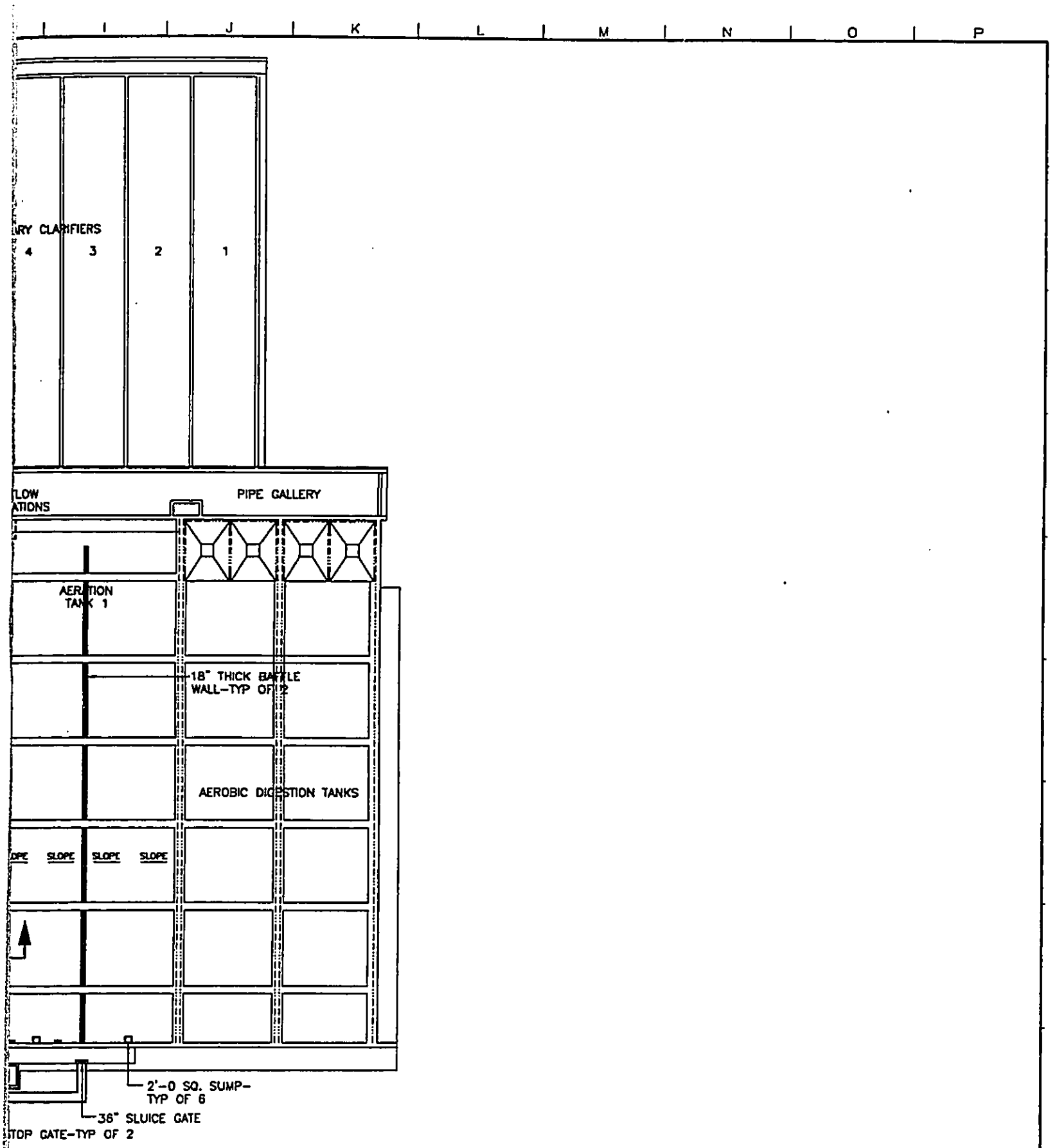
THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DE

WAILUK

P



BY	DATE	APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

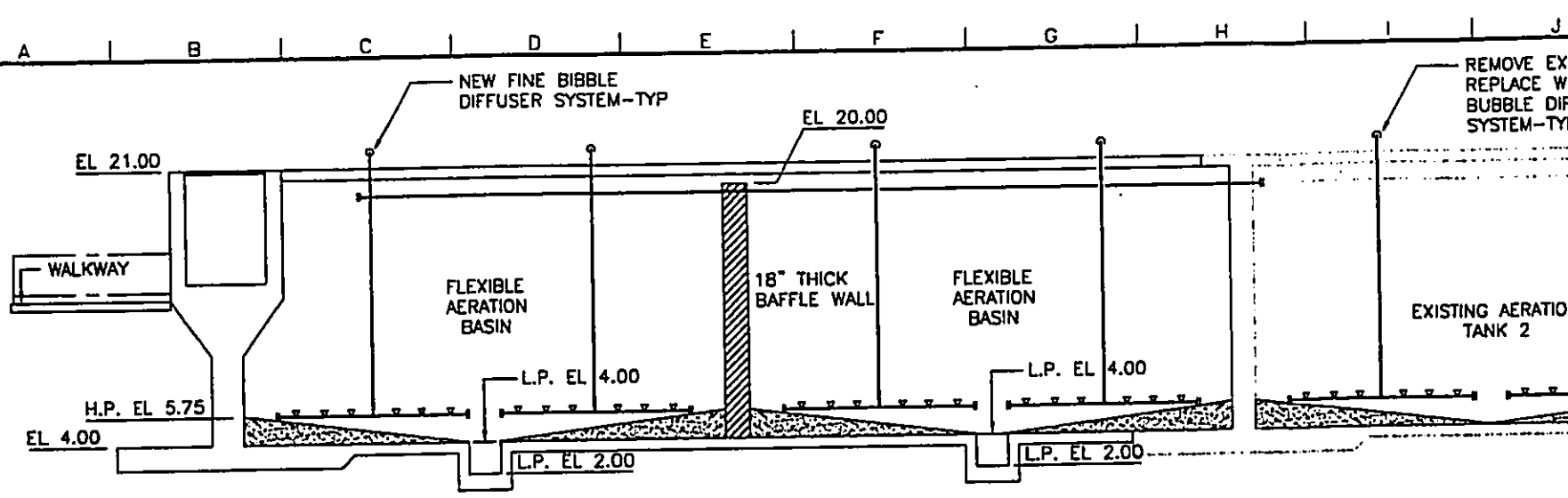
AERATION TANKS AND SECONDARY CLERIFIERS

GENERAL PLAN

SCALE: AS SHOWN

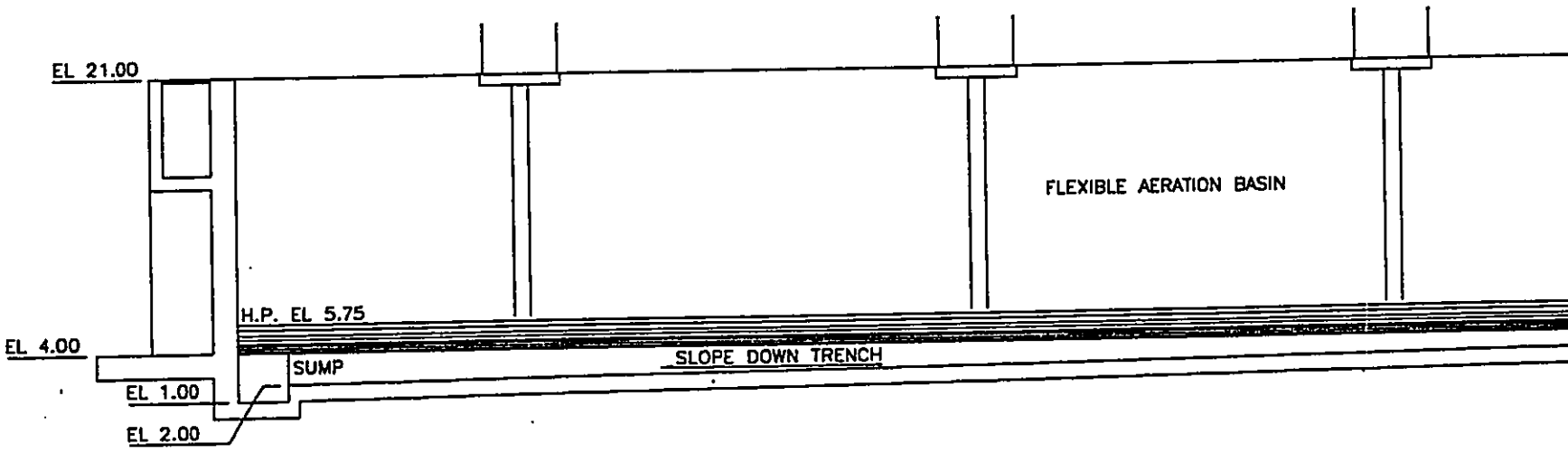
DRAWING NUMBER: **FIG 3-2**

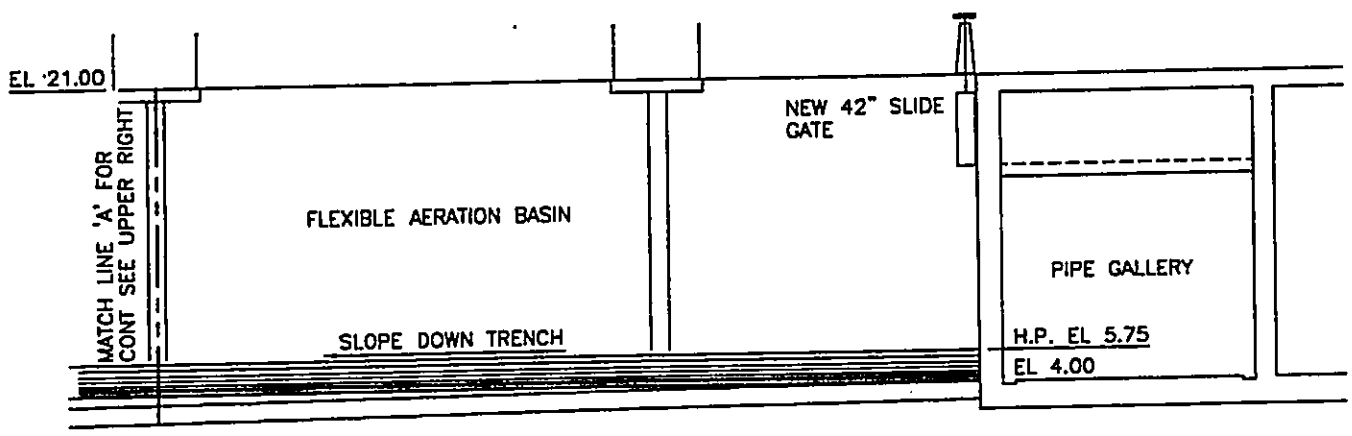
SHEET NUMBER: _ OF _



SECTION 1 / FIG1-2

SCALE: 3/16" = 1'-0





SECTION 2 / FIG1-2

SCALE: 3/16" = 1'-0

BROWN AND CALDWELL

SUBMITTED: _____ PROJECT MANAGER DATE: _____

APPROVED: _____ BROWN AND CALDWELL DATE: _____

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

FILE 19296

DRAWN MBC

DESIGNED TRB

CHECKED ARA

PRELIMINARY

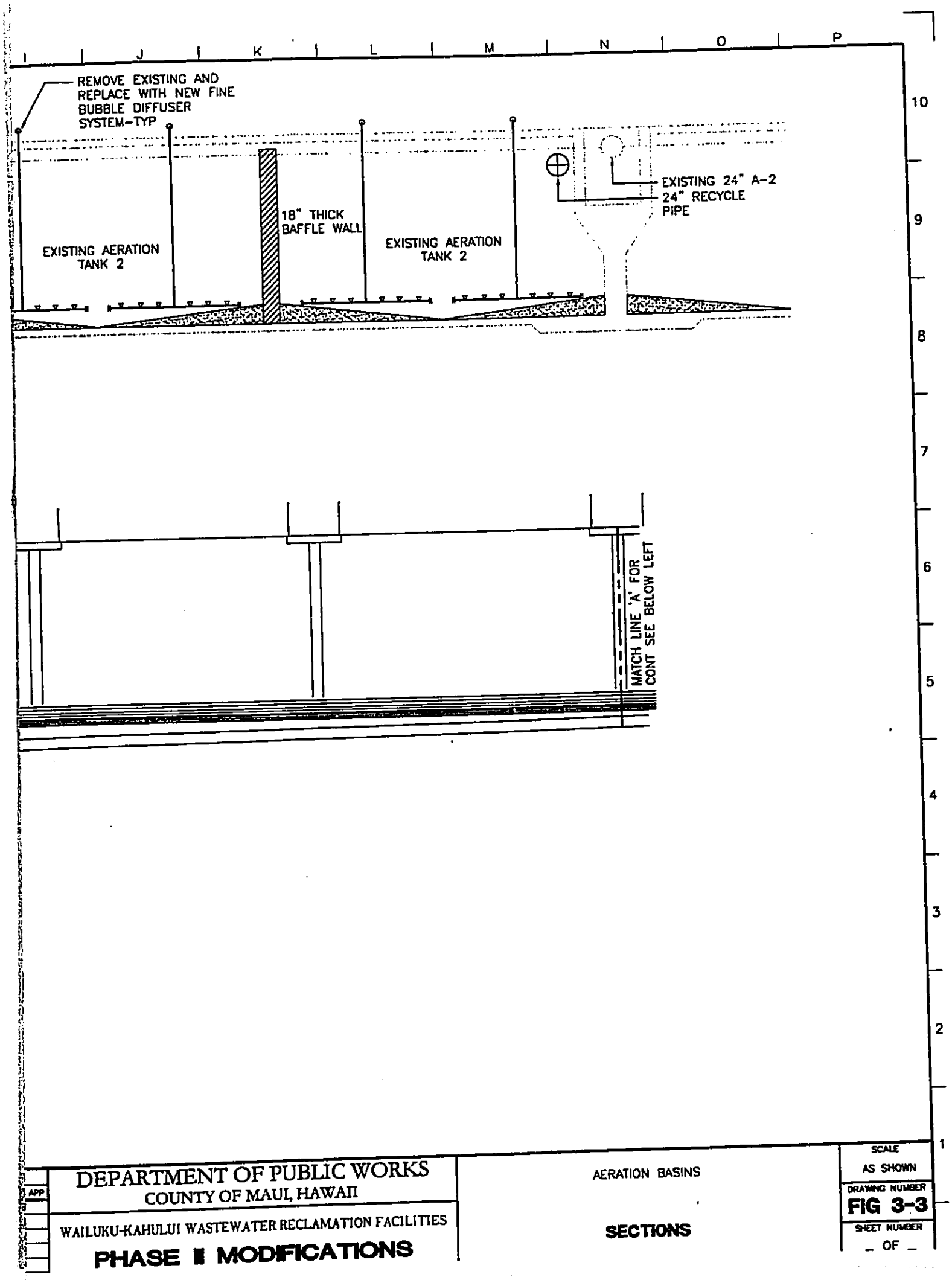
THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

REVISIONS					
ZONE	REV	DESCRIPTION	BY	DATE	APP

DEPART
C

WAILUKU-KAHU

PHAS



APP

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI, HAWAII

WAILUKU-KAHULUI WASTEWATER RECLAMATION FACILITIES

PHASE II MODIFICATIONS

AERATION BASINS

SECTIONS

SCALE
AS SHOWN

DRAWING NUMBER
FIG 3-3

SHEET NUMBER
_ OF _

Appendix B

Drainage Assessment

Wells Street Professional Center
2145 Wells Street,Suite 302
Wailuku, HI 96793

Tel: (808) 244-7005
Fax: (808) 244-9026

BROWN AND CALDWELL
Environmental Engineering & Consulting

May 4, 2001

Mr. Dave Taylor, P.E.
County of Maui
Wastewater Reclamation Division
200 South High Street
Wailuku, Hawaii 96793

55/20927

Subject: Wailuku-Kahului WWRF Phase II Modifications
Drainage Assessment

Dear Mr. Taylor:

As part of our evaluation of the proposed improvements at the Wailuku-Kahului WWRF, we are providing an assessment of the site drainage.

The WWRF is located on an 18.75-acre site located approximately one mile east of Kahului Harbor, along the north shore of the island of Maui. The tax map key for the property is (2) 3-8-01:188. The address is 281 Amala Place, Kahului, Hawaii, 96732.

The northern boundary of the WWRF site is formed by the shoreline of Kahului Bay. The south boundary of the site is generally formed by Amala Place. Approximately 250 feet from the plant site is Kanaha Pond Wildlife Sanctuary. The east boundary is vacant beach land. The property to the west is classified as heavy industrial. The land has various debris and stored materials.

The existing ground at the area of the proposed improvements is classified as mottled tan and brown silty sand, of medium dense condition, mixed with basalt gravel. Slopes are relatively flat, sloping slightly to the west. There are no drainage facilities on the site, with runoff collecting in depressions, and percolating into the ground. A berm along the ocean side near the proposed improvements restricts runoff from reaching the ocean.

Proposed improvements consist of a new blower building of approximately 3,800 square feet, 3,000 square feet of paving, and a new flexible aeration basin, approximately 10, 000 square feet. No drainage improvements are proposed.

The flexible aeration basin will be open and collect any rain, eliminating runoff. The blower building and paving will increase runoff slightly. Because the overall area for runoff is reduced, and the increase in runoff due to improvements is minimal, there should be no adverse effects to adjacent and downstream properties due to the proposed improvements.

Please feel free to call me with any questions you may have concerning this project.

Very truly yours,

BROWN AND CALDWELL

Jeffrey T Pearson, P.E.
Assistant Project Manager

JTP:

cc: Munekiyo & Hiraga, Inc