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COUNTY OF MAUI
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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

October 22, 2002

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

Dear Ms. Salmonson:

SUBJECT: FINAL ENVIRONMENTAL ASSESSMENT FOR KIHEI BIKEWAY AT PIILANI NORTH (FROM EAST WAIPUILANI STREET EXTENSION TO LIPOA STREET), TMK: 2-2-24:POR. 24 AND 25, KIHEI, MAUI, HAWAII

The Department of Public Works and Waste Management, County of Maui, has reviewed the Final Environmental Assessment (EA) for the subject project and issued a Finding of No Significant Impact (FONSI) determination. Please publish the notice of availability for this project in the November 8, 2002, OEQC Environmental Notice.

We have enclosed four (4) copies of the Final EA. The completed Publications Form and the Project Summary will be sent to you by E-mail. Please call Alan L. Unemori at Warren S. Unemori Engineering, Inc., at (808) 242-4403, if you have any questions.

Thank you.

Sincerely,

for DAVID GOODE
Director

DG:MA:jso
Enclosure
s:\milton\gsalmonson-kihei bikeway at piilani north

Quality Seamless Service – Now and for the Future

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Final Environmental Assessment

CONSTRUCTION OF KIHEI BIKEWAY AT PIILANI NORTH

(From East Waipuilani Street Extension to Lipoa Street)

Prepared for:

County of Maui
Department of Public Works and Waste Management

Prepared by:

Warren S. Unemori Engineering, Inc.
Civil and Structural Engineering / Land Surveying
Wells Street Professional Center, Suite 403
2145 Wells Street
Wailuku, Maui, Hawaii 96793

October, 2002

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PREFACE

The County of Maui, Department of Public Works and Waste Management (DPWWM), proposes to construct bike and pedestrian path improvements for the *Kihei Bikeway at Piilani North (From East Waipuilani St. Extension to Lipoa St.)* in Kihei, Maui, Hawaii (TMK 2-2-24:Por. 24 and 25). Pursuant to 23 CFR 771, U.S. Department of Transportation, Federal Highway Administration, Environmental Impact and Related Procedures; Chapter 343, Hawaii Revised Statutes; and, Chapter 200 of Title 11, Hawaii Administrative Rules; this Environmental Assessment documents the project's technical characteristics, environmental impacts and alternatives, and advances findings and conclusions relative to the project.

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
PROPOSED CONSTRUCTION OF KIHEI BIKEWAY AT PIILANI NORTH
(FROM EAST WAIPUILANI STREET EXTENSION TO LIPOA ST.)

AGENCY: County of Maui, Department of Public Works and Waste Management.

PROJECT DESCRIPTION:

The County of Maui, Department of Public Works and Waste Management (DPWWM), proposes to construct bike and pedestrian path improvements for the *Kihei Bikeway at Piilani North (From East Waipuilani Street Extension to Lipoa Street)* in Kihei, Maui, Hawaii (TMK 2-2-24:Por. 24 and 25).

The proposed approximately 3,000± ft long alignment is oriented in a north-south direction, parallel to and west of Piilani Highway [F.A.P. No. RF - 031 - 1 (5)]. It intersects several existing and proposed east-west roadways linking Piilani Highway with the primary coastal roadway, South Kihei Road.

The project involves Federal participating funds. Total project cost is estimated at approximately $1,000,000, with funding provided through the Transportation Equity Act for the 21st Century (TEA-21) and the County of Maui. The TEA-21 succeeded the Federal Intermodal Surface Transportation Efficiency Act (ISTEA),

The DPWWM has prepared the present Draft Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. 4332(2)(c), 49 U.S.C. 303, and Chapter 343, Hawaii Revised Statutes. In the Draft EA, three (3) alternatives were considered: (1) Alternative "A": the proposed action; (2) Alternative "B": the "no-build" alternative; and, (3) Alternative "C": the shared right-of-way.

PROJECT SUMMARY:

Regional transportation in this area of Kihei is provided primarily by vehicles traveling along South Kihei Road, a heavily-congested, primarily two-lane, two-way road (with some segments widened to a four-lane, two-way road) that generally follows the coastline. Parallel to and east (mauka) of South Kihei Road is Piilani Highway, a two-lane, two-way highway. The existing roadway network in this area relies on South Kihei Road as the primary arterial. Thus motorists traveling along South Kihei Road routinely encounter heavy traffic, compounded by insufficient connector roads between Piilani Highway and South Kihei Road.

The proposed Bikeway will relieve local traffic congestion, in addition to providing recreational opportunities along a landscaped and irrigated greenway. In the context of this relatively urbanized environment, the proposed project is considered one of the key elements in the transportation objectives of the 1998 Kihei-Makena Community Plan for the County of Maui.

Based on the EA and supporting analyses, the DPWWM is satisfied that potential improvement and long-term impacts have been identified and addressed.

FOR FURTHER INFORMATION, CONTACT: Mr. David Goode, Director, Department of Public Works and Waste Management, County of Maui, 200 South High Street, Wailuku, Maui, Hawaii 96793; telephone: (808) 270-7845.

10-22-02
Date

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

I. PROJECT OVERVIEW:

A. APPLICANT:

The applicant is the Department of Public Works and Waste Management, County of Maui (hereinafter referred to as DPWWM).

B. LOCATION:

The applicant is proposing to construct approximately 3,000± ft of a landscaped and irrigated bike and pedestrian path (hereinafter referred to as the "Bikeway") in Kihei, Maui, Hawaii.

Kihei is located along the leeward side of Mount Haleakala, a dormant shield volcano rising to approximately 10,000 feet above mean sea level (MSL). The project site (see Figure 1) is located approximately 3,000 feet inland and varies in elevation from approximately 15 feet to approximately 30 feet M.S.L.

The proposed Bikeway alignment (see Figure 2) is oriented in a North-South direction and is located along the westerly (makai) side of Piilani Village. It is parallel to and located approximately 1,000 feet west (makai) of Piilani Highway [F.A.P. No. RF-031-1(5)]. This alignment also generally parallels the alignment of the partially constructed [easterly (mauka) two lanes] Liloa Drive (N-S Collector), as well as an existing unpaved utility maintenance road, existing 18" and 36" waterlines, portions of a 12" reclaimed waterline, and an existing 69kV overhead electrical transmission line.

It's northern terminus is the intersection of Liloa Drive (N-S Collector) and East Waipuilani Street Extension, in the vicinity of Piilani Village Phase II and III Subdivisions. It's southern terminus is the intersection of Liloa Drive (N-S Collector) and Lipoa Street, in the vicinity of the Kihei Community Center / Swimming Pool Complex, Kihei Elementary / Lokelani Intermediate Schools, and the Haggai Institute (fka Maui Sun Hotel).

It crosses the following existing east-west roadways that link South Kihei Road to Liloa Drive (N-S Collector) and/or Piilani Highway: East Waipuilani Street Extension, Kauhaa Street, Piikea Avenue (Road "C"), and Lipoa Street. It is situated along the following existing projects: Piilani Village Phase III Subdivision, Meadowlands Phase II Subdivision, Piilani North Park / Detention Basin (soccer field), Yee's Orchard, Piilani Village (Safeway) Shopping Center, proposed Piilani Gardens Apartment Complex, Kihei Community Center / Swimming Pool Complex, and Haggai Institute.

C. LAND OWNERSHIP:

The proposed project extends over portions of roadway right-of-ways, roadway reserves and/or bikeway reserves:

1. Owned by the County of Maui; or,
2. Owned by Spencer Homes, Inc. but is in the process of being dedicated to the County of Maui.

D. EXISTING LAND USE:

The alignment generally is located along a utilities and maintenance access corridor which include: an existing unpaved utility maintenance access road, existing 18" and 36" waterlines, existing 12" reclaimed waterlines, and existing overhead 69kV electrical, telephone, and cable television transmission lines. It is also generally parallel to and west (makai) of the new Liloa Drive roadway (fka N-S Collector Road), within roadway right-of-ways or right-of-way reserves alongside roadway right-of-ways. These segments typically abut: the Liloa Drive (N-S Collector) roadway right-of-way on the easterly (mauka) side; and, on the westerly (makai) side, undeveloped parcels, existing residential subdivisions, a tropical fruit orchard, and the Haggai Institute (fka Maui Sun Hotel). Across the abutting Liloa Drive (N-S Collector), to the east (mauka) of the proposed Bikeway, are existing residential subdivisions, the Piilani North Park / Detention Basin (soccer field), a commercial shopping center, a proposed apartment complex, and the Kihei Community Center / Swimming Pool Complex.

E. PROJECT NEED:

The Kihei Bikeway at Piilani North Project will implement the first significant portion of the "Kihei Greenways System Conceptual Plan" (see Figure 3) as well as one of the major goals of the "1998 Kihei-Makena Community Plan" (hereinafter referred to as Community Plan), which was adopted on March 20, 1998.

The Community Plan, Part II, Section B, "Identification of Major Problems and Opportunities of the Region", Section 1, "Problems", "Transportation", page 11 states the following:

> *"Inadequate traffic circulation and lack of public transportation are recognized as the most significant problems in Kihei-Makena... There is a need to lessen the dependence on automobiles through efficient land use distributions. Bicycle and pedestrian paths separate from automobile traffic would provide an effective alternative to the automobile"*

Additional statements supporting the development of multi-use bikeways / jogging paths / walkways include the following:

Part III, Section A, "Intended Effects of the Kihei-Makena Community Plan", Item 3, 'Enhancement of Neighborhoods", page 15:

> *"Kihei's linear form has been largely defined by two parallel roadways, South Kihei Road and Piilani Highway. This linear pattern of development, combined with near total reliance on South Kihei Road and Piilani Highway, forces residents to travel by car for their shopping, recreation and basic needs, often resulting in traffic congestion...a more efficient internal roadway circulation system is proposed. A trail/greenway/bikeway system is also being proposed to provide alternate means of transportation."*

Part III, Section B, "Goals, Objectives and Policies", "Land Use", "Objectives and Policies", page 17:

> *"e. Establish a system of parks, utility easements, shoreline areas, drainageways and wetlands as an open space framework for the urban areas of the regions, i.e., where structures exist or are planned to exist, and provide an integrated system of pedestrian and bicycle paths."*

Part III, Section B, "Goals, Objectives and Policies", "Environment", "Implementing Actions", page 22:

> *"g. Partner with the Na Ala Hele, South Maui Heritage Corridor, Kihei 2000, and Bikeways Maui organizations to establish a continuous trail/greenway/bikeway system from Kealia Pond to Kilohana Road, to provide pedestrian lateral accesses to the Kihei-Makena shoreline, and to protect and maintain traditional shoreline access."*

Part III, Section B, "Goals, Objectives and Policies", "Housing and Urban Design", "Objectives and Policies", page 28:

> *"e. Provide for integration of natural physical features with future development of the region. New development shall incorporate features such as gulches and wetlands into open space and pedestrian pathway and bikeway systems."*

Part III, Section B, "Goals, Objectives and Policies", "Physical and Social Infrastructure", "Transportation", Objectives and Policies", pages 30 to 31:

> *"c. Strengthen the coordination of land use planning and transportation planning to promote sustainable development and to reduce dependencies on automobiles. New residential communities should provide convenient pedestrian and bicycle access between residencies and neighborhood commercial areas, parks and public facilities."*
>
> *"g. Plan, design and construct a pedestrian and bikeway network throughout the Kihei-Makena region which considers the utilization of existing stream beds, drainageways, wetlands and public rights-of-way along coastal and inland areas."*

Part III, Section B, "Goals, Objectives and Policies", Physical and Social Infrastructure", "Transportation", "Implementing Actions", page 32:

> *"i. Preserve and enhance the identity of Kihei's neighborhoods by designing the north-south collector road in discontinuous segments. Work with landowners, neighborhoods, and community groups to plan and implement an adjacent but separate trail/greenway/bikepath to provide non-motorized public access along the full length of the road reserve. In sections where no roadway is built, the trail/greenway/bikepath may be broadened to form a neighborhood park, public access, or open space area."*

Clearly, the intent of the most recent "Kihei-Makena Community Plan" is that a multi-use trail/bikeway/greenway be built. The proposed project is expected to implement the objectives of the Kihei-Makena Community.

F. PROPOSED ACTION:

Anticipated improvements include:

- Typically, a single 12 ft. wide asphalt-paved bike and pedestrian path is proposed.
- Proposed landscaping consisting of trees and ground cover and supporting irrigation (to be supplied by reclaimed wastewater) A 12" irrigation main will be extended from the existing 12" reclaimed water transmission line. (See Figure 5.)
- Basic appurtenances (e.g., striping, signing, traffic control features, etc.).

- Basic amenities (e.g., benches, etc.).
- Basic lighting (e.g., post-mounted overhead lighting at intervals of approximately ~80 ft. o.c.).

Since a large segment of the existing unpaved, meandering, utility maintenance road may be displaced by the proposed improvements, occasional maintenance access to the existing infrastructure is expected to be provided along the 12 ft. wide bikeway where required. Additional amenities (e.g., informational or cultural signs, thematic landscaping, exercise stations, drinking fountains, etc.) are expected to be provided through community undertakings.

G. ANTICIPATED PERMITS REQUIRED

(1) NPDES General Permit for Discharge of Stormwater Associated with Construction Activity

(2) Maui County Grading Permit

(3) Maui County Building Permit

(4) Maui County Permit for Working Within County Right-of-Way

(5) Maui County Permits for Reclaimed Water Service (Forms RW-1 through RW-3)

(6) State of Hawaii Department of Health Permits for Reclaimed Water Service (Forms RW-1 through RW-3)

II. ALTERNATIVES ANALYSIS:

A. ALTERNATIVE "A":

Alternative "A" represents the proposed action. The proposed Bikeway corridor (between East Waipuilani Street Extension and Lipoa Street) appears to be the only remaining continuous corridor, running parallel to and located between Piilani Highway and South Kihei Road, available in this vicinity. Any other north-south corridor between Piilani Highway and South Kihei Road will traverse or otherwise bifurcate existing commercial or residential properties, as follows:

1. For the region east between the proposed Bikeway along Liloa Drive (N-S Collector) and Piilani Highway, there are no vacant, undeveloped lands:

    - Existing Piilani Village Phase II Residential Subdivision;
    - Piilani Village Phase III Residential Subdivision currently under construction;
    - Existing Piilani Village (Safeway) Shopping Center;
    - Piilani Gardens Apartment Complex currently under construction;
    - Kihei Community Center and Pool Complex

2. For the region west (makai) of the proposed Bikeway, there are a number of existing commercial and residential properties that represent existing barriers, including:

    - Meadowlands Phases I and II Subdivision;
    - Azeka Place Shopping Center Phase II;
    - Lipoa Center;
    - Lipoa Professional Plaza;
    - Haggai Institute;
    - Three (3) wetland mitigation ponds

Beyond the northern terminus of the proposed Bikeway at East Waipuilani St. Extension, there is a Roadway Reserve along the westerly (makai) boundary of Piilani Village Phases I and II Subdivisions.

Similarly, beyond the southern terminus of the Bikeway at Lipoa Street, a 100 feet wide corridor has been reserved for the future extension of the Bikeway and the widening of Liloa Drive (N-S Collector).

Hence, portions of the corridor and the adjoining remnant strips along Liloa Drive (North-South Collector) appear to be the only feasible location for a Bikeway between Piilani Highway and South Kihei Road in Central Kihei.

The Bikeway will provide existing and future residents in the surrounding vicinity with recreational opportunities and convenient access to public facilities, including the Kihei Community Center & Pool Complex, Kihei Elementary and Lokelani Intermediate Schools, the Haggai Institute and the new Piilani Village Commercial Center. The proposed Bikeway embodies the pertinent objectives of the 1998 Kihei-Makena Community Plan.

B. ALTERNATIVE "B":

Alternative "B" represents the "no-build" alternative. Staying with the "status quo" *implies that automobile traffic congestion will continue to increase in the Central Kihei* Area - the most pressing problem identified in the 1998 Kihei-Makena Community Plan. The existing remnant strips along Liloa Drive (N-S Collector) is typically overgrown with native vegetation and pedestrian use is limited to a few foot trails that have developed over the years.

Consequently, the "no-build" alternative does not represent the most beneficial alternative in addressing the serious transportation problems in the Central Kihei Area.

C. ALTERNATIVE "C":

Alternative "C" represents a Bicycle route within or immediately adjoining the vehicular travelway, in which both motorists and bicyclists share the same general section of roadway, or routes which define bicycling space within the right shoulder, separated by a single solid paint stripe. This Alternative was dropped from consideration early in the design development on the basis of placing pedestrians and bicyclists at a higher safety risk than a Bicycle route with a Separated Right-of-Way (see Alternative "A").

The "Bike Plan Hawaii: A State of Hawaii Master Plan", revised September, 1992, provide design guidance for the development of bikeways and is drawn directly from AASHTO and MUTCD (Manual on Uniform Traffic Control Devices) guidelines. Section 2.6.3., "Separation Between Bicycle Paths and Roadways", of this document states the following:

> *"When two-way bicycle paths are located immediately adjacent to a roadway, some operational problems may occur. Problems associated with bicycle paths located immediately adjacent to roadways include:*

A. *Unless paired, they require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal Rules of the Road.*

B. *When the bicycle path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a bicycle path often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/automotive accidents and should be discouraged at every opportunity.*

C. *At intersections, motorists entering or crossing the roadway often will not notice bicyclists coming from their right, as they are not expecting contra-flow vehicles. Even bicyclists coming from the left often go unnoticed, especially when sight distances are poor.*

D. *When constructed in narrow roadway right of way, the shoulder is often sacrificed, thereby decreasing safety for motorists and bicyclists using the roadway.*

E. *Many bicyclists will use the roadway instead of the bicycle path because they have found the roadway to be safer, more convenient, or better maintained. Bicyclists using the roadway are often subjected to harassment by motorists who feel that in all cases the bicyclists should be on the path instead.*

F. *Bicyclists using the bicycle path generally are required to stop or yield at all cross streets and driveways, while bicyclists using the roadway usually have priority over cross traffic, because they have the same right of way as motorists.*

G. *Stopped cross street motor vehicle traffic or vehicles existing side streets or driveways may block the path crossing.*

H. *Because of closeness of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of bicycle paths and bicyclists out of traffic lanes. These barriers can represent an obstruction to bicyclists and motorists. can complicate maintenance of the facility, and can cause other problems as well.*

The Bike Plan Hawaii, Section 2.6.3.2, "Width and Clearance" provides minimum recommended widths and separations for shared bicycle paths on separated Rights-of-Way (see Figure 6), which are expected to be adopted for all segments having adequate space.

For these reasons, Alternative "C" was eliminated in favor of Alternative "A".

III. DESCRIPTION OF THE EXISTING ENVIRONMENT:

A. PHYSICAL ENVIRONMENT:

1. Surrounding Environment

The proposed Bikeway alignment (see Figure 2) is oriented in a North-South direction and is located along the westerly (makai) side of Piilani Village. It is parallel to and located approximately 1,000 feet west (makai) of Piilani Highway [F.A.P. No. RF-031-1(5)]. This alignment also generally parallels the alignment of the partially constructed [easterly (mauka) two lanes] Liloa Drive (N-S Collector), as well as an existing unpaved utility maintenance road, existing 18" and 36" waterlines, and an existing 69kV overhead electrical transmission line.

It's northern terminus is the intersection of Liloa Drive (N-S Collector) and East Waipuilani Street Extension, in the vicinity of Piilani Village Phase II and III Subdivisions. It's southern terminus is the intersection of Liloa Drive (N-S Collector) and Lipoa Street, in the vicinity of the Kihei Community Center / Swimming Pool Complex, Kihei Elementary / Lokelani Intermediate Schools, and the Haggai Institute (fka Maui Sun Hotel).

It crosses the following existing east-west roadways that link South Kihei Road to Liloa Drive (N-S Collector) and/or Piilani Highway: East Waipuilani Street Extension, Kauhaa Street, Piikea Avenue (Road "C"), and Lipoa Street. It is situated along the following existing projects: Piilani Village Phase III Subdivision, Meadowlands Phase II Subdivision, Piilani North Park / Detention Basin (soccer field), Yee's Orchard, Piilani Village (Safeway) Shopping Center, proposed Piilani Gardens Apartment Complex, Kihei Community Center / Swimming Pool Complex, and Haggai Institute.

2. Climate

The Kihei coast is generally sunny, warm and dry during the entire year. In Kihei Town, the annual high temperature averages in the high 80's with the low temperature averaging in the high 60's (Atlas of Hawaii, 1983). June through August are historically the warmer months of the year, while the cooler months are January through March.

Average rainfall distribution in the Kihei-Makena region varies from under 10-inches per year to 30-inches per year in the higher elevations. Rainfall in the Kihei-Makena region is highly seasonal, with most of the precipitation occurring in the winter months.

Northeast tradewinds prevail approximately 80 to 85 percent of the time. Winds average 10 to 15 miles per hour during afternoons with slightly lighter winds during

mornings and nights. Between October and April, the southerly winds of Kona storms may be felt.

In the absence of tradewinds and of nearby storms, winds may become light and variable. The diurnal heating and cooling of the land mass gives rise to onshore sea breezes during the day and offshore land breezes at night.

3. Topography and Soils

The existing ground from the new Waipuilani Street Extension to Lipoa Street generally slopes in a southerly-to-northerly direction with an average slope of approximately 1.3%±. Natural vegetation include but is not limited to buffelgrass and kiawe trees.

According to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, (August, 1972)", two soil classifications found on the project site are the Pulehu Series and the Alae Series (see Figures 7 and 8). The Pulehu Series, clay loam, 0 to 3 percent slopes (PsA) is characterized as having a moderate permeability, slow runoff, and a slight erosion hazard. The Alae Series, Alae sandy loam, 3 to 7 percent slopes (AaB) is characterized has having slow runoff and a slight erosion hazard.

4. Flood and Tsunami Hazard

According to Panel Number 150003 0265C of the Flood Insurance Rate Map, revised September 6, 1989, prepared by the U. S. Federal Emergency Management Agency, Federal Insurance Administration, the project site is entirely within Flood Zone C, outside the tsunami inundation limits and subjected to minimal flooding (see Figure 9).

5. Flora and Fauna

A Special Management Area Use Permit Application for the Piilani Village Commercial Center submitted in July, 1997, reported the following:

> *"Vegetation within the project area is dominated by buffelgrass (Cenchrus ciiaris) with a dwindling canopy of Kiawe (Prosopis pallida). Koa haole (Leucaena leucocephala) were also found scattered across the general vicinity of the project area.*
>
> *Avifauna and mammals common to the project site and surrounding areas are also typical of species found in the urbanized Kihei area. Feral mammals typically found in the area include cats, rats, mice and mongoose. Exotic species of birds commonly found in this area include the Northern Cardinal,*

Common Mynah, Golden Plover, Spotted Dove, House Finch, Gray and Black Francolin and the Blue Heron."

6. Wetlands

The nearest "Wetlands" sites are the Azeka 3.5-acre wetland mitigation pond, which is approximately 1000 feet west (makai) of the bikeway, and the Long's 3-acre wetland mitigation pond, which is approximately 1200 feet west (makai) of the bikeway. A wetlands mitigation site for the Meadowlands Subdivision is also approximately 1200 feet west (makai) of the nearest portion of the bikeway.

7. Archaeological Resources

The Final Environmental Assessment for the Road "C" and North-South Collector Road reported that an archaeological inventory survey undertaken by Xamanek Researchers in 1995 found one (1) archaeological site, a rock shelter, which was designated State Historic Preservation Division (SHPD) Site No. 50-50-10-3529. Site 3529 is not affected by the Kihei Bikeway.

That Report also stated that a known historic site (Historic Site 50-10-1710) is located approximately 102 feet south of the Lokelani Intermediate School parcel Site 1710 was outside the Road "C"/North-South Collector project site.

That Report also stated that the land area underlying the North-South Collector Road segment which extends north of Road "C" (and which contains a portion of the Kihei Bikeway) was reviewed by SHPD as part of the Piilani North II-A Large Lot Subdivision. The SHPD, by letter dated September 12, 1996, concluded that the large lot subdivision will have "no effect" on historic sites. (see attached letters contained in Appendix "B")

8. Air Quality

There are no point sources of airborne emissions in the immediate vicinity of the project site. The air quality of the Kihei area is considered good with existing airborne pollutants attributed primarily to automobile exhaust from the region's roadways and construction activities. Another source of airborne emissions may include smoke from sugarcane burning which occurs in the Central Maui isthmus. This source is intermittent, however, and prevailing tradewinds quickly disperse particulates which are generated.

CORRECTION

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

Common Mynah, Golden Plover, Spotted Dove, House Finch, Gray and Black Francolin and the Blue Heron."

6. Wetlands

The nearest "Wetlands" sites are the Azeka 3.5-acre wetland mitigation pond, which is approximately 1000 feet west (makai) of the bikeway, and the Long's 3-acre wetland mitigation pond, which is approximately 1200 feet west (makai) of the bikeway. A wetlands mitigation site for the Meadowlands Subdivision is also approximately 1200 feet west (makai) of the nearest portion of the bikeway.

7. Archaeological Resources

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9. Noise Characteristics

Traffic noise from Piilani Highway is the predominant source of noise in the locality of the project. Other background noise levels are attributed to natural (e.g., wind) conditions.

10. Scenic and Open Space Resources

The proposed project is located west (makai) of the Piilani Highway. Moving toward the shoreline, there are vacant properties with commercial uses clustered around South Kihei Road. To the immediate north of the proposed Bikeway is the Piilani Village Phase II Subdivision, while to the immediate south of the proposed Bikeway are the Kihei Elementary and Lokelani Intermediate Schools. The subject property is not currently considered to be part of a scenic corridor.

B. COMMUNITY SETTING:

1. Community Character

The Kihei-Makena Community Plan region includes a diverse range of physical and socio-economic environments. With its dry and mild climate and proximity to recreation-oriented shoreline resources, the visitor-based economy has grown steadily over the past few years. The town of Kihei serves as the commercial and residential center of the region with the master-planned communities of Wailea and Makena serving as the focal point for visitor activities.

The proposed Bikeway is located within Central Kihei, traversing both developed and undeveloped lands to the east and north of the Lipoa business district.

2. Population

The population of the County of Maui has exhibited relatively strong growth over the past decade, with the 1990 population estimated at 100,504, a 41.8 percent increase over the 1980 population of 70,847. Growth in the County is expected to continue, with resident population in the Year 2000 documented at 128,094 (2000 U. S. Census) and projected to145,872 by the Year 2010 (Community Resources, Inc., January, 1994).

Just as the County's population has grown, the resident population of the Kihei-Makena Community has increased dramatically in the last two decades.

Population gains were especially pronounced in the 1970's as the rapidly-developing visitor industry attracted many new residents. The current resident population of the Kihei-Makena region is 22,874 (2000 U. S. Census).

3. Economy

The economy of Maui County is heavily dependent upon the visitor industry. In 1993, for example, total visitor arrivals numbered 2.5 million (Maui County Data Book, 1994). The dependency on the visitor industry is especially evident in Kihei-Makena, which is one of the State's major resort destination areas. The openings of the Four Seasons Hotel, the Grand Wailea and the Kea Lani Hotel have boosted the regions's significance as a resort destination.

Support for the visitor industry is found in Kihei, where numerous retail commercial centers are found. New commercial centers in Kihei, such as Azeka's and the Longs Drugs complexes, lend further support to the regional economy.

4. Police and Fire Protection

The Maui Police Department (MPD) consists of five (5) patrol divisions and includes 410 employees. These divisions provide police services through its Hana, Lahaina, Lanai, Molokai and Wailuku districts. On Maui, the MPD includes 373 administrative, patrol and support personnel.

Police services for the Kihei-Makena subdistrict are currently provided by patrol officers on assignment from the Wailuku Patrol Division. Each eight (8) hour watch is staffed by a minimum of four (4) patrol officers.

Fire prevention, protection and suppression services are provided by the Maui Fire Department's (MFD) Kihei Station. Situated between approximately one and two miles south of the project site, the Kihei Fire Station is equipped with a 1,500 gallon pumper, and is staffed by one (1) captain and five (5) firefighters per twenty-four (24) hour shift.

5. Medical Facilities

Maui Memorial Hospital, the only major medical facility on the island, services the Kihei-Makena region. Acute, general and emergency care services are provided by the 185-bed facility which is located in Wailuku. Several Kihei clinics, and dental and medical offices provide local health care services for Kihei-Makena residents and visitors.

6. Recreational Facilities

Diverse recreational opportunities are available in the Kihei-Makena region. Over 90 percent of the Kihei-Makena region's parks are either directly on the beach, or across the street from a beach. The Kihei area is served by twenty-six (26) public parks between Maalaea and Makena, including the following:

(1) Kalama Beach Park
(2) Kamaole Beach Park I
(3) Kamaole Beach Park II
(4) Kamaole Beach Park III
(5) Kalepolepo Beach Park (Loko Ia Ko Ie Ie park)
(6) Kihei Memorial Park (Mai Po'ina Oe I'au Park)
(7) Kihei Complex & Youth Center
(8) Kilohana Park
(9) Poolenalena Park (Pepeiao Lepo Beach)
(10) Charley Young Beach
(11) Maalaea Beach Park
(12) Kenolio Complex (Ball field)
(13) Kihei Beach Reserve
(14) Hale Piilani Subdivision Park
(15) Kenolio Park
(16) Keonekai park
(17) Horita's Beach Park (Ka Ono Ulu)
(18) Maui Peace Park (Kamaole III)
(19) Kihei Regional Park
(20) Kihei Community Center & Aquatic Center
(21) Baldwin-Malama Basin/Soccer Field
(22) Kamole Point
(23) Kilohana Drive/Piilani Highway Parcel
(24) Makena Landing
(25) Makena Beach Park (Maui Prince Hotel)
(26) Palauea Beach Park

Additional recreational opportunities are available in the Wailea-Makena area, including several championship golf courses and tennis courts. Shoreline recreation for both areas include swimming, fishing, picnicking, snorkeling and windsurfing.

7. Schools

The State Department of Education (DOE) operates three (3) schools in the Kihei area. Kihei Elementary School covers grades K to 5, with an enrollment of approximately 911 students. Kamali'i Elementary School, a second elementary school with an enrollment of approximately 580 students, opened in August, 1996. Lokelani Intermediate School includes grades 6 to 8, with an enrollment of approximately 660 students. Public school students in grades 9 through 12 attend Maui High School in Kahului. Kihei Public Charter High School, setup as a temporary campus at the Kihei Youth Center, can accommodate up to 150 high school students. Started in August, 2001, it recently graduated 5 students out of 37 that completed the year.

8. Solid Waste

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

C. INFRASTRUCTURE

1. Roadway System

Piilani Highway is a two-lane, State arterial highway, which runs north to south and is located approximately 1,000 feet to the east (mauka) of the proposed Bikeway. Within the study area, Piilani highway fronts the Elleair (fka Silversword) Golf Course and the Maui Research and Technology Park on the mauka side. Although a controlled access highway, access is permitted from Piilani Highway in the vicinity of the project site at the following general locations:

a. Piikea Avenue (Road "C"), originating at South Kihei Road between the Long's and Azeka developments, crossing the south end of the project site: A right-of-way ranging from 68 to 92 feet (providing a minimum of four (4) lanes plus turning lanes). Dedicated turning lanes are provided.

b. Existing Lipoa Street Intersection at Piilani Highway.

c. New Waipuilani Street Extension to Piilani Highway (recently completed as part of the Piilani Village Phase II Subdivision)

Improvements recently completed by the County include:

a. Piikea Avenue (Road "C"): Crossing the southern side of the proposed project site (between Piilani Highway and Liloa Drive and extending west from Liloa Drive to South Kihei Road. The segment of Piikea Avenue, from its existing terminus near Azeka Place II and the Long's Drugs Store to the Liloa Drive is a two (2) lane facility. Between Liloa Drive (N-S Collector) and Piilani Highway, it is a signalized, four (4) lane facility.

b. Liloa Drive (N-S Collector): Extending from Piikea Avenue to Halekuai Street to the south. Liloa Drive is a two (2) lane facility with turning lanes.

c. Piilani Highway: Signalized intersection of Piilani Highway and Piikea Avenue.

d. South Kihei Road: Signalized intersection of South Kihei Road and Piikea Avenue (Road "C").

2. Water

A water transmission and distribution system developed by the Department of Water Supply services this area of Kihei. A 36-inch transmission line and an 18-inch transmission/distribution system serve the region and is located along the Liloa Drive (N/S Collector) road reserve and remnant strips located to the west of the Piilani Village development. These waterlines cross the Piikea Avenue (Road "C") right-of-way near the Liloa Drive (N-S Collector) intersection. Distribution lines are also located on nearby East Waipuilani Street Extension, Lipoa Street and South Kihei Road.

3. Drainage

Two Piilani Highway culverts discharge offsite runoff from easterly (mauka) lands, through Piilani Village, across the proposed Bikeway alignment.

As part of the recently completed County Road "C" project, an existing 54-inch Piilani Highway culvert crossing was extended underground through Piilani Village.

As part of the Piilani Village Phase III Subdivision construction currently underway, an existing 90-inch Piilani Highway culvert crossing is being extended underground through Piilani Village.

The outflow from both culverts cross the proposed Bikeway along an existing, lined ford crossing, to an existing unnamed drainageway that flows in a westerly (makai) direction, to existing low-lying areas near South Kihei Road and Uluniu Road, and eventually flows into the ocean.

4. Wastewater System

The service area for the County's Kihei wastewater collection system extends from North Kihei to Wailea. The system consists of a number of pump stations, force mains and gravity lines which convey flows to the Kihei Wastewater Reclamation Facility. This treatment and disposal facility, which is located adjacent to the Silversword Golf Course, maintains an existing design capacity of 8.0 million gallons per day (mgd).

Existing sewer lines in the vicinity of the proposed Bikeway include existing 8-inch lines along East Waipuilani Street, and Lipoa Street. An 8-inch sewer line was also recently completed along Piikea Avenue (Road "C").

A 12" reclaimed water transmission line, located parallel to and between the aforementioned 18" and 36" waterlines, along an existing utility corridor, serves the region with R1 reclaimed water.

5. Electrical and Telephone System

Electrical and telephone service in the Kihei region is provided by Maui Electric Company, Ltd., and GTE Hawaiian Tel., respectively, along a primary utility corridor along which the proposed bikeway is located.

IV. POTENTIAL IMPACTS AND MITIGATION MEASURES:

A. IMPACTS TO THE PHYSICAL ENVIRONMENT:

1. Surrounding Uses

The proposed Bikeway will traverse lands which are currently vacant or already in use as a utilities corridor along Liloa Drive which includes existing 18" and 36" waterlines, a 12" reclaimed waterline, and existing 69kV electrical, telephone and cable transmission lines. Impacts of the Bikeway construction and implementation are not anticipated to adversely affect existing land uses which surround the roadway corridor. In the long term, the Bikeway improvements will expedite non-motorized transportation and serve existing and proposed land uses on the immediately surrounding properties.

2. Flora, Fauna and Wetland Considerations

There are no known habitats or rare, endangered of threatened species of flora located within the project limits. All of the communities contained either alien or indigenous plant species. No endemic plants were found. Native plants which were found are considered indigenous and commonly found in other locations. The removal of existing flora from the site is not considered an adverse impact.

Similarly, the project is not anticipated to adversely affect fauna typically found in the urbanized Kihei region.

As the nearest wetland mitigation sites are approximately 1000 feet west (makai) of the Bikeway, no adverse effects are anticipated.

3. Archaeological Resources

The land area underlying the Bikeway was reviewed by SHPD as part of the Piilani North II-A Large Lot Subdivision. The SHPD, by letter dated September 12, 1996, concluded that the large lot subdivision (which includes the Bikeway project site) will have "no effect" on historic sites (see Appendix "B").

4. Air Quality

Air quality impacts attributed to the project will include dust generated by short-term construction-related activities. Sitework, such as clearing, grubbing and grading, and utilities and pavement construction, for example, will generate air-

borne particulates. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind-blow emissions.

Once the project is completed, project-related pedestrian and bikeway traffic will not generate automotive emissions. No adverse impacts are therefore anticipated.

5. Noise

Short-term noise impacts associated with construction activities along the project corridor may occur. These impacts can occur as a result of the short distances between the project corridor and immediate neighbors. However, construction activities will be restricted to normal daylight working hours, from Monday through Friday, excluding certain holidays.

In terms of long-term noise parameters, as only pedestrian and bicycle traffic is expected, noise level increases should be negligible.

6. Scenic and Open Space Resources

The subject property is not currently considered to be part of a scenic corridor. On the other hand, the extensive landscaping of the site should substantially enhance the openness and aesthetics of the project corridor.

7. Cultural Practices Resources

Scientific Consultant Services, Inc. (SCS), was retained to perform a Cultural Practices Assessment of the Project. The "Assessment and Recommendations" section of that Report states the following:

> *"SCS consulted community members and businesses concerning activities and events in and around Liloa Drive in Kihei, Maui. No traditional cultural practices were identified in this area. The proposed Kihei Bikeway will not cause loss or destruction to any cultural resource.*
>
> *Based on the information provided by individuals, as well as businesses, SCS believes the Act 50, Cultural Impact Assessment requirements for the Section 106 process have been met and the Kihei Bikeway project poses no adverse effect on cultural sites."*

A full copy of the Report is included in Appendix E.

B. IMPACTS TO COMMUNITY SETTING

1. Land Use and Community Character

The proposed Bikeway will be located adjacent to the existing Piilani Village Commercial Center, the Kihei Community Center & Aquatic Center, the Kihei Elementary and Lokelani Intermediate Schools, and the Haggai Institute and be within reasonable walking distance of many commercial and business establishments in the vicinity. In the context of this relatively urbanized environment, the proposed project is considered one of the key elements in the transportation objectives of the 1998 Kihei-Makena Community Plan. The Bikeway's implementation will certainly improve local traffic circulation and relieve congestion in this highly traveled area. In this regard, the proposed action will support and enhance land uses along and surrounding the project corridor.

2. Population

On a short-term basis, the project will support construction and construction-related employment. The Bikeway itself will not create long term employment, nor provide long-term residential housing. It will, however, enhance the flow of traffic originating from the existing and anticipated future residential subdivisions and commercial properties within the immediate and surrounding vicinity.

3. Police, Fire and Medical Services

The proposed action will not increase demands placed upon police, fire and medical services. However, in improving circulation and relieving traffic congestion, the implementation of the project is anticipated to improve accessibility to local neighborhoods and commercial uses by police, fire and emergency medical services.

4. Recreation

The proposed project will actually increase recreational space as well as provide greater accessibility to recreational facilities such as the Kihei Community Center & Aquatic Center.

5. Solid Waste

The completed project is not considered a direct solid waste generator.

C. IMPACTS TO INFRASTRUCTURE

1. Roadways

The proposed project is expected to reduce the amount of automobile traffic within the existing Piilani Village Commercial Center, the Kihei Community Center & Aquatic Center and the Lipoa Commercial Center, thereby improving the traffic circulation.

The Bikeway will be aligned at all major roadway intersections to connect to the existing or proposed crosswalks to facilitate roadway crossings.

2. Water and Wastewater

The proposed project will not consume any significant amounts of potable water nor generate any wastewater, and is therefore not expected to impact capacity and service requirements for water and wastewater systems.

Landscape irrigation will take advantage of available reclaimed water, which further conserves precious water resources.

3. Drainage

The "Preliminary Drainage & Soil Erosion Control Report for Kihei Bikeway at Piilani North (from Kulanihakoi St. to Lipoa St." (July, 1998) (see Appendix "C") reported that calculations predict that approximately only 4.5 cfs of onsite surface runoff is presently generated by the project site, and that this project is not expected to result in any increase in onsite surface runoff volume, due mainly to the increased vegetal cover over the project site. This Report states the following:

> *"Since the onsite surface runoff volume generated by the proposed project will not be increased, it is our professional opinion that the proposed development will not have an adverse effect on the adjacent downstream properties."*

V. RELATIONSHIPS TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS:

A. STATE LAND USE DISTRICTS:

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes the four major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural" and "Conservation". The subject parcel is within the "Urban" district The proposed action involves the construction of a Bikeway which is compatible with the "Urban" designation.

B. MAUI COUNTY GENERAL PLAN

The Maui County General Plan (1990 Update) sets forth broad objectives and policies to help guide the long range development of the County. As stated in the Maui County Charter:

> *"The purpose of the General Plan is to recognize and state the major problems and opportunities concerning the needs and development of the County and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development."*

The proposed action is in keeping with the following General Plan objectives and policies.

Objective:

"To preserve for present and future generations existing geographic, cultural and traditional community lifestyles by limiting and managing growth through environmentally sensitive and effective use of land in accordance with the individual character of the various communities and regions of the County."

Policy:

"Formulate a directed land use growth strategy which will encourage the redevelopment and infill of existing communities allowing for mixed land uses, where appropriate."

Objective:

"To provide an economic climate which will encourage controlled expansion and diversification of the County's economic base."

Policy:

"Maintain a diversified economic environment compatible with acceptable and consistent employment."

C. KIHEI-MAKENA COMMUNITY PLAN

Refer to Section I.E "Project Need" in this Draft Environmental Assessment for detailed ***Objectives*** and ***Implementing Actions*** in the 1998 Kihei-Makena Community Plan which are relevant to the proposed project.

D. ZONING

The proposed Bikeway falls within the Project District 5 zoning category. The proposed Bikeway is in conformance with the zoning provisions of the site.

E. COUNTY OF MAUI SPECIAL MANAGEMENT AREA

The subject property is located within the County of Maui's Special Management Area. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Maui Planning Commission, projects located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Maui Planning Commission.

An SMA Use Permit is not required since SMA approvals have already been secured for the proposed Bikeway in conjunction with adjacent Piilani Village projects (see discussion in Item 7 below)

1. Recreational Resources

Objective:

Provide coastal recreational resources 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 recreation activities that cannot be provided in other areas;*

(ii) *Requiring replacement of coastal resources having 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 Commission; and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response:

The proposed project is located approximately 3,000 feet inland from the shoreline and is therefore not anticipated to affect existing coastal or inland recreational resources. However, accessibility to these resources may be indirectly improved as a result of this project.

2. Historical/Cultural Resources

Objective:

Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management area that are in Hawaiian and American history and culture.

Policies:

a. *Identify and analyze archaeological 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:

An archaeological inventory survey done for the entire Piilani Project discovered several archaeological sites. However, none of these sites are located within the land area of the Bikeway.

3. Scenic and Open Space Resources

Objective:

Protect, preserve and where desirable, restore of 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 land forms and existing public views to and along the shoreline;*

c. *Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and*

d. *Encourage those developments which are not coastal dependent to locate in inland areas.*

Response:

The proposed project will not impact coastal scenic and open space resources. Furthermore, the project will not affect public views to and along the shoreline.

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 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:

Improvements to the subject property are not expected to adversely impact coastal ecosystems. Erosion control measures will be implemented during construction to ensure that coastal ecosystems are not impacted.

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 project would have a beneficial short term impact on the local economy during construction. In the long term, the project enhances traffic circulation to and from the existing Lipoa Commercial Center, the Kihei Community Center & Aquatic Center, and the Piilani Village Commercial Center, increasing the accessibility of goods and services to Kihei-Makena residents. In this context, the proposed project is a significant step toward maintaining and enhancing the region's long-term economic stability.

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 non-point source pollution hazards;

b. Control development in areas subject to storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;

c. Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

d. Prevent coastal flooding from inland projects; and

e. Develop a coastal point and non-point source pollution control program.

Response:

According to Panel Number 150003 0265C of the Flood Insurance Rate Map, revised September 6, 1989, prepared by the U. S. Federal Emergency Management Agency, Federal Insurance Administration, the project site is entirely within Flood Zone C (see Figure 9), outside the tsunami inundation limits and subject to minimal flooding (see Exhibit 3, "Preliminary Drainage and Soil Erosion Control Report, Kihei Bikeway at Piilani North", July, 1998)

Erosion control measures will be incorporated during the construction period to minimize soil loss and erosion hazards. No adverse drainage impacts to downstream properties should result from the proposed project.

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 and short and long-term impacts of proposed coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.*

Response:

In compliance with the "Special Management Area Rules and Regulations of the County of Maui", SMA approvals have been secured from the County Department of Planning in conjunction with the following Piilani Village projects:

1. On January 10, 1989, the Maui Planning Commission approved the Phase 2 Project District (PH-2) and Special Management Area (SMA) Permit applications for the development of 455 single-family residential units, which also identified the proposed bikeway as part of the master improvement plan for this area. Construction was initiated in September 1990, which also included the first 1,000 feet of a 6 ft. wide bike and jogging trail along Piilani Village Phase I Subdivision.

2. On April 9, 1990, the Maui Planning Commission approved the PH-2 and SMA Permit applications for the development of 330 multi-family residential units, which also identified the proposed bikeway as part of the master improvement plan for this area. Construction of the supporting offsite infrastructure was initiated on March 26, 1998.

3. On October 3, 2001, in a memo to David Goode, Director, DPWWM, from John E. Min, Director, Department of Planning, the Planning Director states the following:

> *"This memo is written in response to your memo concerning whether a Special Management Area Use Permit is required for the implementation of a bikeway segment between Lipoa Street and Piikea Avenue. The project description for the Permit (90/SM1-009) for the multi-family portion of the Piilani Village as stated in the April 10, 1990, Planning Director's Report notes in part that a proposed pedestrian/bicycle parkway along the makai edge of the project is planned that would like te residential areas with the commercial, school and park sites (enclosed). Therefore, the proposed bikeway is covered under the Special Management Area (SMA) Use Permit Docket No. 90/SM1-009 and a new SMA is not required."*

This Draft Environmental Assessment is prepared for public review in compliance with Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Administrative Rules, Environmental Impact Statement Rules.

Applicable State and County requirements will be adhered to in the design and construction of the proposed project.

8. Public Participation

Objective:

Stimulate public awareness, education and participation in coastal management.

Policies:

a. *Maintain a public advisory body to identify coastal management problems and to provide public 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 mediation to respond to coastal issues and conflicts.*

Response:

The proposed project is designed to alleviate current and projected traffic demands in the Central Kihei area. A meeting with the community and civic groups will be held to introduce the proposed improvements to the community and solicit their comments. A public hearing is not required per the "Federal-Aid Highway Program Manual", dated June 30, 1989, Volume 7-"Right-of-Way and Environment", Chapter 7 - "Environment", Section 1 - "Environmental Impact and Related Procedures", as this project was granted "Categorical Exclusion" status on May 6, 2002.

Item 10 - "Categorical Exclusion" states the following:

"a. *Categorical exclusions (CEs) are actions which meet the definition contained in 40 CFR 1508.4, and, based on past experience with similar actions, do not involve significant environmental impacts. They are actions which: do not induce significant impacts to planned growth or land use for the area, do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural,*

recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; and do no otherwise, either individually or cumulatively, have any significant environmental impacts...

c. The following actions meet the criteria for CEs in the CEQ regulation (Section 1508.4) and Paragraph 10a of this regulation and normally do not require any further NEPA approvals by the Administration:

(3) Construction of bicycle and pedestrian lanes, paths and facilities.

(7) Landscaping."

The proposed project is not contrary to the objective of public awareness, education and participation.

A full copy of the documentation for Categorical Exclusion is included in Appendix D of this Report.

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 project site is located approximately 3,000 feet inland from the nearest shoreline. Consequently the proposed project is not anticipated to adversely impact any beaches in the vicinity.

VI. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED:

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

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

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

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES:

The proposed project will result in the loss of approximately 2.2 acres of land for the development of the Bikeway. While the loss of this land is considered irretrievable, the project need for the Bikeway improvements in the Central Kihei area is considered essential.

The proposed landscaping and irrigation improvements will tend to enhance this corridor by implementing the first segment of the Kihei Greenway (see Figure 3).

No other irreversible and irretrievable commitments of resources have been identified in connection with the proposed action.

VIII. FINDINGS AND CONCLUSIONS:

The proposed project involves the construction of approximately 3,000± l.f. of a landscaped and irrigated bike and pedestrian path along the westerly edge of Piilani Village Phases I and II, and is parallel to and located approximately 1,000 feet west (makai) of Piilani Highway. The project site extends from the new Waipuilani Street Extension, at its northerly terminus, crosses the newly constructed Piikea Avenue (Road "C"), and extends to Lipoa Street, at its southerly terminus.

Every phase of the proposed action, expected consequences, both primary and secondary, and the cumulative as well as the short-term and long-term effects of the action have been evaluated herein in accordance with the "Significance Criteria" of Section 11-200-12 of the Administrative Rules. Based on the analysis, the proposed project will not result in any adverse impacts. Discussion of project conformance to the criteria is given below:

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

There are no known habitats of rare, endangered or threatened species of flora and fauna within the project limits. An archaeological site has been identified in proximity to the proposed Bikeway. The site has been identified as a rock shelter (Site No. 50-50-10-3529) and was evaluated as "significant". Data recovery field work has already been completed.

The land area underlying the Bikeway was reviewed by SHPD as part of the Piilani North II-A Large Lot Subdivision. The SHPD, by letter dated September 12, 1996, concluded that the large lot subdivision will have "no effect" on historic sites.

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

The project would not curtail the beneficial uses of the environment. Quite the contrary, the landscaped Bikeway and Pedestrian path will improve the beneficial use of the surrounding environment from the standpoint of improved transportation, recreation and aesthetic value.

3. The Proposed Action Does not Conflict with the State's Long-Term Environmental Policies or Goals or Guidelines as Expressed in Chapter 344, Hawaii Revised Statutes.

The State Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes. The proposed action is in conformance with the following policies and guidelines:

Environmental Policy:

Enhance the quality of life by:

> *"(c) Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian."*

Guidelines:

Transportation

> *"(a) Encourage transportation systems in harmony with the lifestyle of the people and the environment of the State"*

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

The project would directly benefit the local economy during the construction phase. In the long term, the project should have an indirect beneficial effect since the enhanced circulation system and recreational use should benefit local businesses in the area.

5. The Proposed Action does not Affect Public Health

No negative impacts to the public's health and welfare are anticipated. Quite to the contrary, the public's health and welfare may actually improve due to increased recreational activities (i.e., walking, running, bicycling, etc.) that promote exercise and its health related benefits.

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

No major population changes are anticipated as a result of the proposed project. The project is not anticipated to have adverse impacts upon medical, police and fire protection services as well as other public service systems. No major effects on public facilities are anticipated.

7. No Substantial Degradation of Environmental Quality is Anticipated

No substantial degradation of environmental quality is anticipated as a result of the project. The project responds to a need for improved transportation circulation within Central Kihei.

8. The Proposed Action does not involve a Commitment to Larger Actions, nor would Cumulative Impacts Result in Considerable Effects on the Environment

The proposed Bikeway will occupy a narrow corridor which spans approximately one mile of property. Details on additional commitments and time frame for additional extensions are uncertain at this point in time. Should additions be proposed, these will be evaluated under the appropriate permit processes. Should Federal, State or County funding be involved, environmental review would be required. Any additions west (makai) of the Piilani Highway would also be subject to County SMA review.

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

There are no rare, threatened or endangered species of flora, fauna or avifauna or their habitats on the subject property. The nearest wetland mitigation pond is approximately 1,000 feet west (makai) of the Bikeway.

10. Air Quality, Water Quality or Ambient Noise Levels would not be Detrimentally Affected by the Proposed Project

Construction activities will result in short term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind-blown emissions. Noise impacts will occur primarily from construction equipment. Construction will be limited to daylight working hours.

In the long term, the project is not anticipated to have an impact on air quality or noise levels.

11. The Proposed Project would not affect Environmentally Sensitive Areas, such as Flood Plains, Tsunami Zones, Erosion-Prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters.

The entire project area is located in Zone C, areas of minimal flooding. The project does not involve lands subject to tsunami inundation, erosion-prone areas, geologic hazards, estuaries, fresh waters or coastal waters. Hydrological calculations indicate that there will be no net increase of onsite surface runoff volume due to the proposed improvements. Drainage patterns in the area surrounding the project will not be altered.

12. The Proposed Project would not Substantially Affect Scenic Vistas and Viewplanes Identified by County or State Plans or Studies

Scenic vistas and viewplanes from the subject property are not identified in any County or State plans or studies.

13. The Project would not Require Substantial Energy Consumption

The project would ease traffic congestion within the Central Kihei area and minimize wasted time and energy.

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

IX. AGENCIES CONTACTED AND CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT:

The following agencies and organizations were contacted during the preparation of the Environmental Assessment:

1. **U. S. Army Corps of Engineers**
   Pacific Ocean Division
   Building 230
   Fort Shafter, Hawaii 96858

2. **U. S. Fish and Wildlife Service**
   Office of Environmental Services
   300 Ala Moana Blvd., Room 6307
   Honolulu, Hawaii 96813

3. State of Hawaii
   Department of Transportation
   Highways Division
   650 Palapala Drive
   Kahului, Hawaii 96732

4. Department of Land and Natural Resources
   State Historic Preservation District
   1151 Punchbowl Street
   Honolulu, Hawaii 96813

5. State of Hawaii
   Department of Health
   54 High Street
   Wailuku, Hawaii 96793

6. **Department of Planning**
   County of Maui
   250 South High Street
   Wailuku, Hawaii 96793

7. **Department of Education**
   State of Hawaii
   Maui District Office
   54 High Street, 4th Floor
   Wailuku, Hawaii 96793

8. **Kihei Community Association**
   P. O. Box 662
   Kihei, Hawaii 96753

9. **Spencer Homes, Inc.**
   P.O. Box 97
   Kihei, Hawaii, 96753

10. Attention: Leila Leong, Site Manager
    Piilani Village Shopping Center
    225 Pi'ikea Avenue
    Kihei, Maui, Hawaii 96753

11. Attention: Mr. Robert Freeman
    HBS Limited Partnership
    75-6081 Ali'i Drive, Suite N-102
    Kailua-Kona, HI 96740

12. **Piilani Gardens LLC**
    15206 Ventura Blvd., Suite 306
    Sherman Oaks, California 91403

13. Atttention: Cindy Mendes
Piilani Village Homeowners Association
Oihana Property Management
840 Alua Street, Suite 103
Wailuku, Maui, Hawaii 96793-1442

14. Attention: Rose Marie Duey, Island Representative
Alu Like, Inc.
Maui Island Center
1939 Vineyard Street
Wailuku, Maui, Hawaii 96793

15. Attention: Clara DeStafano, Pelekikena (President)
Central Maui Hawaiian Civic Club
P.O. Box 483
Kahului, Maui, Hawaii 96732

16. Attention: Nani Kekiwi, Club Advisor
Hui O Ke Ali'i
Lahaina Intermediate School
871 Lahainaluna Road
Lahaina, Maui, Hawaii 96761

17. Attention: Daniel Awai, Jr., District Supervisor
Department of Hawaiian Home Lands
Maui District Office
1063 East Main Street
Wailuku, Maui, Hawaii 96793

18. Attention: Helen Robello, Iku Hai
Hale O Na Ali'i O Hawai'i
Halau O Lili'uokalani
RR2 Box 228
Kula, Maui, Hawaii 96790

19. Attention: Coila I. Eade, Acting Director
Hana Cultural Center
P.O. Box 27
Hana, Maui, Hawaii 96713

20. Attention: William H. Ching, President
Hina-Malailena
P.O. Box 175
Hana, Maui, Hawaii 96713

21. Attention: Hanale Henry Kauhi, Executive Director
Hui Kako'o 'Aina Ho'opulapula
P.O. Box 2878
Wailuku, Maui, Hawaii 96793

22. Attention: Keoki Maka Kamaka Kiili, Maui Island Coordinator
Hui Na'auao Na Hono A Pi'ilani
P.O. Box 2546
Wailuku, Maui, Hawaii 96793

23. Attention: Mahealani Akau, Executive Director
Hui No Ke Ola Pono, Inc.
Native Hawaiian Health Care System
P.O. Box 894
Wailuku, Maui, Hawaii 96793

24. Attention: Keoki Sousa, President
Kahuna La'au Lapa'au O Maui, Inc.
P.O. Box 3103
Wailuku, Maui, Hawaii 96793

25. Attention: Natalie A. Kama, President
Keokea Hawaiian Homes Farmers Association
P.O. Box 331028
Kahului, Maui, Hawaii 96733

26. Attention: Lyons Kapi'ioha Naone, III, President
Kumu A'o
P.O. Box 814
Wailuku, Maui, Hawaii 96793

27. Attention: Desmon D. Antone, President/Co-Founder
Lae'ula O Kai
P.O. Box 694
Wailuku, Maui, Hawaii 96793

28. Attention: Joy Poe, Executive Director
Lahaina Arts Society
648 Wharf Street
Lahaina, Maui, Hawaii 96761

29. Attention: Bernice Nitta, Pelekikena (President)
Lahaina Hawaiian Civic Club
P.O. Box 191
Lahaina, Maui, Hawaii 96761

30. Attention: Jo-Ann T. Ridao, Managing Director
Lokahi Pacific
840 Alua Street, Suite 203
Wailuku, Maui, Hawaii 96793

31. Attention: Craig Henderson, Editor-Publisher
Na Po'e Hawai'i
370 Dairy Road
Kahului, Maui, Hawaii 96732

32. Attention: Sandra L. Kamai, Office Clerk
Na Po'e Kokua
P.O. Box 3006
Wailuku, Maui, Hawaii 96793

33. Attention: Linda Nelson, President
Native Hawaiian Plant Society
P.O. Box 5021
Kahului, Maui, Hawaii 96732

34. **Office of Hawaiian Affairs**
711 Kapiolani Blvd., Suite 500
Honolulu, Hawaii 96813-5249

35. Attention: Thelma Shimaoka, Community Resource Coordinator
Office of Hawaiian Affairs
Maui Office
140 Ho'ohana Street, Suite 206
Kahului, Maui, Hawaii 96732

36. Attention: Clarence K. Kamai, Jr., President
Paukukalo Hawaiian Homes Community Association, Inc.
P.O. Box 5088
Kahului, Maui, Hawaii 96732

37. Attention: Charles Kauluwehi Maxwell, Sr., Manager/President
Pukalani Hula Hale
157 Alea Place
Pukalani, Maui, Hawaii 96768

38. Attention: Kili Namau'u Kahu, Director
Punana Leo O Maui
P.O. Box 337
Wailuku, Maui, Hawaii 96793

39. Attention: K. Maka Kamaka Ki'ili, Ku'auhau
Royal Order of Kamehameha I
Chapter IV Heiau 'O Kahekiki (Maui)
P.O. Box 2546
Wailuku, Maui, Hawaii 96793

40. Attention: Lui Hokoana, Po'okela Director
University of Hawai'i-Maui Community College
Hui Lei Ola
310 Kaahumanu Avenue
Kahului, Maui, Hawaii 96732

41. Attention: Janet Allan, President
West Maui Cultural Council
Malu'ulu'olele Cultural Center
P.O. Box 906
Lahaina, Maui, Hawaii 96767

42. Attn: Ferreira, Paul and Shirley N.
Waipuilani LLC
P.O. Box 2041
Kahului, Maui, Hawaii 96732

43. **GK South Maui Investments**
P.O. Box 1896
Wailuku, Maui, Hawaii 96793

44. **Yee's Orchard**
393 Liholiho Street
Wailuku, Maui, Hawaii 96793

45. **Stewart E. Fern Estate**
4-003 Aumoana Place
Kaneohe, Oahu, Hawaii 96744

46. **Azeka Building Corporation**
P.O. Box 689
Kihei, Maui, Hawaii 96753

47. **Haggai Institute**
P.O. Box 13
Atlanta, GA 30370-2801

X. COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD AND APPLICABLE RESPONSES:

Comments were received from the following agencies and individuals.

(1) Letter from OEQC to the Department of Public Works and Waste Management (DPWWM), dated September 11, 2002.

(2) Letter dated September 10, 2002, to Joe Krueger, DPWWM from the State of Hawaii Department of Transportation.

(3) Letter dated September 17, 2002, from Walter S. Enomoto, President, Maui Bicycle Association, to Warren S. Unemori Engineering, Inc., which was hand-delivered at the Informational Meeting on September 17, 2002, at the Kihei Community Center.

(4) Letter dated September 18, 2002, from the Department of Land and Natural Resources, Historic Preservation Division.

Copies of these letters, and the responses to these letters are summarized as Exhibits in the attached response letter to Genevieve Salmonson, Director, OEQC.

DOCUMENT CAPTURED AS RECEIVED

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

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

September 11, 2002

David Goode
Department of Public Works & Waste Management
200 South High Street
Wailuku, HI 96793

Attn: Joe Krueger

Dear Mr. Goode:

Subject: Draft Environmental Assessment (EA) for **Kihei Bikeway at Piilani North**

We have the following comments to offer:

Two-sided pages: In order to reduce bulk and save on paper, please consider printing on both sides of the pages in the final document.

Community meeting: If the September 17th community meeting takes place as scheduled, include a synopsis of issues raised in the final EA.

Contacts: If you received any correspondence from contacts made during the pre-consultation phase, be sure to include copies in the final EA.

Maintenance and cleaning: Broken glass and potholes create a disincentive for cyclists to use dedicated bikeways, who then take to highway shoulders. This is a problem on some of Oahu's bike paths. Who will be responsible for maintaining the bikeway and keeping it free of clutter and broken glass?

Safety

Bikeway / motorway intersections are notorious for creating unsafe cycling situations. Motorists turning off the main road are generally not on the alert for cyclists coming out of side paths. Some cyclists, having had the right of way on the bikeway, continue to take it when they begin to blend in with motor traffic. The isolation and safety of the bikeway can also lull a cyclist into letting his guard down, which can prove hazardous or deadly in the car-bike mix.

From the layout in Figure 5 one can easily see how southbound motorists turning right onto Piikea Avenue or Lipoa Street can collide with cyclists coming off the bikeway. What

Sep 11 02 08:17a Dept. of Health (OEQC) (808) 586-4186 p.1

measures do you plan to ensure the safety of cyclists coming off of the bikeway at the end points or at street intersections?

Future facilities: Are any future bikeways planned for Kihei? Bikeways, paths or lanes going to other parts of Kihei would encourage cyclists to meet their total transportation needs by bicycle rather than by automobile.

Paving; landscaping: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible, and HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible. For the text of these sections of HRS contact our office for a paper copy or go to our website at http://www.state.hi.us/health/oeqc/guidance/index.html. Given Maui's chronic water shortage, we also recommend the use of unthirsty plants.

If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

c: Alan Unemori

Sep 11 02 08:17a Dept. of Health (OEQC) (808) 586-4186 p.2

WARREN S. UNEMORI ENGINEERING, INC. Civil & Structural Engineers • Land Surveyors
Wells Street Professional Center • 2145 Wells Street, Suite 403 • Wailuku, Maui, HI 96793 TEL: (808) 242-4403 FAX: (808) 244-4856

October 21, 2002

Ms. Genevieve Salmonson
Director
OFFICE OF ENVIRONMENT QUALITY CONTROL
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Re: Response to Your Letter to David Goode, dated September 11, 2002, Regarding the Draft Environmental Assessment (EA) for **Kihei Bikeway at Piilani North**

Dear Ms. Salmonson:

On behalf of the Department of Public Works and Waste Management (DPWWM), the following is our item-by item response to the comments and recommendations of the OEQC:

(1) ***"Two-sided pages. In order to reduce the bulk and save on paper, please consider printing on both sides of the pages in the final document."***

Response.

We will consider using both sides of pages with text only. It will be difficult for us to use both sides on pages with color photos, exhibits, or Construction Plans.

(2) ***"Community meeting. If the September 17th community meeting takes place as scheduled, include a synopsis of issues raised in the final EA.***

Response:

The September 17, 2002 community meeting took place as scheduled. Attached as Exhibit "A" please find a copy of the ***"Synopsis of Issues Raised at the Informational Meeting with Kihei Community Association (KCA) and Other Interested Parties for the Kihei Bikeway at Piikea".***

Also attached is a news article published in the October 3-16, 2002 issue of the Maui Weekly describing some of the items discussed at that meeting.

(3) *"Contacts. If you received any correspondence from contacts made during the pre-consultation phase, be sure to include copies in the final EA"*

Response:

To date, except for the letter from the OEQC to which I am responding, the only other comments we have received are as follows:

Letter dated September 10, 2002, to Joe Krueger, DPWWM from the State of Hawaii Department of Transportation. A copy of that letter stating that this project should have no impact on the SDOT's facilities, which requires no response, is attached as Exhibit "B".

Letter dated September 17, 2002, from Walter S. Enomoto, President of the Maui Bicycle Association, to Warren S. Unemori Engineering, Inc., which was hand-delivered at the Informational Meeting on September 17, 2002, at the Kihei Community Center. A copy of that letter and our response to that letter is attached as Exhibit "C".

Letter dated September 18, 2002, from the Department of Land and Natural Resources, Historic Preservation Division, and the response to that letter (see Exhibit "D")

(4) *"Maintenance and cleaning. Broken glass and potholes create a disincentive for cyclists to use dedicated bikeways, who then take to highway shoulders. This is a problem on some of Oahu's bike paths. Who will be responsible for maintaining the bikeway and keeping it free of clutter and broken glass?"*

Response:

Please refer to the *"Synopsis of Issues Raised at the Informational Meeting with Kihei Community Association (KCA) and Other Interested Parties for the Kihei Bikeway at Piikea"* (Exhibit "A") for a discussion of this issue.

The County typically assigns maintenance of detention basins and landscaping in median strips to the Department of Parks and Recreation. However, past experience in maintenance of parks, soccer fields, and median strips in the immediate project vicinity have demonstrated that the original landscaping will be overgrown unless the Kihei Community Association can organize a group of volunteers to help to maintain and/or alert the Parks and Recreation when maintenance is visibly lacking.

Attached please find a letter from Mr. Gene Thompson to Mr. Milton Arakawa, Deputy Director of the DPWWM, addressing the issue of landscaping plans and

maintenance for the Bikeway, dated September 26, 2002, (see Exhibit "E"), and the subsequent response by Mr. Milton Arakawa to Mr. Gene Thompson , dated October 4, 2002 (Exhibit "F").

(5) "*<u>Safety</u>. Bikeway/motorway intersections are notorious for creating unsafe cycling situations. Motorists turning off the main road are generally not on the alert for cyclists coming out of side paths. Some cyclists, having had the right of way on the bikeway, continue to take it when they begin to blend in with motor traffic. The isolation and safety of the bikeway can also lull a cyclists into letting his guard down, which can prove hazardous or deadly in the car-bike mix.*

From the layout in Figure 5 one can easily see how southbound motorists turning right onto Piikea Avenue or Lipoa Street can collide with cyclists coming off the bikeway. What measures do you plan to ensure the safety of cyclists coming off of the bikeway at the end points or at street intersections."

Response:

Exhibit "G" gives an example of the mitigating measures proposed for the Piikea-Liloa Street intersection and others. Mitigating measures include visual cues, including a split path, signage, contrasting textured and colored concrete on the sidewalks or truncated dome detectable warning systems immediately adjacent to the cross-walks.

Signage for vehicles alerting drivers that they are approaching a bikeway/pedestrian crossing will also be posted.

A feasibility study of the advantages and disadvantages of constructing a roundabout vs. a fully signalized intersection crossing is also underway.

(6) *<u>"Future facilities</u>. Are any future bikeways planned for Kihei? Bikeways, paths or lanes going to other parts of Kihei would encourage cyclists to meet their total transportation needs by bicycle rather than by automobile."*

Response:

The proposed Bikeway segment is part of an overall conceptual master plan prepared by the Kihei Community Association as part of the Kihei 2000 Greenway Workshop. Exhibit "H" shows the general plan. Future extensions to the proposed planned segment are to eventually extend it north to Kulanihakoi Street from the East Waipuilani Street Extension, and to extend it south from Lipoa Street to Halekuai Street.

Of course, County, State and Federal funding must be secured and budgeted prior to design and construction of the extensions.

(7) *"Paving, landscaping. Hawaii Revised Statues 103D-407 requires the use of recycled glass in paving materials whenever possible, and HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible... Given Maui's chronic water shortage, we also recommend the use of unthirsty plants."*

Response:

In response to a similar request on another project for the DPWWM, Mr. Norman Shinno of Grace Pacific (Phone: 877-2755) on Maui was contacted on January 24, 2002, for his opinion of the use of glassphalt. He stated that glassphalt is used in the base course only - not on the paved surface as the asphalt does not stick to glass as it does to conventional aggregate. He also stated that on windy days it poses somewhat of a hazard to laborers.

Mr. Shinno also suggested a call to Mr. Ed McCary of the State Department of Transportation Material Testing and Engineering Lab. Mr. McCary was contacted (Phone: 873-3535) and confirmed that glassphalt is used only as the base course material in roadways when cullet (crushed glass) is available. Mr. McCary also stated that during cold-planing of highways constructed with glassphalt, glass does get into the air.

Use of glassphalt is also undesirable as a surface course since glass is much more reflective than conventional aggregate and could pose more of an annoyance or hazard for users.

If cullet is available, the General Contractor will be requested to comply with the State requirement to use it whenever cullet is available.

With respect to the use of native Hawaiian flora and "unthirsty" plants, Landscape Architects from PBR Hawaii, a Landscape Architect firm on Oahu, have been consulted to recommend the selection of landscaping material from native Hawaiian and other species that should thrive in the project location. Also, the immediate project scope includes the construction/extension of an existing R-1 reclaimed water line from the Piilani Village (Safeway) Shopping Center site up through the proposed Bikeway to supply water for irrigation.

If you have any further questions or comments, please call me at (808) 242-4403.

Sincerely,

Alan L. Unemori
Vice President

cc Milton Arakawa, DPWWM
Joe Krueger, DPWWM
Russel Chung, PBR Hawaii
Glen Karamatsu, ECS

Synopsis of Issues Raised at the Informational Meeting with Kihei Community Association (KCA) and Other Interested Parties for the Kihei Bikeway at Piikea

Date: September 17, 2002

Place: Kihei Community Center

Start Time: 6:30 pm

EXHIBIT A

Meeting Agenda: (see attached)

Presentation Team:

Department of Public Works and Waste Management

- o Milton Arakawa, Deputy Director
- o Joe Krueger, Engineer

Warren S. Unemori Engineering, Inc.

- o Clifford Mukai, Project Manager and Project Presenter
- o Alan Unemori, Environmental Assessment Coordinator

PBR Hawaii

- o Russel Chung, Landscape Architect

Scientific Consultant Services, Inc.

- o Leann McGerty, Preparer of the Cultural Practices Assessment Report

Summary of Presentation:

A PowerPoint presentation was given by Clifford Mukai that discussed or displayed the following items:

(1) History of the Project, starting from development of conceptual plans, meetings with the community, County, State and Federal Agencies, preliminary plans, refinement of preliminary plans through community feedback, final plans, updates to the KCA Planning & Development Committee

(2) History of the Environmental Permitting Process, including securing of Categorical Exclusion (no Federal EA required), publication of the Draft EA in The Environmental

Notice August 23, 2002, issue, targeted publishing date of the Final EA in The Environmental Notice, targeted end of the 30-day legal challenge period

(3) Pre-final plans had been submitted for agency review and approval. (Two sets of Construction Plans and two copies of the Draft EA Report were on display for anyone interested in reviewing them)

(4) Digital photos showing that the existing, unpaved trails are being used by residents in the neighborhood

(5) Aerial photos showing the location, orientation and extent of the proposed Bikeway

(6) Extensive digital photos simulating a "walk" along the length of the corridor in which the proposed Bikeway will be built, including the existing development mauka and makai of the corridor

(7) Digitized exhibits showing typical cross-sections of the Bikeway, including the geometry of the paved surface, material composition, inclusion of a 12" waterline for landscape irrigation, and the planned use of shade trees

(8) General guidelines which should promote safe use of the path by pedestrians, joggers, in-line skaters, bicyclists and appropriate signage

(9) Details of the pedestrian crossings and intersection approaches giving visual cues to pedestrians and bicyclists that they are approaching an intersection, and ADA compliance

(10) Status of the Liloa-Piikea intersection, which has already been master-planned by County, State and Federal agencies to be signalized and underground infrastructure already constructed

(11) Status of construction of the signalized Liloa-Piikea intersection being placed on hold pending a feasibility study of constructing an alternate roundabout (aka rotary) proposed at the last KCA workshop with respect to pedestrian safety, traffic flow, minimum geometry within the available roadway right-of-way

(12) Issue of Community involvement in maintaining the planned landscaping of the Bikeway and the possible future addition of such items as exercise stations, benches, functional water fountains, etc. Organization of an "Adopt-a-Segment" Maintenance program by the Community was suggested as one way by which the Bikeway landscaping could be properly maintained.

(13) A series of digital photos of the proposed planting materials, including theme trees, accent trees, available native Hawaiian trees, shrubs, available native Hawaiian shrubs, ground covers, etc. were then shown

(14) A series of digital photos of proposed lighting selections, and the final lighting selection were shown. The criteria for the lighting selection included community input, aesthetics, control of lateral diffusion of light to surrounding residences, and resistence to potential vandalism

The PowerPoint presentation was then concluded, and the audience was invited to provide any questions and/or comments

Issues Raised:

(1) Construction schedule - what is the timetable for completing the construction of the proposed segment of the bikeway?

Response:

Given the current status and the targeted completion of the EA process by December 9, 2002, construction could begin as early as Summer, 2003, after which the Bikeway could be completed by Winter, 2003.

(2) Roundabout - what issues will be included in a feasibility study of use of a roundabout?

Response:

Typical issues would include (1) safety of pedestrians in the roundabout, (2) familiarity of drivers with operating a vehicle in a roundabout, (3) efficiency of traffic flow and possible backups to adjacent signalized intersections, (4) minimum radius of the roundabout, particularly for heavy trucks delivering shipments to Safeway, (5) availability of land surrounding the intersection, (6) conformance with State and Federal Funding for the signalized intersection vs. replacement funding for a roundabout

(3) Roundabout - what is the status of the feasibility study of the roundabout, and when can we expect the feasibility study of the proposed roundabout to be available for public review?

Response:

This is currently being evaluated by the County and their consultants. Preliminary findings will be reviewed by the County in a few weeks.

(4) Priorities of automobile traffic vs. bicycle traffic - since in reality bicyclists have to yield to automobile traffic at all intersections, can the County close off automobile traffic at minor intersections, specifically the Kauha'a Street intersection entering/exiting the Meadowlands II Subdivision?

Response:

Since the Kauha'a Street intersection already exists, all permits have been approved, and the roadway, including intersection, has already been dedicated to the County, it would probably be illegal to close off that intersection unless one can somehow obtain a consensus from the residents of the Meadowlands subdivision who would be directly affected by the closing of the roadway. Also, the Fire and Police Departments would probably need to be consulted for the reduction of their access options in responding to emergencies.

(5) Maintenance - is the maintenance of the Bikeway the responsibility of the Parks and Recreation Department and shouldn't it be their responsibility to do so?

Response:

While the maintenance of the Bikeway falls under the responsibility of the Parks and Recreation Department, realistically, unless community volunteers take an active part in maintaining the Bikeway, past experience in maintenance of parks, soccer fields, and even median strips in the vicinity has shown that original landscaping will soon be overgrown with weeds. (Testimony to this effect was volunteered from some members in the audience). It was also pointed out that in an article published in the Maui News in July, 2002, the Deputy Director had asked for "community partners" or volunteers in maintaining the Bikeway, but had received little response from the Community.

Unemori, Alan L.

From: Martha Green [marthagreen@hotmail.com]
Sent: Friday, September 13, 2002 1:11 PM
To: Unemori, Alan L.
Subject: KCA Agenda For 09/17/02

Kihei Community Association

Community Meeting Agenda

September 17, 2002

- **Maui Electric Co.'s wireless antenna program**
- **The county's plans for the Kihei Greenway**
- **"Kai Makani" 112-unit multi-family residential planned development located across from Maipoina Oe Lau Beach Park**
- **"Cove Beach Villas" a 13-unit condominium project on Kalama Street.**

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10/21/2002

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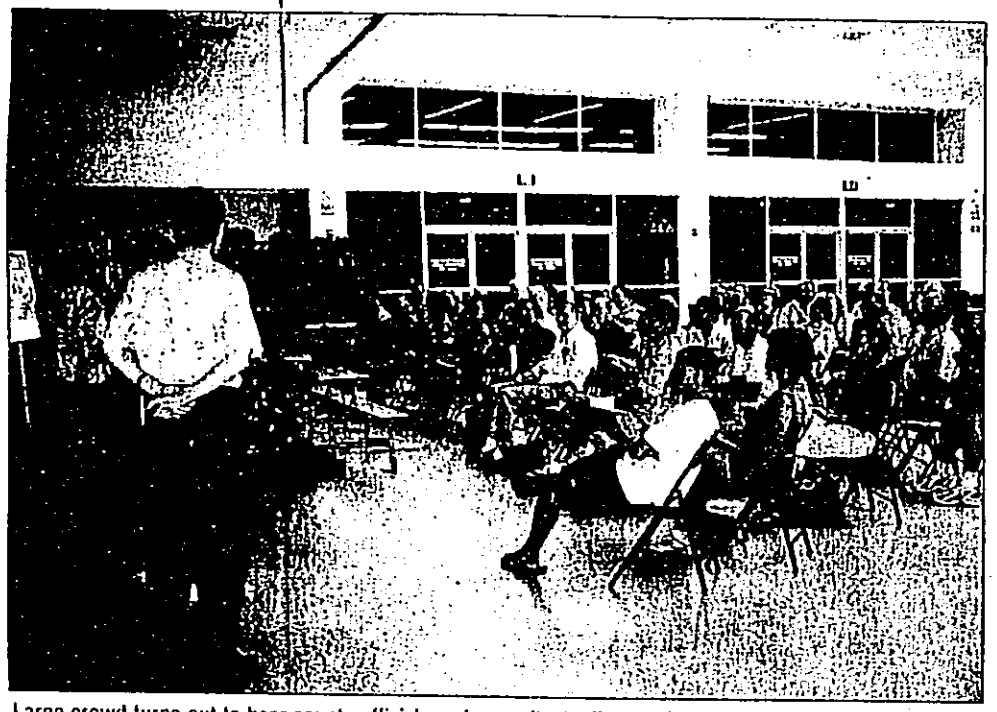


Large crowd turns out to hear county officials and consultants discuss the planned Kihei Greenway project at the Kihei Community Association meeting last month.

Consultant Clifford Mukai of Warren Unemori Engineering explains the details of the project.

Greenway given green light

Finally, after 12 years the first phase of the Kihei Greenway will be built. Shortened version disappoints many but it's a start.

Amy Huyett

After more than 12 years of planning, designing and waiting, the county is in its final stages of preparing for the construction of the first phase of the Kihei Greenway, said Milton Arakawa, deputy director of the county Department of Public Works and Waste Management at a Kihei Community Association Planning and Development meeting Sept. 17.

While what the county is proposing is still one-third short of the original 1-mile plan, the county is concentrating on the shortened version for the time being.

"Everyone has waited a

could hold it up longer, such as the permitting processes. The only thing that remains is final design approval from county, state and federal agencies to ensure details such as safety and accessibility guidelines are in place, and that is expected to take anywhere from a few months to six months.

"We are excited about how far this has come," he said. "And ideally we will begin the construction by the middle of next year."

If everything is approved as expected, the greenway will be a north-south, 3,000-foot multi-use trail on the

pavement markings, and textured colored concrete to alert users of upcoming pedestrian crossings. The total construction costs are estimated at $1 million, using county, state and federal funds.

"We are looking to the community for a lot of the aesthetic planning. Their involvement will determine things such as landscaped islands, exercise stations, benches and water stations, and beautification," Mukai said. "The funding has its limits and we are concentrating on building a good, solid path. The basics are fine, but

nity or business-based partners would step forward to help maintain the greenway.

"If different entities get into the spirit and help take charge of upkeep that would make a big difference," he said. "But if we get no volunteers, then we will have to figure something else out because maintenance is key."

But even though there is general enthusiasm for construction to begin, concerns about safe pedestrian crossing, additional intersections, and variations from the original community vision have caused skepticism and weariness among community members.

There are now four intersections within the 3,000-foot project and a decision is yet to be reached on the proposal for a roundabout to replace the four-way stop at Piikea and Liloa streets.

Public Works Deputy Director Arakawa said that the feasibility for a roundabout at this intersection is currently being evaluated by a Honolulu consulting firm and the results will hopefully be ready in a few weeks.

"Literature shows that roundabouts can be very effective in certain situations. We currently have none on Maui and are not sure that this is the right place to try it, but we are willing to see," Arakawa said. "Right now we are building the greenway, assuming the existing conditions of the four-way stop, and if a roundabout was to go in there would have to be minor modifications."

And Mukai said that because the intersection was master planned to be lighted, it is conceivable that it would have traffic lights installed within a couple of months.

"We knew that safe crossings would be a challenge," he said. "And we discussed this with several traffic engineers who were unanimous that traffic lights are the safest way to go."

The county's plan also cut the original greenway proposal by one-third, leaving out the section of Kulanihakoi to Waipuilani, and many wanted to know when the rest of it will be built.

But Arakawa said that any additions to the greenway are not being discussed and that at this point, this is the only segment on the table.

"This is the first section, but we do hope to build on it someday," he said. "Other plans will have to be taken back to the drawing board."

The county is also waiting for final reports from an ongoing traffic analysis that will determine if there will be sufficient traffic demand to justify turning Liloa Drive into four lanes. Such a decision could have a major impact on the plans to continue the greenway route north of Waipuilani Road. ■

"FESTA ITALIANA"
Saturday, October 19, 2002
from 5 pm 'til 9 pm
at the Kihei Community Center
(corner of Lipoa & Piilani)
Delicious Pasta, Salads

While what the county is proposing is still one-third short of the original 1-mile plan, the county is concentrating on the shortened version for the time being.

"Everyone has waited a long time for this," Arakawa said. "And because this plan got its genesis from the KCA, we wanted to share where we are at right now. We are just as anxious to start this as you."

Clifford Mukai, of Unemori Engineering, said that the plan has already overcome milestones that

said. "And ideally we will begin the construction by the middle of next year."

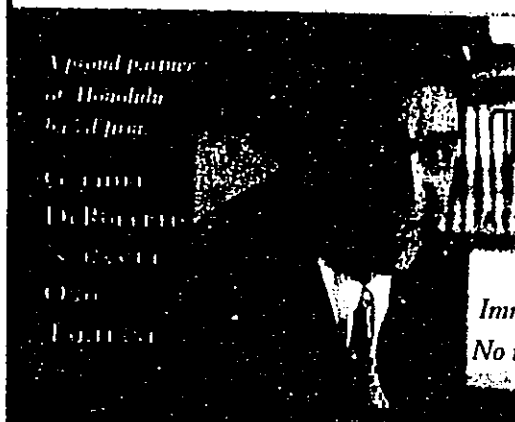
If everything is approved as expected, the greenway will be a north-south, 3,000-foot multi-use trail on the makai side of Liloa Drive from Waipuilani Road to Lipoa Street, Mukai said. The total paved width will be 12-feet and landscaping such as trees for shade is proposed to the extent possible.

There will be signs displaying the rules for users and there will be visual cues like changes in alignment,

islands, exercise stations, benches and water stations, and beautification," Mukai said. "The funding has its limits and we are concentrating on building a good, solid path. The basics are fine, but beyond that financing will need to be taken on at the community level."

And although the county is ultimately responsible for maintenance of the greenway, Mukai said that upkeep will be a challenge and that they are looking for community partners to help. He expressed hope that commu-

EXPERIENCE & UNDERSTANDING



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DIRECTOR

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GLENN M. OKIMOTO
JADINE Y. URASAKI

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

IN REPLY REFER TO:
HWY-M2.299-02

September 10, 2002

MEMORANDUM

TO: **Joe Krueger**
Department of Public Works & Waste Management

FROM: **Paul M. Chung**
State Highways

SUBJECT: **Proposed Kihei Bikeway at Piikea**
Job No. 01-14

Thank you for the opportunity to review and comment on the proposed bikeway project in Kihei. Based upon our review, it appears that this project should not impact our facilities, therefore, we have no comments to offer.

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

/pmc

EXHIBIT B

EXHIBIT C

Date: September 17, 2002

To: Warren S. Unemori Engineering Inc.

From: Walter S. Enomoto,

RE: **Draft Environmental Assessment-Construction of Kihei Bikeway at Piilani North. August 2002.**

Thank you for sending me an advance copy of the Draft Environmental Assessment for the Construction of the Kihei Bikeway at Piilani North. I would like to provide comments on the following items found in the draft environmental assessment. If you could, please respond to me in writing concerning some of the points raised as follows:

1) Page 35, item #5.
" *Proposed Action Does Not Affect Public Health.*"
"No impacts to the public's health and welfare are anticipated."

Suggest changing statement to read as follows:
" No negative impacts to the public's health and welfare are anticipated. Quite to the contrary, the public's health and welfare may actually improve due to increased recreational activities (i.e. walking, running, bicycling, etc) that promote exercise and its health related benefits."

2) Appendix B of the Soil Erosion Plan.
The need for a tire cleaning pad is questionable. The path itself is paved asphalt and landscaping along the Bikeway will limit the inclusion of mud or debris that would mandate the need for this feature. The other issue is how this pad works after water gets on it. Will traction be reduced beyond acceptable limits?? Would the build up of dirt, mud and debris along with water make it more slippery??

3) Due to the speed differential and potential for user conflicts along the Bikeway, I suggest that the use of mopeds along the Bikeway not be allowed. It would also goes against the non-motorized philosophy that this Bikeway (Greenway) embodies.

4) In any future projects of the Kihei Bikeway, change wording of "Bikeway" to "Greenway". The name "Greenway" more accurately defines the multi-use feature of this project. "Bikeway" implies that only bicyclists are allowed on this facility.

5), Appendix C. page 1, Under Project Description.
"...irrigation (*expected* to be supplied from the County's reclaimed wastewater transmission line),..."

Has the use of this water been confirmed by Department of Public Works and

Transportation yet? If not, have alternative sources been investigated?

6) No bicycling group (most notably absent was Bikeways Maui Inc. and the Mayor's Bicycle Advisory Committee) was listed in the agencies contacted or consulted in the preparation of the Environmental Assessment. It is unacceptable for a project specifically orientated towards bicycling not to include **any** bicycling / pedestrian representative group. **All** future bicycling and/or pedestrian related facility projects **must** include at least the above named groups in the preparation of plans and assessments.

7) The length of time to submit comments on this E.A. is also unacceptable. Only seven days were allowed to voice comments regarding this E.A. from its first public forum (September 17) to the end of the comment period (September 23rd). Adequate notice and comment period should be adhered to in the future.

8) Concerning the "accessible route" near the intersection of Kauha'a St. and Liloa Drive shown in Appendix A. sheet 7 of -, was this done to accommodate ADA requirements?

9) Appendix A, sheet 7, at the *Kauha'a St. and Liloa Drive Intersection*, where the Bikeway meets the intersection:
Rather than have bike/ peds cross at the intersection (where they will have to watch for vehicular traffic from four possible directions) can the Bikeway remain straight through but use a slightly raised crosswalk on Kauha'a St.? Bike /peds would only have to be watchful of two way traffic at this crossing and the wide (12ft) raised crosswalk section will help to keep vehicular speed down along Kauha'a St. Sidewalks that extend to Liloa Drive could be installed at a future point in time along with crosswalks across Liloa Drive to allow bicyclists and peds to access Piilani III and the existing park and retention basin mauka of Liloa Drive.

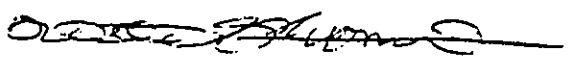
10) Regarding signage along the Bikeway, how will signage, near the intersections of Piikea St. and Liloa Drive and Lipoa St. and Liloa Drive, keep vehicles heading south and turning makai from possible collisions with bicyclists and pedestrians?

11) Are there plans for any type of barriers to be installed at access points along the Bikeway?

12) Are or have the construction plans been finalized yet ? Can we inspect these plans prior to construction starting ?

Thank you for the opportunity to comment on this Draft Assessment. I can be reached in the following manner listed on the following page. If you could respond to these items in writing by October 8, 2002, I would appreciate it very much.

Sincerely,



Walter S. Enomoto

293 So. Mokapu St.
Kahului, HI 96732

Home Phone: 877-5947

Cell Phone: 870-0130

E-mail: wenomoto@juno.com

WARREN S. UNEMORI ENGINEERING, INC. Civil & Structural Engineers • Land Surveyors
Wells Street Professional Center • 2145 Wells Street, Suite 403 • Wailuku, Maui, HI 96793 TEL: (808) 242-4403 FAX: (808) 244-4856

October 21, 2002

EXHIBIT C

Mr. Walter S. Enomoto
President
MAUI BICYCLE CLUB
293 S. Mokapu Street
Kahului, HI 96732

Re: Response to Your Comments, dated September 17, 2002, on the "Draft Environmental Assessment - Construction of Kihei Bikeway at Piilani North", August, 2002

Dear Walter:

Thank you for taking the time to prepare your comments to the Draft Environmental Assessment (EA) Report for the above project. The following is our item-by-item response to your comments.

(1) *Page 35 (should be page 38), EA item #5. "Proposed Action Does not Affect Public Health".*

"No impacts to the public's health and welfare are anticipated"

Suggest changing statement to read as follows:

"No negative impacts to the public's health and welfare are anticipated. Quite the contrary, the public's health and welfare may actually improve due to increased recreational activities (i.e., walking, running, bicycling, etc.) that promote exercise and its health related benefits."

Response:

Agreed

(2) *Appendix B of the Soil Erosion Plan.*

"The need for a tire cleaning pad is questionable. The path itself is paved asphalt and landscaping along the Bikeway will limit the inclusion of mud and debris that would mandate the need for this feature. The other issue is how this pad works after water gets on it. Will traction be reduced beyond

acceptable limits? Would the build-up of dirt, mud and debris along with water make it more slippery?

Response:

There is a fundamental misconception here. The tire cleaning pad will be constructed as a temporary measure to minimize the amount soil which may be picked up by construction equipment tires from the project site during construction only (and therefore minimize the amount of soil which can deposit onto the paved surfaces of Liloa and nearby streets). It will be constructed and used only during the construction phase, after which it will be removed. This is a standard method by which the County requires Contractors to minimize soil erosion from the site.

Other County Public Works requirements include the use of dust fences to minimize the amount of airborne dust from blowing over to adjacent owner's properties, and silt fences to keep silt deposits generated during construction from entering and clogging the existing drainage infrastructure near any given construction site.

(3) ***Due to the speed differential and potential for user conflicts along the Bikeway, I suggest that the use of mopeds along the Bikeway not be allowed. It would also go against the non-motorized philosophy that this Bikeway (Greenway) embodies.***

Response:

According to the DPWWM, they have sent Corporate Counsel a request to prepare an ordinance to restrict motorized users (except wheel chairs) from using bikeways and greenways. The existing state traffic codes and county ordinances currently do not address this issue.

(4) ***In any future projects of the Kihei Bikeway, change wording of "Bikeway" to "Greenway". The name "Greenway" more accurately defines the multi-use feature of this project. "Bikeway" implies that only bicyclists are allowed on this facility.***

Response:

This project was first proposed as a "Multi-Use Trail". Also, according to the DPWWM, there is a "Waimea Trails and Greenways" project on the Big Island. Therefore, in future projects, either "Multi-Use Trail" or "Greenway" would be acceptable.

(5) *Appendix C, page 1, Under Project Description*

"... irrigation (expected to be supplied from the County's reclaimed wastewater transmission line) ..."

Has the use of this water been confirmed by Department of Public Works and Transportation yet? If not, have alternative source been investigated?

Response:

At the time of the release of the Preliminary Drainage Report (March, 2002), the County was in the process of amending the proposed scope of work for the Bikeway to include the extension of the R-1 reclaimed water system which currently ends at the Safeway Piilani Commercial Village Soccer Field/Detention basin.

Since then, the scope of work has been amended to include extending that line in order to provide irrigation of the landscaping along the proposed Bikeway. Both the Department of Public Works and Department of Transportation are aware of its inclusion in the plans for construction of the Bikeway.

One alternative would be to use potable water, which is more expensive than reclaimed water, which is generated daily at the Kihei Wastewater Treatment Facility across Piilani Highway south of Piilani Commercial Village.

Another alternative which has been used for irrigation of Piilani Phase I is nonpotable water from a well which was developed before the R-1 reclaimed water from the Kihei Wastewater Reclamation Facility was available. However, operation and maintenance of the well is costlier than the use of the R-1 reclaimed water from the Kihei Wastewater Treatment Facility.

(6) *No bicycling group (most notably absent was Bikeways Maui Inc., and the Mayor's Bicycle Advisory Committee) was listed in the agencies contacted or consulted in preparation of the Environmental Assessment. It is unacceptable for a project specifically oriented toward bicycling not to include any bicycling/pedestrian representative group. All future bicycling and/or pedestrian related facility projects must include at least the above named groups in the preparation of plans and assessments.*

Response:

The purpose of the EA process is to contact as many groups that the County (or private sector) is aware of that would have any interest in the project. That is why the public is notified through publication of The Environmental Notice.

Both the authors of the EA Report and The Maui Bicycling Club were in fact, notified by the OEQC, and a copy of the Draft EA sent to the Maui Bicycling Club directly. This project has also been discussed with the Kihei Community Association for a number of years (as far back as 1996 to my knowledge), over which time several informational meetings with the Kihei Community Association have been conducted. We apologize for the oversight in notifying the above-named groups.

An article in the Maui News, dated July 15, 2002, also included an appeal by the Deputy Director of the DPWWM for input and for "community partners" to help maintain the proposed Bikeway (see attached)

(7) ***The length of time to submit comments on this EA is also unacceptable. Only several days were allowed to voice comments regarding this EA from its first public forum (September 17) to the end of the comment period (September 23). Adequate notice and comment period should be adhered to in the future.***

Response:

The length of the EA process is dictated by the OEQC. As a result of the EA process, the OEQC, who had knowledge of the existence of the Maui Bicycling Club, requested that we immediately contact them, which we did that very same day. Also, this was not the first public forum on this project. Its planning has been going on with the help of the Kihei Community Association for years. Any initial omissions from the notification lists were inadvertent.

(8) ***Concerning the "Accessible route" near the intersection of Kauha'a Street and Liloa Drive shown in Appendix A, sheet 7 of -, was this done to accommodate ADA requirements?***

Response:

Yes. The slope of the main path further west of the "accessible route" does not meet ADA criteria for maximum slope and frequency of landings. It was therefore incorporated to comply with ADA requirements.

(9) ***Appendix A, Sheet 7, at the Kauha'a St. and Liloa Drive Intersection, where the Bikeway meets the intersection:***

Rather than have bike/peds cross at the intersection (where they will have to watch for vehicular traffic from four possible directions) can the Bikeway remain straight through but use a slightly raised crosswalk on Kauha'a St.? Bike/peds would only have to be watchful of two way traffic at this crossing and the wide (12ft) raised crosswalk section will help to keep vehicular speed

down along Kauha'a St. Sidewalks that extend to Liloa Drive could be installed at a future point in time along with crosswalks across Liloa drive to allow bicyclists and peds to access Piilani III and the existing park and retention basin mauka of Liloa Drive.

Response:

Pursuant to public input received at the Informational Meeting requesting that we straighten out the bikeway at this crossing, and based on our subsequent telephone conversation with the DPWWM, it is our understanding that the County will be checking with the Meadowlands Subdivision association whether they prefer to have the Kauha'a Street connection to Liloa Drive closed. We further understand that the County may need to evaluate any traffic impacts to South Kihei Road from such a closure. Until such time that these findings are obtained, the Multi-Use Trail will cross the intersections at the designated crosswalks.

(10) *Regarding signage along the Bikeway, how will signage, near the intersections of Piikea St., and Liloa Drive and Lipoa St., and Liloa Drive keep vehicles heading south and turning makai from possible collisions with bicyclists and pedestrians?*

Response:

Signage will be implemented in accordance with the "Manual of Uniform Traffic Control Devices" Guidelines.

(11) *Are there plans for any type of barriers to be installed at access points along the Bikeway.*

Response:

Construction Sheets 9.1 and 9.2, "Intersection Details" show the location of 4" diameter removable pipe stanchions at the access points for bicycles designed to keep vehicular traffic from encroaching onto the Bikeway. Details of the removable pipe stanchions are shown on Construction Sheet 8.1. These are designed to be removable for access and occasional use of the paved bikeway by Maui Electric Co., telephone, cable, Department of Water Supply and Department of Wastewater Reclamation Division utility trucks for maintenance purposes.

(12) *Are or have the construction plans been finalized yet? Can we inspect these plans prior to construction starting?*

Response:

Construction Plans are in the pre-final stage, and have been submitted to appropriate review agencies for their comments and approval. Two sets of Preliminary Construction Plans were made available for public review and comments at the Informational Meeting on September 17, 2002. Final Construction Plans can be inspected prior to construction start by requesting the DPWWM for a chance to review them.

I hope that our item-by-item response is helpful to your understanding of the design elements of this project. If you have any further questions, please call me at (808) 242-4403. In my absence, please ask for Clifford Mukai. Thank you.

Sincerely,

Alan L. Unemori
Vice-President

cc Milton Arakawa, Deputy Director, DPWWM
Joe Krueger, DPWWM

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Input sought for planned bicycle path

KIHEI – Maui County is preparing plans for a bicycle path to run along Liloa Drive in Kihei as an initial phase of a Kihei greenway system but is asking for community groups and businesses to participate in the project.

Deputy Public Works Director Milton Arakawa said the county is planning a landscaped bikeway but will need "community partners" to help in maintaining the greenway.

"The County of Maui has finite maintenance resources which are used to maintain roadways and other public facilities around the island," he said in a news release.

The county would want volunteers to assume responsibility for maintaining the landscaping along the bikeway when it is constructed, he said.

With community partnerships, a higher level of landscaping can be provided, he said.

The Kihei Greenways System Conceptual Plan calls for a single 12-foot-wide asphalt-paved pathway that could be used by bicyclists and pedestrians. There would be traffic controls, lighting and benches along the route, along with landscaping with trees and shrubs.

For information on participating, call Arakawa at 270-7845.

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EXHIBIT D

BENJAMIN J. CAYETANO
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STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
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601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

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September 18, 2002

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

Dear Mr. Goode,

SUBJECT: **National Historic Preservation Act Section 106 Review and Chapter 6E-8 Historic Preservation Review Pertaining to an Information Request for the Proposed Construction of the Kihei Bikeway at Pi`ikea Waiohuli Ahupua`a, Wailuku District, Island of Maui**
TMK: (2) 3-9

Thank you for the opportunity to provide comments pertaining to the information request for the proposed construction of the Kihei Bikeway at Pi`ikea, which was received by our staff August 22, 2002. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was conducted of the subject property.

Based on the submitted information request, we understand the proposed undertaking will utilize both County and Federal funding, will consist of the construction of a 12-foot wide bikeway located on the makai side of Liloa Street (North-South Collector Road) between the recently completed East Waipuilani Street Extension and Lipoa Street, and will tie into the existing crosswalks at each intersection.

A search of our records indicates an archaeological inventory survey has not been conducted of the subject property. The Kihei area, in general, once was the location of pre-Contact farming, perhaps with scattered houses and burials. Known historic sites in the general Kihei area include Kilolani Congregational Church, which is associated with David Malo, the associated cemetery, fishponds, backdune marshlands and agricultural deposits, and house sites.

In 2001, Cultural Surveys Hawaii conducted an archaeological inventory survey of the adjacent section of the North-South Collector Road (which extended from Kulanihako`i Street to Waipuilani Street). During the survey, no historic sites were identified (Borthwick et. Al. 2002).

At present we have not received the construction plans for the proposed bikeway and do not know the extent of related ground-altering activities (if any). Therefore, we are not able to provide comments at this time. Please supply us with more information on the construction plans and ground alteration, so we can complete our review.

If you have any questions, please call Cathleen Dagher at 692-8023.

Aloha,

Gilbert Coloma-Agaran
State Historic Preservation Officer

CD:jen

RECEIVED
COUNTY OF MAUI
2002 SEP 25 P 3:22
ENGINEERING DIVISION
DEPT. OF PUBLIC WORKS

WARREN S. UNEMORI ENGINEERING, INC. Civil & Structural Engineers • Land Surveyors
Wells Street Professional Center • 2145 Wells Street, Suite 403 • Wailuku, Maui, HI 96793 TEL: (808) 242-4403 FAX: (808) 244-4856

October 9, 2002

Mr. Gilbert Coloma-Agaran
State Historic Preservation Officer
DEPARTMENT OF LAND AND NATURAL RESOURCES
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, HI 96707

Re: Response to Your Letter to Mr. David Goode, Department of Public Works and Waste Management (DPWWM), County of Maui, dated September 18, 2002, concerning the Proposed Construction of the Kihei Bikeway at Piikea

Dear Mr. Coloma-Agaran:

Thank you for your comments to the information request for the above project. Pursuant to your point that a search of your records indicates that an archaeological inventory survey has not been conducted on the subject property, in the Draft Environmental Assessment Report, Chapter III, "Description of the Existing Environment", Section A, "Physical Environment", Item (7), "Archaeological Resources", we stated the following:

> *"The Final Environmental Assessment for the Road 'C' and North-South Collector Road reported that an archaeological inventory survey undertaken by Xamanek Researchers in 1995 found one (1) archaeological site, a rock shelter, which was designated State Historic Preservation Division (SHPD) Site No. 50-50-10-3529. Site 3529 is not affected by the Kihei Bikeway.*
>
> *That Report also stated that a known historic site (Historic Site 50-50-1710) is located approximately 102 feet south of the Lokelani Intermediate School parcel. Site 1710 was outside the Road 'C'/North-South Collector project site.*
>
> *That Report also stated that the land area underlying the North-South Collector road segment which extends north of Road 'C' (and which contains a portion of the Kihei Bikeway) was reviewed by SHPD as part of the Piilani North II-A Large Lot Subdivision. The SHPD, by letter dated September 12, 1996, concluded that the large lot subdivision will have 'no effect' on historic sites (see attached letters contained in Appendix 'B')."*

Attached for your reference are the letters contained in Appendix "B" of the Draft Environmental Assessment Report.

With respect to your request for construction plans for the proposed bikeway, we have also attached a copy of Appendix "A" of the Draft EA Report, which shows the Preliminary Plans and Profiles for the portion between East Waipuilani Street Extension to Lipoa Street).

Please call me if your have any questions or if we can provide you with any additional information on this important project.

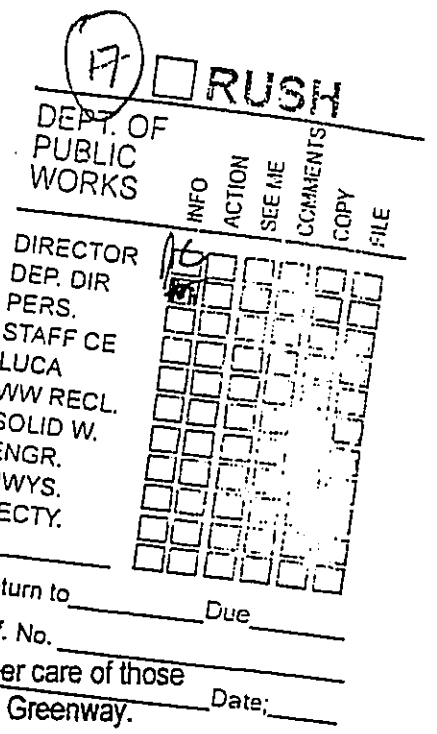
Sincerely,

Alan L. Unemori
Vice-President

cc David Goode, *Director, DPWWM*
Joe Krueger, DPWWM

EXHIBIT E

September 26, 2002



Mr. Milton Arakawa 02 SEP 30 P1:50
Department of Public Works
200 South High St. COUN
Wailuku, HI 96793 PUB

RE: Landscape Plans for Future Central Kihei Greenway

Dear Milton:

Because I have had a lot of experience with public landscapes and volunteer care of those landscapes, I have suggestions on how to proceed with the landscape of the future Greenway.

We have to accept the fact that many of our public landscapes have not done well because lack of funds and qualified people to care for them. If we are not careful with the Greenway landscape, it too could degenerate into a mass of weeds with dead and half dead trees. ie: The streetscape of Alanui ke Alii in Kihei.

I suggest aiming low. Plant only tree varieties that give good shade yet require minimal care. At this point, no grass, no shrubs unless in areas where reliable volunteer groups agree to maintain them. I can speak from experience that volunteers, especially qualified ones, are hard to find unless the work required is minimal.

In the matter of volunteers, I suggest organizing them, training them and providing them with written information as to what they are expected to do. Keep an organization going. I would be pleased to help organize this and would like to care for a sample area to start with.

The landscape should be limited to varieties of hardy shade trees that do nor grow too big; milo trees come to mind. The care could be pretty much limited to checking out the watering, trimming sucker growth, some weed removal and fertilizer.

If, in the future, the volunteers are more enterprising than hoped for, we could get into additional planting. Meanwhile, I'd rather see something that works that something elaborate that goes to pot. We don't want a boondoggle!

Thanks for listening,

Gene Thompson
2531 So. Kihei Road C-502
Kihei, HI 96753

Tel: 879-2758

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

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

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

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

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

TRACY TAKAMINE, P.E.
Wastewater Reclamation Division

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

BRIAN HASHIRO, P.E.
Highways Division

JOHN D. HARDER
Solid Waste Division

October 4, 2002

EXHIBIT F

Mr. Gene Thompson
2531 South Kihei Road, C-502
Kihei, Maui, Hawaii 96753

RECEIVED
OCT 09 2002
WARREN S. UNEMORI ENGINEERING, INC.

Dear Mr. Thompson:

Thank you for your letter of September 26, 2002 pertaining to landscaping for the Kihei Bikeway at Pi`ikea project. We can certainly understand your sentiment regarding planting trees and landscaping that will be maintained well. I have asked our landscape architect for the project, Russell Chung from PBR Hawaii, to contact you regarding your suggestions on specific landscape species.

We also appreciate your offer to help organize volunteers to assist with the landscape maintenance. As you know, maintenance is often overlooked, but is one of the keys to retaining the appeal and popularity of a public place. Since the Department of Parks and Recreation has worked with a number of volunteer groups in the past, we will be coordinating with them, as well as interested individuals such as yourself on this issue.

We are also looking into the possibility of earmarking some monies from our Highways Fund for maintenance of medians and bikepaths. The concept would involve hiring County staff to be used solely for the purpose of highway, median and bike path landscape maintenance. Hopefully, additional resources to be utilized for maintenance purposes will help to retain a higher level of aesthetics for our public facilities.

We are hopeful that this project sets the tone for future projects. We again thank you for your offer to help and look forward to working cooperatively with you to bring this project to fruition.

Sincerely,

for DAVID GOODE
Director

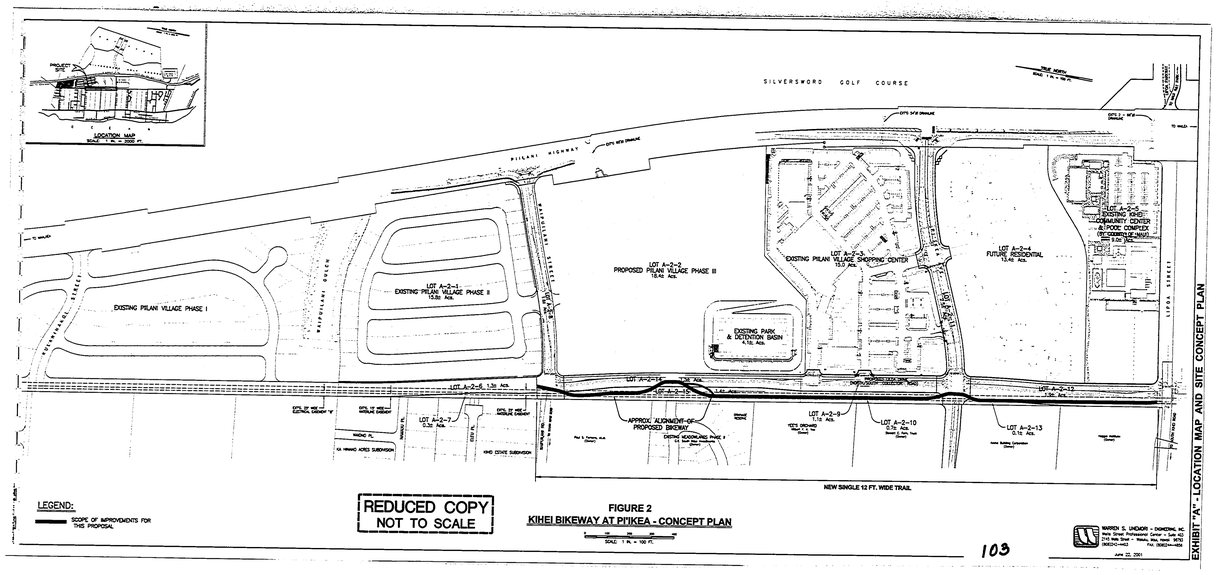
DG:MA:jso
xc: Floyd Miyazono, Director of Parks and Recreation
Clifford Mukai, Warren S. Unemori Engineering
s:\milton\thompson

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Sharing the Path - Education

- General Guidelines for Sharing the Path:
  - EVERYONE: KEEP TO THE RIGHT except to pass.
  - Look carefully before entering or crossing the bikeway.
  - Pass on the left, only when safe. Give an audible warning before passing another bikeway user.
  - Make a complete stop at all intersections, dismount, and cross at marked crossings only.
  - When stopping, move off the pavement to allow other users to pass.
  - Yield to emergency or maintenance vehicles.
- Bicycling:
  - Helmets are recommended for all cyclists and required by State law for children under 16.
  - Stop your bicycle, if necessary, to yield or to prevent an accident. Bicyclists must yield to pedestrians.
  - Bicyclists may ride two-abreast only when safe (when the bikeway is not crowded). Never ride three-or-more-abreast.
  - Bicycle headlight is required when riding at night.
  - Ride at a safe speed. Slow down when the bikeway is crowded.


LOCATION MAP
SCALE: 1 IN. = 2000 FT.
PROJECT SITE
SILVERSWORD GOLF COURSE
PILANI HIGHWAY
EXISTING PILANI VILLAGE PHASE I
LOT A-2-1
EXISTING PILANI VILLAGE PHASE II
13.00 Acs.
LOT A-2-2
PROPOSED PILANI VILLAGE PHASE III
18.4± Acs.
LOT A-2-3
EXISTING PILANI VILLAGE SHOPPING CENTER
13.0 Acs.
LOT A-2-4
FUTURE RESIDENTIAL
13.40 Acs.
LOT A-2-5
EXISTING KIHEI COMMUNITY CENTER & POOL COMPLEX
(BY COUNTY OF MAUI)
Area 5.00± Acs.
EXISTING PARK & DETENTION BASIN
4.10± Acs.
LOT A-2-6, 1.3± Acs.
LOT A-2-7
0.3± Acs.
LOT A-2-8
1.40± Acs.
LOT A-2-9
1.0 Acs.
LOT A-2-10
0.5 Acs.
LOT A-2-11
1.3± Acs.
LOT A-2-12
0.10 Acs.
LOT A-2-13
0.10 Acs.
APPROX. ALIGNMENT OF PROPOSED BIKEWAY
EXISTING MEANDERING PHASE II
NEW SINGLE 12 FT. WIDE TRAIL
KIHEI ESTATE SUBDIVISION
LEGEND:
SCOPE OF IMPROVEMENTS FOR THIS PROPOSAL
REDUCED COPY
NOT TO SCALE
FIGURE 2
KIHEI BIKEWAY AT PI'IKEA - CONCEPT PLAN
SCALE: 1 IN. = 100 FT.
EXHIBIT "A" - LOCATION MAP AND SITE CONCEPT PLAN

103

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Sharing the Path - Education

- General Guidelines for Sharing the Path:
  - EVERYONE: KEEP TO THE RIGHT except to pass.
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  - Pass on the left, only when safe. Give an audible warning before passing another bikeway user.
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  - When stopping, move off the pavement to allow other users to pass.
  - Yield to emergency or maintenance vehicles.
- Bicycling:
  - Helmets are recommended for all cyclists and required by State law for children under 16.
  - Stop your bicycle, if necessary, to yield or to prevent an accident. Bicyclists must yield to pedestrians.
  - Bicyclists may ride two-abreast only when safe (when the bikeway is not crowded). Never ride three-or-more-abreast.
  - Bicycle headlight is required when riding at night.
  - Ride at a safe speed. Slow down when the bikeway is crowded.

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Sharing the Path - Education (continued)

- Walking / Jogging:
  - Keep to the right when walking or running on the path.
  - Look before entering the bikeway or changing directions.
  - Don't walk or run more than two abreast.
- In-Line Skating:
  - Helmets, kneepads, and wristguards are advised.
  - Skate single-file when the bikeway is busy.
  - Skate at a safe speed, and be prepared to stop suddenly.
- Common Courtesy:
  - Do not litter or trespass on private property.
  - Keep your dog on a leash. Pick up after your dog.
  - Respect other bikeway users. SHARE THE PATH.

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Sharing the Path - Education (continued)

- Walking / Jogging:
  - Keep to the right when walking or running on the path.
  - Look before entering the bikeway or changing directions.
  - Don't walk or run more than two abreast.
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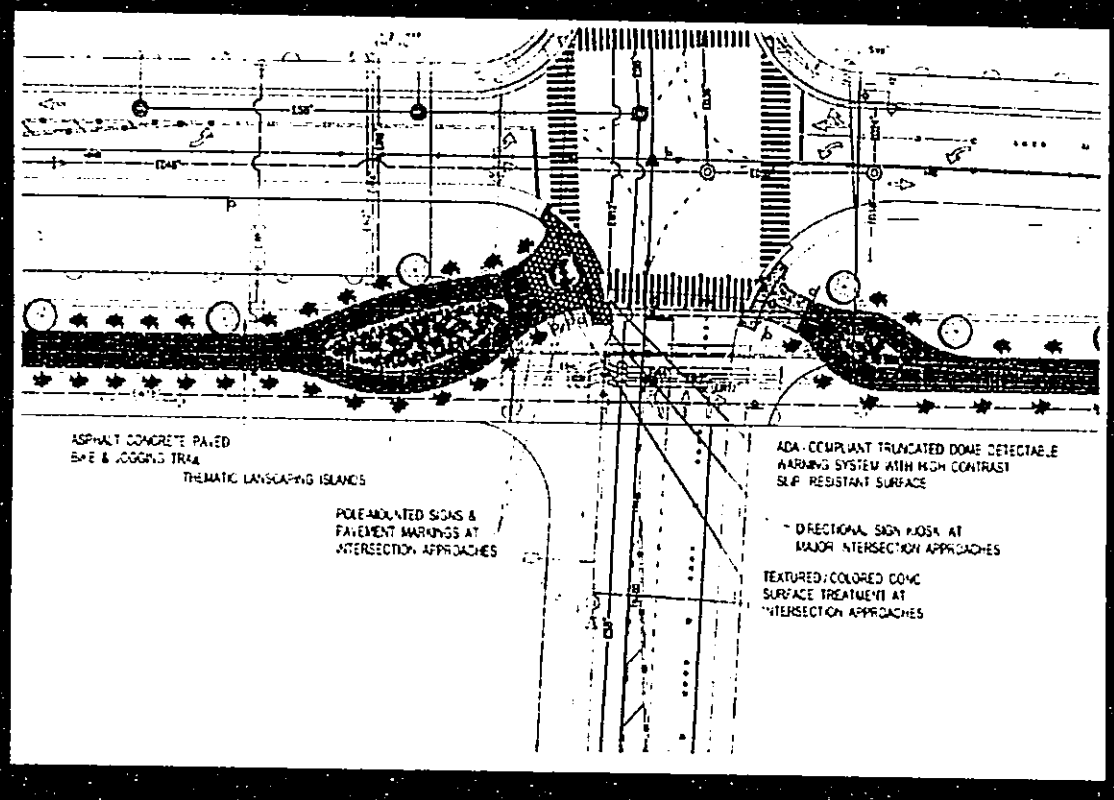
  - Keep your dog on a leash. Pick up after your dog.
  - Respect other bikeway users. SHARE THE PATH.

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Pedestrian Crossings - Intersection Approaches

- Entire Approach Designed to Provide a Visual Cue:



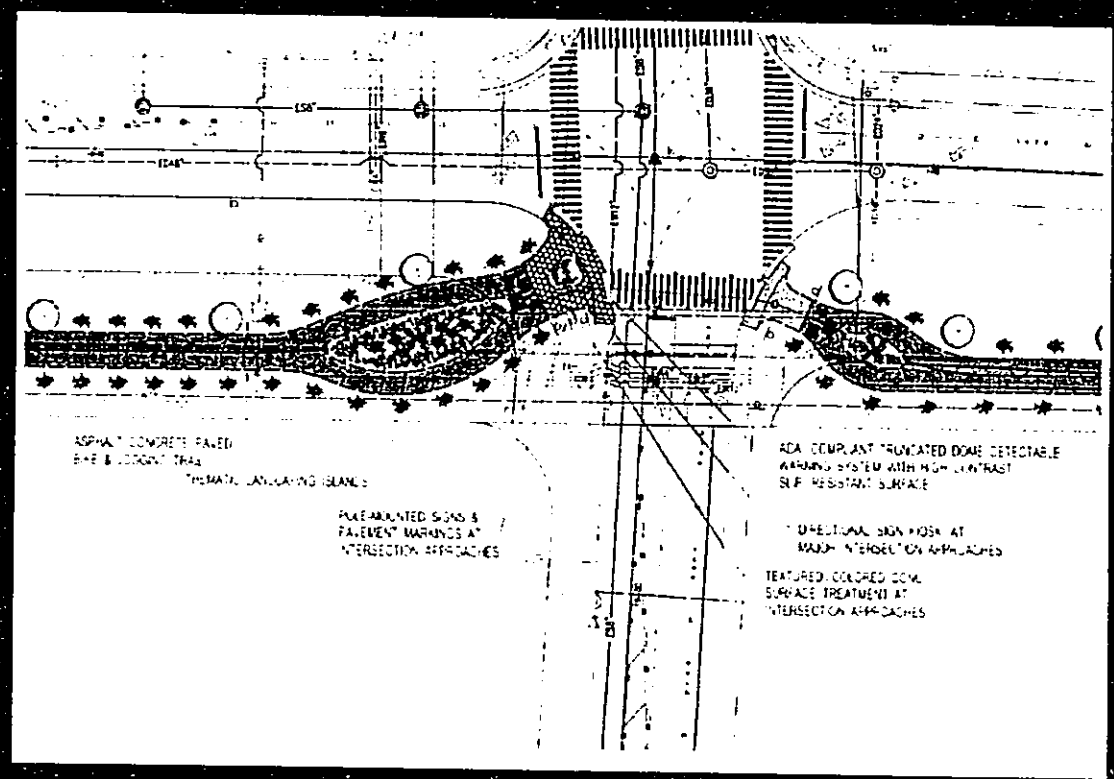
- Defined Alignment Changes (Landscaping Islands).
- Pole Mounted Signs and Pavement Markings.
- Textured and Colored Concrete at Approaches.
- ADA-Compliant Truncated Dome Detectable Warnings

DOCUMENT CAPTURED AS RECEIVED

KIHEI BIKEWAY AT PI'IKEA

Pedestrian Crossings - Intersection Approaches

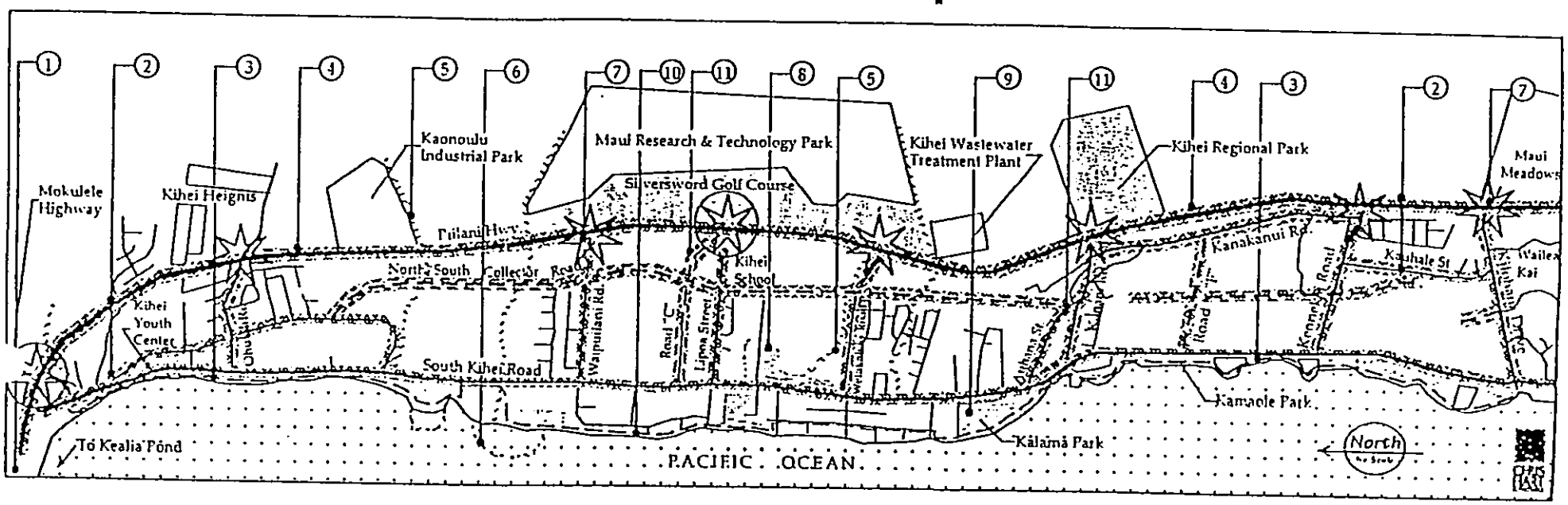
- Entire Approach Designed to Provide a Visual Cue:



- Defined Alignment Changes (Landscaping Islands).
- Pole Mounted Signs and Pavement Markings.
- Textured and Colored Concrete at Approaches.
- ADA-Compliant Truncated Dome Detectable Warnings

DOCUMENT CAPTURED AS RECEIVED

EXHIBIT H



KIHEI GREENWAYS SYSTEM CONCEPTUAL PLAN

KEY:

1. Kealia Pond Boardwalk
2. Greenway System
3. Coast Walk
4. Piilani Walkway & Open Greenway Space
5. Natural Stream/Open Space Corridors
6. Natural, Cultural & Historic Sites
7. ✲Gateways
8. Wetlands
9. Parks
10. Beach Reserves
11. Mauka-Makai Connectors/Open Space

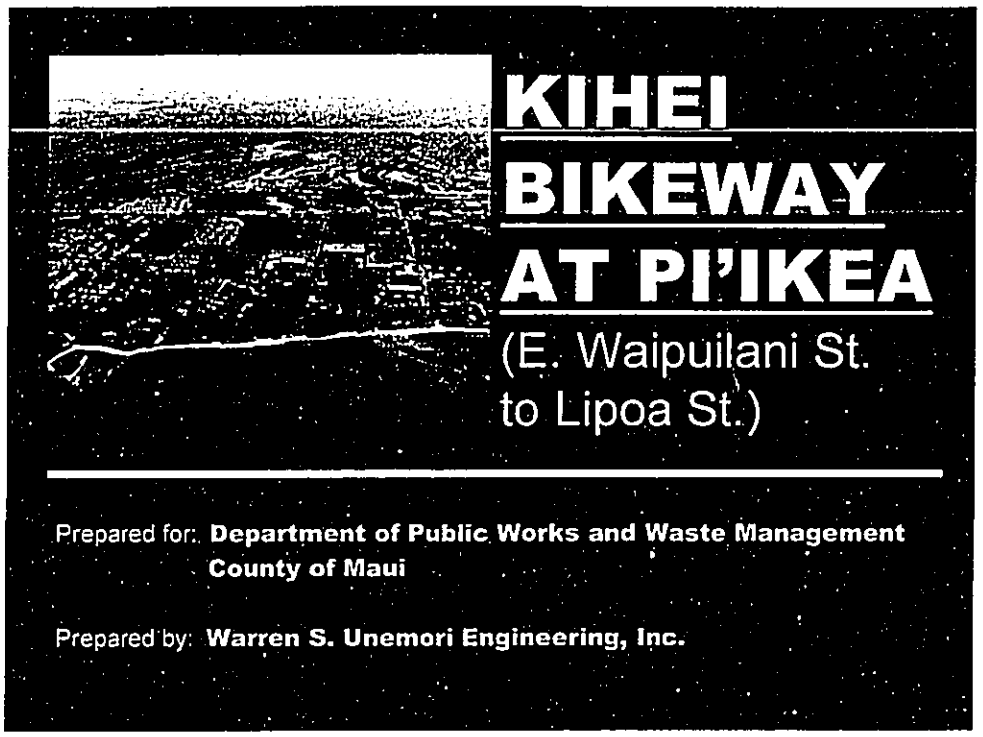
Source: Summary, Kihei 2000 Greenways Workshop

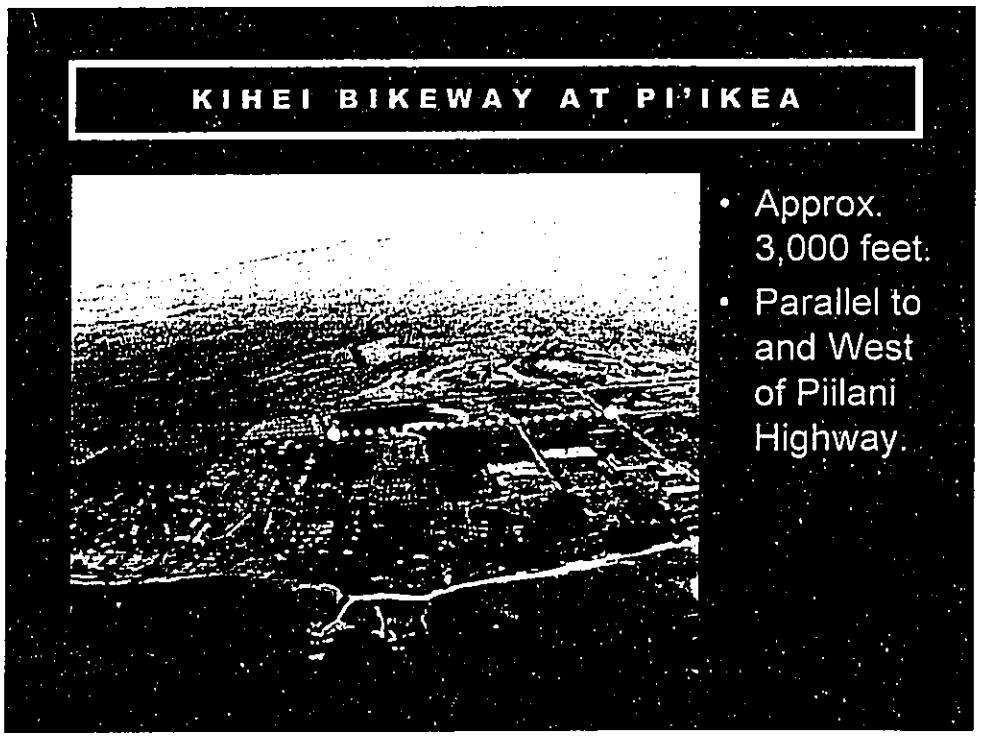
FIGURE 3

REFERENCES

- Austin, Tsutsumi & Associates, "Kihei Traffic Master Plan", October, 1989
- Community Resources, Inc., "Maui County Community Plan Update Program Socio-Economic Forecast Report", January, 1994
- "Kihei-Makena Community Plan (1998)", March, 1998
- Maui Economic Development Board, Inc., "Maui County Data Book", December, 1994
- Munekiyo & Arakawa, Inc., "Final Environmental Assessment, Construction of Road "C" and North-South Collector Road STP-0900 (42)", August, 1997, Prepared for County of Maui, DPWWM,
- Munekiyo & Arakawa, Inc., "Special Management Area Use Permit and Project District Phase II Application, Piilani Village Commercial Center", July, 1997, Prepared for Piilani Village Partners
- Warren S. Unemori Engineering, Inc., "Preliminary Drainage & Soil Erosion Control Report, Kihei Bikeway at Piilani North (from Kulanihakoi St. to Lipoa St.)", July, 1998, Prepared for County of Maui, DPWWM,
- R.M. Towill Corporation, "Bike Plan Hawaii A State of Hawaii Master Plan for Bikeways", Prepared for Highways Division, Department of Transportation, State of Hawaii, April, 1994
- State of Hawaii, Department of Business, Economic Development and Tourism, "Data Book", March, 1993
- U. S. Department of Agriculture, Soil Conservation Service, "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii", 1972
- University of Hawaii, Department of Geography, "Atlas of Hawaii", Second Edition, 1983
- University of Hawaii, Land Study Bureau, "Detailed Land Classification-Island of Maui", May 1967
- U. S. Census Bureau (website for 2000 Census data)

GRAPHICAL EXHIBITS

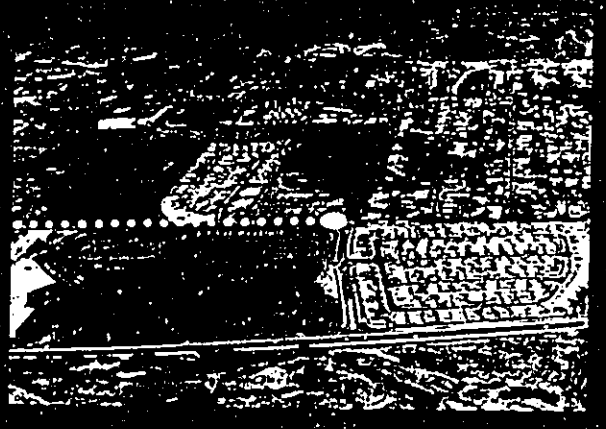

KIHEI
BIKEWAY
AT PI'IKEA
(E. Waipuilani St.
to Lipoa St.)
Prepared for: Department of Public Works and Waste Management
County of Maui
Prepared by: Warren S. Unemori Engineering, Inc.


KIHEI BIKEWAY AT PI'IKEA
• Approx. 3,000 feet.
• Parallel to and West of Piilani Highway.

KIHEI BIKEWAY AT PI'IKEA

- Along West (makai) side of Liloa Drive (N-S Collector).

KIHEI BIKEWAY AT PI'IKEA

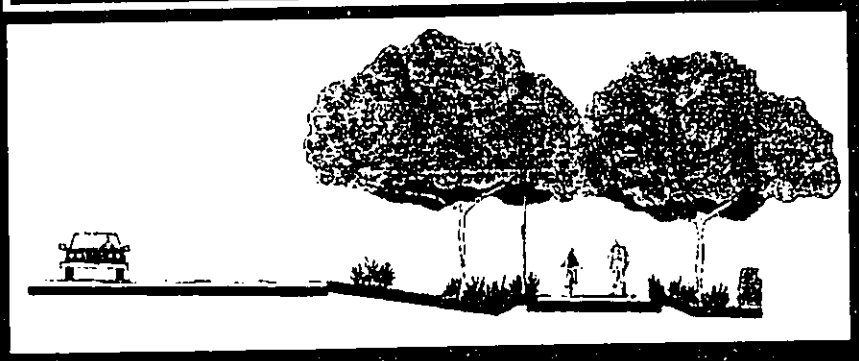


- Northerly Terminus: Intersection of Liloa Drive and East Waipuilani St.

KIHEI BIKEWAY AT PI'IKEA

- Southerly Terminus: Lipoa St.
- Total Anticipated Construction Cost: Approx. $1,000,000.

KIHEI BIKEWAY AT PI'IKEA



TYPICAL SECTION

- Total Paved Width: 12'-0"
- Pavement Section: 2" Asphalt Conc. On 6" Untreated Base Course
- Note: Location and spacing of shade trees subject to coordination with adjoining utility alignments.

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Theme Trees

Formosa Koa

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Theme Trees

Milo

Madagascar Olive

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Accent Trees

Hong Kong Orchid

Kolomona

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Accent Trees

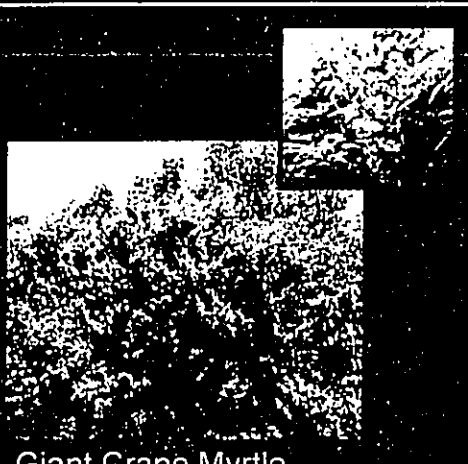
Jatropha

Singapore Plumeria

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Accent Trees



Giant Crape Myrtle

Silver Trumpet

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Shrubs

Hibiscus

Salmon Flower

Red Flower

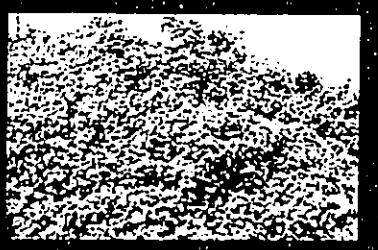
Yellow Flower

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Shrubs

Radiation Lantana



Yellow Lantana

KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Shrubs

Day Lily

Agapanthus

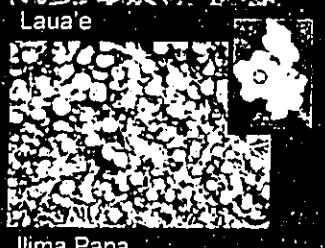
KIHEI BIKEWAY AT PI'IKEA

Proposed Plant Materials

Ground-Covers

Laua'e

Golden Glory



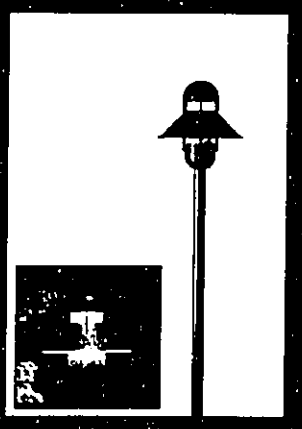
Ilima Papa

Kupukupu Fern

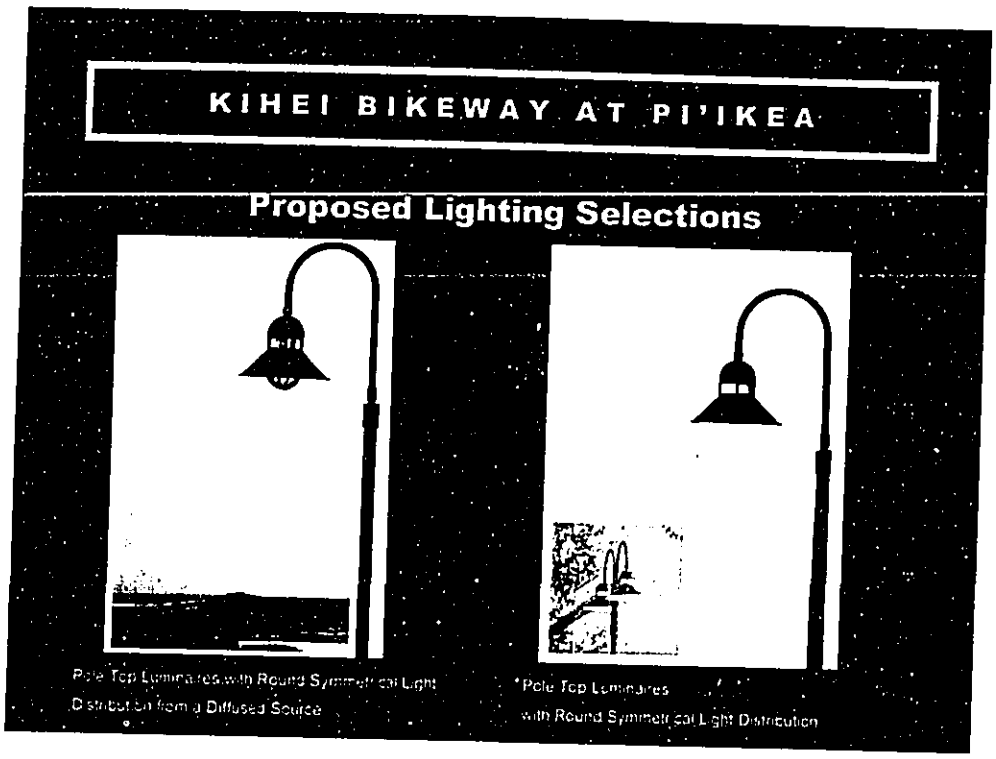
KIHEI BIKEWAY AT PI'IKEA

Proposed Lighting Selections

Pole Top Luminaires with Round Symmetrical Light Distribution from a Diffused Source



Pole Top Luminaires with Round Symmetrical Light Distribution


KIHEI BIKEWAY AT PI'IKEA
Proposed Lighting Selections
Pole Top Luminaires with Round Symmetrical Light Distribution from a Diffused Source
Pole Top Luminaires with Round Symmetrical Light Distribution

APPENDICES:

A: **Preliminary Plan and Profiles**

B: **Archaeological Correspondence**

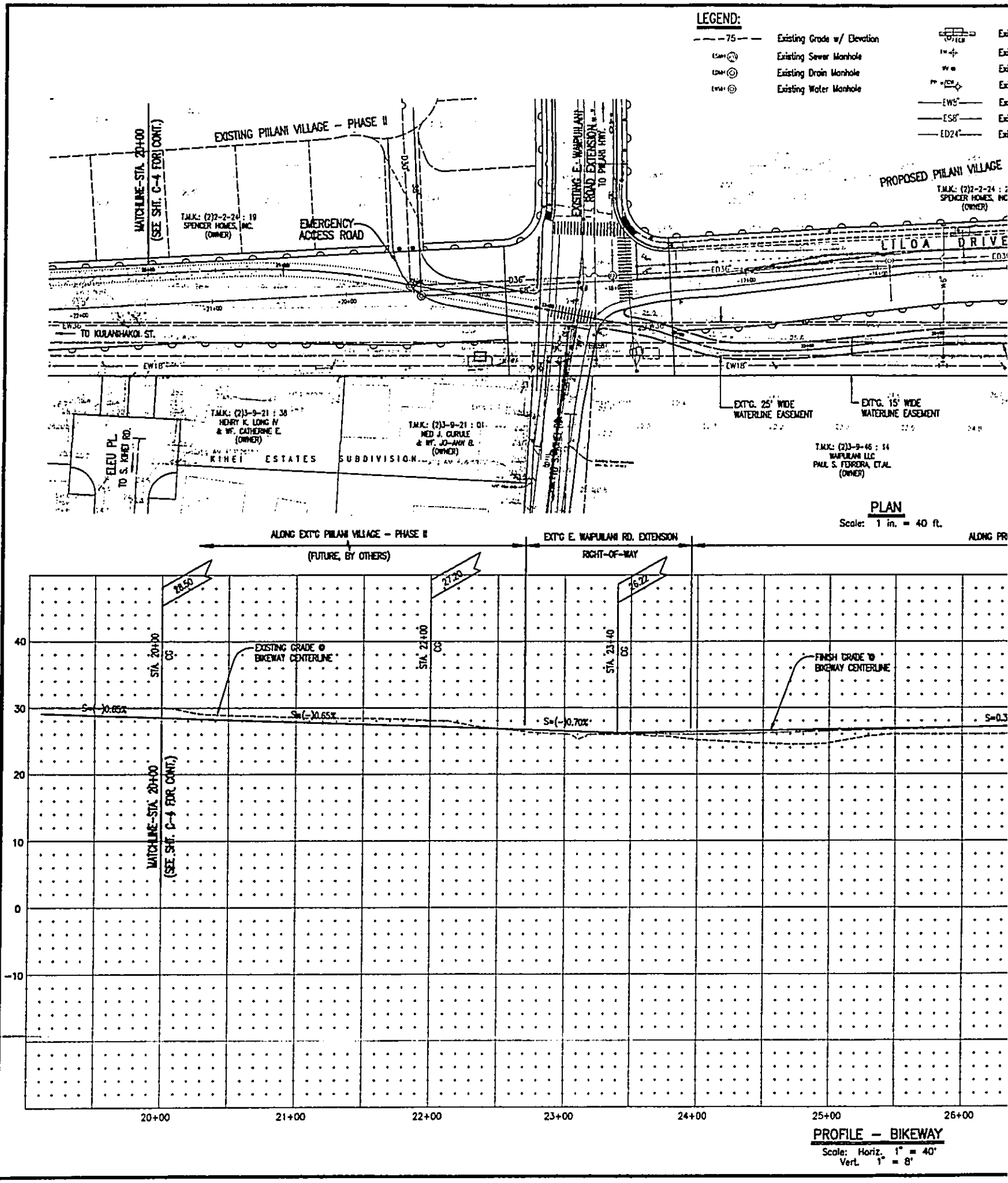
C: **Preliminary Grading and Drainage Report**

D: **SDOT Documentation of Categorical Exclusion Granted**

E: **Cultural Practices Assessment Report**

APPENDIX "A"

Preliminary Plan and Profiles



98proj/98047/conplans/pl-bike0.dwg

JOB NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII				

Existing Catch Basin
Existing Fire Hydrant
Existing Water Valve
Existing Power Pole w/Guy Wire
EW8" Existing Waterline w/Size
ES8" Existing Sewerline w/Size
ED24" Existing Drainline w/Size

TRUE NORTH
SCALE: 1 IN. = 40 FT.

PROPOSED PILANI VILLAGE – PHASE III
T.M.K.: (2)2-2-24 : 20
SPENCER HOMES, INC.
(OWNER)

ACCESSIBLE ROUTE
(SEE PLAN, SHT. C-21)
(SEE PROFILE, SHT. C-20)

EXISTING PARK & DETENTION BASIN

LILOA DRIVE (NORTH – SOUTH COLLECTOR)

ED36" ED48" ED45" EW36" EW18"

MATCHLINE-STA. 31+00
(SEE SHT. C-6 FOR CONT.)

TO PIIKEA AVE.

EXIST'G. 15' WIDE WATERLINE EASEMENT

EXIST'G. 25' WIDE ELECTRICAL EASEMENT "B"

BIKEWAY
(SEE TYP. SEC. SHT. C-19)

T.M.K.: (2)3-9-54 : 20
JIMMY B. MORAL & WF. NEZA
(OWNER)

EXISTING MEADOWLANDS SUBDIVISION – PHASE II

T.M.K.: (2)3-9-54 : 20 TO 25
G.K. SOUTH MAUI INVESTMENTS
(OWNER)

T.M.K.: (2)3-9-54 : 89
THE MEADOWLANDS LOT OWNERS
(OWNER)

-9-46 : 14
ANI LLC
RERA, ET AL
NER)

PLAN
ale: 1 in. = 40 ft.

ALONG PROPOSED PILANI VILLAGE – PHASE III

ALONG PARK & DETENTION BASIN

MATCHLINE-STA. 31+00
(SEE SHT. C-6 FOR CONT.)

27.85 28.00 20.30 15.00

STA. 28+44.42 HIGH POINT
STA. 28+90 CO
STA. 28+40 BVC
STA. 29+40 EVC
STA. 30+00 BVC
STA. 30+50 CO
STA. 31+00 EVC

L=100' L=100'

S=0.32% S=(-)7.00% S=(-)3.61%

FINISH GRADE @ FUTURE N-S COLLECTOR ROAD CENTERLINE

27.84 14.50 16.80

40 30 20 10 0

26+00 27+00 28+00 29+00 30+00 31+00

ADE @
ENTERLINE

E – BIKEWAY
Horiz. 1" = 40'
l. 1" = 8'

C-5

CLIFFORD N. MUKAI
LICENSED PROFESSIONAL ENGINEER
NO. 6887-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION

REVISION	DATE	BRIEF	MADE BY	APPROVED

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI
WAILUKU, MAUI, HAWAII

PLAN & PROFILE
BIKE AND JOGGING PATH
(STA 20+00 TO STA 31+00)

KIHEI BIKEWAY AT PIILANI NORTH
(FROM KULANIHAKOI ST. TO LIPOA ST.)

FED. AID PROJ. NO.

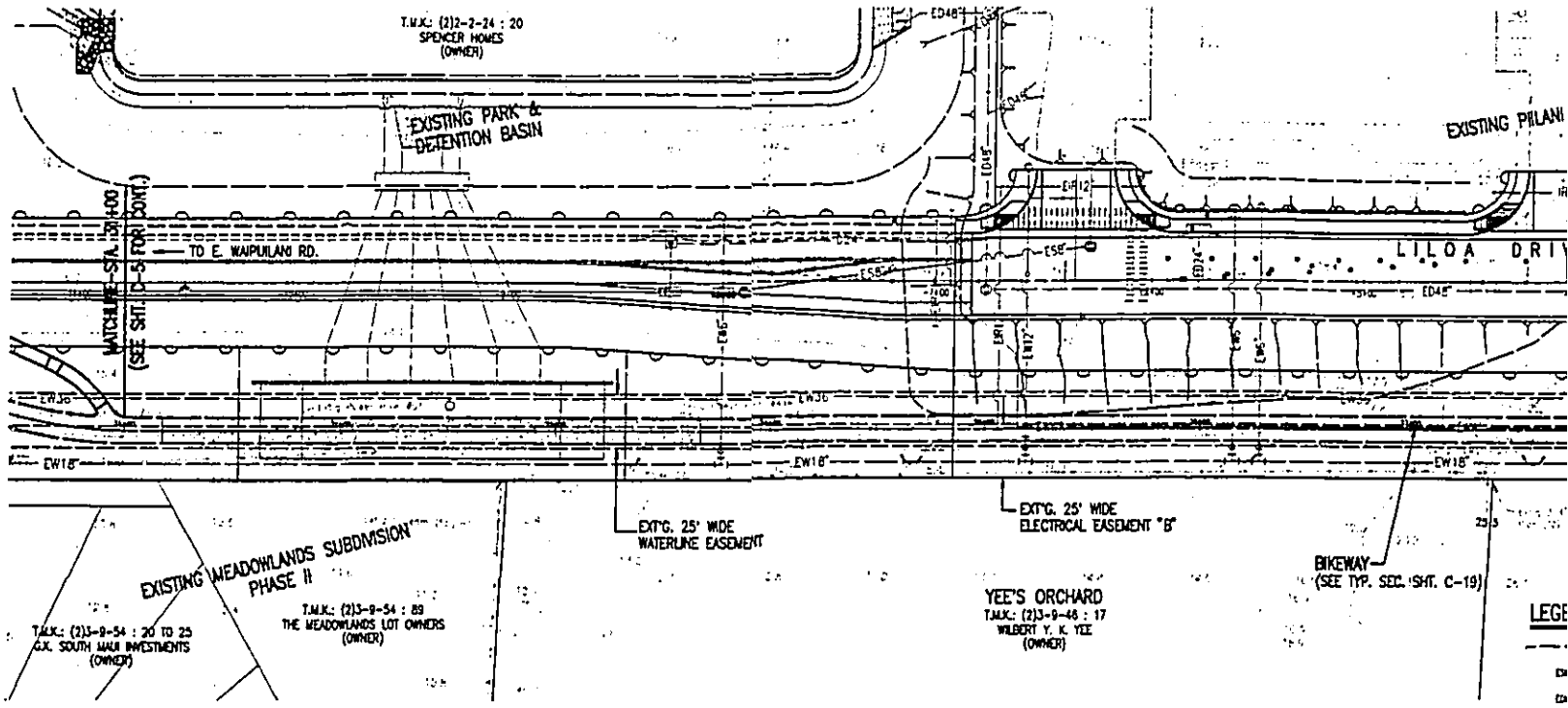
DESIGNED BY MMM DRAWN BY DPT CHECKED BY CNM

APPROVED SUBMITTED BY

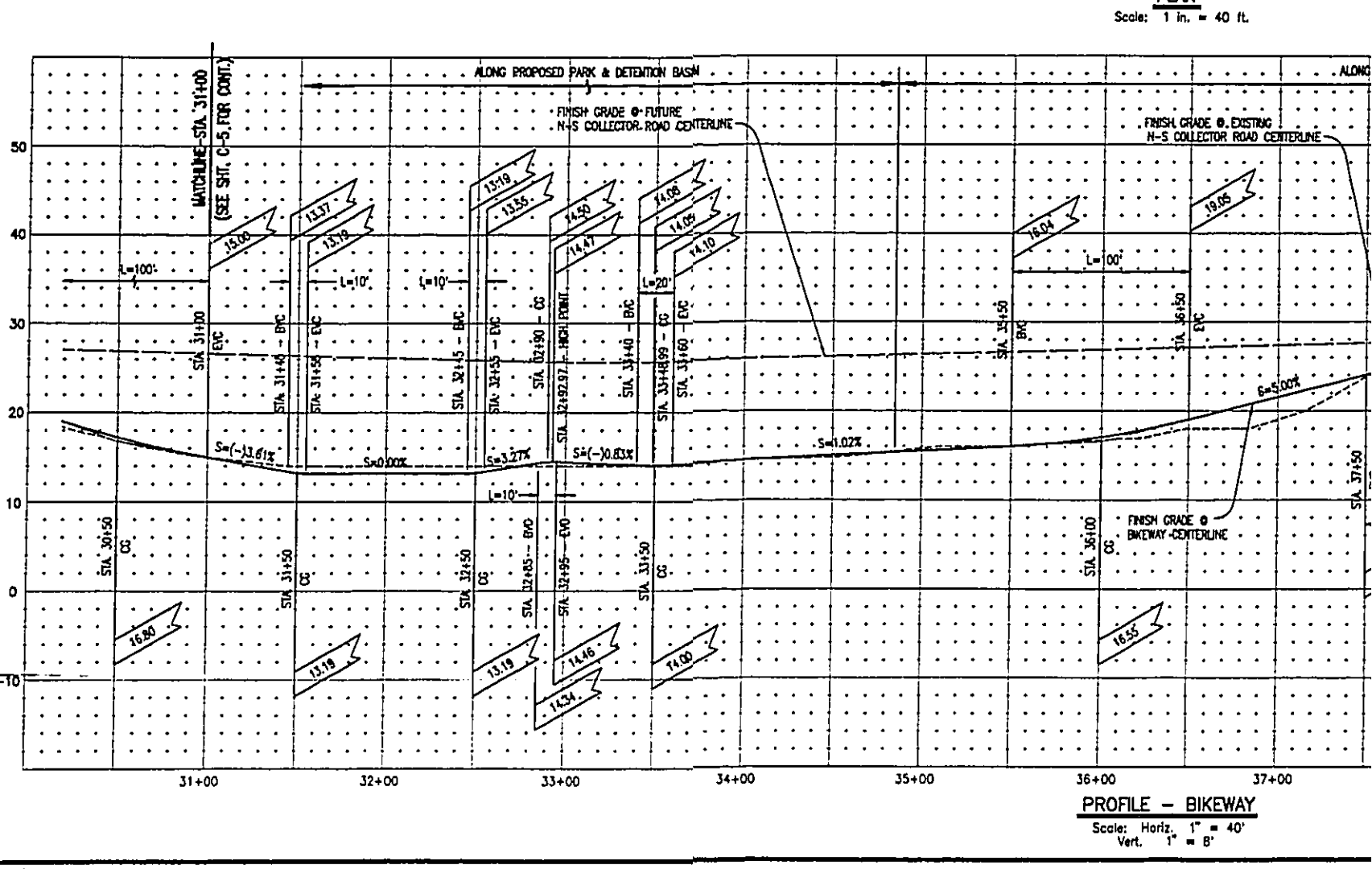
DATE FIRM MEMBER DATE

FILE	POCKET	FOLDER	NO.

SHEET 7 OF —



PLAN
Scale: 1 in. = 40 ft.



PROFILE – BIKEWAY
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

98proj/98047/contons/pl-bk40.dwg

JOB NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII				

TRUE NORTH
SCALE: 1 IN. = 40 FT.

EXISTING PIILANI VILLAGE COMMERCIAL

T.M.K.: (2)2-2-24 : 21
HBS LIMITED PARTNERSHIP
(OWNER)

T.M.K.: (2)2-2-24 : 22
PIILANI GARDENS LLC
(OWNER)

LILOA DRIVE (NORTH / SOUTH COLLECTOR)

TO PIILANI HWY.

PIKEA AVE.

TO LIPOA ST.

BIKEWAY
(SEE TYP. SEC. SHT. C-19)

EXT'G. 15' WIDE
WATERLINE EASEMENT

T.M.K.: (2)3-9-02 : 30
STEWART E. FERN. TRUST
(OWNER)

T.M.K.: (2)3-9-02 : 78
AZOKA BUILDING
CORPORATION
(OWNER)

TO S. KIHEI RD.

MATCHLINE-STA. 42+50
(SEE SHT. C-7 FOR CONT.)

LEGEND:

- Existing Grade w/ Elevation
- Existing Sewer Manhole
- Existing Drain Manhole
- Existing Water Manhole
- Existing Catch Basin
- Existing Fire Hydrant
- Existing Water Valve
- Existing Power Pole w/Guy Wire
- Existing Waterline w/Size
- Existing Sewerline w/Size
- Existing Drainline w/Size

PLAN
e: 1 in. = 40 ft.

ALONG PROPOSED PIILANI VILLAGE COMMERCIAL

PIKEA AVE. (ROAD "C") RIGHT-OF-WAY

FINISH GRADE @ EXISTING
N-S COLLECTOR ROAD CENTERLINE

EXISTING GRADE @
BIKEWAY CENTERLINE

STA. 36+50 EVC
STA. 37+50 BVC
STA. 38+00 CG
STA. 38+50 EVC
STA. 39+00 HIGH POINT
STA. 39+90 BVC
STA. 40+00.37 LOW POINT
STA. 40+15 CG
STA. 40+40 EVC
STA. 41+37 CG
STA. 41+77 CG
STA. 42+09 BVC
STA. 42+19 CG
STA. 42+29 EVC
STA. 42+45 BVC
STA. 42+69.69 = LOW PT.
STA. 42+73 EVC
STA. 42+80 CG

19.05 26.55 26.23 25.18 25.14 25.69 28.91 29.34 28.45 27.15 26.54 26.36 24.05 26.19 25.00 27.95 28.66 26.40

L=100' L=50' L=30' L=20'

S=5.00% S=(-)0.72% S=2.79% S=2.08% S=(-)2.08% S=(-)5.00% S=1.08%

37+00 38+00 39+00 40+00

E - BIKEWAY
Horiz. 1" = 40'
1" = 8'

C-6

CLIFFORD N. MUKAI
LICENSED PROFESSIONAL ENGINEER
NO. 6687-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION

REVISION	DATE	BRIEF	MADE BY	APPROVED

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI
WAILUKU, MAUI, HAWAII

PLAN & PROFILE
BIKE AND JOGGING PATH
(STA 31+00 TO STA 42+00)

KIHEI BIKEWAY AT PIILANI NORTH
(FROM KULANIHAKOI ST. TO LIPOA ST.)

FED. AID PROJ. NO.

DESIGNED BY	DRAWN BY	CHECKED BY
MMN	DPT	CNM

APPROVED _____ DATE _____

SUBMITTED BY _____ FIRM MEMBER _____ DATE _____

FILE	POCKET	FOLDER	NO

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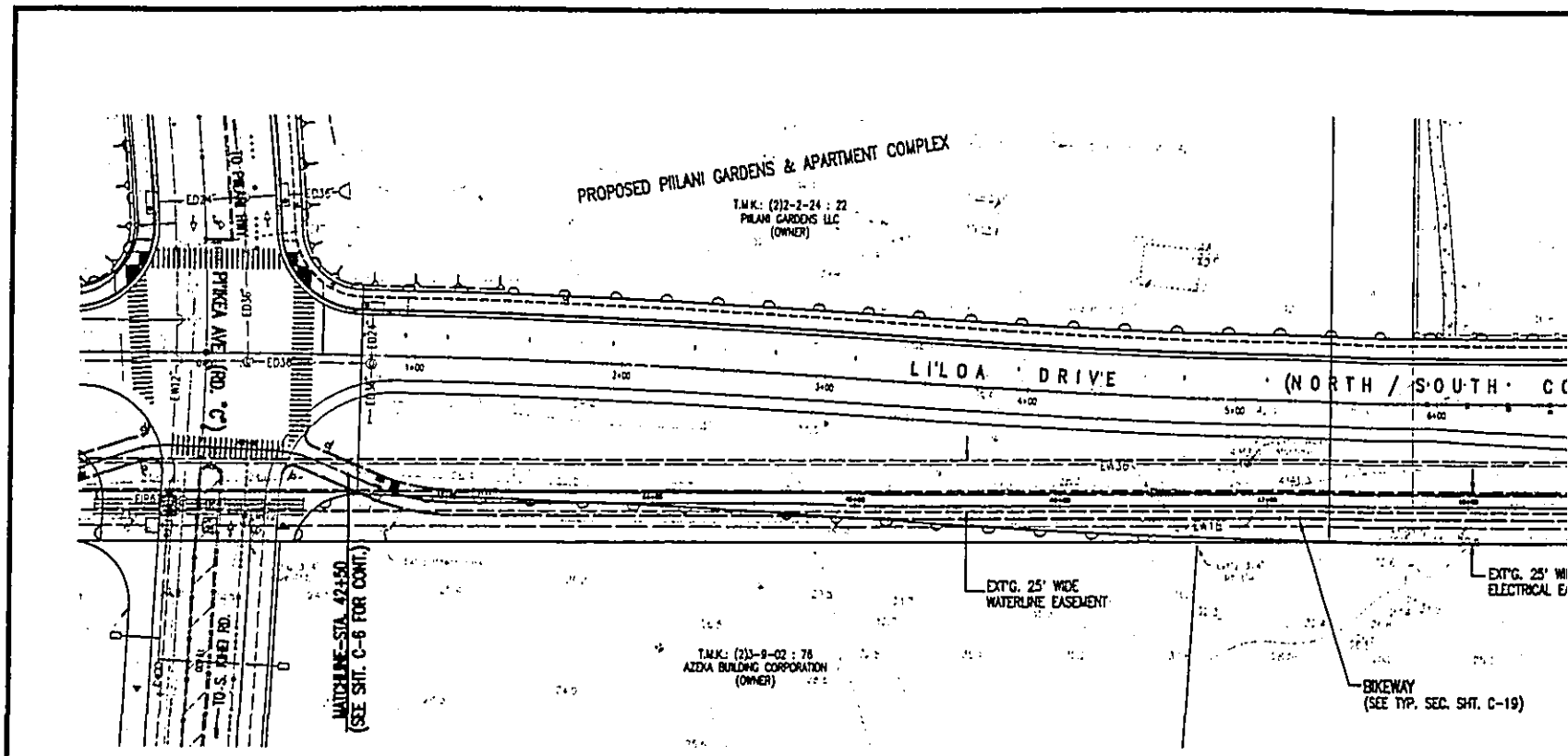
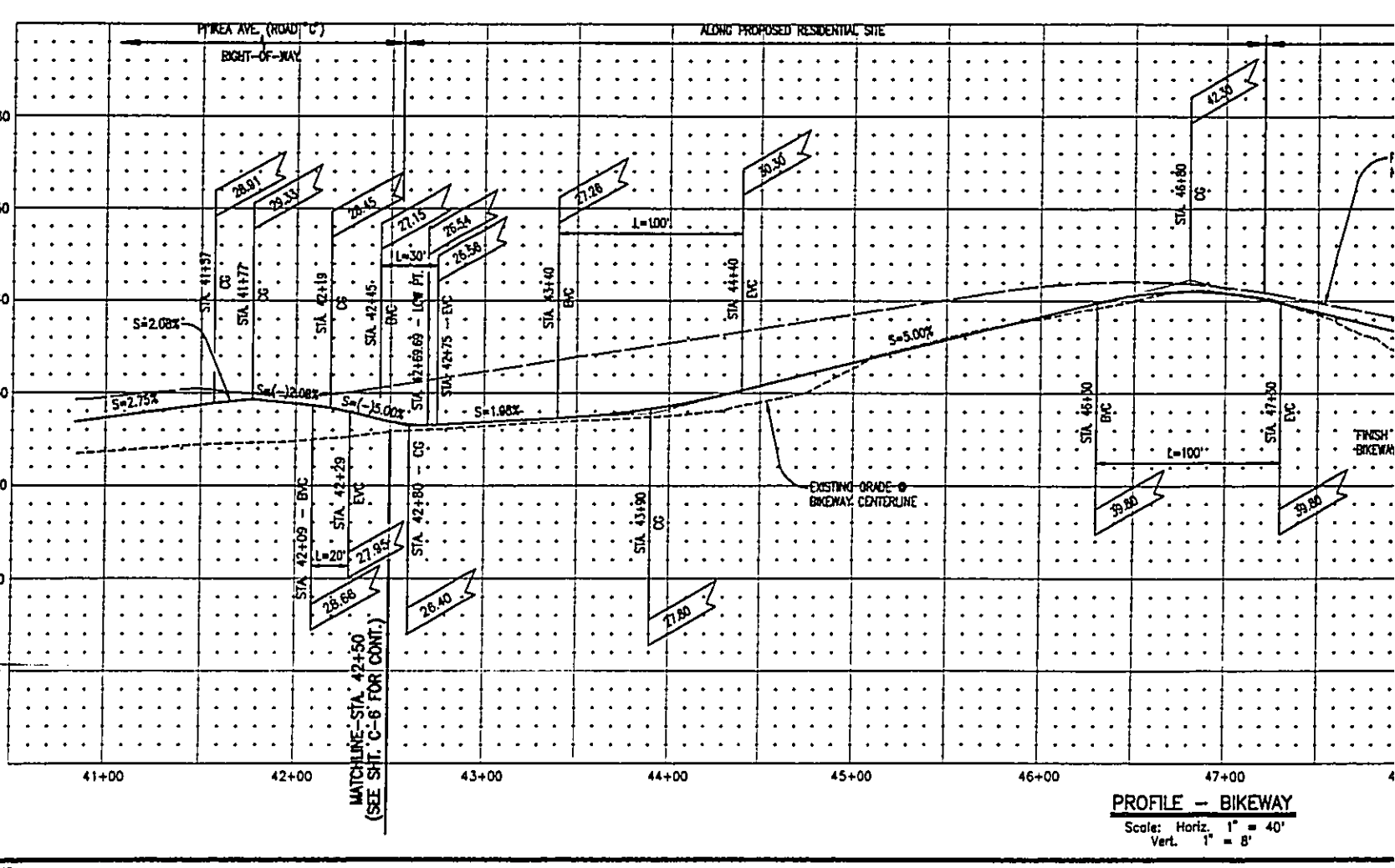


PLAN
Scale: 1 in. = 40 ft.



PROFILE – BIKEWAY
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

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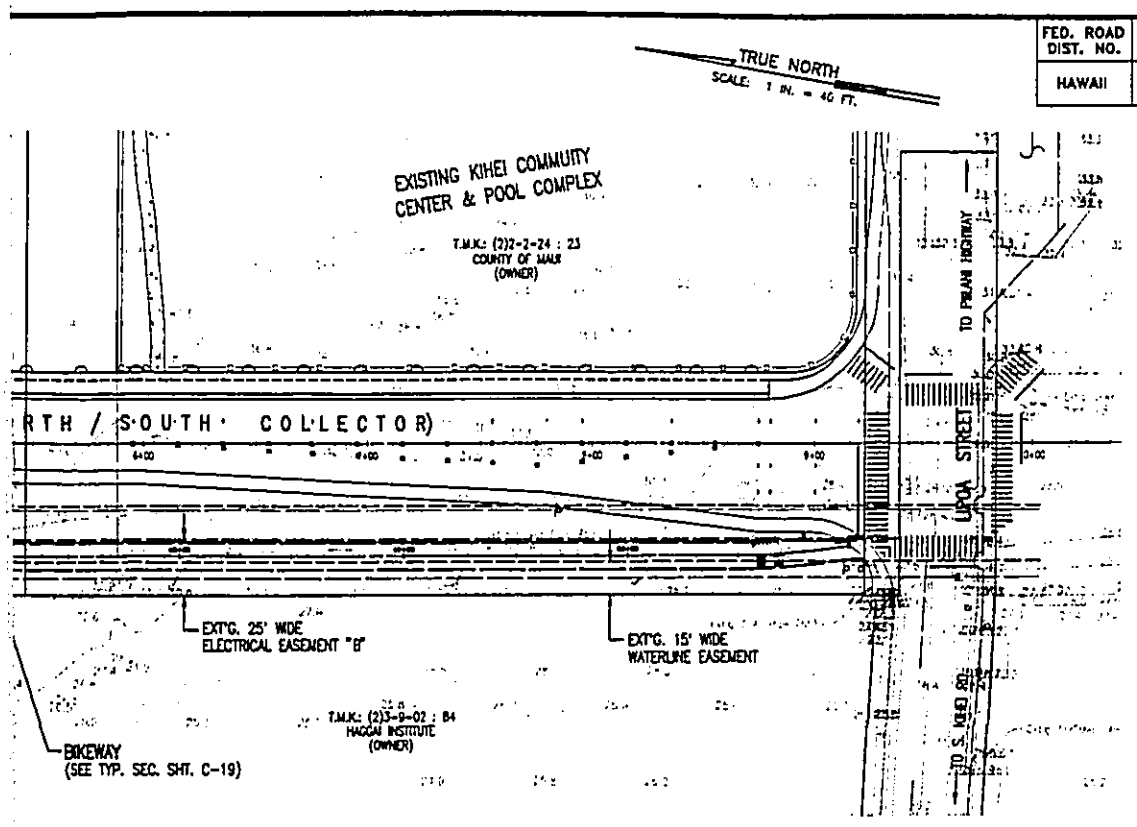
JOB NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII				

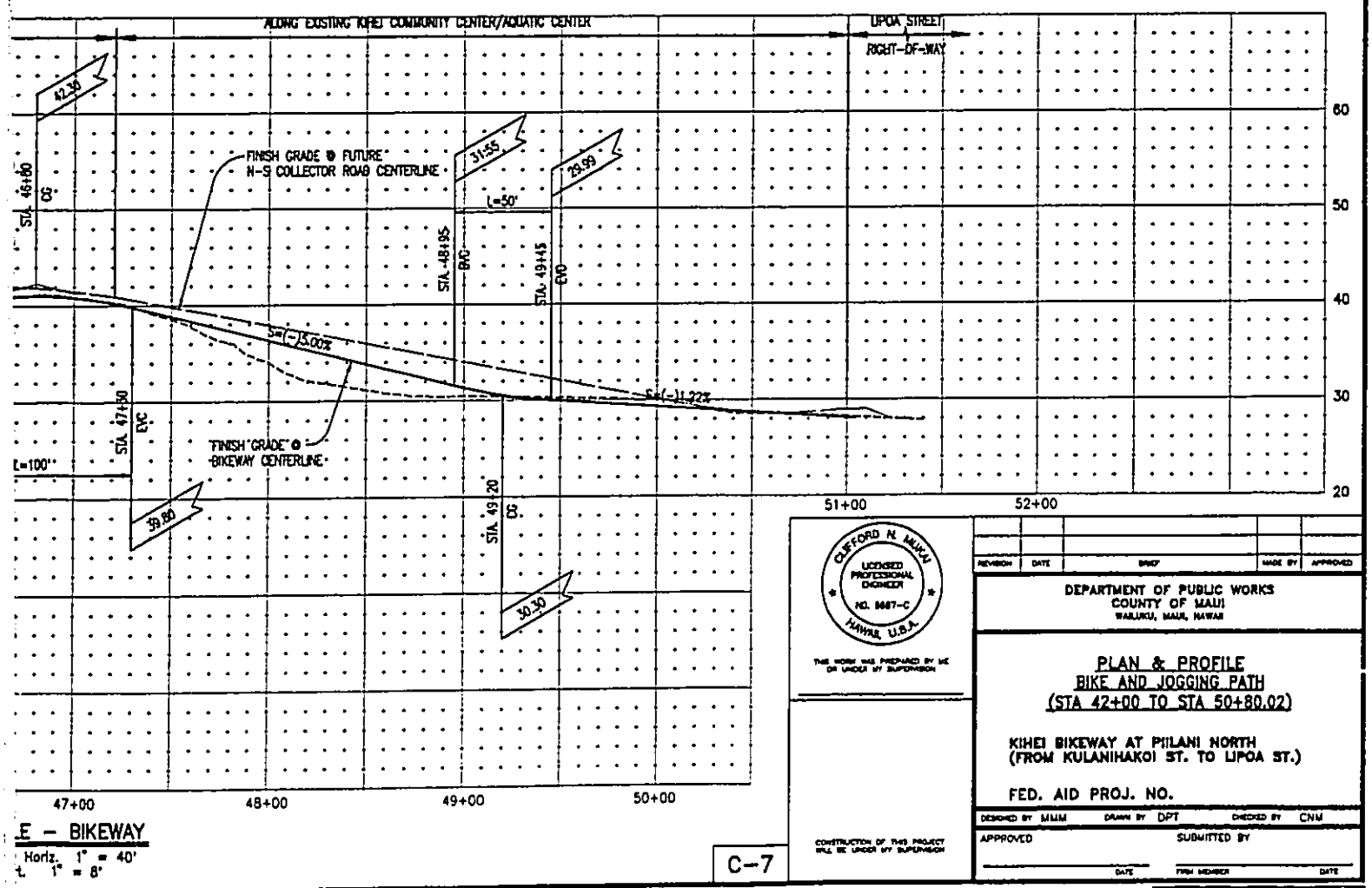


LEGEND:

- —75— Existing Grade w/ Elevation
- Existing Sewer Manhole
- Existing Drain Manhole
- Existing Water Manhole
- Existing Catch Basin
- Existing Fire Hydrant
- Existing Water Valve
- Existing Power Pole w/Guy Wire
- —EWS"— Existing Waterline w/Size
- —ES8"— Existing Sewerline w/Size
- —ED24"— Existing Drainline w/Size

PLAN

Scale: 1 in. = 40 ft.



PROFILE — BIKEWAY

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

C-7

CLIFFORD N. MUKAI
LICENSED PROFESSIONAL ENGINEER
NO. 9687-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION

REVISION	DATE	BRIEF	MADE BY	APPROVED

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI
WAILUKU, MAUI, HAWAII

PLAN & PROFILE
BIKE AND JOGGING PATH
(STA 42+00 TO STA 50+80.02)

KIHEI BIKEWAY AT PIILANI NORTH
(FROM KULANIHAKOI ST. TO LIPOA ST.)

FED. AID PROJ. NO.

DESIGNED BY MMM DRAWN BY DPT CHECKED BY CNM

APPROVED DATE

SUBMITTED BY
FIRM MEMBER DATE

FILE	POCKET	FOLDER	NO.

SHEET 9 OF ---

APPENDIX "B"

Archaeological Correspondence

DOCUMENT CAPTURED AS RECEIVED

A OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

DEPUTY
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

September 12, 1996

Mr. Glen Ueno
Department of Public Works
Division of Land Use and Codes Administration
250 South High Street
Wailuku, Hawaii 96793

LOG NO: 18056
DOC NO: 9609KD11

Dear Mr. Ueno:

SUBJECT: Chapter 6E-42 Historic Preservation Review – Piilani North II-A Large Lot Subdivision, Waiohuli, Makawao District, Island of Maui
TMK: 2-2-02: 66 (LUCA File No. 2.2381)

We have received the preliminary plat of the Piilani North II-A Large Lot Subdivision, which is located along the west side of Piilani Highway, between the existing Piilani Phase I subdivision and Lipoa Street in Kihei. Three lots are proposed; a 17.3 acre lot for Phase II residential development (LUCA File 2.1863), a lot for the Waipuilani Street extension, and a 59.7 acre lot for future residential development.

Our office has previously reviewed the Project District Ordinance approval and Special Management Area permit for this project, as well as an amended Project District application (letter to B. Miskae June 13, 1994). As part of our original review of this project, an inventory survey was requested and successfully completed by the applicant (Donham 1989). Subsequent to acceptance of the inventory survey report by our office, a data recovery plan was approved and executed. The report on data recovery excavations at Site 50-50-10-2475 was reviewed and approved as well.

The area included within the II-A Large Lot Subdivision is within the area encompassed by the former Piilani Village Phase I project area. Historic preservation review has been concluded for this area. The proposed large lot subdivision will have "no effect" on historic sites.

Please contact Ms. Theresa K. Donham at 243-5169 if you have any questions.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

KD:jen

DOCUMENT CAPTURED AS RECEIVED

JOHN J. CAYETANO
GOVERNOR OF HAWAII

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
Gilbert Coloma-Agaran

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

November 4, 1996

LOG NO: 18456
DOC NO: 9610KD23

Mr. Eric Fredericksen
Xamanek Researches
P. O. Box 131
Pukalani, Hawaii, 96788

Dear Mr. Fredericksen:

SUBJECT: Historic Preservation Review of an Archaeological Data Recovery Report, Site 50-50-10-3529 (Road "C"), Waiohuli, Makawao District, Maui
TMK: 2-2-02: 67

Thank you for submitting a revised final of the report entitled *Data Recovery Report for Site 50-50-10-3529, A Rockshelter in the Road "C" Corridor, Waiohuli Ahupua'a, Makawao District, Maui Island* (E.M. Fredericksen and D.L. Fredericksen 1996). The revised report contains additional information and discussions as requested in our letter of November 20, 1995. The new information and the excellent artifact photographs in the revised report provide a fuller understanding of this site and of its significance as a cultural resource in the Kihei area.

The revised report is acceptable. Please contact Ms. Theresa K. Donhain at 243-5169 if you have any questions.

Boyd Dixon

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

KD:jen

c: BALDWIN*MALAMA c/o Claudia Fong (915 Fort Street, Suite 702, Honolulu 96813)

DOCUMENT CAPTURED AS RECEIVED

DATA RECOVERY REPORT FOR SITE 50-50-10-3529, A ROCKSHELTER IN THE ROAD "C" CORRIDOR, WAIOHULI *AHUPUA`A*, MAKAWAO DISTRICT, MAUI ISLAND (TMK: 2-2-03: por. 67)

Prepared for:

BALDWIN*MALAMA
Honolulu

Prepared by:

Xamanek Researches
P.O. Box 131
Pukalani, Hawaii 96788

Erik M. Fredericksen
Demaris L. Fredericksen

Revised
September 1996

DOCUMENT CAPTURED AS RECEIVED

ABSTRACT

An archaeological data recovery project was conducted at Site 50-50-10-3529, a low rock overhang, located in Waiohuli *ahupua'a* (TMK: 2-2-02: 67) during the months of June through October, 1994.

A total of 21 test units were excavated at the site, with the largest number (14) concentrated around the mouth of, and within the rock shelter overhang.

The site represents a temporary habitation shelter, and an activity area devoted to the refining of volcanic glass material, and fishhook manufacture. Two fire hearths were located outside the drip line of the rock shelter, from which charcoal samples were collected and analyzed. Activity at the site dates from the late precontact period, c. AD 1470 to 1700. Only 2 historic artifacts were recovered, both on or very near the surface. Large amounts of marine shell food midden were found, along with artifacts consisting of coral abraders and files, volcanic glass cores and utilized flakes, utilized basalt flakes, worked bone and fishhook pieces.

The earlier archaeological inventory survey report deemed Site 3529 significant under Criterion "D" of the Federal and State historic preservation guidelines. However, the completed data recovery work now renders the site "no longer significant" for its information content.

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...VERNOR OF HAWAII

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

GILBERT COLOMA-AGARAN

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AQUATIC RESOURCES
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CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION DIVISION
LAND DIVISION
STATE PARKS
WATER AND LAND DEVELOPMENT

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LAND USE & CODES ADM.
COUNTY OF MAUI

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

October 30, 1997

Glen Ueno
Department of Public Works
Land Use and Codes Administration
County of Maui
250 South High Street
Wailuku, Hawaii 96793

LOG NO: 20402
DOC NO: 9710BD38

Dear Mr. Ueno:

SUBJECT: Chapter 6E-42 Historic Preservation Review of the Proposed Pi'ilani Village Commercial Center
Waiohuli Ahupua'a, Makawao District, Island of Maui
TMK 2-2-2: Por. of 66 (LUCA File No. 2.2452)

This letter is a Historic Preservation review of the final approval for a proposed subdivision to include the Pi'ilani Village Commercial Center in Waiohuli Ahupua'a. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field check was conducted of the subject property for this review.

An archaeological inventory survey of the project area (Donham 1989) and data recovery of State Site 50-50-10-2475 was successfully completed and approved by this office in 1996 (SHPD DOC. NO: 9609KD11). In this review, we found the proposed construction of the Pi'ilani Village Commercial Center to have "no effect" on historic sites.

If you have any questions please contact Boyd Dixon at 243-5169.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

BD:jen

cc. Elizabeth Anderson, Maui County Planning Department (fax: 243-7634)
Ralph Nagamine, Maui County Department of Public Works (fax: 243-7972)

APPENDIX "C"

Preliminary Grading and Drainage Report

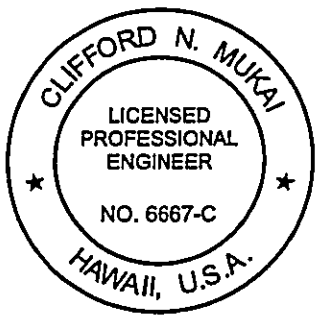
Established 1969

Preliminary Drainage Report and Erosion Control Plan for

Kihei Bikeway at Piilani North (from Waipuilani Street to Lipoa Street)

Kihei, Maui, Hawaii
TMK: (2) 2-2-24: Portion of 24 and 25

Prepared For: Department of Public Works
County of Maui



Date: March, 2002

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

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		Page
I.	INTRODUCTION	1
II.	PROPOSED PROJECT	
	A. Site Location	1
	B. Project Description	1
III.	EXISTING CONDITIONS	
	A. Topography and Soil Conditions	2
	B. Drainage	2
	C. Flood and Tsunami Zone	3
IV.	DRAINAGE PLAN	
	A. General	3
	B. Hydrologic Calculations	4
	C. Conclusion	4
V.	REFERENCES	5

EXHIBITS

1	Location Map
2	Site Specific Soil Classification Map
3	Flood Insurance Rate Map

APPENDICES

A	Hydrologic Calculations
B	Erosion Control Plan

Preliminary Drainage Report
for
Kihei Bikeway at Piilani North
(from Waipuilani Street to Lipoa Street)
Kihei, Maui, Hawaii

I. INTRODUCTION

This report has been prepared to examine both the existing drainage conditions and the proposed drainage plan for the subject development.

II. PROPOSED PROJECT

A. *Site Location:*

The project site is located in Kihei, on the island of Maui, and in the State of Hawaii. It is situated along the westerly side of the North - South Collector Road fronting Piilani Village Shopping Center and the Kihei Aquatic and Park Site between Waipuilani Street and Lipoa Street. (See Exhibit 1).

The project site encompasses an area of approximately 2.31 acres.

B. Project Description:

The proposed plan is to construct a single 12 ft. wide or dual 6 ft. wide asphalt paved path which would span approximately 2800 feet from Waipuilani Street at the north end and Lipoa Street at the south end. Improvements would include landscaping (groundcover and shade trees), lighting, irrigation (expected to be supplied from the County's reclaimed wastewater transmission line), and basic appurtenances (e.g., striping, signing, traffic control features, etc.).

II. EXISTING CONDITIONS:

A. Topography and Soil Conditions:

The project site is undeveloped and not being used for any particular purpose. The existing ground from Waipuilani Street to Lipoa Street generally slopes in a southerly to northerly direction with an average slope of approximately 1.3%. Natural vegetation include, but is not limited to buffelgrass and kiawe trees.

According to the *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* [1], prepared by the United States Department of Agriculture, Soil Conservation Service, the two soil classifications found on the project site are the Pulehu Series, Pulehu clay loam, 0-3 percent slopes (PsA) and the Alae Series, Alae sandy loam, 0-3 percent slopes (AaB). The Pulehu clay loam is characterized as having moderate permeability, slow runoff and a slight erosion hazard. The Alae sandy loam is characterized as having slow runoff and a slight erosion hazard. (see Exhibit 2).

B. Drainage:

According to our calculations, approximately 2.3 cfs of onsite surface runoff is presently generated by the project site (see Appendix A). This surface runoff sheet flows across the project site into the adjacent downstream properties.

C. Flood and Tsunami Zone:

According to Panel Number 150003 0265C of the Flood Insurance Rate Map [2], dated September 6, 1989, prepared by the United States Federal Emergency Management Agency, the project site is situated within Zone C, which is designated as an area subject to minimal flooding. (See Exhibit 3).

IV. DRAINAGE PLAN

A. General:

The design criteria that will be utilized for the design of the proposed bike and jogging path shall include minimal alterations to the natural drainage pattern of the onsite surface runoff volume to ensure that the present volume sheet flowing into the downstream properties is not increased by the proposed bike and jogging path.

According to our calculations, the onsite surface runoff volume generated from the project site is expected to be approximately 2.3 cfs. Accordingly, it is expected that there will be no net increase of onsite surface runoff volume due to the proposed improvements (Appendix A). This is due mainly to the increased vegetal cover over the project site.

B. Hydrologic Calculations:

The hydrologic calculations are based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui", Title MC-15, Chapter 4 and the "Rainfall Frequency Atlas of the Hawaiian Islands", Technical Paper No. 43, U. S. Department of Commerce, Weather Bureau.

Rational Formula used:

$$Q = CIA$$

Where
- Q = Rate of Flow (cfs)
- C = Runoff Coefficient
- I = Rainfall Intensity (inches/hour)
- A = Area (Acres)

The hydrologic calculations for this project may be found in Appendix A.

C. Conclusion:

According to our calculations, the Kihei Bikeway at Piilani North (Waipuilani Street to Lipoa Street) Project is not expected to result in an increase in onsite surface runoff volume which is due mainly to the increased vegetal cover over the project site (Appendix A). Since the onsite surface runoff volume generated by the proposed project will not be increased, it is our professional opinion that the proposed development will not have any adverse effect on the downstream adjoining properties.

Prepared By: Carlos R. Rivera
Carlos R. Rivera

Reviewed By:
Clifford N. Mukai, P.E.

VII. REFERENCES

1. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* August 1972. United States Department of Agriculture, Soil Conservation Service.

2. *Flood Insurance Rate Map, Maui County, Hawaii.* Community-Panel Number 150003 0265C. September 6, 1989 Federal Emergency Management Agency, Federal Insurance Administration.

3. *Rainfall Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43.* 1962. U.S. Department of Commerce, Weather Bureau.

4. *Rules for the Design of Storm Drainage Facilities in the County of Maui.* July 1995. Department of Public Works and Waste Management, County of Maui..

EXHIBITS

1 Location Map

2 Site Specific Soil Classification Map

3 Flood Insurance Rate Map

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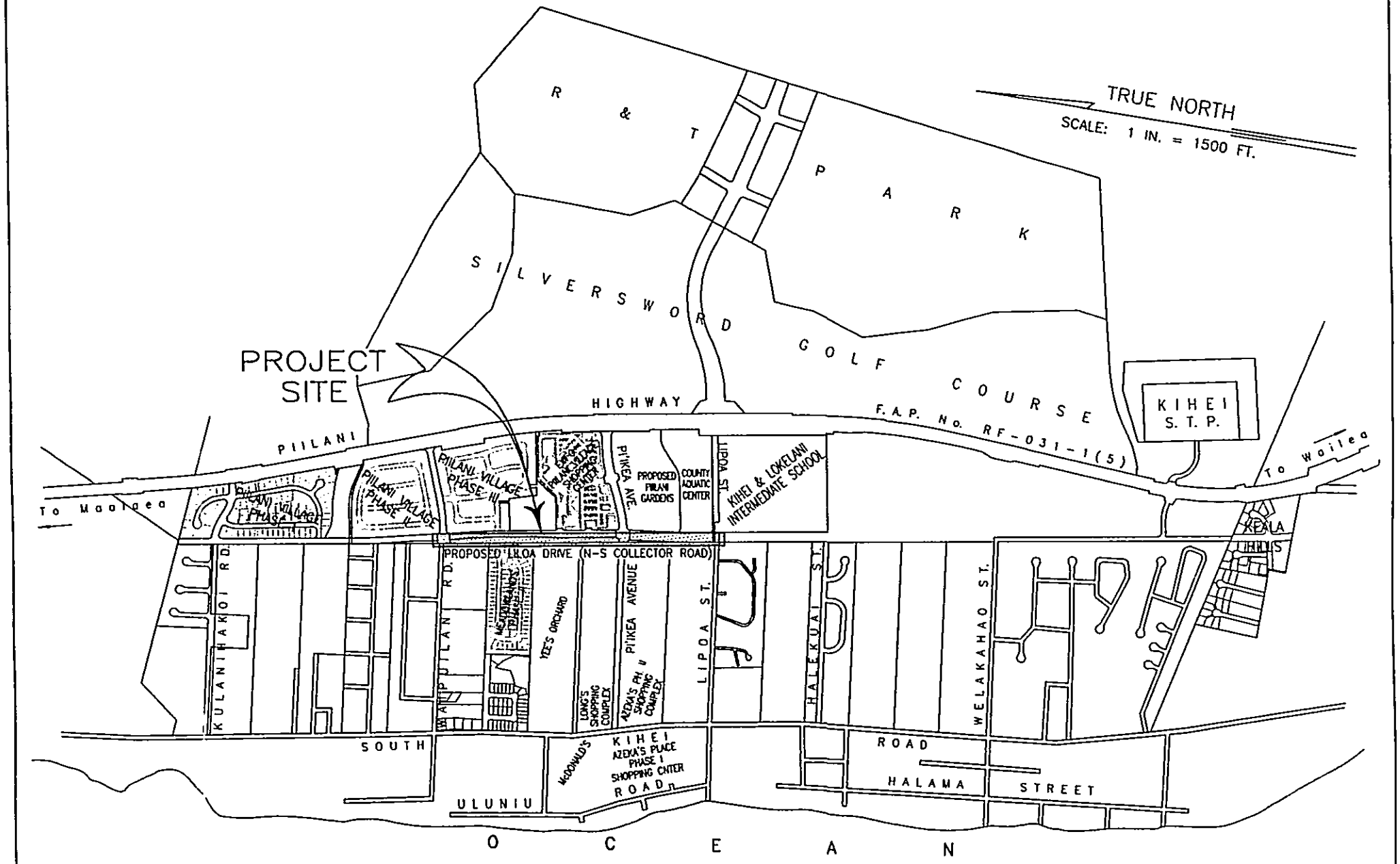


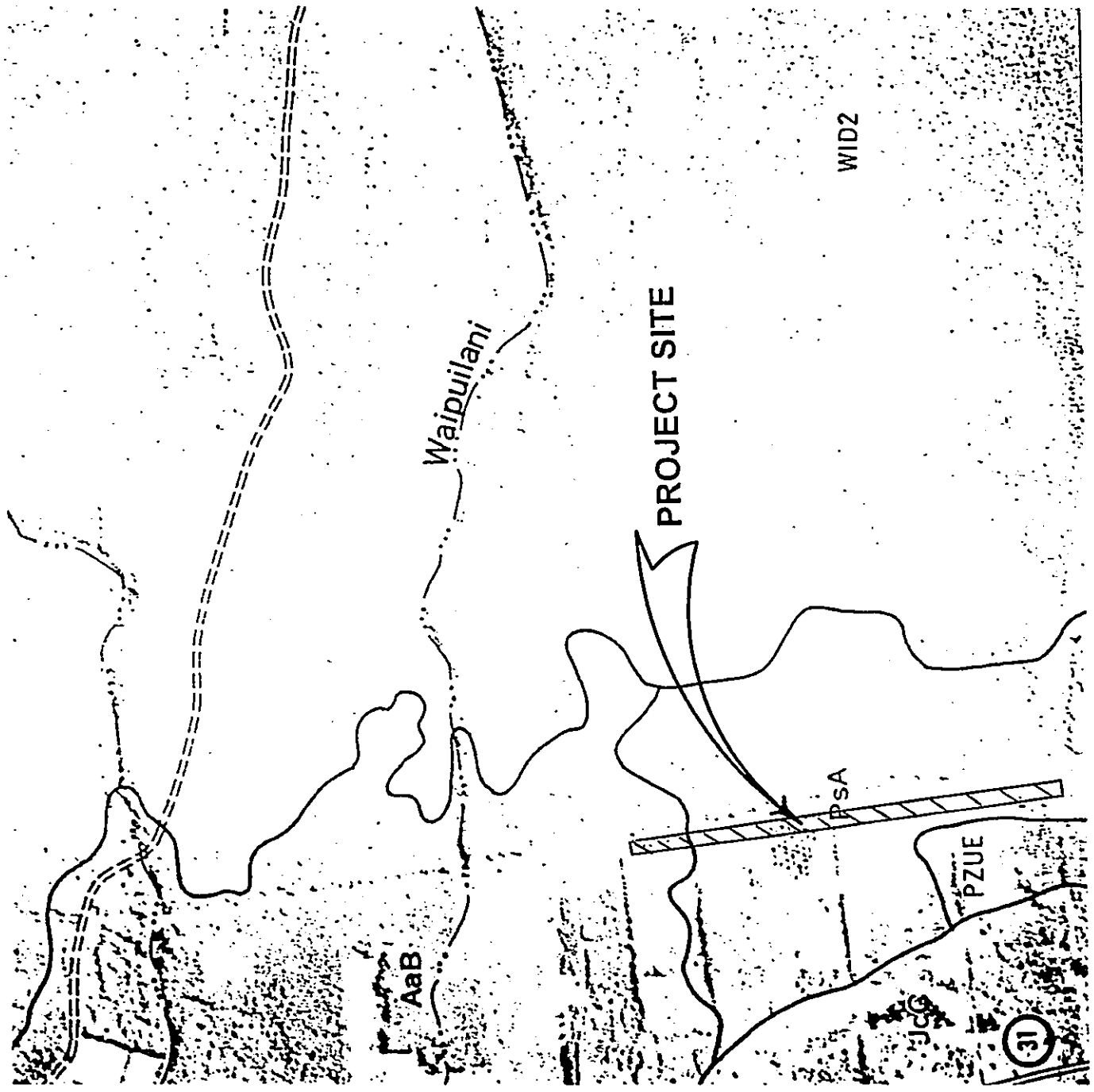
LOCATION MAP

0 1500 3000 4500 6000

SCALE: 1 IN. = 1500 FT.

FIGURE 1

EXHIBIT 2
SITE SPECIFIC SOIL
CLASSIFICATION MAP



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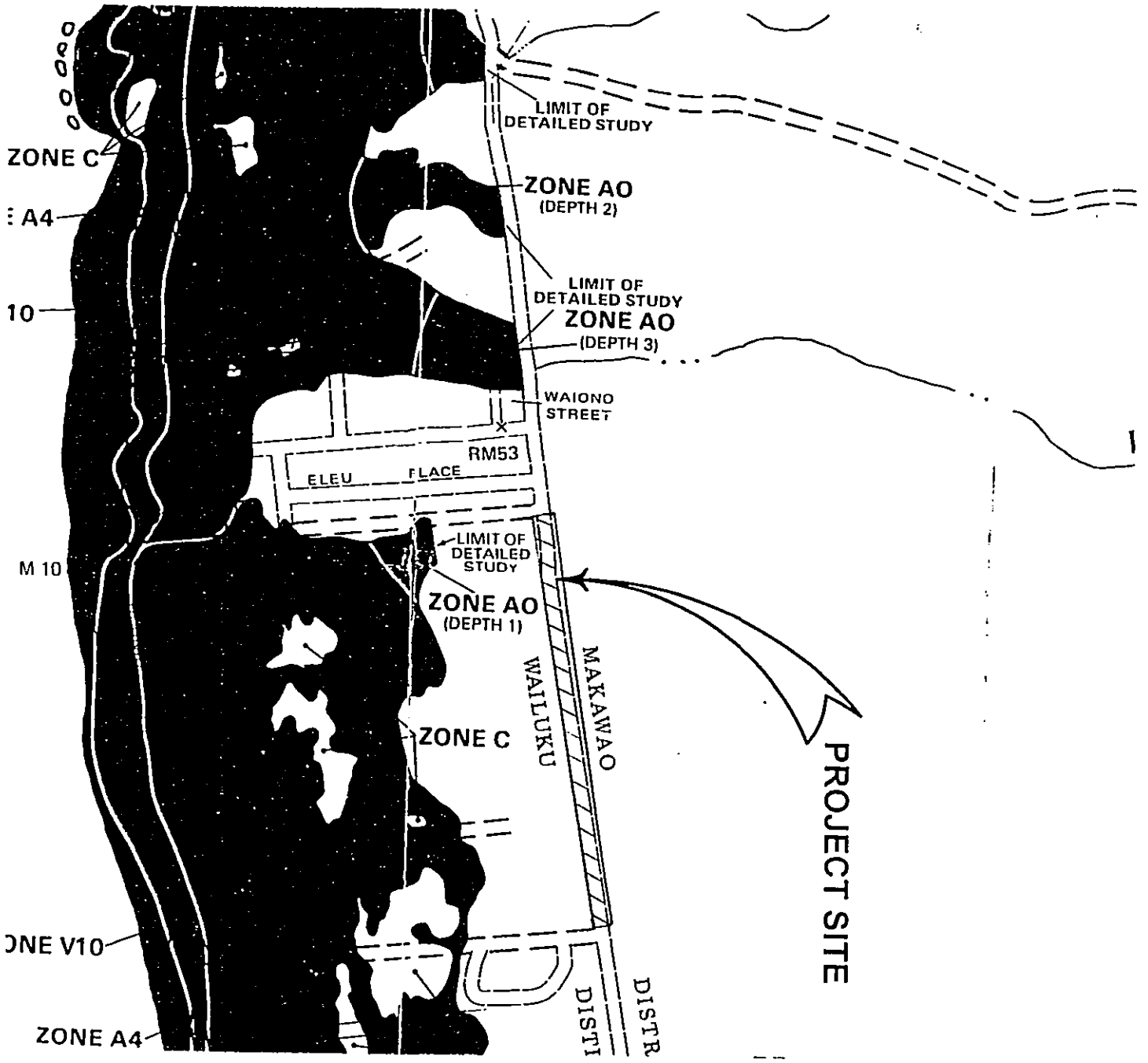


EXHIBIT 3
FLOOD INSURANCE
RATE MAP

APPENDIX A

HYDROLOGIC CALCULATIONS

Warren S. Unemori Engineering, Inc.
Wells Street Professional Center
2145 Wells Street , Suite 403
Wailuku, Maui , Hawaii 96793

Date: April 1, 2002

HYDROLOGIC CALCULATIONS: PRE-DEVELOPMENT

Objective: To determine the pre-development runoff of the project site

I. 50-Yr. - 1 Hr. Rainfall:

From "Rainfall Frequency Atlas of the Hawaiian Islands", for Kihei, Maui,
R(10 Yr.-1Hr.) = 1.75 inches

2. Total Area:

Area (Ac.):		2.31

3. Runoff Coefficents:

Infiltration:	Medium	0.07
Relief:	Flat (0-5%)	0.00
Vegetal Cover:	*Poor (<10%)*	0.05
Development Type:	Agricultural	0.15
	Runoff Coeff't., C:	0.27

4. Time of Concentration:

Approx. Elev. Diff'l. (ft.)		12
Higher Elev. (ft.):	38	
Lower Elev. (ft.):	26	
Approx. Runoff Length (ft.):		310
Average Slope:		3.87%
Time of Concentration (min.):		10

5. Intensity:

Intensity (in./hr.):	3.7

6. Total Runoff:

Q = C x I x A (cfs):	**2.31**

Warren S. Unemori Engineering, Inc.
Wells Street Professional Center
2145 Wells Street , Suite 403
Wailuku, Maui , Hawaii 96793

Date: April 1, 2002

HYDROLOGIC CALCULATIONS: POST-DEVELOPMENT

Objective: To determine the post-development runoff of the project site

I. 50-Yr. - 1 Hr. Rainfall:

From "Rainfall Frequency Atlas of the Hawaiian Islands", for Kihei, Maui,
R(10 Yr.-1Hr.) = 1.75 inches

2. Total Area:

Area (Ac.):		2.31

3. Runoff Coefficents:

Landscape Portion, Area (Ac.):		1.54
Infiltration:	Medium	0.07
Relief:	Flat (0-5%)	0.00
Vegetal Cover:	High (50-90%)	0.00
Development Type:	Agricultural	0.15
	Runoff Coeff't., C:	0.22
Bike / Jogging Path, Area (Ac.):		0.77
Infiltration:	Negligible	0.20
Relief:	Flat (0-5%)	0.00
Vegetal Cover:	None	0.07
Development Type:	Bike / Jog Path	0.68
	Runoff Coeff't., C:	0.95
	Weighted Runoff Coeff't., C:	0.46

4. Time of Concentration:

Approx. Elev. Diff'l. (ft.)		10
Higher Elev. (ft.):	24	
Lower Elev. (ft.):	14	
Approx. Runoff Length (ft.):		300
Average Slope:		3.33%
Time of Concentration (min.):		36

5. Intensity:

Intensity (in./hr.):	2.2

6. Total Runoff:

Q = C x I x A (cfs):	**2.35**

APPENDIX B

SOIL EROSION CONTROL PLAN

EXISTING PIILANI VILLAGE – PHASE II

T.M.K.: (2)2-2-24 : 19
SPENCER HOMES, INC.
(OWNER)

EXISTING E. WAIPUILANI ROAD EXTENSION TO PIILANI HWY.

PROPOSED PIILANI VILLAGE – PHASE III

T.M.K.: (2)2-2-24 : 20
SPENCER HOMES, INC.
(OWNER)

ACCESSIBLE ROUTE

20' X 30'
TIRE CLEANING PAD

LILOA DRIVE (NORTH-SOUTH COLLECTOR)

TO KULANIHAKOI ST.

T.M.K.: (2)3-9-21 : 01
NED J. GURULE
& WF. JO-ANN B.
(OWNER)

KIHEI ESTATES SUBDIVISION

TO S. KIHEI RD.

PROPOSED BIKEWAY PATH

SILT FENCE

T.M.K.: (2)3-9-46 : 14
WAIPUILANI LLC
PAUL S. FERREIRA, ET.AL.
(OWNER)

T.M.K.: (2)3-9-54 : 20
JIMMY B. MORAL
& WF. NIZA
(OWNER)

EXISTING MEADOWLANDS SUBDIVISION –

T.M.K.: (2)3-9-
G.K. SOUTH MA
(OWI

MATCHLINE

EXISTING PIILANI VILLAGE COMMERCIAL

T.M.K.: (2)2-2-24 : 21
HBS LIMITED PARTNERSHIP
(OWNER)

TO KULANIHAKOI ST.

TO PIILANI HWY.

PIIKEA AVE.

TO S. KIHEI RD.

PROPOSED BIKEWAY PATH

SILT FENCE

T.M.K.: (2)3-9-02 : 30
STEWART E. FERN, TRUST
(OWNER)

TRUE NORTH
SCALE: 1 IN. = 100 FT.

PROPOSED PIILANI GARDENS & APARTMENT C

T.M.K.: (2)2-2-24 : 22
PIILANI GARDENS LLC
(OWNER)

LILOA DRIVE (NOR

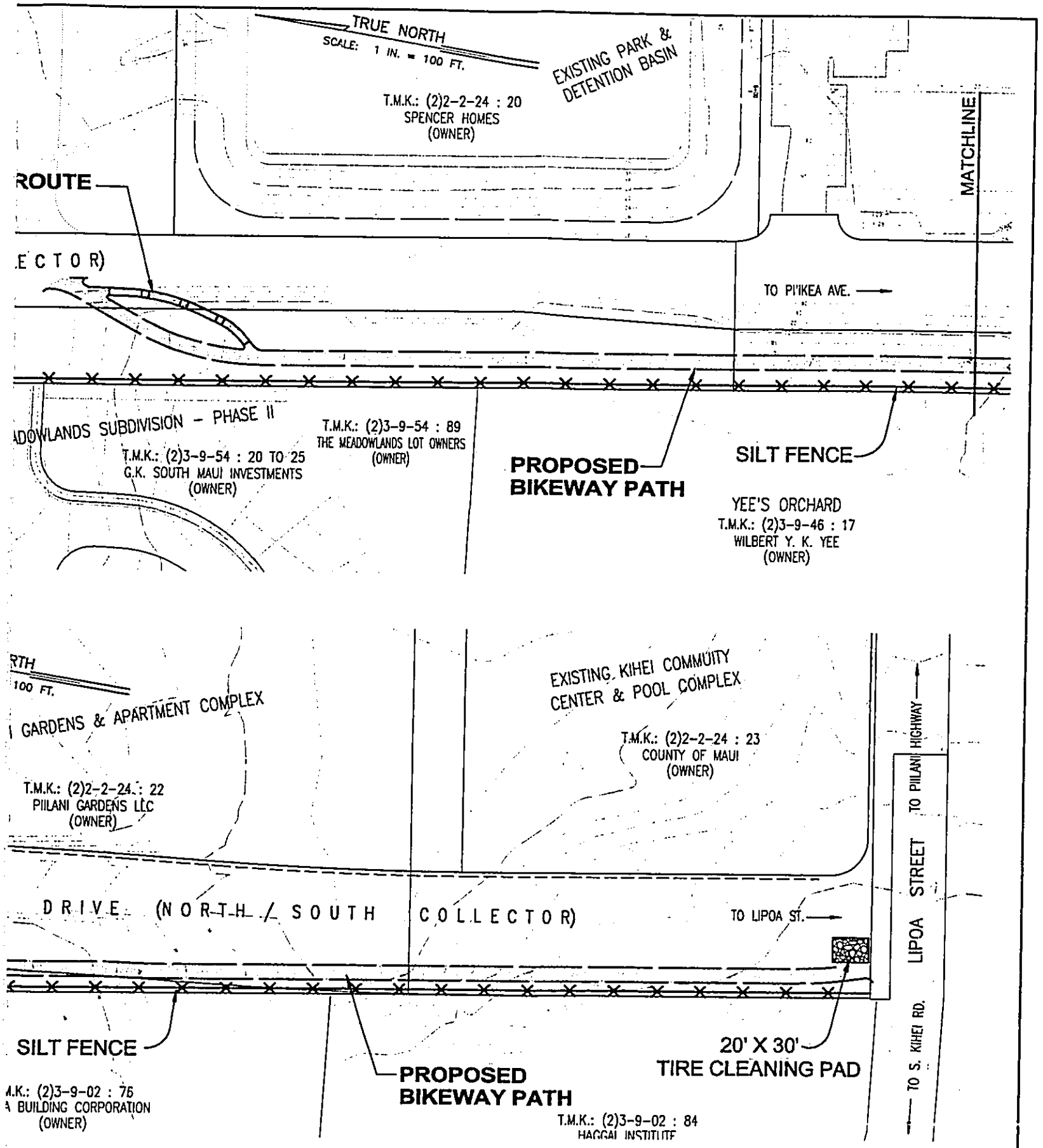
SILT FENCE

T.M.K.: (2)3-9-02 : 76
AZEKA BUILDING CORPORATION
(OWNER)

EROSION CONTROL PLAN

SCALE: 1 INCH = 100 FEET

3004\dwg\dgn\ero_ctrl.dgn 6/15/2005 9:47:



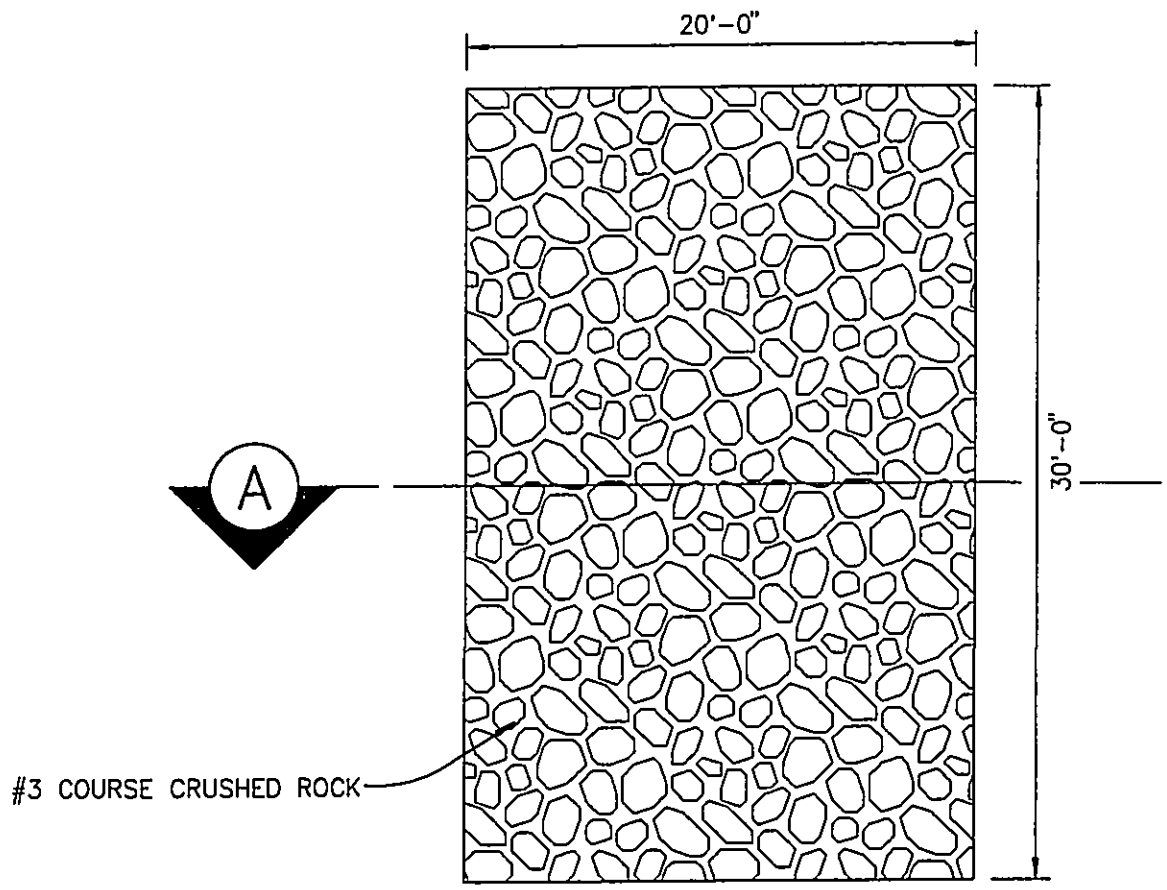
L PLAN
EET

WARREN S. UNEMORI - ENGINEERING, INC.
Wells Street Professional Center - Suite 403
2145 Wells Street - Wailuku, Maui, Hawaii 96793
(808)242-4403 FAX: (808)244-4856

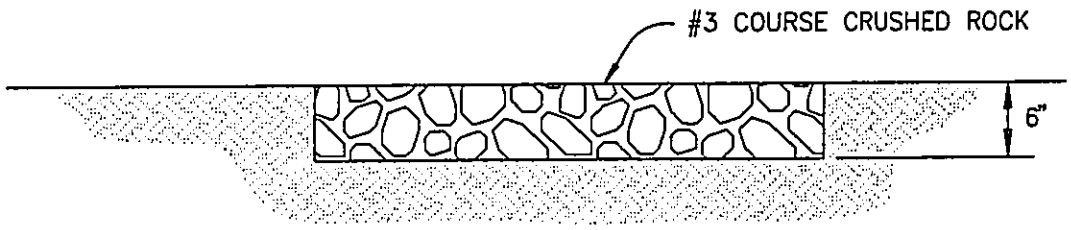
April 2, 2002

11"x17"

WSUE #98047



PLAN



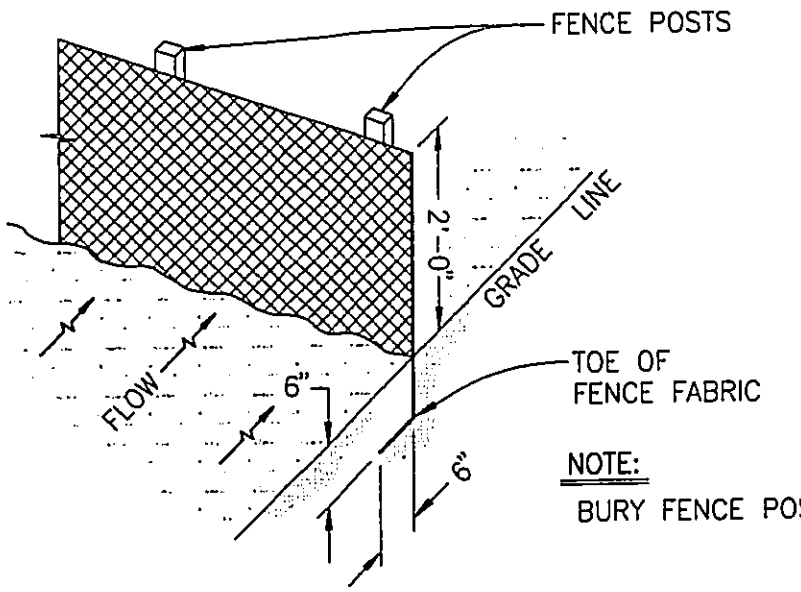
SECTION A

DETAIL–TIRE CLEANING PAD

NOT TO SCALE

EROSION CONTROL DETAILS

NOT TO SCALE



NOTE:
BURY FENCE POST 1 FOOT MIN.

DETAIL – SILT FENCE

NOT TO SCALE

30'-0"

RUSHED ROCK

6"

'AILS

WARREN S. UNEMORI – ENGINEERING, INC.
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2145 Wells Street – Wailuku, Maui, Hawaii 96793
(808)242-4403 FAX: (808)244-4856

April 2, 2002

11"x17"

WSUE #98047

APPENDIX "D"

SDOT Documentation of Categorical Exclusion Granted

Project Number _____

State of Hawaii
Department of Transportation
Highways Division

DOCUMENTATION FOR CATEGORICAL EXCLUSIONS LISTED UNDER 23 CFR §771.117(d)

Project Title: KIHEI BIKEWAY AT PIILANI NORTH from Waipuilani Street to Lipoa Street.

1) DESCRIPTION

Attach project location map and other appropriate graphics.

Estimated Project Cost	*Project Length*	*Number of Lanes*
ROW: n/a CON: $ 700.000	0.57 mi (.914 km)	2 Existing __ Proposed

Design Speed	*Functional Classification – 1= Principal Arterial, 2 = Minor Arterial, 3= Major Collector, 4= Minor Collector, 5= Local Road*	*Proposed Typical Section*
__Existing __ Proposed	3 Existing ___ Proposed	☐ Rural ☒ Urban

Bridge	*Bridge Sufficiency Rating*	*Bridge ID*
☐ Yes ☑ No	n/a	n/a

Project Description: New bike path along North-South Collector Road, from Waipuilani Street to Lipoa Street, to include grading, paving, drainage, utility relocation, landscaping and irrigation.

2) ISSUES

Any response in a shaded box, requires items 3 - 8 to be completed. Otherwise, skip to items 7 and 8.

	YES	NO
SOCIAL-ECONOMIC FACTORS		
A. General Economics - Adverse effects on the general economics of the community.		X
B. Community & Residential - Changes in the access controls along the length of the project.		X
C. Industrial & Commercial - Changes in the access controls along the length of the project.		X
D. Prime, Unique, Statewide, Local Important Farmland - Land on the Agricultural Lands of Importance for Hawaii Classification (ALISH) will be acquired.		X
E. Land Use/Urban Policy - *Consistent* with the local transportation improvement plans, land use plans and urban policy.	X	

Project Number _____

	YES	NO
F. Right-of-Way - Right of way that may be acquired by fee simple purchase, permanent or temporary easement, right of entry, gift, or other device are *within* the following limits: 1. Resurfacing, Reconditioning, Restoration, Rehabilitation Projects. a. Permanent - Less than one acre for any one mile (0.25 ha for any 1 km) b. Temporary - Less than 2 acres for any one mile (0.5 ha for any 1 km) 2. Bridge Rehabilitation (including full deck replacement) or Minor Replacement Less than one half acre (0.2 ha) per bridge	X	
- Displacements Residential, commercial, or industrial displacements. Vacant buildings which are not significant cultural resources may be acquired.		X
G. Environmental Justice - Neither minority nor low-income populations *will receive* disproportionately high or adverse impacts as a result of the proposed project.	X	
NATURAL & PHYSICAL ENVIRONMENTAL FACTORS		
H. Wetlands - A Section 404 permit is required.		X
I. Flood Plains - Encroachment into a floodplain.		X
J. Streams, Rivers, Shoreline Encroachments - A Section 404 permit is required. - *Contradictory* with the goals of the Coastal Zone Management Plan. - Use of lands, waters, or rivers designated as Wild/Scenic Rivers by the U.S. Government *(DOI National Park Service and/or US Fish & Wildlife Service)* - Permit required from the United States Coast Guard & Department of Accounting and General Services (DAGS).		X
K. Rare, Threatened & Endangered Species - Adverse effects on rare, threatened, and endangered species or their habitat.		X
L. Section 106, Historical & Cultural - Adverse effects to a significant cultural and/or historical resource. (*Cultural and historical resources are significant only if they are on or eligible for the National Register of Historic Places.*)		X
M. Section 4(f) or 6(f) Properties - Acquisition of lands under the protection of Section 6(f) of the Land And Water Conservation Act of 1965. - Use of lands or other properties under the purview of Section 4(f) unless a Programmatic Section 4(f) approval has been made by the FHWA.		X
N. Air Quality - Anticipate Carbon Monoxide levels that exceed 90% of the Federal standards of 9 ppm in 8 hours.		X
O. Noise Quality - A noise analysis is required per 23 CFR §772.5.		X

	YES	NO
P. **Hazardous Waste** - Properties with hazardous waste will be acquired.		X
Q. **Visual and Aesthetic** - Adverse effect to viewshed.		X
R. COMMENTS This is a bike path project.		

3) PURPOSE AND NEED

Purpose and need of proposed action. Include description of existing facilities, abutting facilities, and how the action links into the overall transportation system. **When appropriate**, show that this project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

n/a

4) ALTERNATIVES

Summary of the alternatives considered and if they are not proposed for adoption, why not. (Identify which, if any, of the alternatives is the preferred alternative.)

n/a

5) PUBLIC INVOLVEMENT

Briefly summarize the status and results of public involvement. Include the dates and results of coordination with local units of government, if any.

n/a

6) IMPACTS

Provide a description of the impacts. Also attach coordination and concurrence letters requested (See *Instructions for Categorical Exclusions*, page 4). If the coordination letters are not attached, provide information on what coordination has taken place.

n/a

Project Number _____

7) DETERMINATION

☑ Categorical Exclusion
It is determined, after review of this document, and coordination with other agencies, that this project was demonstrated that no significant environmental effects will result.

☐ Environmental Assessment (EA) / Environmental Impact Statement (EIS)
It is determined, after review of this document, and coordination with other agencies, that further study is required to determine if there will be significant environmental consequences. An Environmental Assessment is required.

8) SIGNATURES

Prepared By:

4/11/02
Date

Project Engineer/Manager
County of Maui

Approved By:

5/2/02
Date

Chief, Highway Division
Hawaii Department of Transportation

5/6/02
Date

Federal Highway Administration
Transportation Engineer

APPENDIX "E"

Cultural Practices Assessment Report

SCS Project 326-1

A CULTURAL PRACTICES ASSESSMENT FOR THE KĪHEI BIKEWAY IN KĪHEI, MAUI, HAWAI`I [TMK: 2-2-02]

Prepared By:
Leann McGerty, B. A.
and
Robert L. Spear, Ph.D.
July 2002

Prepared For:
Warren S. Unemori Engineering
2145 Wells Street, Suite 403
Wailuku, Maui, Hawaii 96793

SCIENTIFIC CONSULTANT SERVICES Inc.

711 Kapiolani Blvd. Suite 1475 Honolulu, Hawai`i 96813

ABSTRACT

At the request of Warren S. Unemori Engineering, Inc., Scientific Consultant Services, Inc. (SCS) conducted a cultural practices assessment for 3,000 feet of the Kīhei Bikeway in Kīhei, Maui (TMK: 2-2-02). SCS consulted with community members and businesses concerning activities and events between Waipuilani and Lipoa streets. Document research established that the project was previously a part of Haleakalā Ranch land and is located in a previously barren landscape, only developed in the past 13 years. Construction of a bikeway will not cause loss or destruction to any cultural resource. Therefore, the Kīhei Bikeway project poses no adverse affect on cultural sites.

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ASSESSMENT AND RECOMMENDATIONS 10

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Figure 3: Aerial Photo of Kīhei Bikeway. 5
Figure 4: Section of 1929 Map of Maui, Walter E. Wall Surveyor. 7
Figure 5: Map of Hawaiian Commercial and Sugar Company Lands in 1949. 8
Figure 6: Map of Hawaiian Commercial and Sugar Company Lands in 1962. 9

INTRODUCTION

At the request of Warren S. Unemori Engineering, Inc., Scientific Consultant Services, Inc. (SCS) conducted a cultural practices assessment for 3,000 feet of the Kīhei Bikeway in Kīhei, Maui (TMK: 2-2-02, Figure 1).

This project falls under the aegis of Section 106 and Act 50. The Section 106 seeks to accommodate historic preservation issues with the needs of projects utilizing Federal funds. This is accomplished through consultation among concerned parties with an interest in the effects of the project on historic properties and is to be initiated in the early stages of planning a project. Consultation is to occur to identify those properties potentially affected by the project, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties (King and Nissley 2000).

In 2000, the Hawai'i State Legislature passed into law Act 50, which included in the definition of "environmental impact statement," effects on the cultural practices of the Community and State. The definition of "significant effect" was amended to include adverse effects on cultural practices (Act 50, Session Laws of Hawaii 2000). Act 50 requires an assessment of cultural practices in the project area to be included in the Environmental Impact Statement and to be taken into consideration during the planning process. The November 1997 *Guidelines for Assessing Cultural Practices* recognized the concept of geographical expansion by using as an example "the broad geographical area, e.g., district or ahupua`a." SCS consulted with community members in Kīhei to ascertain what cultural uses (if any) are occurring in the region encompassing the proposed bikeway corridor. Cultural Impact Assessment on the Kīhei Bikeway project was completed in July of 2002.

DEFINING CULTURAL PRACTICES

Recently, consultation between the Office of Environmental Quality and Control (OEQC), Office of Hawaiian Affairs (OHA) and the Primary Corridor Transportation Project resulted in a general definition of cultural practices (reported in Act 50, Cultural Impact Assessment 2001). It was decided that the process should identify "anthropological" cultural practices, rather than "social" cultural practices. *Limu* gathering would be considered anthropological while a modern-day marathon would be considered social cultural practice. The discussion resulted in the following workable definition for cultural practices:

> (1) A traditional cultural practice that is being conducted in an urban setting; and
>
> (2) Traditions, beliefs, practices, lifeways, societal, history of a community and its traditions, arts, crafts, music, and related social institutions. [Act 50, Cultural Impact Assessment, 2001]

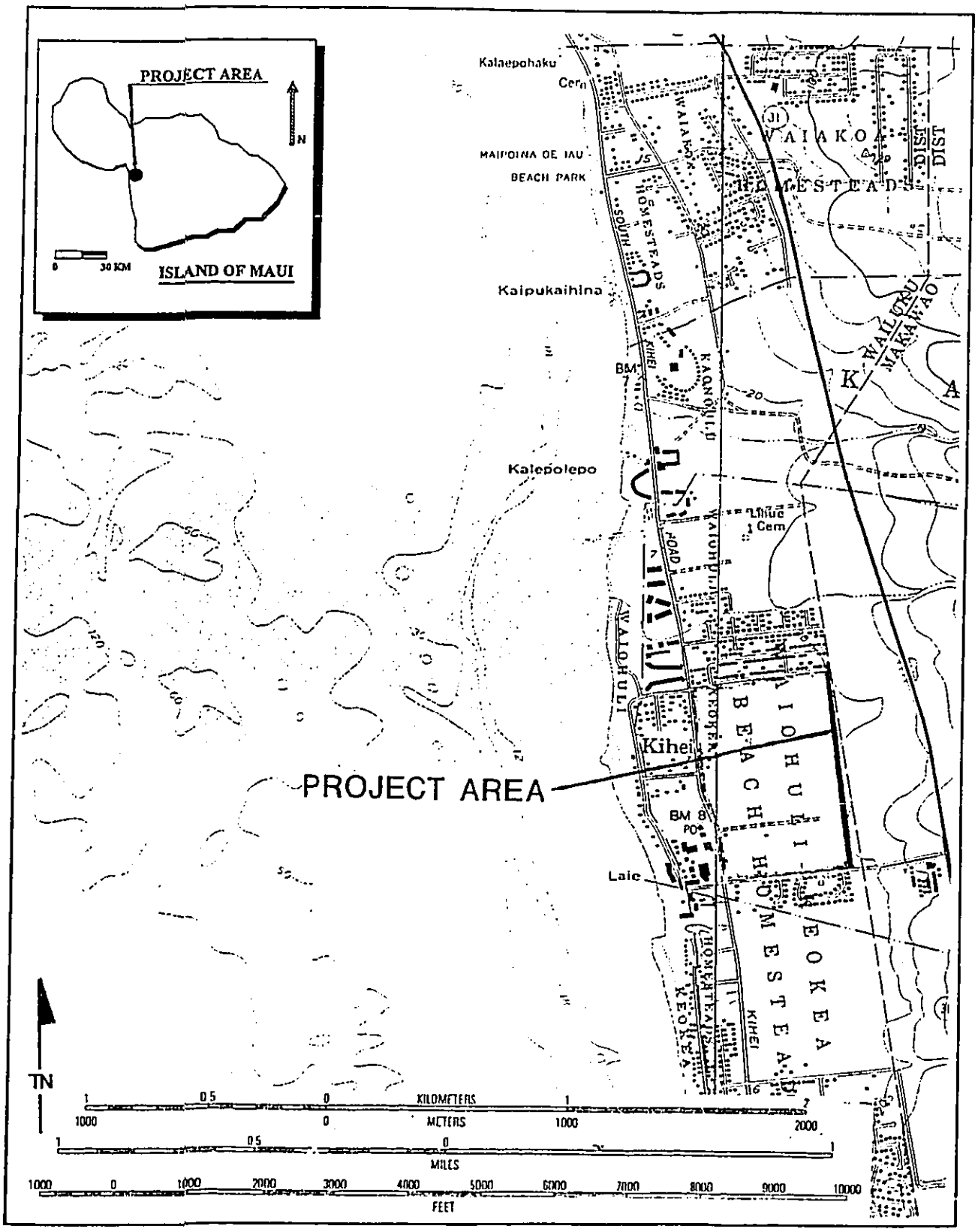

Figure 1: USGS Puu O Kali and Maalaea Quadrangles Showing Project Area.

It was also concluded that a proposed action that may not physically alter gathering practices, but may affect access to gathering areas would be included in the investigation (State of Hawai`i 1997). There was a discussion distinguishing between "traditional" cultural practices, such as fishing, and "urban" cultural practices, such as craft fairs and the elderly gathering at shopping malls. It was decided that the spirit of Act 50 pointed in the direction of assessing and protecting traditional cultural practices in urban setting, rather that urbanized cultural practices. This definition is appropriate for the present Kīhei Bikeway project

METHODOLOGY

Informant interviews form a critical part of the cultural practices assessment process. Individuals having knowledge of traditional, as well as current cultural practices associated with the project area were sought for interviews. Maui residents and businesses along the proposed bikeway were consulted for such information. Inquiries were made concerning any information pertaining to cultural activities that may be impacted by the proposed Kīhei Bikeway project.

Maui residents who contributed information and recommended additional sources included, Dana Naone Hall of the Maui Burial Council, Melissa Kirkendall, currently Maui Island Archaeologist, and Theresa Donham formerly with the State Historic Preservation Division. Six business or developments along the project's route were consulted.

STUDY AREA

The Kīhei Bikeway is proposed for Liloa Drive located between South Kīhei Road and Pi`ilani Highway, in Kīhei, Maui. The project area extends from Waipuilani Street in the north, down Liloa Drive, and ends at Lipoa Street in the south, approximately 3,000 feet (Figures 2 and 3). The bikeway route originates on the *makai* side of the road , meanders into the street briefly at an intersection across from Pi`ilani Village Phase III, and returns to the *makai* side of the road until it reaches the last thoroughfare before Lipoa Street. Here, again, the bikeway veers slightly into the street and then returns to the *makai* side of the road where it continues, until reaching the intersection of Liloa and Lipoa streets.

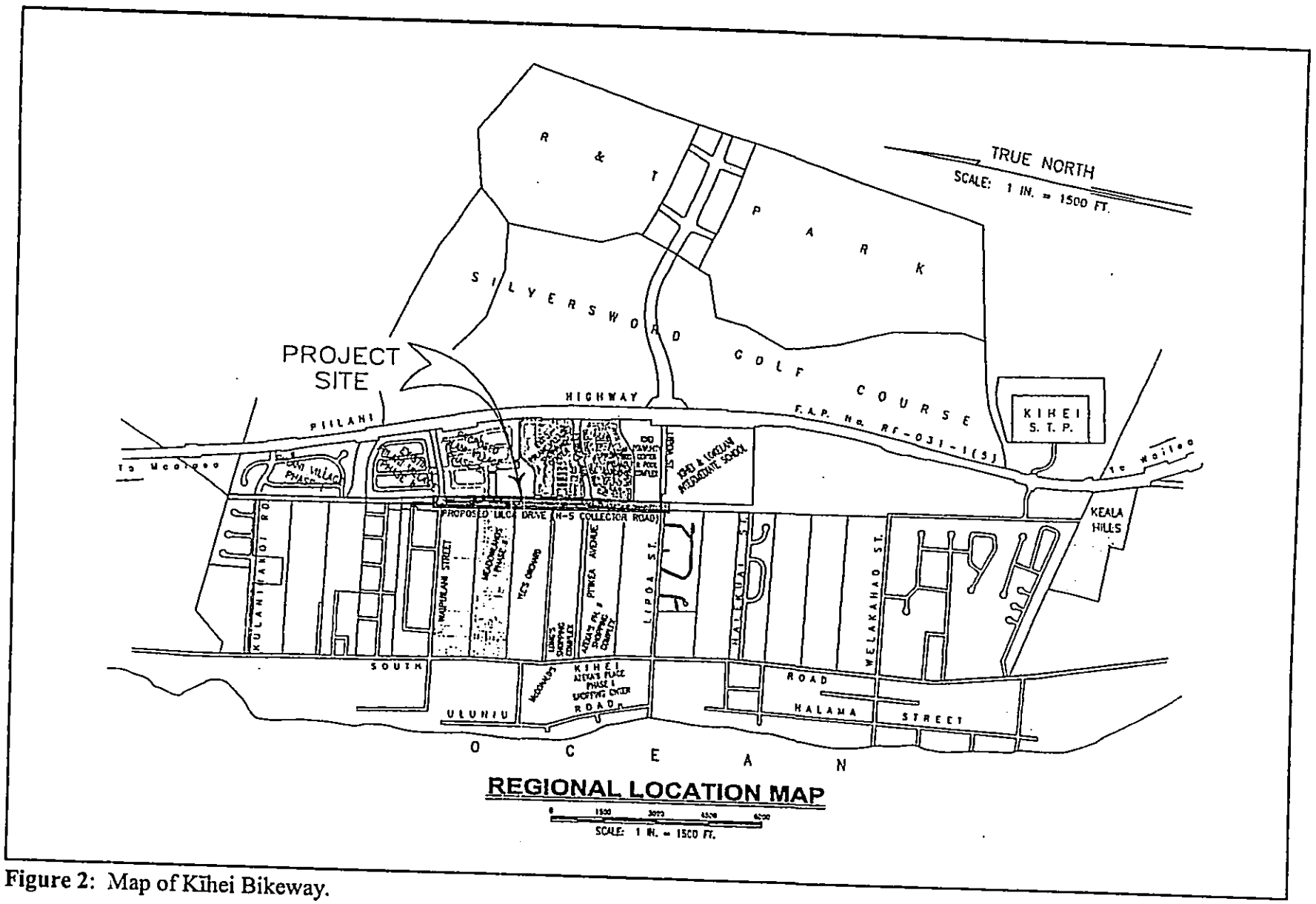

Figure 2: Map of Kīhei Bikeway.

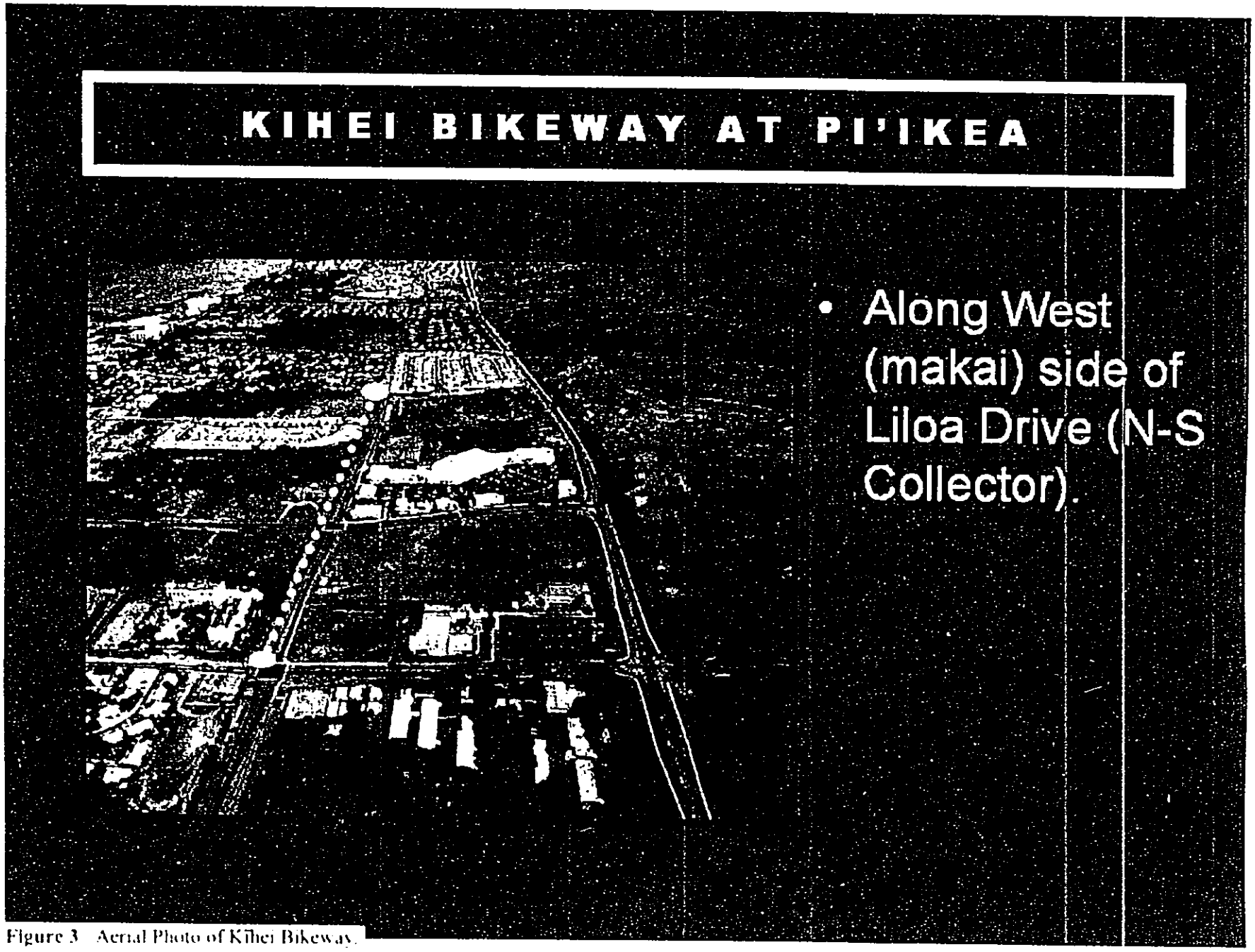

Figure 3 Aerial Photo of Kihei Bikeway

Development along the *mauka* side of Liloa Drive (north to south) consists at present of: Pi`ilani Village Phase III, Park and Detention Basin, Pi`ilani Village Shopping Center, multi-family lots, and the Kīhei Community Center. The *makai* side of Liloa Drive (north to south) consists of Meadow Lands Phase II development, Yee's orchard, Long's Shopping Complex, Azeka's Phase II Shopping Complex, and the Haggai Institute. Wetlands created in a land exchange are situated in an area behind the shopping centers and will not be affected by the proposed bikeway construction.

A 1929 map of Maui (Figure 4) shows Kīhei as a destination for the Hawaii Commercial and Sugar Company railroad in a totally undeveloped terrain. Background research established that there had been no Land Commission Awards or previously identified historical properties in the vicinity of the project, located south of Waipuilani Gulch. A document search revealed that a large section of government land, including the project area, had become a part of the Haleakalā Ranch in the 1800s (Land Grant 9325:1). No specific use for the area incorporating Liloa Drive could be identified in any available source.

Sugar production in the early twentieth century included development in both Wailuku and Kīhei by the Hawaiian Commercial and Sugar Company. Available land was purchased and leased for agricultural. Figure 5 shows new roads and cultivated sugar fields in 1949, bordering Kīhei town, close to the project area. Little change has occurred to Kīhei 13 years later (Figure 6). Although some coastal lands were sold in the 1950s, it wasn't until the 1970s that development of shopping centers, hotels, apartments, and condominiums changed Kīhei's focus and began its present day expansion (Speakman 1984).

IDENTIFICATION OF CULTURAL PRACTICES

Businesses and community services bordering Liloa Drive on both sides were contacted. This included Pi`ilani Village Development, Pi`ilani Village Shopping Center, Kīhei Community Center, Longs Shopping Complex, Azeka's Shopping Complex, and The Haggai Institute. All of these enterprises are of recent origin (the oldest, Azeka's Shopping Center was constructed in 1989), and not associated with any traditions, beliefs, practices, lifeways, or societal history of the Kīhei community. Neither the Kīhei Community Center, which may coordinate arts, crafts, music, parties, and other related activities, nor the man-made wetlands will be affected by the proposed bikeway.

DOCUMENT CAPTURED AS RECEIVED

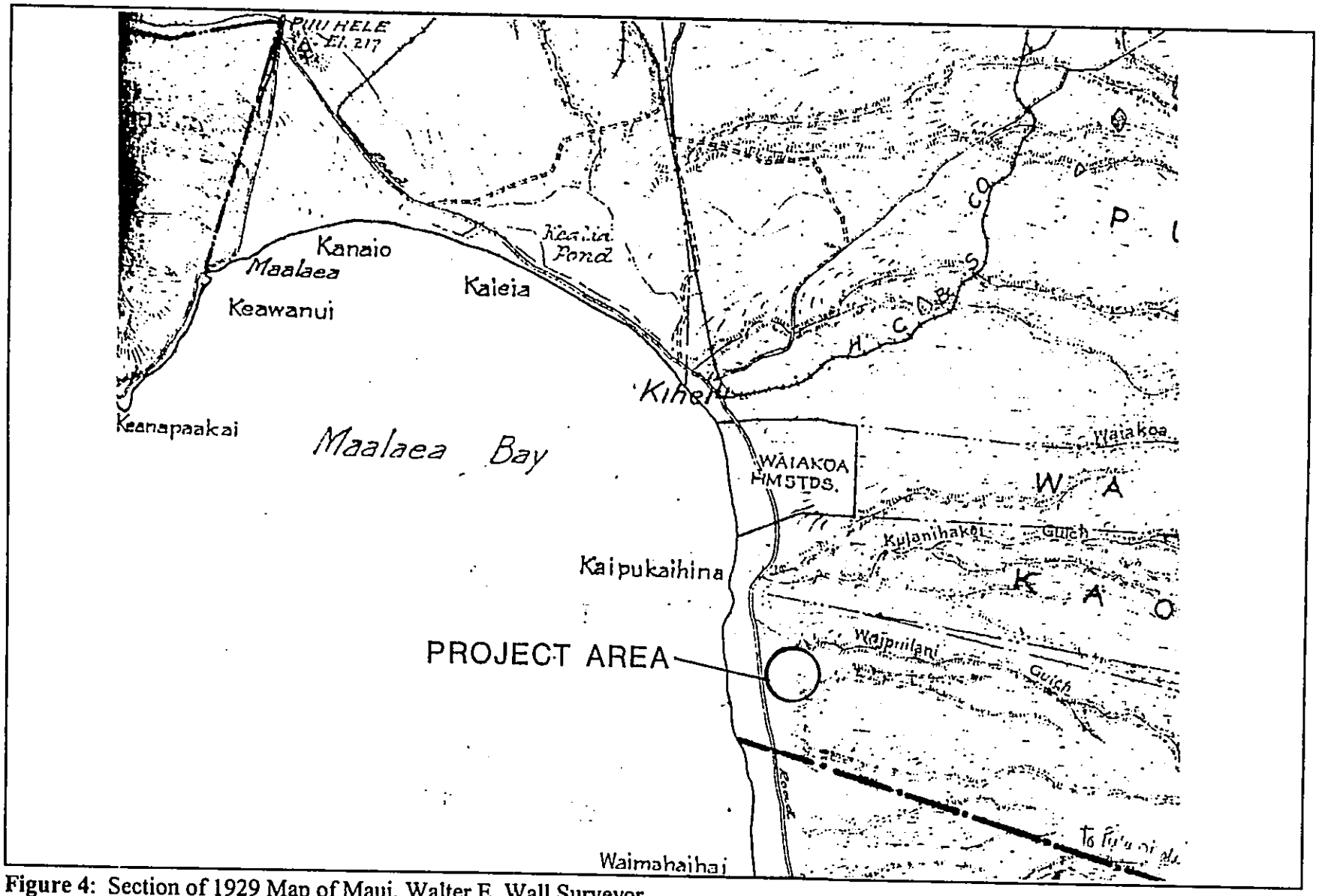

Figure 4: Section of 1929 Map of Maui, Walter E. Wall Surveyor.

DOCUMENT CAPTURED AS RECEIVED

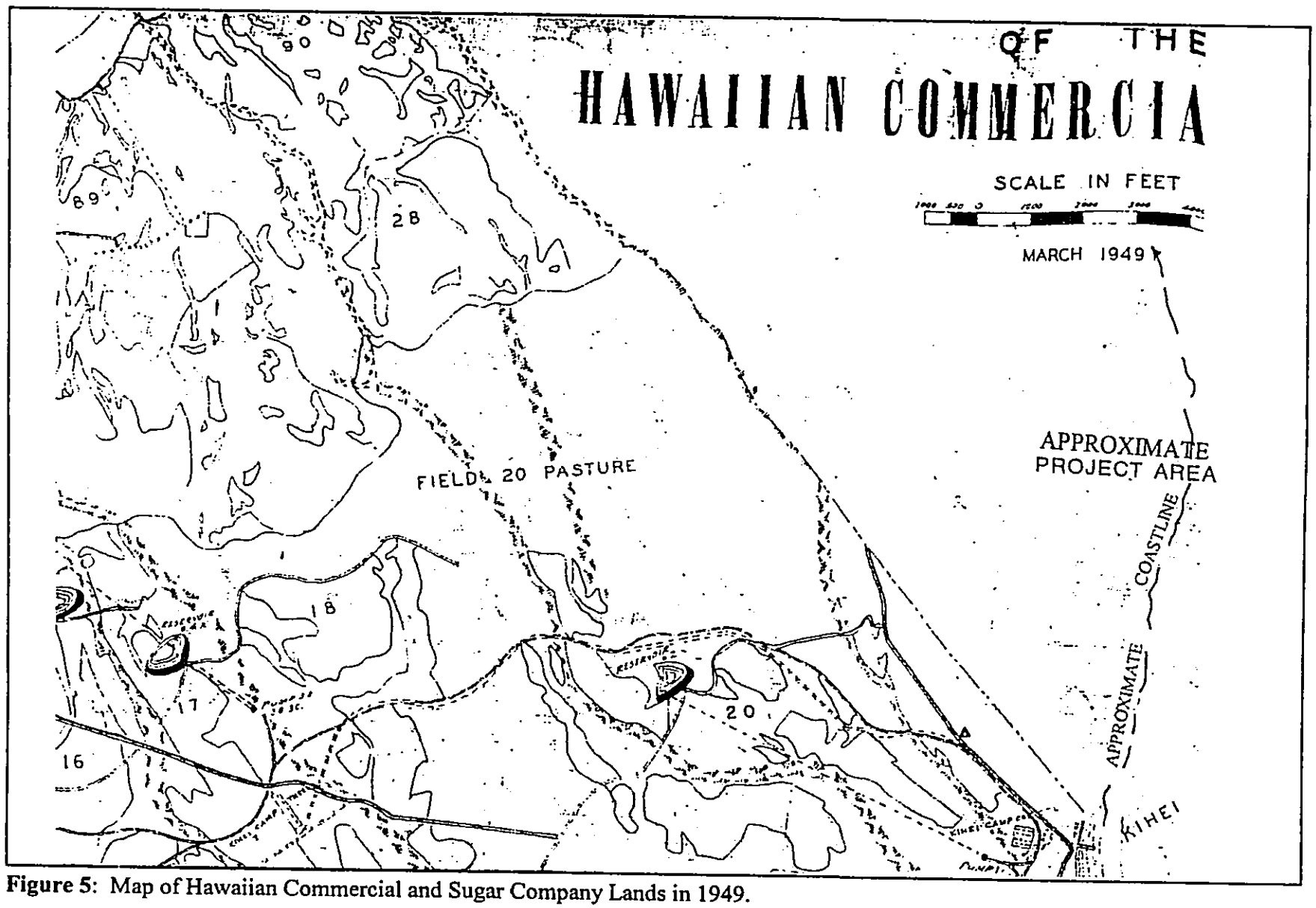

Figure 5: Map of Hawaiian Commercial and Sugar Company Lands in 1949.

DOCUMENT CAPTURED AS RECEIVED

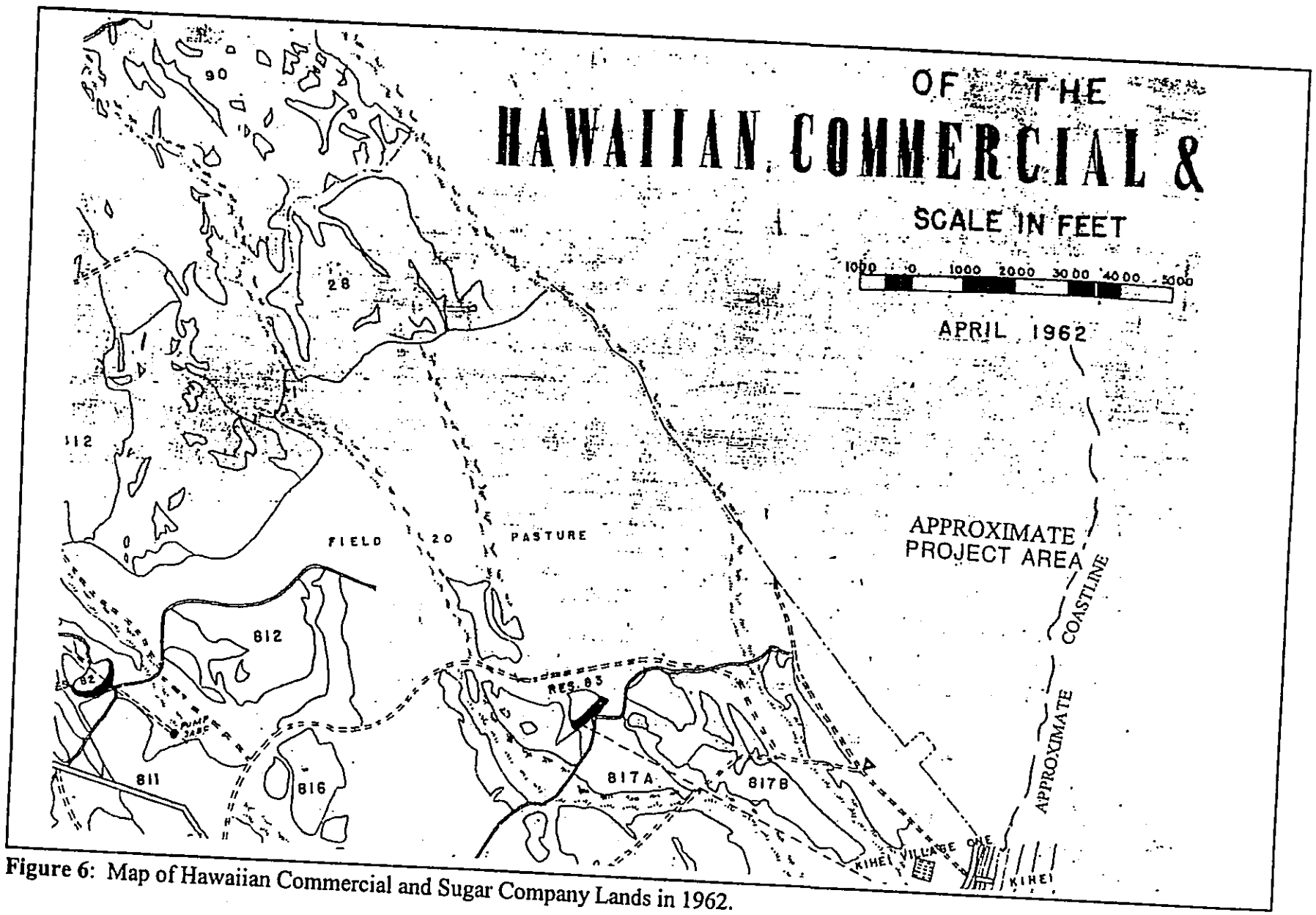

Figure 6: Map of Hawaiian Commercial and Sugar Company Lands in 1962.

ASSESSMENT AND RECOMMENDATIONS

SCS consulted community members and businesses concerning activities and events in and around Liloa Drive in Kīhei, Maui. No traditional cultural practices were identified in this area. The proposed Kīhei Bikeway will not cause loss or destruction to any cultural resource.

Based on the information provided by individuals, as well as businesses, SCS believes the Act 50, Cultural Impact Assessment requirements for the Section 106 process have been met and the Kīhei Bikeway project poses no adverse affect on cultural sites.

REFERENCES CITED

King, Thomas F. And Claudia Nissley

2000 *Section 106: Working with the Revised Regulations.* Alexandria Virginia, National Preservation Institute.

Speakman, Cummins E.

1984 *Mowee: An Informal History.* Pueo Press, San Rafael, California.

State of Hawai'I

1997 *Guidelines for Assessing Cultural Impacts.* Office of Environmental Quality Control.

FIGURES:

1. **Regional Location Map**
2. **Piilani North Bikeway - Concept Plan**
3. **Kihei Greenways System Conceptual Plan**
4. **Piilani North Bikeway - Typical Sections**
5. **Landscape Concept Plan**
6. **Shared Bicycle Path and Dimensions on Separated R-O-W**
7. **General Soil Map**
8. **Site Specific Soil Classification Map**
9. **Flood Insurance Rate Map**
10. **Location of Archaeological Sites in Project Proximity**

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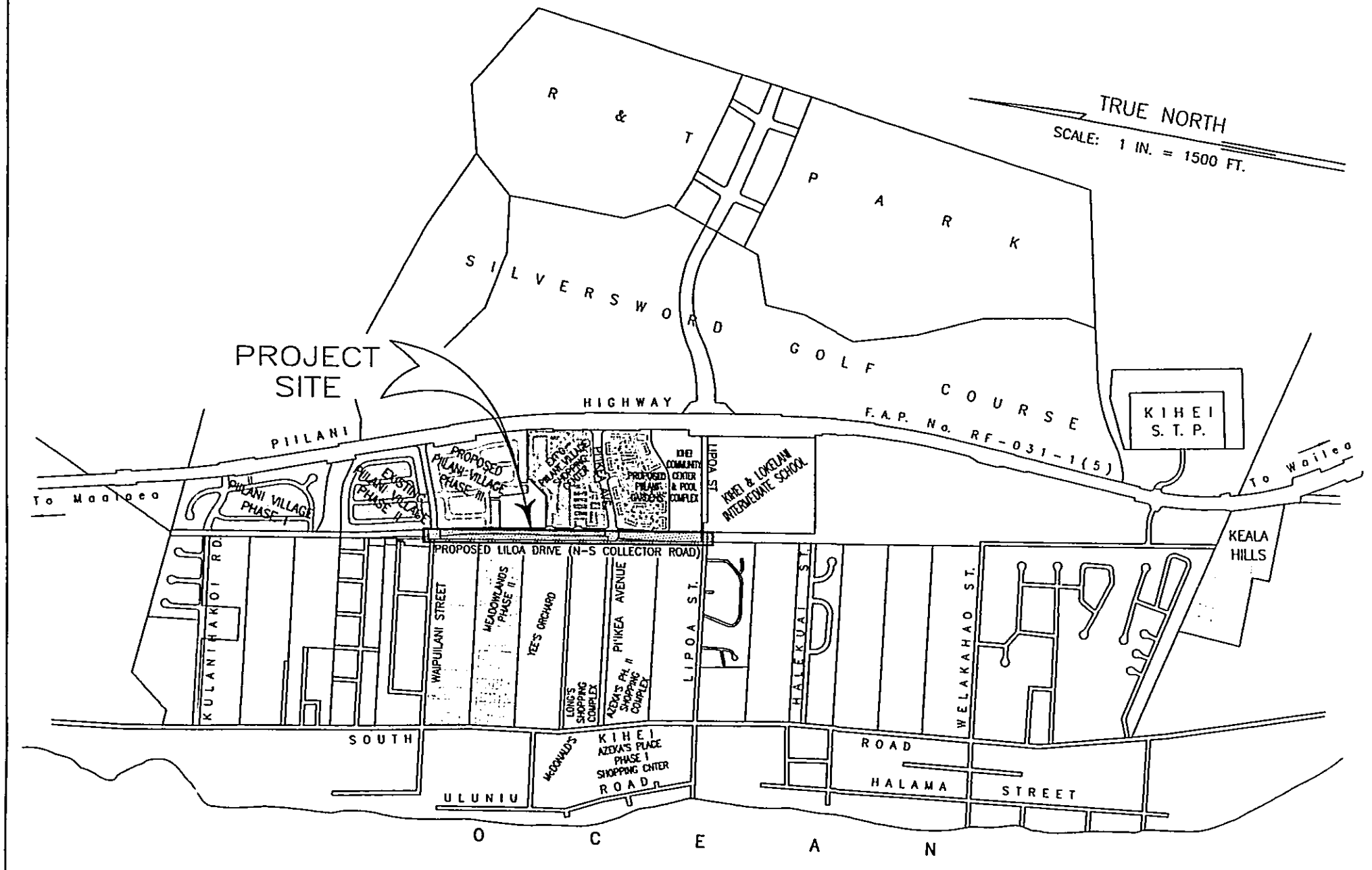


REGIONAL LOCATION MAP

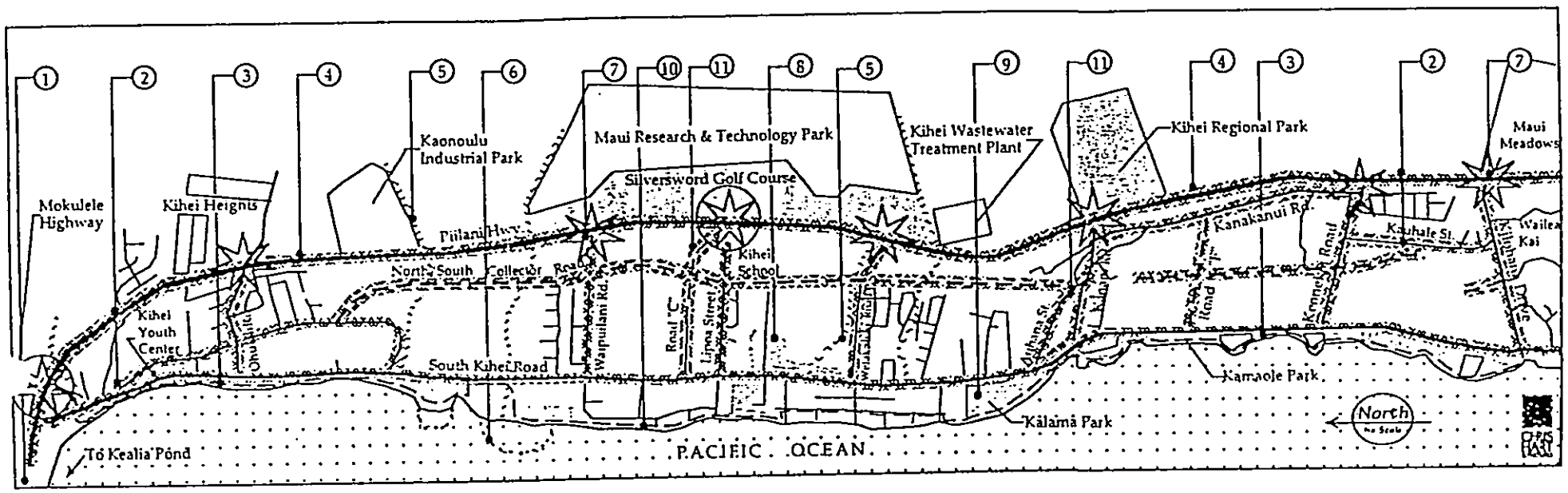
0 1500 3000 4500 6000

SCALE: 1 IN. = 1500 FT.

FIGURE 1

MAP/DRAWING#

103



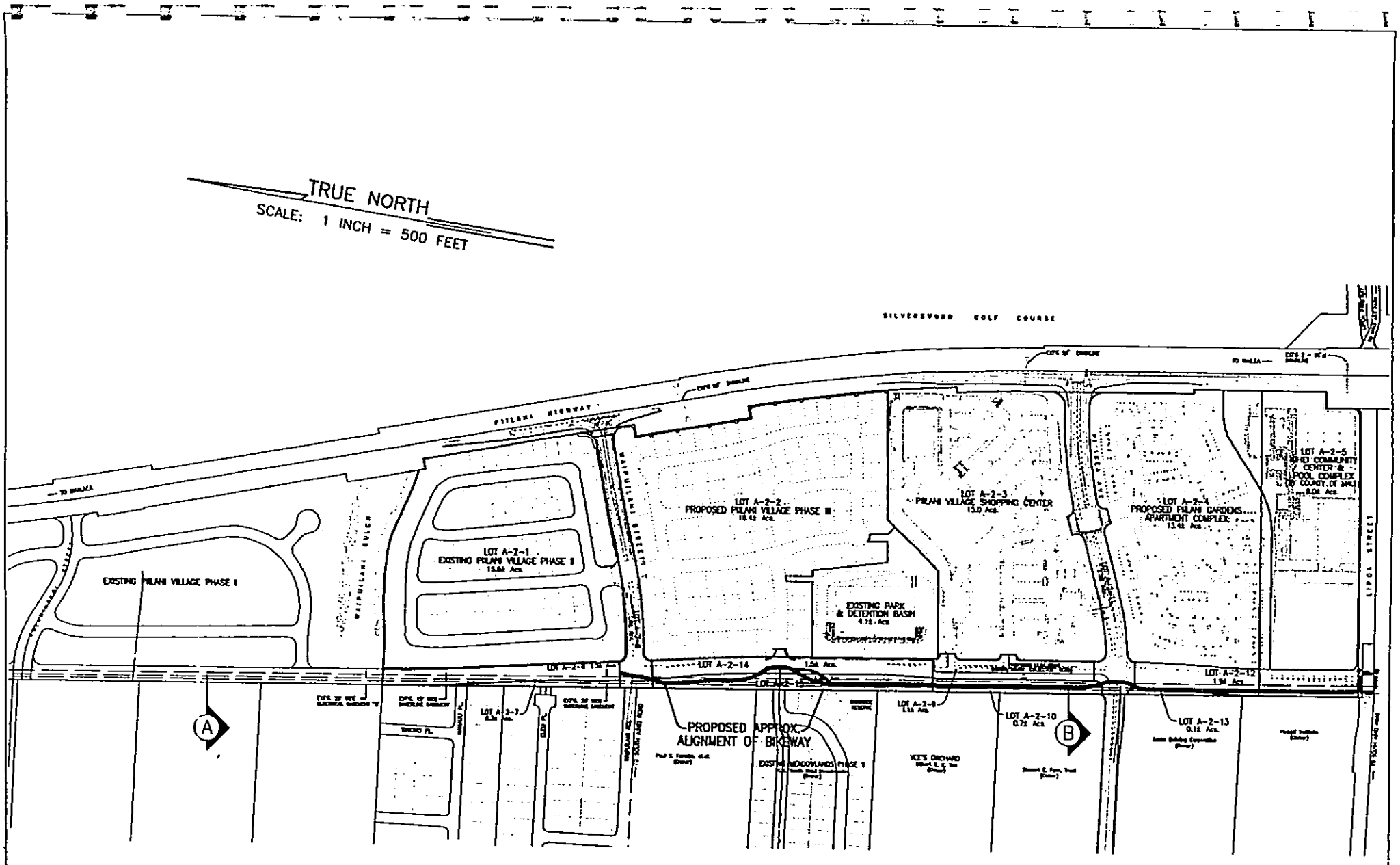
KIHEI GREENWAYS SYSTEM CONCEPTUAL PLAN

KEY:

1. Kealia Pond Boardwalk
2. Greenway System
3. Coast Walk
4. Piilani Walkway & Open Greenway Space
5. Natural Stream/Open Space Corridors
6. Natural, Cultural & Historic Sites
7. ✲Gateways
8. Wetlands
9. Parks
10. Beach Reserves
11. Mauka-Makai Connectors/Open Space

Source: Summary, Kihei 2000 Greenways Workshop

FIGURE 3



PIILANI NORTH BIKEWAY - TYPICAL SECTION LOCATIONS

FIGURE 4
(1 of 3)

0 500 1000 1500 2000

SCALE: 1 IN. = 500 FT.

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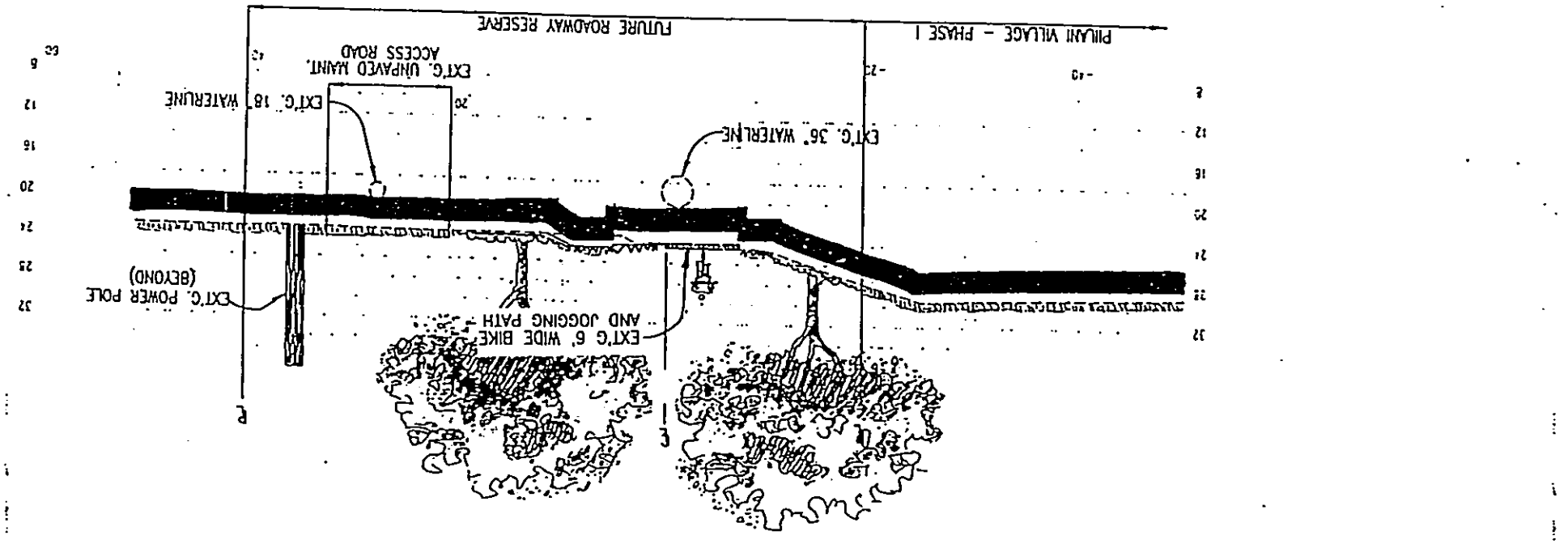
August 28, 1998

FIGURE 4
(2 of 3)



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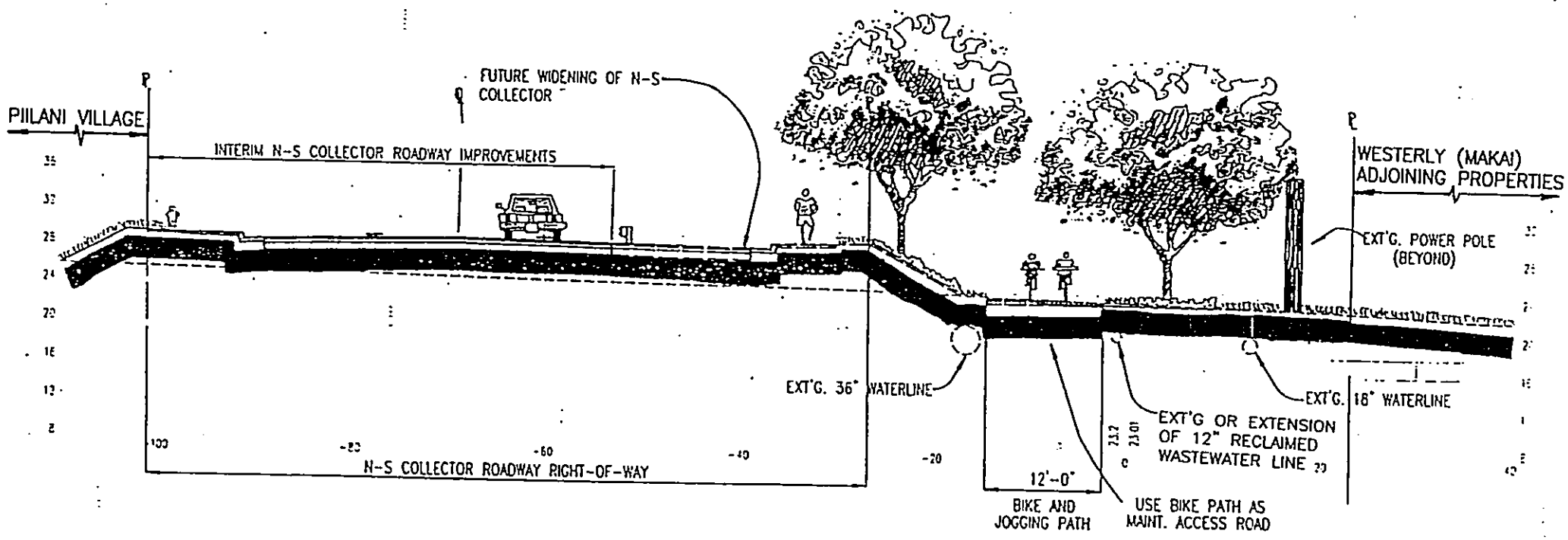

PIILANI NORTH BIKEWAY – TYPICAL SECTION

SCALE: 1" = 10'

FIGURE 4
(3 of 3)

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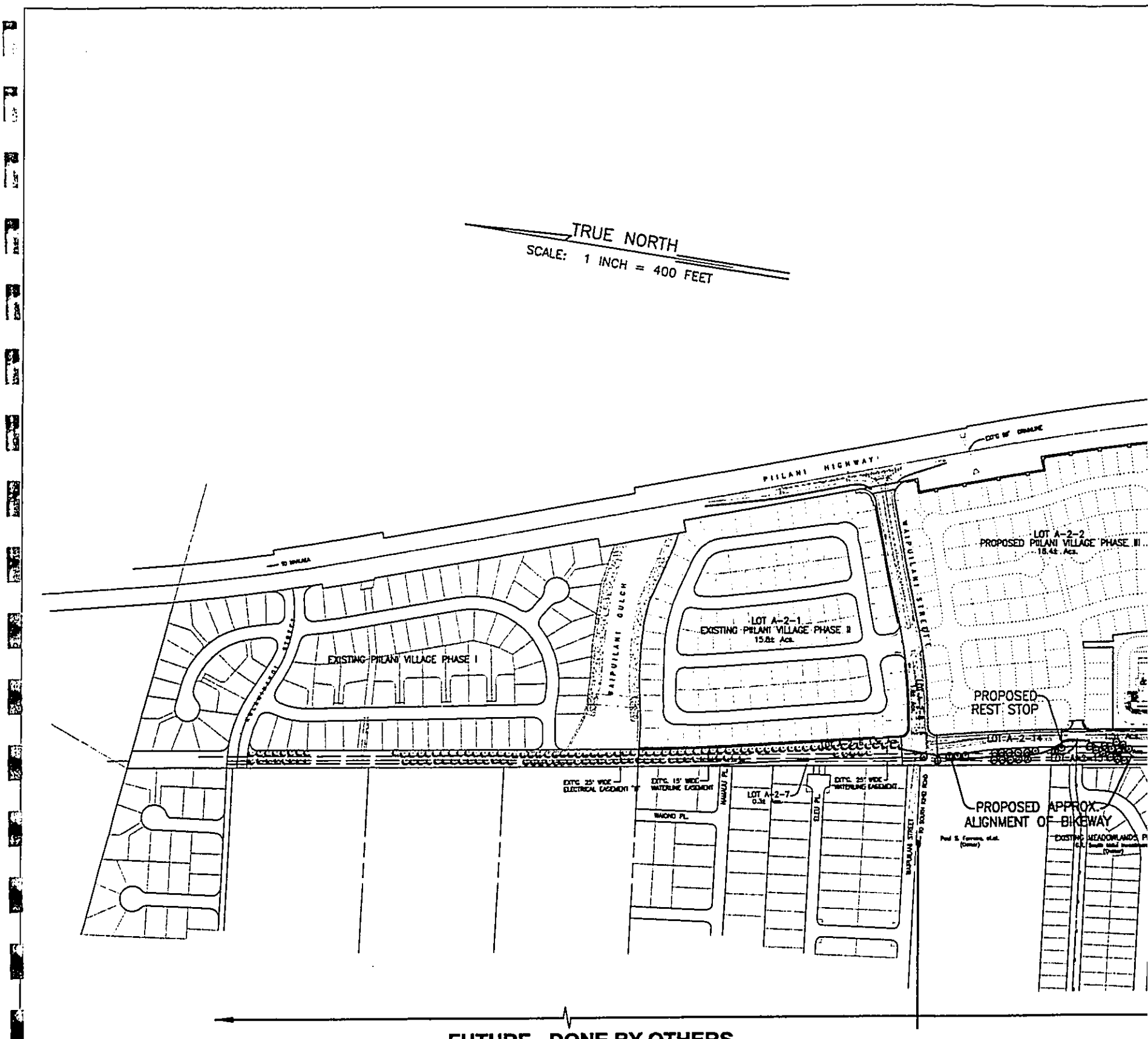

LANDSCAPE CONCEPT

0 400 800

SCALE: 1 IN. = 400 FT.

FIGURE 5

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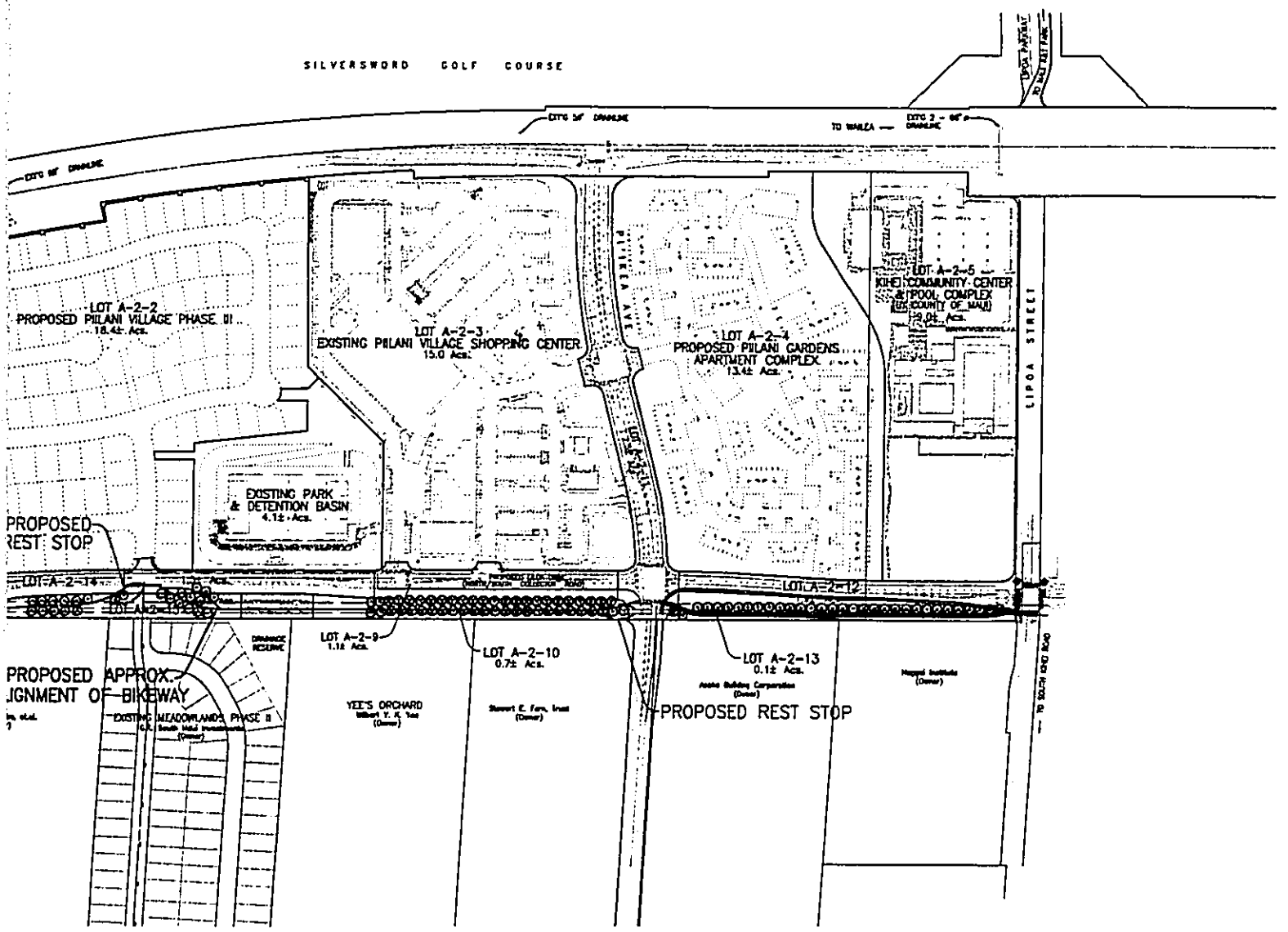

SCOPE OF THE PROJECT

PE CONCEPT PLAN

800 1200 1600

LE: 1 IN. = 400 FT.

WARREN S. UNEMORI - ENGINEERING, INC.
Wells Street Professional Center - Suite 403
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(808)242-4403 FAX: (808)244-4856

August 28, 1998

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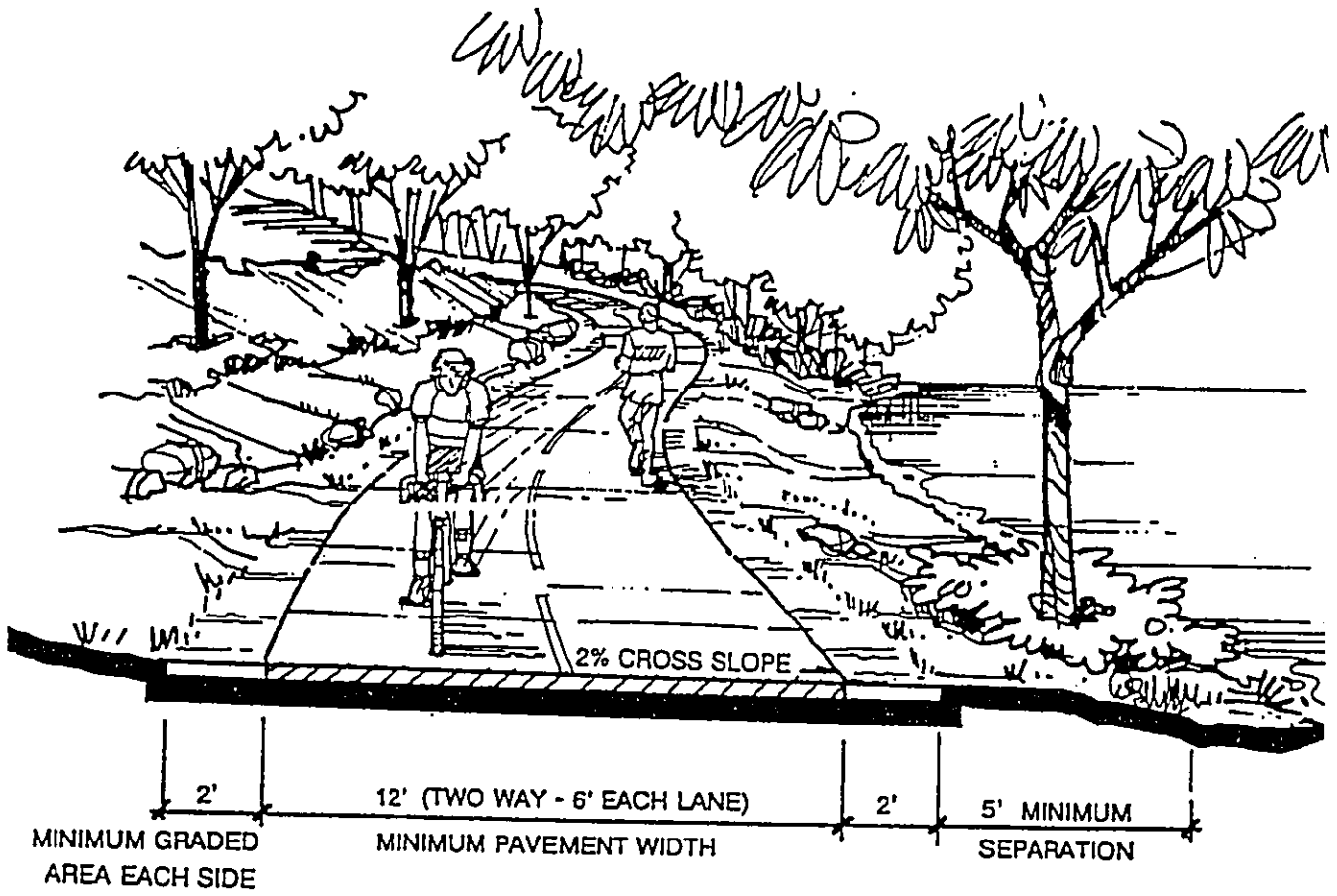

Source: Derived from Guide for the Developmentof Bicycle Facilities, 1991, American Association of State Highway and Transportation Officials (AASHTO), Washington D.C., 1991.

BIKEPLAN HAWAII REVISION
STATE OF HAWAII
Department of Transportation

R. M. TOWILL CORPORATION

FIGURE 2-10
SHARED BICYCLE PATH AND DIMENSIONS ON SEPARATED R-O-W

FIGURE 6

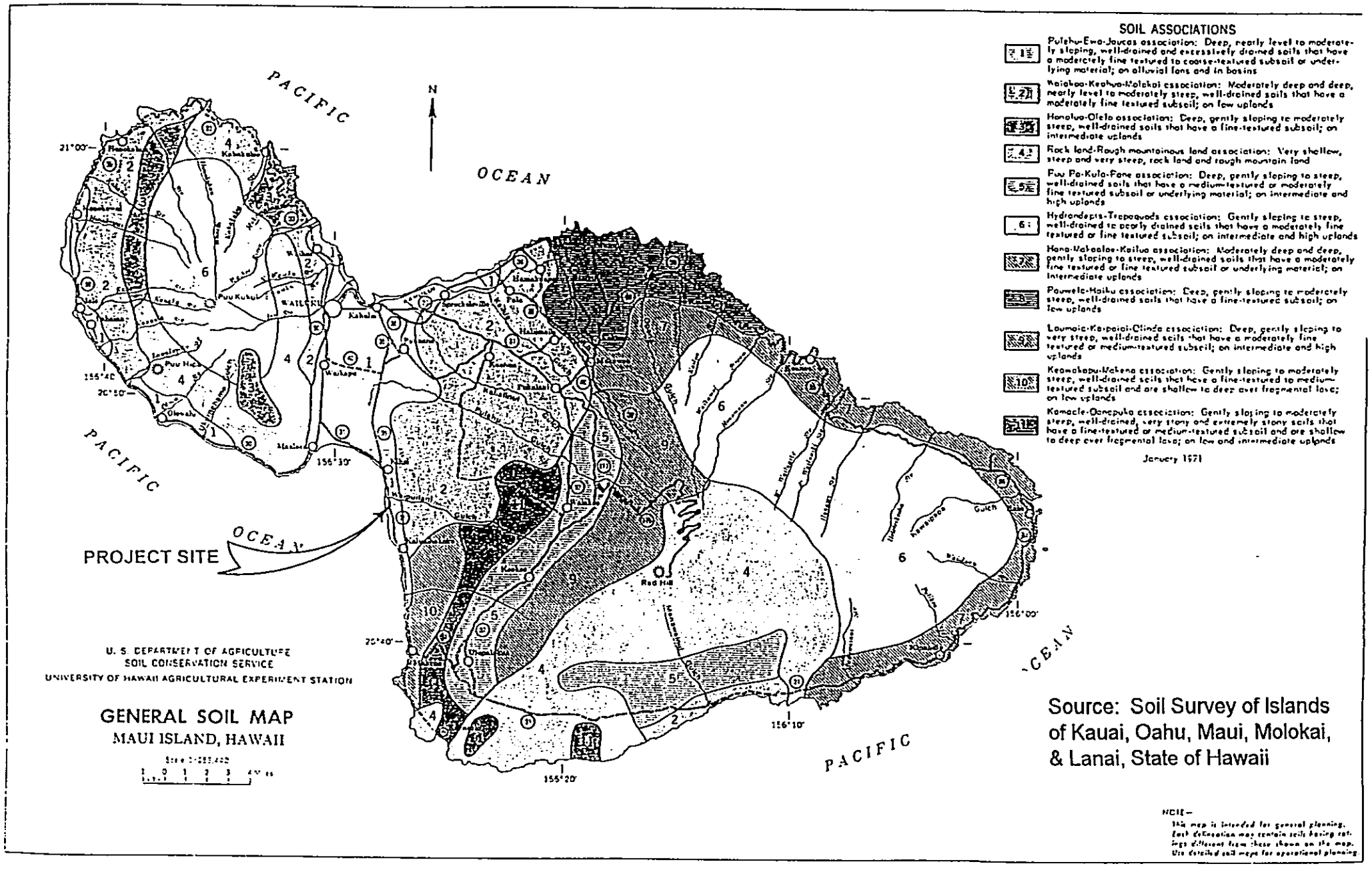

FIGURE 7

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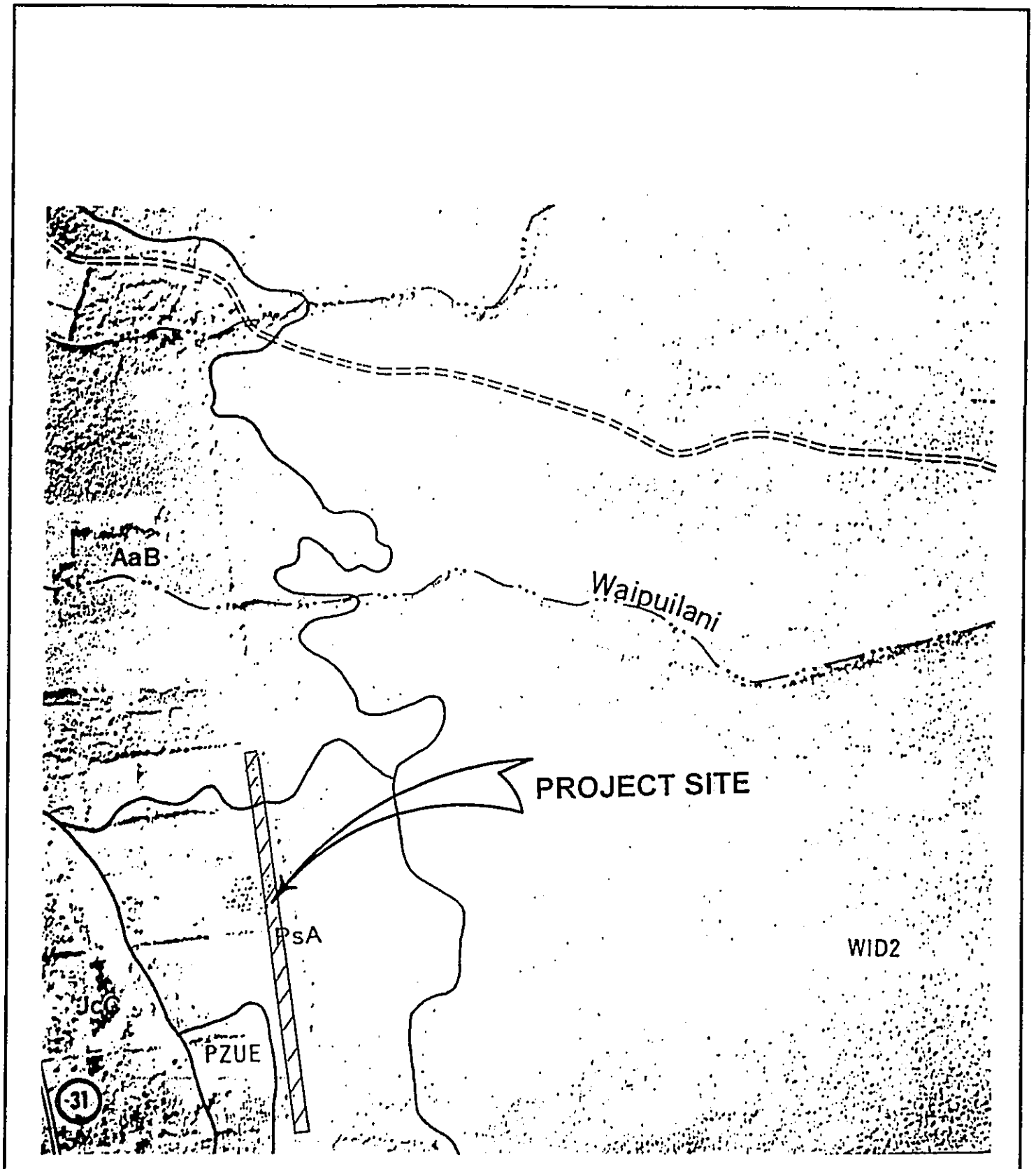

97proj/97100/exhibits/dm-mp10.dwg

FIGURE 8
SITE SPECIFIC SOIL CLASSIFICATION MAP

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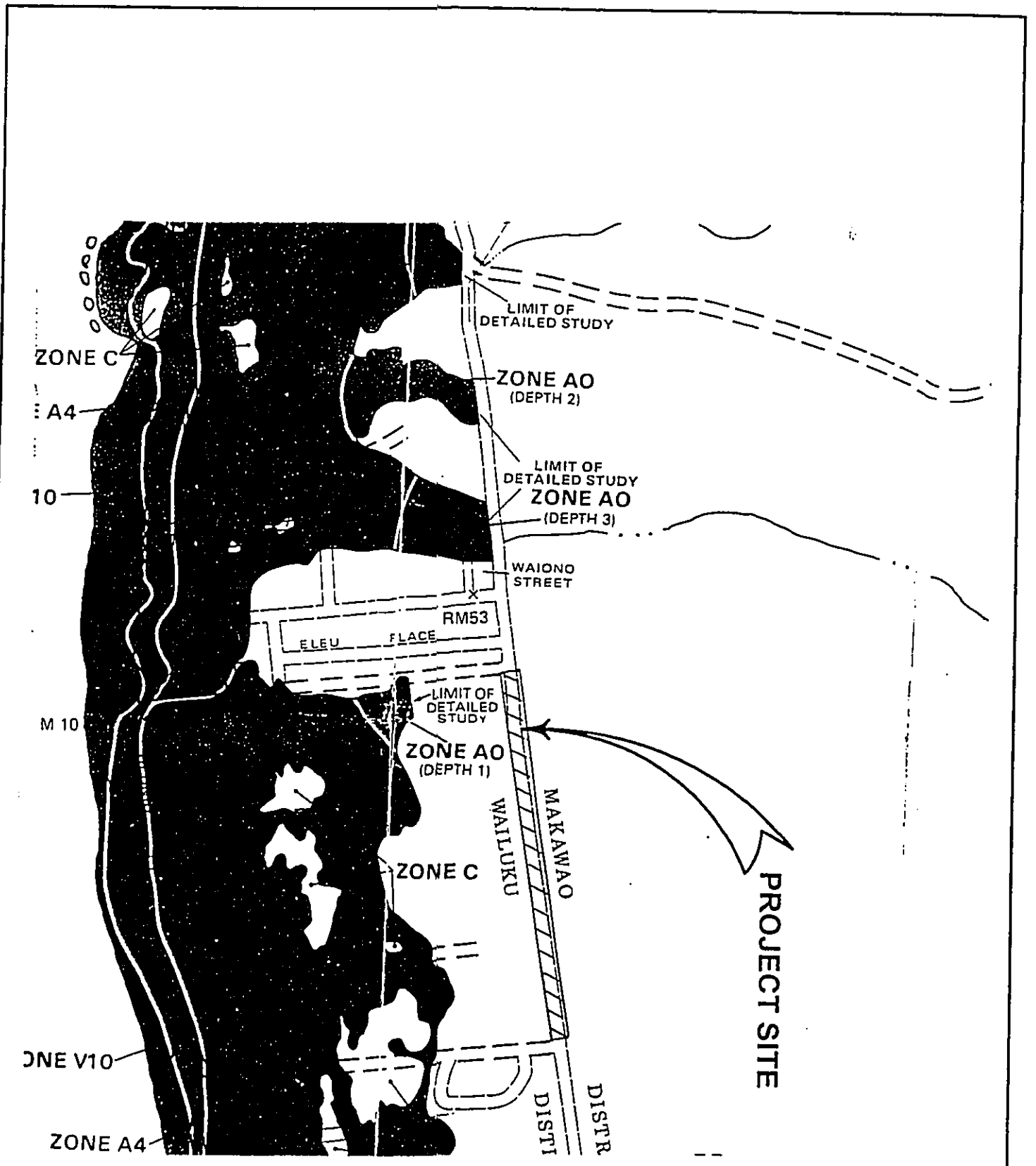

97proj/97100/exhibits/dm-rp10.dwg

FIGURE 9
FLOOD INSURANCE RATE MAP

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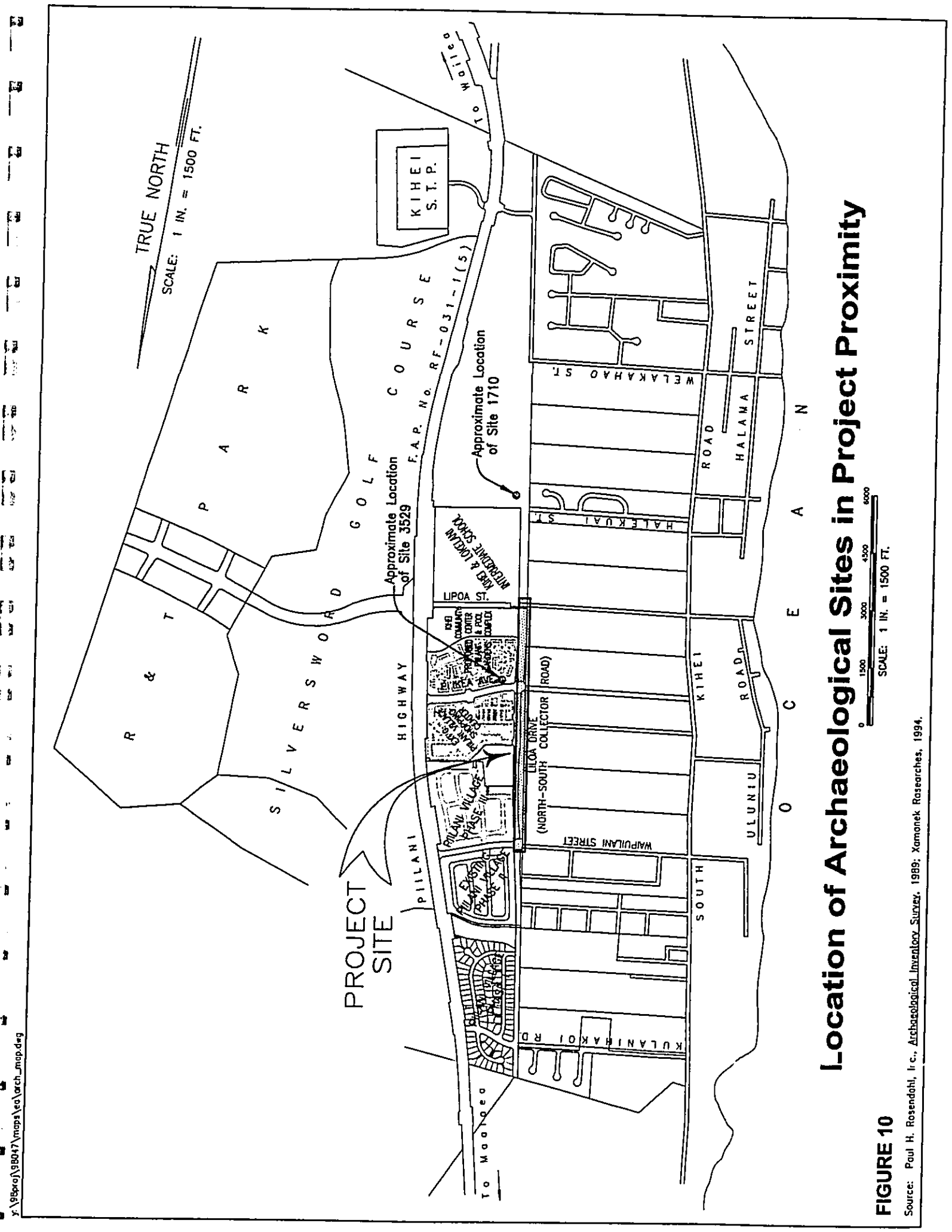

FIGURE 10

Source: Paul H. Rosendahl, Inc., Archaeological Inventory Survey, 1989; Xamanek Researches, 1994.