ALAN. M. ARAKAWA
Mayor

DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

July 3, 2012

Gary Hooser, Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Dear Mr. Hooser:

RE:	Project Name:	Proposed 2.0 MG Water Tank
	Applicant:	County of Maui, Department of Water Supply
	Project I.D.	Draft Environmental Assessment and Anticipated Finding of No Significant Impact
	TMKs:	(2) 3-8-046:032

With this letter, the Department of Water Supply hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for the proposed 2.0 MG water tank situated at the existing Kahului Water Tank site (TMK (2)3-8-046:032), in the Wailuku District on the island of Maui for publication in the next available edition of the Environmental Notice.

Enclosed is a complete OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Myles Fujinaka at (808) 270-7835.

Sincerely,

Dave Taylor, Director

Enclosures
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
Mich Hirano, Munekiyo & Hiraga, Inc.

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"By Water All Things Find Life"

Agency Action EA
Chapter 343, HRS
Publication Form

Project Name Proposed 2.0 MG Water Tank at Existing Kahului Water Tank Site - DEA-AFONSI
Island: Maui
District: Wailuku
TMK: (2) 3-8-046:032
Permits: Construction Permits work within County Right-of-Way Permit, Community Noise Permit (as applicable), NPDES Permit (as applicable)
Proposing/Determination Agency: County of Maui, Department of Water Supply, 200 South High Street, 5th Floor, Wailuku, Hawaii 96793, Contact: Myles Fujinaka, P.E., (808) 270-7835
Consultant: Munekiyo & Hiraga, Inc., 305 High Street, Suite 104, Wailuku, Hawaii 96793, Contact: Mich Hirano, AICP, Senior Vice President, (808) 244-2015
Status: 30-day comment period

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

Through agreements with Maui Lani Partners, the County of Maui, Department of Water Supply (DWS) proposes to develop a new 2.0 million gallon (MG) water tank at the existing Kahului Water Tank Site on Waiinu Road in Wailuku. The proposed 2.0 MG water tank will serve Central Maui residents and businesses and is part of DWS' continuing efforts to upgrade the Central Maui Water System. The subject property is located on Waiinu Road in the vicinity of Sandhills Estates, Historic Sandhills, and the Maui Memorial Park Cemetery in Wailuku. An existing 1.5 MG, steel-constructed water tank is located on the northeastern portion of the subject property. The proposed 2.0 MG water tank will be located adjacent to and southwest of the existing 1.5 MG water tank. The proposed 2.0 MG water tank be located will at the site of a former 2.0 MG water tank which was demolished in the late 1980s due to structural deterioration. The new tank will measure 30 feet in height with a flat roof.

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	Applicant:	County of Maui, Department of Water Supply
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Draft Environmental Assessment

PROPOSED 2.0 MG WATER TANK AT EXISTING KAHULUI WATER TANK SITE

(TMK (2)3-8-046:032)

Prepared for:

County of Maui,
Department of Water Supply

July 2012

MUNEKIYO HIRAGA, INC.

CONTENTS

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LIST OF FIGURES

LIST OF APPENDICES

Executive Summary

Project Name:	Proposed 2.0 MG Water Tank at Existing Kahului Water Tank Site
Type of Document:	Draft Environmental Assessment
Legal Authority:	Chapter 343, Hawaii Revised Statutes
Agency Determination:	Anticipated Finding of No Significant Impact
Applicable Environmental Assessment Review "trigger":	Use of County lands and funds
Location:	Island of Maui Wailuku, Maui, Hawaii TMK (2) 3-8-046:032
Applicant and Landowner:	County of Maui Department of Water Supply 200 South High Street, 5th Floor Wailuku, Hawaii 96793
Approving Agency:	County of Maui Department of Water Supply 200 South High Street, 5th Floor Wailuku, Hawaii 96793 Contact: David Taylor, Director Phone No.: (808) 270-7816
Agent:	Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawaii 96793 Contact: Mich Hirano, AICP Phone No.: (808) 244-2015
Project Summary:	Through agreements with Maui Lani Partners, the County of Maui, Department of Water Supply (DWS) proposes to develop a new 2.0 million gallon (MG) water tank at the existing Kahului Water Tank Site on Waiinu Road in Wailuku. The proposed 2.0 MG water tank will serve Central Maui residents and businesses and is part of DWS' continuing efforts to upgrade the Central Maui Water System.

The proposed 2.0 MG water tank site is identified by TMK (2)3-8-046:032 in the vicinity of Sandhills Estates, Historic Sandhills, and the Maui Memorial Park cemetery in Wailuku. The subject property is a 1.58-acre, flag-lot parcel located on Waiinu Road. An existing 1.5 MG, steel-constructed water tank is located on the northeastern portion of the parcel. The existing Kahului Water Tank, is part of DWS' Central Maui System. The proposed 2.0 MG water tank will be located adjacent to and southwest of the existing Kahului Water Tank. The proposed 2.0 MG water tank will be constructed of concrete and will measure 30 feet in height with a flat roof.

The project site is owned by the County of Maui. The proposed project will be funded by the County of Maui. The use of County lands and funds are triggers for Chapter 343, Hawaii Revised Statutes (HRS). As such, a Draft Environmental Assessment (EA) has been prepared pursuant to Chapter 343, HRS, and Chapter 200 of Title 11, Hawaii Administrative Rules (HAR), Environmental Impact Statement Rules. This EA documents the project's technical characteristics and environmental impacts, and advances findings and conclusions relative to the significance of the project.

I. PROJECT OVERVIEW

I. PROJECT OVERVIEW

A. PROJECT LOCATION, CURRENT LAND USE, AND LAND OWNERSHIP

Through agreements with Maui Lani Partners, the County of Maui, Department of Water Supply (DWS) proposes to develop a 2.0 million gallon (MG) water tank at the existing Kahului Water Tank site on Waiinu Road in Wailuku, Maui, Hawaii. See **Figure 1**. The Kahului Water Tank site is identified by TMK (2)3-8-046:032. See **Figure 2**. The 1.58-acre, flag-lot parcel is owned by the County of Maui. The Sandhills Estates residential subdivision borders the project site to the east while the Maui Memorial Park cemetery is located immediately west of the site. An undeveloped parcel is located across of Waiinu Street, south of the project site.

An existing 1.5 MG, steel-constructed water tank is located on the northeastern portion of the project site. The existing Kahului Water Tank is part of DWS' Central Maui Water System and will remain on the site. See **Figure 3**. The proposed 2.0 MG water tank will be located adjacent to and southwest of the existing Kahului Water Tank. Refer to **Figure 2**. The proposed water tank will be constructed on a location formerly occupied by a 2.0 MG water tank that was demolished in the late 1980s due to structural failure. The existing 1.5 MG Kahului Water Tank that currently occupies the site was installed in 1985. An existing chain link fence and concrete wall surrounds the majority of the project site, excluding the driveway from Waiinu Road.

The subject property is classified as "Urban" by the State Land Use Commission, designated "Public/Quasi-Public" by the Wailuku-Kahului Community Plan map, and is County zoned "R-3, Residential". Buildings or premises utilized by Federal, State, or County governments for public purposes are permitted uses in residential districts.

The landowner and applicant for the proposed action is DWS.

B. PROPOSED ACTION

Through agreements with Maui Lani Partners, DWS proposes to develop a 2.0 MG water tank to serve Central Maui residents and businesses. The proposed tank of concrete and will

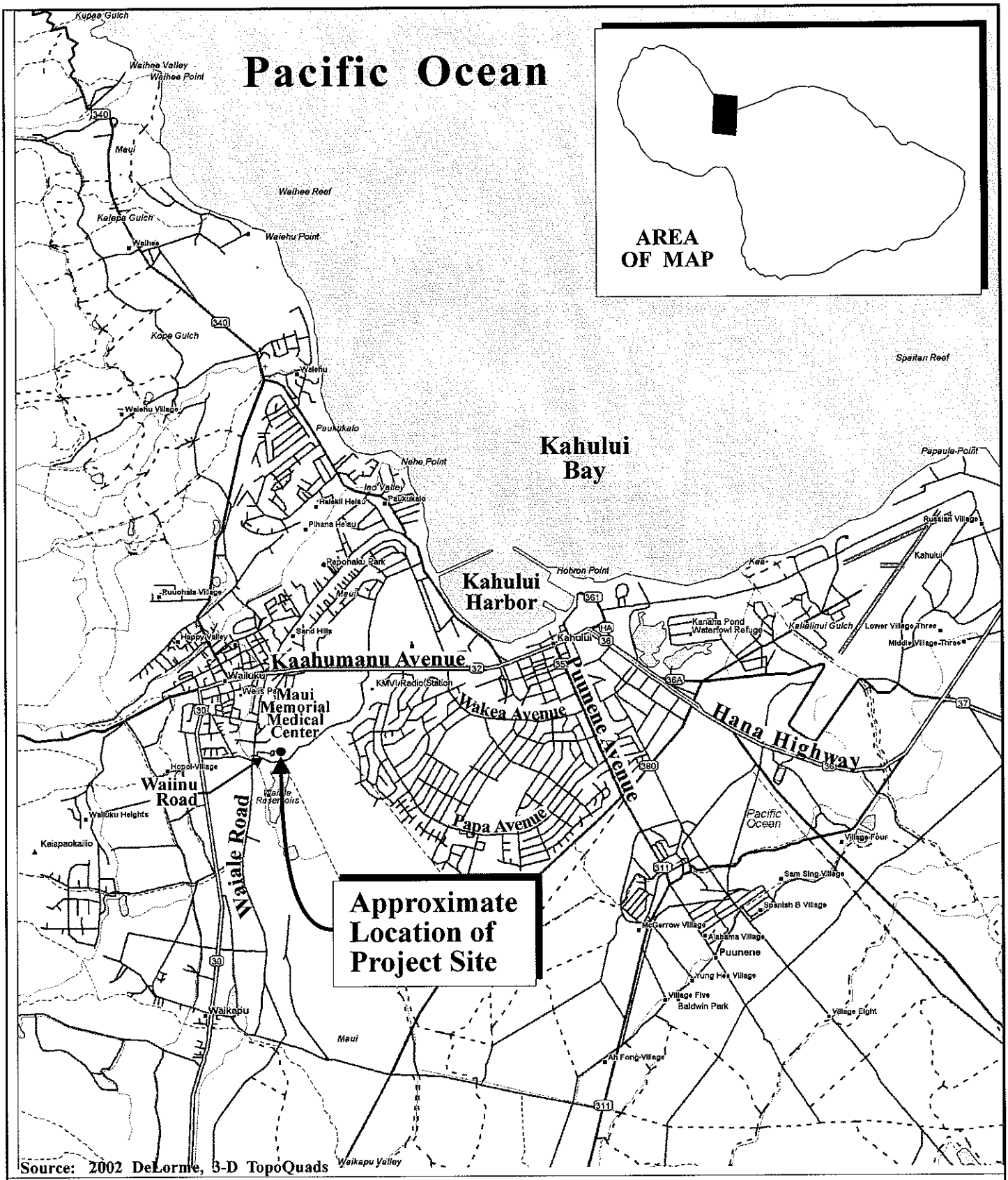


Figure 1 Proposed 2.0 MG Water Tank

NOT TO SCALE

Regional Location Map

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\Kahului WT\regional

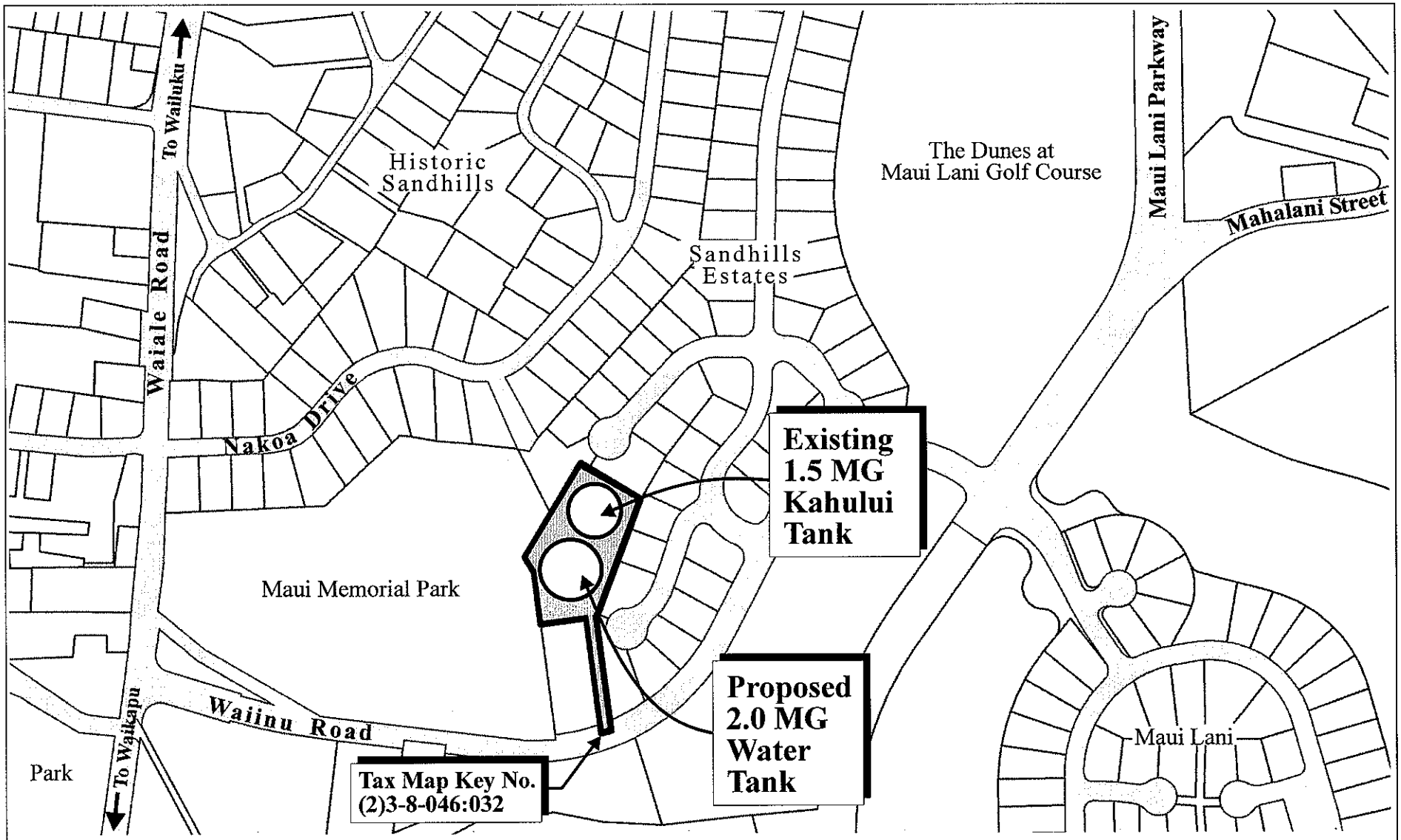


Figure 2

Proposed 2.0 MG Water Tank

Property Location Map

166.50
0 Feet
83.25 333

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\propertylocation

Photo No. 1: Project Site Driveway Access Road and Existing 1.5 MG Tank from across of Waiinu Road

Photo No. 2: Existing 1.5 MG Water Tank from End of Driveway Access Road

Source: Maui Lani Partners

Figure 3 Proposed 2.0 MG Water Tank
Existing Site Photos

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\Kahului WT\ExistingSitePhotos

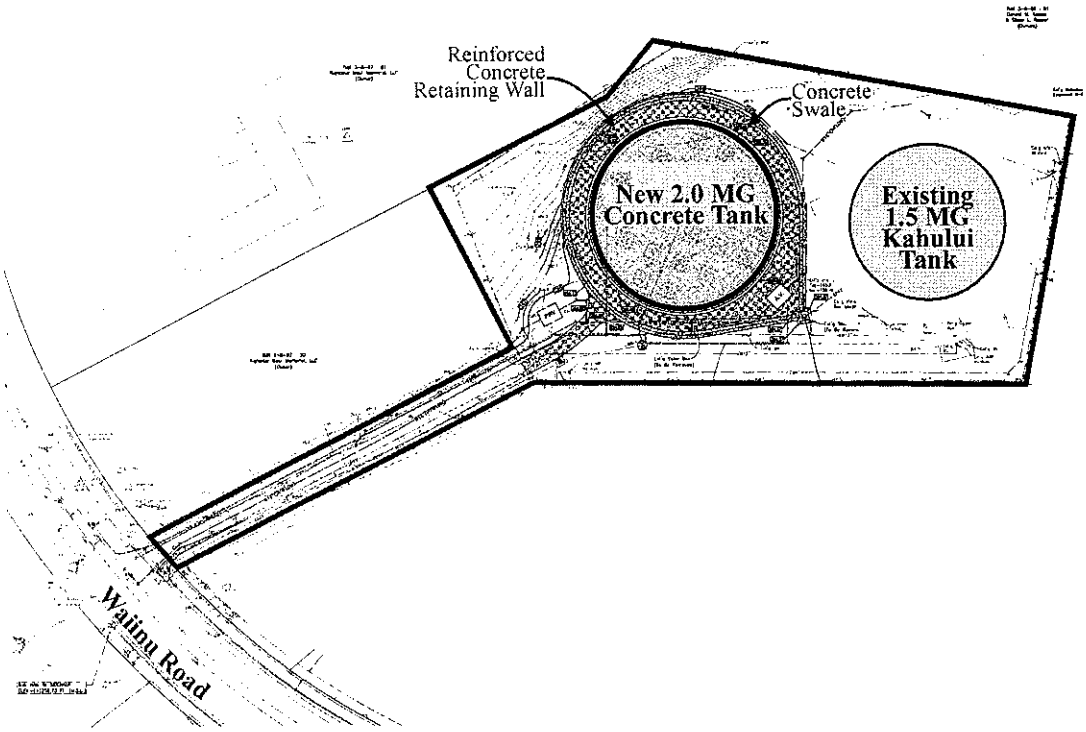
measure 30 feet in height with a flat roof. The proposed tank will have a lower profile than the existing 1.5 MG tank which has a dome roof and is approximately 50 feet in height. See **Figure 4**. **Appendix "A"** provides project plans for the proposed water tank.

Construction of the new tank will be accompanied by minor on-site grading, a new water main installed under the access driveway, repairing the existing access driveway, and construction of a reinforced concrete retaining wall. DWS will install new pipelines within the project site connecting the tank to the existing distribution lines. The pipelines will typically be installed in a 5- to 6-foot deep trench, except for a few specific locations where pipeline crossings occur and trench depths will reach approximately 10 feet below existing grade. The proposed pipe installations include a new 16-inch outflow line extension through the driveway between Waiinu Road and the proposed tank. The line would extend into the Waiinu Road right-of-way and connect to an existing 16-inch pipeline. Beyond the proposed pipeline connection, work within the Waiinu Road right-of-way would be limited to the replacement of an existing valve southwest of the driveway entrance to the site.

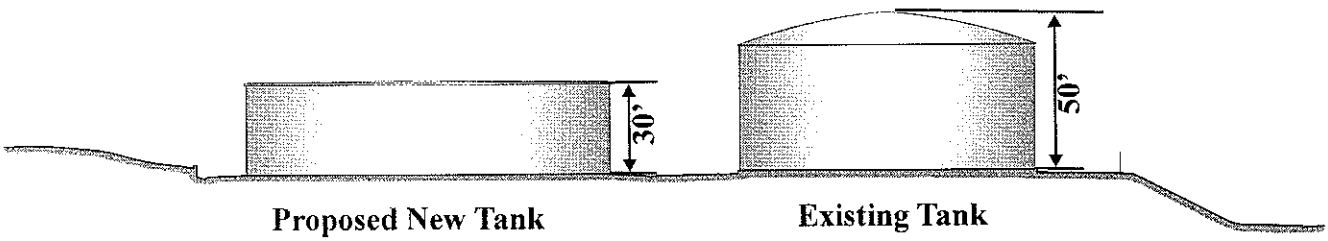
C. PROJECT NEED

The proposed 2.0 MG water tank will improve and expand water storage capabilities for the Central Maui region. The proposed project is part of the DWS' ongoing efforts to upgrade the Central Maui Water System and plan for the water service requirements associated with future growth in the region. Future residential and commercial development within the Central Maui Water System includes the Maui Lani Master Plan. Maui Lani is a multi-phased development in Kahului that began construction in 1996. At full build-out, Maui Lani will include up to 3,700 residential units, including the new Village Mixed Use commercial development. Rather than address water system improvement requirements in an incremental manner, the County and Maui Lani entered into an overall agreement for the development of water system improvements that address transmission and storage capacity. The agreement, which was executed on July 29, 2003, addresses the size and timing of improvements to ensure that there will be adequate service to the Maui Lani Master Plan and assure that additional facilities are consistent with the Wailuku-Kahului Community Plan.

The proposed 2.0 MG water tank is identified as one of the water system improvements in the agreement between Maui Lani and the County. The agreement states that Maui Lani will pay for the entire cost of a new 1.5 MG water tank at the Kahului Water Tank site. The agreement also stipulates that Maui Lani or the County may elect to increase the size of the



Plan View



East Elevation View

Source: Warren S. Unemori Engineering, Inc.

Figure 4 Proposed 2.0 MG Water Tank
Plan and East Elevation Views

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\Kahului WT\PlanandElevation

water tank, with each party paying its pro rata share of the oversizing. During the design phase of the proposed project, the County requested the tank size to be 2.0 MG to provide additional storage capacity to serve other areas of Central Maui. As such, the proposed water tank is a joint effort between DWS and Maui Lani and will serve portions of the Maui Lani Master Plan as well as other areas of Central Maui.

D. CHAPTER 343, HAWAII REVISED STATUTES

As previously mentioned, the proposed project will be jointly funded by DWS and Maui Lani Partners.

The proposed project involves the use of County lands and funds, triggering the need for the preparation and processing of an Environmental Assessment (EA) pursuant to Chapter 343, Hawaii Revised Statutes (HRS). Based on the scope of the proposed project, this EA is being prepared in accordance with Chapter 200 of Title 11, Department of Health Administrative Rules, Environmental Impact Statement Rules. Accordingly, this document addresses the project's technical characteristics, environmental impacts and alternatives, and advances findings and conclusions relative to the significance of the proposed action.

The approving agency for the EA is the County of Maui, Department of Water Supply.

E. PROJECT COSTS AND SCHEDULE

The estimated construction cost for the proposed 2.0 MG water tank and related improvements is approximately $4 million. Construction of the proposed project will commence upon the receipt of all necessary regulatory permits and approvals. Construction duration is estimated to be approximately one (1) year.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL SETTING

1. Surrounding Land Uses

a. Existing Conditions

The project site is located on the central isthmus of Maui in the Wailuku-Kahului Community Plan Area. 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 materials for suppliers. Kahului is considered Central Maui's commercial retailing center with the Queen Kaahumanu Center, Maui Mall, Maui Marketplace and Kahului Shopping Center located within the region. Wailuku, on the other hand, serves as the seat of County and State governments, with several agencies headquartered in the civic center area between Kaohu Street and Main Street. Wailuku also serves as a center for professional services including medical, dental, legal and design professions.

The project site is located on Waiinu Road in the urbanized area of Wailuku. An existing 1.5 MG water tank is located on the project site. Land uses surrounding the project site include existing residential areas as well as public/quasi-public uses. Immediately adjacent to the project site are the Sandhills Estates residential community and the Maui Memorial Park cemetery. The Dunes at Maui Lani Golf Course is located beyond the Sandhills Estates, while the Historic Sandhills residential community is located further north of the Kahului Water Tank site. Medical facilities, including the Maui Memorial Medical Center, Kaiser Permanente, and Liberty Dialysis Center, are located in the vicinity of the project site to the

northwest. The Waiale Reservoir, owned by the Hawaiian Commercial & Sugar Company (HC&S), is located south of the project site, across Waiinu Road.

b. Potential Impacts and Proposed Mitigation Measures

The proposed action is intended to extend water storage capacity to better meet the water needs for residents and businesses in the Central Maui Water Service Area. The project site has historically been used for water tanks, with a former 2.0 MG tank located on the site until the late 1980's and the existing 1.5 MG Kahului Water Tank currently occupying the site. The continued use of the project site for water storage is deemed appropriate given the existing improvements present at the site and the related infrastructure associated with the water distribution system.

2. Climate

a. Existing Conditions

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 averages approximately 20 inches per year (County of Maui, 2011). Winds in the Kahului region are predominantly out of the north-northeast and northeast.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to adversely affect climatic conditions in the area nor is the proposed water tank anticipated to be adversely affected by climatic conditions.

3. Topography and Soils

a. Existing Conditions

The project site is located on Maui's central isthmus. The building pad is very flat with a slope of less than one percent, and sits at an approximate elevation of 265 feet above mean sea level (amsl). The sloping remnant of a sand dune occupies the southwest corner of the site. See **Appendix "B"**.

Underlying the site and surrounding lands is soil belonging to the Pulehu-Ewa-Jaucas association which is characterized as having deep, nearly level to moderate slope, with well drained soils that have moderately fine to coarse texture. See **Figure 5**. The soil type specific to the project site is Puuone Sand (PZUE). See **Figure 6**. PZUE soils are predominate in the Kahului region and are typified by a sandy surface layer underlain by cemented sand. These soils are typically used for pasture and urban development. (USDA Soil Conservation Service, 1972).

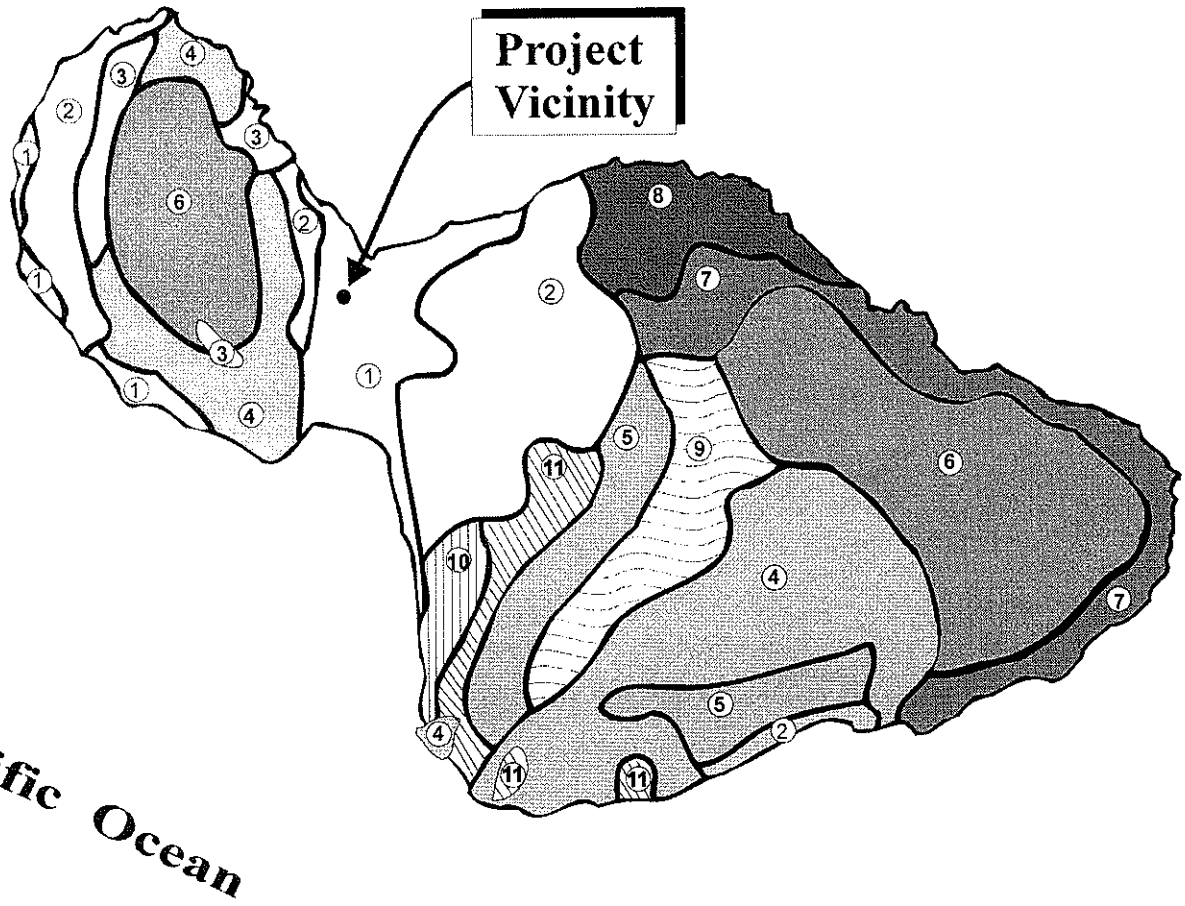
The project site has been graded in some areas to a maximum depth of 22 feet in the past to accommodate the former 2.0 MG water tank that was demolished and for the site preparation for the existing 1.5 MG Kahului Water Tank.

b. Potential Impacts and Mitigation Measures

The proposed 2.0 MG water tank will be developed on the location of the former 2.0 MG water tank that was demolished in the late 1980s. The footprint of the new tank will be nearly identical to that of the former tank. Because the site has been previously improved, grading and ground altering activities will be relatively limited. Grading will generally be shallow, with most cuts and fills typically no more than two (2) feet above or below existing grade. Footings will be constructed to a depth of approximately three (3) feet below finished grade. The retaining wall on the southwestern side of the new tank generally represents the most severe cut at a depth of roughly seven (7) feet below existing grade. In addition, new pipelines connecting to the water tank will typically be installed in a five (5) to six (6) foot deep trench, except for a few specific locations where pipeline crossings

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



Source: USDA Soil Conservation Service

Figure 5

Proposed 2.0 MG Water Tank

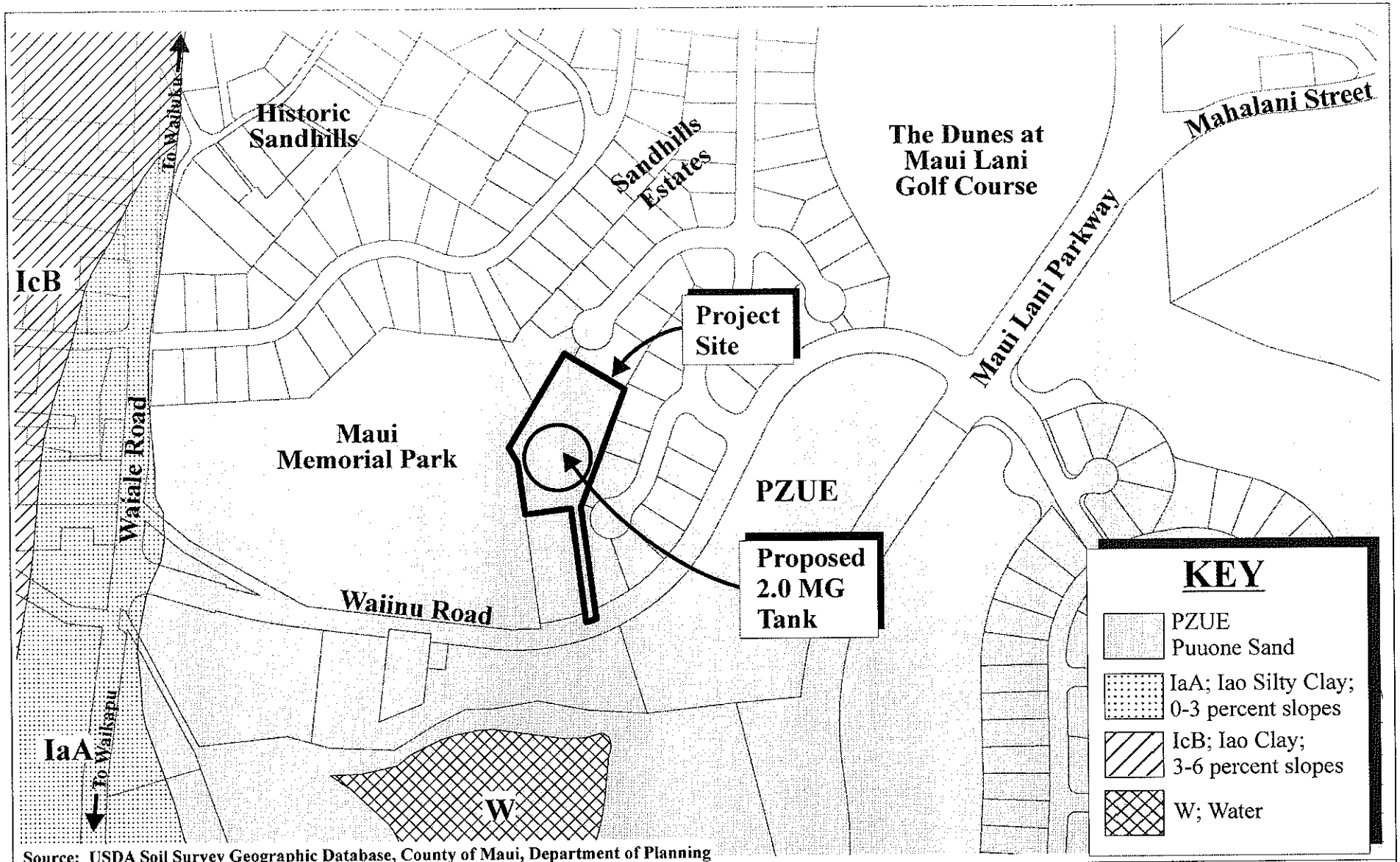
Soil Association Map

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\Soils



Source: USDA Soil Survey Geographic Database, County of Maui, Department of Planning

Figure 6

Proposed 2.0 MG Water Tank

Soil Classification Map

0 166.50 Feet
83.25 333

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\SoilClassification

occur and trench depths will reach approximately ten (10) feet below existing grade. The proposed project will not significantly alter existing topography and soil characteristics at the project site.

4. Agriculture

a. Existing Conditions

The project site is located in an urban area of Central Maui and does not have a history of agricultural use.

In 1977, the State of Hawaii, Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawaii (ALISH), based primarily, though not exclusively, on soil characteristics of the underlying land. The three (3) classes of ALISH lands are "Prime", "Unique", and "Other Important" agricultural land, with the remaining non-classified lands termed "Unclassified". When utilized with modern farming methods, "Prime" agricultural lands have soil quality, growing season, and moisture supply needed to produce sustained crop yields economically; while "Unique" agricultural lands contain a combination of soil quality, growing season, and moisture supply to produce sustained yields of a specific crop. "Other Important" agricultural lands include those important agricultural lands that have not been rated as "Prime" or "Unique" (State of Hawaii, Department of Agriculture, 1977). The project site is not classified in the ALISH system, indicating that it is not considered an important agricultural land.

b. Potential Impacts and Mitigation Measures

Adverse impacts to agricultural endeavors in the region are not anticipated as a result of the proposed project. The project site is located in an urban area of Central Maui and does not have a history of former agricultural use.

5. Flood and Tsunami Hazard

a. Existing Conditions

The Flood Insurance Rate Map (FIRM) for this region indicates that the project site is located in Zone X (unshaded), areas determined to be outside the 0.2 percent annual chance floodplain. See **Figure 7**. In addition, the project site is located beyond the reaches of the tsunami inundation zone.

b. Potential Impacts and Mitigation Measures

The project site is not a shoreline property, nor is it situated near streams, wetland areas or other areas which may pose flooding concerns. With the project site being located within Flood Zone X (unshaded) and beyond the reaches of the tsunami inundation zone, adverse impacts related to flood and tsunami hazards are not anticipated.

6. Flora, Fauna and Avifauna

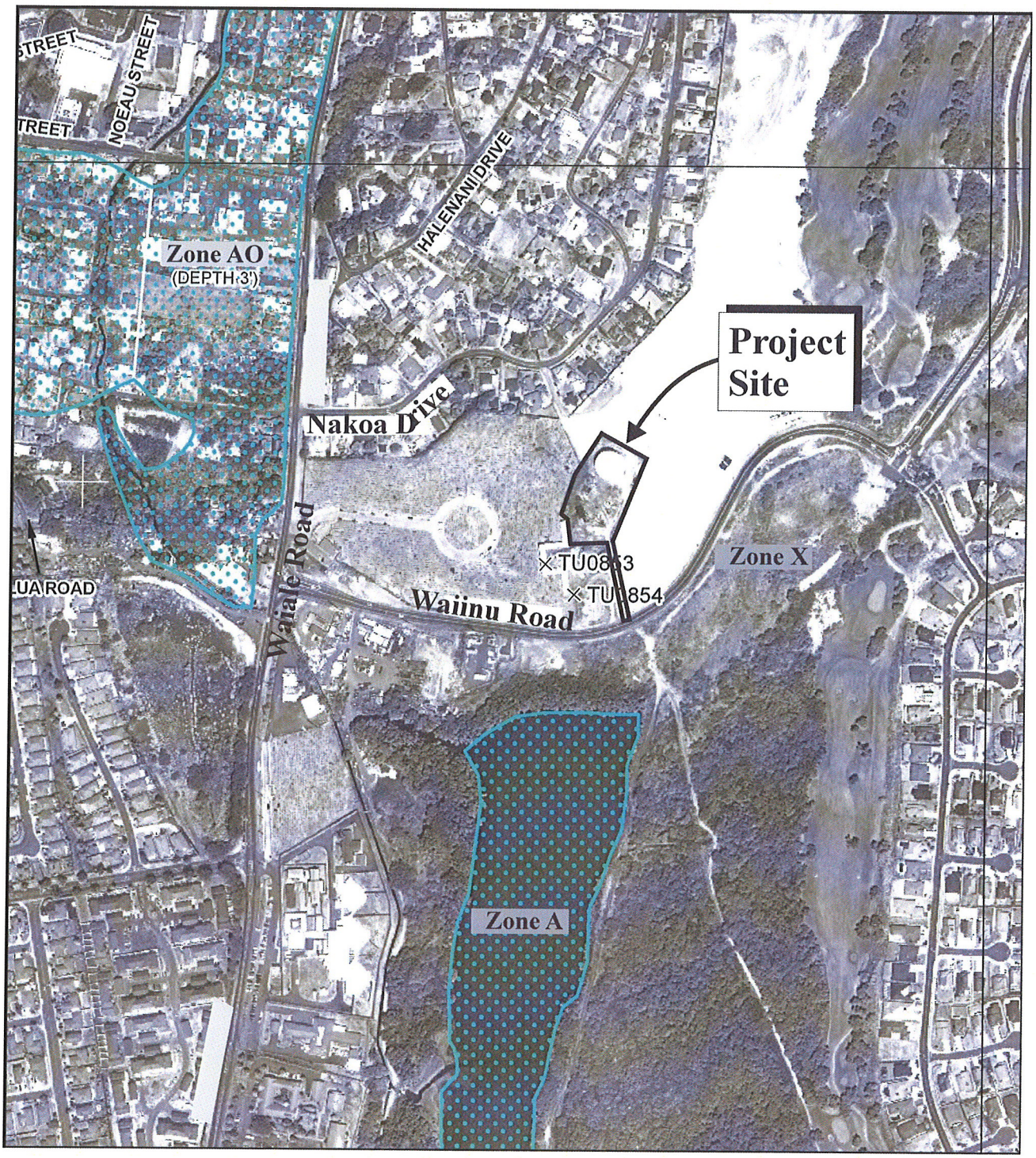
a. Existing Conditions

The project site is cleared and paved with limited vegetation at the site. Landscaped grass covers the non-paved areas of the site. Small shrubs and grasses grow on the sloped sand dune area of the southwest corner of the site. There are no known rare, threatened, or endangered species of plants within the project site.

Fauna and avifauna found within and within the vicinity of the project site are characteristic of urban areas. Fauna typically found in the vicinity include mongoose, rats, dogs and cats. Avifauna include the Common Mynah, Spotted Dove, Barred Dove, Japanese White-Eye Cardinal, Red-Crested Cardinal, and House Sparrow. There are no identified rare, threatened or endangered species of fauna or avifauna found at the project site.

b. Potential Impacts and Mitigation Measures

There are no known significant habitats or rare, endangered or threatened species of flora, fauna, and avifauna located within the project site. There are no streams or wetlands located within the project site that would provide



Source: Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel No. 1500030391E

Figure 7

Proposed 2.0 MG Water Tank

Flood Insurance Rate Map

0 250 500 1000 Feet

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\FIRM

habitat for such species. The proposed action is not anticipated to have an adverse impact upon species of flora, fauna, or avifauna.

7. Streams, Wetlands, and Reservoirs

a. Existing Conditions

There are no streams or wetlands in the immediate vicinity of the project site. Waiale Reservoir, owned by HC&S, is located south of the project site, across Waiinu Road. The reservoir is over 500 feet away from the proposed 2.0 MG water tank location and over 200 feet south of Waiinu Road. Waiale Reservoir holds water used to irrigate sugar cane fields and other agricultural fields.

The majority of stormwater runoff from the project site flows to two (2) drain inlets, enters an underground drainline, and eventually discharges into the Waiale Reservoir. Currently, approximately 1.7 cubic feet per second (cfs) of runoff from the project site enters the Waiale Reservoir during the 10-year, 1-hour storm. Prior to the demolition of the former 2.0 MG water tank in the late 1980's, two (2) tanks existed at the site and the runoff entering the Waiale Reservoir was 2.7 cfs during the 10-year, 1-hour storm. The stormwater is used by HC&S for irrigation. Refer to **Appendix "B"**.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to adversely impact Waiale Reservoir. During the construction phase of the project, appropriate Best Management Practices (BMPs) will be implemented to minimize runoff from the project site. Upon completion, existing drainage improvements will prevent stormwater runoff from adversely impacting downstream properties. The peak stormwater runoff from the project site entering the Waiale Reservoir will revert to the original 2.7 cfs rate that existed in the 1980's for the 10-year, 1-hour storm. This stormwater will be utilized by HC&S to irrigate sugar cane fields. Refer to **Appendix "B"**.

8. Archaeological Resources

a. Existing Conditions

The project site is located on the central Maui isthmus within the Wailuku *ahupuaa*. The site is within the Puuone Sand Dunes Formation, a large feature that extends from Kahului Harbor to Waikapu. The Wailuku *ahupuaa* has been studied extensively in the past. Settlement patterns documented by previous archaeological studies suggest intensive land usage in Iao Valley and the Waiale Road corridor along the northern and western sides of the Puuone Dunes formation. However, in the central area to the east of the dunes, very few sites other than scattered burials have been found (Xamaneck Researches, 1997).

Several burials have been discovered along Waiale Road in the vicinity of the project site. A pre-Contact burial was found while road crews were excavating under the Kaahumanu Avenue bridge crossing Waiale Road (Site 4126), north of the project site. Several sites, including human remains, burials, historic coffin burials, and habitation sites, were also discovered along Waiale Road in the vicinity of the Wailuku Sand Hills community. Further south on Waiale Road, south of the proposed project site, human remains were inadvertently discovered during the construction of the Maui Homeless Shelter in 1992 and the Ka Hale A Ke Ola affordable housing development in 1996 (Xamaneck Researches, 1997).

b. Potential Impacts and Mitigation Measures

As previously mentioned, the proposed 2.0 MG water tank will be developed on the location of the former 2.0 MG water tank that was previously demolished. The footprint of the proposed tank will be nearly identical to that of the former tank. Because the new tank will be located on the former tank site and the site has been previously improved, grading and ground altering activities will be in areas previously disturbed. Grading will generally be shallow, with most cuts and fills typically no more than two feet above or below existing grade. Footings will be constructed to a depth of approximately 3 feet below finished grade. The retaining wall on the southwestern side of the new tank generally represents the most severe cut at a depth of roughly 7 feet below existing grade. In addition, new pipelines will

typically be installed in a 5 to 6 foot deep trench, except for a few specific locations where pipeline crossings occur and trench depths will reach 10 feet or so below existing grade.

The State Historic Preservation Division (SHPD) was consulted for the proposed project related to an application for a Work Within County Right-of-Way permit. SHPD noted that previous archaeological monitoring during construction work within the vicinity of the project site has documented numerous pre-Contact Hawaiian burials. As such, it was recommended that all ground altering activities be monitored by a qualified archaeologist. See **Appendix "C"**. Prior to the initiation of construction, an archaeological monitoring plan will be submitted to SHPD for review and approval pursuant to Section 13-279, Hawaii Administrative Rules.

9. Cultural Resources

a. Cultural Context

Pre-Contact Period

The project site is located in the *ahupuaa* of Wailuku. The *ahupuaa* of Wailuku is a large land unit that encompasses land near Kahului Bay from Paukukalo to Kapukaulua. This *ahupuaa* includes Iao Valley and the northern half of the Kahului isthmus. This *ahupuaa* is located in and encompasses approximately half the land area of the Wailuku District. Wailuku is noted as being the place where chiefs were buried and wars were fought. The environmental conditions in the lower Iao Valley were ideal for agricultural practices vital to support a large population. Combined with access to Kahului Harbor, these conditions made Wailuku a key location for a political and religious center (Xamanek Researches, 1997).

The core area of Wailuku was comprised by Iao Valley and the two related dune formations to the north and south of the Iao river. This was the central place of religious and political power on Maui, which culminated during the time of High Chief Piilani (c. 1600 AD). During the late pre-contact period, warfare intensified as the chiefs from Maui, Oahu and Hawaii competed for political and military supremacy (Xamanek Researches, 1997).

For the duration of Chief Kahekili's rule (1765 -1790), Wailuku once more became the place of intense warfare. In the mid-1770's, Kalanihale, the royal residence of Kahekili, was marched upon by a Big Island chief named Kalaniopuu and his *alapa* (warriors). News of his coming preceded him, and Kahekili hid his warriors in the sand dunes above Halekii *Heiau* to surprise the invading troops. A battle (Battle of Kakanilua) followed whereby the army of Kalaniopuu was pushed to the sea and defeated. By 1786, Kahekili controlled the islands of Maui, Molokai, Lanai, and Oahu. However, in 1790, Kahekili's control over the islands came to a close with the battle of Kepaniwai when King Kamehameha I defeated the ruler (Xamanek Researches, 1997).

Early Post-Contact Period

Significant changes to the landscape of Hawaii ensued after the arrival of missionaries and other foreigners in the late 1700s and early 1800s. Further, the establishment of the sugar industry in the 19th century catalyzed a dramatic transition in Wailuku. The first sugar cane crops grown in the *ahupuaa* were harvested and processed in 1828. Kamehameha III, with the assistance of two Chinese technicians, established a water-powered mill in Wailuku: Hungtai Sugar Works. The Wailuku Sugar Mill was established later in 1862. Meanwhile, cattle ranching also became an established commercial activity on the southern and eastern side of the Iao Valley sand dunes (Xamanek Researches, 1997).

Post-1850s Period

Following the Great Mahele of 1848, much of the *ahupuaa* of Wailuku was designated as Crown Land, to be used in support of the royal "state and dignity" (Xamanek Researches, 1997).

The boost of the sugar industry came in 1876 with the introduction of The Reciprocity Treaty that increased the price of sugar. Ditches constructed in the 1880's by Claus Spreckels tapped into the water resources from the mountains to irrigate fields for sugar cane production. These endeavors contributed to the foundation of HC&S in 1882 (Xamanek Researches, 1997).

The construction of the Kahului Railroad in the late 1870's and its continuation for approximately two (2) decades facilitated mobility across towns, as well as contributed to the growth of various commercial activities and residential areas. The introduction of the automobile in the 1950s greatly increased the ease of travel across the island. Residents of Wailuku were able to make daily commutes to other areas of the island, especially into nearby Kahului, an expanding town offering two (2) major ports of entry, the Kahului Harbor and Kahului Airport, as well as newly completed shopping centers and other social facilities (Xamanek Researches, 1997).

b. Potential Impacts and Mitigation Measures

Cultural Impact Assessment interviews were conducted for the proposed project with two (2) individuals who live in and are knowledgeable of the area. Summaries of the cultural interviews are provided below.

Leslie Kuloloi`o

Uncle Les' laugh is happy and infectious, his embrace strong and sincere. For years, he has spent his life dedicated to preserving Hawaii's culture and managing our island's resources wisely. "There are some things school books don't teach you," he explains.

Leslie Kuloloi`o's last name has been misspelled since his birth. Uncle Les, as he is often referred to, explains that the plantation had made a mistake in spelling his father's last name; that the correct spelling uses the letter 'a', as in Kuloloi`a, rather than the 'o' of Kuloloi`o. The error is attributed to the ambiguous lines of cursive and for generations has gone uncorrected, making for an interesting introduction.

Leslie Kuloloi`o was born in 1940 in the old Paia Hospital which once stood near Makawao Union Church. Uncle Les explains that the hospital was filled mostly by military doctors and later moved to Pu`unene until it was finally moved to its present location in Wailuku. Today all that remains of the old Paia Hospital is a memorial sign in its place. The youngest of four (4) children, Uncle Les now resides in the four-bedroom home of his childhood. His father, Wally, moved the house that was originally built by the plantation

from Hawaiian Village where he and his family once lived in Paia to Kahului over fifty years ago. Uncle Les reveals the house is likely over 100 years old and proudly affirms that it is the oldest and most traditional house in his neighborhood. "You can hear the termites singing Hawaii Aloha," Uncle Les exclaims. His father hired Akina Construction to do the heavy lifting and transporting of the structure to the 6th increment in Kahului. Uncle Les explains that the plantation had built Dream City in Kahului in the 1950's to provide workers with the opportunity of building and owning their own homes. As development grew around Dream City, each phase was called an increment beginning with the 1st increment and ending with the 12th increment.

Uncle Les just may be most accurately described as a do-it-all kind of person. He joined the military in 1959 after graduating from St. Anthony High School and returned home in 1962 when his love and longing for the ocean called for him in Makena. There, he spent almost a year living and making an earning net and trap fishing. After that, Uncle Les seemed to do it all, and labeling him as a 'hard worker' just doesn't seem to cut it. He worked at the airport for Murray Air, preparing their crop duster planes with fertilizer, and as a fueler for the U. S. Air Force, fueling jets to train pilots. He worked in construction, helping build the Kula Highway, became a Lieutenant in Charge for Freeman Guards (now called the Hawaii Protective Association) on Oahu for a couple of years, then returned home to Maui. He later became the sales manager for Hawaiian Linen Supply and worked for Intercontinental Drillers doing core testing on the island. But through it all, it seems the turning point in Uncle Les' career was in 1980. It was in 1980 that Uncle Les became a Hawaiian Language Teacher with his mother at Waihee Elementary and became a part of the team who conducted the first archaeological survey study for the military on Kaho`olawe. It was the first time Uncle Les had worked with archaeologists and when he reached the island he knew he needed to learn more. It was then that Uncle Les began working with two (2) great kupuna, Charles Keau and Uncle Harry Mitchell, who changed his life and inspired him to get involved.

In speaking of the Kahului Water Tank site, Uncle Les remembers that there was a previous water tank on the property, and explains that it was a different tank from what currently exists on the site today. He recalls the cemetery

being there, in close proximity to the project site, for quite some time, as well as the jail. He also recalls Bulgo's Mortuary and the Apana family junkyard being in the vicinity. Prior to development of the area, Uncle Les recalls there were kiawe trees and sand dunes, east of present day Waiale Road. He goes on to reveal that old maps of the area illustrate that there were once wetlands and mahiai (agriculture, farming) of wet and dry taro patches mauka of Waiale Road, from Wailuku to Waikapu in pre-contact times. The project site, however, because of its dry and sandy conditions, was unlikely used for agriculture. This is supported by studies, Uncle Les explains that were conducted for the adjacent Sandhills Estates lots that reported no findings of pre-contact habitation sites, agricultural sites, or significant places of worship. Uncle Les also explains that no remnants of major battle artifacts were found in the adjacent area. When asked if he knows of beach or mountain accesses through the project site, Uncle Les says he knows of none. He explains that there are no traditional trails, whether they are fishing, habitation or agricultural trails, shown in reference maps of the area. He goes on to note, as well, that he does not know of any cultural practices that have been carried out on the project site. He adds that the project site is fenced in and protected. He concludes that a place for water needs to be protected.

Based on his knowledge of the area Uncle Les does not believe the proposed water tank will adversely impact native Hawaiian cultural practices.

Stephanie Ohigashi

Stephanie Ohigashi was born and raised on Maui. After high school, Ms. Ohigashi attended college and worked on the mainland for a few years before moving back to Maui. She is deeply rooted in the Historic Sandhills neighborhood, having spent most of her life living on three different streets in the area. During the 1950s, Ms. Ohigashi lived on Naniloa Drive. In the early 1960s, she lived on Leinani Drive before moving to a home on Halenani Drive where she and her husband currently live.

Ms. Ohigashi shared fond memories of her childhood growing up in the Historic Sandhills neighborhood. She recalled the former water tank existing at the Kahului Water Tank site. Kiawe trees and koa trees grew in the vicinity of the water tank before more recent development came to the area.

There were no agricultural practices in the area that she is aware of. As a child, Ms. Ohigashi rode her bicycle in front of the water tank on a dirt road near the location of the existing Waiinu Road. There were also numerous paths through the kiawe tree forest created by children who rode through the area as a shortcut to various destinations.

Ms. Ohigashi and her husband raised three boys in their Historic Sandhills home. Her sons all attended the local public schools in the area: Wailuku Elementary School, Iao School, and Baldwin High School. Ms. Ohigashi spoke of fun times she had with her sons in the neighborhood when they were growing up. Near the Waiale Reservoir and former Apana Junk Yard, she explained that there was an open tank that was submerged below ground. A roof covered the tank, however, there was an opening between the roof and tank large enough for people to climb down into the tank. The open tank resembled a half pipe and was known amongst neighborhood children as a place to skateboard. Ms. Ohigashi recalls making skateboards for her sons and taking them to the tank after school to skateboard. Her sons also rode their bicycles through the neighborhood and in the kiawe and koa forests that existed in the area.

Today, Ms. Ohigashi and her family frequent the Maui Memorial Park cemetery, located adjacent to and west of the Kahului Water Tank site. Ms. Ohigashi's mother and other family members are buried at the cemetery. She notes that the existing water tank at the site does not bother her or her family when they visit the Maui Memorial Park. She and her family acknowledge and understand that the water tank is necessary to provide water to residents and businesses in the area. Ms. Ohigashi noted that she likes the Maui Memorial Park and water tank area because of its higher elevation, which makes it somewhat of a landmark in Central Maui.

Ms. Ohigashi discussed several existing problems in the vicinity of the project site, including an abundance of loose dogs in the area that stray onto roadways and the increasing traffic on Waiinu Road. She noted that as future development in Central Maui progresses, Waiinu Road will see more vehicles and a traffic signal may be required at its intersection with Waiale Road. These problems, however, are unrelated to the existing water tank and would not be impacted by the proposed project.

Ms. Ohigashi noted that she is not aware of any cultural practices that are or have been carried out at the Kahului Water Tank site and surrounding areas. She also indicated that there are no beach or mountain accesses through the project site that she is aware of. Ms. Ohigashi did note that prior to the more recent development in the area, residents took shortcuts through the kiawe forests that existed north and west of the project site. Children would walk through the forested area to go to Baldwin High School, located across of Kaahumnau Avenue. Ms. Ohigashi also recalls walking with her children through the kiawe brush to collect cans and bottles.

In speaking about the proposed project, Ms. Ohigashi did not note any cultural concerns that would result from the development of the water tank. She did recommend, however, that an appropriate color of paint be selected for the tank, keeping in mind visitors to the adjacent Maui Memorial Park. Ms. Ohigashi noted that she did like the paint scheme of the existing water tank, which until recently was painted sky blue with clouds. She further suggested that the two (2) tanks be painted with a similar color, noting that if one tank looked brand new and the other was rusty and dilapidated, people may raise concerns regarding visual impacts.

10. Air Quality

a. Existing Conditions

The Wailuku-Kahului region is not exposed to adverse air quality conditions. Point sources, such as Maui Electric's Maalaea and Kahului Power Plants and HC&S's Puunene Mill and non-point sources such as automobile emissions, are not significant to generate high concentrations of pollutants.

b. Potential Impacts and Mitigation Measures

Localized air quality impacts from construction equipment and vehicles may occur during construction of the proposed project. As such, potential air quality impacts during construction will be mitigated by complying with the provisions of the State Department of Health Administrative Rules, Title 11, Chapter 60, Air Pollution. Best Management Practices will be implemented to mitigate potential air quality impacts. Measures which may be taken during construction to reduce air quality impacts include water spraying and

sprinkling of loose or exposed soil and erecting dust screens. Exhaust emissions from construction vehicles are anticipated to have a negligible impact on regional air quality as these emissions would be relatively small and readily dissipated. It should be noted that the Sandhills Estates properties immediately adjacent to the project site are currently vacant and undeveloped, as are a majority of the properties within the community.

No significant long-term air quality impacts are anticipated as a result of the proposed project.

11. Noise

a. Existing Conditions

Existing background noise levels are primarily attributable to natural conditions (e.g., wind) and traffic along Waiinu Road and other area roadways.

b. Potential Impacts and Mitigation Measures

Ambient noise conditions will be temporarily affected by construction activities. Material-transport and construction vehicles and power tools are anticipated to be the dominant noise-generating sources during construction. Construction will be limited to normal daylight hours. Construction noise impacts will be mitigated through compliance 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. In complying with Chapter 46, the contractor will be responsible for minimizing noise by properly maintaining noise mufflers and other noise-attenuating equipment. Construction will be limited to normal daylight hours. As previously mentioned, the Sandhills properties immediately adjacent to the project site are currently vacant and undeveloped.

Once operational, the proposed 2.0 MG water tank is not anticipated to adversely impact noise quality in the vicinity of the project site. There will be

no pumps installed as part of the proposed tank that would generate noise impacts for the surrounding neighborhood.

12. Visual Resources

a. Existing Conditions

The Maui Memorial Park cemetery and crematorium lie west of and adjacent to the project site. Scenic resources to the west of the project site beyond the Maui Memorial Park include Iao Valley and the West Maui Mountains. Looking east, Haleakala is visible. To the north lies the Sandhills Estates residential development, which currently includes many vacant and undeveloped lots. Beyond Sandhills Estates are single-family homes of the Historic Sandhills residential community. Southern views from the project site are limited by existing vegetation surrounding Waiale Reservoir across Waiinu Road.

b. Potential Impacts and Mitigation Measures

The proposed 2.0 MG water tank will measure 30 feet in height with a flat roof. As mentioned previously, the water tank will be developed where a former 2.0 MG tank once stood. The proposed tank will have a lower profile than the existing 1.5 MG tank which occupies the northeastern portion of the site. The existing tank has a dome roof and has a height of approximately 50 feet. DWS will paint the exterior of the 2.0 MG water tank to conform with the surrounding landscape. The specific color of the tank has not yet been decided.

Although the proposed tank will be visible from adjacent properties, the project site is not part of a scenic corridor, and the proposed tank will not affect views of Haleakala, Iao Valley, or the West Maui Mountains from inland vantage points. Accordingly, the proposed project is not anticipated to have an adverse impact upon the visual character of the surrounding area.

13. Chemicals and Hazardous Materials

a. Existing Conditions

The project site is currently used for the existing Kahului Water Tank. A water tank was formerly located on the site where the new 2.0 MG water tank will be situated. The project site was never used for agricultural purposes and fertilizers and pesticides have not been used on the property. Since DWS has been using the property, no chemicals have been stored on the property. There is no evidence of chemicals or hazardous materials within the project site.

b. Potential Impacts and Mitigation Measures

Since there is no evidence of chemicals and hazardous materials on the project site, no mitigation measures for chemicals and hazardous materials are required. Development of the new 2.0 MG water tank will not require the use of chemicals or hazardous materials.

14. Traditional Beach and Mountain Access

a. Existing Conditions

There are no known traditional beach and mountain access trails within or within the immediate vicinity of the project site.

b. Potential Impacts and Mitigation Measures

The proposed project will not adversely impact traditional beach or mountain access trails.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

a. Existing Conditions

The population of the County of Maui has exhibited relatively strong growth over the past decade. The County's population grew by 20.9 percent between 2000 and 2010, compared to a 12.3 percent increase in the State of Hawaii as

a whole during the same time period. Maui County's population increased from 128,094 residents in 2000 to 154,834 residents in 2010. The population of the island of Maui exhibited even stronger growth than the County as a whole, with a 22.8 percent population increase over the decade. Approximately 144,444 residents lived on the island of Maui in 2010 (U.S. Census Bureau, 2000 and 2010). Maui County's resident population is projected to rise to 174,450 people in 2020 and to 199,550 people in 2030 (Maui County Planning Department, 2006).

The proposed project is located on the island's central isthmus, within the Wailuku-Kahului Community Plan region. Just as Maui County and Maui Island's populations have grown, the resident population of the Central Maui region has also increased. The estimated population of the Wailuku-Kahului region in 2000 was 41,503, which comprised 35.3 percent of the island's population (Maui County Planning Department, June 2006). The resident population for this region in 2010 was approximately 54,400, an increase of 31.2 percent over 10 years (U.S. Census, 2010). The population of the Wailuku-Kahului region is projected to increase to 60,877 people in 2020 and to 71,223 people in 2030 (Maui County Planning Department, June 2006).

b. Potential Impacts and Mitigation Measures

The proposed project is an infrastructure development component deemed necessary to meet the requirements for planned future growth in the Central Maui Water System Service Area. The proposed project is not anticipated to have an adverse impact on population growth parameters for the Wailuku-Kahului region.

2. Economy

a. Existing Conditions

The Wailuku-Kahului region encompasses a broad range of commercial, service, and governmental activities. In addition, the region is surrounded by significant agricultural acreages primarily in sugar cane cultivation. This vast expanse of agricultural land, the majority of which is managed by HC&S, is considered a key component of the local economy.

The County and State economies have been impacted by the nation's recent economic recession, with the major industries of tourism, construction, and real estate being particularly hard hit due to, among other factors, reduced discretionary income and tightening of credit. Unemployment rates in the State and County peaked in the summer of 2009. Since that time, the unemployment rate has slowly declined. In April 2012, the seasonally unadjusted unemployment rate in Hawaii stood at 6.0 percent. The unemployment rate in the County of Maui was slightly higher at 6.5 percent. However, this represents an improvement from one year ago, when the County's seasonally unadjusted unemployment rate was 7.5 percent in April 2011 (DLIR, June 2012).

b. Potential Impacts and Mitigation Measures

On a short-term basis, the proposed action is anticipated to have a positive effect during the construction phase of development as expenditures for construction and related support services are made through local suppliers and through the employment of local labor.

From a long-term perspective, the proposed 2.0 MG water tank will improve the Central Maui Water System to better serve residents and businesses in the region. Adverse economic impacts are not anticipated as a result of the proposed project. DWS does not anticipate the need for additional personnel to monitor and maintain the tank.

3. Housing

a. Existing Conditions

In 2010, Maui County's housing supply totaled 70,379 units. This represents a 25 percent increase from 2000 when there were 56,377 housing units in the County (U.S. Census Bureau, 2010).

The *Socio-Economic Forecast* prepared for the Maui County General Plan 2030 in 2006 estimated housing demand on the island of Maui to grow by 2.3 percent annually between 2010 and 2015. Housing demand in the Wailuku-Kahului Community Plan region was projected to grow at a slightly faster rate of 2.9 percent (Maui County Planning Department, 2006). It should be noted,

however, that these demand estimates were prepared prior to the recent housing market downturn.

New residential construction on Maui has slowed in recent years as a result of the nationwide economic recession. Between 2000 and 2007, over 1,000 new residential building permits were issued annually in Maui County. In 2008 and 2009, residential building permits fell to just 750 and 390 permits, respectively. New construction continued to be slow in 2010 and 2011, when approximately 277 and 210 residential building permits were issued in the County, respectively (U.S. Census Bureau, 2012).

Despite slow residential construction, there are signs that the housing market is improving. The Realtors Association of Maui reports higher sales activity and declining residential and condominium inventories. Interest rates also remain near historic lows, which may help to motivate would-be buyers to purchase homes if they qualify (Realtors Association of Maui, 2011). As the economy improves, demand for housing is anticipated to rise.

b. Potential Impacts and Mitigation Measures

The proposed 2.0 MG water tank project involves the construction of a new water tank adjacent to the existing 1.5 MG Kahului Water Tank on Waiinu Road. In the context of population growth, the proposed project is considered to be an infrastructure component necessary to meet the demand created from the planned future growth in the residential housing in the Wailuku-Kahului area.

C. PUBLIC SERVICES

1. Recreational Facilities

a. Existing Conditions

The Wailuku-Kahului region encompasses a full range of recreational opportunities, including shoreline and boating activities at the Kahului Harbor and adjoining beach parks, and individual and organized athletic activities offered at numerous County parks. The War Memorial Complex, for example, located along Kaahumanu Avenue, includes a gymnasium, swimming pool,

tennis courts, youth baseball fields, football and soccer practice areas, the War Memorial Stadium and baseball stadium. Also found in the Wailuku-Kahului area are the Wailuku Community Center, Kahului Community Center, Kanaha Beach Park, and Keopuolani Park. The Dunes at Maui Lani, a daily fee golf course and driving range open to the public, is located to the northwest of the project site.

b. Potential Impacts and Mitigation Measures

The proposed project in and of itself is not considered a population generator. As such, the proposed project will not place any new demands on recreational activities in the project Wailuku-Kahului region.

2. Police and Fire Protection

a. Existing Conditions

Police protection for the Wailuku-Kahului region is provided by the County Police Department headquartered at the Wailuku Station, located northeast of the project site at the intersection of Kaahumanu Avenue and Mahalani Street. The region is served by the Department's Central Maui patrol.

Fire prevention, suppression, and protection services for the Wailuku region is provided by the County Department of Fire and Public Safety's Wailuku Station which is located approximately half a mile northwest of the project site.

b. Potential Impacts and Mitigation Measures

The location of the proposed 2.0 MG water tank within the existing Wailuku-Kahului urban core will not extend service area limits for emergency services. Police and fire protection services are not expected to be adversely impacted by the proposed project. The proposed project will not adversely affect the service capabilities for emergency services.

3. Solid Waste

a. Existing Conditions

Single-family residential solid waste collection service is provided by the County of Maui on a weekly basis. Residential solid waste collected by County crews is disposed at the County's Central Maui Landfill, located four (4) miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

b. Potential Impacts and Mitigation Measures

As applicable, a solid waste management plan will be developed in coordination with the Solid Waste Division of the County Department of Environmental Management (DEM) for the disposal of construction waste material generated by the project.

Upon completion, the proposed water tank is not anticipated to require solid waste collection and disposal services. As such, the proposed project will not impact the capacity of the Central Maui Landfill.

4. Health Care

a. Existing Conditions

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 231-bed facility which is located nearby the project site. The Kaiser Permanente Medical Care facility and the Liberty Dialysis Center, both located on Maui Lani Parkway to the northeast of the project site, provide additional private health care services in the Central Maui area. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to increase the service demands placed upon health care services.

5. Education

a. Existing Conditions

The Wailuku-Kahului region is served by the State Department of Education's public school system, as well as by several privately operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the Kahului area include Pomaikai, Lihikai and Kahului Elementary 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). Baldwin High School (Grades 9 to 12) is located north of the project site, beyond Kaahumanu Avenue.

The University of Hawaii Maui College serves as the island's principal institution of higher education.

b. Potential Impacts and Mitigation Measures

The proposed project is not considered a student population generator. As such, the proposed project will not adversely affect enrollments or locations of educational facilities.

D. INFRASTRUCTURE

1. Roadways

a. Existing Conditions

The Wailuku-Kahului region is served by a roadway network which includes arterial, collector and local roads. Existing roadways in the vicinity of the project site include Waiinu Road, Waiale Road, Maui Lani Parkway, Mahalani Street, and Kaahumanu Avenue.

Waiinu Road is a two-lane county roadway that generally runs in an east-west direction between Waiale Road in the west and Maui Lani Parkway in the east. The posted speed limit on Waiinu Road is 20 miles per hour (mph).

Waiale Road is a two-lane collector road that runs in the north-south direction between Wailuku and Waikapu. Waiale Road begins at East Waiko Road in Waikapu and becomes Lower Main Street in central Wailuku at its intersection with Main Street. The posted speed limit of Waiale Road in the vicinity of its intersection with Waiinu Road is 20 mph.

Maui Lani Parkway is a private four-lane, divided roadway completed between Kaahumanu Avenue and Waiinu Road. This existing segment is an initial phase of a roadway that will, in the future, extend to Kuihelani Highway, providing an alternative route to Kaahumanu Avenue. The existing configuration provides an alternative path to the High Street/Main Street route through Wailuku Town for vehicles traveling between areas located south of Wailuku and areas to the east of Wailuku. Vehicles utilize Maui Lani Parkway via Waiinu Road and Waiale Road to access Kaahumanu Avenue. Maui Lani Parkway also serves as an alternative access to Mahalani Street. It is anticipated that Maui Lani Parkway will be dedicated to the County of Maui in the future.

Mahalani Street is a County roadway that connects Maui Lani Parkway in the south to Kaahumanu Avenue in the north. Similar to Maui Lani Parkway, Mahalani Street serves an alternate route to Kaahumanu Avenue via Waiinu Road and Waiale Road.

Kaahumanu Avenue is the principal linkage between Wailuku and Kahului, owned by the State of Hawaii. Kaahumanu Avenue is a four-lane, divided roadway with a raised median. Exclusive left turn lanes are provided in the median of Kaahumanu Avenue and right turn acceleration lanes are provided at selected access locations. The posted speed limit on Kaahumanu Avenue within the vicinity of Maui Lani Parkway is 45 mph.

b. <u>Potential Impacts and Mitigation Measures</u>

The proposed project is not anticipated to generate significant volumes of incoming or outgoing traffic and will not affect existing traffic conditions in the area. The number of DWS personnel who would visit the project site for routine monitoring and/or service activities would be limited to approximately two (2) employees, two (2) times a month.

During the construction of the proposed tank, the DWS and the project's contractor will develop an appropriate construction traffic control plan to ensure the smooth and safe traffic operation along Waiinu Road.

2. Wastewater

a. Existing Conditions

Domestic wastewater generated in the Wailuku-Kahului region is conveyed to the County's Wailuku-Kahului Wastewater Reclamation Facility located one-half mile south of Kahului Harbor. The design capacity of the facility is 7.9 million gallons per day (MGD). The facility serves the Kahului, Wailuku, Paia, Kuau and Spreckelsville areas.

An 8-inch County sewer system line is located in Maui Lani Parkway. This line connects to existing lines on Kaahumanu Avenue and Kanaloa Drive, and discharges into the County's pump station at Paukukalo. Wastewater is then pumped through a 24-inch force main to the Wailuku-Kahului Wastewater Reclamation Facility.

b. Potential Impacts and Mitigation Measures

The proposed water tank will not generate any wastewater flow and will not affect existing wastewater collection and treatment systems in the area.

3. Water

a. Existing Conditions

Domestic water for the Wailuku-Kahului region is provided by the DWS Central Maui System. The Central Maui System water sources are located on the windward slope of the West Maui Mountains. The major source of water for this system is the Iao Aquifer. Approximately 75 percent of the water to supply the Central Maui System is withdrawn from the Iao Aquifer which is located in the vicinity of the Iao Stream and Waiehu Stream. The remaining 25 percent is withdrawn from Waihee Aquifer to the northwest. The sustainable yield of the Iao Aquifer is 20 MGD.

The primary source for the existing Kahului Water Tank is the DWS' Mokuhau Wells near Happy Valley, north of Iao Stream.

b. Potential Impacts and Mitigation Measures

The water source for the proposed 2.0 MG water tank will be DWS' Mokuhau Wells, which is the same source as the existing 1.5 MG tank, and occasionally other Central Maui sources, including Kepaniwai Well, Iao Tunnel Shaft 33, Iao Water Treatment Facility, and future replacement wells for Shaft 33.

Water quality is not expected to be affected in the short term or long term as a result of the proposed project.

4. Drainage

a. Existing Conditions

A Preliminary Engineering Report for the proposed project was prepared by Warren S. Unemori Engineering, Inc.in June 2011. Refer to **Appendix "B"**.

Stormwater runoff at the project site currently sheet flows from its outer edges inward to two (2) drain inlets located on the eastern side of the site. The runoff then enters an underground drainline that runs across the site's access driveway, crosses Waiinu Road, and eventually discharges into a small gully before draining into the Waiale Reservoir. Stormwater collected in the Waiale Reservoir is utilized by HC&S to irrigate sugar cane fields in Central Maui.

A small amount of runoff from the project site's access driveway flows off-site onto Waiinu Road. The runoff flows eastward and enters a curb inlet catch basin and is taken to the Dunes at Maui Lani Golf Course via Waiinu Road's underground system.

Prior to the demolition of the former 2.0 MG water tank in the late 1980s, two (2) water tanks existed at the project site: the existing 1.5 MG water tank and the former 2.0 MG water tank. When the two (2) tanks existed together at the site in the 1980s, 2.7 cubic feet per second (cfs) of surface runoff generated by the site during a 10-year, 1-hour storm was discharged into Waiale Reservoir. Another 0.3 cfs of surface runoff was conveyed from the site's access

driveway to the area now occupied by the Dunes at Maui Lani Golf Course. Following the demolition of the former 2.0 MG water tank, the runoff from the project site entering the Waiale Reservoir declined to 1.7 cfs during the 10-year, 1-hour storm. The runoff from the access driveway remain unchanged.

b. Potential Impacts and Mitigation Measures

As previously discussed, the proposed 2.0 MG water tank will be constructed on the same footprint of the former 2.0 MG water tank that occupied the site until the late 1980s. Prior to the demolition of the former 2.0 MG water tank, runoff from the project site during the 10-year, 1-hour storm totaled 2.7 cfs being discharged into the Waiale Reservoir and an additional 0.3 cfs of surface runoff being conveyed to the area now occupied by the Dunes at Maui Lani Golf Course. Following the demolition of the former 2.0 MG water tank, the runoff from the site entering the Waiale Reservoir declined to 1.7 cfs. Once the proposed 2.0 MG water tank is completed, peak stormwater runoff discharging into Waiale Reservoir will revert to the original 2.7 cfs rate that existed in the 1980s. Runoff from the paved access driveway will remain the same.

The existing drainage pattern will remain essentially unchanged, with runoff from the project site continuing to drain to Waiale Reservoir and runoff from the access driveway directed to the Dunes at Maui Lani Golf Course, as it has historically done. As such, adverse impacts to drainage conditions are not anticipated as a result of the proposed project.

In the event that DWS needs to drain water from the proposed tank, the water would enter a drainage system that flows under Waiinu Road and into the Waiale Reservoir.

5. Electrical and Telephone Systems

a. Existing Conditions

Electrical and telephone service in the area is provided via overhead lines along Waiinu Road, to the south of the project site. Electrical and telephone facilities along Maui Lani Parkway have been installed underground. These

services are provided by Maui Electric Company, Ltd., and Hawaiian Telcom, respectively.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to affect electrical or telephone services in the Wailuku-Kahului region. The proposed 2.0 MG water tank will place no additional demands on electrical or telephone service.

E. CUMULATIVE AND SECONDARY IMPACTS

Cumulative impacts are defined by Title 11, Chapter 200, Hawaii Administrative Rules (HAR), Environmental Impact Statement Rules, as:

> *the impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

A "secondary impact" or "indirect effect" from the proposed action is defined by Title 11, Chapter 200, HAR as:

> *effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.*

In this case, the context for analyzing secondary and cumulative impacts is defined by the time horizon within which "reasonably foreseeable" conditions may occur. From a local planning standpoint, the future context for water use and development is established by the Water Use and Development Plan (WUDP) and the Maui County General Plan. Both documents are inseparable, as the General Plan defines parameters for growth, while the WUDP provides a means for meeting the needs of this planned growth. The updated WUDP for Central Maui was adopted by the County Council in December 2010 while the General Plan is currently being updated. Both documents plan for the horizon year 2030. Both planning documents utilize the same technical data base for planning consistency purposes. Thus, "reasonably foreseeable" conditions may be considered within this future context.

The Maui County General Plan, as set forth in Chapter 2.80.B of the Maui County Code, provides for the update of the County General Plan. The General Plan is a long-term,

comprehensive blueprint for the physical, economic, environmental development and cultural identity of the County through 2030. The components of the General Plan include the following:

- The Countywide Policy Plan provides broad policies and objectives which portrays the desired direction of the County's future. It will include a countywide vision, statement of core principles, and objectives and policies for population, land use, the environment, the economy, and housing. **(Specific Countywide policies and objectives supporting the timely implementation of infrastructure are presented in Chapter III of this EA document.)**

- The Maui Island Plan (MIP) provides a land use strategy, water assessment, nearshore ecosystem assessment, an implementation strategy, and milestone measurements. Within the land use strategy, a Managed and Directed Growth Plan will be completed that will identify existing and future land use patterns and determine planned growth.

- The nine (9) Community Plans provide implementing actions based on consistency with the Countywide Policy Plan and MIP's vision, goals, objectives, and policies.

The County Council approved the Countywide Policy Plan in March 2010. The draft MIP was transmitted on October 16, 2009 to the Council for review and approval. The Wailuku-Kahului Community Plan was last updated in 2002. **(Specific community plan goals, objectives and policies supporting the timely implementation of infrastructure are presented in Chapter III of this EA document.)**

Whereas the Countywide Policy Plan covers planning goals and objectives at the broadest levels, and the regional Community Plans consider specific regional needs and opportunities, the MIP and the WUDP may be viewed as parallel plans, in that both address functional elements of the General Plan, and both address islandwide growth parameters which will ultimately dictate water consumption patterns on the island.

The MIP will be used by the County Council, Maui Planning Commission, County administration and the community as a policy foundation for day-to-day decision making by doing the following:

- Providing direction for the development of future policies and regulations (for example, zoning and other ordinances, guidelines and area-specific plans that describe what kind of development can occur where);

- Providing policies to help determine the appropriateness of development proposals; and

- Assigning resource for capital investments and programmatic initiatives.

The Directed Growth Plan, which is a key element of the MIP, provides a framework for managing outcomes of growth based on analysis of natural hazards, sensitive lands, cultural resources, scenic corridors, and related environmental and human community parameters. An important result of the Directed Growth Plan is the preparation and adoption of maps that delineate urban and rural growth areas. Referred to as Urban and Rural Growth Boundaries, these maps will set the boundaries for the physical limits of development. In so doing, the Directed Growth Plan seeks to manage the use of non-urban and non-rural resources important in sustaining the island to the year 2030.

In light of the foregoing, the assessment of cumulative and secondary impacts is undertaken in the context of planned growth recommended by the General Plan update process, particularly the MIP and its proposed Urban and Rural Growth boundary maps which are currently undergoing review by the County Council. Although, they have yet to be adopted, the proposed urban and rural growth boundaries provide the basis for acknowledging that the proposed new 2.0 MG water tank will facilitate implementation of the General Plan, as mandated by County Charter. Future housing and commercial development currently envisioned by the General Plan within the Central Maui Water Service Area represents the "reasonably foreseeable" future for considering potential impacts of the proposed project. The spatial order of development of these units is not defined, however, as development timelines are governed by market conditions, discretionary approval processes, and landowners' financial capacity and preference to build. Notwithstanding, the availability of an additional 2.0 MG storage capacity provided by the proposed project will, over time, allow for the provision of new housing and related supporting projects to accommodate the County-planned growth in the region. It is noted that the new 2.0 MG water storage tank is but one infrastructural component which is required to ensure that the MIP is implemented as required by the County Charter. Other infrastructure components include the need for sufficient wastewater collection, treatment and disposal capacity, and sufficient regional and local transportation system networks that will provide for community connectivity and mobility.

In summary, the proposed project is being planned in consideration of the long-term infrastructural requirements necessary to support planned future growth in the Central Maui region. The proposed project is not anticipated to have a significant adverse impact on the

physical environment. Assessing the project in the context of the future planned growth in the Central Maui region in the foreseeable future, the proposed action is not anticipated to result in significant adverse secondary or cumulative impacts.

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes (HRS), relating to the Land Use Commission, establishes the four (4) major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural", and "Conservation". The subject property is located within the "Urban" district. See **Figure 8**. The proposed use of the property is consistent with "Urban" district provisions.

B. MAUI COUNTY GENERAL PLAN

As indicated by the Maui County Charter, the purpose of the general plan shall be to:

> *... indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density; land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.*

Chapter 2.80B of the Maui County Code, relating to the General Plan and Community Plans, implements the foregoing Charter provision through enabling legislation which calls for a Countywide Policy Plan and a Maui Island Plan. The Countywide Policy Plan was adopted as Ordinance No. 3732 on March 24, 2010. The Maui Island Plan is currently in the process of review and formulation by the Maui County Council.

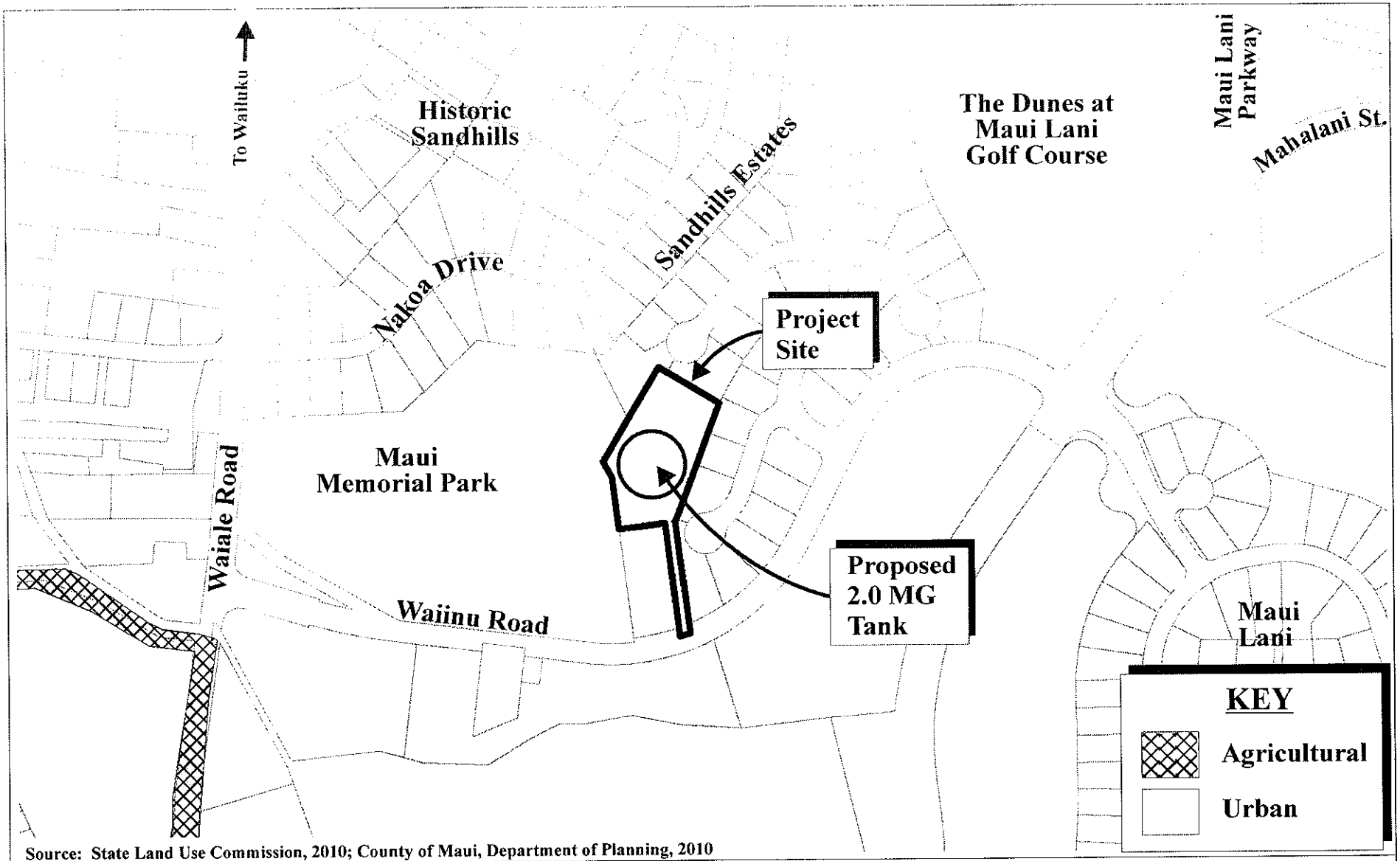


Figure 8

Proposed 2.0 MG Water Tank

State Land Use District Designations

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\SLUD

With regard to the Countywide Policy Plan, Section 2.80B.030 of the Maui County Code states the following.

The countywide policy plan shall provide broad policies and objectives which portray the desired direction of the County's future. The countywide policy plan shall include:

1. *A vision for the County;*
2. *A statement of core themes or principles for the County; and*
3. *A list of countywide objectives and policies for population, land use, the environment, the economy, and housing.*

Core principles set forth in the Countywide Policy Plan are listed as follows:

1. Excellence in the stewardship of the natural environment and cultural resources;
2. Compassion for and understanding of others;
3. Respect for diversity;
4. Engagement and empowerment of Maui County residents;
5. Honor for all cultural traditions and histories;
6. Consideration of the contributions of past generations as well as the needs of future generations;
7. Commitment to self-sufficiency;
8. Wisdom and balance in decision making;
9. Thoughtful, island appropriate innovation; and
10. Nurturance of the health and well-being of our families and our communities.

Congruent with these core principles, the Countywide Policy Plan identifies goals objectives, policies and implementing actions for pertinent functional planning categories, which are identified as follows:

1. Natural environment

2. Local cultures and traditions

3. Education

4. Social and healthcare services

5. Housing opportunities for residents

6. Local economy

7. Parks and public facilities

8. Transportation options

9. Physical infrastructure

10. Sustainable land use and growth management

11. Good governance

With respect to the proposed 2.0 MG water tank project, the following goals, objectives, policies and implementing actions are illustrative of the project's compliance with the Countywide Policy Plan.

IMPROVE PHYSICAL INFRASTRUCTURE

Goal: Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.

Objective:

1. Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.

Policies:

a. Develop and fund improved water-delivery systems.

c. Ensure a reliable and affordable supply of water for productive agricultural uses.

Objective:

5. Improve the planning and management of infrastructure systems.

Policies:

a. Provide a reliable and sufficient level of funding to enhance and maintain infrastructure systems.

d. Maintain inventories of infrastructure capacity, and project future infrastructure needs.

In summary, the development of the proposed 2.0 MG water tank is consistent with the themes and principles of the Countywide Policy Plan.

C. WAILUKU-KAHULUI COMMUNITY PLAN

The project site is located in the Wailuku-Kahului Community Plan region which is one (1) of nine (9) Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plan, which is designed to implement the Maui County General Plan. Each Community Plan contains recommendations and standards which guide the sequencing, patterns and characteristics of future development in the region.

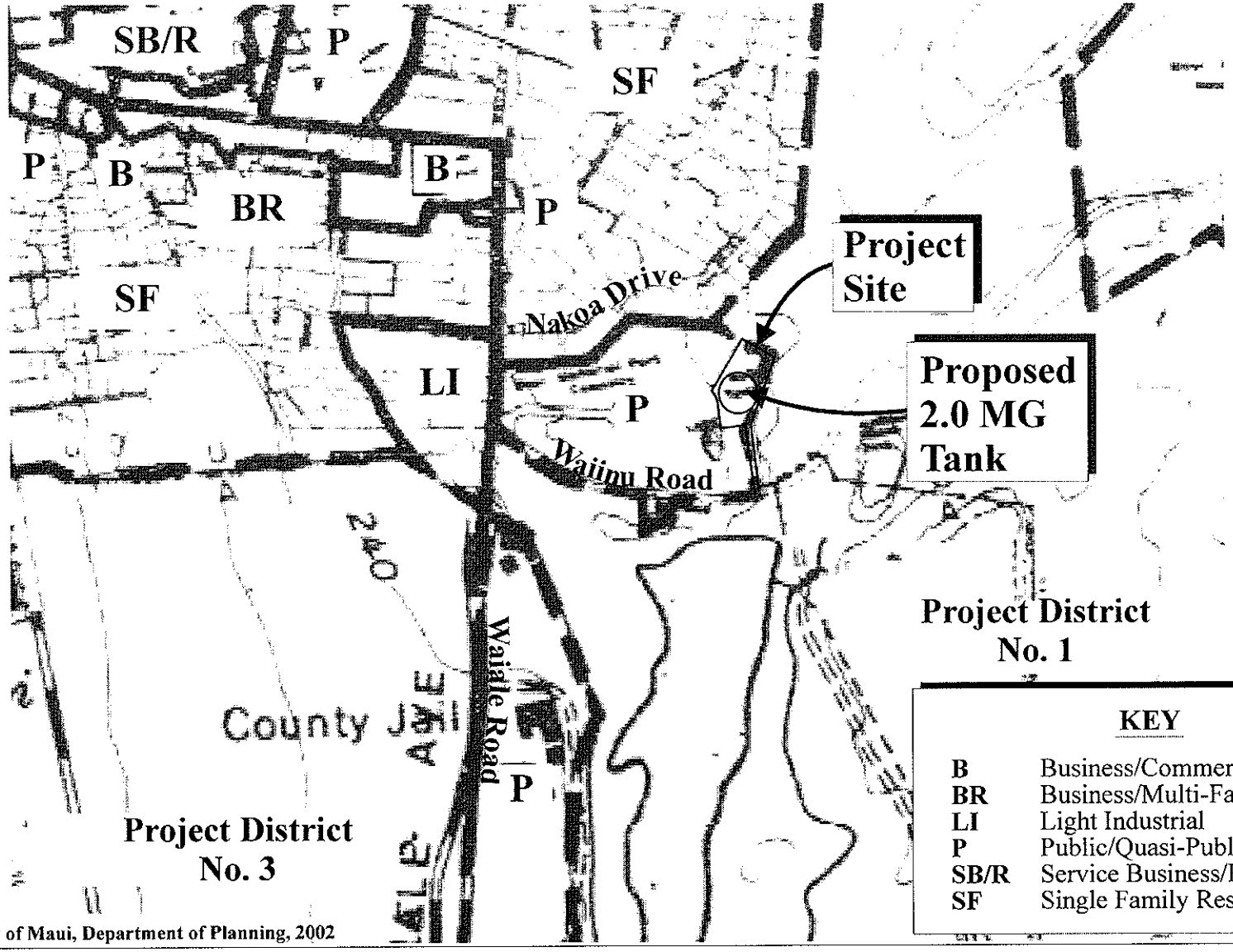
The Wailuku-Kahului Community Plan was adopted by the County of Maui through Ordinance No. 3061 which took effect on May 30, 2002. Land use guidelines are set forth by the Wailuku-Kahului Community Plan Land Use Map. As shown in **Figure 9**, the lands underlying the subject property comprise "Public/Quasi-Public" on the Wailuku-Kahului Community Plan Map. The proposed water tank is consistent with the "Public/Quasi-Public" designation.

The proposed project is in conformance with the following goals, objectives, and policies of the Wailuku-Kahului Community Plan.

HOUSING

Goal

A sufficient supply and choice of attractive, sanitary and affordable housing accommodations for the broad cross section of residents, including the elderly.



Source: County of Maui, Department of Planning, 2002

Figure 9

Proposed 2.0 MG Water Tank

Wailuku-Kahului Community Plan Map

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

MauiLani\KahuluiWT\WailukuKahuluiCommunityPlan

Objectives and Policies

- Plan, design and construct off-site public infrastructure improvements (i.e. water, roads, sewer, drainage, police and fire protection, and solid waste) in anticipation of residential, commercial and industrial developments defined in the Community Plan.

GOVERNMENT

Goal

Government that demonstrates the highest standards of fairness; responsiveness to the needs of the community; fiscal integrity; effectiveness in planning and implementation of programs and projects; a fair and equitable approach to taxation and regulation; and efficient, results-oriented management.

Objectives and Policies

- Ensure that adequate infrastructure is or will be available to accommodate planned development.

INFRASTRUCTURE

Goal

Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters and visitors through the provision of clean water, effective waste disposal and drainage systems, and efficient transportation systems which meet the needs of the community.

WATER AND UTILITIES

Objectives and Policies

- Coordinate water system improvement plans with growth areas to ensure adequate supply and a program to replace deteriorating portions of the distribution system. Future growth should be phased to be in concert with the service capacity of the water system.

- Coordinate the construction of all water and public roadway and utility improvements to minimize construction impacts and inconveniences to the public.

- Coordinate expansion of and improvements to the water system to coincide with the development of residential expansion areas.

D. WATER USE AND DEVELOPMENT PLAN

Hawaii State Law requires each County to prepare, periodically update, and adopt a Water Use and Development Plan (WUDP) to serve as the long-range planning blueprint for all water uses in each County. Maui County requires a WUDP update each time the County General Plan is amended or revised. As the County's General Plan is currently in the processs of being updated, DWS is in the process of updating its WUDP. In December 2010, the County Council adopted the Central DWS District WUDP Plan Update. Based on planning assumptions associated with the General Plan update, water consumption for the DWS Central District is expected to grow from 22 million gallons per day (MGD) in 2005 to 34 MGD in 2030. To account for unmetered uses, such as fire protection and line flushing and system losses, water production requirements are set to be approximately 10 percent greater than consumption requirements (County of Maui, Department of Water Supply, 2010).

The WUDP identifies and assesses water resource options to address the projected water production requirements. These sources include new sources of water, options to conserve and use water more efficiently, and options to protect stream and groundwater resources. The Central DWS District WUDP assesses in detail the five most promising candidate strategies and resources.

Although the WUDP does not discuss specific water storage infrastructure like the proposed 2.0 MG tank, the proposed project is consistent with the long-term strategies outlined in the WUDP as it would provide for water storage capacity for proposed water supply resources recommended in the WUDP, such as the Shaft 33 replacement wells in the Iao Aquifer.

E. COUNTY ZONING

The subject property is designated "R-3, Residential" by Maui County zoning. Buildings or premises used by Federal, State or County governments for public purposes are permitted uses in residential districts. As such, the proposed project is consistent with Maui County zoning.

F. COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES

Pursuant to Chapter 205A, HRS, projects are evaluated with respect to Coastal Zone Management (CZM) objectives, policies and guidelines. While the subject property is not

located within the County of Maui's Special Management Area, the project's relationship to applicable coastal zone management considerations have been reviewed and assessed.

(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 project is not located near the shoreline and is not anticipated to adversely impact existing coastal or inland recreational resources.

(2) Historic 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: During consultation regarding a Work Within County Right-of-Way Permit for the proposed project, the State Historic Preservation Division (SHPD) noted that previous archaeological monitoring during construction work within the vicinity of the project site has documented numerous pre-Contact Hawaiian burials. As such, it was recommended that all ground altering activities be monitored by a qualified archaeologist. Prior to the initiation of construction, an archaeological monitoring plan will be submitted to SHPD for review and approval pursuant to Section 13-279, Hawaii Administrative Rules.

(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 project site is located within Maui's central isthmus. The proposed 2.0 MG water tank will measure 30 feet in height with a flat roof. The tank will be developed adjacent to an existing 1.5 MG water tank and on the location of a former 2.0 MG water tank. The new tank will have a lower profile than the existing 1.5 MG water tank, which is 50 feet in height with a dome roof. DWS will paint the exterior of the water tank to conform to the surrounding landscape. The color of the tank has not yet been determined.

The project site is not part of a scenic corridor and will not affect views from inland vantage points.

(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 project site is located approximately 1.5 miles away from the coast and is not expected to adversely impact coastal ecosystems. Best Management Practices (BMPs) will be implemented during the construction of the project to minimize runoff from the project site. The project will comply with applicable County drainage provisions. Development of the proposed project is not anticipated to adversely affect drainage conditions in the area. Refer to **Appendix "B"**.

(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 proposed project will generate short-term construction-related employment and spending which will benefit the local economy. The proposed action does not contradict the objectives and policies for economic uses. Furthermore, the proposed project implements the County's long-term goals and objectives to maintain and improve potable water service provision to existing and planned future businesses and residents in the area. The project site is currently used for water storage and the proposed project will provide a public facility in a suitable location.

(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: According to the Flood Insurance Rate Map for the area, the project site is located within Zone X (unshaded), an area determined to be outside of the 0.2

percent annual floodplain. No significant adverse drainage impacts to downstream properties are anticipated as a result from project implementation. Stormwater runoff volumes will match the runoff volume from the site in the 1980's when two (2) tanks occupied the property. The existing drainage pattern will remain essentially unchanged with runoff from the site continuing to drain to Waiale Reservoir and runoff from the access driveway directed to the Dunes at Maui Lani Golf Course. If there is a need for DWS to discharge water from the proposed tank, the water will enter a drainage system that flows under Waiinu Road and into Waiale Reservoir.

(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: In compliance with the requirements of Chapter 343, HRS, this Environmental Assessment (EA) has been prepared to facilitate public understanding and involvement with the proposed project. All aspects of the development will be conducted in accordance with applicable Federal, State, and County standards. Opportunities for review of the proposed action are offered through the regulatory review process for the EA set forth by Chapter 343, HRS.

(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 mediations to respond to coastal issues and conflicts.

Response: The proposed project will meet County public awareness, education and participation objectives. Opportunities for agency and public review will be provided as part of the notification review and comment process required for the EA.

(9) Beach Protection

Objective:

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 project will not involve construction in the vicinity of shoreline areas. The project site is approximately 1.5 miles inland from the nearest shoreline. As such, the proposed project is not anticipated to have an adverse effect on local beach environments.

(10) Marine Resources

Objective:

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 project site is located approximately 1.5 miles from the shoreline. The proposed project, therefore, is not anticipated to have adverse effects upon marine and coastal resources in the project vicinity.

In addition to the foregoing objectives and policies, Section 205A-30.5, HRS Prohibitions provide that:

> *(a) No Special Management Area Use Permit or Special Management Area Minor Permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light:*
>
> *(1) Directly illuminates the shoreline and ocean waters; or*
> *(2) Is directed to travel across property boundaries toward the shoreline and ocean waters.*
>
> *(b) Subsection (a) shall not apply to special management area use permits for structures with:*
>
> *(2) Artificial lighting provided by a government agency or its authorized users for government operations, security, public safety, or navigational needs; provided that a government agency or its authorized users shall make reasonable efforts to properly position or shield lights to minimize adverse impacts.*

Response: The project site is not located near the shoreline. Furthermore, the proposed project does not involve any artificial lighting that would illuminate surrounding properties.

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The proposed project involves the construction of a 2.0 MG water tank at the existing Kahului Water Tank site. Construction will take place on County-owned lands already utilized for water storage infrastructure. An existing 1.5 MG water tank exists on the northeastern portion of the site and the proposed 2.0 MG water tank will be developed on the location of a former 2.0 MG water tank that was demolished in the early 1990s. The proposed water tank will measure 30 feet in height, approximately 20 feet lower than the existing 1.5 MG tank. The project site is not part of a scenic corridor and the new water tank will not adversely affect views from inland vantage points.

Assessment of construction-related impacts was carried out as part of the EA. The development will have limited, unavoidable construction-related impacts on the environment, as described in Chapter II. In the short term, construction activities associated with the proposed water tank will have a temporary impact on air quality from dust generation and discharge of exhaust from construction equipment. Appropriate BMPs will be implemented to mitigate adverse impacts, including a dust fence to mitigate wind blown dust emissions, temporary erosion control measures, watering of exposed surfaces and regular maintenance of construction equipment. The construction of the proposed 2.0 MG water tank will also result in unavoidable noise impacts. The use of properly maintained construction equipment will mitigate noise impacts generated by such equipment. In addition, the project will comply with State Department of Health community noise limits and construction will be limited to normal daylight hours. As applicable, a Community Noise Permit will be obtained if construction noise levels exceed allowable levels.

V. ALTERNATIVES TO THE PROPOSED ACTION

V. ALTERNATIVES TO THE PROPOSED ACTION

A. PREFERRED ALTERNATIVE

The proposed construction of a 2.0 MG water tank at the Kahului Water Tank site is deemed appropriate given the presence of the existing 1.5 MG tank and the former use of the site for a previous 2.0 MG water tank. Because the subject parcel has sufficient space to accommodate a second water tank, DWS determined that the construction of the proposed water tank would represent the most efficient use of County lands. In addition, this site is already being utilized for water storage infrastructure and improvements, thereby eliminating potential costs or planning considerations that might arise from other unknown alternative site locations. Once operational, the location of two (2) water tanks on a single site will provide efficiencies for DWS staff in terms of ongoing maintenance of the water storage facilities. The proposed project is intended to meet the need for enhanced water storage capacity to serve existing and future businesses and residents within the Central Maui Water Service Area. The project is part of DWS' ongoing efforts to improve the Central Maui Water System.

B. NO ACTION ALTERNATIVE

The "no action" alternative calls for the continued use of the existing 1.5 MG water tank at the project site to serve the water storage needs for the Central Maui Water Service Area. The Central Maui Water System would not receive necessary improvements to allow for continued high-quality water service provision to existing and planned businesses and residents. This alternative would not address the need for additional water storage capacity in the region necessary to serve planned future growth. The "no action" alternative would also not be consistent with the water system agreement between the County of Maui and Maui Lani.

C. DEFERRED ACTION ALTERNATIVE

The "deferred action" alternative would have similar consequences to the "no action" alternative in that the proposed project would be delayed and improvements to the Central Maui Water System would not be realized in a timely manner. This alternative would not respond to the need for enhanced water storage needs for businesses and residents in the area or for planned future growth. The alternative would also not be consistent with the intent of the water system agreement between the County and Maui Lani, which seeks to have improvements in place to serve new development within the Master Plan.

D. ALTERNATIVE TANK SITE ALTERNATIVE

This alternative would involve site selection and property acquisition to develop a new water storage facility at a new location. This alternative was not pursued because the existing Kahului Water Tank site, which is already owned by the County of Maui, was deemed capable of accommodating the proposed water tank.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Development of the proposed project will involve commitments of energy, labor, fiscal and material resources. The use of these resources, when weighed against the expected benefits derived from expanded water storage capacity, is not considered an adverse commitment.

VII. SIGNIFICANCE CRITERIA ASSESSMENT

VII. SIGNIFICANCE CRITERIA ASSESSMENT

The "Significance Criteria", Section 12 of the Hawaii Administrative Rules (HAR), Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed project will have significant impacts on the environment. The following criteria and preliminary analysis are provided.

1. **Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.**

   The construction of the proposed 2.0 MG water tank will result in short-term construction related air quality and noise impacts. However, these impacts will be limited in scope. There are no known rare, threatened, or endangered species of flora, fauna, avifauna, or important habitats located within the project site. In addition, the proposed tank will be developed on a parcel that has been previously improved. An existing 1.5 MG water tank occupies the northeastern portion of the site and the proposed water tank will be constructed on the footprint of a former 2.0 MG water tank that was demolished in the early 1990s. As mentioned in Chapter II of this document, a cultural impact assessment of the project site concluded that no significant impacts to cultural practices were anticipated.

   During consultation regarding a Work Within County Right-of-Way Permit for the proposed project, the State Historic Preservation Division (SHPD) noted that previous archaeological monitoring during construction work within the vicinity of the project site has documented numerous pre-Contact Hawaiian burials. As such, it was recommended that all ground altering activities be monitored by a qualified archaeologist. Prior to the initiation of construction, an archaeological monitoring plan will be submitted to SHPD for review and approval pursuant to Section 13-279, Hawaii Administrative Rules.

2. **Curtails the range of beneficial uses of the environment.**

   The proposed project and its commitment of land resources are not anticipated to curtail the range of beneficial uses of the environment. The County-owned parcel has a history of use for water storage infrastructure, and an existing 1.5 MG water tank

currently occupies a portion of the site. The addition of a second water tank on the project site would not result in adverse effects on the beneficial uses of the environment.

3. **Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.**

The proposed action has been reviewed in the context of the State's Environmental Policy and Guidelines that are set forth in Chapter 344, HRS. The proposed action does not contravene provisions of Chapter 344, HRS.

4. **Substantially affects the economic welfare, social welfare, and cultural practices of the community or State.**

The proposed project will directly benefit the local economy by providing construction and construction-related employment. In the long term, the proposed project will provide improved water storage capacity for businesses and residents in the Central Maui Water Service Area. The proposed project will have a beneficial impact to the economic and social welfare of the community. The proposed project will not adversely affect cultural practices.

5. **Substantially affects public health.**

No adverse impacts to public health or welfare are anticipated as a result of the proposed project. Appropriate Best Management Practices (BMPs) will be implemented during the construction phase of the project to mitigate potential air quality and noise impacts. From a long-term perspective, the project will provide enhanced water storage capacity to meet the potable water and fire protection needs of residents and businesses in the Central Maui Water Service Area. As such, implementation of the proposed project will be beneficial to the overall health of residents living in the service area.

6. **Involves substantial secondary impacts, such as population changes or effects on public facilities.**

The proposed project is not considered a population generator. The proposed 2.0 MG water tank is intended to increase water storage capacity in the Central Maui Water

Service Area. Significant adverse impacts to population are not anticipated as a result of the proposed project.

From a land use standpoint, the proposed project is in keeping with the objectives, policies, and implementing actions of the Wailuku-Kahului Community Plan. Adverse impacts to public facilities, including water and wastewater capabilities and facilities, are not anticipated as a result of project implementation.

7. **Involves a substantial degradation of environmental quality.**

During construction of the project, appropriate BMPs will be implemented to ensure that potential adverse environmental effects are mitigated. No substantial degradation of the environment is anticipated as a result of project implementation.

From a long-term perspective, no substantial degradation of environmental quality resulting from the project is anticipated.

8. **Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**

The proposed action does not represent a commitment to larger actions. In addition, the proposed action is not expected to result in cumulative impacts that would adversely affect the environment.

9. **Substantially affects a rare, threatened, or endangered species, or its habitat.**

There are no known or identified habitats of rare, threatened, or endangered species of flora, fauna or avifauna, or their habitats in the vicinity of the project site.

10. **Detrimentally affects air or water quality or ambient noise levels.**

Construction activities will result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, and installation of dust screens will be implemented to minimize windblown emissions. Noise impacts will occur primarily from construction equipment. Equipment mufflers or other noise attenuating equipment, as well as proper equipment and vehicle maintenance, will be used during construction activities. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawaii, Department of Health

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 Chapter 46 rules.

With the implementation of the proposed mitigation measures, the project is not anticipated to have significant adverse impacts on air quality or noise levels. Upon completion of construction, the proposed project is not anticipated to have long-term adverse air quality or noise impacts.

Water quality is not expected to be affected in the short term or long term.

11. **Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.**

The project site is not located within and the proposed action would not affect any environmentally sensitive areas. The project site is not subject to flooding or tsunami inundation. The project site is not a shoreline property, nor is it situated near streams, wetland areas, or other areas that may pose flooding concerns. Soils underlying the project site are not considered to be erosion-prone. There are no geologically hazardous lands, estuaries, or coastal waters within or adjacent to the project site.

12. **Substantially affects scenic vistas and viewplanes identified in County or State plans or studies.**

The project site is not identified as a scenic vista or viewplane in County or State plans or studies. It is not anticipated that the proposed project will affect scenic corridors or coastal scenic and open space resources. The proposed 2.0 MG water tank will measure 30 feet in height and will be built on the footprint of a former 2.0 MG water tant, adjacent to an existing 1.5 MG water tank. The proposed tank will have a lower profile than the existing tank which is approximately 50 feet in height.

13. **Requires substantial energy consumption.**

The proposed project 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 project will not create substantial new demand for energy resources.

Based on the foregoing findings, it is anticipated a Finding of No Significant Impact (FONSI) can be issued for the Environmental Assessment for the proposed action.

VIII. LIST OF PERMITS AND APPROVALS

VIII. LIST OF PERMITS AND APPROVALS

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

State of Hawaii

1. Community Noise Permit, as applicable
2. National Pollutant Discharge Elimination System (NPDES) Permit (as applicable)

County of Maui

1. Construction Permits (Grading, Building, Electrical, Plumbing, Driveway)
2. Water Use Agreement (Approval by County Council)
3. Work Within County Right-of-Way Permit

IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during preparation of the Draft Environmental Assessment (EA). Agency comments and responses to substantive comments are included herein.

FEDERAL AGENCIES

1. George Young
   Chief, Regulatory Branch
   U.S. Department of the Army
   U.S. Army Engineer District, Honolulu
   Regulatory Branch
   Building 230
   Fort Shafter, Hawaii 96858-5440

2. Loyal A. Mehrhoff
   Field Supervisor
   U.S. Fish and Wildlife Service
   300 Ala Moana Blvd., Room 3-122
   Honolulu, Hawaii 96813

STATE AGENCIES

3. Bruce Coppa, Director
   Department of Accounting and General Services
   1151 Punchbowl Street, #426
   Honolulu, Hawaii 96813

4. Loretta J. Fuddy, Acting Director
   State of Hawaii
   Department of Health
   919 Ala Moana Blvd., Room 300
   Honolulu, Hawaii 96814

5. Alec Wong, P.E., Chief
   Clean Water Branch
   State of Hawaii
   Department of Health
   919 Ala Moana Blvd., Room 300
   Honolulu, Hawaii 96814

6. Patti Kitkowski
   District Environmental Health Program Chief
   State of Hawaii
   Department of Health
   54 High Street
   Wailuku, Hawaii 96793

7. Genevieve Salmonson, Acting Manager
   Environmental Planning Office
   Department of Health
   919 Ala Moana Blvd., Suite 312
   Honolulu, Hawaii 96814

8. Lene Ichinotsubo
   Environmental Management Division
   State of Hawaii
   Department of Health
   919 Ala Moana Blvd., Room 212
   Honolulu, Hawaii 96814

9. William J. Aila, Jr., Interim Chairperson
   State of Hawaii
   Department of Land and Natural Resources
   P. O. Box 621
   Honolulu, Hawaii 96809

10. Puaalaokalani Aiu, Administrator
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawaii 96707

11. Morgan Davis
Department of Land and Natural Resources
State Historic Preservation Division
130 Mahalani Street
Wailuku, Hawaii 96793

12. Glenn Okimoto, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

cc: Fred Cajigal

13. Major General Darryll Wong, Director
Hawaii State Civil Defense
3949 Diamond Head Road
Honolulu, Hawaii 96813-4495

14. Gary Hooser, Director
Office of Environmental Quality Control
235 S. Beretania Street, Suite 702
Honolulu, Hawaii 96813

15. Clyde Nāmu`o, Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

16. Jesse Souki, Director
State of Hawaii
Office of Planning
P. O. Box 2359
Honolulu, Hawaii 96804

17. Dan Davidson, Executive Officer
State of Hawaii
State Land Use Commission
P.O. Box 2359
Honolulu, Hawaii 96804

COUNTY AGENCIES

18. Alan Arakawa, Mayor
County of Maui
200 South High Street
Wailuku, Hawaii 96793

19. Teena Rasmussen, Coordinator
County of Maui
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, Hawaii 96793

20. Anna Forest, Officer Management Officer
Maui Civil Defense Agency
200 South High Street
Wailuku, Hawaii 96793

21. Jeffrey A. Murray, Fire Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, Hawaii 96732

22. Jo-Ann Ridao, Director
County of Maui
Department of Housing and Human Concerns
One Main Plaza
2200 Main Street, Suite 546
Wailuku, Hawaii 96793

23. Glenn Correa, Director
County of Maui
Department of Parks and Recreation
700 Halia Nakoa Street, Unit 2
Wailuku, Hawaii 96793

24. William Spence, Director
County of Maui
Department of Planning
250 South High Street
Wailuku, Hawaii 96793

25. Gary Yabuta, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

26. David Goode, Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, Hawaii 96793

27. Kyle Ginoza, Director
County of Maui
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 100
Wailuku, Hawaii 96793

28. Jo Anne Johnson, Director
County of Maui
Department of Transportation
200 South High Street
Wailuku, Hawaii 96793

29. Honorable Joseph Pontanilla, Council Vice Chair
Maui County Council
200 South High Street
Wailuku, Hawaii 96793

30. Honorable Mike Victorino
Maui County Council
200 South High Street
Wailuku, Hawaii 96793

UTILITIES

31. Dan Takahata, Manager – Engineering
Maui Electric Company, Ltd.
P. O. Box 398
Kahului, Hawaii 96733

32. **Hawaiian Telcom**
60 South Church Street
Wailuku, Hawaii 96793

OTHER AGENCIES

33. **Historic Sandhills Neighborhood Assn.**
c/o Stephanie Ohigashi
179 Halenani Drive
Wailuku, Hawaii 96793

34. Barbara A. Kojima, Property Manager
Maui Lani Community Association
P. O. Box 1642
Kahului, Hawaii 96733

35. Wesley P. Lo, Chief Executive Officer
Maui Memorial Medical Center
221 Mahalani Street
Wailuku, Hawaii 96793

36. Norman Quon, Director
Kaiser Permanente
531 Ohohia Street
Honolulu, Hawaii 96819

37. Rik Papa, President
Attention: Tiana Raymondo
Kehalani Community Association
P. O. Box 1530
Wailuku, Hawaii 96793

38. Bill Dix, Account Manager Sandhills Hawaiiana
140 Hoohana Street
Kahului, Hawaii 96732

39. Joe Blackburn
Islands and Bluffs Property Manager
c/o The Pono Center
62 N. Market Street, 3rd Floor
Wailuku, Hawaii 96793

SEP 29 2011

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

September 26, 2011

Regulatory Branch
Engineering and Construction Division

Corps File No. POH-2011-00105

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

This letter is in response to your early consultation request for input on the preparation of a Draft Environmental Assessment (DEA) pursuant to Hawaii Revised Statutes, Chapter 343 for the ***Kahului Water Tank Project*** located on TMK: (2)3-8-046L032 in Wailuku, Island of Maui, Hawaii. The proposed water tank will serve central Maui residents and businesses and is part of the County of Maui, Department of Water's on-going efforts to upgrade the Central Maui Water System.

According to your correspondence, the proposed water tank will be constructed on a 1.58-acre flag-lot parcel located off of Waiinu Road. The parcel is owned by the County of Maui and is classified as "Urban" by the State Land Use Commission. The site was formerly occupied by a 2.0 million gallon (MG) water tank that was demolished in the 1980's; the new tank would be located adjacent to an existing 1.5 MG water tank. Based on our review of the information provided to our office, it does not appear that any jurisdictional streams or water bodies occur on-site that would require Department of the Army (DA) authorization.

However, as you prepare final engineering and construction plans for the project, please be aware that DA authorization is required for activities that result in the discharge of dredged or fill material into jurisdictional waters of the United States, including wetlands. Examples of such activities include, but are not limited to: 1) creating fills for residential or commercial development, placing bank protection, temporary or permanent stockpiling of excavated material, building road crossings and driveways, backfilling for utility line crossings and constructing outfall structures, dams, levees, groins, weirs, or other structures; 2) mechanized land clearing, grading which involves filling low areas or land leveling, ditching, channelizing and other excavation activities that would have the effect of destroying or degrading waters of the U.S.; 3) allowing runoff or overflow from a contained land or water disposal area to re-enter a water of the U.S.; and 4) placing pilings when such placement has or would have the effect of a discharge of fill material. For additional permit information, please visit our website at http://www.poh.usace.army.mil/EC-R/EC-R.htm.

If you need further assistance, please contact Ms. Susan A. Meyer, Project Manager, by phone at (808) 438-2137 or by electronic mail at susan.a.meyer@usace.army.mil. Thank you for

your cooperation with our regulatory program. Please be advised you can provide comments on your experience with the Corps' Honolulu District Regulatory Branch by accessing our web-based customer survey form at http://www.poh.usace.army.mil/EC-R/forms/ecr-CustomerSurvey.pdf.

Sincerely,

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

CF:
Mr. Myles Fujinaka, P.E., County of Maui, Department of Water

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

George Young, P.E. Chief
Department of the Army
U.S. Army Corps of Engineers, Honolulu District
Fort Shafter, Hawaii 96858-5440

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Young:

Thank you for your letter of September 26, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that based on your review, it does not appear that any jurisdictional streams or water bodies occur on-site that would require Department of the Army (DA) authorization.

We also understand that DA authorization is required for activities that result in the discharge of dredged or fill material into jurisdictional waters of the United States, including wetlands. The proposed project will not result in discharge of dredged or fill material into such waters.

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

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\Kahului\WT\DOA EC Res_ltr.doc

APR 28 2011

NEIL ABERCROMBIE
GOVERNOR

BRUCE A. COPPA
COMPTROLLER

RYAN T. OKAHARA
DEPUTY COMPTROLLER

(P)1084.1

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

APR 27 2011

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Maui, Hawai'i 96793

Dear Mr. Hirano:

Subject: Early Consultation Request for Draft Environmental Assessment (EA) for Proposed Kahului Water Tank
Wailuku, Maui, Hawai'i
TMK: (2) 3-8-046: 032

Thank you for the opportunity to provide comments for the subject document. The subject project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Ms. Gayle Takasaki of the Public Works Division at 586-0584.

Sincerely,

BRUCE A. COPPA
State Comptroller

5

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Dean H. Seki, Acting State Comptroller
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810-0119

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Seki:

Thank you for your department's letter of April 27, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\DAGS EC Res_ltr.doc

APR 26 2011

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to
EMD / CWB

04024PEC.11

April 21, 2011

Mr. Mich Hirano, AICP
Principal
Munekiyo &Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

SUBJECT: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK No. (2)3-8-046:032, Wailuku, Island of Maui, Hawaii

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at:
http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2

State waters, you may apply for an NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

a. Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.

b. Hydrotesting water.

c. Construction dewatering effluent.

You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

3. For types of wastewater not listed in Item No. 2 above or wastewater discharging into Class 1 or Class AA waters, you may need an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage is required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at:
http://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

EC:ml

c: Document Log No. 2011B046
Document Log No. 2011B119/EPO 11-069

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Alec Wong, P.E., Chief
Clean Water Branch
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801-3378

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032
EMD/CWB 04024PEC.11

Dear Mr. Wong:

Thank you for your letter of April 21, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments. The responses are in the same order as in your letter. As a general response, we have reviewed the Clean Water Branch's standard comments on your website. A discussion of applicable comments is presented in **Exhibit "A"**.

1. We acknowledge that any projects and its potential impacts to State waters must meet the anti-degradation policy (Hawaii Administrative Rules (HAR), Section 11-54-1.1), designated uses (HAR, Section 11-54-3), and water quality criteria (HAR, Sections 11-54-4 to 11-54-8).

2. We further acknowledge that the applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State waters. Coordination will be carried out with the Department of Health prior to project construction to determine the NPDES permit requirements.

3. We also note that a NPDES individual permit is required for types of discharge not covered by a NPDES general permit or wastewater discharging into Class 2 or Class AA waters. Again, coordination with the Department will be undertaken prior to construction to determine the NPDES permit requirements.

4. We acknowledge that all discharges related to the project construction or operation, whether or not NPDES permit coverage and/or Section 401 Water Quality Control (WQC) are required, must comply with the State's Water Quality Standards.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
Enclosure
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply (w/enclosure)
K:\DATA\MauiLani\KahuluiWTI\DOH CWB EC Res_ltr.doc

//

EXHIBIT A

Clean Water Branch

1. *Any project and its potential impacts to State waters must meet the State's: 1) Antidegradation policy, which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected; 2) Designated uses, as determined by the classification of the receiving State waters; and 3) water quality criteria (Hawaii Administrative Rules (HAR), Chapter 11-54).*

   Response: The applicant acknowledges that any projects and its potential impacts to State waters must meet the anti-degradation policy (Hawaii Administrative Rules (HAR), Section 11-54-1.1), designated uses (HAR, Section 11-54-3), and water quality criteria (HAR, Section 11-54-4 to 11-54-8).

2. *The Army Corps of Engineers should be contacted at (808) 438-9258 to see if this project requires a Department of the Army (DA) permit. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.*

   Response: The Army Corps of Engineers has been contacted during the Early Consultation process for the proposed project. The Army Corps of Engineers, in a letter dated September 26, 2011, indicated that it does not appear that nay jurisdictional streams or water bodies occur onsite that would require Department of Army authorization.

3. *National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, NPDES general permit coverage may be applied for by submitting a Notice of Intent (NOI) form: 1) storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi); 2) storm water associated with construction activities, including excavation, grading, clearing, demolition, uprooting of vegetation, equipment staging, and storage areas that result in the disturbance of equal to or greater than one (1) acre of total land area*; 3) treated effluent from leaking underground storage tank remedial activities; 4) once through cooling water less than one (1) million gallons per day; 5) hydrotesting water; 6) dewatering effluent; 7) treated effluent from petroleum bulk stations and terminals; 8) treated effluent from well drilling activities; 9) treated effluent from recycled water distribution systems; 10) storm water and*

certain non-storm water from a small municipal separate storm sewer system; and 11) circulation water from decorative ponds or tanks.

**The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.*

Response: The applicant acknowledges a National Pollutant Discharge Elimination System (NPDES) permit may be required for discharges of wastewater, including storm water runoff, into State waters. Coordination will be carried out with the Department of Health prior to project construction to determine the NPDES permit requirements.

4. *A separate NOI form for each type of discharge must be submitted at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.*

   Response: The applicant acknowledges that a separate notice of intent (NOI) form must be submitted for each type of discharge, if applicable, at least 30 calendar days prior to the start of discharge activity.

5. *For types of wastewater discharges not listed above or wastewater discharging into Class 1 or Class AA waters, you may need to obtain an NPDES individual permit. Class 1 waters include, but is not limited to, all State waters in natural reserves, preserves, sanctuaries, and refuges established by the Department of Land and Natural Resources (DLNR) under Hawaii Revised Statutes (HRS), Chapter 195, or similar reserves for the protection of aquatic life established under HRS, Chapter 195.*

   Response: The applicant acknowledges that a NPDES individual permit may be required for discharge into Class 1 or Class AA waters. The applicant will discuss permit requirements for the proposed project with the Department of Health.

6. *An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge or start of construction activities. The NPDES application forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.*

   Response: The applicant acknowledges that a NPDES individual permit application, if applicable, must be submitted at least 180 calendar days before the commencement of discharge or construction activities.

7. *You must also submit a copy of the NOI or NPDES permit application to the State DLNR, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.*

   Response: The applicant acknowledges that a copy of the NOI or NPDES permit application, if applicable, must be submitted to the SHPD.

8. *Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards.*

   Response: The applicant acknowledges that all discharges related to project construction and operation must comply with the State's Water Quality Standards.

9. *Noncompliance with water quality requirements contained in HAR, Chapter 11-54 and/or permitting requirements specified in HAR, Chapter 11-55 may be subject to penalties of $25,000 per day per violation.*

   Response: The applicant acknowledges that compliance with water quality and permitting requirements are subject to Chapter 11-54 and 11-55, HAR.

APR 28 2011

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

STATE OF HAWAII
DEPARTMENT OF HEALTH
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

April 27, 2011

Mr. Mich Hirano, AICP
Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Subject: **Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK: (2) 3-8-046:032, Wailuku, Maui, Hawaii**

Thank you for the opportunity to review this project. We have the following comments to offer:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage maybe required for this project. The Clean Water Branch should be contacted at 808 586-4309.

2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control." A noise permit may be required and should be obtained before the commencement of work.

It is strongly recommended that the Standard Comments found at the Department's website: http://hawaii.gov/health/environmental/env-planning/landuse/landuse.html be reviewed, and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230 or E-mail me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski

Patti Kitkowski
District Environmental Health Program Chief

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Patti Kitkowski, District Environmental
Health Program Chief
Department of Health
State of Hawaii
54 High Street
Wailuku, Hawaii 96793-2102

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Ms. Kitkowski:

Thank you for your letter of April 27, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

1. We acknowledge that the applicant may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for this project. Coordination will be carried out with the Department of Health prior to project construction to determine the NPDES permit requirements.

2. The DWS will comply with Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control." As applicable, a noise permit will be obtained before the commencement of construction.

3. We have reviewed the standard comments found on the Department of Health's website. We are enclosing a list of applicable comments as well as the applicant's response to each. See **Exhibit "A"**.

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

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
Enclosure
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\DOH Maui EC Res_ltr.doc

EXHIBIT A

Environmental Planning Office

1. *Identify the waterbody type and class, as defined in Hawaii Administrative Rules Chapter 11-54 (http://www.state.hi.us/health/about/rules/11-54.pdf), of all potentially affected water bodies.*

   Response: There are no streams or wetlands on the project site. The project site is located over 1.5 miles from the Pacific Ocean.

2. *Identify any existing National Pollutant Discharge Elimination System (NPDES) permits and related connection permits (issued by permittees) that will govern the management of water that runs off or is discharged from the proposed project site or facility. Please include NPDES and other permit numbers; names of permittees, permitted facilities, and receiving waters (including waterbody type and class as in 1. above); diagrams showing drainage/discharge pathways and outfall locations; and note any permit conditions that may specifically apply to the proposed project*

   Response: There are no existing NPDES permits or related connection permits governing water quality management at the project site.

3. *Identify any planning documents, groups, and projects that include specific prescriptions for water quality management at the proposed project site and in the potentially affected waterbodies. Please note those prescriptions that may specifically apply to the proposed project.*

   Response: There are no existing water quality actions being undertaken at the project site.

4. *Identify all potentially affected water bodies that appear on the current List of Impaired Waters in Hawaii Prepared under Clean Water Act.*

   Response: There are no potentially affected water bodies within the project area that appear on the current list of Impaired Waters.

5. *We suggest that each submittal identify and analyze potential project impacts at a watershed scale by considering the potential contribution of the proposed project to cumulative, multi-project watershed effects on hydrology, water quality, and aquatic and riparian ecosystems. We also suggest that each submittal broadly evaluate project alternatives by identifying more than one engineering solution for proposed projects. In particular, we suggest the consideration of*

"alternative," "soft," and "green" engineering solutions for channel modifications that would provide a more environmentally friendly and aesthetically pleasing channel environment and minimize the destruction of natural landscapes.

Response: With implementation of BMPs during construction of the proposed 2.0 MG water tank, the proposed project is not expected to significantly adversely impact hydrology, water quality or aquatic and riparian ecosystems in the vicinity of the project site. There are no channel modifications proposed as part of the project.

Hazard Evaluation and Emergency Response Office

6. *A Phase I Environmental Site Assessment (ESA) should be conducted for developments or redevelopments. If the investigation shows that a release of petroleum, hazardous substance, pollutants or contaminants occurred at the site, the site should be properly characterized through an approved Hawaii State Department of Health (DOH)/Hazard Evaluation and Emergency Response Office (HEER) soil and or groundwater sampling plan. If the site is found to be contaminated, then all removal and remedial actions to clean up hazardous substance or oil releases by past and present owners/tenants must comply with chapter 128D, Environmental Response Law, HRS, and Title 11, Chapter 451, HAR, State Contingency Plan.*

   Response: The proposed 2.0 MG water tank will be located on the site of a former 2.0 MG water tank which was demolished due to structural failure. As such an ESA was not prepared.

Clean Air Branch

7. *A significant potential for fugitive dust emissions exists during all phases of construction and operations. Proposed activities that occur in proximity to existing residences, businesses, public areas or thoroughfares, exacerbate potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. The plan, which does not require DOH approval, would help with recognizing and minimizing the dust problems from the proposed project.*

   Activities must comply with the provisions of Hawaii Administrative Rules, § 11-60-1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance problems.

The contractor should provide adequate measures to control the fugitive dust from the road areas and during the various phases of construction. Examples of measures that can be implemented to control dust include, but are not limited to, the following:

a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
b) Providing an adequate water source at the site prior to start-up of construction activities;
c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
d) Minimizing dust from shoulders and access roads;
e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Controlling dust from debris being hauled away from the project site.

Response: Best Management Practices will be implemented to minimize the potential for dust-related impacts from the construction of the proposed 2.0 MG water tank. Project-related activities will comply with applicable provisions of Section 11-60-1.33, HAR.

Clean Water Branch

The applicant will respond separately to the Clean Water Branch's comments received in a letter dated April 21, 2011.

Safe Drinking Water Branch

8. *Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, titled Rules Relating to Potable Water Systems.*

Response: The proposed project will comply with Rules Relating to Potable Water Systems, HAR, Title 11, Chapter 20.

9. *All new public water systems are required to demonstrate and meet minimum capacity requirements prior to their establishment. This requirement involves demonstration that the system will have satisfactory technical, managerial and financial capacity to enable the system to comply with safe drinking water standards and requirements.*

Response: The proposed project is not a new public water system. Rather, it is intended to provide additional storage capacity for an existing water system.

10. *Projects that propose development of new sources of potable water serving or proposed to serve a public water system must comply with the terms of Section 11-20-29 of Chapter 20. This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.*

Response: The proposed project does not propose the development of a new source of potable water.

11. *The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the state of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.*

Response: The proposed project does not propose the development of a new source of potable water.

12. *All sources of public water systems must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water.*

Response: The proposed project does not propose the development of a new source of potable water. Therefore, it is not subject to a source water assessment and there is no source water protection area delineated for storage facilities.

13. *Projects proposing to develop new public water systems or proposing substantial modifications to existing public water systems must receive approval by the Director of Health prior to construction of the proposed system or modification. These projects include treatment, storage and distribution systems of public water systems. The approval authority for projects owned and operated by a*

County Board or Department of Water or Water Supply has been delegated to them.

Response: The proposed project does not involve the development of a new public water system or the substantial modification of an existing public water system. The project is limited to the construction of an additional 2.0 MG water tank and related improvements on a site that is currently used for water storage infrastructure.

14. *All public water systems must be operated by certified distribution system and water treatment plant operators as defined by Hawaii Administrative Rules, Title 11, Chapter 11-25 titled; Rules Pertaining to Certification of Public Water System Operators.*

Response: The proposed 2.0 MG water tank is part of the Central Maui Water System, operated by the County of Maui, Department of Water Supply.

15. *All projects which propose the use of dual water systems or the use of a non-potable water system in proximity to an existing potable water system to meet irrigation or other needs must be carefully designed and operated to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the potable system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the potable water supply. In addition backflow devices must be tested periodically to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent the inadvertent consumption on non-potable water. Compliance with Hawaii Administrative Rules, Title 11, Chapter 11-21 titled; Cross-Connection and Backflow Control is also required.*

Response: The proposed project does not propose the use of dual water systems or the use of a non-potable water system in proximity to an existing water system.

16. *All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai`i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.*

Response: The proposed project is located within the source water protection area of Maui Lani Wells. However, the project is not considered a

potentially contaminating activity as identified in the Maui Hawaii Source Water Assessment Plan.

Solid and Hazardous Waste Branch

17. *The state regulations for hazardous waste are in Chapters 11-260 to 11- 280, Hawaii Administrative Rules (HAR). These rules apply to the identification, handling, transportation, storage and disposal of regulated hazardous waste. Generators, transporters and treatment, storage and disposal facilities of hazardous waste must adhere to these requirements or be subject to fines and penalties.*

    Response: The proposed project will comply with applicable requirements of HAR, Chapters 11-260 to 11-280.

18. *Generators of solid waste are required to ensure that their wastes are properly delivered to permitted solid waste management facilities. Managers of construction and demolition projects should require their waste contractors to submit disposal receipts and invoices to ensure proper disposal of wastes.*

    Response: Construction waste for the project will be properly disposed of at an approved construction waste disposal facility. Following project construction, the proposed 2.0 MG water tank will generate minimal solid waste, if any.

19. *HRS Chapter 342G encourages the reduction of waste generation, reuse of discarded materials, and the recycling of solid waste. Businesses, property managers and developers, and government entities are highly encouraged to develop solid waste management plans to ensure proper handling of wastes. Solid waste management plans should also seek to maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.*

    Response: The proposed project will generate minimal solid waste, if any.

Noise, Radiation, and Indoor Air Quality Branch

20. *Project activities shall comply with Chapter 11-39 (Air Conditioning and Ventilating), Chapter 11-45 (Radiation Control) and 11-46 (Community Noise Control) of the Administrative Rules of the Department of Health.*

    Response: The proposed project will comply with applicable requirements of HAR, Chapter 11-46, community noise control. HAR, Chapter 11-

39 (Air Conditioning and Ventilating) and Chapter 11-45 (Radiation Control) do not apply to the proposed project.

MAY 13 2011

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 11, 2011

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

Attention: Mr. Mich Hirano, AICP, Principal

Ladies and Gentlemen:

Subject: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank

Please pardon our lateness. Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Division of Aquatic Resources, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0414. Thank you.

Sincerely,

Charlene Unoki
Assistant Administrator

25

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

2011 MAY 10 A 10:07

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

April 13, 2011

DAR 3771

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
~~Div. of Boating & Ocean Recreation~~
x Engineering Division
Div. of Forestry & Wildlife
Div. of State Parks
x Commission on Water Resource Management
Office of Conservation & Coastal Lands
Land Division –
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator
SUBJECT: Early Consultation for Draft Environmental Assessment for the Proposed Kahului Water Tank
LOCATION: Island of Maui
APPLICANT: Munekiyo & Hiraga, Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by April 26, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

RECEIVED MAY 02 2011

( ) We have no objections.
( ) We have no comments.
(X) Comments are attached.

Signed:
Date: 5/4/11

DIVISION OF AQUATIC RESOURCES - MAUI
DEPARTMENT OF LAND & NATURAL RESOURCES
130 Mahalani Street
Wailuku, Hawai'i 96793
May 4, 2011

To: Alton Miyasaka, Aquatic Biologist

From: Skippy Hau, Aquatic Biologist

Subject: Early Consultation for Draft EA for the Proposed Kahului Water Tank (DAR 3771)
(Due April 26, 2011 Charlene Unoki, Land)

Will the 2 MG water tank replace the present 1.5 MG tank?

Or will both tanks be providing water for Kahului?

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Assistant Administrator
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Sir or Madame:

Thank you for your department's letter of May 11, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

In response to the Division of Aquatic Resources' comments, we note that the proposed 2.0 MG Water Tank will supplement the existing 1.5 MG tank at the site. Both tanks will address water storage needs for residents and business in Wailuku and Kahului.

We acknowledge that other than comments from the Division of Aquatic Resources, the Department of Land and Natural Resources has no other comments to offer on the proposed project.

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

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\DLNREC Res_ltr.doc

PHONE (808) 594-1888 FAX (808) 594-1865

MAY 06 2011

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

HRD11/5677

April 26, 2011

Mich Hirano, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai'i 96793

Re: Pre-Draft Environmental Assessment Consultation
Water Tank Construction
Kahului, island of Maui

Aloha e Mich Hirano,

The Office of Hawaiian Affairs (OHA) is in receipt of your April 7, 2011 letter requesting comments ahead of a draft environmental assessment to support the construction of a new 2 million gallon water tank (project) in Kahului proposed by the County of Maui-Department of Water Supply. It is our understanding the project will be constructed within the "footprint" of a water tank which was demolished in the 1980's due to structural failures. An existing 1.5 million gallon tank is situated on the 1.58 acre parcel where the project will be constructed.

OHA has no substantive comments at this time. We look forward to reviewing the DEA and providing additional comments at that time. Please send one CD and one hardcopy of the DEA to OHA attn: Compliance Monitoring Program when it becomes available. Should you have any questions or concerns, please contact Keola Lindsey at 594-0244 or keolal@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Chief Executive Officer

C: OHA- Maui COC

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

GARY HOOSER
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET, SUITE 702
HONOLULU, HI 96813

April 15, 2011

Munekiyo & Hiraga, Inc.
Attn: Mich Hirano, AICP, Principal
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Subject: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK 2-3-8-46:32, Wailuku, Maui

Thank you for the early consultation request on the subject project. The County of Maui, Department of Water Supply, plans to design and construct a new 2 million gallon water tank at the Kahului Water Tank site on Waiinu Road in Wailuku.

Please visit the Office of Environmental Quality Control's website to review checklists, sample templates, our distribution list, deadline calendar, and publication form. Please go to: http://oeqc.doh.hawaii.gov/Shared%20Documents/Forms/AllItems.aspx and click on the link "Environmental_Assessment_PrepKit" for the latest in submission procedures. In an on-going effort to reduce the use of paper, put the publication form on the compact disk along with a pdf copy of the document to be published in our Environmental Notice. We still need one hardcopy of the document for our files.

If you have any questions, please call Rebecca Alakai at 586-4185.

Sincerely,

Rebecca Alakai

Rebecca Alakai
Senior Planner

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

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

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Hooser:

Thank you for your department's letter of April 15, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We thank you for the information regarding Environmental Assessment (EA) submission procedures. We will consult your website to prior to the submittal of the Draft EA for publication to verify the submittal requirements.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\OEQC EC Res_ltr.doc

JUN 0 2 2011

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
JAN S. GOUVEIA
RANDY GRUNE
JADINE URASAKI

IN REPLY REFER TO:

STP 8.0443

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

May 24, 2011

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Subject: Kahului Water Tank
Pre-Consultation for Draft Environmental Assessment (DEA)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project.

DOT understands the Maui County Department of Water Supply proposes to construct a new 2 million gallon (MG) concrete water tank adjacent to an existing 1.5 MG, steel water tank on Waiinu Road. Access to the project will be from Waiinu Road.

DOT does not anticipate any significant adverse impacts to the State transportation facilities. However, the applicant is required to obtain a permit from DOT Highways Division, Maui District Office to transport oversize and overweight equipment/loads within the State highways facilities.

DOT appreciates the opportunity to provide comments. If there are any questions, including the need to meet with Highways Division staff, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Glenn M. Okimoto, Ph.D, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Okimoto:

Thank you for your letter of May 24, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that the State Department of Transportation does not anticipate any significant adverse impacts to the State transportation facilities.

We further acknowledge that the applicant is required to obtain a permit from the Department of Transportation Highways Division, Maui District Office to transport oversize and overweight equipment or loads within the State highway facilities. DWS will coordinate with the Maui District Office to obtain permits prior to construction, as applicable.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\SDOT EC Res_ltr.doc

APR 25 2011

ALAN M. ARAKAWA
Mayor

TEENA M. RASMUSSEN
Economic Development Coordinator

OFFICE OF ECONOMIC DEVELOPMENT
COUNTY OF MAUI
2200 MAIN STREET, SUITE 305, WAILUKU, MAUI, HAWAII 96793, USA
Telephone: (808) 270-7710 • Facsimile: (808) 270-7995 • Email: economic.development@mauicounty.gov

April 20, 2011

Munekiyo & Hiraga, Inc.
305 High St., Ste. 104
Wailuku, HI 96793

Subject: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK No. (2) 3-8-046:032, Wailuku, Maui, Hawaii

Dear Mr. Hirano,

I have reviewed this proposal and we do not have any objections.

We see this project as being very important. This area is seeing lots of development, and is growing quickly. This will enhance the infrastructure that is needed to support this growth.

Sincerely,

Teena M. Rasmussen

Teena M. Rasmussen
Coordinator
Maui County Office of Economic Development

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Teena M. Rasmussen, Coordinator
Office of Economic Development
County of Maui
2200 Main Street, Suite 305
Wailuku, Hawaii 96793

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Ms. Rasmussen:

Thank you for your letter of April 20, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that you do not have any objections to the proposed project.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\OED EC Res_lt.doc

JUN 03 2011

ALAN M. ARAKAWA
Mayor

KYLE K. GINOZA, P.E.
Director

MICHAEL M. MIYAMOTO
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

June 1, 2011

Mr. Mich Hirano
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

SUBJECT: KAHULUI 2 MG WATER TANK
EARLY CONSULTATION
TMK 3-8-046:032, WAILUKU

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. None.

2. Wastewater Reclamation Division (WWRD) comments:

   a. None.

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,

KYLE K. GINOZA, P.E.
Director of Environmental Management

APR 28 2011

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
HOUSING DIVISION
COUNTY OF MAUI

ALAN M. ARAKAWA
Mayor
JO-ANN T. RIDAO
Director
JAN SHISHIDO
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

April 15, 2011

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street
Wailuku, HI 96793

Dear Mr. Hirano:

**Subject: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank located in Wailuku, Maui, Hawaii.
TMK: (2) 3-8-046:032**

The Housing Department has reviewed the request for Early Consultation for the above subject project. Based on our review, we have determined that the subject project is not subject to Chapter 2.96, Maui County Code. At the present time, the Department has no additional comments to offer.

Please call Mr. Buddy Almeida of our Housing Division at 270-5746 if you have any questions.

Sincerely,

Wayde T. Oshiro

WAYDE T. OSHIRO
Housing Administrator

cc: Director of Housing and Human Concerns

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Wayde T. Oshiro, Housing Administrator
Department of Housing and Human Concerns
County of Maui
35 Lunalilio Street, Suite 102
Wailuku, Hawaii 96793

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Oshiro:

Thank you for your letter of April 15, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that the proposed project is not subject to Chapter 2.96, Maui County Code.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
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ALAN M. ARAKAWA
Mayor

MAY 05 2011

GLENN T. CORREA
Director

PATRICK T. MATSUI
Deputy Director

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

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

April 28, 2011

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Hirano:

SUBJECT: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK: (2) 3-8-046:032, Wailuku, Maui, Hawaii

Thank you for the opportunity to review and comment on the subject project. The Department of Parks & Recreation has no comments at this time, and looks forward to reviewing the Environmental Assessment when it is available.

Please feel free to contact me or Robert Halvorson, Chief of Planning and Development, TA, at 270-7931, should you have any questions.

Sincerely,

GLENN T. CORREA
Director of Parks & Recreation

c: Robert Halvorson, Chief of Planning and Development, TA

GTC:RH:ca

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director

JAN 2 6 2012

COUNTY OF MAUI

DEPARTMENT OF PLANNING

January 25, 2012

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

SUBJECT: COMMENTS ON REQUEST FOR EARLY CONSULTATIN DURING PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE PROPROSED KAHULUI WATER TANK, LOCATED AT WAILUKU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-8-046:032 (RFC 2011/0055)

The Department of Planning (Department) is in receipt of your letter, dated April 7, 2011, requesting comments on Department of Water Supply plans to design and construct a new two (2) million gallon water tank at the Kahului Water Tank site on Waiinu Road in Wailuku. The Department wishes to apologize for the long delay in responding to your request. The new tank will be located on property that once contained a one and one half (1.5) million gallon tank. The proposed tank will serve Central Maui residents and businesses as part of continuing upgrades to the Central Maui Water System.

According to the Special Management Area (SMA) maps on file with the Department, the property is located within the SMA. As such, a SMA Permit will be required.

Thank you for the opportunity to comment. Please include the Department on the distribution list for the draft. Should you require further clarification, please contact Staff Planner Livit Callentine at livit.callentine@mauicounty.gov or at (808) 270-5537.

Sincerely,

CLAYTON I. YOSHIDA, AICP
Program Planning Administrator

for WILLIAM SPENCE
Planning Director

xc: Clayton I. Yoshida, AICP, Planning Program Administrator (PDF)
Livit U. Callentine, AICP, Staff Planner (PDF)
RFC File
General File

WRS:CIY:LUC:rm
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ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director

FEB 10 2012

COUNTY OF MAUI

DEPARTMENT OF PLANNING

February 9, 2012

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Hirano:

SUBJECT: AMENDED COMMENTS ON REQUEST FOR EARLY CONSULTATION DURING PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE PROPROSED KAHULUI WATER TANK, LOCATED AT WAILUKU, MAUI, HAWAII; TMK: (2) 3-8-046:032 (RFC 2011/0055)

In our January 25, 2012 letter, the Department of Planning (Department) identified the subject parcel as being located within the Special Management Area (SMA). However, according to SMA maps on file with the Department, the property is not located within the SMA. As such, a SMA Permit will not be required.

Thank you for the opportunity to amend our comments. Please include the Department on the distribution list for the draft. Should you require further clarification, please contact Staff Planner Livit Callentine at livit.callentine@mauicounty.gov or at (808) 270-5537.

Sincerely,

CLAYTON I. YOSHIDA, AICP
Program Planning Administrator

for WILLIAM SPENCE
Planning Director

xc: Livit U. Callentine, AICP, Staff Planner (PDF)
RFC File
General File
WRS:CIY:LUC:rm
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MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

William Spence, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawaii 96793

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Spence:

Thank you for your letters of January 25, 2012 and February 9, 2012, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We note that the 1.5 million gallon (MG) water tank referenced in your letter is an existing tank that is currently on the project site. The proposed 2.0 MG water tank will be constructed adjacent to the existing 1.5 MG tank.

We acknowledge that the proposed project is not located within the Special Management Area (SMA) and a SMA Permit will not be required.

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

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
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MAY 02 2011

POLICE DEPARTMENT

COUNTY OF MAUI

ALAN M. ARAKAWA
MAYOR

OUR REFERENCE

YOUR REFERENCE

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

GARY A. YABUTA
CHIEF OF POLICE

CLAYTON N.Y.W. TOM
DEPUTY CHIEF OF POLICE

April 26, 2011

Mr. Mich Hirano, AICP
Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Hirano:

SUBJECT: Early Consultation Request for the Preparation of a D.E.A. for the Proposed Kahului Water Tank at TMK No. (2)3-8-046:032

This is in response to the request for comments on the above subject.

We have reviewed the information submitted for this project and have submitted our comments and/or recommendations. Thank you for giving us the opportunity to comment on this project.

Very truly yours,

ACD. Matsuura

Assistant Chief Danny Matsuura
for: Gary A. Yabuta
Chief of Police

c: William Spence, Planning Department

COPY

Chief/Comm Jos. 4/21/11 Comm - B-3 - forward to Request. A3

Terry, prepare resp mse

TO : GARY YABUTA, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

4/19/11

FROM : MARK VICKERS, SERGEANT, VISITOR ORIENTED POLICE

SUBJECT : RESPONSE TO REQUEST FOR COMMENTS REGARDING: PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KAHULUI WATER TANK

This communication is submitted as a response to a request for comments for a Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank received from by Mr. Mich HIRANO, AICP, Principal of Munekiyo & Hiranga, Inc regarding:

PROJECT	:	KAHULUI WATER TANK
TMK #	:	(2)3-8-046:032
CONSULTANT	:	Munekiyo & Hiraga, Inc.

RESPONSE:

In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian and vehicular movement.

The Project Site is located on TMK (2)3-8-046:032 in the vicinity of Sand Hills Estates, Historic Sand Hills and the Maui Memorial Park cemetery in Wailuku. This is a 1.58 acre flag lot accessed from Waiinu Road. Construction will occur within the confines of this flag lot which is owned by the County of Maui.

As ingress and egress to the Project Site is at the flag lot's intersection with Waiinu Road, concerns arise regarding the movement of vehicles from the Project Site to the public roadway. The tracking of debris and/or construction remnant material may pose a safety condition at this intersection for both vehicular and pedestrian traffic. It is suggested that procedures be put in place in order to minimize and mitigate this potential safety hazard. As the flow of traffic on Waiinu Road has the right of way, the impact this project has on traffic in the immediate vicinity is expected to be minimal.

No road, lane or sidewalk closures are expected during the course of this project.

CONCLUSION:

There are no objections to the progression of this project at this time, from the police standpoint, in regards to pedestrian and vehicular movement.

Respectfully Submitted,

Sgt. Mark MK Vickers 10046
Visitor Oriented Police
April 19, 2011 @ 1115 Hours

Agree with Sgt. Vickers' assessment.

A/Capt. 1512

4/19/11 1130

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Gary Yabuta, Chief
Police Department
County of Maui
55 Mahalani Street
Wailuku, Hawaii 96793

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Chief Yabuta:

Thank you for your letter of April 26, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge your concerns regarding the ingress and egress of vehicles from the project site to Waiinu Road. During the construction phase, DWS will implement Best Management Practices (BMP) to mitigate the potential for tracking of debris and/or construction remnant materials, which may pose a safety condition at the flag lot's intersection with Waiinu Road. DWS and the project's contractor will develop an appropriate traffic control plan to ensure the smooth and safe traffic operation along Waiinu Road. From a long-term perspective, the proposed project will not generate significant traffic volumes. The number of DWS personnel who would visit the project site for routine monitoring and/or service activities would be limited to approximately two (2) employees, two (2) times a month.

We concur that no road, lane, or sidewalk closures are expected during the course of the project.

Furthermore, we acknowledge that the Department has no objections to the progression of the project at this time in regards to pedestrian and vehicular movement.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
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MAY 02 2011

ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

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

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

April 27, 2011

Mr. Mich Hirano, A.I.C.P., Principal
MUNEKIYO & HIRAGA, INC.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Dear Mr. Hirano:

SUBJECT: EARLY CONSULTATION FOR PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KAHULUI WATER TANK; TMK: (2) 3-8-046:032

We reviewed your early consultation request and offer the following comment:

1. No inspections were done on Building Permit No. B2008/1989 for water tank repairs. Please contact Ernie Takitani at 270-7393 regarding inspections for this building permit.

Please call Rowena M. Dagdag-Andaya at 270-7845 if you have any questions regarding this letter.

Sincerely,

DAVID C. GOODE
Director of Public Works

DCG:RMDA:ls
xc: Highways Division
Engineering Division
S:\LUCA\CZM\prop_kahului_water_tank_ec_38046032_ls.wpd

51

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

David C. Goode, Director
Department of Public Works
County of Maui
200 South High Street, Room No. 434
Wailuku, Hawaii 96793

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Goode:

Thank you for your letter of April 27, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that inspections were not done on Building Permit No. B2008/1989 for water tank repairs. DWS will contact Mr. Ernie Takitani regarding inspections for this building permit.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
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305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhplanning.com · www.mhplanning.com

APR 21 2011

ALAN M. ARAKAWA
Mayor

JO ANNE JOHNSON WINER
Director
MARC I. TAKAMORI
Deputy Director
Telephone (808) 270-7511

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI
200 South High Street
Wailuku, Hawaii, USA 96793-2155

April 15, 2011

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

Subject: Proposed Kahului Water Tank

Dear Mr. Hirano,

Thank you for the opportunity to comment on this project. We have no comments to make at this time.

Please feel free to contact me if you have any questions.

Sincerely,

Jo Anne Johnson Winer
Director

MAY 0 2 2011

Director of Council Services
Ken Fukuoka

COUNTY COUNCIL
COUNTY OF MAUI
200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.mauicounty.gov/council

April 28, 2011

Munekiyo and Hiraga, Inc.
Attention: Mich Hirano, AICP, Principal
305 High Street, Suite 104
Wailuku, HI 96793

SUBJECT: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK No. (2) 3-8-046:032, Wailuku, Maui, HI

Dear Mr. Hirano:

Thank you for the opportunity to provide early consultation comments for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank at TMK No. (2) 3-8-046:032, Wailuku, Maui, HI.

After review of the information presented, I have no comments at this time.

Sincerely,

Joseph Pontanilla

JOSEPH PONTANILLA,
COUNCIL MEMBER

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

APR 18 2011

April 14, 2011

Mr. Mich Hirano, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Subject: Early Consultation Request for the Preparation of a Draft Environmental Assessment for the Proposed Kahului Water Tank
Wailuku, Maui Hawaii
Tax Map Key: (2) 3-8-046:032

Dear Mr. Hirano,

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

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

Should you have any questions or concerns, please call me at 871-2341.

Sincerely,

Kyle Tamori
Staff Engineer

55

MUNEKIYO HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

July 2, 2012

Kyle Tamori, Staff Engineer
Maui Electric Company, Ltd.
210 West Kamehameha Avenue
Kahului, Hawaii 96733

SUBJECT: Response to Early Consultation Regarding Proposed 2.0 MG Water Tank at the Existing Kahului Water Tank Site, TMK (2)3-8-046:032

Dear Mr. Tamori:

Thank you for your letter of April 14, 2011, providing comments on the proposed 2.0 MG Water Tank project. On behalf of the Department of Water Supply (DWS), we offer the following information in response to your comments.

We acknowledge that you do not have any objections to the proposed project at this time.

Thank you again for your participation in the Chapter 343, Hawaii Revised Statutes (HRS) review process. A copy of your letter will be included in the Draft Environmental Assessment. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Mich Hirano, AICP
Principal

MH:yp
cc: Myles Fujinaka, P.E., County of Maui, Department of Water Supply
K:\DATA\MauiLani\KahuluiWT\MECO EC Res_ltr.doc

X. REFERENCES

X. REFERENCES

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APPENDIX A.

Project Plans

Construction Plans for ...

2.0 MG KAHULUI TANK ADDITION

TAX MAP KEY: (2) 3-8-46 : 32

Wailuku, Maui, Hawaii

Prepared for . . .

MAUI LANI PARTNERS
WAILUKU, HAWAII

INDEX OF DRAWINGS:

Sheet Number	Description
1	Title Sheet
2	Schematic Phasing Plan
3	Site Plan
4	Grading Plan
5	Typical Roadway Sections; Pavement Restoration Details

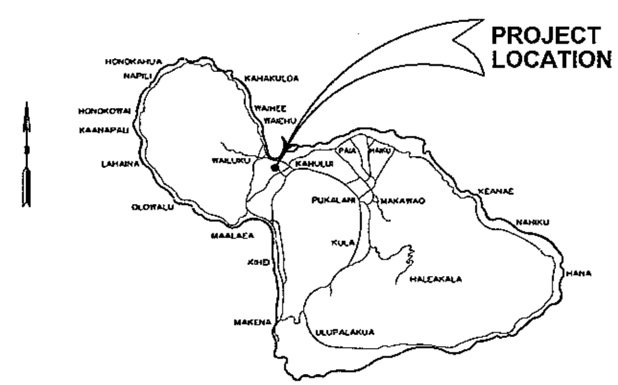
APPROVED BY:

DIRECTOR, DEPARTMENT OF PUBLIC WORKS — DATE
COUNTY OF MAUI
(Approval is limited to work within the County right-of-way)

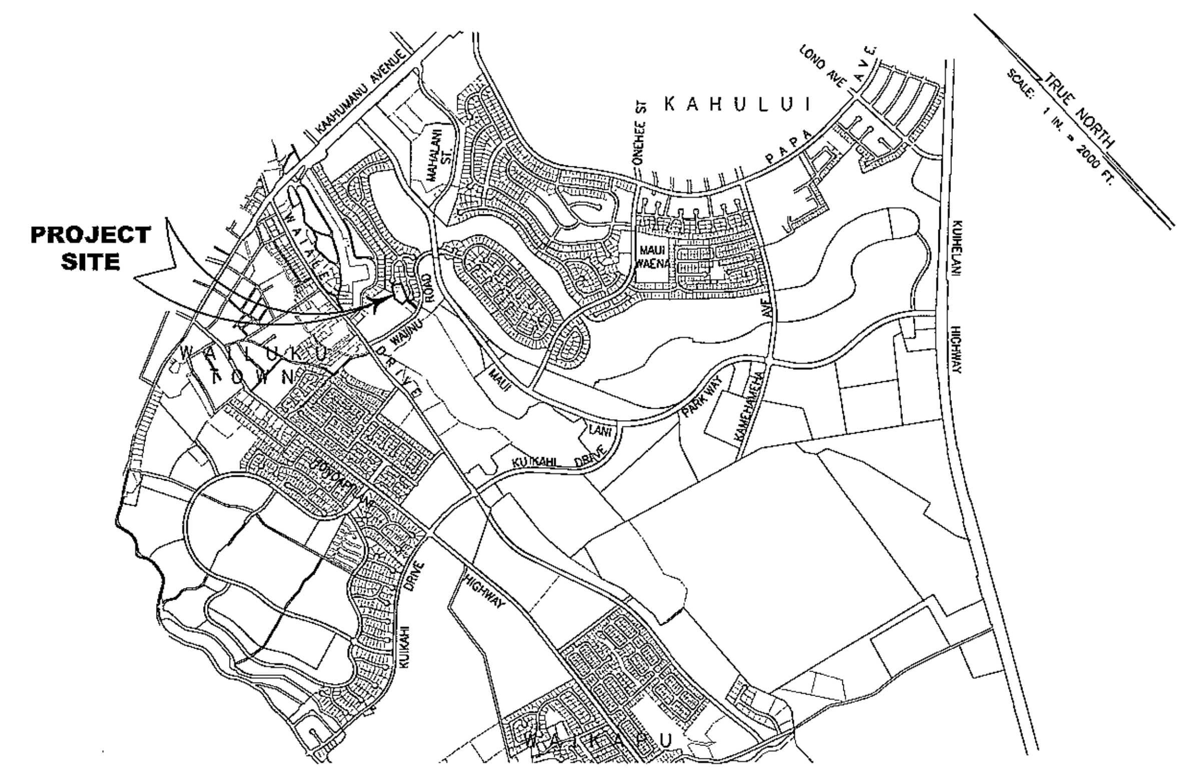
DIRECTOR, DEPARTMENT OF WATER SUPPLY — DATE
COUNTY OF MAUI
(Approval is limited to the Water System Improvements which will be dedicated to the Department of Water Supply)

Prepared by . . .

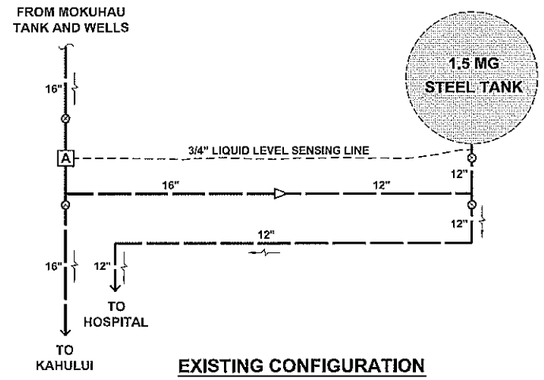
WARREN S. UNEMORI ENGINEERING, INC.
Civil & Structural Engineers - Land Surveyor
Wells Street Professional Center - Suite 403
2145 Wells Street -Wailuku, Maui, Hawaii 96793



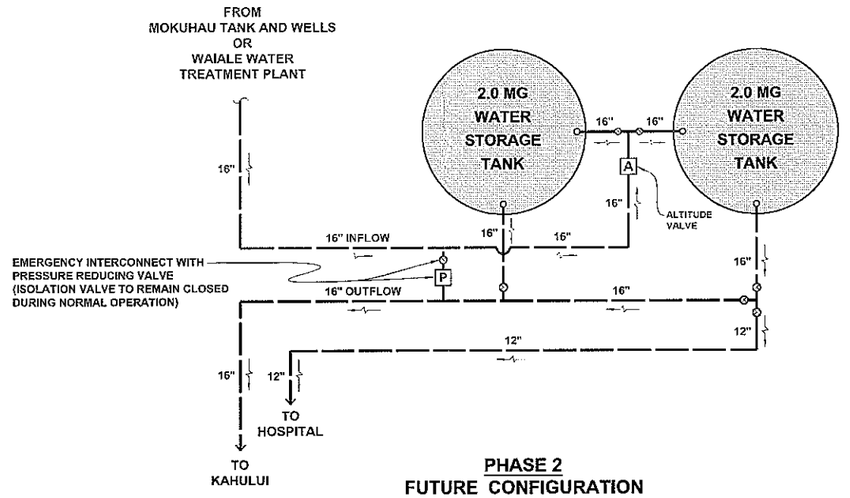
ISLAND OF MAUI
NOT TO SCALE



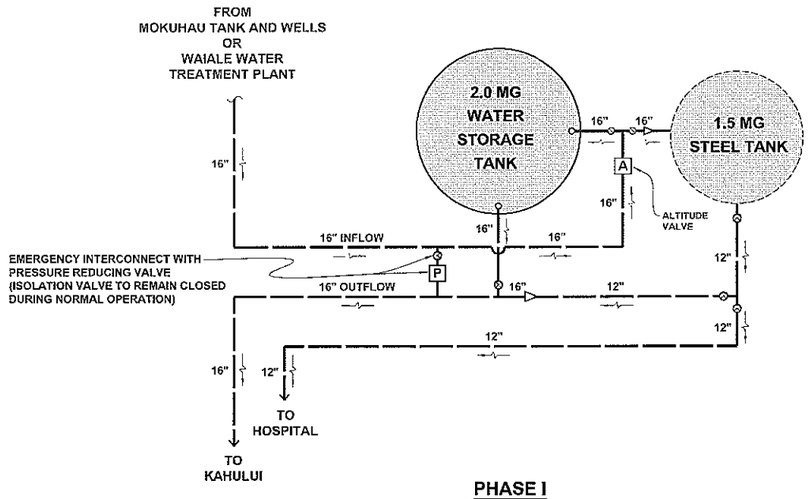
PROJECT VICINITY MAP
0 2000 4000 6000 8000
SCALE: 1 INCH = 2000 FEET



EXISTING CONFIGURATION



PHASE 2
FUTURE CONFIGURATION
(FINAL)



PHASE I
INTERIM CONFIGURATION
(THIS CONTRACT)

KAHULUI TANK PIPING SCHEMATIC PHASING PLAN

LETTER	DESCRIPTION	DATE
	Plan revised following DWS review	10/7/2010

DARREN T. UNEMORI LICENSED PROFESSIONAL ENGINEER NO. 7937-C HAWAII, U.S.A.

SIGNATURE DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION "AS DEFINED IN SECTION 16-115-2 OF THE HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, LAND SURVEYORS AND LANDSCAPE ARCHITECTS"

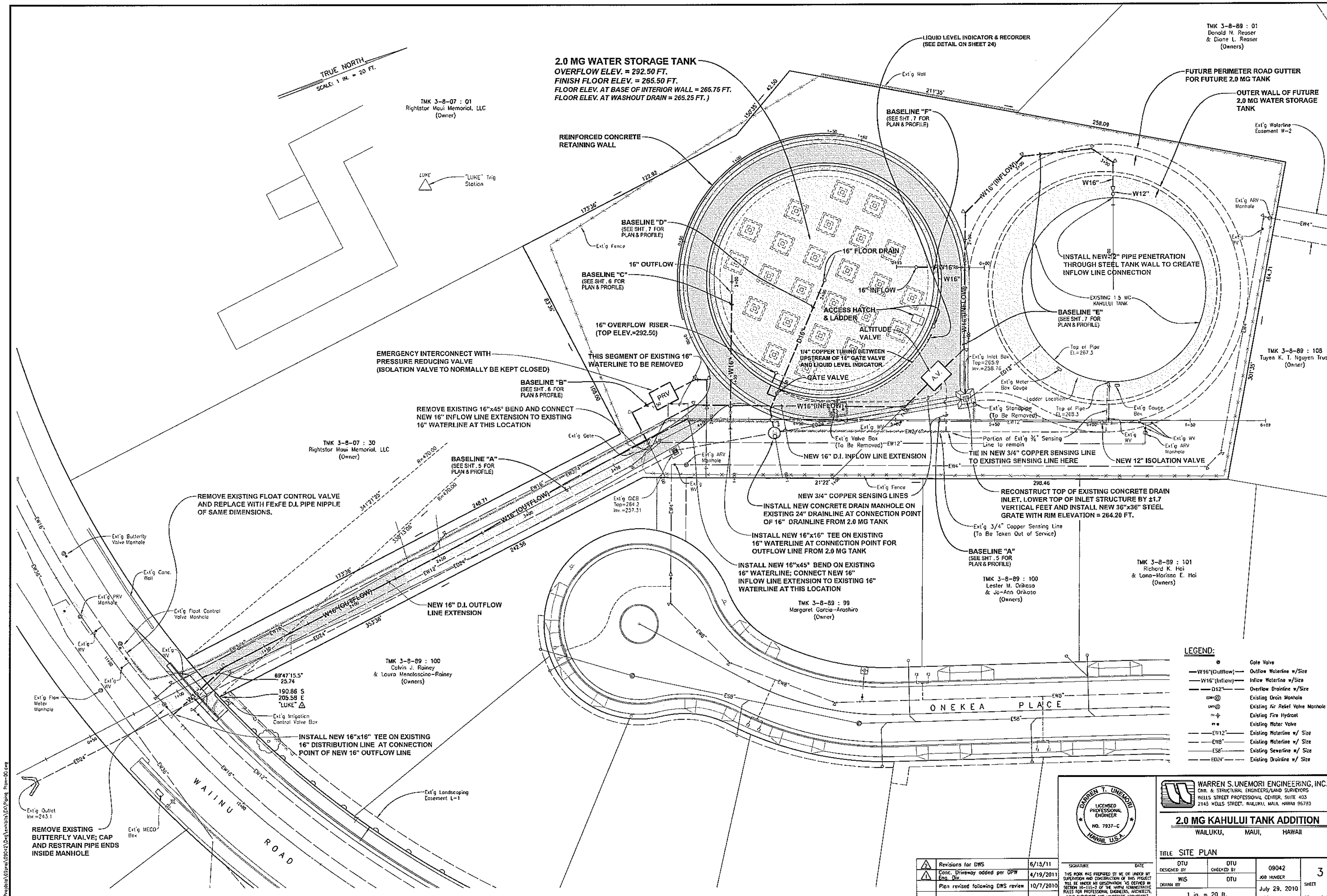
WARREN S. UNEMORI ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS/LAND SURVEYORS
WELLS STREET PROFESSIONAL CENTER, SUITE 403
2145 WELLS STREET, WAILUKU, MAUI, HAWAII 96793

2.0 MG KAHULUI TANK ADDITION
WAILUKU, MAUI, HAWAII

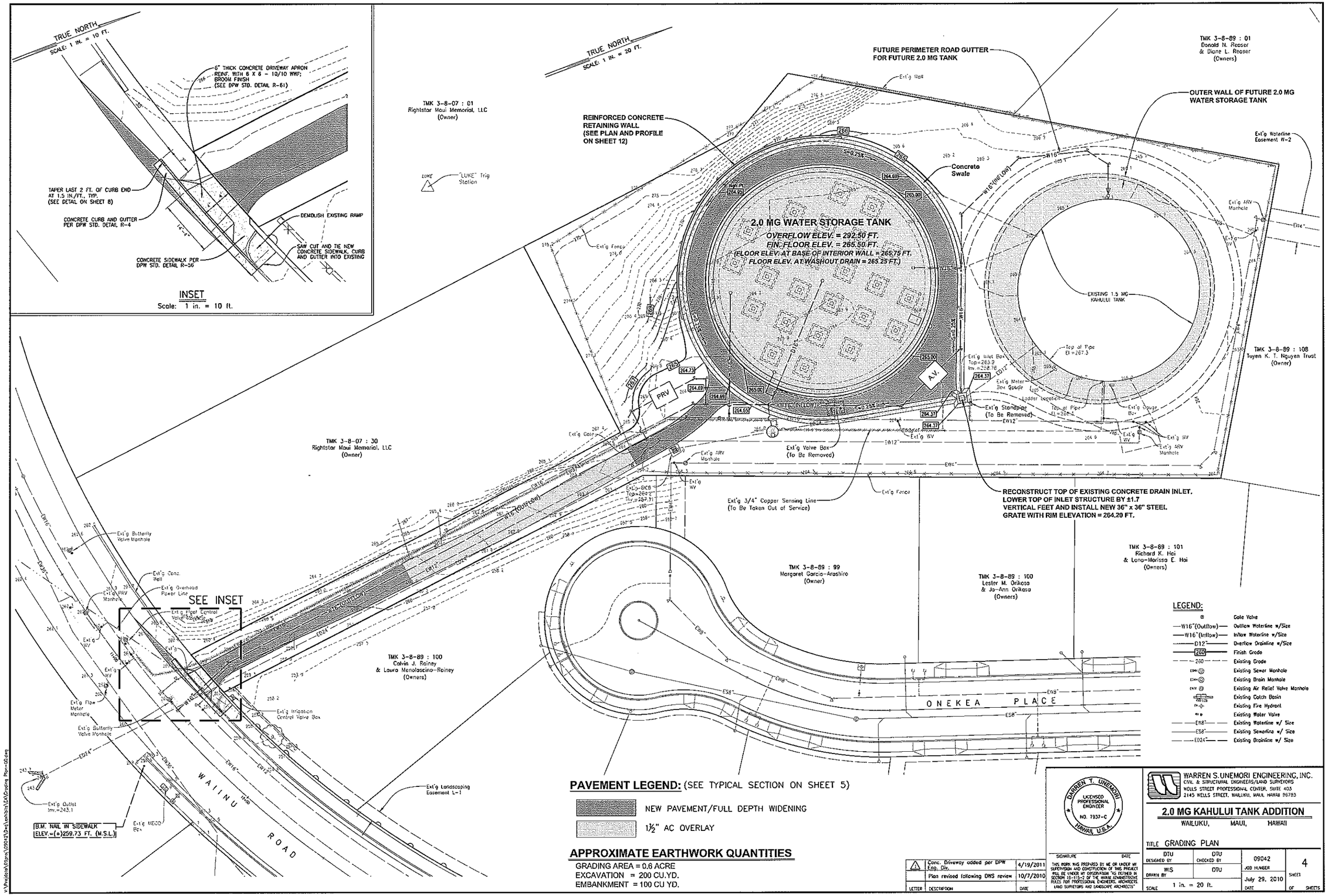
TITLE SCHEMATIC PHASING PLAN

DESIGNED BY: DTU	CHECKED BY: DTU	JOB NUMBER: 09042	SHEET: 2
DRAWN BY: WIS		DATE: July 29, 2010	OF SHEETS
SCALE: NOT TO SCALE			

Y:\Projects\09pro\09042\Dwg\exhibits\EA\Kahului-Tank-Piping-Schematic-00.dwg


TRUE NORTH
SCALE: 1 IN. = 20 FT.
2.0 MG WATER STORAGE TANK
OVERFLOW ELEV. = 292.50 FT.
FINISH FLOOR ELEV. = 265.50 FT.
FLOOR ELEV. AT BASE OF INTERIOR WALL = 265.75 FT.
FLOOR ELEV. AT WASHOUT DRAIN = 265.25 FT.)
LIQUID LEVEL INDICATOR & RECORDER (SEE DETAIL ON SHEET 24)
TMK 3-8-89 : 01 Donald N. Reaser & Diane L. Reaser (Owners)
FUTURE PERIMETER ROAD GUTTER FOR FUTURE 2.0 MG TANK
OUTER WALL OF FUTURE 2.0 MG WATER STORAGE TANK
TMK 3-8-07 : 01 Rightstar Maui Memorial, LLC (Owner)
REINFORCED CONCRETE RETAINING WALL
BASELINE "F" (SEE SHT. 7 FOR PLAN & PROFILE)
"LUKE" Trig Station
BASELINE "D" (SEE SHT. 7 FOR PLAN & PROFILE)
16" OUTFLOW
16" FLOOR DRAIN
BASELINE "C" (SEE SHT. 6 FOR PLAN & PROFILE)
16" INFLOW
ACCESS HATCH & LADDER
ALTITUDE VALVE
INSTALL NEW 12" PIPE PENETRATION THROUGH STEEL TANK WALL TO CREATE INFLOW LINE CONNECTION
EXISTING 1.5 MG KAHULUI TANK
BASELINE "E" (SEE SHT. 7 FOR PLAN & PROFILE)
16" OVERFLOW RISER (TOP ELEV.=292.50)
1/4" COPPER TUBING BETWEEN UPSTREAM OF 16" GATE VALVE AND LIQUID LEVEL INDICATOR
GATE VALVE
EMERGENCY INTERCONNECT WITH PRESSURE REDUCING VALVE (ISOLATION VALVE TO NORMALLY BE KEPT CLOSED)
THIS SEGMENT OF EXISTING 16" WATERLINE TO BE REMOVED
BASELINE "B" (SEE SHT. 6 FOR PLAN & PROFILE)
REMOVE EXISTING 16"x45° BEND AND CONNECT NEW 16" INFLOW LINE EXTENSION TO EXISTING 16" WATERLINE AT THIS LOCATION
TMK 3-8-89 : 108 Tuyen K. T. Nguyen Trust (Owner)
TMK 3-8-07 : 30 Rightstar Maui Memorial, LLC (Owner)
BASELINE "A" (SEE SHT. 5 FOR PLAN & PROFILE)
NEW 16" D.I. INFLOW LINE EXTENSION
TIE IN NEW 3/4" COPPER SENSING LINE TO EXISTING SENSING LINE HERE
NEW 12" ISOLATION VALVE
REMOVE EXISTING FLOAT CONTROL VALVE AND REPLACE WITH FExFE D.I. PIPE NIPPLE OF SAME DIMENSIONS.
NEW 3/4" COPPER SENSING LINES
INSTALL NEW CONCRETE DRAIN MANHOLE ON EXISTING 24" DRAINLINE AT CONNECTION POINT OF 16" DRAINLINE FROM 2.0 MG TANK
RECONSTRUCT TOP OF EXISTING CONCRETE DRAIN INLET. LOWER TOP OF INLET STRUCTURE BY ±1.7 VERTICAL FEET AND INSTALL NEW 36"x36" STEEL GRATE WITH RIM ELEVATION = 264.20 FT.
INSTALL NEW 16"x16" TEE ON EXISTING 16" WATERLINE AT CONNECTION POINT FOR OUTFLOW LINE FROM 2.0 MG TANK
INSTALL NEW 16"x45° BEND ON EXISTING 16" WATERLINE; CONNECT NEW 16" INFLOW LINE EXTENSION TO EXISTING 16" WATERLINE AT THIS LOCATION
BASELINE "A" (SEE SHT. 5 FOR PLAN & PROFILE)
TMK 3-8-89 : 101 Richard K. Hai & Lana-Marissa E. Hai (Owners)
TMK 3-8-89 : 100 Lester M. Orikasa & Jo-Ann Orikasa (Owners)
TMK 3-8-89 : 99 Margaret Garcia-Arashiro (Owner)
NEW 16" D.I. OUTFLOW LINE EXTENSION
TMK 3-8-89 : 100 Calvin J. Rainey & Laura Menolascino-Rainey (Owners)
190.86 S
205.58 E
"LUKE"
INSTALL NEW 16"x16" TEE ON EXISTING 16" DISTRIBUTION LINE AT CONNECTION POINT OF NEW 16" OUTFLOW LINE
ONEKEA PLACE
WAIINU ROAD
REMOVE EXISTING BUTTERFLY VALVE; CAP AND RESTRAIN PIPE ENDS INSIDE MANHOLE
LEGEND:
Gate Valve
Outflow Waterline w/Size
Inflow Waterline w/Size
Overflow Drainline w/Size
Existing Drain Manhole
Existing Air Relief Valve Manhole
Existing Fire Hydrant
Existing Water Valve
Existing Waterline w/ Size
Existing Waterline w/ Size
Existing Sewerline w/ Size
Existing Drainline w/ Size
WARREN S. UNEMORI ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS/LAND SURVEYORS
WELLS STREET PROFESSIONAL CENTER, SUITE 403
2145 WELLS STREET, WAILUKU, MAUI, HAWAII 96793
DARREN T. UNEMORI LICENSED PROFESSIONAL ENGINEER NO. 7937-C HAWAII, U.S.A.
2.0 MG KAHULUI TANK ADDITION
WAILUKU, MAUI, HAWAII
TITLE SITE PLAN
Revisions for DWS 6/15/11
Conc. Driveway added per DPW Eng. Div. 4/19/2011
Plan revised following DWS review 10/7/2010
LETTER DESCRIPTION DATE
DTU DESIGNED BY
DTU CHECKED BY
WIS DRAWN BY
DTU
09042 JOB NUMBER
SCALE 1 in. = 20 ft.
July 29, 2010 DATE
SHEET 3 OF SHEETS

INSET
Scale: 1 in. = 10 ft.



PAVEMENT LEGEND: (SEE TYPICAL SECTION ON SHEET 5)

NEW PAVEMENT/FULL DEPTH WIDENING

1½" AC OVERLAY

APPROXIMATE EARTHWORK QUANTITIES

GRADING AREA = 0.6 ACRE
EXCAVATION = 200 CU.YD.
EMBANKMENT = 100 CU YD.

LETTER	DESCRIPTION	DATE
1	Conc. Driveway added per DPW Eng. Div.	4/19/2011
	Plan revised following DWS review	10/7/2010

DARREN T. UNEMORI
LICENSED PROFESSIONAL ENGINEER
NO. 7937-C
HAWAII, U.S.A.

SIGNATURE DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION "AS DEFINED IN SECTION 16-115-2 OF THE HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, LAND SURVEYORS AND LANDSCAPE ARCHITECTS"

WARREN S. UNEMORI ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS/LAND SURVEYORS
WELLS STREET PROFESSIONAL CENTER, SUITE 403
2145 WELLS STREET, WAILUKU, MAUI, HAWAII 96793

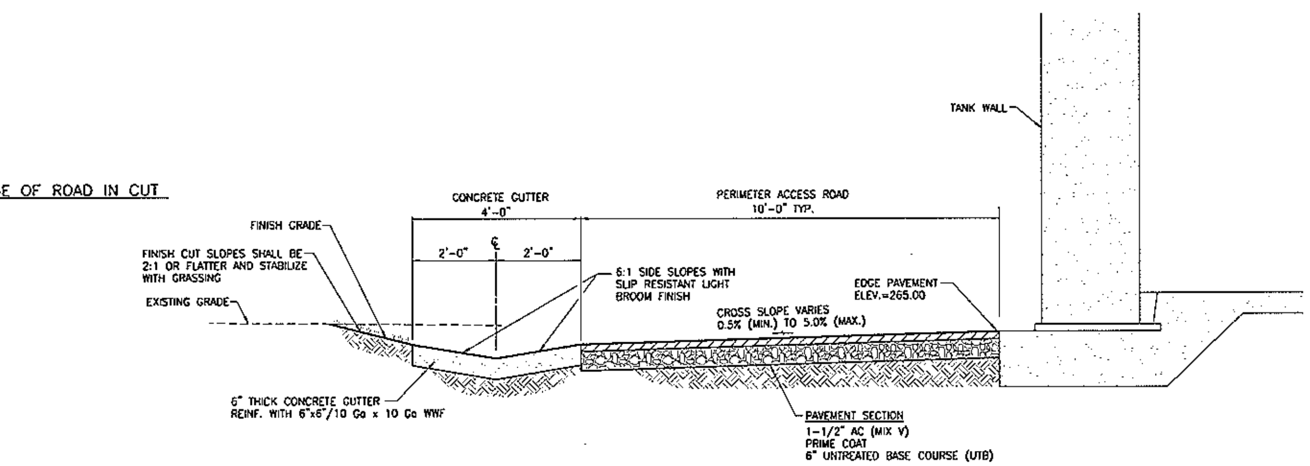
2.0 MG KAHULUI TANK ADDITION

WAILUKU, MAUI, HAWAII

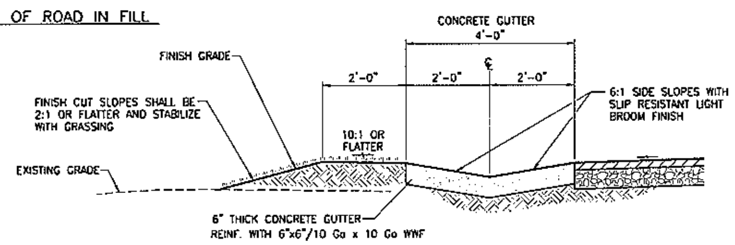
TITLE GRADING PLAN

DESIGNED BY	CHECKED BY	JOB NUMBER	SHEET
DTU	DTU	09042	4
DRAWN BY		DATE	OF SHEETS
WS	DTU	July 29, 2010	
SCALE	1 in. = 20 ft.		

OUTER EDGE OF ROAD IN CUT

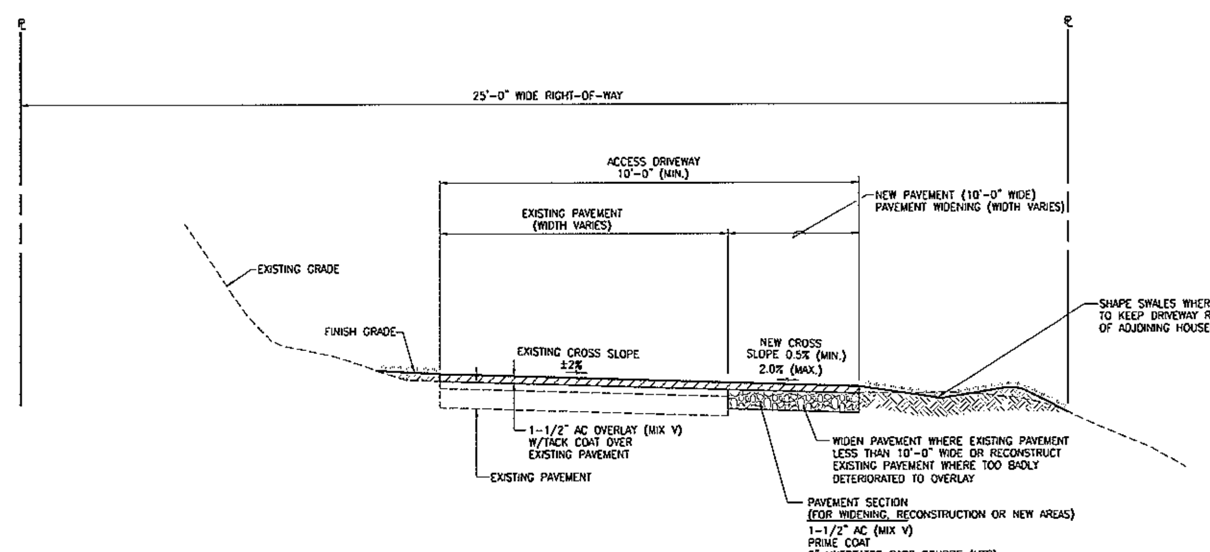


OUTER EDGE OF ROAD IN FILL



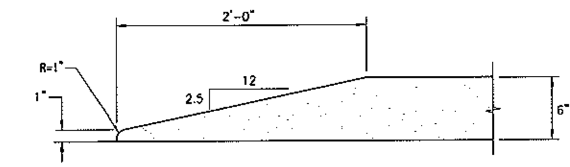
2.0 MG TANK PERIMETER ACCESS ROAD

SCALE: 1/2" = 1'-0"



TANK SITE ACCESS DRIVEWAY

SCALE: 1/2" = 1'-0"

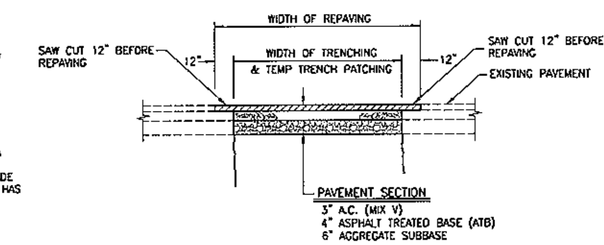


CURB END DETAIL

SCALE: 1 1/2" = 1'-0"

NOTES:

1. RESTORE PAVEMENT TO MATCH NEW PAVEMENT SECTION
2. MINIMUM THICKNESS OF PAVEMENT
   A.C. PAVEMENT = 3"
   ASPHALT TREATED BASE = 4"
   AGGREGATE SUBBASE = 6"
3. THE CONTRACTOR SHALL PROVIDE A TEMPORARY COLD MIX PATCH IF RESTORATION WORK CANNOT BE MADE WITHIN 24 HOURS AFTER BACKFILL HAS BEEN COMPLETED.

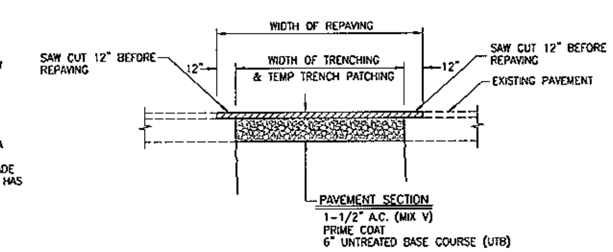


WAIINU ROAD PAVEMENT RESTORATION DETAIL

NOT TO SCALE

NOTES:

1. RESTORE PAVEMENT TO MATCH NEW PAVEMENT SECTION
2. MINIMUM THICKNESS OF PAVEMENT
   A.C. PAVEMENT = 1-1/2"
   UNTREATED BASE COURSE = 6"
3. THE CONTRACTOR SHALL PROVIDE A TEMPORARY COLD MIX PATCH IF RESTORATION WORK CANNOT BE MADE WITHIN 24 HOURS AFTER BACKFILL HAS BEEN COMPLETED.



TANK ACCESS DRIVEWAY PAVEMENT RESTORATION DETAIL

NOT TO SCALE

LETTER	DESCRIPTION	DATE

DARREN T. UNEMORI
LICENSED PROFESSIONAL ENGINEER
NO. 7937-C
HAWAII, U.S.A.

SIGNATURE DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION "AS DEFINED IN SECTION 16-115-2 OF THE HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, LAND SURVEYORS AND LANDSCAPE ARCHITECTS"

WARREN S. UNEMORI ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS/LAND SURVEYORS
WELLS STREET PROFESSIONAL CENTER, SUITE 403
2145 WELLS STREET, WAILUKU, MAUI, HAWAII 96793

2.0 MG KAHULUI TANK ADDITION

WAILUKU, MAUI, HAWAII

TITLE TYPICAL ROADWAY SECTIONS; PAVEMENT RESTORATION DETAILS

DTU DESIGNED BY	DTU CHECKED BY	09042 JOB NUMBER	5 SHEET
WSK DRAWN BY	DTU	July 29, 2010 DATE	OF SHEETS
SCALE 1/2" = 1'-0"			

APPENDIX B.

Preliminary Engineering Report

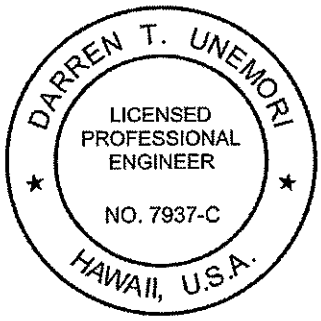
Established 1969

Preliminary Engineering Report

2.0 MG Kahului Storage Tank

Wailuku, Maui, Hawaii
TMK: (2) 3-8-46: 32

Prepared For: Maui Lani Partners
Wailuku, Hawaii



WARREN S. UNEMORI ENGINEERING, INC.
Civil and Structural Engineers – Land Surveyors
Wells Street Professional Center – Suite 403
2145 Wells Street
Wailuku, Maui, Hawaii 96793

Date: June 2011

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TABLE OF CONTENTS

Exhibits

Appendix – Hydrologic Calculations

Preliminary Engineering Report for
2.0 MG Kahului Storage Tank
at TMK: (2) 3-8-46: 32
Wailuku, Maui, Hawaii

This report summarizes the impact that construction of the proposed 2.0 million gallon (2.0 MG) capacity water storage reservoir is expected to have on drainage conditions and public infrastructure in the area.

Project Location and Description

The project site, which is also known as the *Kahului Tank site* by the Dept. of Water Supply, is a 1.6 acre County-owned land parcel located in Wailuku, on the island of Maui. It lies on the northerly side of Waiinu Road, and is adjoined to the west by the Maui Memorial Park cemetery and to the north and east by single-family houselots of the Sandhills Estates residential subdivision.

The proposed project involves construction of a new 2.0 MG concrete water storage tank on the vacant southern portion of the site next to the existing 1.5 MG steel water tank occupying the northern end. Construction of the new tank will be accompanied by several associated improvements including minor onsite grading, a new water main installed under the access driveway, underground piping and control valves for the new tank, and repaving the existing access driveway.

The Department of Water Supply currently has two large water storage tanks supplying potable water to Kahului: a 1960's era 1.5 MG capacity steel tank located at its Kahului Tank site, and a 3.0 MG capacity concrete tank constructed in the 1970's at its Waiale Tank site. The proposed new 2.0 MG concrete water tank will add its capacity to the existing 1.5 MG Kahului Tank and 3.0 MG Waiale Tank to increase the total volume of water that can be stored to supply the Kahului area with drinking water and fire protection on a daily basis and during emergencies. Construction of this new tank will also represent an important step in modernizing these vital components of the public water infrastructure, providing greater assurance that Kahului will have a water storage reservoir which can survive a major earthquake, hurricane or other natural disaster and remain in service in the aftermath of a catastrophe.

Topography and Soil Conditions

The Kahului Tank site was graded and leveled in the 1960's to create a single large building pad wide enough to house two water tanks. This building pad -- which is sloped at less than 1 percent and is very flat -- lies at an approximate elevation of 265 feet. The sloping remnant of a sand dune occupies the southwest corner of the site.

According to the *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, the project site is underlain by Puuone Sand (PUZE). Puuone Sand is characterized as having rapid permeability above the cemented layer and slow runoff with a moderate to severe wind erosion hazard.[1]

Flood and Tsunami Hazard

The Flood Insurance Rate Map[2] indicates that the Kahului Tank site lies entirely within Zone X, outside the 0.2% annual chance floodplain and beyond the tsunami inundation zone.

Drainage Conditions

Runoff generated on the Kahului Tank site sheet flows from its outer edges inward to two drain inlets located on the eastern side of the site (see Exhibit A). It then enters an underground drainline which runs under the access driveway, crosses Waiinu Road, and eventually discharges into a small gully on the south side of Waiinu Road that crosses an undeveloped land parcel belonging to Maui Memorial Park before draining into A&B's Waiale irrigation reservoir (see Exhibit B). Storm runoff collected in Waiale reservoir is then used by HC&S to irrigate its sugar cane fields in the Central Valley.

A small amount of runoff from the tank site's access driveway sheet flows off the project site and onto Waiinu Road. Prior to the construction of the Dunes at Maui Lani Golf Course, the runoff flowed from Waiinu Road to an area now occupied by the golf course. Currently, the access driveway's surface runoff flows eastward where it enters a curb inlet catch basin and is then taken to the golf course by Waiinu Road's underground storm drain system.

Two water tanks originally occupied the Kahului Tank site in the 1980s: a 2.0 MG concrete water tank that was constructed in the 1960's and a used 1.5 MG steel water tank which was relocated to the site in 1985 (see Exhibit C). The original 2.0 MG concrete water tank, which resided southern half of the project site, was demolished in the late 1980's by the Dept. of Water Supply after it had deteriorated too badly to remain in service. The 1.5 MG steel water tank is still in active service and is the sky-blue colored tank recognizable on the site today.

The new 2.0 MG concrete water tank will essentially be constructed in the footprint of the original 2.0 MG concrete water tank which occupied the site in the 1980s, so its construction is expected to return the site to the hydrologic condition which existed at that earlier time. When

[1] United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* August 1972, p. 117, Map 99.
[2] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Flood Insurance Rate Map, Maui County, Hawaii.* Community-Panel Number 150003 0391E. September 25, 2009.

two tanks stood on the project site in the 1980s, 2.7 cubic feet per second of surface runoff generated by the site from a 10-year, 1-hour storm was discharged into Waiale Reservoir. Another 0.3 cubic feet per second of surface runoff from the site's access driveway was conveyed to the area which is now occupied by the Dunes at Maui Lani Golf Course. During the 20-year interim period which followed the demolition of the original 2.0 MG concrete water tank, the runoff volume entering Waiale Reservoir from the project site diminished somewhat to 1.7 cubic feet per second while the access driveway's runoff into the golf course remained at 0.3 cubic feet per second. Once the new 2.0 MG concrete water tank is constructed, peak runoff is expected to revert back to the original 2.7 cubic feet per second rate which existed in the 1980s while the repaved access driveway will continue to discharge surface runoff to the golf course at a rate of 0.3 cubic feet per second. A summary of the surface runoff for each site condition is shown below:

Table 1 - Surface Runoff Summary for Kahului Tank Site

	Runoff Destination:	
Site Condition:	**Waiale Reservoir**	**Dunes at Maui Lani Golf Course**
Circa 1985	2.7 cfs.	0.3 cfs.
Interim (Present)	1.7 cfs.	0.3 cfs.
After Construction of New 2.0 MG Concrete Water Tank	2.7 cfs.	0.3 cfs.

The existing drainage pattern will remain essentially unchanged as runoff from the project site will continue to drain to Waiale Reservoir and the Dunes at Maui Lani Golf Course as it has historically done (see Exhibit D).

Vehicular Access

The Kahului Tank site is a secure, unmanned facility which operates automatically and is remotely monitored by the Department of Water Supply. The existing paved driveway on Waiinu Road will continue to serve as the sole means of access to the tank site. Access to the tank site will be infrequent and essentially limited to maintenance visits by Dept. of Water Supply personnel; consequently, the presence of a new 2.0 MG concrete water tank is not expected to generate additional traffic.

Public Utilities and Services

The new 2.0 MG concrete water tank will be part of a secure, unmanned facility operated by and accessible only to Dept. of Water Supply personnel which will not include a restroom or habitable buildings. Consequently, the new 2.0 MG concrete water tank will place no additional demand on public utilities such as sewer, electrical power, telephone or cable television, or public services such as solid waste disposal.[3]

Conclusion

Construction of the proposed 2.0 MG concrete water tank at the Dept. of Water Supply's Kahului Tank site is an important addition to the public water system infrastructure which should not adversely affect drainage conditions in the area nor place an additional burden on public infrastructure.

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[3]The radio based telemetry equipment used by the Dept. of Water Supply for remote monitoring is solar powered.

EXHIBITS

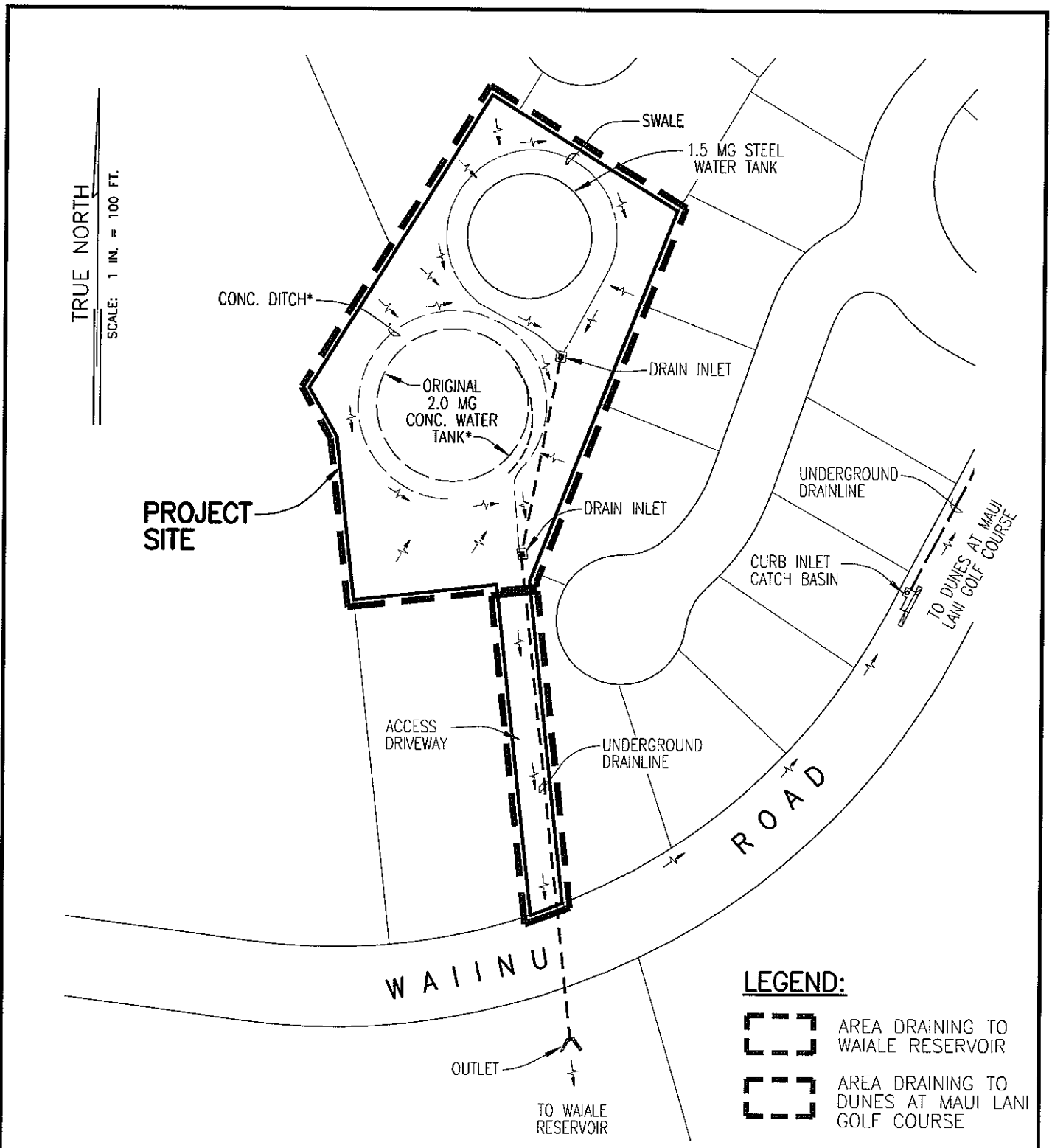


EXHIBIT "A"
KAHULUI TANK SITE DRAINAGE PATTERN
(1985 - PRESENT)

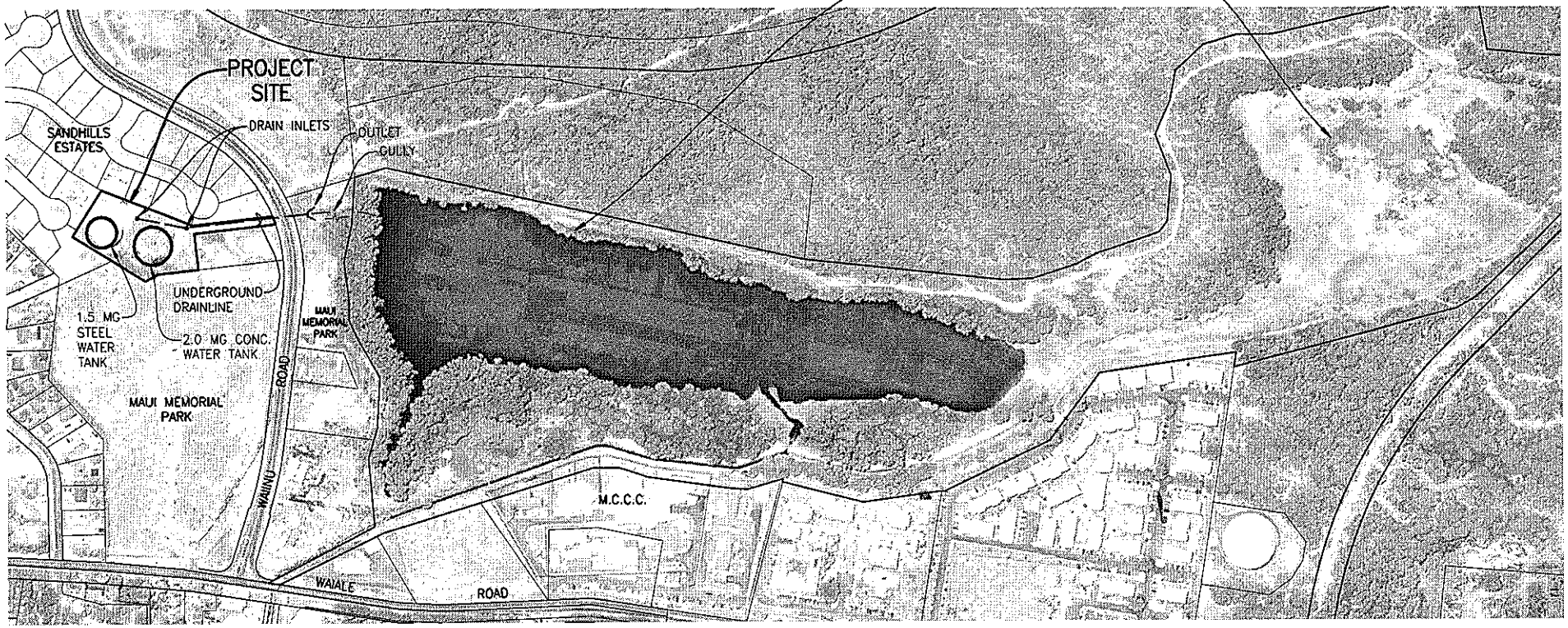
0 100 200 300 400

SCALE: 1 IN. = 100 FT.

V:\Projdata\09proj\09042\Dwg\exhibits\Drain Pattern-00.dwg

TRUE NORTH

SCALE: 1 IN. = 300 FT.



0 300 600 900 1200

SCALE: 1 IN. = 300 FT.

EXHIBIT "B"

DRAINAGE TO WAIALE RESERVOIR

May 26, 2011

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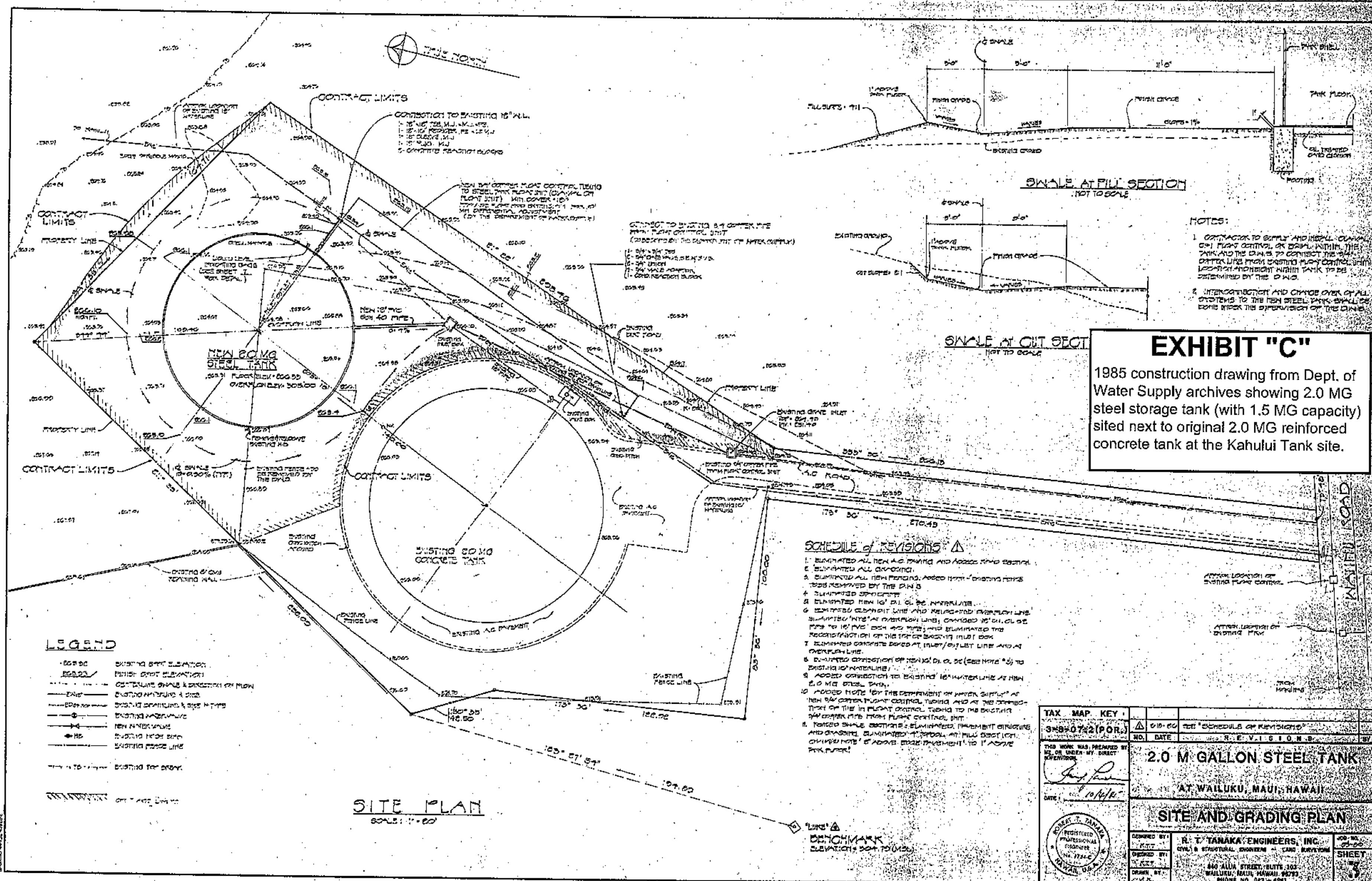
EXHIBIT "C"

1985 construction drawing from Dept. of Water Supply archives showing 2.0 MG steel storage tank (with 1.5 MG capacity) sited next to original 2.0 MG reinforced concrete tank at the Kahului Tank site.



TRUE NORTH
CONTRACT LIMITS
NEW 2.0 MG STEEL TANK
EXISTING 2.0 MG CONCRETE TANK
CONTRACT LIMITS
PROPERTY LINE
SWALE AT FILL SECTION
NOT TO SCALE
SWALE AT CUT SECTION
NOT TO SCALE
NOTES:
SCHEDULE of REVISIONS
LEGEND
SITE PLAN
SCALE: 1" = 60'
BENCHMARK
WAIEHU ROAD
TAX MAP KEY
3-8-07:2 (POR.)
2.0 M GALLON STEEL TANK
AT WAILUKU, MAUI, HAWAII
SITE AND GRADING PLAN
R. T. TANAKA ENGINEERS, INC.
SHEET 3

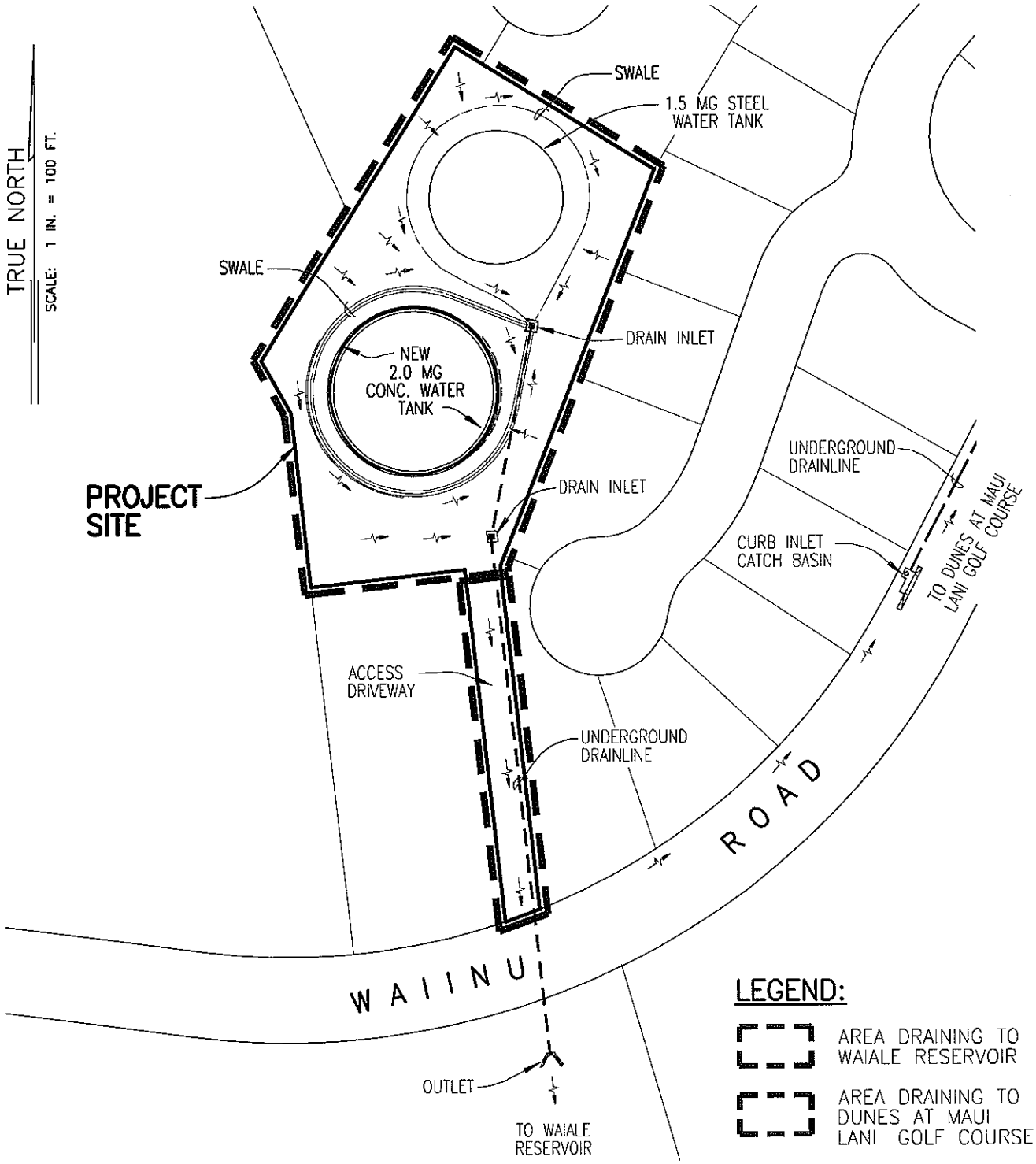


EXHIBIT "D"
KAHULUI TANK SITE DRAINAGE PATTERN AFTER CONSTRUCTION OF NEW 2.0 MG CONCRETE WATER TANK

0 100 200 300 400

SCALE: 1 IN. = 100 FT.

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APPENDIX – Hydrologic Calculations

Hydrologic Calculations

The following hydrologic calculations for drainage basins smaller than 100 acres are based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui"[1] and the *Rainfall-Frequency Atlas of the Hawaiian Islands*.[2] The design storm for the project site is a 10-year recurrence interval, 1-hour duration storm, and a precipitation of 2.0 inches is used in the calculations.

Rational Formula used:

$$Q = C \cdot I \cdot A$$

where, Q = *rate of flow* (cubic feet per second)

C = *runoff coefficient*

I = *rainfall intensity* (inches per hour)

A = *area* (acres)

The table below summarizes the calculated surface runoff rates for each project site condition.

Table 1 – Surface Runoff for Kahului Tank Site

	Runoff Destination:	
Site Condition:	Waiale Reservoir	Dunes at Maui Lani Golf Course
Circa 1985	2.7 cfs.	0.3 cfs.
Interim (Present)	1.7 cfs.	0.3 cfs.
After Construction of New 2.0 MG Concrete Water Tank	2.7 cfs.	0.3 cfs.

[1] County of Maui, Department of Public Works and Waste Management, "Rules for the Design of Storm Drainage Facilities in the County of Maui." November 2, 1995.

[2] U.S. Department of Commerce, Weather Bureau, *Rainfall-Frequency Atlas of the Hawaiian Islands*. 1962.

1. Onsite Runoff of Original Kahului Tank Site (Circa 1985)
Draining to Waiale Reservoir

Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers · Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: 2.0 MG Kahului Tank Addition
Project No.: 09042
Engineer: Derek T. Ono
Date: 5/19/2011

Area

Description: Onsite Runoff of Kahului Tank Site (Circa 1985)
Draining to Waiale Reservoir

Area (A):	1.43	acres
Impervious Area:	0.58	acres

Runoff Coefficient

Composite Runoff Coefficient:	0.3
Impervious Runoff Coefficient:	0.95
Weighted Runoff Coefficient (C):	0.56

Time of Concentration

Runoff Length:	265	ft.
Start Elevation:	266.1	ft. M.S.L.
End Elevation:	264.5	ft. M.S.L.
Average Slope:	0.6	%
Time of Concentration (T_c):	19.5	minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.0 in.
Intensity (I):	3.34 in./hr.

Flow Rate & Runoff Volume

$$Q = C \cdot I \cdot A$$
$$= 2.7 \text{ ft.}^3/\text{sec.}$$

2. Onsite Runoff of Kahului Tank Site Interim (Present) Condition
Draining to Waiale Reservoir

Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers · Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: 2.0 MG Kahului Tank Addition
Project No.: 09042
Engineer: Derek T. Ono
Date: 6/8/2011

Area

Description: Onsite Runoff of Kahului Tank Site Interim (Present) Condition Draining to Waiale Reservoir

Area (A):	1.43	acres
Impervious Area:	0.13	acres

Runoff Coefficient

Composite Runoff Coefficient:	0.3
Impervious Runoff Coefficient:	0.95
Weighted Runoff Coefficient (C):	0.36

Time of Concentration

Runoff Length:	265	ft.
Start Elevation:	266.1	ft. M.S.L.
End Elevation:	264.5	ft. M.S.L.
Average Slope:	0.6	%
Time of Concentration (T_c):	19.5	minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.0 in.
Intensity (I):	3.34 in./hr.

Flow Rate & Runoff Volume

$$Q = C \cdot I \cdot A$$
$$= 1.7 \text{ ft.}^3\text{/sec.}$$

3. Onsite Runoff of Kahului Tank Site after Construction of
New 2.0 MG Concrete Water Tank
Draining to Waiale Reservoir

Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers · Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: 2.0 MG Kahului Tank Addition
Project No.: 09042
Engineer: Derek T. Ono
Date: 5/19/2011

Area

Description: Onsite Runoff of Kahului Tank Site after Construction of New 2.0 MG Concrete Water Tank Draining to Waiale Reservoir

Area (A):	1.43	acres
Impervious Area:	0.58	acres

Runoff Coefficient

Composite Runoff Coefficient:	0.3
Impervious Runoff Coefficient:	0.95
Weighted Runoff Coefficient (C):	0.56

Time of Concentration

Runoff Length:	265	ft.
Start Elevation:	266.1	ft. M.S.L.
End Elevation:	264.5	ft. M.S.L.
Average Slope:	0.6	%
Time of Concentration (T_c):	19.5	minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.0 in.
Intensity (I):	3.34 in./hr.

Flow Rate & Runoff Volume

$$Q = C \cdot I \cdot A$$
$$= 2.7 \text{ ft.}^3/\text{sec.}$$

4. Runoff from Kahului Tank Site Access Driveway Draining to the Dunes at Maui Lani Golf Course

Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers · Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: 2.0 MG Kahului Tank Addition
Project No.: 09042
Engineer: Derek T. Ono
Date: 5/19/2011

Area

Description: Runoff from Kahului Tank Site Access Driveway
Draining to the Dunes at Maui Lani Golf Course

Area (A):	0.14	acres
Impervious Area:	0.06	acres

Runoff Coefficient

Composite Runoff Coefficient:	0.3
Impervious Runoff Coefficient:	0.95
Weighted Runoff Coefficient (C):	0.58

Time of Concentration

Runoff Length:	245.63	ft.
Start Elevation:	264.3	ft. M.S.L.
End Elevation:	259.5	ft. M.S.L.
Average Slope:	2.0	%
Time of Concentration (T_c):	9	minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.0 in.
Intensity (I):	4.25 in./hr.

Flow Rate & Runoff Volume

$Q = C \cdot I \cdot A$

$= 0.3$ $ft.^3/sec.$

APPENDIX C.

State Historic Preservation Division Letter

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

March 15, 2011

Ty Fukuroku, Civil Engineer
County of Maui, DPW - DSA
Via fax to: (808) 270-7972

LOG NO: 2011.0613
DOC NO: 1103MD35
Archaeology

Dear Mr. Fukuroku:

SUBJECT: Chapter 6E-8 Historic Preservation Review –
WTP 2011/0006 - 2.0 MG Kahului Tank Addition, Wainu Road
Wailuku Ahupua'a, Wailuku District, Island of Maui
TMK: (2) 3-3-8-046:032 (por.)

Thank you for the opportunity to comment on the aforementioned project, which we received on March 4, 2011. Our review is based on reports, maps, correspondence and aerial photographs kept on file at the State Historic Preservation Division.

The project involves the construction of a new cement water tank for Maui Lani Partners. According to our records, previous archaeological monitoring during construction work within this subdivision has documented numerous pre-Contact Hawaiian burials.

Based on the above information, we recommend that all ground altering activities associated with this project be monitored by a qualified archaeologist. We request that prior to initiation of work, an archaeological monitoring plan be submitted to SHPD for review and approval pursuant to HAR §13-279.

If you have questions about this letter please contact Morgan Davis at (808) 243-5169 or via email to: morgan.e.davis@hawaii.gov.

Aloha,

Theresa K. Donham
Acting Archaeology Branch Chief
State Historic Preservation Division

cc: County of Maui DSA via fax to: (808) 270-7972
Maui County CRC, Department of Planning, 250 S. High Street, Wailuku, Hawaii 96793