DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

LINDA LINGLE
Mayor

HENRY OLIVA
Director

ALLEN SHISHIDO
Deputy Director

(808) 243-7230
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Napili Park

RECEIVED
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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

July 27, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Finding of No Significant Impact (FONSI) for Napili Park
TMK: 4-3-18:40 & 41 and portion of 4-3-01:5
Napili, Maui, Hawaii

The County of Maui Department of Parks and Recreation has reviewed the comments received during the 30-day public comment period which began on June 23, 1998. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the August 8, 1998 OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and four copies of the EA. Please call Patrick Matsui at (808) 243-7387 if you have any questions.

Sincerely,

Henry Oliva
Director

Enclosures

cc: Hiyakumoto + Higuchi Architects, Inc.

89

1998-08-08-MA-FEA-Napili Park

FINAL ENVIRONMENTAL ASSESSMENT

NAPILI PARK

Napili, Maui, Hawaii

July, 1998

Prepared for

Department of Parks & Recreation
County of Maui

by Hiyakumoto + Higuchi Architects Inc.

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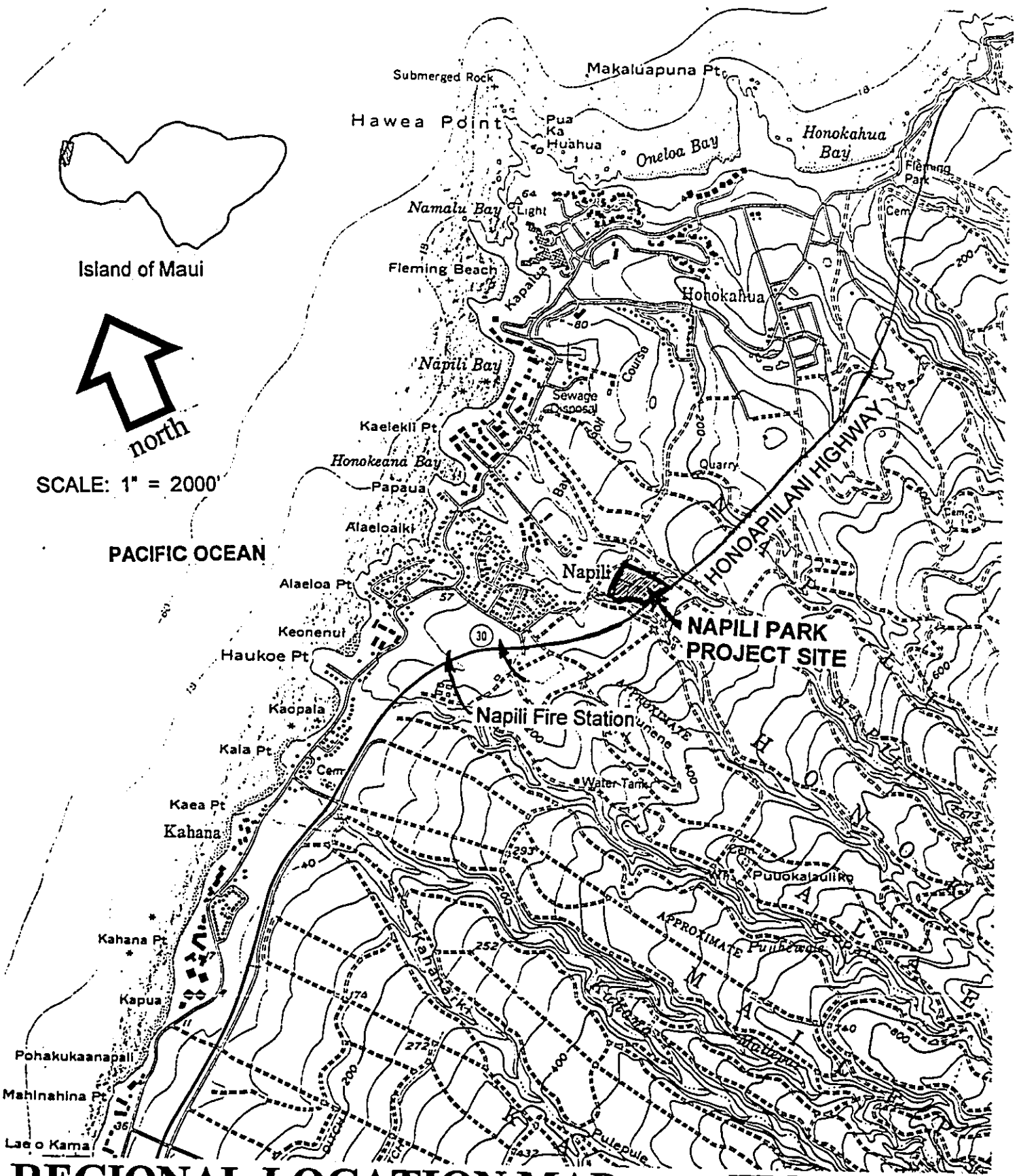
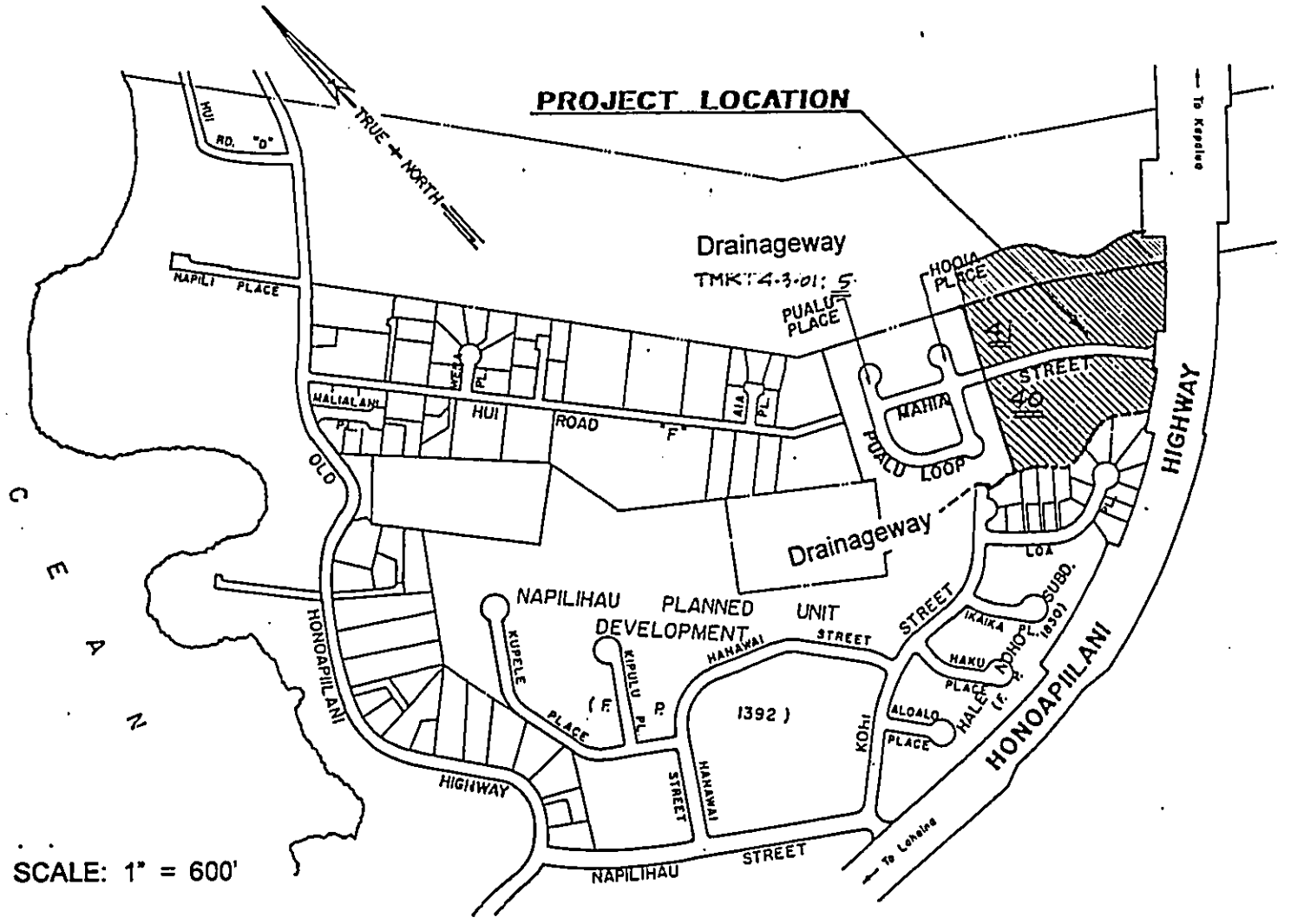


REGIONAL LOCATION MAP **FIGURE 1**

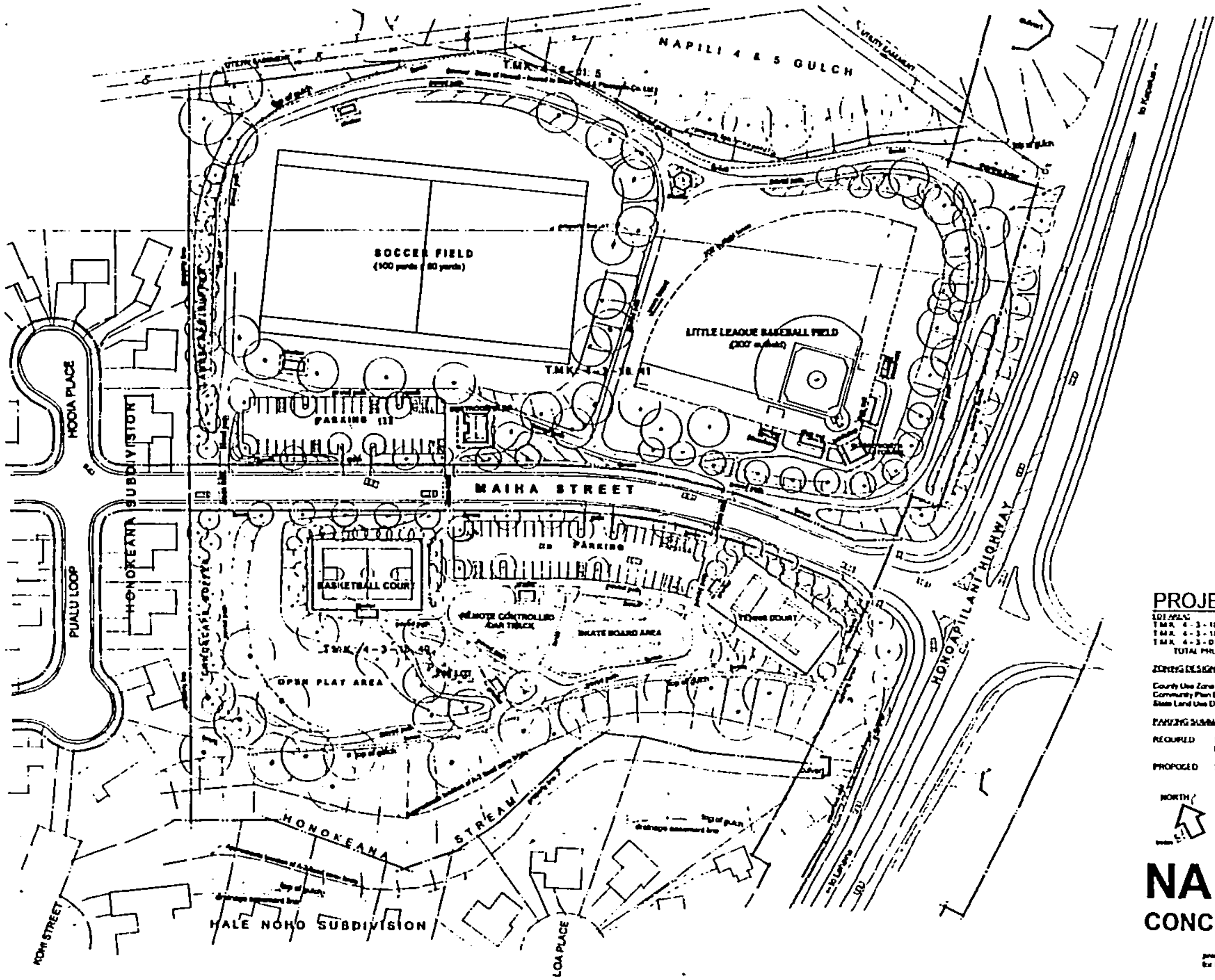
NAPILI PARK



VICNITY MAP

FIGURE 2

NAPILI PARK



PROJECT DATA

LOT AREAS

T.M.K. 4-3-18 parcel 40 ([illegible])	3.824 Acres ([illegible])
T.M.K. 4-3-18 parcel 41 ([illegible])	4.118 Acres ([illegible])
T.M.K. 4-3-01 portion of parcel 5 (state owned)	2.2 Acres ([illegible])
TOTAL PROPOSED DEVELOPMENT AREA	10.312 Acres ([illegible])

ZONING DESIGNATIONS

	parcels 40 & 41	parcel 5
County Use Zone	R-1 residential	Agricultural
Community Plan Designation	Park	Park
State Land Use Designation	Urban	Urban

PARKING SUMMARY

REQUIRED	Tennis Courts	8 stalls per court =	8 stalls
	Bleachers	1 stall / 8 seats x 90 seats =	15 stalls
		Total stalls required =	22 stalls req'd
PROPOSED	36 + 45 stalls =		81 stalls proposed (incl. 4 accessible)

NORTH

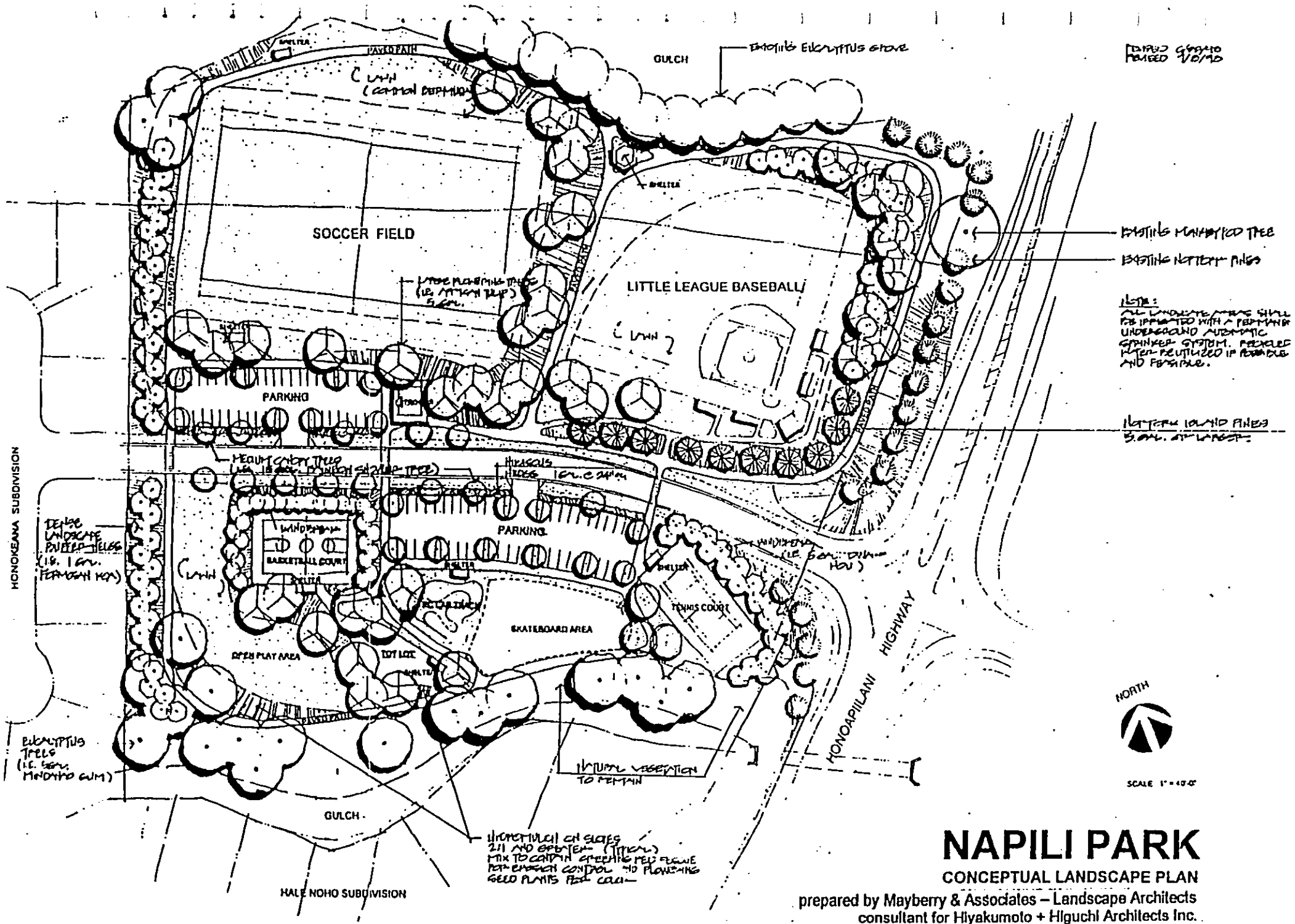
0 40 60 80 100
GRAPHIC SCALE

NAPILI PARK

CONCEPTUAL SITE PLAN

prepared by Hyakumoto + Higuchi Architects Inc. for the Department of Parks & Recreation County of Maui June 19[illegible]

FIGURE 3



NAPILI PARK

CONCEPTUAL LANDSCAPE PLAN

prepared by Mayberry & Associates – Landscape Architects
consultant for Hiyakumoto + Higuchi Architects Inc.
for the Department of Parks & Recreation County of Maui
June 1998

FIGURE 4

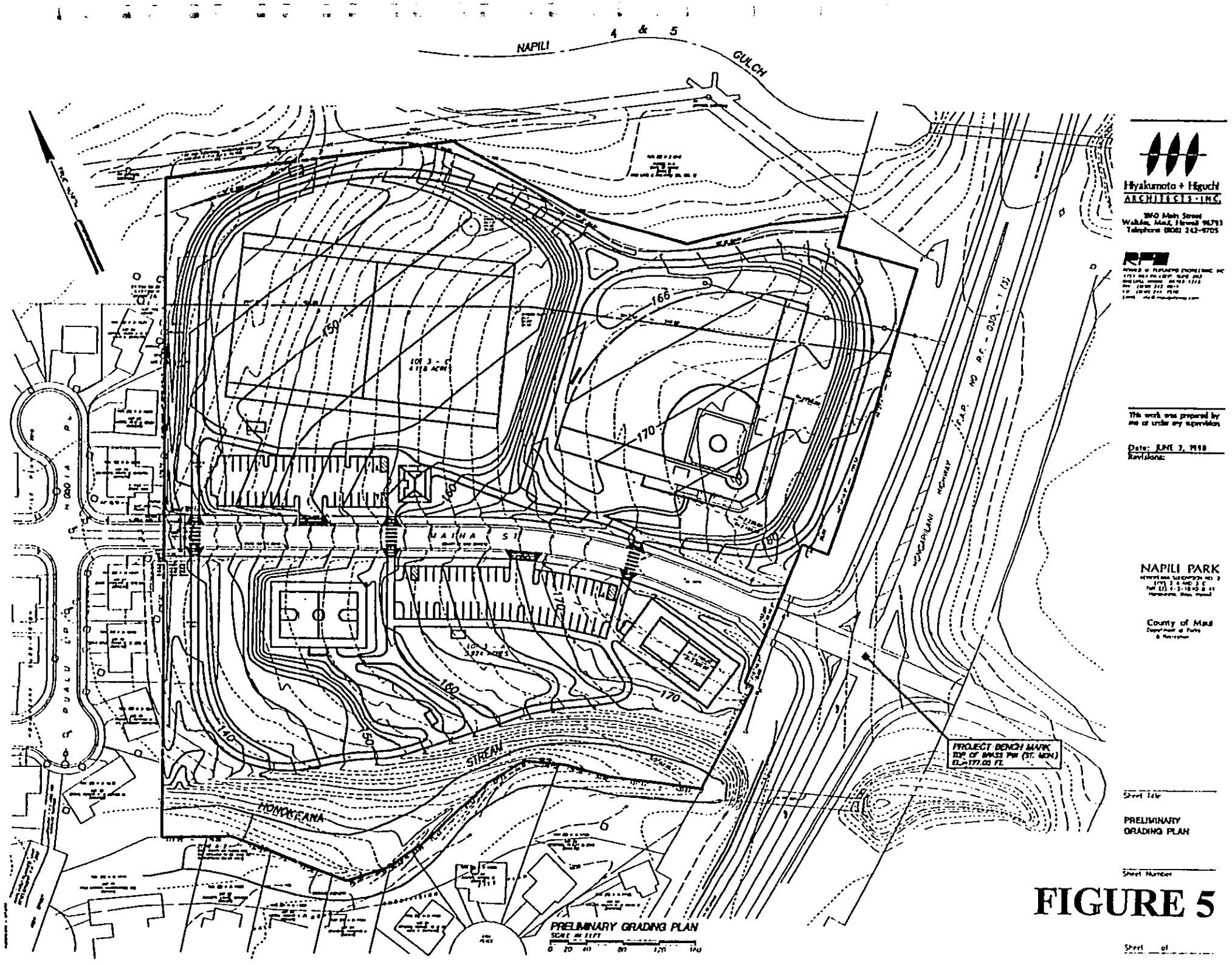


FIGURE 5

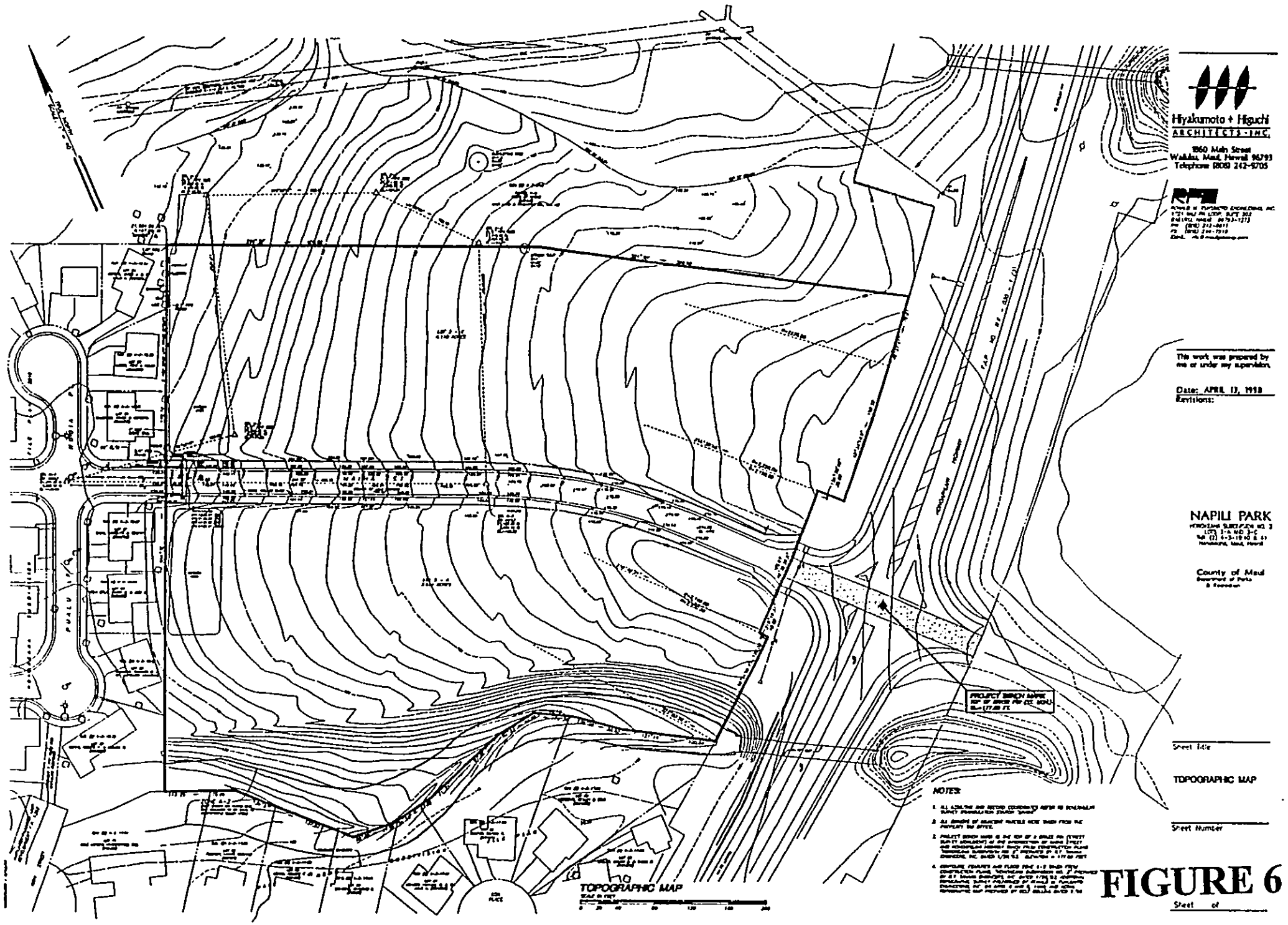


FIGURE 6

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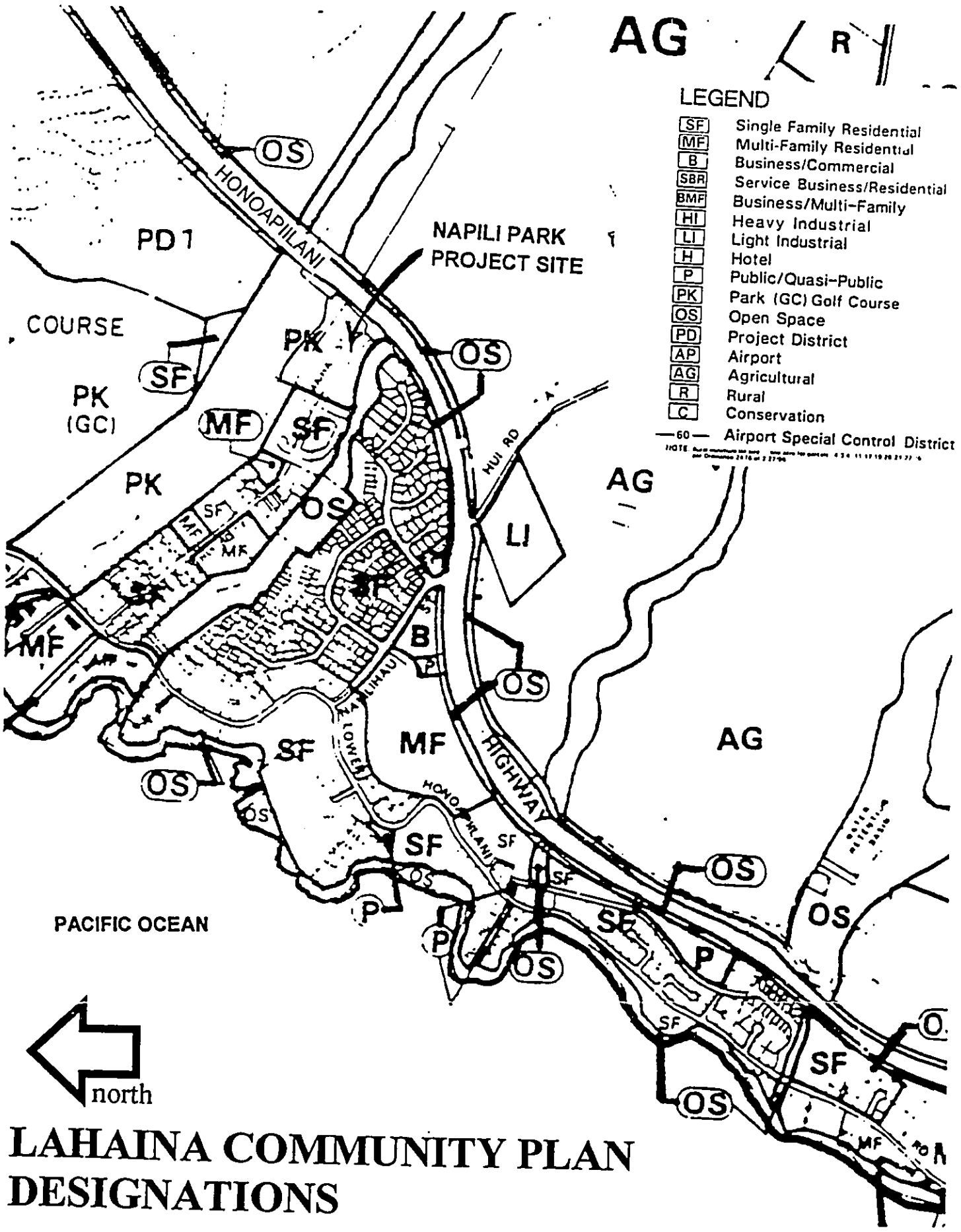


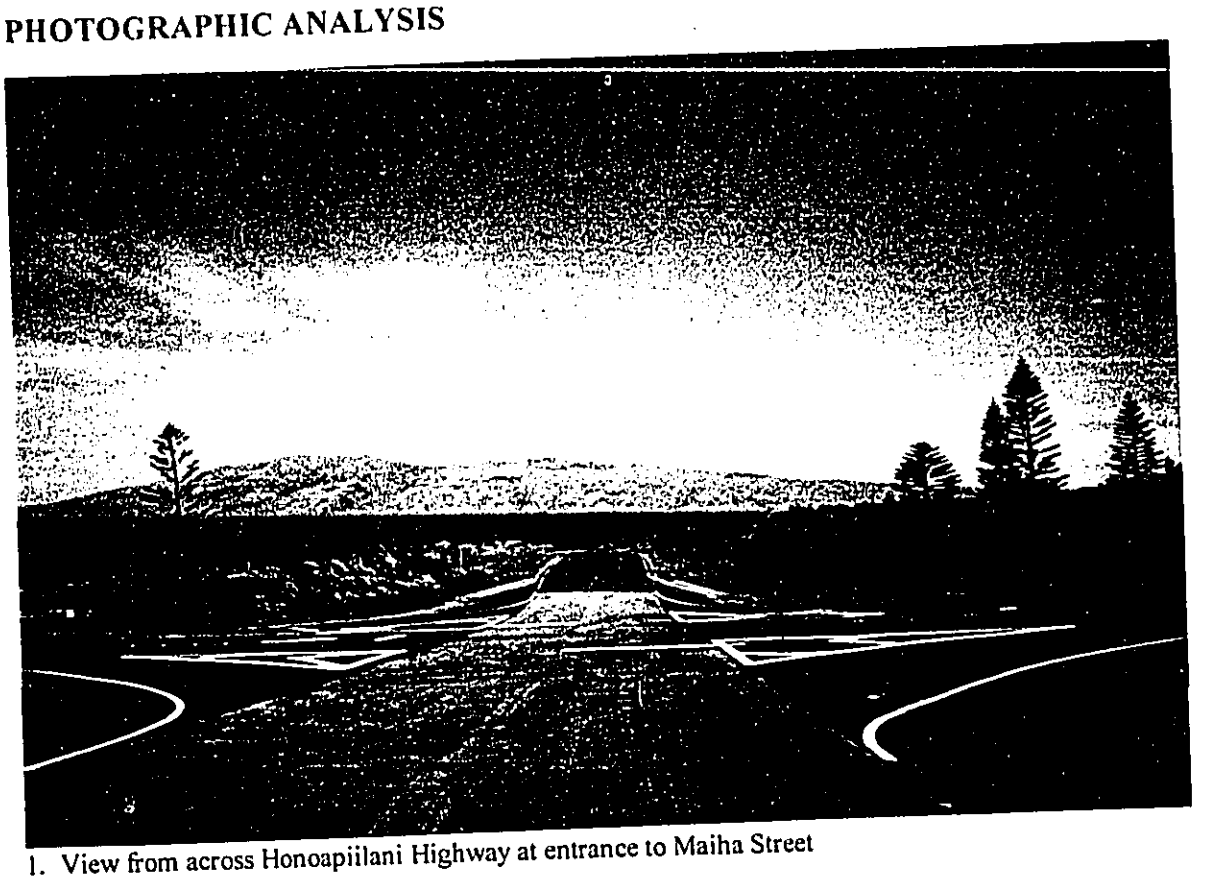
LAHAINA COMMUNITY PLAN DESIGNATIONS

NAPILI PARK

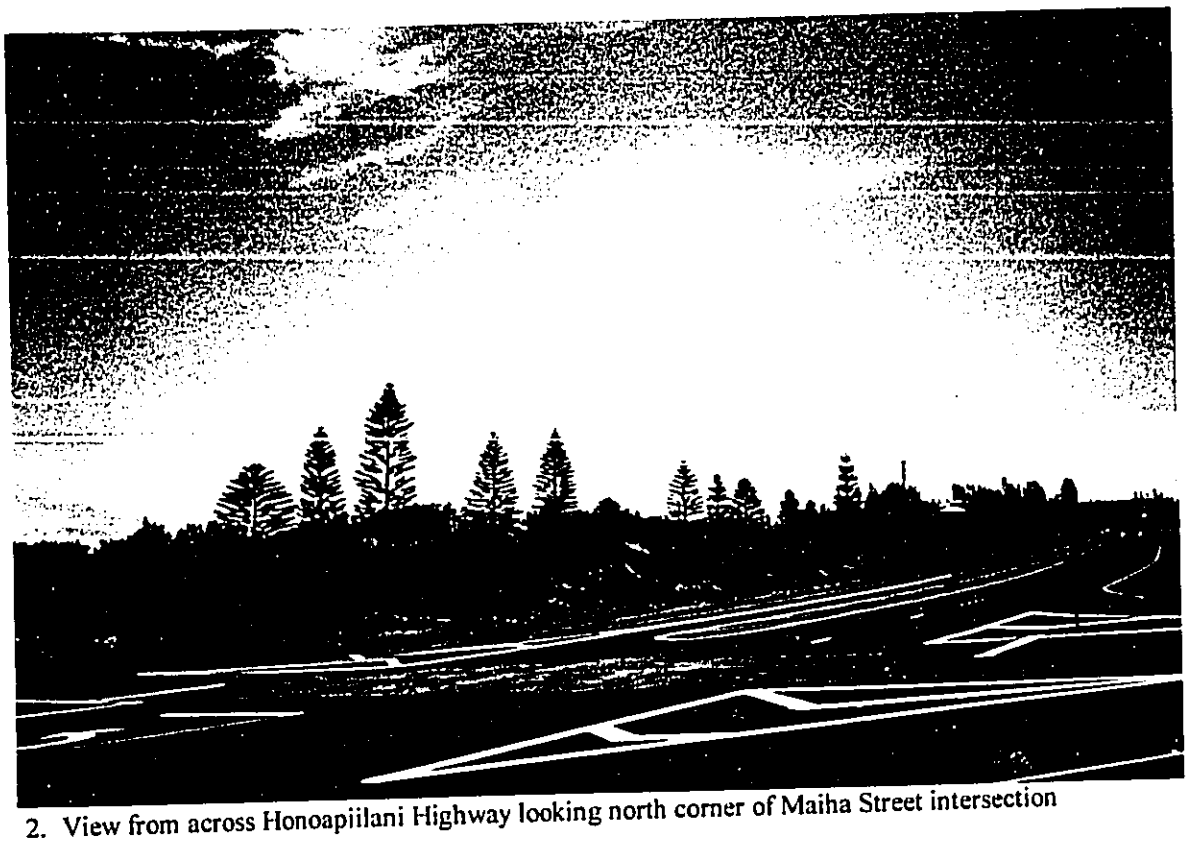
FIGURE 7

iv. **Photographic Analysis**

PHOTOGRAPHIC ANALYSIS

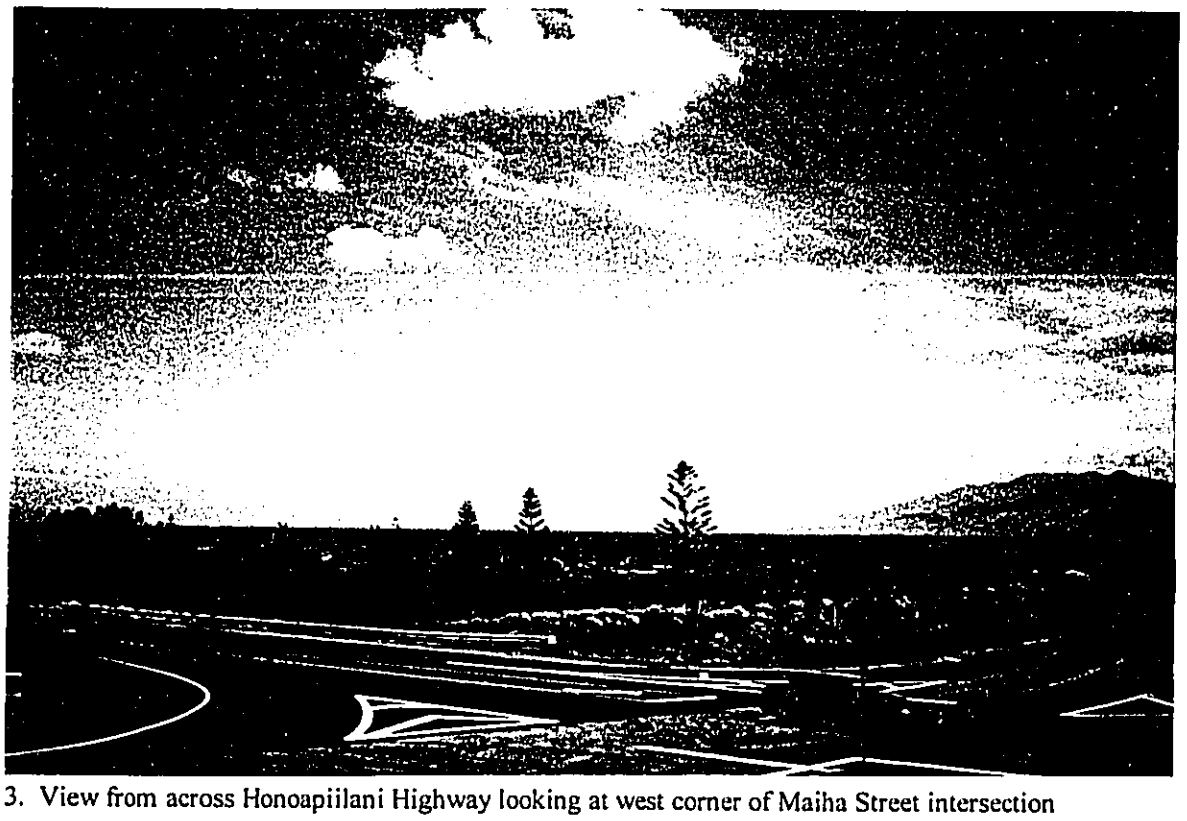


1. View from across Honoapiilani Highway at entrance to Maiha Street



2. View from across Honoapiilani Highway looking north corner of Maiha Street intersection

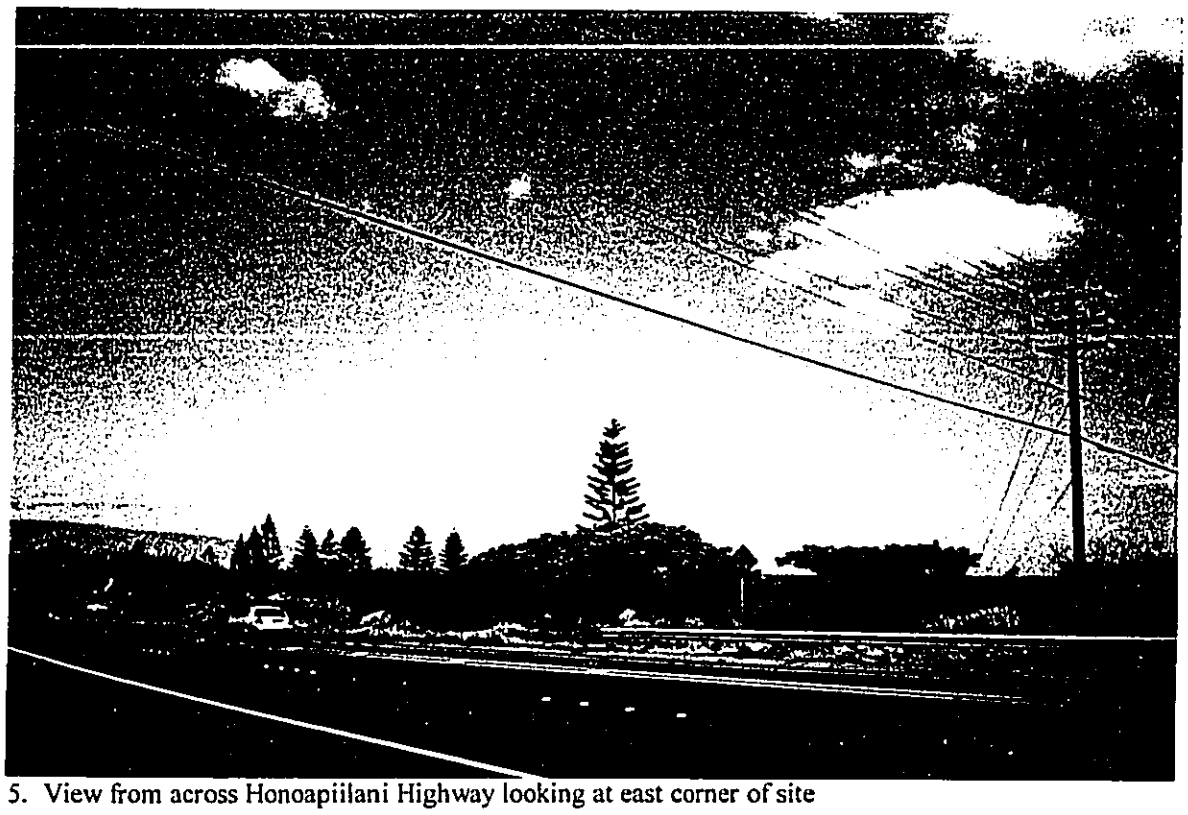
PHOTOGRAPHIC ANALYSIS



3. View from across Honoapiilani Highway looking at west corner of Maiha Street intersection

4. View from across Honoapiilani Highway looking at south corner of park site

PHOTOGRAPHIC ANALYSIS



5. View from across Honoapiilani Highway looking at east corner of site

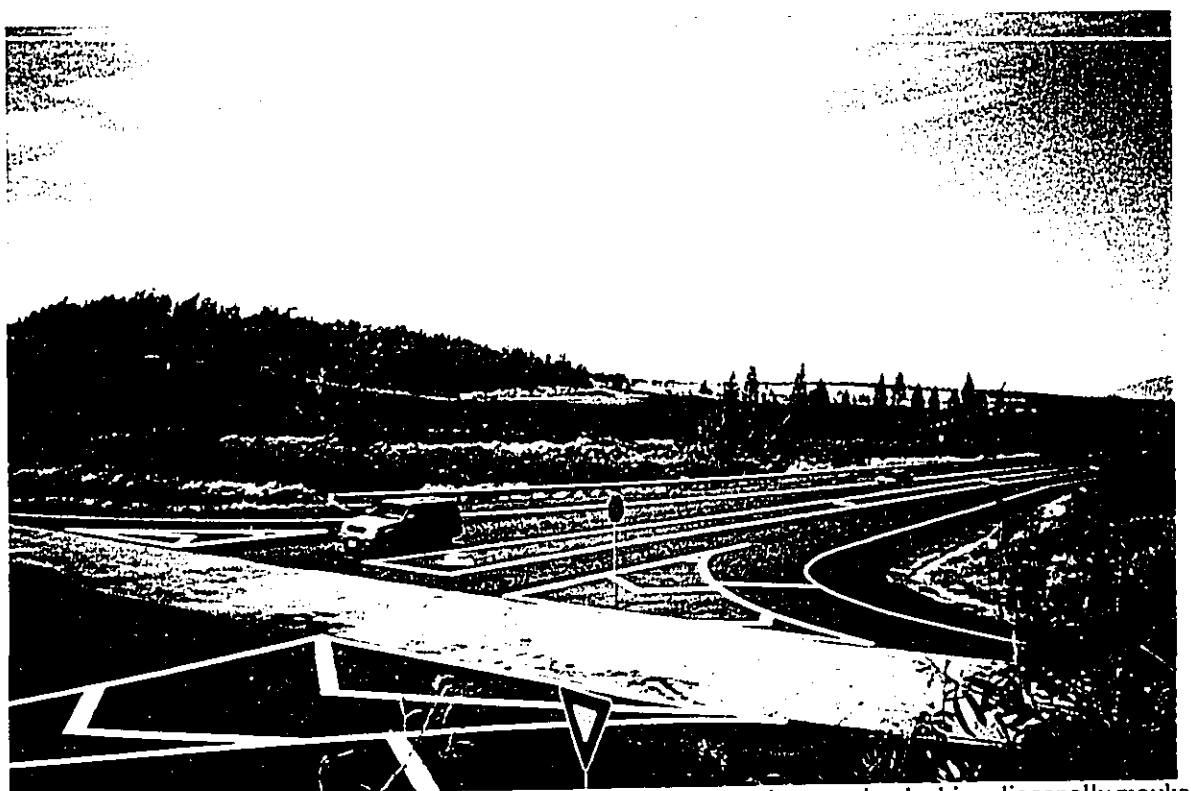
6. View from across Honoapiilani Highway looking east toward Maiha Street intersection

PHOTOGRAPHIC ANALYSIS

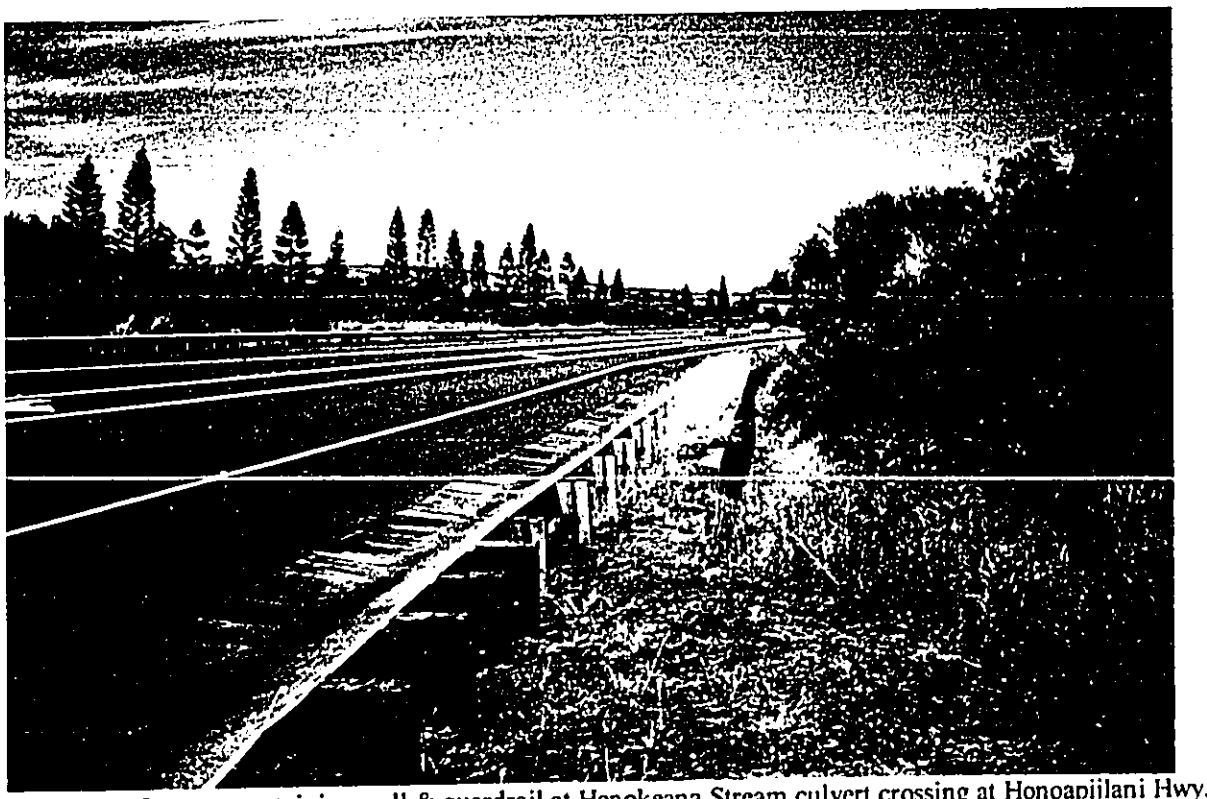
7. View from across Honoapiilani Highway looking north at east corner of park site

8. View from across Honoapiilani Highway looking northwest at park site Kaanapali side of Maiha Street

PHOTOGRAPHIC ANALYSIS

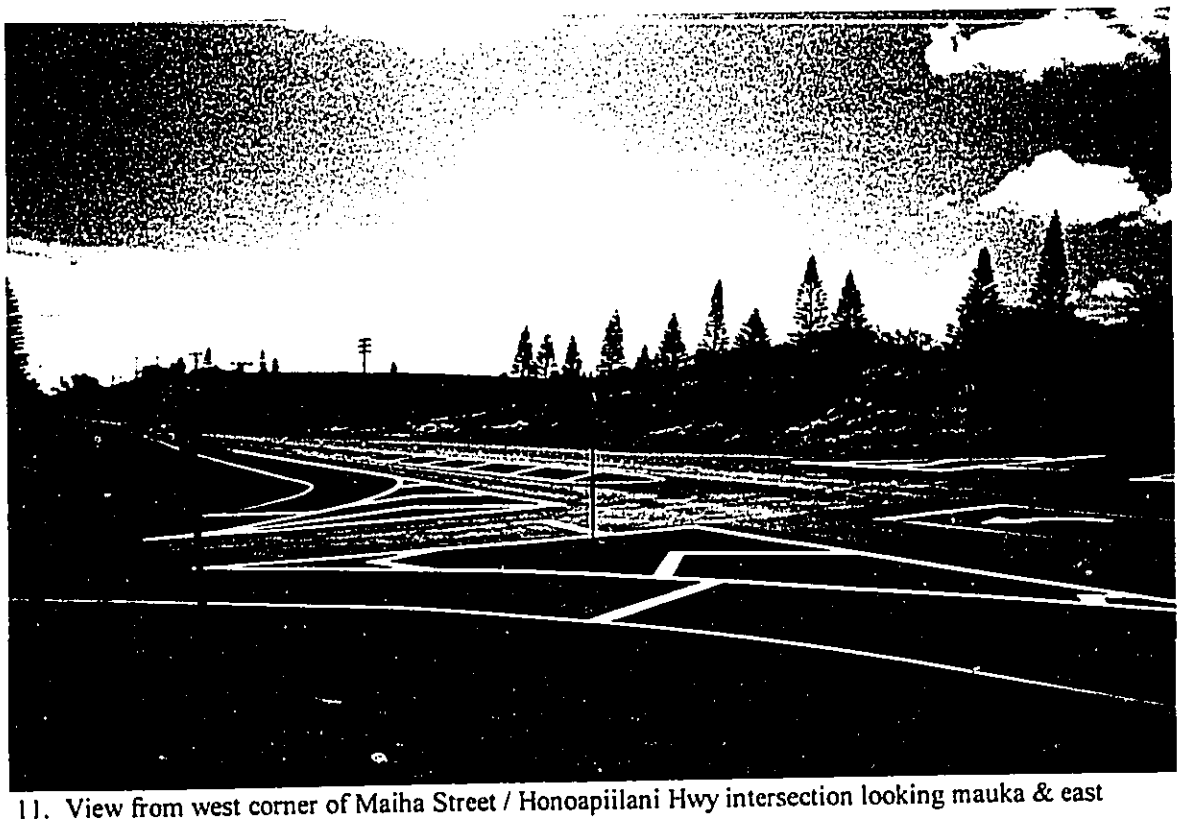


9. View from northeast corner of Maiha Street / Honoapiilani Hwy. intersection looking diagonally mauka

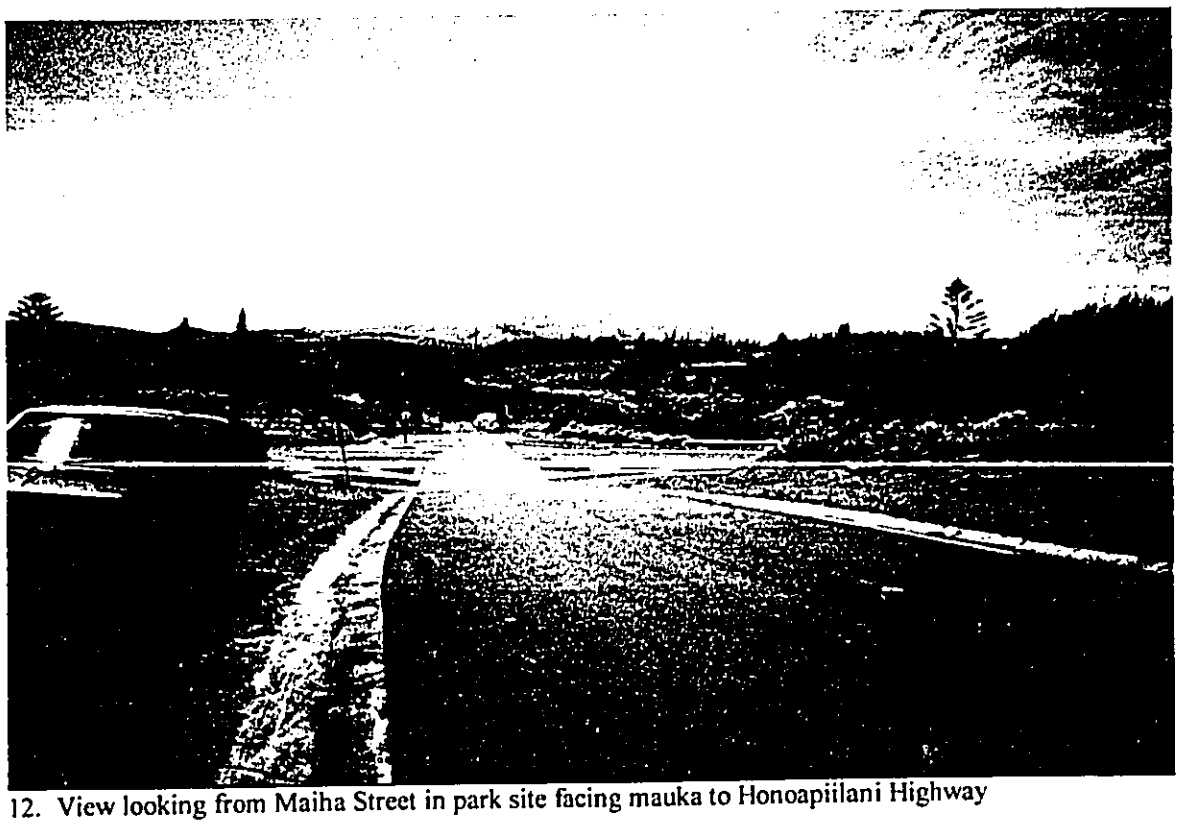


10. View of concrete retaining wall & guardrail at Honokeana Stream culvert crossing at Honoapiilani Hwy.

PHOTOGRAPHIC ANALYSIS

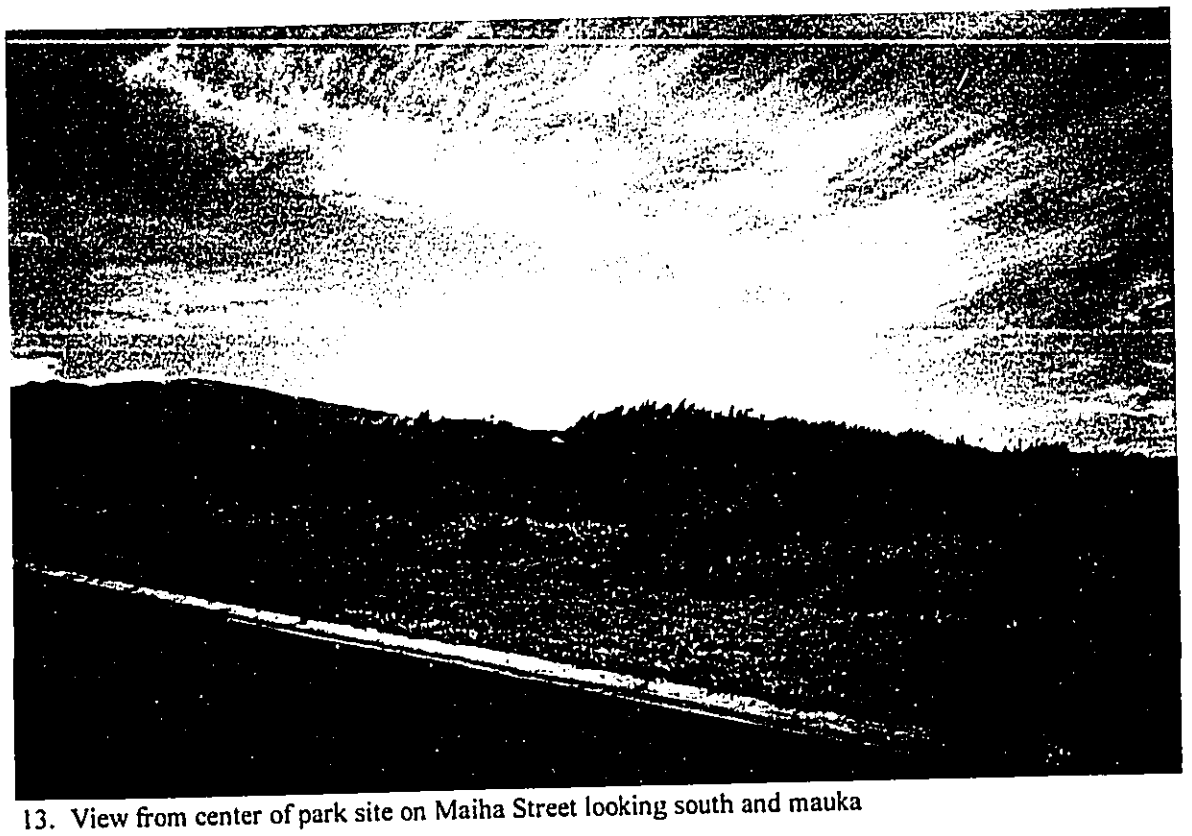


11. View from west corner of Maiha Street / Honoapiilani Hwy intersection looking mauka & east

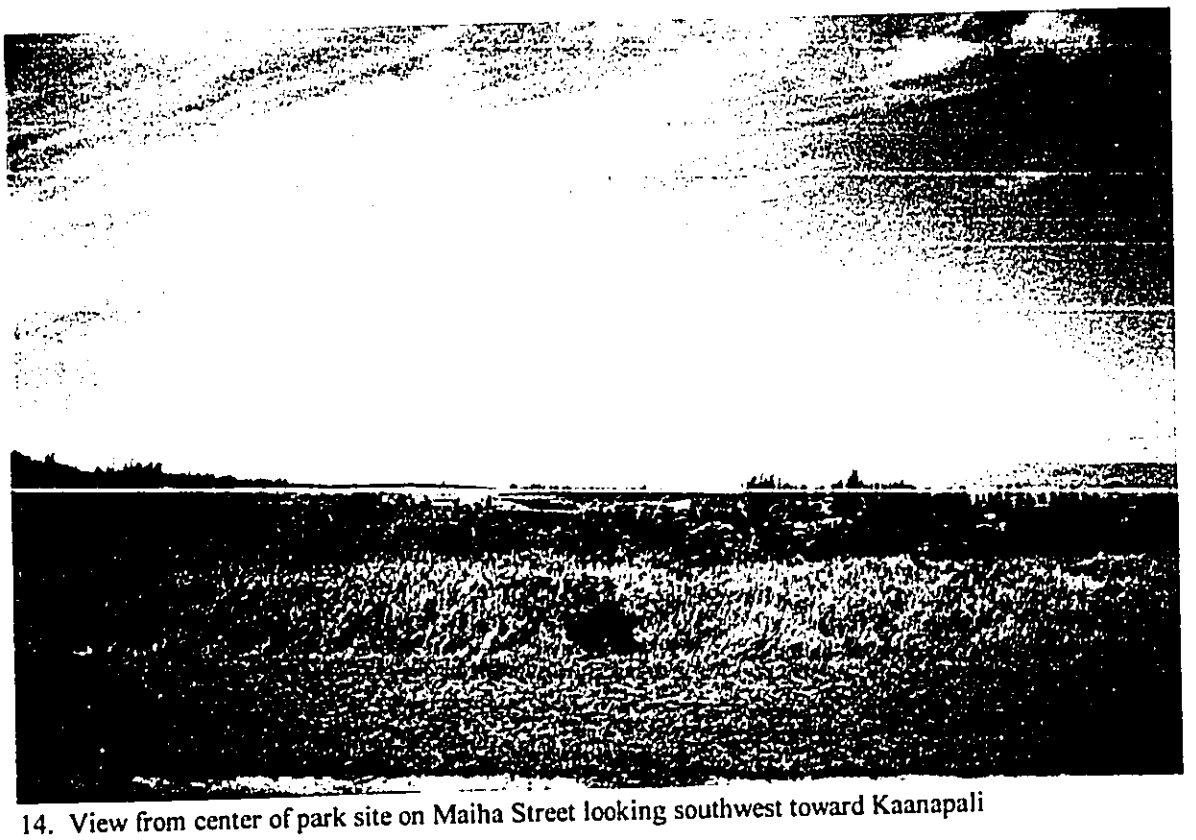


12. View looking from Maiha Street in park site facing mauka to Honoapiilani Highway

PHOTOGRAPHIC ANALYSIS



13. View from center of park site on Maiha Street looking south and mauka



14. View from center of park site on Maiha Street looking southwest toward Kaanapali

PHOTOGRAPHIC ANALYSIS

15. View from center of park site on Maiha Street looking west toward Lanai & Napili

16. View from center of park site on Maiha Street looking makai toward Honokeana Subdivision

PHOTOGRAPHIC ANALYSIS

17. View from west quadrant of park site looking west (Derks residence on right)

18. View from near Maiha Street looking west toward Knowles residence.

PHOTOGRAPHIC ANALYSIS

19. View from mauka end of park site on Maiha Street looking west into Honokeana Subdivision

20. View from mauka end of park site on Maiha Street looking north toward Kapalua

PHOTOGRAPHIC ANALYSIS

21. View from maika end of park site on Maiha Street looking makai into Honokeana Subdivision

22. View from makai end of park site looking northeast to Kapalua

PHOTOGRAPHIC ANALYSIS

23. View from center of park site looking north toward Kapalua

24. View from center of park site looking east and mauka

I. GENERAL INFORMATION

A. Proposed Action

The County of Maui Department of Parks & Recreation (the Agency) proposes to develop a neighborhood park in the Napili area. The proposed site encompasses approximately 10.3 acres along Maiha Street which leads from Honoapiilani Highway to the Honokeana Subdivision. The site is on two County-owned parcels and a portion of State-owned property presently leased to Maui Land & Pineapple Co. (See Figures 1 and 2). The County will be requesting approval from the Board of Land & Natural Resources for withdrawal of ML&P Co. from the lease and for the eventual transfer of this property from the State by Executive Order. Discussions with Maui Land & Pineapple Co. indicate their willingness to withdraw from their lease with the State for the project. The County will provide for the subdivision of this portion of the parcel.

The park development (See Figure 3) is proposed to include a soccer field, a Little League baseball field with backstop, dugouts, scorekeepers' booth, bleachers, a restroom building, a basketball court, a tennis court, a skateboard area, a remote control car track area, a tot lot, and an open play area. Other proposed amenities include paved parking for approximately 80 cars, fencing, paved jogging/walking paths, picnic shelters, and landscaping. As Maiha Street bisects the park into two areas, fencing is proposed along both sides of the street with pedestrian access controlled at three crosswalks only.

B. Project Site Location (see figures 1 and 2)

1. South parcel:	T.M.K.: 4-3-18: 40
2. North parcel:	T.M.K.: 4-3-18: 41
3. Portion of State parcel:	T.M.K.: 4-3-01: portion of parcel 5

C. Land Areas

1. South parcel:	3.924 acres (170,937 s.f.)
2. North parcel:	4.188 acres (179,378 s.f.)
3. Portion of State parcel:	2.2 ± acres (96,000 s.f.)
Total	10.312 acres (446,315 s.f.)

D. Land Use Zoning

1. State Land Use Designations

a. South and north parcels:	Urban
b. Portion of State parcel:	Agricultural
c. Surrounding parcels:	Urban

2. Community Plan Designations (Lahaina - See Figure 7)

a.	South and north parcels:	Park (Open space at Honokeana Stream drainageway)
b.	Portion of State parcel:	Park
c.	Surrounding parcels:	Multi-family, Single-family

3. Use Zones (Maui County Comprehensive Zoning Ordinance)

a.	South and north parcels:	R-1 Residential
b.	Portion of State parcel:	Agricultural
c.	Surrounding parcels:	Ag, R-1

E. Anticipated Permits Required

1. Special Management Area (SMA) Permit
2. Building Permit
3. Grading Permit
4. National Pollutant Discharge Elimination System Permit (for construction activities)

F. Alternatives to Proposed Actions Which Were Considered

The proposed park site was originally planned to be a subsequent phase of the Honokeana Subdivision by Maui Land & Pineapple Co. During the review of the West Maui Community Plan in the early 1970's, the direction was to have a park in this area. Several sites were considered and negotiations between the County and Maui Land & Pineapple Co. resulted in the choice of this site.

II. EXISTING ENVIRONMENTS, POTENTIAL IMPACTS, & MITIGATIVE MEASURES

A. Physical Environment

1. Surrounding Land Uses

The surrounding developments include single-family residential lots with Honokeana Subdivision on the northwest (makai) side; and Hale Noho Subdivision on the southwest (Honokowai) side. A drainageway (Honokeana Stream) exists between the Hale Noho Subdivision and the project site.

Honoapiilani Highway runs along the southeast (mauka) boundary with pineapple field across the highway.

Another drainageway (Napili 4-5) exists on the northeast (Kapalua) side of the park site and pineapple fields also exist across the gulch.

The development of the park should enhance the residential quality of the area as it will provide for the recreational needs of the neighborhood.

2. Climate

The climate in Honokeana-Napili area is generally mild. Average rainfall is between 30 to 45 inches annually.

Annual temperature is between 75 degrees and 85 degrees Fahrenheit. August and September are the warmest months of the year, while January, February, and March are the coldest.

The prevailing winds throughout the year are the northeast trades which blow at velocities of 5 to 20 miles per hour. The strongest, most damaging winds generally accompany winter storms, usually from the south.

3. Topography and Soil Characteristics

The site is presently vacant and covered with scrubby vegetation, weeds, and koa. It was previously cultivated with pineapple in the 1970's and has been left fallow and untouched except for the development of Maiha Street which serves the Honokeana Subdivision.

The general elevations on the site range from 130 feet above mean sea level at the westerly (makai) boundary to about 190 feet at the eastern (mauka) border (See Figure 6). The southwest property line at the approximate centerline of the Honokeana Stream drainageway has depths to about 20'. The drainageway on the north (Kapalua) side is not included in the site as the proposed property line is set near the top of the bank of the drainageway.

The soil on the site, according to the U.S.D.A. Soil Conservation Services Soil Survey, is classified as Kahana Silty Clay, KbB and KbC in the Kahana Series. This type of soil will normally have rapid permeability, slow to medium runoff and moderate to severe erosion hazard if cultivated and not protected.

Basaltic rock was encountered at depths of 4-1/2 to 8-1/2 feet at five of the nine test pits.

A copy of the Soils Investigation Report prepared by Island Geotechnical Engineering, Inc. dated May 22, 1998 is included in the appendix.

4. Flood Hazards

The site is outside the potential tsunami inundation area. The major portion of the site is designated in Flood Zone "C" (minimal flooding area as designated by the U.S. Army Corps of Engineers). A narrow strip along the property line in the Honokeana Stream is designated as Zone "A2" (subject to 100-year flooding). The proposed development area is not in the A-2 Zone and will be designed to be within the "minimal flooding" Zone C.

5. Flora and Fauna

There is no indication of rare or endangered plants on the site. This fact is reinforced by the fact that the site was previously cultivated with pineapple for many years and left fallow since the 1970's. Much of the site is covered with common weeds and other existing vegetation including some evidence of the abandoned pineapple fields, haole koa, few African tulip trees, Eucalyptus trees along the Kapalua side gulch, and some home vegetable gardens on the mauka side of the site.

The area is not known as a significant habitat for rare and endangered wildlife and birds. The wildlife in the area includes introduced species such as rats, mice, mongoose, cats, and common sparrows, mynas, doves, francolins, and Japanese White-eye.

The proposed park is not expected to have any significant impact on rare, endangered, or threatened fauna or avifauna as only common alien species seem to be utilizing the site. Development of the park with planting of trees on the fringe areas of the play fields and the parking area as well as in passive areas (See Figure 4) may in fact provide further habitat for birds in the area.

Proposed landscape planting will include:

(1) Eucalyptus trees at drainageway boundaries to match existing eucalyptus trees.
(2) Norfolk Island pine to match existing Norfolk Island pines planted along the State highway.
(3) Medium flowering canopy trees such as Rainbow Shower trees for color and Hibiscus hedges to satisfy the parking ordinance planting requirements.
(4) Formosan Koa or similar dense foliage trees to screen the residential neighborhood.
(5) Common Bermuda at playfields.
(6) Dwarf Hou or similar windbreak planting at the playcourts.
(7) Larger flowering shade trees similar to African Tulips which are also existing on the site.

(8) Hydromulching of slopes greater than 3:1 with creeping red Fescue for erosion control.
(9) The Dept. of Water Supply's list of xerophagic landscape plants will be reviewed and plants used where practical.

6. Archaeological Resources

As the site was cultivated for many years with pineapple by Maui Land & Pineapple Co. until the late 1970's, there is no evidence of existing archaeological or historical landmarks. A letter from the State Department of Land and Natural Resources, Historic Preservation Division dated March 16, 1993 to then Planning Director, notes the highly unlikely presence of historic sites on the property.

Construction plans and specifications will require the contractor to cease work in the area if any artifacts or remains of historic value are found and immediately contact the State Historic Preservation Division for appropriate action.

7. Air Quality and Noise

This area is not exposed to adverse air quality conditions and air quality is generally good. No point sources of airborne emissions exist in the immediate vicinity. Honoapiilani Highway traffic already produces some indirect emissions from vehicles. Pineapple fields on the mauka side of the highway and across the north (Kapalua) side gulch also produce occasional dust and equipment emissions associated with agricultural activities.

The park project will not produce any long term adverse affects in air quality as there will not be any airborne emission sources added by its construction. There will be an insignificant increase in the emissions from vehicles of the park users.

During the construction of the park, there will be some short-term impacts anticipated. These impacts will be the dust generated by the grading and construction activities. The construction documents will specify dust control measures including dust screens, regular watering and sprinkling of the dust producing areas and activities, as necessary to minimize the airborne dust. The contractor, by contract, will be responsible for the implementation of these dust control measures.

Noise levels in the area are relatively low and characteristic of residential areas. There is also the occasional and temporary agricultural activity noise from pineapple field harvesters, trucks, and other field equipment as well as the highway traffic noise.

The long-term noise levels are not anticipated to significantly increase with the park development. There will be a slight increase in the noise level due to park related vehicular traffic and the mostly weekend sports events at the new fields. Daily noise levels will be limited to soccer and baseball practice, skateboarding, remote model car racing, and basketball and tennis court use. Night time use of the park will be discouraged and no field or court lighting will be provided as requested by the Parks Department and the Community Advisory Committee reviewing the park plans.

The short term noise level impact will be expected from the construction activity especially during the grading and sitework phases of work. Construction will be limited to

normal working daylight hours and weekdays. The contractor will be required to obtain a noise permit from the Health Dept. prior to construction.

8. Visual Resources

There are no structures existing on site which restrict views of neighboring properties. The proposed restroom building, the scorekeepers' booth, dugouts, and shelters are relatively small, one-story structures which will not have any significant visual impact on neighboring parcel views. Their distant proximity to the neighboring properties will also further reduce the impact on the neighbors relative to views. The highest structure planned is the baseball backstop (approximately 24 feet high) which will be chainlink fencing and will be set in an area which will be a grading cut area. Also, as no field lighting is planned, glare from these types of lights will not be a problem.

B. Socio-economic Environment

1. Population

The population of Maui County in 1990 according to Hawaii State Department of Business, Economic Development and Tourism statistics was 100,504 residents with 91,361 residents on the island of Maui. In the same year, Lahaina was noted to have 14,574 residents including 4,332 residents in the Napili-Honokowai area. Projections of the resident population for Lahaina for the years 2000 and 2010 are 18,555 and 22,633 respectively.

As this park will be developed to serve existing residential areas, there should be no impact on the population growth in the area.

2. Economy

The economy of Maui is heavily dependent on the visitor industry. This is especially true of the West Maui area with its resort destination areas in Kapalua and Kaanapali. Agriculture is still prevalent in West Maui as Maui Land & Pineapple Company still maintains its pineapple fields and operations in the immediate area. A plantation baseyard also exists mauka of the highway and several employees live in the Honokeana and Hale Noho subdivisions which are immediately adjacent to the site.

There will not be any significant economic impacts due to this development.

C. Public Services

1. Recreational Facilities

West Maui has several recreational facilities on State, County, and resort properties. The major public recreational facilities area located at the West Maui Recreation Center and the Lahaina Civic Center. The nearest beach parks include the

Honokowai Beach Park, Pohaku Park (S-turn), and the D. T. Fleming Park. The Kaanapali and Kapalua resorts also have golf, tennis and beach recreational facilities.

This park development will add to the recreational facilities in the area and will provide full size ball fields, a basketball court, a skateboard area, a remote control model car track, paved jogging / walking paths, and a younger children's play area; all of which are not available in the immediate area. This will be a tremendous asset to the area to provide for the recreational activities for the youth in the neighborhood.

2. Police and Fire Protection

The Lahaina Police Station is located approximately six miles from the site at the Lahaina Civic Center and serves this West Maui area. The Napili Fire Station is located within a mile of the site along Honoapiilani Highway.

The development will not have significant impacts on the police or fire protection facilities in the West Maui area. The Police Department has been very supportive of the new park as it will provide for a safer area for skateboarders as well as providing for positive recreational facilities for the youth. The development of the park will reduce the fire hazard of the vacant lot which now exists and buildings on the site will be small and limited in numbers.

3. Medical Facilities

The closest major medical facility on the island is Maui Memorial Hospital which is 28 miles from the site in Wailuku. Private medical offices and facilities exist in the West Maui area and include the Maui Medical Group, Lahaina Physicians, West Maui Healthcare Center, and Kaiser Permanente Lahaina Clinic.

There will be no adverse impact on the medical facilities as the residents of the neighborhood will be the users of the park and no significant increase in population results from this development.

4. Schools

Four public schools are operated by the State of Hawaii Department of Education in the West Maui area. They are Lahainaluna High School, Lahaina Intermediate School, King Kamehameha III Elementary School, and Princess Nahienaena Elementary School. All of these schools are located in the Lahaina Town area which is about 7 miles south of this area.

School enrollment will not increase due to this development as the park is to service the existing residential areas.

D. Infrastructure

1. Roadways and Traffic

Honoapiilani Highway (State Highway 30) is the main highway serving the West Maui area. The highway is the link to the Central Maui area and ends past Kapalua with a substandard road extending north through Kahakuloa and on to Waihee and the Wailuku / Kahului area.

Access to the project site which abuts the highway is through Maiha Street which serves as the entrance roadway to the Honokeana Subdivision. Maiha Street will bisect the park into two sections.

Based on the Traffic Impact Study prepared by Austin Tsutsumi & Associates included in the Appendix of this report, the following conclusions were made:

a. The proposed development of Napili Park would not adversely affect operations on Honoapiilani Highway in the vicinity of the project.
b. The Napili Park development is projected to generate less than 25 average weekday trips.
c. The Honoapiilani Highway and Maiha Street intersection does not meet the warrants for the installation of a traffic signal system without or with the proposed development.
d. The intersection of Honoapiilani Highway and Maiha Street is currently operating overall at LOS A during both AM and PM peak hours of traffic.
e. With the proposed project, the intersection on Honoapiilani Highway and Maiha Street is projected to operate overall at LOS A during the AM and PM peak hours of traffic. The left turns out of Maiha Street heading towards Kapalua are projected to operate at LOS B during the AM and PM peak hours of traffic.

Pursuant to these conclusions, no off-site improvements due to this development are recommended at this time.

2. Water

The water system in the area consists of a 1.0 million gallon reservoir and various distribution lines. The reservoir located on the mauka side of the highway at about a half mile southeast of the site provides storage and feeds the distribution system in the area.

An existing 8" waterline is stubbed out at Maiha Street where it enters the Honokeana Subdivision and will service this project. Landscape irrigation water will be provided by well water which is to be pumped from an on-site well or may be provided from irrigation systems of Maui Land and Pineapple Co.

3. Wastewater

The County's wastewater collection and transmission system and the Lahaina Wastewater Reclamation Facility provide for sewage collection in this area. The Lahaina Wastewater Reclamation Facility is located approximately three miles south of the project in Kaanapali mauka of the highway. The waste is collected and transmitted along Lower Honoapiilani Road via gravity sewer lines or force mains.

The project site will be serviced via an 8" sewer line stubout along Maiha Street as it enters the Honokeana Subdivision. This line flows through the subdivision and along Hui Road F eventually hooking up to the Lower Honoapiilani Road line.

4. Solid Waste Disposal

A trash enclosure will be provided for a trash bin on site for pick up by County or a private disposal company. Trash will be disposed of at the Central Maui Landfill in Puunene.

5. Drainage

The project site is at the top of its drainage area bound by Honoapiilani Highway at its mauka limit, Napili 4 & 5 Gulch on the north, and Honokeana Stream on the south. Storm runoff from the areas above Honoapiilani highway bypass the development area via the well-defined Napili 4 & 5 Gulch and Honokeana Stream. Existing drainage improvements within these drainageways, including siltation basins, carry runoff to the ocean.

The park site is divided by Maiha Street into two distinct drainage areas. The north section flows mauka to makai and in the northerly direction to the Napili 4 & 5 Gulch. The south section flows mauka to makai and in the southerly direction to Honokeana Stream.

The park development will not alter these natural drainage patterns. Design for drainage will incorporate applicable recommendations from the State Office of Planning's Coastal Nonpoint Pollution Control Program Management Plan. Furthermore, all grading work and park improvements are planned within the former pineapple fields atop an existing plateau and will not affect the floodways of the bordering drainageways.

As noted in the Preliminary Drainage Report, the grading of the grassed playfield areas creates a situation where theoretically there is 0.1 cfs less runoff from the site into the drainageways. Therefore, no impact is foreseen into these drainageways.

6. Electrical / Telephone

Maui Electric Company and GTE Hawaiian Tel presently service this area. Electrical and telephone service will be provided from the underground service and stubouts existing on the Kapalua side of Maiha Street as it leaves the Honokeana Subdivision.

III. RELATIONSHIP TO GOVERNMENTAL ZONING AND LAND USE POLICIES

A. State Land Use Designations

The subject project is within the "Urban" district designation as established by the Land Use Commission (H.R.S. Chapter 205). The proposed neighborhood park use is a permitted use within this district.

B. Maui County General Plan

The Maui County General Plan (1990 Update) effective September 27, 1991 and amended April 23, 1993 established in its Social Infrastructure/Recreation and Open Space section the objectives to provide high-quality recreational facilities to meet the present and future needs of our residents of all ages and physical ability; and to provide a wide range of recreational, cultural and traditional opportunities for all of our people. The planned neighborhood park development is in conformance with these objectives and follows the policies established in the General Plan.

C. West Maui Community Plan

The West Maui Community Plan which was adopted by Ordinance 2476 and became effective on February 27, 1996, established the following as one of its objectives and policies relative to Social Infrastructure/Recreation and Open Space:

"Provide adequate community-oriented park facilities including facilities for field and court games, children's play, and picnicking within, or adjacent to, existing and future residential areas at the following existing or planned park sites:... c. Napili."

and establishes the following Implementing Action:

"Plan, design, and construct a regional park at Napili."

The proposed development complies with the objectives and policies of the community plan and proceeds with the implementing action it established.

D. Maui County Comprehensive Zoning Ordinance

The Maui County Comprehensive Zoning Ordinance designates the two County-owned parcels of the proposed park as R-1 residential. The State-owned parcel of which a portion is proposed to be utilized for this park is zoned Agricultural.

R-1 residential zoning allows the development of lands for park use and publicly owned buildings. Agricultural zoning allows the development of lands for "open land types" of park use. The proposed park development complies with both zoning uses.

E. Special Management Area Impacts

The following summarizes and identifies other possible impacts which are required to be addressed or described by this assessment report for the SMA permit:

1. *Probable impact, including cumulative impacts, of the proposed action on the environment:* The probable impact of the park development on the environment will be minimal. Increase in rainwater drainage runoff and peak flows is not significant, and no diversion from the existing natural drainage patterns is planned. The impact on the traffic in the area due to this development will also be insignificant. The "hard surface" areas to be developed in the park is minimal relative to the area of the landscaped and grassed areas and therefore will not have significant impacts cumulatively on the environment. As no lights and night activities are planned or anticipated, noise levels from park activities will be limited and should be within tolerable levels of the neighborhood as expected from a neighborhood park. Short- term dust and noise levels due to construction will be mitigated through standard controls during that time.

2. *Any probable adverse environmental effects that can be avoided:* The project is being planned to avoid adverse environmental effects. Drainage runoff is minimized and grading is planned to slow down existing peak flows. Lights are not planned and gated parking lots are to be included, as requested by the neighborhood park planning committee, to close park during night hours to minimize noise. All ground surfaces not anticipated to be hard surface areas will be grassed or planted with landscaping and an automatic landscape irrigation system is planned to maintain the plantings. Mitigative measures will be taken during construction to minimize short- term dust and noise problems.

3. *Alternatives to the proposed action:* The park development is in keeping with the West Maui Community Plan which establishes the implementation action to develop this park. Therefore, no alternatives to the proposed action are anticipated. Construction of the fully developed plan may be phased due to budget constraints and each phase by itself will be developed to not significantly affect the environment.

4. *Mitigative measures proposed to minimize impact:* "Hard surface" areas are being kept to a minimum to minimize runoff. Grading is planned to minimize the peak flows. Temporary dust and erosion control measures will be implemented during the construction operations to mitigate any potential impacts associated with construction activities.

5. *Any irreversible and irretrievable commitment to resources:* No irreversible or irretrievable commitment to resources are anticipated from the planned development of the park.

F. S.M.A. Objectives, Policies, and Guidelines

Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Maui County Planning Commission, Sections 12-202-10 and 12-202-11, projects located within the Special Management Area (SMA) are evaluated with respect to the following coastal zone management consideration of the SMA objectives, policies, and guidelines.

Recreational Resources
Objective: Provide coastal recreational resources accessible to the public.
Policies:

1) Improve coordination and funding of coastal recreational planning and management; and
2) Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:
   (a) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
   (b) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy 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;
   (c) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
   (d) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
   (e) Encouraging expanding public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value;
   (f) 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;
   (g) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits, and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response: The proposed project will provide for additional recreational facilities within the SMA area although it will not be on the shoreline. It will provide a diverse and accessible recreational facility for the neighboring communities. Planning of this development will address the concerns relative to drainage and pollution source regulations.

Historical / Cultural Resources
Objective: Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management areas that are significant in Hawaiian and American history and culture.
Policies:

1) Identity and analyze significant archaeological resources;

2) Maximize information retention through preservation of remains and artifacts or salvage operations; and
3) Support state goals for protection, restoration, interpretation and display of historic resources.

Response: The proposed site was cultivated in pineapple by Maui Land & Pineapple Company for many years until the 1970's. No evidence of historical or cultural sites exist due to this, and the Historic Preservation Division of DLNR has recognized the fact in writing that it is unlikely that there are any historic or cultural sites here. The construction plans and specifications will require the contractor to stop work in the area if any significant artifacts or remains of historic value are uncovered during clearing and excavation.

Scenic and Open Space Resources

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

Policies:

1) Identity valued scenic resources in the coastal zone management area;
2) Insure 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;
3) Preserve, maintain, and where desirable, improve and restore shoreline open space and scenic resources; and
4) Encourage those developments which are not coastal dependent to locate inland areas.

Response: The proposed park will be designed to provide for open space and views to the ocean as well as the mauka views. Grading of the park will alter the existing topography to allow for relatively flat play areas. However, preliminary grading design has been directed at minimizing the impact of earth banks on mauka and makai sides of the fields to the neighboring residences and roadways. The open space will be maintained in the area and on site by the minimal amount of buildings. Landscaping will be compatible with the plants and trees in the area.

Coastal Ecosystems

Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on coastal ecosystems.

1) Improve the technical basis for natural resource management;
2) Preserve valuable coastal ecosystems of significant biological or economic importance;
3) 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
4) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Response: The project is not anticipated to adversely impact the coastal ecosystems. There will be no significant increase to the drainage flow rates as a result of this project. Mitigation measures to contain soil erosion and surface runoff will be implemented during construction of the project to protect surrounding areas and drainage ways. Design of site drainage will follow the Coastal Nonpoint Pollution Control Program Management Plan as applicable.

Economic Uses

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

Policies:

1) Concentrate in appropriate areas the location of coastal dependent development necessary to the state's economy;
2) Insure that coastal dependent development such as harbors and ports, 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
3) 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:
   (a) Utilization of presently designated locations is not feasible;
   (b) Adverse environmental effects are minimized; and
   (c) Important to the state's economy.

Response: The proposed project is located in lands designated for park use and is in keeping with the policies and objectives of the West Maui Community Plan.

Coastal Hazards

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

Policies:

1) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazard;
2) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;
3) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
4) Prevent coastal flooding from inland projects.

Response: The development area of the proposed project is located within Flood Zone C on the FEMA Flood Insurance Maps. Zone C is an area of minimal flooding. Portions of the site which will not be developed are within the Honokeana Stream and Napili 4 & 5 drainage ways. Portions of these drainage ways are in Zone A2 which is subject to 100-year flood inundation. Existing natural drainage patterns on the planned developed areas of the site will

be maintained and sheet flows will lead the runoff to the drainageways. The grading of the large flat areas of the play fields will encourage infiltration of runoff on site and reduce the flow velocity.

Managing Development

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

Policies:

1) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;
2) Facilitate timely processing of application for development permits and resolve overlapping of conflicting permit requirements; and
3) Communicate the potential short and long-term impacts of proposed significant 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: The proposed project will be developed in accordance with applicable State and County requirements. Project planning has been proceeding with the assistance of a community park planing committee set up by the County Parks Department. Four planning meetings have been held with this committee and the public was invited to attend and provide their input. In addition, the project is subject to the Environmental Assessment review process through the State Office of Environmental Quality Control and the Special Management Area permitting process through the Maui County Planning Commission. Both processes provide the opportunity for public review and consideration.

IV. SUMMARY OF SIGNIFICANCE CRITERIA

A. Based on the following significance criteria, the project does not seem to have a significant impact on the environment.

1. Loss or destruction of any natural or cultural resources.

   The project will not involve significant loss or destruction of natural or cultural resources. The park site has been disturbed with the cultivation of pineapple for several years and does not seem to contain any significant historical or archaeological landmarks, artifacts, or remains. Construction work will be halted if any are uncovered and the State Historic Preservation Office will be called in immediately for a determination. No endangered flora or fauna have been found on the site and the planting of landscape tree clusters may encourage avifauna to nest in the area.

2. Curtailment of the range of beneficial uses of the environment.

   The project will not curtail the beneficial uses of the environment. The basic use is proposed to be open land type of activities and passive recreation with minimal buildings on the site and is within the intended uses of the present zoning. The athletic fields and passive park use areas will be beneficial to the residential areas in the adjacent areas.

3. Conflicts with the State's long-term goals and guidelines as expressed in Chapter 344, HRS.

   In fact, the development will promote the goals and guidelines by: (1) providing for a better quality of life for the residents through more and improved recreational facilities, and (2) providing open space land use with minimal impact and possibly enhancement of the environment.

4. Substantial effects on the economic and social welfare of the community and state.

   The project will affect the social welfare of the community in a very positive way as it will be providing for much needed additional recreational facilities in the area. Although economic effects may not be measurable, it will definitely not have a negative effect on the community.

5. Substantial effects on public health.

   The project will have a positive effect on public health in terms of providing for recreational needs for the mental and physical health of the people in the community. In terms of sanitation, wastewater disposal from the restroom facilities will be planned in an environmentally safe and regulated means through the existing sewer lines and regional treatment plant. Construction specifications will require the contractor to provide for a

rodent survey at the site prior to clearing operations and eradicate as necessary including submittal of Form VC-12 to the Health Dept.

6. Substantial secondary effects, such as population changes or infrastructure demands.

   The project will not cause any population changes and should, in fact, provide for the existing population. There will not be significant demands on the infrastructure in the area. The drainage at the site will be addressed in the development of drainage improvements on site in conjunction with the design of the project connecting to existing drainageways immediately adjacent to the site on both sides. Design of trash receptacle areas will encourage recycling and solid waste reduction and recycled products for construction will be used where feasible.

7. Involvement of a substantial degradation of environmental quality.

   This project will not involve substantial degradation of the environmental quality. Its design is intended to improve the quality of the environment in the area. Recommendations set forth in the Coastal Nonpoint Pollution Control Program Management Plan will be considered where applicable.

8. Individually limiting but cumulatively having a considerable effect upon environment or a commitment for larger action.

   This application is for the development of the entire 10.3 acre park site. At this point in time, the project is limited to this area as it is bound by the highway, two drainageways and a residential subdivision. There is a possibility of acquisition of more adjacent state properties for further expansion in the drainageways. However, this is not foreseen for many years and the present proposed development does not necessarily commit to a larger action in the future nor a cumulatively considerable impact on the environment.

9. Substantial effects on a rare, threatened, or endangered species or its habitat.

   There is no evidence of rare, threatened or endangered species on or around the project

10. Detrimental effects on air or water quality or ambient noise levels.

    The project is not expected to have any adverse long-term effects on the air or water quality or the ambient noise levels in the area. Short-term impacts on air and water quality and noise levels will be apparent during construction. Measures to mitigate these impacts are already required by existing laws and will be emphasized in the construction documents for the project. A noise permit will be required of the contractor prior to commencement of work.

11. Effects on an environmentally sensitive area, such as a flood plain, tsunami, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal water.

The major portion of the project site is not in an environmentally sensitive area, although a narrow strip along the Honokeana stream drainageway property line is within a flood inundation area. However, the area within the drainage area will be left undeveloped.

12. Substantial effects on scenic vistas and view planes identified in county or state plans or studies.

    The makai views from the highway are not affected by the development. The topography is such that the highway is cut into the grade as it passes mauka of the site creating an existing high bank on both the mauka and makai sides of the highway. The mauka views from the existing Honokeana Subdivision will not be significantly impacted as the earth bank at the proposed soccer field will be approximately 50' away from the nearest residence. Landscape planting which was requested by the residents for visual privacy from the park may also have some impact on the West Maui mountain view. Views from Hale Noho Subdivision looking north will not be impacted significantly as it is lower in elevation than the top of the Honokeana Stream bank on the park site. Buildings and structures on the site will be small in area and one-story and set away from the street. The tallest structure will probably be the baseball backstop (24'±) but this will be in a graded cut area of the site and its full height will not be evident from the street.

13. Requirements for substantial energy consumption.

    The project will not require substantial energy consumption. Power will be required at the restrooms which will be designed to provide for natural lighting during the day. No night lighting will be planned as the Advisory Committee decided that the park should not be for night use.

V. DETERMINATION

A. After a review of the short and long-term impacts of the proposed action and based on the "significance criteria" as noted in the previous section, it is determined that a Negative Declaration is appropriate and an Environmental Impact Statement is not required.

B. The only probable adverse impacts will occur during the construction phase and are therefore temporary. As stated earlier, these impacts will be mitigated by appropriate actions by the contractor during construction as specified in the construction documents and as required by law.

C. It does not appear that any long-term impacts will detrimentally affect the region. In fact, long-term impacts should be beneficial to the surrounding neighborhood and the community in general.

VI. APPENDIX

- List of Agencies, Associations, Groups, Companies contacted
- Napili Park Community Advisory Committee List and Meeting Minutes
- Comments received during preparation of Environmental Assessment
- Preliminary Drainage and Erosion Control Report
- Traffic Impact Report
- Soils Investigation Report

LIST OF AGENCIES, ASSOCIATIONS, GROUPS, COMPANIES CONTACTED

COUNTY AGENCIES:

Mr. Henry Oliva, Director
Department of Parks and Recreation
County of Maui
1580-C Kaahumanu Avenue
Wailuku, HI 96793

Ms. Lisa Nuyen, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, HI 96793

Mr. Charles Jencks, Director
Department of Public Works
County of Maui
200 South High Street
Wailuku, HI 96793

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

Mr. Ronald Davis, Fire Chief
Maui County Department of Fire Control
200 Dairy Road
Kahului, HI 96732

Mr. Tom Phillips, Chief of Police
Maui County Police Department
55 Mahalani Street
Wailuku, HI 96793

Ms. Robbie Ann Kane Guard, Coordinator
Maui Economic Development Agency
County of Maui
200 South High Street
Wailuku, HI 96793

STATE AGENCIES:

Mr. Michael Wilson, Director
Department of Land and Natural Resources
P. O. Box 621
Honolulu, HI 96809

Mr. Robert Siarot, Maui District Engineer
Department of Transportation
State of Hawaii
650 Palapala Drive
Kahului, HI 96732

Mr. Don Hibbard, State Historic Preservation Officer
Department of Land and Natural Resources
Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, HI 96813

Mr. Boyd Dixon, State Historic Preservation Officer
Department of Land & Natural Resources
Historic Preservation Division, Maui Office
130 Mahalani Street
Wailuku, HI 96793

Mr. Meyer L. Ueoka, Wildlife Biologist
Department of Land and Natural Resources
54 South High Street
Wailuku, HI 96793

Mr. Phil Ohta, Land Agent
Department of Land & Natural Resources
54 High Street
Wailuku, HI 96793

Mr. Art Bauckham, Planner
Department of Health
Environmental Planning Office
P. O. Box 3378
Honolulu, HI 96801

Mr. Herbert Matsubayashi, Division Chief
Environmental Health Services Division
Health Department
54 High Street
Wailuku, HI 96793

Mr. Kazu Hayashida, Director
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

Mr. Rick Egged, Director
Office of Planning
Dept. of Business Economic Development and Tourism
235 South Beretania Street, 6th Floor
Honolulu, HI 96813

Mr. Kali Watson, Chairman
Hawaiian Home Lands
P. O. Box 1879
Honolulu, HI 96805

Mr. Randall Ogata, Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Ste. 1250
Honolulu, HI 96813

Ms. Carolyn Nuyen, Librarian
Lahaina Public Library
680 Wharf Street
Lahaina, HI 96761

FEDERAL AGENCIES:

Mr. Neal Fujiwara, District Conservationist
Natural Resources Conservation Services
U.S. Dept. of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, HI 96793

COL (P) Carl Strock, Commander & Division Engineer
U.S. Army Corps of Engineers
Pacific Ocean Division
Building 230
Fort Shafter, HI 96858-5440

OTHER ENTITIES CONTACTED:

Napili Park Community Advisory Committee

Mr. Warren Suzuki, Vice President
Maui Land & Pineapple Company, Ltd.
P. O. Box 187
Kahului, HI 96732

Mr. Larry Quam, President
Napili Community Association
P. O. Box 5384
Lahaina, HI 96761

Mr. Ed Reinhardt, Engineering Manager
Maui Electric Company
210 West Kam Avenue
Kahului, HI 96732

NAPILI PARK COMMUNITY ADVISORY COMMITTEE
LIST OF COMMITTEE MEMBERS (Attached)

MINUTES OF COMMITTEE MEETINGS

1. December 24, 1997
2. March 19, 1998
3. April 20, 1998
4. June 22, 1998

Napili Park Advisory Committee

Name	Phone	Fax	Interest
Arakawa, Brian	661-5401		W. Maui L.L. President
Countryman, Bill	667-1200	667-8384	Soccer
Fabella, Brian	669-3056	669-5740	Skateboard
Iona, Sheryl	669-2726		Playground
Kauhaahaa, Lawrence	661-4441	661-2004	Community Police
Knowles, Rick	669-7733	669-7734	Kapalua Land/Neighbor
Kudlich, Mike	669-6172		Little League/Soccer
Kukahiko, Earl	661-0501		Girls Softball
Marsetti, Richard	669-4484		Little League/Softball
Minami, Dave	669-6201	669-7089	Maui Pine/Neighbor
Rosenthall, Don	667-6618	661-9316	County Recreation
Suzuki, Warren	877-3882	877-3856	Maui Land & Pine
Webb, Barbara	669-5478		Playground/Trails

March 23, 1998

Hiyakumoto + Higuchi
ARCHITECTS · INC.

December 24, 1997

Mr. Robert Halvorson
Department of Parks & Recreation
County of Maui
1580C Kaahumanu Avenue
Wailuku, HI 96793

Re: Napili Park

Dear Robert:

The following are notes of the first community meeting for this project:

1. Allen Shishido, Deputy Parks Director, opened the meeting and introduced County & Parks Dept. personnel present (Director Henry Oliva, John Buck, Jeff Anderson, Robert Halvorson, Councilman Dennis Nakamura).

2. Director Oliva addressed the group and gave brief background of the project.

3. Calvin and Eric were introduced as the consultants.

4. Calvin provided information on the consultant team, scope of services, project location, access to site, zoning, and the major components of the park requested at this time by the county. Calvin answered some questions from the group prior to testimony.

5. Public testimony was then provided by the following persons:

   a. Ross Alexander (West Maui Taxpayers Assn.) - expressed need for park and long wait to get to this point.

   b. Louise Alexander - one priority should be for skateboard facilities; pedestrian access from end of Kohi Street needed for people from subdivision.

   c. Mike Kudlich - served on previous park planning committee; a multi-purpose playcourt (basketball, skating) should be incorporated into plans; consideration should be made for shelter from rain since this area is rainy; traffic signals should also be considered for safety of pedestrians and vehicles.

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d. Louise Rockett - need to provide for skateboard facility; also walking/jogging paths should be in plans possibly toward gulch.

e. Joanne Johnson (West Maui Youth Center) - kids have waited long so project should be built quickly; skateboard facility is a priority; concern expressed about pedestrian/bicycle access to park.

f. Darryl Ellis - need a safe place for kids to play; provide good pedestrian access so park will be used more.

g. Barbara Webb (architectural/interior design background) - need for younger kids play equipment with good shade trees and good ground surface such as play equipment area on Onehee Street (Kahului Community Center park); plans should include walking paths; interested in being on committee.

h. Wendy Johannson - park site should be at Napilihau Villages site as it is very accessible to community.

i. David Diven - need for skating facility; footpaths straight to park for access, vehicular traffic should be secondary; provide for shelters for park users in case of rains; provide facilities as multi-purpose as possible.

j. Benny Martin & Kevin Sullivan (pre-teenage testifiers) - need for skateboard facility; use $50 fees collected from confiscated skateboards to build skating facility.

k. David Minami (Honokeana subdiv. resident) - need lights at intersection of Honoapiilani Highway and Maiha Street. (Calvin noted that traffic study will be making recommendations on this.)

6. Allen noted that the county is putting a committee together to work with the consultants on the park planning and will be setting up another meeting in mid-January. He asked for volunteers. Also, as there were concerns about a meeting place closer to or in Napili, Allen asked group for suggestions. Methodist Church in Napili has meeting room. Parks Dept. will contact pastor.

7. Henry noted that there is a definite need to prioritize the usages as there are budgetary concerns and there are other parks in West Maui which are being planned.

8. Dennis Nakamura also spoke and repeated that West Maui area has several parks being considered or planned such as Wainee (adjacent to West Maui Rec. Center), North Beach (Kaanapali) and Mahinahina regional park.

9. Meeting concluded shortly after 7:00 p.m.

Any questions or corrections, please feel free to call.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA

fc: All Consultants

NAPILI PARK

Minutes of Community Advisory Committee
Thursday, March 19, 1998, 6:00 p.m.
Honolua United Methodist Church

1. Present: (See attached list)

2. Allen Shishido, Deputy Director of County Parks Department opened the meeting and introduced the Parks Department Director, Parks staff who were present, and the consultant.

3. Henry Oliva, Director of County Parks Dept., discussed the history of the park, the planning process and the formation of a Community Advisory Committee.

4. Patrick Matsui, Parks Department Planning & Development Division Chief, presented a list of committee members who have, thus far, volunteered or been asked to be on the committee (list attached). The purpose of the committee is to (1) provide continuity in the input and planning of the park throughout the three scheduled meetings; (2) to have a fair and equal representation of each user group; (3) to assist in supportive testimony for future public hearings for budget, SMA permit, etc. The meeting time may be changed from 6:00 p.m. to 7:00 p.m. to allow coaches on the committee to attend. There was one concern that if the meeting is at 7:00, some of the kids may not be able to attend. Tentatively, future meetings are scheduled for mid-April and mid-May.

5. Police officers Lawrence Kauhaahaa and Rocky Lassiter were introduced. Officer Kauhaahaa spoke to the group and emphasized safe play with skateboards. He also volunteered to be on committee.

6. Calvin Higuchi AIA (Hiyakumoto + Higuchi Architects), project consultant, was introduced and presented the conceptual plan.

   a. The concept plan was based on the original program initiated by the Parks Dept. for the consultant's Request for Proposal as well as input from the public at the first community meeting on December 23, 1998 at Lahaina Civic Center. It was also based on latest available topographic surveys and the assumption that the state land on the Kapalua side of the project site will be eventually transferred to the county.

   b. The concept plan includes:

      (1) Active play areas which are kept away from residences and on Kapalua side of road due to required large sizes of playfields.

      - Little League sized baseball field (200' outfield) including dugouts, scorekeeper's booth/storage building, backstop and fencing and scoreboard; located toward highway to avoid balls being hit into residential areas.
      - Soccer field (100 yd. x 50 yd.).
      - Playcourts and skateboard areas located close to highway on Honokowai side of road.

(2) Passive play areas are located throughout park and as they are less restricted by area, are set into narrow area on Honokowai side of road.

- Tot lot with kids' play equipment and safety surfacing.
- Picnic areas.
- Passive play open field areas.
- Jogging paths (8' wide) with shelters.

(3) Other amenities include a restroom/storage building, parking lots (42 and 38 stalls respectively on each side of road), landscape buffers at residential lots, speed bumps and marked cross walks.

c. *Pedestrian* access to park. The access points initially proposed from Hui Road F and Hale Noho Subdivision through Honokeana Subdivision were reviewed. The Honokeana Subdivision does not have sidewalks, and access points go through private residential properties which have been built over with masonry walls. There is also resistance from owners of those lots and residences in the subdivision to pedestrian through-traffic. At this point, an access from the end of Kohi Street in Hale Noho Subdivision through a lot owned by The ARC of Maui and crossing the drainage way is being studied. This access may incur additional design, permitting and construction costs as additional topographic surveys, bridge designs and Corps of Engineers permits may be required. Cost and value of this access may have to be weighed against the cost and value of the park and amenities. This will be a decision for the Community Advisory Committee. More details should be available at the next meeting.

d. As the conceptual plan is based on state land transfer to the county, contact has been made with the Maui land agent for DLNR. Indications are that the Maui office of DLNR would not have problems with the transfer. Maui Land & Pine who now leases the property also has been contacted and indicated they see no problem at this time to releasing their hold on the lease of the portion shown on the park concept plan. To start the process, the county would request in writing the transfer by Executive Order with a legal description (by an engineer or surveyor). If the planning and construction schedule dictates start of construction prior to final transfer by Executive Order, the state and ML&P may be able to provide a right-of-entry agreement to start construction on this land if the formal transfer process is moving ahead.

e. By the next meeting, which may be scheduled in mid-April, the consultant hopes to have a traffic study and soils investigation started, a topographic survey completed, the concept plan updated with preliminary grading, and a landscape concept plan.

f. The basic layout of concept plan was accepted by the group with the incorporation of some comments noted from those present:

- Provide shelters at baseball field, soccer field, passive play areas, since it rains unexpectedly in Napili.

- Relocate tot lot away from road to prevent tots straying into street.
- Provide fence along road to limit access across road at crosswalks.
- Relocate courts slightly makai to get away from residences which are close to that area across the gulch.
- Do not provide lights for courts or fields. As this is a "neighborhood" size park and residences are immediately adjacent, park use should be limited to daytime use.
- Skateboard area for "neighborhood" parks are normally 6000 s.f. maximum (about the size of a basketball court). Other larger parks are being planned for West Maui which may probably include larger skateboard facilities.
- Skateboard facility could be relocated in sloped area where natural terrain could be used for ramps.
- Skateboard facility could be a priority if "partnering" by the community provides for monitoring of the facility.
- Provide space for remote control car track. This may be another partnering project.
- Consider access through lots at Loa Place cul-de-sac as they were noted to be close to the park site.
- Wood bridge in Napili is not recommended due to the wet conditions and faster deterioration of the wood.
- Consider tennis court.

Estimates of costs of elements of park were requested for consideration of prioritizing which elements would go into first phase within $1,000,000 budget.

7. Allen Shishido discussed elements of the park which community partnerships would promote. He distributed two handouts - "Skateparks for Maui County - Guidelines by Parks & Recreation Sk8 Park Task Force" and "Playground Improvement Partnerships: A Maui County Department of Parks & Recreation Program for Community Collaboration" (copies distributed at meeting). It was noted that the skateboard facility, the tot lot play equipment and area, and the remote control car track are prime elements where community partnerships would be needed.

Meeting was adjourned at about 7:20 p.m.

Napili Park Community Meeting
List of Attendees - March 19, 1998

Ball, Kim	3989 Mahinahina St.	Lahaina, HI 96761
Balmores, Irineo	64 Maiha St	Lahaina, HI 96761
Cacal, Jeffery	13 Paula Loop	Lahaina, HI 96761
Cajudoy, Sheryl	5100-B Hanawai St.	Lahaina, HI 96761
Cajudoy, Sheila	5100-B Hanawai St.	Lahaina, HI 96761
Camacho, Ray	P.O. Box 1373	Lahaina, HI 96767
Derks, Monica	31 Pualu Loop	Lahaina, HI 96761
Diven, David	120 Hiui F. Rd. C5	Lahaina, HI 96761
Draper, Randy	P.O. Box 10123	Lahaina, HI 96761
Flores, Kazuo	P.O. Box 233	Lahaina, HI 96761
Hiraga, Nelson	P.O. Box 41	Lahaina, HI 96767
Iona, Shawn	46-A Puamana Pl.	Lahaina, HI 96761
Iona, Sheryl	46-A Puamana Pl.	Lahaina, HI 96761
Johnson, Jo Anne	50 Puu Anoano #508	Lahaina, HI 96761
Johnson, Jim	50 Puu Anoano #508	Lahaina, HI 96761
Kauhaahaa, Lawrence	1850 Honoapiilani Hwy.	Lahaina, HI 96761
Knowles, Rick	25 Pualu Loop	Lahaina, HI 96761
Kudlich, Mike	4055 Mahinahina Pl.	Lahaina, HI 96761
Kurose, Hideo	5084 Honoapiilani Rd.	Lahaina, HI 96761
Ladera, Wesley	45 Pualu Loop	Lahaina, HI 96761
Lasseter, Rocky	1850 Honoapiilani Hwy.	Lahaina, HI 96761
Lowson, Mac	P.O. Box 613	Lahaina, HI 96767
Martin, Benny	P.O. Box 10905	Lahaina, HI 96761
McNatt, Bob	1000 Kapalua Dr.	Lahaina, HI 96761
Minami, Dave	4900 Honoapiilani Hwy.	Lahaina, HI 96761
Rasnak, Shane	4530 L. Honoapiilani Hwy.	Lahaina, HI 96761
Rasnak, Dan	4530 L. Honoapiilani Hwy.	Lahaina, HI 96761
Rasnak, Charles	4530 L. Honoapiilani Hwy.	Lahaina, HI 96761
Rosenthall, Don	1840 Honoapiilani Hwy.	Lahaina, HI 96761
Ross, Louise	5161 I Kohi St.	Lahaina, HI 96761
Ross, Alexander	5161 I Kohi St.	Lahaina, HI 96761
Sommers, Casey	4435 L. Honoapiilani Hwy. #114	Lahaina, HI 96761
Sullivan, Kevin	P.O. Box 10905	Lahaina, HI 96761
Tillman, Mark	3500 L. Honoapiilani Rd. #10-F	Lahaina, HI 96761
Turalva-Albano, Chassidy	5111-A Hanawai St.	Lahaina, HI 96761
Turalva-Albaro, Kristelle	5111-A Hanawai St.	Lahaina, HI 96761
Vierra, George	71 Loa Place	Lahaina, HI 96761
Vieth, Mark	910 A Honoapiilani Hwy.	Lahaina, HI 96761
Webb, Barbara	P.O. Box12364	Lahaina, HI 96761
Bernudez, Darren	?	
Bermudez, Tiare	?	
Uddipa, Vanessa	?	
Henry Oliva	Parks & Recreation Director	
Allen Shishido	Deputy Director	
Patrick Matsui	Chief of Park Planning & Development	
Robert Halvorson	Parks Project Manager	
Jeff Anderson	Parks West Maui District Supervisor	
Calvin Higuchi	Hiyakumoto + Higuchi	

NAPILI PARK

Minutes of Community Advisory Committee
Monday, April 20, 1998, 7:10 pm – 8:35 pm
Napilihau Community Center

1. Present: (See attached list)

2. Parks Department Project Manager Robert Halvorson opened the meeting and introduced Parks Department Director Henry Oliva, Deputy Director Allen Shishido, Planning and Development Division Chief Pat Matsui, Parks staff, and Project Prime Consultant Calvin Higuchi, AIA (Hiyakumoto + Higuchi Architects).

Calvin noted progress of project since the last meeting (March 19, 1998) and presented an updated Conceptual Site Plan based on comments from that meeting.

3. General:
   a. Started traffic engineering study and report. The traffic engineer has indicated that at this point he does not see this park as have any significant impact on the traffic in the area.
   b. Started soils engineering report to determine subsurface soils conditions. Some committee members indicated that the soil in this area should be workable without need for blasting.
   c. Topographic survey of the area north of the site to the top of gulch was completed early last week.
   d. March 15, 1998 Conceptual Site Plan was revised based on comments from the last meeting and location of the top of gulch.

4. Revised Conceptual Site Plan
   a. Presentation:
      1. The tot lot was relocated away from the road (Maiha Street).
      2. Fencing is proposed along both sides of Maiha Street to restrict road crossings. Speed bumps or humps are also being considered.
      3. Basketball court is relocated away from residences across the gulch on the Honokowai side as requested. A tennis court was noted at the mauka side of the parking area opposite the basketball court.
      4. This affected the location of the parking which was moved mauka from its original location. This created offset driveway locations along Maiha. Also pedestrian crosswalks were located to be away from these driveways to separate pedestrian and vehicular traffic.
      5. All active play areas (tennis, basketball, tot lot, skating) are about 150 feet from residences, Hale Noho and Honokeana. As noise from these areas was a concern, the distance to residences in both subdivisions were kept about the same. As this park will be a "neighborhood" park and nighttime use will be discouraged (no field lights, etc.), the daytime noise hopefully will be tolerable.
      6. A skateboard area of approximately 6000 s.f. and remote control car track area is added. These will be "partnership areas as well as the tot lot.

7. A footbridge and pathway is added betwween the park and Kohi Street for access from the subdivision.

b. Questions/Responses:
   1. What is a remote control car lot? Response – Attendee representing a remote control car organization explained a vision of a paved track due to the Napili rains. This track would be the only track on Maui. A world group (Kiyosho?) sponsors an annual race attracting 200 participants. Last years race site was Japan. This year (1998) the site is the Philippines, and next year (1999) is Hawaii. A 150' x 75' area is needed for a track comparable to Japan's. Discussion, however, expressed that this park is a neighborhood park and is not intended for such an event. A regional or district park is more suitable where adequate spectator seating is available.
   2. What is the status of the access from Kohi Street? Response – Parks Department is meeting with the ARC of Maui (Association of Retarded Citizens of Maui) Board of Directors on Monday, April 27 to present a proposed access through their lot. Access is not available through the Honokeana Subdivision as the residents declined having the access there.
   3. What about access from Hui Road "F"? Response – There is no access available through the Honokeana Subdivision, and access through the State land would be costly.
   4. Is it possible to provide a concrete slab for the community to construct a community center building? Response – The County of Maui may be open to discussion on a community center building in Napilihau, probably not at this site. Also, a "community center" will probably be used at night and the direction of committee at the last meeting was to discourage nighttime use.
   5. Will excavation encounter lava rock? How will grading be affected? Response – Soils investigation will identify subsurface conditions. Previous projects indicate rock is not a problem. The design also avoids the highway bank, in-part because of the existing Norfolk Pines which were planted in the State Highways right-of-way.
   6. Will the paved paths be available for roller-blading? The AC paved path is intended for walking and jogging. Roller blades and walking are competing uses, and are dangerous together. A set time schedule may be needed to avoid roller-blade/walking conflicts. Community to partner on formulating rules.

5. Conceptual Landscape Plan
   a. Presentation:
      1. Eucalyptus trees at the top of the north gulch provide a wind break and is visually pleasing. The plan is to mirror that effect in the south gulch.
      2. The line of existing Norfolk pines along the Highway will be extended into the park site along Maiha Street.
      3. Landscape wind breaks will be provided at the tennis and basketball courts.
      4. Shade trees are planned at the tot lot.
      5. Trees at parking lots will be planned to comply with the required tree planting at parking lots.

6. A landscape buffer is planned between the Honokeana Subdivision homes and the park.
7. The earth banks are being kept to a 3:1 slope to accommodate the use of riding mowers on the slopes which, for simplicity and cost, are being planned for grassing.

b. Questions/Responses:
   1. What kind of landscaping is planned between the Honokeana residential and the park? Response: A stand of trees and ground cover. There is also a bank of about 6' to 8' where the soccer field is elevated above the elevation of the residences. Suggestion: Trees and ground cover may provide a visual barrier, however, also need a sound barrier. Consider a hedge in addition to the trees and ground cover.
   2. Similar treatment was requested on the Hale Noho residential side, as noise and loss of some privacy is a major concern of residents on that side of the gulch. Response from other attendees – a) Would you rather have a park, or no park? As we are going from a vacant lot to a developed park for the kids to use, there will be impact of some noise and loss of privacy, but the positive is a park for the children. b) Consider a hibiscus hedge, it's cheap. c) Based on his understanding, sound travels up much like heat. The residences are all lower than the park, also, the winds will dissipate the noise.
   3. What are the limits of the chain link fence? Response – The chain link fence is planned along both gulches, and along both sides of Maiha Street, in addition to backstop and play field and tennis court fencing. The extent of the fence is also dependent on the budget.

6. Construction Cost
   a. Presentation:
      1. Entire park without the skateboard park and the remote control car lot is estimated at more than $2 million.
      2. The basic park, including grading and landscaping, excluding the restroom building, park amenities, and parking is estimated at $1.4 million.
      3. The basic park adding the restroom and baseball field improvements is estimated at $1.9 million.
      4. The park budget is $1.0 million.

Before proceeding, Calvin asked for acceptance of the conceptual site plan. Aside from the cost factors, this plan could be used as the park masterplan and be done in phases over several years. With the committees acceptance, the consultants can proceed with preparation of the environmental assessment report and the SMA (Special Management Area) permit submittal package and further into the permitting process. Unanimous approval was given by the committee.

   b. Questions/Responses:
      1. Due to the available park budget, one may ask "Which is the preferred priority, the north or south section?"

2. If the County can do the basic park, then the community can partner to develop the amenities.
3. The skateboard park is a priority! The children need a place to play to get them off the streets.
4. The tot lot with shade is a priority. The tot lot at the Lahaina Recreation Center gets too hot and a tot lot in this neighborhood is needed.
5. Since the excavation is much higher than embankment, Maui Land & Pineapple may have a location for the excess material. This will reduce the cost of soil disposal.
6. Other projects are coming on-line in the Napili area. These developments need to provide park dedication or pay a park development fee. This is a source of additional revenue to used strictly for park development.
7. The Army Reserve and National Guard may be available to help with the mass grading. The County's Department of Public Works and Waste Management may also be able to help with the grading work.
8. The Outdoor Circle may be able to help with securing plants and planting them. Plants may also be available from the State DLNR.
9. Is water available at the site? County potable water is available at the lower levels of the site from the Honokeana Subdivision. The park design will incorporate a booster pump system to get water to the entire site.
10. Consider a lawn skateboard area instead of the paved skateboard park. The equipment is more expensive, but the physical facility is a grassed slope.
11. It is not fair to vote on priorities since the attendance is not representative of the community. The kids should have a say.
12. The baseball and soccer improvements will provide the most recreational benefit for the children. Question: Is there an immediate need for baseball and soccer? Response from the West Maui Little League and AYSO representatives: There are 300 children from the Napili area interested in AYSO, and Napili fields 2 baseball teams, but the interest is for at least 4 teams. Baseball and soccer is only available in the Napili area because Kapalua/Maui Land & Pineapple allow the use of the field behind the church across D.T. Fleming Park. Due to the limited field area, many children have to travel to Lahaina. Since many parents work and cannot provide transportation, many children cannot participate.
13. What is the status of securing the north land from the State? Response: Parks Department has discussed with the State Department of Land and Natural Resources. If there are no objections to the SMA (Special Management Area Permit) and the EA (Environmental Assessment), then DLNR will sign off the land via an executive order.

7. Access from adjoining properties:
   a. Presentation:
      1. The access needs to span about 70 – 80 feet to avoid the floodway and a COE (Corps of Engineers) permit which would take several months to process.
      2. The estimated construction cost is $150,000.

b. Questions/Responses:
   1. The park is the priority, the access is not. Parks Dept. and the consultants will continue to pursue the access through the ARC of Maui property. This seems to be the last option unless another access in the Napilihau subdivision made available for the neighborhood through one of the residential lots.

8. Schedule:
   a. The next step, since the committee accepted the masterplan, is to prepare and submit the environmental assessment (EA) and the Special Management Area (SMA) applications. Construction plans could be prepared, building permit processing started, and possibly bidding process started concurrently with the EA and SMA process.
   b. Anticipated Ground Breaking is October 1998.

9. Partnerships:
   Parks Deputy Director Allen Shishido presented a pamphlet on how Partnerships can make things happen. The tot lot, skateboard area, and remote control car area are prime Partnership project areas. Partnerships with the County require a non-profit 501E organization. You do not have to start from scratch, you can work with existing organizations. We also need to support state laws requiring proper safety equipment for skateboarding. A partnered skateboard park will require a certified monitor to assure the proper use of equipment.

10. Parks Director Henry Oliva closed the meeting by thanking all the participants for taking their time and providing comments for the development of their park.

11. Meeting adjourned: 8:35 pm

NAPILI PARK

Minutes of Final Community Advisory Committee Meeting
Monday, June 22, 1998, 7:10 pm – 8:00 pm
Napilihau Community Center

1. Present: (See attached list)

2. Parks Department Project Manager Robert Halvorson opened the meeting and introduced Parks Department Deputy Director Allen Shishido, Parks Planning and Development Division Chief Patrick Matsui, Parks West Maui Supervisor Jeff Anderson, and Project Prime Consultant Calvin Higuchi, AIA (Hiyakumoto + Higuchi Architects).

3. Calvin presented an update report since the last meeting of April 20, 1998.

   a. Calvin explained that this is the final Advisory Committee meeting, and thanked all participants. Calvin also asked the members to please support the project when it comes up for Planning Commission hearing for the Special Management Permit process.

   b. The concept plan is generally similar to the last plan presented in April, however, the banks are steeper than the desired 3:1 slopes. The required field sizes and the existing grade made the slopes tighter. Also, the tennis court was shifted slightly to fit better into the terrain. The Landscape Architect is studying the plant selection and will have this information on the SMA submittal drawings. In addition to the 24"x36" colored drawings of the site plan, and building designs presented during the meeting, 8-1/2" x 11" copies of the Concept Plan, Building Designs, and Preliminary Grading Plan were available for those present.

   c. Conceptual Building Design drawings included designs of the Restroom, Shelters, Baseball Dugouts, and Scorekeepers/Maintenance buildings.

   d. Following the last meeting, the County & H+HA contacted the ARC (Association for Retarded Citizens) of Maui to discuss the park access from Kohi Street. ARC of Maui understandably denied the request since their clients may have difficulty with strangers walking so close. Additional alternatives are still being investigated and H+HA will be providing the County with an analysis of the various alternative access sites.

   e. The traffic engineering and soils investigation reports are complete. Based on the studies, there are no additional traffic related improvements required for the park development. The soils investigation, however, discovered rocks about 6' – 8' below the surface. A review of the grading plan indicates the development will not encounter these rocks. Calvin cautioned the evaluation is only based on what the soils investigation discovered at the specific locations.

f. The preliminary drainage report notes that the drainage of the site will follow the natural drainage pattern and involve limited underground improvements. Runoff will continue to sheet flow from the roadway to the gulches on either side of the park. An underground system will extend a highway drain to a sump prior to flowing into the gulch.

g. The Environmental Assessment (EA) was submitted on June 10 and will be published by the Office of Environmental Quality Control (OEQC) tomorrow, June 23. A copy of the EA is available at the Lahaina Public Library for review. Comments may be submitted via the internet.

Advanced Copies of the EA were submitted to thirty (30) agencies. To date, twelve (12) agencies responded with comments. Of the twelve, eleven had positive or no comments and one letter from the Office of Hawaiian Affairs raised a concern about ceded lands which will need to be addressed.

The EA process allows for a 30-day comment period after publication of notice of availability of the Draft EA in The Environmental Notice published by the Office of Environmental Quality Control. The end of the 30-day comment period is July 23. Comments from the reviewing agencies and the public are responded to in the Final EA followed by a Final EA and Finding of No Significant Impact (FONSI). Submittal deadline to OEQC is 07/29/98 for 8/8/98 publication. The end of the 30-day legal challenge period is September 8, 1998.

h. To align the County's Special Management Area (SMA) permit process with the EA process, an SMA application will be submitted at the end of this month or early July. The community's comments to the County Planning Department and Planning Commission are helpful in this process. The Planning Commission hearing will probably be in mid September.

i. The order-of-magnitude cost for the entire park development is about $2.6 million. The budget for the park development is $1 million. The grading, landscaping and minimal fencing of the park site is estimated at about $1.5 million. These figures will be evaluated as the design process continues.

4. Questions and Responses:

a. $1.5 million is required for the basic grading, landscaping and fencing? How will that happen? RESPONSE – The costs will be reviewed as the plans are developed. Possible cost savings may be available. Some ideas include a suitable disposal site for excess dirt on Maui Land & Pineapple land, irrigation water from adjacent pineapple fields, and other deductive alternate bid items which can be used to reduce the bid if it comes in above the budgeted amount.

b. As previously discussed, can the Army Reserve or the County provide mass grading assistance? RESPONSE – Coordination between the general contractor and these entities will involve additional work by someone. Quantifying the contractors work will require additional work. Trying to schedule the work is also a problem, especially if the entity is working pro bono. If the contractor's schedule is held up by the entity, the contractor could request extra time and money. The park will be developed much faster if the contractor performed all the work.

c. How can you get $1.5 million of work out of a $1.0 million budget? RESPONSE – As the design development progresses, the costs can be tied down better. Other options include eliminating the baseball field and providing an overlay at the corner of the soccer field. The fields would be shared.

d. The $1.0 million is only the 1998 budget and needs to be encumbered by December 31, 1999. The proposed schedule is to advertise for bids in August '98, issue a notice to proceed at the end of August '98, with construction completion in May 1999. Lobbying by the community to the mayor or at the County Council's budget hearings for additional funds should start in January 1999.

e. Access to the park is a concern. A resident 2 houses from the Derks expressed concern that residents cross their lot now to get to Napilihau. Where will the pedestrian access be developed? RESPONSE (Allen Shishido) – Access to the park is a priority, and an issue that needs to be resolved, however, there are no easy solutions. The consultants will be providing an analysis of the various access sites discussed and submit it to the County for further decision and action.

f. Barbara Webb who is supporting the development of a tot lot reported she collected 150 signatures supporting a playground at the park. The resolution will be forwarded to the appropriate party.

g. The S-turn residents may contest the Napili Park development because they were promised a park development there. They are already contesting the rezoning of the S-turn property from park to residential. RESPONSE – That issue should not affect this park development.

5. In closing Parks Deputy Director Allen Shishido thanked the community for their input into the park planning process. The community had general agreement on the park amenities which helped the planning. The County expects to move some dirt by the end of the year. The community in response expressed appreciation for the opportunity to be involved in the park planning process.

COMMENTS RECEIVED DURING PREPARATION
OF ENVIRONMENTAL ASSESSMENT

NAPILI PARK			
Log of Draft EA comment letters			
Date received	From	Response sent	Remarks
6/1/98	USDA Nat. Resources Conserv. Service (Neal Fujiwara)	6/4/98	revised labels on drainageways
6/2/98	State Dept. of Hawaiian Home Lands (Kali Watson)	(none)	
6/3/98	Maui Electric Co. (Ed Reinhardt)	(none)	
6/8/98	State DLNR, Land Management Div. (Phil Ohta)	(none)	
6/8/98	County Parks Dept. (Henry Oliva)	(none)	
6/9/98	State DLNR, Forestry & Wildlife Div. (Fern Duvall)	7/24/98	Bob Hobdy visited site for flora
6/9/98	County Planning Dept. (Lisa Nuyen)	(none)	
6/9/98	Office of Hawaiian Affairs (Randall Ogata/Colin Kippen)	7/9/98	response from Pat Matsui
6/11/98	Maui Land & Pineapple Co. Inc. (Warren Suzuki)	7/24/98	revised parks listing
6/12/98	County Police Dept. (Chief Thomas Phillips)	(none)	
6/15/98	State Health Dept. Maui (Herbert Matsubayashi)	7/24/98	constr. noise / rodent survey noted
6/17/98	State DLNR, Historic Preserv. Div. (Don Hibbard)	(none)	
6/18/98	State Dept. of Transportation (Kazu Hayashida)	(none)	
6/18/98	State D.B.E.D.T. (Rick Egged)	7/24/98	CZM; runoff pollutant control
6/24/98	State DLNR (Michael Wilson)	(none)	
6/24/98	County Office of Econ. Dev. (Robbie Guard)	7/24/98	traffic concerns, other details
6/26/98	State Health Dept. - Environ. Health (Bruce Anderson)	7/24/98	recycling, polluted runoff, irrigation
6/30/98	County Public Works/W.M. (Charlie Jencks / David Goode)	7/24/98	flood inund., BMP, recycling, parking, ADA
6/30/98	U.S. Army Engineer Div. - Civil Works (Paul Mizue)	(none)	
7/7/98	U.S. Army Engineer Div.- Operations (Geo. Young)	(none)	
7/10/98	County Fire Dept. (Leonard Niemczyk)	(none)	
7/21/98	County Planning Dept. (Lisa Nuyen)	(none)	
7/24/98	State OEQC (Gary Gill / Les Segundo)	7/24/98	photos, views, runoff, alternatives, I.s.,etc.

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

210 Imi Kala St.
Suite 209
Wailuku, HI
96793-2100

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

June 1, 1998

Mr. Calvin S. Higuchi AIA
Hiyakumoto + Higuchi Architects, Inc.
P.O. Box 922
Wailuku, Hawaii 96793

Dear Mr. Higuchi,

SUBJECT: Draft EA of Napili Park

Regarding your draft EA, Section II (A) (1), I believe the drainageway between the Hale Noho Subdivision and the project site is Honokeana Stream. The other drainageway on the northeast (Kapalua) side of the project is named Napili 4-5.

In Section IV (A) (11), Honokowai Stream is noted. I believe it should be Honokeana or possibly Napili 4-5, depending upon where the narrow strip is located as noted in Section II (A) (4).

Since there was no description to drainage, I would like to review that portion once it becomes available.

Thank you for the opportunity to comment.

Sincerely,

Neal S. Fujiwara
District Conservationist

Hiyakumoto + Higuchi
ARCHITECTS · INC.

June 4, 1998

Mr. Neal Fujiwara
USDA, Natural Resources Conservation Services
210 Imi Kala Street
Suite 209
Wailuku, HI 96793-2100

Re: Napili Park

Dear Mr. Fujiwara:

Thank you for your letter of June 1, 1998 commenting on the advance copy of the Draft EA. We reviewed the items you noted and will be revising Section II(A)(1) and IV(A)(11) to note the correct names of the drainageway on the Kapalua side (Napili 4-S) and Hale Noho Subdivision side (Honokeana Stream).

We are awaiting the preliminary drainage report from our civil engineer and will provide a copy to you when we receive it.

Your comments are appreciated.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson, Parks Dept. w/letter

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

KALI WATSON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

June 2, 1998

Mr. Calvin S. Higuchi, Architect
Hiyakumoto + Higuchi Architects, Inc.
P.O. Box 922
Wailuku, HI 96793

Dear Mr. Higuchi:

Subject: Napili Park, Draft Environmental Assessment,
TMK 4-3-18:40 & 41, 4-3-1:05 por., Napili, Maui,
Dated May, 1998

Thank you for the opportunity to review the subject application. The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call Daniel Ornellas at 586-3837.

Aloha,

for KALI WATSON, Chairman
Hawaiian Homes Commission

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

June 3, 1998

Mr. Calvin S. Higuchi
Architect
Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
Wailuku, HI 96793

Dear Mr. Higuchi:

Subject: *Napili Park*

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

In reviewing the information transmitted and our records, we have no objection to the subject project. We encourage the developer's electrical consultant to meet with us as soon as practical to verify the project's electrical requirements so that service can be provided on a timely basis.

If you have any questions or concerns, please call Dan Takahata at 871-2385.

Sincerely,

Edward L. Reinhardt
Manager, Engineering

ELR/dt:lh

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

MICHAEL D. WILSON
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT S. COLOMA-AGARAN

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF LAND MANAGEMENT
54 SOUTH HIGH STREET, ROOM 101
WAILUKU, HAWAII 96793-2198

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

June 8, 1998

Mr. Calvin S. Higuchi, AIA
Hiyakumoto & Higuchi
1860 Main Street
P.O. Box 922
Wailuku, Maui, Hawaii 96793

Dear Mr. Higuchi:

Subject: Review of Advance Copy of a Draft Environmental Assessment for the Proposed Napili Park, Tax Map Key: 4-3-18: 40 & 41, and 4-3-01: Portion 05, Napili, Lahaina, Maui.

The Maui District Land Office has reviewed the advance copy of a draft environmental assessment for the proposed Napili Park by the Department of Parks and Recreation on lands identified by Tax Map Key: 4-3-18: 40 & 41 and 4-3-01: Portion 05, situate in Napili, Lahaina, Maui, and has the following comments:

1. Tax Map Key: 4-3-01: Portion 05 is State owned land;

2. The subject parcel is currently under Revocable Permit No. S-5978 with Maui Land and Pineapple Co. Concurrence from the permittee will be necessary in order to withdraw this portion of land from their permit;

3. The County of Maui, Department of Parks and Recreation, will need to acquire Board of Land and Natural Resources' approval for the withdrawal of the subject land from the existing permit and set aside of this land by executive order prior to any use of this property; and

4. The subject parcel will need to be subdivided from the State's parcel.

We appreciate the opportunity to review and comment on the draft environmental assessment.

Should you have any questions regarding the above subject matter, please contact the Maui District Land Office at the address described on the letter head or by telephone at 984-8100.

Very truly yours,

PHILIP OHTA
Maui District Land Manager

cc: Mr. D. Y. Uchida
Mr. W. Kennison

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

LINDA LINGLE
Mayor

HENRY OLIVA
Director

ALLEN SHISHIDO
Deputy Director

(808) 243-7230
FAX (808) 243-7934

June 8, 1998

Calvin Higuchi, Principal
Hiyakumoto & Higuchi Architects Inc.
P.O. Box 922
Wailuku, Hawaii 96793

RE: Napili Park Draft Environmental Assessment

Dear Mr. Higuchi:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Napili Park project. We are in full support of the park development as detailed in the draft.

Should you have any questions or need of further comment please call me or Patrick Matsui, Chief of Parks Planning & Development at 808-243-7931.

Sincerely,

Henry Oliva
Director

HO:PTM:rh

s:\planning\rh\dea resp

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
54 SOUTH HIGH ST., ROOM 101
WAILUKU, HAWAII 96793-2198

June 9, 1998

TO: Mr. Calvin S. Higuchi
Hiyakumoto + Higuchi Architects, Inc.
860 Main Street
P.O. Box 922
Wailuku, HI 96793

THROUGH: Mr. Meyer L. Ueoka, District Wildlife Manager MLU

FROM: Dr. Fern P. Duvall II, Wildlife Biologist

SUBJECT: Draft Environmental Assessment: Napili Park, Maui, HI

Dear Mr. Higuchi:

I reviewed the Draft EA for Napili Park for our offices, and made a site visit 4 June 1998 to further look at possible impacts to flora and fauna.

It seems that most of the area except for the actual gulch on the north has been, as reported, in pineapple cultivation until 1972 and contains no elements of concern for flora or fauna. However, since the gulch rim and sides have not ever been in pineapple cultivation, and all cultivation stopped in 1972, I would recommend at least a one-time survey of the vegetation be done. Since, it is very unlikely that rare vegetation elements will be found, a single review by a trained eye could probably clarify this.

If you have questions, please feel free to contact me: (808) 871-2929

Sincerely,

Dr. Fern P. Duvall II
Wildlife Biologist

CC. Wesley Wong DOFAW
Michael Buck DOFAW

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Fern Duvall II, Wildlife Biologist
State of Hawaii, Dept. of Land & Natural Resources
Division of Forestry & Wildlife
54 So. High Street, Room 101
Wailuku, HI 96793-2198

Re: Napili Park Draft Environmental Assessment

Dear Mr. Duvall:

Thank you for your letter of June 9, 1998 in response to our request for your review of our Draft E.A. Your comments were transmitted to Mr. Robert Halvorson of the Maui County Parks Department. Mr. Halvorson has since contacted Mr. Bob Hobdy from your office and visited the site to survey it for any rare vegetation elements as you recommended. At that time, none were found.

Again, thank you for your review and concern. Please call me if you have any questions.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

LINDA LINGLE
Mayor

DAVID W. BLANE
Director

LISA M. NUYEN
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

CLAYTON I. YOSHIDA
Planning Division

AARON H. SHINMOTO
Zoning Administration and
Enforcement Division

June 9, 1998

Mr. Calvin S. Higuchi, AIA
Hiyakumoto + Higuchi Architects, Inc.
P. O. Box 922
Wailuku, Hawaii 96793-7109

Dear Mr. Higuchi:

RE: Advance Draft Environmental Assessment for Napili Park, Napili, Maui, Hawaii; TMK: 4-3-018:40, 41, 4-3-001:por. 005

Thank you for the opportunity to comment on the proposed Napili neighborhood park Advance Draft Environmental Assessment.

The review of the Draft Environmental Assessment for the subject project has not identified any potential impacts based on the significance criteria listed in Section 11-200-12 of the Environmental Impact Statement Rules. Therefore, the Planning Department supports a Negative Declaration for this project.

We appreciate the opportunity to provide comments. If you have any questions, please feel free to contact Don Schneider, Staff Planner, of this office at 243-7735.

Sincerely,

Lisa M. Nuyen

LISA M. NUYEN
Director of Planning

LMN:DAS:cmh
c: Clayton Yoshida, AICP, Planning Program Administrator
Don Schneider, Staff Planner
Project File
General File
(S:\ALL\DON\NAPILIPK.EA)

PHONE (808) 594-1888

FAX (808) 594-1865

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

June 09, 1998

Mr. Calvin S. Higuchi
Architect
1860 Main Street
P.O. Box 922
Wailuku, Maui, HI 96793

EIS No. 186

Subject: Advance Copy of Draft Environmental Assessment (DEA) for Napili Park, Napili, Island of Maui

Dear Mr. Higuchi:

Thank you for the opportunity to review an Advance Copy of Draft Environmental Assessment (DEA) for Napili Park, Napili. The County of Maui proposes to develop a neighborhood park in about 10.3 acres of ceded lands in the Napili area. The park will house a variety of facilities such as soccer and baseball fields, basketball and tennis courts, bathrooms, and other accessory outlets.

The Office of Hawaiian Affairs (OHA) has reviewed the advanced copy of the DEA and has some concerns regarding the proposed project. As a matter of policy, OHA opposes to the transfer of ceded lands regardless of the purpose or use. Therefore, on the subject of transferring properties from the State to the County of Maui, OHA urges the applicant to address the sensitive issue of ceded lands.

Furthermore, OHA intends to thoroughly review the DEA once the document is available for public review. Because of the scope of the development, OHA expects the applicant to fully address several potential adverse impacts on (i) flora and fauna habitats, (ii) archaeological resources, (iii) air quality and noise, and (iv) scenic resources.

Please contact Colin Kippen (594-1938), Officer of the Land and Natural Resources Division.

Sincerely yours,

Randall Ogata
Administrator

Colin Kippen
Officer,
Land and Natural
Resources Division

cc: Board of Trustees
OEQC
CAC, Island of Maui

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE
WAILUKU, HAWAII 96793

LINDA LINGLE
Mayor

HENRY OLIVA
Director

ALLEN SHISHIDO
Deputy Director

PLANNING & DEVELOPMENT
(808) 243-7931

July 9, 1998

Mr. Colin Kippen, Officer
Land and Natural Resources Division
Office of Hawaiian Affairs, State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Kippen:

SUBJECT: NAPILI PARK
Draft Environmental Assessment Comments
EIS No. 186

Thank you for your June 9, 1998 letter to Mr. Calvin Higuchi of Hiyakumoto + Higuchi Architects, Inc. commenting on the advance copy Draft Environmental Assessment. We will incorporate your comments into the Final Environmental Assessment. Following are brief responses to your comments:

As a matter of policy OHA opposes the transfer of ceded lands from the State of Hawaii to the County of Maui for park use. We are unclear on the specifics of OHA's objections to the transfer of the ceded lands and feel this issue should be addressed by the State of Hawaii as the trustee of the public land trust.

We look forward to OHA's review and comments on the Draft Environmental Assessment. The DEA addresses your concerns on the potential adverse effects on (i) flora and fauna habitats, (ii) archaeological resources, (iii) air quality and noise, and (iv) scenic resources.

Please contact me at 243-7387 if you have any questions or would like to discuss our project further.

Sincerely,

Patrick Matsui

Patrick Matsui
Chief of Planning and Development

c: Henry Oliva, Director
Calvin Higuchi, AIA, Hiyakumoto + Higuchi

MAUI LAND & PINEAPPLE COMPANY, INC.

June 11, 1998

Mr. Calvin S. Higuchi, AIA
Architect
Hiyakumoto & Higuchi Architects, Inc.
1860 Main Street
Wailuku, Maui, Hawaii 96793

Dear Calvin:

Subject: *Napili Neighborhood Park*
Draft Environmental Assessment
TMK: 4-3-01: Portion of 05 and 4-3-08:40 & 41
Napili, Lahaina, Maui, Hawaii

Thank you for providing us with the opportunity to review the advance copy of the Draft Environmental Assessment for the subject project. Based on our review, we have only one (1) comment to offer at this time.

Under the section addressing Recreational Facilities, we are not aware of existing beach parks named Honokahua Park and Kapalua Beach. Please confirm.

We sincerely appreciate the opportunity to provide our comments and look forward to reviewing the next copy of the Draft Environmental Assessment.

If you have any questions or wish to discuss the matter, please do not hesitate to contact me.

Mahalo,

Warren A. Suzuki
Vice President/Land Management

/dc
cc: Rick Knowles, Kapalua Land Company, Ltd.
David Minami, Maui Pineapple Company, Ltd.

P.O. Box 187, Kahului, Hawaii 96732-0187 • (808) 877-3351 • Fax (808) 871-0953

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Warren Suzuki
V.P./Land Management
Maui Land & Pineapple Co.
P. O. Box 187
Kahului, HI 96732

Re: Napili Park Draft Environmental Assessment

Dear Warren:

Thank you for your letter of June 11, 1998 responding to our request for your review of an advance copy of our Draft Environmental Assessment. Our Final E.A. will be revised by deletion of Honokahua Park and Kapalua Beach.

Your interest and time spent assisting us on this project is very much appreciated.

If you have further concerns or questions, please feel free to call me.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

LINDA LINGLE
MAYOR

OUR REFERENCE
at
YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

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

THOMAS PHILLIPS
Acting Chief of Police

June 12, 1998

Mr. Calvin S. Higuchi AIA
Architect
Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
P. O. Box 922
Wailuku, Hawaii 96793

Dear Mr. Higuchi:

Re: Napili Park
Napili, Maui, Hawaii

We have received and reviewed the advance copy of the Draft Environmental Assessment report dated May 1998.

An on-site inspection was conducted and we have no comments or recommendations at this time.

Thank you for the opportunity to make comments on the project.

Very truly yours,

Assistant Chief Richie Nakashima
for: THOMAS PHILLIPS
Acting Chief of Police

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

LAWRENCE MIIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793

June 15, 1998

Mr. Calvin S. Higuchi, AIA
Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
P.O. Box 922
Wailuku, Hawai'i 96793

Dear Mr. Higuchi:

Subject: **Draft Environmental Assessment - Napili Park**
TMK: (2) 4-3-18: 40 & 41, 4-3-01: por. 5

Thank you for the opportunity to comment on the Draft Environmental Assessment. We have the following comments to offer:

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

2. Any construction discharge into state waters will require a National Pollutant Discharge Elimination System (NPDES) permit.

3. The applicant is required by Hawaii Administrative Rules, Chapter 11-26, to determine whether rodents are present at the site and to eradicate these rodents prior to clearing the lot. Should this action be necessary, the applicant is also required to notify the Department by submitting Form VC-12 to this office.

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

Sincerely,

HERBERT S. MATSUBAYASHI
District Environmental Health Program Chief

c: Art Bauckham

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Herbert Matsubayashi
District Environmental Health Program Chief
Department of Health, Maui District Health Office
54 High Street
Wailuku, HI 96793

Re: Napili Park Draft Environmental Assessment

Dear Herbert:

Thank you for your letter of June 15, 1998 responding to our request for your review of our Draft E.A.

In response to your comments, we have included in the Final E.A. the following:

1. Paragraph IV-A-10 notes that the contractor will be required to obtain a noise permit prior to commencement of work.
2. NPDES permit is listed under I-E. Anticipated Permits Required.
3. Paragraph IV-A-5 notes that the construction specifications will require the contractor to provide for a rodent survey prior to any clearing operation and eradication if necessary, including the submittal of Form VC-12 to the Health Dept.

Your comments and concerns are appreciated. If you have any further comments or questions, please feel free to call me.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson
Eric Yamashige

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

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

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

June 17, 1998

Mr. Calvin Higuchi
Hiyakumoto & Higuchi Architects Inc.
1860 Main Street
PO Box 922
Wailuku, Hawaii 96793

LOG NO: 21702
DOC NO: 9806BD11

Dear Mr. Higuchi:

SUBJECT: ***Chapter 6E-8* Historic Preservation Review of a Draft Environmental Assessment for the County of Maui Napili Park**
Honokeana Ahupua`a, Lahaina District, Island of Maui
TMK 4-3-18: 40, 41 and 4-3-01: portion of 5

This is a Historic Preservation review of a draft Environmental Assessment for the County of Maui proposed Napili Park in Honokeana 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. Portions of the property have already been reviewed by this office (SHPD DOC NO: 9303AG18) when it was previously proposed for a subdivision.

The general area seems likely to have once been the location of pre-Contact dryland farming, perhaps with scattered houses. However, the subject property has been subjected to considerable alteration due to modern agriculture and residential development, so it is unlikely that significant historic sites will be encountered today.

We therefore find the proposed construction to have "no effect" on significant historic sites. As a contingency, should any unrecorded historic sites (i.e. subsurface pavings, artifacts, or human skeletal remains) be inadvertently uncovered during construction, we recommend that all work should cease in the vicinity and the contractor should immediately contact the State Historic Preservation Division.

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

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

BD:jen

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

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

JUN 18 1998

IN REPLY REFER TO:
HWY-PS
2.9735

Mr. Calvin S. Higuchi, AIA
Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
P. O. Box 922
Wailuku, Hawaii 96793

Dear Mr. Higuchi:

Subject: Draft Environmental Assessment, Napili Park,
Napili, Maui, TMK: 4-3-18: 40, 41; 4-3-1: por. 5

Thank you for requesting our review and comments on the draft environmental assessment for the proposed Napili Park.

The proposed park is not anticipated to have a significant impact on Honoapiilani Highway, our State facility. We request that the plans for the park be submitted to our Highways Division Maui District Engineer for review and approval.

If you have any questions regarding our comments, please contact Russell Iwasa, Highways Division, Systems Planning Section, (808) 587-1832 or Ferdinand Cajigal, Highways Division Maui District Office, (808) 877-5061.

Very truly yours,

Kazu Hayashida

KAZU HAYASHIDA
Director of Transportation

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING

235 South Beretania Street, 6th Flr., Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Tel.: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-7507

June 18, 1998

Mr. Calvin S. Higuchi, AIA
Hiyakumoto + Higuchi Architects, Inc.
P.O. Box 922
Wailuku, Hawaii 96793

Dear Mr. Higuchi:

Subject: Draft Environmental Assessment (EA) for a Neighborhood Park, Napili, Hawaii (TMK 4-3-18: 40-41 and TMK 4-3-01: por. of parcel 5)

We have reviewed the proposed construction of a neighborhood park on approximately 10.3 acres in Napili, Hawaii. A statutory objective of our Coastal Zone Management (CZM) Program is to provide adequate, accessible, and diverse recreational opportunities in the coastal zone area. However, we note that the draft EA does not discuss the project's consistency with CZM's objectives and policies. Since this is the basis for project approval and the issuance of the required SMA permit, this discussion should be included.

In addition, we are interested in mitigation measures to control polluted runoff from the project site during construction. You may find some of our recommended mitigation measures in our Coastal Nonpoint Pollution Control Program Management Plan.

If you have questions, please contact Claire Cappelle of our Coastal Zone Management Program at 587-2880.

Sincerely,

Rick Egged
Director
Office of Planning

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Rick Egged, Director
Dept. of Business, Economic Development & Tourism
Office of Planning
P. O. Box 2359
Honolulu, HI 96804

Re: Napili Park Draft Environmental Assessment
(Ref. No. P-7507)

Dear Mr. Egged:

Thank you for your response to our request for review of our Draft E.A. In response to your comments, we have:

1. included in the Final E.A. the portion of our SMA permit application which responds to the CZM objectives; and

2. included a note that applicable mitigative measures to control polluted runoff as recommended by your Coastal Nonpoint Pollution Control Management Plan are to be followed.

Your concerns and comments are appreciated as they expanded our report to a more complete assessment of the project.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson
Eric Yamashige

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

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

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

LD-SSB

JUN 24 1998

Ref.:NAPILIPK.RCM

Mr. Calvin S. Higuchi, AIA
Hiyakumoto & Higuchi
Architects, Inc.
1860 Main Street
P.O. Box 922
Wailuku, Maui, Hawaii 96793

Dear Mr. Higuchi:

SUBJECT: Review : Draft Environmental Assessment (advance copy)
Project : Napili Park
Applicant: Department of Parks & Recreation, County of Maui
Location : Napili, Island of Maui, Hawaii
TMK's : 2nd/ 4-3-18: 40 and 41 and 4-3-01: Por. 05

Thank you for the opportunity to review and comment on the subject Draft Environmental Assessment.

Our Land Division Maui District Land Office reviewed the subject Draft Environmental Assessment and responded directly to your agency by letter dated June 8, 1998 (copy attached).

The Department of Land and Natural Resources has no other comments to offer on the proposed project at this time. If at a later date our Land Division receives any other comments on the proposed project from our other divisions, we will transmit them to your agency. Should you have any questions regarding the above subject matter, please feel free to contact our Land Division's Support Services Branch at 1-808-587-0438.

HAWAII: Earth's best!

Aloha,

MICHAEL D. WILSON, Chairperson
of the Board of Land and
Natural Resources

c: Maui District Land Office
Maui Land Board Member

LINDA LINGLE
Mayor

ROBBIE ANN A. KANE GUARD
Economic Development Coordinator

OFFICE OF ECONOMIC DEVELOPMENT
COUNTY OF MAUI
200 SOUTH HIGH STREET, 6TH FLOOR, WAILUKU, MAUI, HAWAII 96793 USA
Telephone: (808) 243-7710 Facsimile: (808) 243-7995

June 24, 1998

Mr. Calvin S. Higuchi
HIYAKUMOTO + HIGUCHI ARCHITECTS, INC.
1860 Main Street
P.O. Box 922
Wailuku, Hawaii 96793

RE: NAPILI PARK

Dear Calvin:

In response to your request for comments/recommendations to the draft Environmental Assessment report dated May 1998, our office is able to offer the following comments:

1. Part II. Existing Environments,...
   - A. Physical Environment
     - 4. Flood Hazards
       - reminder to complete the necessary information
   - B. Socio-economic Environment
     - 1. The population count seems to be from the U.S. Bureau of the Census 1990 statistics. Please contact DBEDT if you should require more recent estimates.
   - D. Infrastructure
     - 1. Concern has arisen due to the safety factor involved when the park is split by Maiha Street. Has this been addressed?

2. Part IV. Summary of Significance Criteria
   - A. Based on the following significance criteria, the ...
     - you may wish to separate the paragraphs (between items #7 and #8)

Other than the above mentioned concerns, the report appears to be very thorough.

Calvin, thank you for giving us the opportunity to review this document. I hope our comments will prove helpful.

Sincerely,

ROBBIE ANN KANE GUARD
Economic Development Coordinator

RKG:jti

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Ms. Robbie Guard, Economic Development Coordinator
Office of Economic Development, County of Maui
200 South High Street, 6th Floor
Wailuku, HI 96793

Re: Napili Park Draft Environmental Assessment

Dear Robbie:

Thank you for your letter of June 24, 1998 responding to our request for review of our Draft E.A. In response to your comments, we:

1. expanded on the Flood Hazard paragraph under Physical Environment to note that the proposed area of development will be limited to the area of the Flood Zone C (minimal flooding area);
2. contacted DBEDT Data Center to confirm the population figures;
3. provide the following comments regarding the Maiha Street splitting of the park:

   The County purchased the two park parcels from Maui Land and Pineapple Company with the existing Maiha Street between them. The realignment of Maiha Street was studied. Due to cost, time, and more roadway areas for extended length and curves, it was not reasonable to relocate the road. We also were concerned about the safety factor of the "split" park and therefore are providing in our design fencing on both sides of the street with controlled access points at crosswalks with possible speed bumps.

Your comments are appreciated as they provide for a more complete assessment of the project. Mahalo.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

LAWRENCE MIIKE
DIRECTOR OF HEALTH

In reply, please refer to

June 26, 1998

98-121/epo

Mr. Calvin S. Higuchi, AIA
Architect
Hiyakumoto & Higuchi Architects Inc.
1860 Main Street
P. O. Box 922
Wailuku, Maui, Hawaii 96793

Dear Mr. Higuchi:

Subject: Pre-Environmental Assessment Consultation
Napili Park
Napili, Maui
TMK: 4-3-18: 40, 41

Thank you for allowing us an early review of the subject project. Besides the comments offered by Mr. Matsubayashi of our Maui District Health Office in his letter of June 15, 1998, we have the following additional comments:

Solid Waste

The State of Hawaii and the County of Maui have set a goal of 50% diversion of solid waste by the year 2000. We request that the developer address all opportunities to incorporate waste reduction and recycling efforts in the design and construction of the park. State recycling mandates also require the use of glassphalt in state and county paving projects when feasible (Act 201, HSL 1994).

Additionally, the Department of Health would like to encourage the use of recycled content building products in constructing the project. This would also

support state and county efforts to promote local reuse of recyclable materials. Lumber made of recycled plastic is produced in state and is a weather resistant alternative to traditional lumber. Locally produced compost is also available for use in landscape work.

Any questions regarding these comments should be directed to Mr. Lane Otsu of the Office of Solid Waste Management at 586-4240.

Polluted Runoff Control

The State has developed *Hawaii's Coastal Nonpoint Pollution Control Program Management Plan*. This management plan addresses proper planning, design, and use of Best Management Practices to substantially reduce polluted runoff (nonpoint source pollution). The management plan can be obtained from the State Planning Office, Coastal Zone Management Program at 587-2877.

The following are suggested management measures to consider:

1. Develop and implement grading and site preparation plans to:

   a) Design and install a combination of management and physical practices to settle solids and associated pollutants in runoff from heavy rains and/or wind;

   b) Prevent erosion and retain sediment on-site, to the extent practicable, during and after construction (portions of the park could be constructed as sediment basins to retain and prevent polluted runoff from entering coastal waters);

   c) Protect areas that provide important water quality benefits and/or are environmentally sensitive ecosystems;

d) Avoid construction, to the extent practicable, in areas that are susceptible to erosion and sediment loss;

e) Protect the natural integrity of water bodies and natural drainage systems by establishing streamside buffers; and

2. Develop and implement irrigation management practices to match the water needs of the turf.

Any questions on these matters should be directed to the Polluted Runoff Control Program in the Clean Water Branch at 586-4309.

Sincerely,

BRUCE S. ANDERSON, Ph.D.
Deputy Director for
Environmental Health

c: MDHO
OSWM
CWB

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Bruce Anderson, Ph.D.
Deputy Director for Environmental Health
Department of Health, State of Hawaii
P. O. Box 3378
Honolulu, HI 96801

Re: Napili Park Draft Environmental Assessment

Dear Mr. Anderson:

Thank you for your letter of June 26, 1998 responding to our request for review of our Draft E.A. In response to your comments, we:

1. have noted in paragraph IV.A.6 that design of waste receptacle areas will encourage recycling and solid waste reduction, and recycled content construction materials will be used where feasible;

2. have included in paragraph IV.A.7 a note stating that the recommendation of the Coastal Nonpoint Pollution Control Program Management Plan will be considered and used where applicable as it related to the civil engineering and landscape irrigation design of our project..

Your concerns and comments are appreciated as they provide for a more complete assessment of the project. Mahalo.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson
Eric Yamashige
Rick Mayberry

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

LINDA LINGLE
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 243-7845
Fax: (808) 243-7955

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

EASSIE MILLER, P.E.
Wastewater Reclamation Division

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

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

June 30, 1998

Mr. Calvin Higuchi
Hiyakumoto & Higuchi
P.O. Box 922
Wailuku, Hawaii 96793

Dear Mr. Higuchi:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
NAPILI PARK
TMK (2) 4-3-018:040 & 041; 4-3-001:005

We reviewed the subject application and have the following comments.

1. The architect and owner are advised that the project is subject to possible flood inundation. As such, said project must conform to Ordinance No. 1145 pertaining to flood hazard districts.

2. A detailed and final drainage report and a Best Management Practices Plan (BMP) shall be submitted with the grading plans for review and approval prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion and sedimentation to the maximum extent practicable. Please note that two (2) major natural drainageways traverse these properties.

3. The refuse area should be designed for future recycling capabilities.

4. The developer should be informed that the Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for the project.

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

6. Public Law 101-336, Americans with Disabilities Act -- Title III, requires all places of public accommodation and commercial facilities be accessible to people with disabilities.

If you have any questions, please call David Goode at 243-7845.

Sincerely,

for CHARLES JENCKS
Director of Public Works
and Waste Management

DG:co/mt
S:\LUCA\CZM\NAPILIPK.WPD

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Charlie Jencks, Director
Department of Public Works and Waste Management
County of Maui
200 So. High Street
Wailuku, HI 96793

Re: Napili Park Draft Environmental Assessment

Dear Mr. Jencks:

Thank you for your letter of June 30, 1998 responding to our request for your review of our Draft E.A. The following are our responses to your comments:

1. Although Flood Zone A-2 borders the park site and is on the park parcels, the proposed area of development will be within the Flood Zone C (minimal flooding) area of the site. We therefore do not anticipate flood inundation in the planned park area.

2. A detailed and final drainage report and BMP will be submitted with the building and grading permit applications. A copy of your letter was forwarded to the civil engineer for his information.

3. We have included a note in paragraph IV.A.6 noting that the design of trash receptacle area will encourage recycling and solid waste reduction. This concern was reiterated in comments from the State Environmental Health Division.

4. The Parks Department has received a copy of your letter to inform them of the fact that waste water system capacity cannot be insured.

5. Off-street parking, loading spaces and landscaping will be provided for compliance to Maui County Code Chapter 19.36.

6. As this is a County-funded project, plans will be submitted to the State Commission on Persons with Disabilities to review for compliance with the ADAAG.

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

Your concerns and comments are appreciated as they provide for a more complete assessment of the project. Mahalo.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson
Eric Yamashige
Rick Mayberry

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

REPLY TO
ATTENTION OF

June 30, 1998

Civil Works Branch

Mr. Calvin S. Higuchi
Hiyakumoto and Higuchi Architects
P.O. Box 922
Wailuku, Maui, Hawaii 96793

Dear Mr. Higuchi:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Napili Park Project, Napili, Maui (TMKs 4-3-1: 5 and 4-3-18: 40, 41). The following comments are provided in accordance with U.S. Army Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army permits.

a. Our Regulatory Section is currently reviewing the DEA and will provide their input under separate cover (telephone: 438-9258).

b. The flood hazard information provided on page 4 of the DEA is correct.

Sincerely,

Paul Mizue, P.E.
Chief, Civil Works Branch

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

REPLY TO
ATTENTION OF

July 7, 1998

Operations Branch

Mr. Calvin S. Higuchi
Hiyakumoto and Higuchi Architects
P.O. Box 922
Wailuku, Maui, Hawaii 96793

Dear Mr. Higuchi:

This letter is a follow-up to the June 30, 1998 letter from Mr. Paul Mizue, Chief of the Civil Works Branch. A member of my regulatory staff visited the Napili Park project site on June 23, 1998. Based on his observations and the material contained in the advanced copy of your Draft Environmental Assessment dated May, 1998, it appears a Department of the Army permit will not be required providing no work is performed in the two drainageways adjacent to the proposed park (Honokowai Stream and Honokeana Stream).

If you have any questions concerning this authorization, please contact Mr. William Lennan of my staff at 438-9258, extension 13 and reference file No. 980000225.

Sincerely,

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

LINDA CROCKETT LINGLE
MAYOR

RONALD P. DAVIS
CHIEF

HENRY A. LINDO, SR.
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE CONTROL

200 DAIRY ROAD
KAHULUI, MAUI, HAWAII 96732
(808) 243-7561

July 10, 1998

Mr. Calvin S. Higuchi, Architect
Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
P. O. Box 922
Wailuku, HI 96793

RE: Draft Environmental Assessment for Napili Park

Dear Mr. Higuchi,

The Department of Fire Control has reviewed you draft environmental assessment and has no comments at this time.

However, the department reserves the right to comment during the plans and specifications submittal stage of this project.

If you have any questions, direct them in writing to the Fire Prevention Bureau, 21 Kinipopo Street, Wailuku, HI 96793.

Sincerely,

LEONARD F NIEMCZYK
Captain, FPB

LINDA LINGLE
Mayor

DAVID W. BLANE
Director

LISA M. NUYEN
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

CLAYTON I. YOSHIDA
Planning Division

AARON H. SHINMOTO
Zoning Administration and
Enforcement Division

July 21, 1998

Mr. Calvin S. Higuchi, AIA
Hiyakumoto + Higuchi Architects, Inc.
P. O. Box 922
Wailuku, Hawaii 96793-7109

Dear Mr. Higuchi:

RE: Draft Environmental Assessment for Napili Park, Napili, Maui, Hawaii; TMK: 4-3-018:40, 41, 4-3-001:por. 005

Thank you for the opportunity to comment on the proposed Napili neighborhood park Draft Environmental Assessment.

The review of the Draft Environmental Assessment for the subject project has not identified any potential impacts based on the significance criteria listed in Section 11-200-12 of the Environmental Impact Statement Rules. Therefore, the Planning Department supports a Negative Declaration for this project.

We appreciate the opportunity to provide comments. If you have any questions, please feel free to contact Don Schneider, Staff Planner, of this office at 243-7735.

Sincerely,

for: LISA M. NUYEN
Director of Planning

LMN:DAS:cmh
c: Clayton Yoshida, AICP, Planning Program Administrator
Don Schneider, Staff Planner
Project File
General File
(S:\ALL\DON\NAPILIPK.EA)

BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

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

July 23, 1998

Mr. Patrick Matsui
County of Maui, Department of Parks and Recreation
1580 Ka'ahumanu Avenue
Wailuku, Hawai'i 96793

Dear Mr. Matsui:

We submit for your response the following comments on a June 1998, draft environmental assessment (DEA) entitled "Napili Park," TMK: 4-3-18-40, 4-3-18-41, and portion of 4-3-01-5, Napili, Maui.

1. PUBLIC VIEWPLANES: Please provide current photographs of the site as seen from various directions. Analyze any impact this project will have on public views from various public areas.

2. LANDSCAPING: Please provide discussion on the various plants (including for example, native Hawaiian plants) to be used for landscaping; check with the Department of Water Supply on the use of xerophagic vegetation in landscaping.

3. ALTERNATIVES: Please describe all the alternatives to the proposed action that were considered.

4. HONOKEANA STREAM: The project is next to the Honokeana Stream. Please describe the impacts of the project on the stream and discuss mitigation measures to reduce stormwater runoff from entering the stream.

5. SIGNIFICANCE CRITERIA: Please consider all 13 significance criteria listed in section 11-200-12, Hawai'i Administrative Rules (1996 revision).

Please include copies of this letter, your response to it and other comment letters/responses in the final environmental assessment and notice of determination for this project. If there are any questions, please call Les Segundo of my staff at 586-4185.

Sincerely,

GARY GILL
Director

Enclosure

c: Mr. Calvin S. Higuchi, AIA, Hiyakumoto & Higuchi Architects, Inc.

8.0 DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

8.1 SIGNIFICANCE CRITERIA

According to the Department of Health Rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The proposed project will not impact scenic views of the ocean or any ridge lines in the area. The visual character of the area will change from the current agricultural land to an improved 4-lane highway which is compatible with the surrounding land use plans and programs being implemented for the region. The highway corridor is comprised of "Prime" agricultural land which is an important resource. Development of drainage systems will follow established design standards to ensure the safe conveyance and discharge of storm runoff. In addition, the subject property is located outside of the Count's Special Management Area (SMA).

As previously noted, no significant archaeological or historical sites are known to exist within the corridor. Should any archaeologically significant artifacts, bones, or other indicators of previous on-site activity be uncovered during the construction phases of development, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

(2) Curtails the range of beneficial uses of the environment;

Although the subject property is suitable for agricultural uses, the land area adjoining the Mokulele Highway is naturally suited for transportation purposes due to its location proximate to an existing highway system. To return the site to a natural environmental condition is not practical from both an environmental and economic perspective.

(3) Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders;

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policy Act.

(4) Substantially affects the economic or social welfare of the community or state;

The proposed project will provide a significant contribution to Maui's future population by providing residents with the opportunity to "live and work in harmony" in a high quality living environment. The proposed project is designed to support surrounding land use patterns, will not negatively or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project's development is responding to projected population growth rather than contributing to new population growth by stimulating in-migration.

(5) Substantially affects public health

Impacts to public health may be affected by air, noise, and water quality impacts, however, these will be insignificant or not detectable, especially when weighed against the positive economic, social, and quality of life implications associated with the project. Overall, air, noise, and traffic impacts will be significantly positive in terms of public health as compared to the "no action" alternative.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities

Existing and planned large-scale housing development projects within Wailuku-Kahului and Kihei will contribute to a future population growth rate that will require expansion of public and private facilities and services. These improvements will become necessary as the overall population of Maui grows and settlement patterns shift. However, the proposed project will not in itself generate new population growth, but provide needed infrastructure the area's present and future population.

In addition, new employment opportunities will generate new sources of direct and indirect revenue for individuals and the County of Maui by providing both temporary and long-term employment opportunities during the construction period. Indirect employment in a wide range of service related industries will also be created from construction during project development.

(7) Involves a substantial degradation of environmental quality;

The proposed development will utilize existing vacant agricultural land. With development of the proposed project, the addition of urban landscaping will significantly mitigate the visual impact of the development as viewed from outside the site while the overall design will complement background vistas.

Makai views from the subject property are available, however, they are not significant nor generally available to the public in the property's present restricted condition.

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

By planning now to address the future needs of the community and the State, improvement of the transportation system is consistent with the long term plans for Maui. No views will be obstructed or be visually incompatible with the surrounding area.

(9) Substantially affects a rare, threatened or endangered species or its habitat;

No endangered plant or animal species are located within the highway corridor.

(10) Detrimentally affects air or water quality or ambient noise levels;

Any possible impact to near-shore ecosystems resulting from surface runoff, will be mitigated by the establishment of on-site retention basins during the construction phases of development. After development, retention areas within the highway right-of-way will serve the same function to encourage recharge of the groundwater.

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

Development of the property is compatible with the above criteria since there are not environmentally sensitive areas associated with the project and the physical character of the corridor has been previously disturbed by agricultural uses. As such, the property no longer reflects a "natural environment". Shoreline, valleys, or ridges will not be impacted by the development.

(12) Substantially affects scenic vistas and view planes identified in county or state plans or studies;

Due to topographical characteristics of the property, views of the area to be developed are generally not significant although they are visible. The majority of the proposed project will not be visible, except from higher elevations by the general public or from persons traveling along the highway.

(13) Requires substantial energy consumption.

The location of the proposed project is between Maui's major growth areas. This relationship will reduce travel times and energy consumption after project build out through efficiencies gained by the increased capacity of the highway. Construction of the proposed project will not require substantial energy consumption relative to other similar projects.

Hiyakumoto + Higuchi
ARCHITECTS · INC.

July 24, 1998

Mr. Les Segundo
OEQC
235 South Beretania Street
Suite 702
Honolulu, HI 96813

Re: Napili Park Draft Environmental Assessment

Dear Mr. Segundo:

Thank you for your comments on our Draft EA noted in your letter dated 7/23/98 to Pat Matsui, Maui County Parks Department. In response to your comments, in our Final EA, we:

1. included a photographic analysis and expanded on visual impacts;
2. provided further description of the landscape planting and an updated conceptual landscape plan;
3. added a paragraph under General Information an alternative considered;
4. expanded on the impacts of runoff into Honokeana Stream noting the calculations from our preliminary drainage report noting 0.1 cfs less runoff due to "flat" grassed areas; and
5. providing for analysis of the visual impact and energy impact under Significance Criteria which were not included in the Draft EA.

We will also include this letter with your letter as part of the Final EA along with other agency letters and responses.

We appreciate your comments as they provide for a more complete assessment of the project. Mahalo.

Very truly yours,

Hiyakumoto + Higuchi Architects, Inc.

Calvin S. Higuchi AIA
Architect

cc: Robert Halvorson
Eric Yamashige
Rick Mayberry

1860 Main Street • P.O. Box 922 • Wailuku, Maui, Hawaii 96793 • (808) 242-9705

PRELIMINARY DRAINAGE AND EROSION CONTROL REPORT

Preliminary

DRAINAGE AND SOIL EROSION CONTROL REPORT
FOR
NAPILI PARK
TMK: (2) 4-3-18: 40 & 41
HONOKEANA, NAPILI, MAUI

Prepared for:

Hiyakumoto + Higuchi Architects, Inc.
1860 Main Street
Wailuku, Hawaii 96793

Developer:

Department of Parks and Recreation
County of Maui
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

June 1998

Ronald M. Fukumoto Engineering, Inc.
1721 Wili Pa Loop, Suite 203
Wailuku, Hawaii 96793

TABLE OF CONTENTS

I. PURPOSE

The purpose of this report is to present hydrologic and hydraulic design computations for the Napili Park development. This report will also review the potential movement of soil in accordance with Chapter 20.08, Soil Erosion and Sedimentation Control of the Maui County Code.

II. PROJECT DESCRIPTION & LOCATION

The Napili Park development is located on lots 3-A and 3-B of the Hale Papa'i Subdivision, being TMK: (2) 4-3-18: parcels 40 & 41, and a portion of TMK: (2) 4-3-01: parcel 05 in Honokeana, Lahaina, on the island of Maui. The development site is bound by the Napili 4 & 5 Gulch and pineapple fields on the north, Honoapiilani Highway on the east (mauka), Honokeana Stream on the south, and the Honokeana residential subdivision on the west (makai). The project site is located about 1/2-mile from the northeast coastline of Maui. (See Figure 1 - Location Map)

The park development will affect about 8.7 acres of the 10.3 acre project site. The project acreage includes 3.924-acres on the Honokowai side of the bisecting Maiha Street, 4.118-acres on the Kapalua side of Maiha Street, and an additional 2.2-acres of State land north of the property limits. The County will acquire this remnant State land to extend the park development to the Napili 4 & 5 Gulch.

III. EXISTING DRAINAGE CONDITIONS

The existing ground within the park site slopes from an elevation of about 186 feet above mean sea level near Honoapiilani Highway to an elevation of about 134 feet along the Honokeana residential subdivision. The average ground slope is about 7 percent.

According to the ***Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii***, the on-site soil consists of Kahana Silty Clay (KbB, KbC). The soil survey describes this soil as having moderately rapid permeability, slow to medium runoff, and a slight to moderate erosion hazard.

Island Geotechnical Engineering, Inc. prepared a "Report, Soils Investigation, Proposed Napili Park, Napili, Maui, Hawaii, TMK: (2) 4-3-18: 40 & 41". The investigation performed at the site supports the Kahana association.

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (panel no. 15003-0138 B) designates the proposed development area as Zone C. Zone C is an area subject to minimal flooding. The flood rate maps, however, identify portions

of the adjoining Honokeana Stream and Napili 4 & 5 Gulch as Zone A2. A zones are areas subject to 100-year flood inundation. FEMA's Flood Boundary and Floodway Map (panel no. 15003-0138) also designates floodways within the Honokeana Stream and Napili 4 & 5 Gulch.

The project site is at the top of its drainage area bound by Honoapiilani Highway at its mauka limit, Napili 4 & 5 Gulch on the north, and Honokeana Stream on the south. Storm runoff from the areas above Honoapiilani Highway by-pass the development areas via the well defined Napili 4 & 5 Gulch and Honokeana Stream. Existing drainage improvements within these drainageways, including siltation basins, carry runoff to the ocean.

The project site is divided further by Maiha Street into two distinct drainage areas. The north section slopes mauka to makai and in the northerly direction to the Napili 4 & 5 Gulch. The south section slopes mauka to makai and in the southerly direction to Honokeana Stream.

IV. DEVELOPED CONDITIONS

The Napili Park development will not alter the natural drainage patterns of the site. All grading work and park improvements are planned within the former pineapple fields atop an existing plateau and will not affect the floodways and 100-year inundation limits of the bordering drainageways.

The north section of the park will be developed with a soccer field, a baseball field, walking paths, shelters, a parking lot, and a restroom building. Runoff from hard surfaces and playfields will sheet flow over landscaped surfaces into the adjoining Napili 4 & 5 Gulch.

The south section of the park will be developed with a basketball court, a tennis court, a tot lot, a skateboard area, an open playfield, walking paths, and a parking lot. Runoff will sheet flow over landscaped surfaces into the adjoining Honokeana Stream.

V. CONCLUSION

Development of the project will not result in any significant increase in peak flow rates and runoff volumes. The addition of impervious areas such as roofs, parking lots, paved playcourts, and walkways is minimal. The "flat" graded and manicured lawns developed for the playfields will reduce the flow velocity encouraging infiltration and reducing surface runoff to offset the developed hard surfaces. Therefore, there will be no adverse effects on the adjacent and downstream properties resulting from the development of this

project.

VI. SOIL EROSION CONTROL MEASURES

The entire Napili Park land area consists of about 10.3 acres. The project grading area, however, encompasses about 8.7 acres. This report evaluates the potential of soil loss based on the 8.7-acre grading area.

The following is a summary of the soil loss computations based on the Universal Soil Loss Equation. (See Appendix B - Soil Erosion Control Plan.)

Area:	8.7 acres
Uncontrolled Erosion Rate:	86 tons/acre/year
Allowable Erosion Rate:	575 tons/acre/year
Severity Number:	6,055
Allowable Severity Number:	50,000

Conclusion:

The figures above indicate that soil loss is within the allowable limits. The uncontrolled erosion rate (86 tons/acre/year) is lower than the allowable erosion rate (575 tons/acre/year) and the severity number (6,055) is lower than the allowable severity number (50,000).

Normal erosion control measures, including diversion ditches and silt screens, will therefore prevent excessive soil loss during construction.

Erosion control measures during construction shall also include limiting the area of clearing and grubbing, sprinkling for dust control, installing and maintaining dust screens, minimizing the construction period, and constructing or installing permanent erosion control measures as soon as possible.

VII. REFERENCES

1. City and County of Honolulu, Department of Public Works, Division of Engineering, ***Storm Drainage Standards***, Honolulu, Hawaii, May 1988.

2. Federal Emergency Management Agency, National Flood Insurance Program, ***FIRM, Flood Insurance Rate map***, Maui County, Hawaii, Community-Panel Number 150003 0138 B, June 1, 1981.

3. Federal Emergency Management Agency, National Flood Insurance Program, ***FLOODWAY, Flood Boundary and Floodway map***, Maui County, Hawaii, Community-Panel Number 150003 0138, June 1, 1981.

4. Island Geotechnical Engineering, Inc., ***Report, Soils Investigation, Proposed Napili Park, Napili, Maui, Hawaii, TMK: (2) 4-3-18: 40 & 41***, Project No. 98116-FM, May 22, 1998.

5. R. M. Towill Corporation, ***Drainage Master Plan for the County of Maui***, Honolulu, Hawaii, October 1971.

6. R. T. Tanaka Engineers, Inc., ***Environmental Assessment for Proposed Residential Subdivision of Lots 3-A and 3-C, Hale Papa'i Subdivision at Honokeana, Lahaina, Maui, Hawaii, Tax Map Key: 4-3-18: 40 & 41***, May 1991.

7. U. S. Department of Agriculture, Soil Conservation Service, ***Erosion and Sediment Control Guide for Hawaii***, Honolulu, Hawaii, March 1981.

8. U. S. Department of Agriculture, Soil Conservation Service, ***Rainfall-Frequency Atlas of the Hawaiian Islands***, Honolulu, Hawaii, 1962.

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

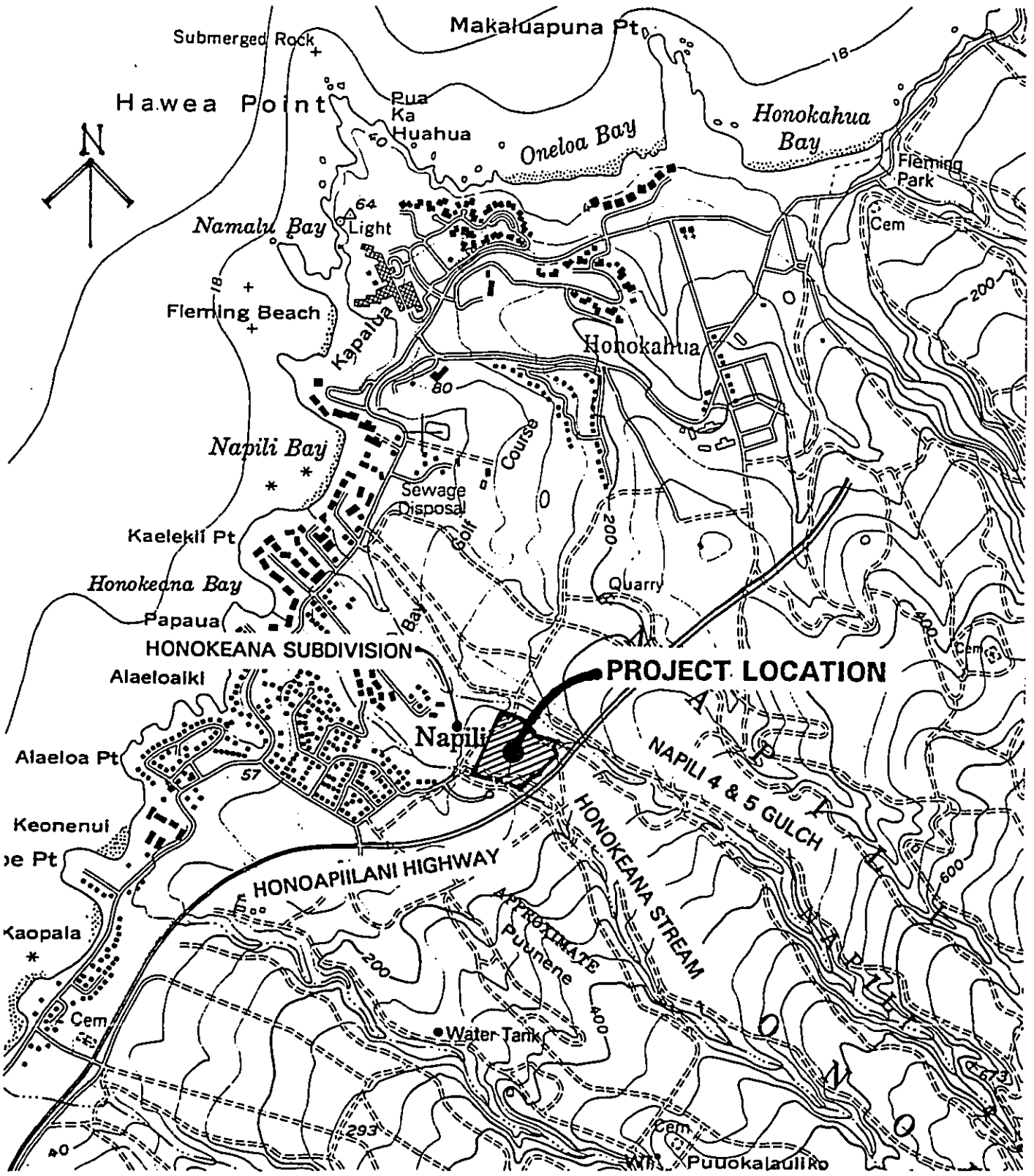

Figure 1
Location Map

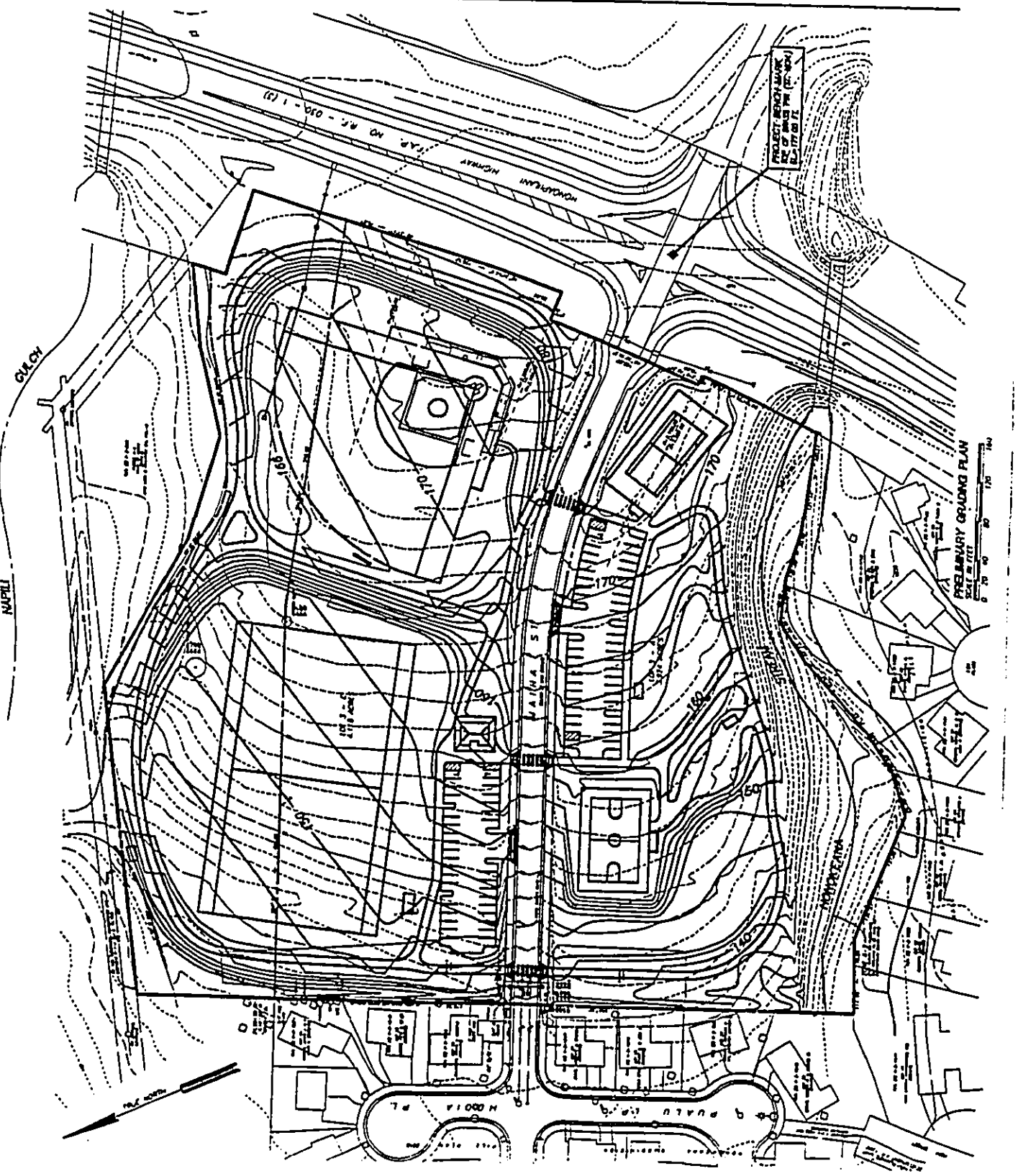

Figure 2
Preliminary Grading Plan

APPENDIX A

DRAINAGE COMPUTATIONS

PURPOSE: To calculate the surface runoff generated by the proposed Napili Park site before and after the proposed development.

I. EXISTING CONDITIONS

A. RUNOFF COEFFICIENT

From Table 1, Ref. 1:

Infiltration:	Medium	0.07
Relief:	Rolling	0.03
Vegetal Cover:	Good	0.03
Development Type:	Ag	0.15
	C =	0.28

B. EXISTING RUNOFF

Determine 10-year recurrence interval runoff for existing conditions.

Drainage Area (A) = 8.7 acres

Rainfall ($I_{10\,yr-1\,hr}$) = 2.0 inches

Time of Concentration (T_c) = 20 minutes
Rainfall Intensity (i_{10}) = 3.3 inches/hour (from Plate 4, Ref 1)

Q_{10} = CiA = 0.28 x 3.3 x 8.7 = 8.0 cfs

II. DEVELOPED CONDITIONS

A. RUNOFF COEFFICIENT

From Table 1, Ref. 1:

Infiltration:	Medium	0.07
Relief:	Rolling/Flat	0.02
Vegetal Cover:	High	0.00
Development Type:	Park	0.20
	C =	0.29

B. DEVELOPED RUNOFF

Determine 10-year recurrence interval runoff for developed conditions.

Time of Concentration (T_c) = 25 minutes
Rainfall Intensity (i_{10}) = 3.15 inches/hour (from Plate 4, Ref 1)

Q_{10} = CiA = 0.29 x 3.15 x 8.7 = 7.9 cfs

III. INCREASE DUE TO DEVELOPMENT

$Q_{10\text{-after}} - Q_{10\text{-before}}$ = 7.9 cfs - 8.0 cfs = (-)0.1 cfs

APPENDIX B

SOIL EROSION CONTROL PLAN

1. SITE CONDITIONS DURING CONSTRUCTION:

The anticipated project grading will encompass about 8.7 acres. This area may be cleared, grubbed, and graded in one increment. Exposed areas shall be grassed or paved immediately after grading is complete.

2. UNCONTROLLED EROSION RATE:

Erosion Rate as set forth by the Maui County Code:

$E = R \times K \times LS \times C \times P$

Where: E = Uncontrolled Erosion Rate (Soil Loss) in tons/acre/year

R = Rainfall factor = 230 tons/acre/year

K = Soil Erodibility Factor (Kahana) = 0.17

L = Slope Length = 750 feet

S = Slope Gradient = 7.0 %

LS = Topographic Factor (Figure 6) = 2.2

C = Cover Factor (to be determined if necessary); use bare soil factor = 1.0

P = Control Factor (to be determined if necessary); use non-agricultural land = 1.0

E = 230 tons/acre/year x 0.17 x 2.2 x 1.0 x 1.0

= 86 tons/acre/year

3. ALLOWABLE EROSION RATE:

Coastal Water Hazard (D) = 2 (class A)

Downstream Hazard (F) = 4 (major)

Duration of Site Work (T) = 0.5 year (6 months)

Maximum Allowable construction Area x Erosion Rate (Table 1)
= 5,000 tons/year

Project Construction Area (A) = 8.7 acres

Allowable Erosion Rate: $\frac{5{,}000 \text{ tons/year}}{8.7 \text{ acres}} = 575$ tons/acre/year

4. REDUCTION IN EROSION RATE:

$\frac{\text{Allowable Erosion Rate}}{\text{Uncontrolled Erosion Rate:}} : \frac{575 \text{ tons/acre/year}}{86 \text{ tons/acre/year}} = 6.7 > 1.0$

Therefore, normal efforts to reduce erosion should be adequate.

5. SEVERITY NUMBER (H):

$H = (2 F T + 3 D) A E$

Where: H = Severity Number

F = Downstream Hazard = 4 (major)

D = Coastal Water Hazard = 2 (class A)

T = Duration of Site Work (years) = 0.5

A = Project Construction Area (acres) = 8.7

E = Uncontrolled Erosion Rate (tons/acre/year) = 86

$H = (2 \times 4 \times 0.17 + 3 \times 2) 8.7 \times 86 = 6{,}055 < 50{,}000$

6. CONCLUSION:

Normal construction erosion control measures and best management practices are sufficient for this project with no excessive soil loss occurring.

TRAFFIC IMPACT REPORT

TRAFFIC STUDY
FOR
NAPILI PARK
NAPILI, MAUI

July 1998

Prepared for:

Hiyakumoto & Higuchi

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Honolulu • Wailuku, Hawaii

TRAFFIC STUDY
FOR
NAPILI PARK
NAPILI, MAUI

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HIYAKUMOTO & HIGUCHI

Prepared by

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Engineers • Surveyors
Honolulu, Hawaii

July 1998

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

TRAFFIC STUDY FOR
NAPILI PARK
NAPILI, MAUI

I. INTRODUCTION

A. Purpose of Study

This report documents the findings and recommendations of a traffic study conducted by Austin, Tsutsumi & Associates, Inc. to evaluate the potential traffic impacts from the development of Napili Park, Napili, Maui.

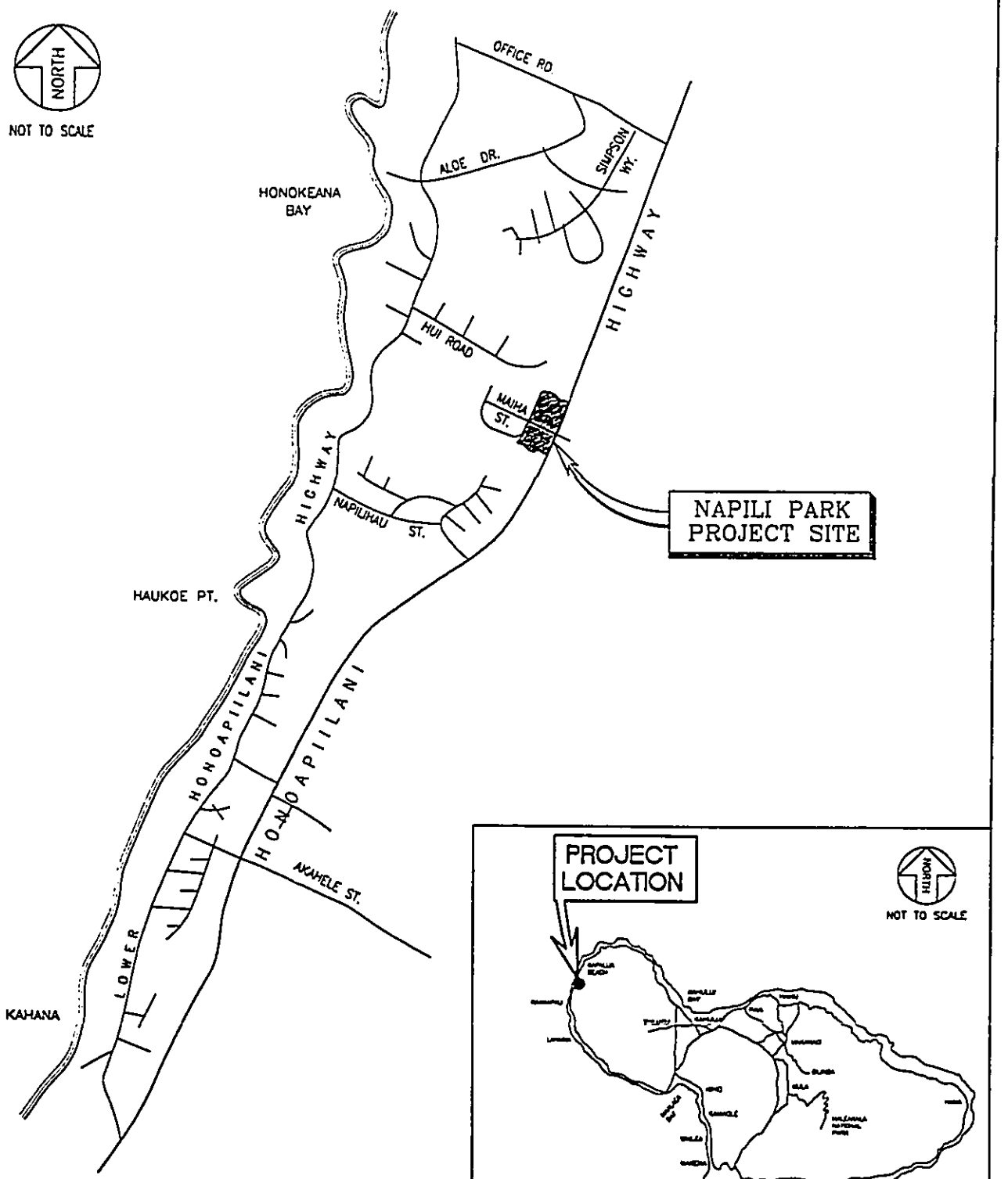
B. Project Description

The County of Maui is proposing to develop a 10-acre park in Napili on a portion of what was originally planned as a 79-unit residential subdivision. The makai portion of the original residential subdivision has been developed as 38 single-family residential units. The undeveloped lots, 8 acres, are identified as TMK: 4-3-18:40 and 41. The 2 additional acres located on the north side (Kapalua) of the proposed park, identified as TMK: 4-3-01 Portion of Parcel 5, are owned by the State of Hawaii. Maiha Street divides the proposed 10-acre park. Current plans call for Napili Park to be developed to provide a soccer/ football field, a baseball field, a basketball court, a tennis court, skateboarding area, remote control racecar track, a comfort station and 81 off-street paved parking stalls. The project schedule was assumed to be completed by the Year 2000 based upon County funding. Figure 1 shows the project location and Figure 2 shows the proposed site layout of Napili Park.

C. Study Methodology

This study will address the following:

1. Existing roadway volumes.
2. Base Year traffic projections without project-generated traffic.



NAPILI PARK	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII	FIGURE
	VICINITY MAP	1

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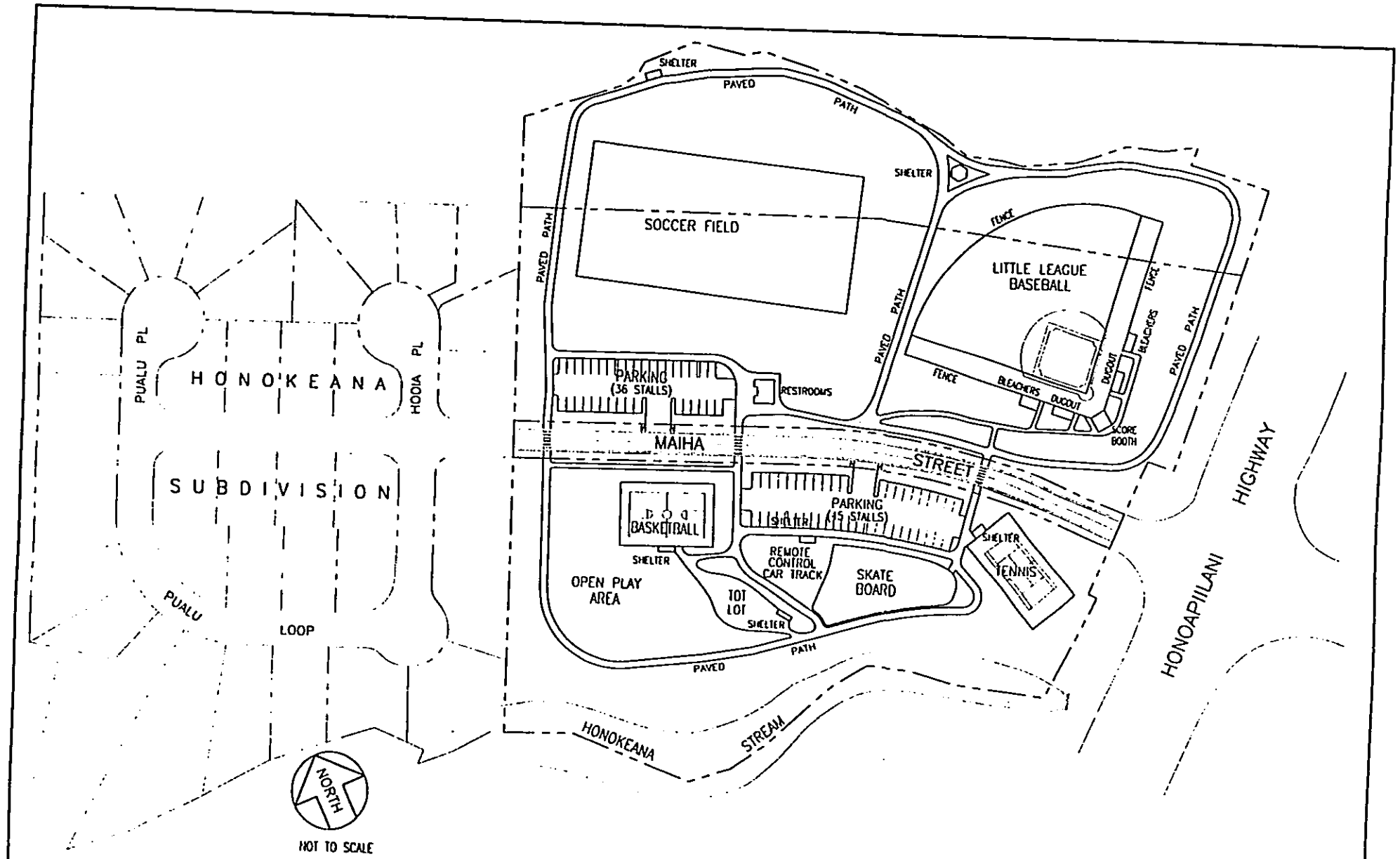

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TRAFFIC IMPACT REPORT
NAPILI PARK

SITE PLAN

EXHIBIT 2

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3. Develop trip generation and traffic assignment characteristics for the proposed project.

4. Superimposing the site-generated traffic onto the Base Year traffic projections.

5. The identification and analyses of traffic impacts resulting from the proposed project.

6. Recommendation of improvements, if appropriate, that would mitigate the traffic impacts resulting from the development of the proposed project.

II. EXISTING CONDITIONS

A. Roadway System

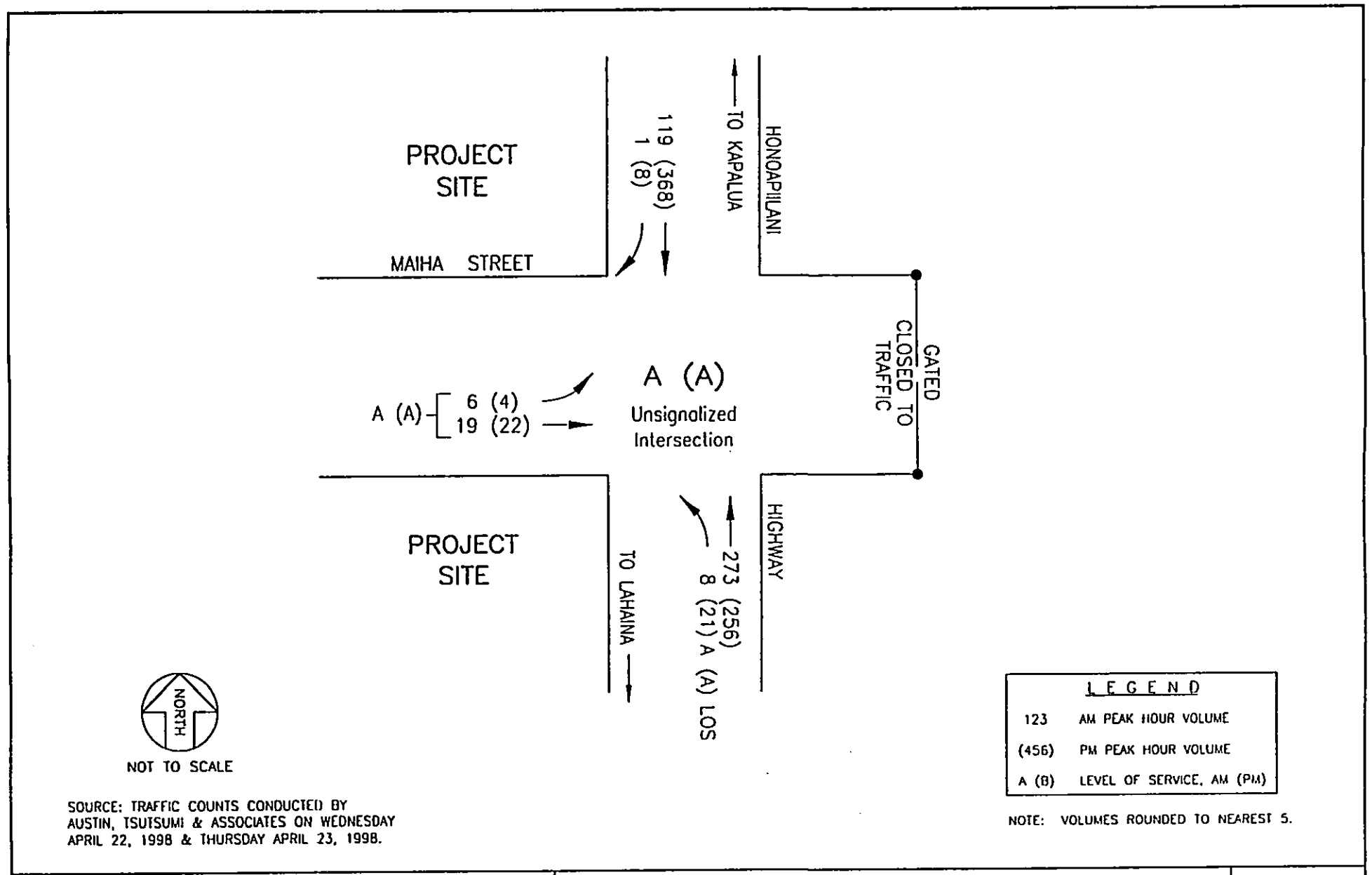
Honoapiilani Highway - is a 2-lane, rural arterial State highway, which provides the regional circulation through West Maui and provides a link to Central and South Maui. In the vicinity of the proposed project, Honoapiilani Highway, is a two-lane, north/south facility with a posted speed limit of 45 miles per hour (mph). At the Honoapiilani Highway and Maiha Street intersection, a left-turn storage lane and a right-turn deceleration lane are provided for vehicles turning off Honoapiilani Highway heading makai on Maiha Street.

Maiha Street - is a 24-foot wide, 2-lane local County roadway providing access from Honoapiilani Highway for the existing 38 single-family units. The east/west facility, which does not have sidewalks, has a posted speed limit of 20 mph.

B. Existing Traffic Volumes

Twenty-four (24)-hour machine counts were conducted on April 23, 1998 at the Honoapiilani Highway and Maiha Street intersection. The survey shows a daily volume of 3,800 vehicles heading towards Lahaina (southbound) and 4,300 vehicles heading towards Kapalua (northbound).

Twenty-four (24)-hour machine counts were supplemented by manual turning movement counts conducted on Wednesday, April 22, 1998 and Thursday, April 23, 1998 at the Honoapiilani Highway and Maiha Street intersection during the AM and PM peak period. The AM peak hour of



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TRAFFIC IMPACT REPORT
NAPILI PARK

EXISTING CONDITIONS

EXHIBIT 3

FILE NAME: 98-16\NP-REP1.DWG
051298

traffic occurred from 7:00 – 8:00 AM. The PM peak hour of traffic occurred from 3:45 – 4:45 PM. The turning movement count data are provided in Appendix A and the peak hour volumes are presented in Figure 3.

D. Existing Level of Service Analyses

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from free-flow conditions at LOS A to congested conditions at LOS F. Capacity analysis of a two-lane highway segment will also be analyzed in terms of volume-to-capacity (V/C) ratios, which are defined by the adjusted rate of traffic flow, divided by the capacity of the highway. A V/C ratio of 1.00 indicates that the highway is at its capacity. The 1994 Highway Capacity Manual – Special Report 209 methods for calculating V/C ratios, delays and corresponding levels of service were utilized in this study. LOS definitions for unsignalized intersections and two-lane highways are provided in Appendix B. LOS calculations are provided in Appendix C.

Two-lane highway analysis indicates that Honoapiilani Highway, south of its intersection with Maiha Street, is operating at LOS B during the AM peak hour of traffic and LOS C during the PM peak hour of traffic. Two-lane highway analysis also reveals that Honoapiilani Highway has a V/C ratio of 0.23 during the AM peak hour of traffic and a V/C ratio of 0.35 during the PM peak period of traffic.

Unsignalized intersection analysis indicates that the left-turning vehicles out of Maiha Street onto Honoapiilani Highway heading towards Kapalua are currently operating at LOS A during both the AM and PM peak hours of traffic. Overall, the unsignalized intersection of Honoapiilani Highway and Maiha Street is operating at LOS A during both peak hours. Traffic volumes generated by the subdivision do not currently meet the warrants for the installation of a traffic signal system.

III. BASE YEAR CONDITIONS

A. Traffic Projections

Historical data contained in the State of Hawaii, Department of Transportation (SDOT) traffic survey data at the Honoapiilani Highway and

Napilihau Road intersection, just south of the Maiha Street intersection, indicate that there is a growth rate of just over 11% annually in the Napili area. A defacto growth rate of just over 11% was used to estimate the Base Year 2000 traffic projections.

B. Proposed Projects

In addition to the defacto growth, future developments (other than the proposed Napili Park) within the vicinity of the study area that could also directly contribute traffic to Honoapiilani Highway and Maiha Street intersection, were included in this study. These developments include the following:

- Kahana Subdivision, a 286-unit residential development south of the proposed Napili Park, is currently under construction with the major infrastructure work completed. Traffic projections for the Kahana Subdivision are based upon the Traffic Impact Assessment Report for ML&P NHLC Subdivision, dated July 26, 1991 prepared by Pacific Planning & Engineering, Inc.

- Honokowai Marketplace Development, an approximately 74,000 square foot, 380-parking stall retail development south of the proposed Napili Park is also currently under construction. Traffic projections for the Honokowai Marketplace are based upon the Traffic Impact Analysis Report for the Proposed Honokowai Commercial Development, dated May 22, 1992, prepared by The Traffic Management Consultant.

- Kaanapali Ocean Resort, a 280-unit timeshare resort development located south of the proposed development at the Kaanapali North Beach area. Traffic projections for the Kaanapali Ocean Resort are based upon the Traffic Impact Analysis Report for the Kaanapali Vacation Club, dated January 1997, prepared by Austin Tsutsumi & Associates, Inc.

- Puukolii Village, a 1,703-unit single family and multi-family subdivision located south of Napili Park. Traffic projections for the Puukolii Village are based upon the Traffic Impact Analysis Report for the Puukolii Village Development, dated November 1992, prepared by Austin Tsutsumi & Associates, Inc.

- Napilihau Villages, a 296-unit multi-family development located south of Napili Park. Traffic projections for the Napilihau Villages are based upon the Traffic Impact Analysis Report for the Napilihau Villages, dated February 1998, prepared by Austin Tsutsumi & Associates

Figure 4 shows the Base Year 2000 traffic projections.

C. Planned Roadway Improvements

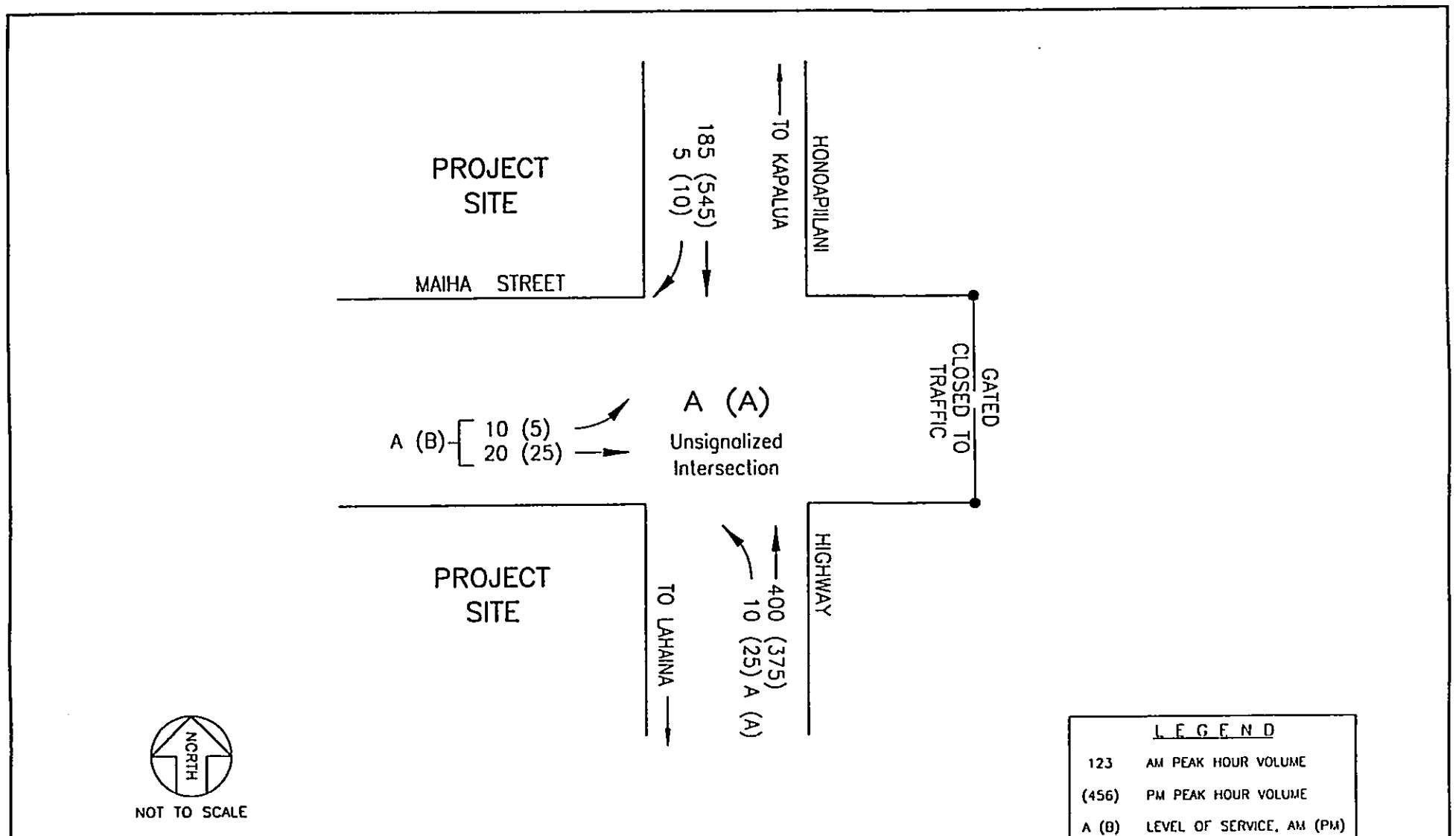
SDOT is currently in the process of developing the plans for the Honoapiilani Highway widening. Plans call for widening Honoapiilani Highway to four lanes between Kaanapali Parkway and Honokowai Stream. Construction of the highway project is anticipated to begin in 1998 with completion estimated by the Year 2000. This improvement will eliminate the bottleneck at the intersection of Honoapiilani Highway and Kaanapali Parkway and would also facilitate traffic flow on Honoapiilani Highway.

The County of Maui is also in the process of developing plans for Phase III of the Lower Honoapiilani Road improvements. The plans call for improving Lower Honoapiilani Road from Mahinahina Bridge to Kahana by constructing left-turn lanes where adequate rights-of-way are available and constructing a sidewalk. A request for proposals, (RFP) for Phase IV of the Lower Honoapiilani Road improvements from Kahana to Napilihau has been advertised for design.

D. Base Year 2000 Level of Service Analyses

With the Base Year 2000 projected volumes, the intersection of Honoapiilani Highway and Maiha Street is estimated to operate at LOS A overall. The left turns out of Maiha Street heading towards Kapalua would continue to operate at LOS A during the AM peak hour of traffic and are estimated to operate at LOS B during the PM peak hour of traffic. LOS values are shown on Figure 4.

Two-lane highway analysis indicates that Honoapiilani Highway will operate at LOS C with a V/C ratio of 0.34 during the AM peak hour of traffic and LOS D with a V/C ratio of 0.50 during the PM peak hour of traffic.



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TRAFFIC IMPACT REPORT
NAPILI PARK

BASE YEAR 2000 WITHOUT PROJECT

EXHIBIT 4

FILE NAME: 98-16\INF-RPT2.DWG
051298

IV. PROJECT GENERATED TRAFFIC

A. Trip Generation

Trip generation for the residential units is based upon trip rates presented in the publication Trip Generation 6th Edition, Institute of Transportation Engineers (ITE) 1997. Table 1 summarizes the trip rate used for this study. Table 2 summarizes the trips generated by the development of the 10 acre Napili Park.

TABLE 1
TRIP GENERATION RATES

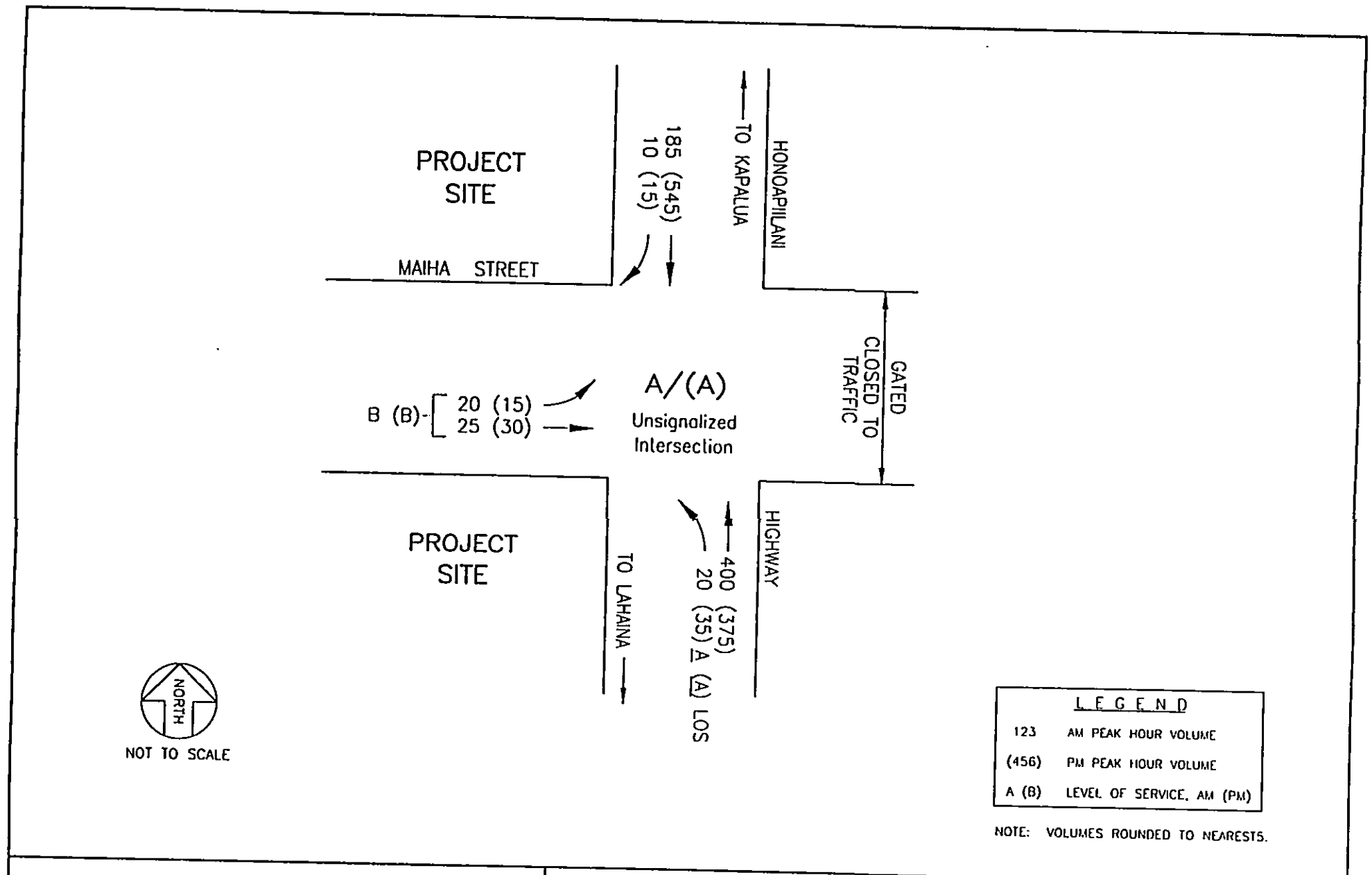
	AVERAGE WEEKDAY DAILY	AM PEAK HOUR		PM PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
County Park	2.28	0.37	0.15	0.21	0.38

TABLE 2
PROJECT TRAFFIC

	ACRE	AVERAGE WEEKDAY	AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Park	10.2	23	4	2	2	4

B. Traffic Assignment

Traffic generated by the proposed park was distributed onto Honoapiilani Highway with 80% of the generated traffic heading towards Lahaina and 20% heading towards Kapalua. The distributed subdivision traffic projections were added to the Base Year 2000 projections. Figure 5 illustrates the Future Year 2000 with the proposed Napili Park.



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TRAFFIC IMPACT REPORT
NAPILI PARK

YEAR 2000 WITH PROJECT

EXHIBIT 5

FILE NAME: 98-16\TIF-RPT3.DWG
051298

C. Level of Service Analyses

With the project traffic added to the Base Year 2000 projections, operations at the unsignalized Honoapiilani Highway and Maiha Street intersection are estimated to operate at LOS A overall during the AM and PM peak hours of traffic. The left turns out of Maiha Street are estimated to operate at LOS B during the AM and PM peak hours of traffic. Table 3 summarizes the unsignalized intersection LOS results. Table 4 summarizes the two-lane highway analysis for Honoapiilani Highway.

Review of the traffic signal warrants indicates that the intersection of Honoapiilani Highway and Maiha Street does not meet the peak hour warrant even with the traffic generated by the proposed Napili Park. Therefore, a traffic signal system is not recommended to be installed at this intersection.

V. CONCLUSIONS

The following are the conclusions of this traffic study:

- The proposed development of Napili Park would not adversely affect operations on Honoapiilani Highway in the vicinity of the project.
- The Napili Park development is projected to generate less than 25 average weekday trips.
- The Honoapiilani Highway and Maiha Street intersection does not meet the warrants for the installation of a traffic signal system without or with the proposed development.
- The intersection of Honoapiilani Highway and Maiha Street is currently operating overall at LOS A during both AM and PM peak hours of traffic.
- With the proposed project, the intersection on Honoapiilani Highway and Maiha Street is projected to operate overall at LOS A during the AM and PM peak hours of traffic. The left turns out of Maiha Street heading towards Kapalua are projected to operate at LOS B during the AM and PM peak hours of traffic.

TABLE 3
UNSIGNALIZED INTERSECTION
LEVEL OF SERVICE SUMMARY

Intersection	Existing		Without Project		With Project	
	AM	PM	AM	PM	AM	PM
Honoapiilani Hwy/ Maiha Street						
Overall	A	A	A	A	A	A
NB LT	A	A	A	A	A	A
EB LT/TH/RT	A	A	A	B	B	B

TABLE 4
TWO-LANE HIGHWAY
LEVEL OF SERVICE SUMMARY

Peak Hour	Existing		Without Project		With Project	
	V/C	LOS	V/C	LOS	V/C	LOS
AM	0.23	B	0.34	C	0.35	C
PM	0.35	C	0.50	D	0.52	D

VI. RECOMMENDATIONS

As a result of the limited traffic generated by the Napili Park, we do not recommend any off-site improvements due to the proposed development at this time.

REFERENCES

1. Institute of Transportation Engineers, Trip Generation, 6th Edition, 1997

2. Transportation Research Board, Highway Capacity Manual, Special Report 209, 1994.

3. State of Hawaii, Department of Transportation, Final Report, Maui Long-Range Land Transportation Plan, February 1997.

4. Pacific Planning & Engineering, Inc. Traffic Impact Assessment Report for ML&P NHLC Subdivision, July 26, 1991.

5. The Traffic Management Consultant, Traffic Impact Analysis Report, Proposed Honokowai Commercial Development, May 22, 1992.

6. Austin Tsutsumi & Associates, Inc., Traffic Impact Analysis Report, Kaanapali Vacation Club, January 1997.

7. Austin Tsutsumi & Associates, Inc., Traffic Impact Analysis Report for the Proposed Puukolii Village Development, November 1990.

8. Austin Tsutsumi & Associates, Inc., Traffic Impact Analysis Report for Napilihau Villages, February 1998.

APPENDICES

APPENDIX A

TURNING MOVEMENT COUNT DATA

AUSTIN, TSUTSUMI & ASSOCIATES
501 SUMNER ST, SUITE 521
HONOLULU, HI, 96817
(808) 533-3646

Weather :
Counted by:
Board # :
Other :

Study Name: MAIHA-A
Site Code : 00000000
Start Date: 04/23/98

Vehicle group 1

	MAIHA From North				HONOAPIILANI From East				MAIHA From South				HONOAPIILANI From West				
Start Time	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Intvl. Total
04/23/98																	
06:30	2	0	4	0	0	24	1	0	0	0	0	0	4	50	0	0	85
06:45	2	0	6	0	0	21	1	0	0	0	0	0	5	58	0	0	93
Hour	4	0	10	0	0	45	2	0	0	0	0	0	9	108	0	0	178
07:00	3	0	5	0	0	36	0	0	0	0	0	0	0	54	0	0	98
07:15	0	0	7	0	0	23	0	0	0	0	0	0	5	66	0	0	101
07:30	0	0	3	0	0	35	1	0	0	0	0	0	2	80	0	0	121
07:45	3	0	4	0	0	25	0	0	0	0	0	0	1	73	0	0	106
Hour	6	0	19	0	0	119	1	0	0	0	0	0	8	273	0	0	426
08:00	1	0	7	0	0	30	1	0	0	0	0	0	3	50	0	0	92
08:15	0	0	3	0	0	29	0	0	0	0	0	0	4	56	0	0	92
Total	11	0	39	0	0	223	4	0	0	0	0	0	24	487	0	0	788
% Apr.	22.0	-	78.0	-	-	98.2	1.7	-	-	-	-	-	4.6	95.3	-	-	-
% Int.	1.3	-	4.9	-	-	28.2	0.5	-	-	-	-	-	3.0	61.8	-	-	-

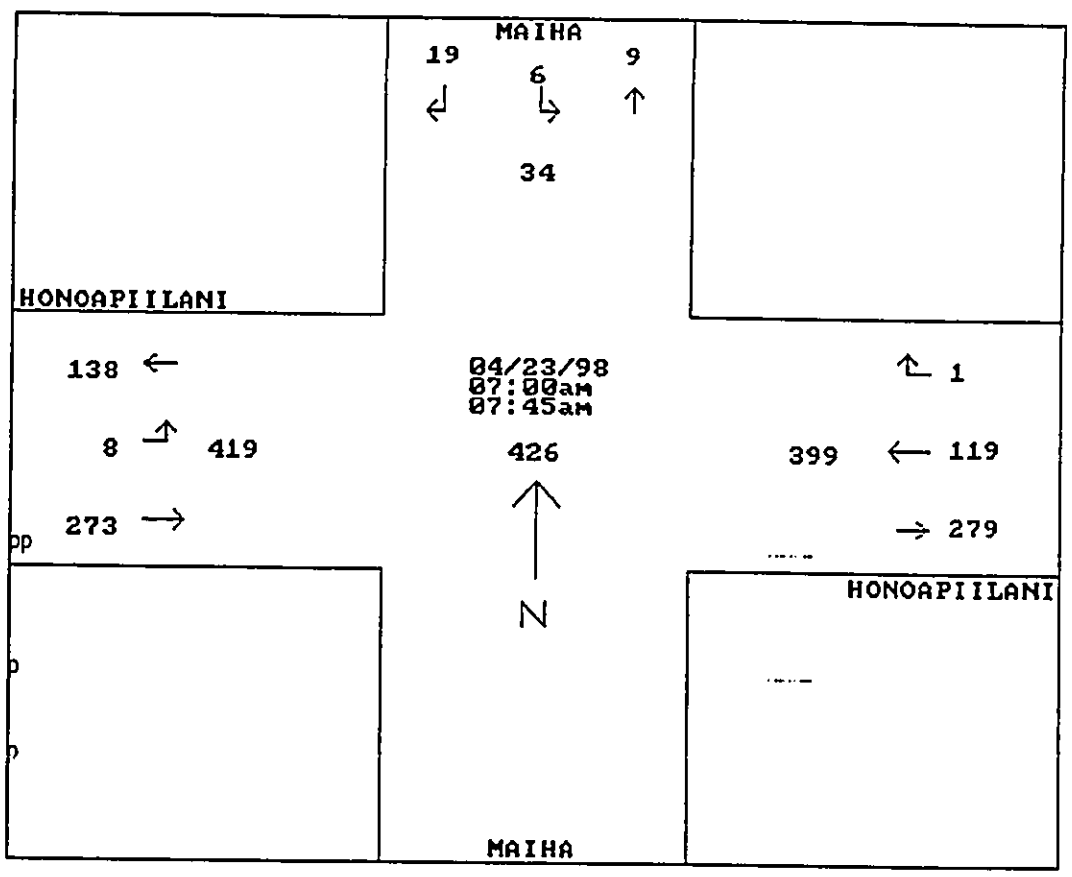
Weather :
Counted by:
Board # :
Other :

AUSTIN, TSUTSUMI & ASSOCIATES
501 SUMNER ST, SUITE 521
HONOLULU, HI, 96817
(808) 533-3646

Study Name: MAIHA-A
Site Code : 00000000
Start Date: 04/23/98

Vehicle group 1

Start Time	MAIHA From North				HONOAPIILANI From East				MAIHA From South				HONOAPIILANI From West				Intvl. Total
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	
Peak Hour Analysis By Entire Intersection for the Period: 06:30 on 04/23/98 to 08:15 on 04/23/98																	
Time	07:00				07:00				07:00				07:00				
Vol.	6	0	19	0	0	119	1	0	0	0	0	0	8	273	0	0	
Pct.	24.0	0.0	76.0	0.0	0.0	99.1	0.8	0.0	0.0	0.0	0.0	0.0	2.8	97.1	0.0	0.0	
Total	25				120				0				281				
High	07:00				07:00				07:00				07:30				
Vol.	3	0	5	0	0	36	0	0	0	0	0	0	2	80	0	0	
Total	8				36				0				82				
PHF	0.781				0.833				0.000				0.856				



Weather :
Counted by:
Board # :
Other :

AUSTIN, TSUTSUMI & ASSOCIATES
501 SUMNER ST. SUITE 521
HONOLULU, HI. 96817
(808) 533-3646

Study Name: MAIHA-P
Site Code : 00000000
Start Date: 04/22/98

Vehicle group 1

Start Time	MAIHA From North				HONOAPIILANI From East				MAIHA From South				HONOAPIILANI From West				Intvl. Total
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	
04/22/98																	
15:15	2	0	7	0	0	67	0	0	0	0	0	0	8	81	0	0	165
15:30	1	0	1	0	0	53	0	0	0	0	0	0	4	70	0	0	129
15:45	2	0	5	0	0	79	0	0	0	0	0	0	4	84	0	0	174
Hour	5	0	13	0	0	199	0	0	0	0	0	0	16	235	0	0	468
16:00	0	0	8	0	0	101	4	0	0	0	0	0	5	71	0	0	189
16:15	2	0	4	0	0	99	2	0	0	0	0	0	7	51	0	0	165
16:30	0	0	5	0	0	89	2	0	0	0	0	0	5	50	0	0	151
16:45	2	0	2	0	0	66	2	0	0	0	0	0	3	71	0	0	146
Hour	4	0	19	0	0	355	10	0	0	0	0	0	20	243	0	0	651
17:00	0	0	4	0	0	78	2	0	0	0	1	0	3	51	0	0	139
17:15	0	0	5	0	0	63	0	0	0	0	0	0	6	46	0	0	120
17:30	1	0	3	0	0	50	3	0	0	0	0	0	6	42	0	0	105
Total	10	0	44	0	0	745	15	0	0	0	1	0	51	617	0	0	1483
% Apr.	18.5	-	81.4	-	-	98.0	1.9	-	-	-	100.0	-	7.6	92.3	-	-	-
% Int.	0.6	-	2.9	-	-	50.2	1.0	-	-	-	-	-	3.4	41.6	-	-	-

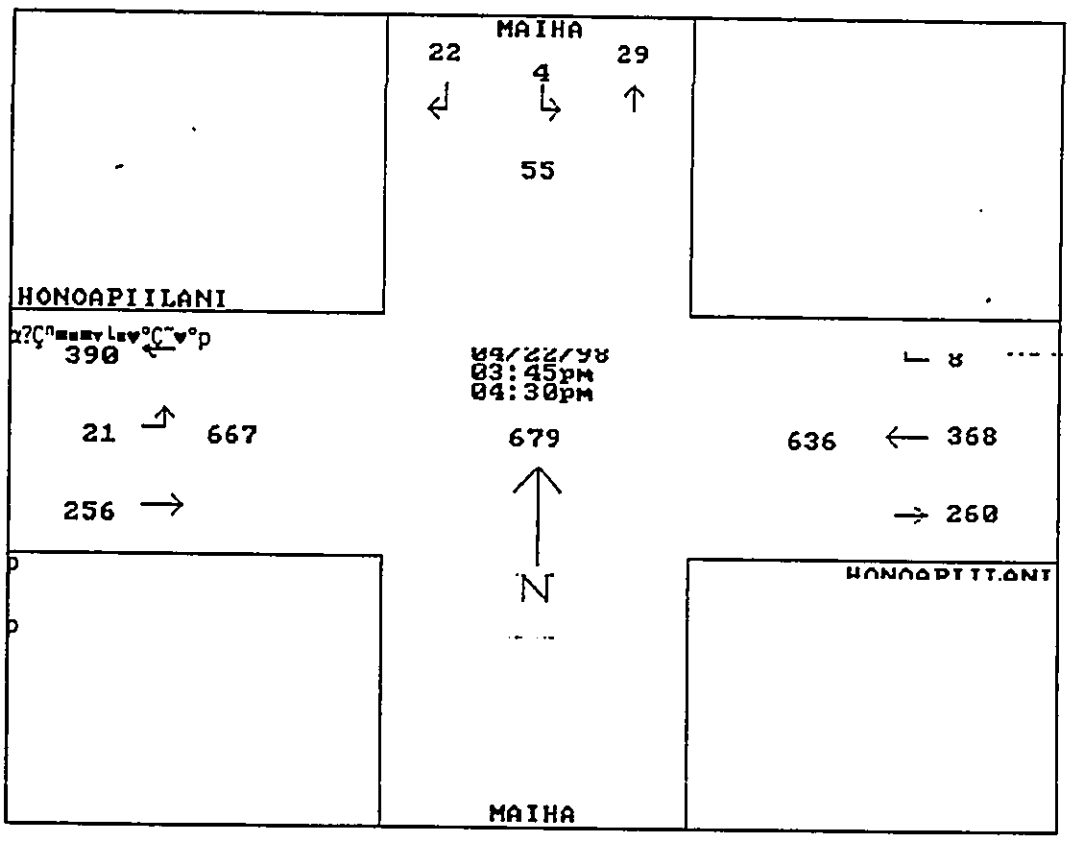
Weather :
Counted by:
Board # :
Other :

AUSTIN, TSUTSUMI & ASSOCIATES
501 SUMNER ST. SUITE 521
HONOLULU, HI. 96817
(808) 533-3646

Study Name: MAIHA-P
Site Code : 00000000
Start Date: 04/22/98

Vehicle group 1

Start	MAIHA From North				HONOAPIILANI From East				MAIHA From South				HONOAPIILANI From West				Intvl.
Time	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Peak Hour Analysis By Entire Intersection for the Period: 15:15 on 04/22/98 to 17:30 on 04/22/98																	
Time	15:45				15:45				15:45				15:45				
Vol.	4	0	22	0	0	368	8	0	0	0	0	0	21	256	0	0	
Pct.	15.3	0.0	84.6	0.0	0.0	97.8	2.1	0.0	0.0	0.0	0.0	0.0	7.5	92.4	0.0	0.0	
Total	26				376				0				277				
High	16:00				16:00				16:00				15:45				
Vol.	0	0	8	0	0	101	4	0	0	0	0	0	4	84	0	0	
Total	8				105				0				88				
PHF	0.812				0.895				0.000				0.786				



APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service definitions for unsignalized intersections is determined by the reserve or unused capacity of a lane. The potential capacity is determined by the size and frequency in gaps in conflicting traffic that can accommodate the side street demand. The reserve capacity is equal to the potential capacity minus the traffic demand. A lower Level of Service translates into longer side street delay. The Levels of Service criteria are shown in the following table:

Level-of-Service Criteria
for Unsignalized Intersections

Stopped Delay for Vehicle (Seconds)	Level of Service	Expected Delay to Minor Street Traffic
≤ 5.0	A	Little or no delay
5.1 to 10.0	B	Short traffic delays
10.1 to 20.0	C	Average traffic delays
20.1 to 30.0	D	Long traffic delays
30.1 to 45.0	E	Very long traffic delays
> 45.0	F	Extreme traffic delays

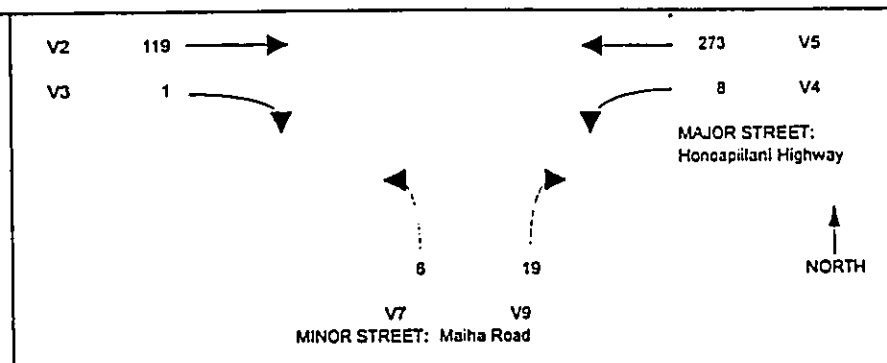
APPENDIX C

LEVEL OF SERVICE COMPUTATIONS

ATA Inc. STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS 1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	AM	File Name:	NAPILI PARK
Scenario:	EXISTING	Intersection:	

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	119	1	8	273	6	19
VOLUME, v (pcph)	119	1	9	273	7	21

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	119	=	119	vph
Potential Capacity:	Cp,9 =					1205	pcph
Movement Capacity:	Cm,p = Cp,9 =					1205	pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	119	=	119	vph
Potential Capacity:	Cp,4 =					1504	pcph
Movement Capacity:	Cm,4 = Cp,4 =					1504	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.99	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA	

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					400	vph
Potential Capacity:	Cp,7 =					621	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					0.99	
Movement Capacity:	Cm,7 = Cp,7 =					618	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

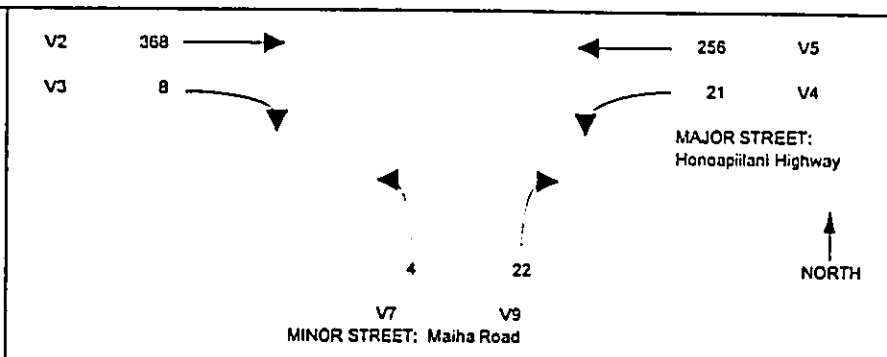
Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	7	618	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	21	1205	981	3.8	A
MAJOR LEFT TURN (4)	9	1504	——	2.4	A

AVERAGE MINOR APPROACH DELAY =	3.8 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.3 sec/veh
LEVEL OF SERVICE =	A	LEVEL OF SERVICE =	A

ATA Inc. STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS 1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	PM	File Name:	NAPILI PARK
Scenario:	EXISTING	Intersection:	

Peak Hour Factor:	1
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	368	8	21	256	4	22
VOLUME, v (pcph)	368	8	23	256	4	24

STEP 1: RT FROM MINOR STREET - V9							
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	368	=	368	vph
Potential Capacity:	Cp,9 =					901	pcph
Movement Capacity:	Cm,p = Cp,9 =					901	pcph

STEP 2: LT FROM MAJOR STREET - V4							
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	368	=	368	vph
Potential Capacity:	Cp,4 =					1145	pcph
Movement Capacity:	Cm,4 = Cp,4 =					1145	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.98	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA	

STEP 3: LT FROM MINOR STREET - V7			
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	645	vph
Potential Capacity:	Cp,7 =	448	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	0.98	
Movement Capacity:	Cm,7 = Cp,7 =	439	pcph

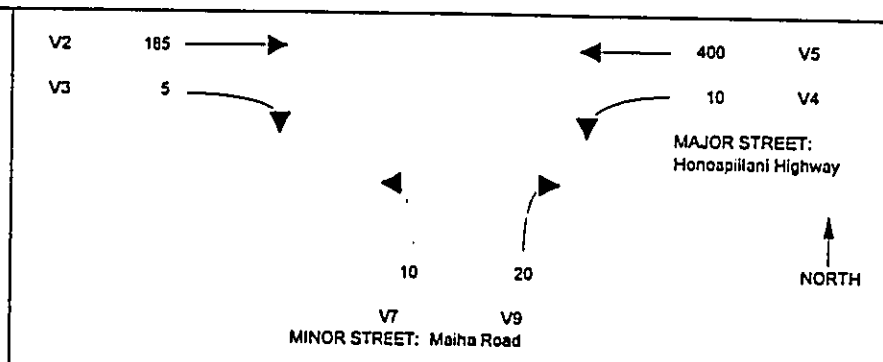
DELAY AND LEVEL OF SERVICE SUMMARY Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	4	439	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	24	901	776	4.8	A
MAJOR LEFT TURN (4)	23	1145	——	3.2	A

AVERAGE MINOR APPROACH DELAY =	4.8 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.3 sec/veh
LEVEL OF SERVICE =	A	LEVEL OF SERVICE =	A

ATA Inc. STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS 1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	AM	File Name:	NAPILI PARK
Scenario:	Year 2000 without proposed park	Intersection:	

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	185	5	10	400	10	20
VOLUME, v (pcph)	185	5	11	400	11	22

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	185	=	185 vph
Potential Capacity:	Cp,9 =					1116 pcph
Movement Capacity:	Cm,p = Cp,9 =					1116 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	185	=	185 vph
Potential Capacity:	Cp,4 =					1399 pcph
Movement Capacity:	Cm,4 = Cp,4 =					1399 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.99
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	595	vph
Potential Capacity:	Cp,7 =	479	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	0.99	
Movement Capacity:	Cm,7 = Cp,7 =	475	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	11	475	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	22	1116	770	4.9	A
MAJOR LEFT TURN (4)	11	1399	—	2.6	A

AVERAGE MINOR APPROACH DELAY =	4.9 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.3 sec/veh
LEVEL OF SERVICE =	A	LEVEL OF SERVICE =	A

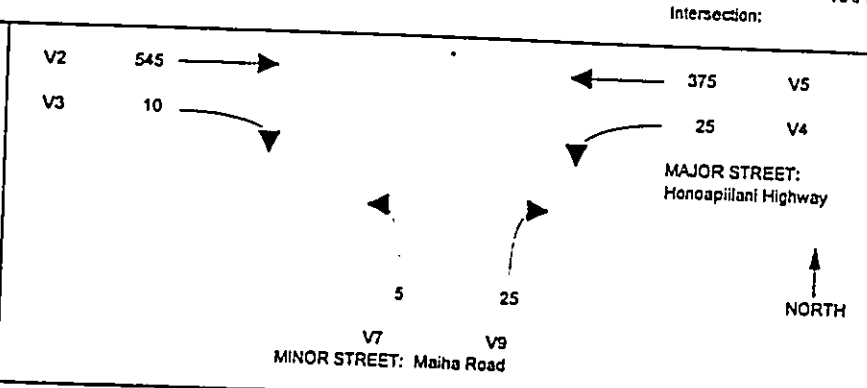
ATA Inc.

STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS

1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	PM	File Name:	NAPILI PARK
Scenario:	Year 2000 without proposed park	Intersection:	

Peak Hour Factor:	1
MAJOR STREET	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
MINOR STREET	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	545	10	25	375	5	25
VOLUME, v (pcph)	545	10	28	375	6	28

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	545	=	545 vph
Potential Capacity:	Cp,9 =					733 pcph
Movement Capacity:	Cm,p = Cp,9 =					733 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	545	=	545 vph
Potential Capacity:	Cp,4 =					943 pcph
Movement Capacity:	Cm,4 = Cp,4 =					943 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.97
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =		
Potential Capacity:	Cp,7 =	945	vph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	300	pcph
Movement Capacity:	Cm,7 = Cp,7 =	0.97	
		292	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	292	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	28	733	585	6.5	B
MAJOR LEFT TURN (4)	28	943	—	3.9	A

AVERAGE MINOR APPROACH DELAY =	6.5	sec/veh	
LEVEL OF SERVICE =	B		
AVERAGE TOTAL INTERSECTION DELAY =	0.3	sec/veh	
LEVEL OF SERVICE =	A		

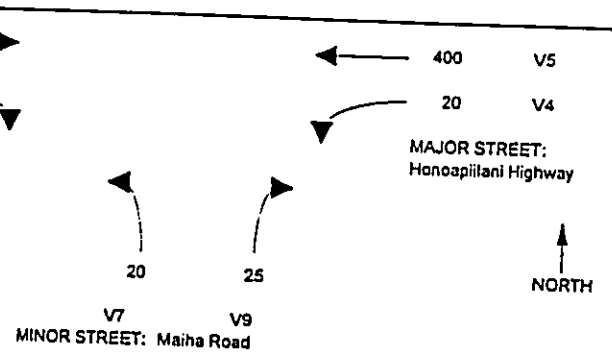
ATA Inc.

STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS

1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	AM	File Name:	NAPILI PARK
Scenario:	Year 2000 with proposed park	Intersection:	

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	185	10	20	400	20	25
VOLUME, v (pcph)	185	10	22	400	22	28

STEP 1: RT FROM MINOR STREET - V9							
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	185	=	185	vph
Potential Capacity:	Cp,9 =					1116	pcph
Movement Capacity:	Cm,p = Cp,9 =					1116	pcph

STEP 2: LT FROM MAJOR STREET - V4							
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	185	=	185	vph
Potential Capacity:	Cp,4 =					1399	pcph
Movement Capacity:	Cm,4 = Cp,4 =					1399	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.98	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA	

STEP 3: LT FROM MINOR STREET - V7			
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =		
Potential Capacity:	Cp,7 =	605	vph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	473	pcph
		0.98	
Movement Capacity:	Cm,7 = Cp,7 =	465	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

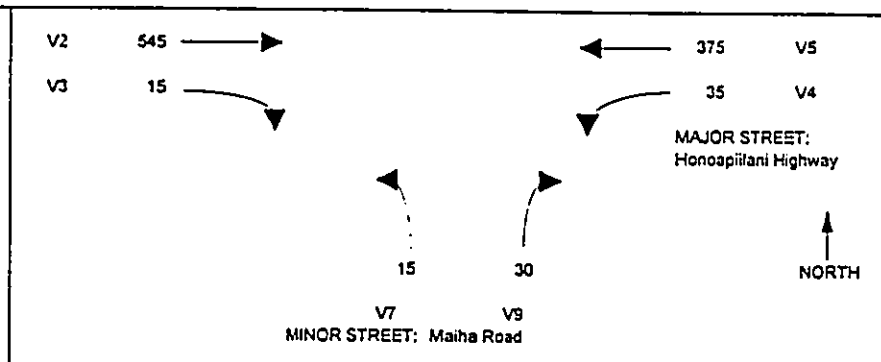
Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	22	465	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	28	1118	688	5.6	B
MAJOR LEFT TURN (4)	22	1399	——	2.6	A

AVERAGE MINOR APPROACH DELAY =	5.6 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.5 sec/veh
LEVEL OF SERVICE =	B	LEVEL OF SERVICE =	A

ATA Inc. STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS 1994 HCM

Major Street:	Honoapiilani Highway	Print Date:	05-May
Minor Street:	Maiha Road	Analyst:	NHH
Peak Hour:	PM	File Name:	NAPILI PARK
Scenario:	Year 2000 with proposed park	Intersection:	

Peak Hour Factor:	1
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	545	15	35	375	15	30
VOLUME, v (pcph)	545	15	39	375	17	33

STEP 1: RT FROM MINOR STREET - V9						
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	545	=	545 vph
Potential Capacity:	Cp,9 =					733 pcph
Movement Capacity:	Cm,p = Cp,9 =					733 pcph
STEP 2: LT FROM MAJOR STREET - V4						
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	545	=	545 vph
Potential Capacity:	Cp,4 =					943 pcph
Movement Capacity:	Cm,4 = Cp,4 =					943 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.96
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA
STEP 3: LT FROM MINOR STREET - V7						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					955 vph
Potential Capacity:	Cp,7 =					296 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					0.96
Movement Capacity:	Cm,7 = Cp,7 =					284 pcph

DELAY AND LEVEL OF SERVICE SUMMARY Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	17	284	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	33	733	480	8.4	B
MAJOR LEFT TURN (4)	39	943	—	4.0	A

AVERAGE MINOR APPROACH DELAY =	8.4 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.6 sec/veh
LEVEL OF SERVICE =	B	LEVEL OF SERVICE =	A

SOILS INVESTIGATION REPORT

REPORT
SOILS INVESTIGATION

PROPOSED NAPILI PARK
NAPILI, MAUI, HAWAII
TMK: (2) 4-3-18: 40 & 41

for

HIYAKUMOTO + HIGUCHI ARCHITECTS, INC.

Project No. 98116-FM
May 22, 1998

ISLAND GEOTECHNICAL ENGINEERING, INC.
Geotechnical Consultants

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May 22, 1998
Project No. 98116-FM

Hiyakumoto Higuchi Architects, Inc.
1860 Main Street
Wailuku, Hawaii 96793

Gentlemen:

The attached report presents the results of a soils investigation at the site of the proposed Napili Park to be located along Maiha Street in Napili, Maui, Hawaii.

A summary of the findings is as follows:

1) Ten (10) test pits were excavated to depths of 4.5 to 8.5 feet below existing grade. In general, the test pits disclosed the site to be overlain with 2.75 to 8.5 feet of red, gray and brown, moderately moist to very moist, moderately stiff to very stiff CLAY and SILT followed by (except for Test Pits 2, 6, 9 and 10) soft to hard BASALT ROCK which extended to the final depths of the test pits at 4.5 to 8.5 feet below existing grade. No BASALT ROCK was encountered at Test Pits 2, 6, 9 and 10. Soft soils were encountered at the surface of Test Pits 2, 7, 9 and 10 and extended to depths of 0.75 to 1.5 feet below existing grade.

2) No groundwater was encountered in any of the test pits at the time of the investigation.

3) Spread footings bearing on firm on-site soils, properly compacted fill or the underlying BASALT ROCK may be used to support the proposed structures.

4) The BASALT ROCK could not be penetrated (refusal) at five of the test pits. The test pits and depths of refusal are: Test Pit 1 (8'), Test Pit 3 (8'), Test Pit 4 (4.5'), Test Pit 5 (4.5') and Test Pit 8 (7.75'). Excavations into the moderately hard to hard ROCK will be difficult to accomplish and will likely require heavy equipment or hoe-ramming for removal.

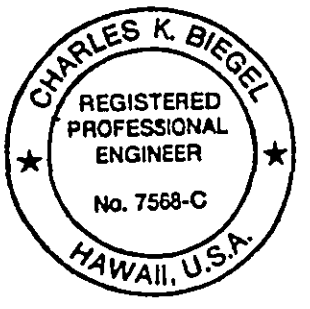
Details of the findings and recommendations are presented in the attached report.

This investigation was made in accordance with generally accepted engineering procedures and included such field and laboratory tests considered necessary for the project. In the opinion of the undersigned, the accompanying report has been substantiated by mathematical data in conformity with generally accepted engineering principles and presents fairly the design information requested by your organization. No other warranty is either expressed or given.

Respectfully submitted,

ISLAND GEOTECHNICAL ENGINEERING, INC.

Charles K. Biegel, P.E.
President



This work was prepared by me
or done under my supervision.

TABLE OF CONTENTS

INTRODUCTION

This investigation was made for the purpose of obtaining information on the subsurface conditions from which to base recommendations for site development for the proposed Napili Park to be located along Maiha Street in Lahaina, Maui. The location of the site, relative to the existing streets and landmarks, is shown on the Vicinity Map, Plate 1.

SCOPE OF WORK

The services included excavating 10 test pits to depths of 4.5 to 8.5 feet, obtaining samples of the underlying soils, performing laboratory tests on the samples, and performing an engineering analysis from the data gathered. In general, the following information is provided for use by the Architect and/or Engineer:

1. General subsurface conditions, as disclosed by the test pits.
2. Physical characteristics of the soils encountered.
3. Recommendations for foundation design, including bearing values, embedment depth and estimated settlement.
4. Recommendations for placement of fill and backfill.
5. Special considerations.

PLANNED DEVELOPMENT

From the information provided, the project will consist of constructing two baseball fields (including dugouts and bleachers), one restroom building and parking to accommodate the usage.

SITE CONDITIONS

Surface

The property, designated by Tax Map Key (2) 4-3-18: 40 & 41, is located along Maiha Street in Napili, Maui, Hawaii. Total lot area is 8.042 acres. At the time of the field investigation, the site was covered with moderately dense to dense weeds and trees.

The lot is bound on the north and south by vacant land, on the west by existing homes and on the east by Honoapiilani Highway. Maiha Street dissects the site and runs in the east/west direction.

From a topographic map by Ronald M. Fukumoto Engineering (dated April 13, 1998) surface elevations at the site range from +186' at the east side of the site to +130' at the west side of the site. Elevations shown on the test pits logs of this report were estimated by measuring from existing features on the site and then performing a rough field interpolation of the above mentioned topographic.

Subsurface

The subsurface conditions at the site were explored by excavating 10 test pits to depths of 4.5 to 8.5 feet. The locations of the test pits are shown on the Plot Plan, Plate 2. Detailed logs of the explorations are presented in the Appendix to this report.

In general, the test pits disclosed the site to be overlain with 2.75 to 8.5 feet of red, gray and brown, moderately moist to very moist, moderately stiff to very stiff CLAY and SILT followed by (except for Test Pits 2, 6, 9 and 10) soft to hard BASALT ROCK which extended to the final depths of the test pits at 4.5 to 8.5 feet below existing grade. No BASALT ROCK was encountered at Test Pits 2, 6, 9 and 10. Soft soils were encountered at the surface of Test Pits 2, 7, 9 and 10 and extended to depths of 0.75 to 1.5 feet below existing grade.

No groundwater was encountered in any of the test pits at the time of the investigation.

From the USDA Soil Conservation Service "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", the site is located in an area designated as Kahana silty clay, 7 to 15 percent slopes (KbC) and Kahana silty clay, 3 to 7 percent slopes (KbB). The Kahana series consist of well-drained soils on uplands on the island of Maui. These soils developed in material weathered from basic igneous rock. Elevations range from 100 to 1,200 feet (USDA, 1972, Plate 92 and pp. 50-51).

Geology

The site is located on the northwesterly flank of the West Maui Mountains. The island of Maui is a volcanic doublet believed to have formed during the late Tertiary (between 1 and 12 million years ago).

The West Maui Mountains were built by lavas flowing from rift zones trending north and south and a central vent. The lava flows which form the mountain have been separated into three groups: Wailuku, Honolua, and Lahaina Volcanic Series (Stearns and MacDonald, 1942). The main lava mass that makes up the West Maui Mountains is known as the Wailuku Volcanic Series which consist of primitive olivine basalts and associated pyroclastic and intrusive rock.

The underlying bedrock is part of the Honolua Volcanic Series and consist of massive flows of oligoclase andesite and soda trachyte reaching 300 feet in thickness, weathering to white or ashy gray. A few of the clinker beds carry water in wet areas (Stearns and MacDonald, 1942).

CONCLUSIONS AND RECOMMENDATIONS

General

Based on the findings and observations of this investigation, it is concluded that the proposed structures may be supported on spread footings bearing on firm on-site soils, properly compacted fill or the underlying BASALT ROCK.

Special Considerations

1. A Case 580 Super K backhoe could not penetrate (refusal) the BASALT ROCK at five of the test pits. The test pits and depths of refusal are: Test Pit 1 (8'), Test Pit

3 (8'), Test Pit 4 (4.5'), Test Pit 5 (4.5') and Test Pit 8 (7.75'). Excavations into the moderately hard to hard ROCK will be difficult to accomplish and will likely require heavy equipment or hoe-ramming for removal.

2. Soft soils were encountered at the surface of Test Pits 2, 7, 9 and 10 and extended to depths of 0.75 to 1.5 feet below existing grade. All structural areas (buildings and pavements) should be proofrolled during site grading work with a vibratory sheepsfoot compactor weighing at least 20,000 pounds. If the soft soils cannot be properly compacted, the soft material shall be removed (see Site Preparation and Grading Section to this report). This proofrolling is standard construction practice but is especially important in light of the soft soils that were found and the fact that the site is believed to have been used in prior years for agricultural purposes and it is likely there are other soft soil areas on the site.

Foundations

An allowable bearing value of 2,000 pounds per square foot may be used for footings bearing on firm on-site soils or properly compacted fill and embedded at least 12 inches below the lowest adjacent grade. For footings bearing on the underlying moderately hard to hard ROCK, an allowable bearing value of 10,000 pounds per square foot may be used for footings "keyed in" a minimum of 4 inches into the ROCK.

For footings located adjacent to new or existing utility trenches, the bottom of the footing shall be deepened below a 1 horizontal to 1 vertical plane projected upwards from the edge of the utility trench.

For footings located on or adjacent to slopes, the footing shall be deepened such that there is a minimum horizontal distance of 5 feet from the edge of the footing to the slope face.

The bearing values are for dead plus live loads and may be increased by one-third for momentary loads due to wind or seismic forces. If any footing is eccentrically loaded, the maximum edge pressure shall not exceed the bearing pressure for permanent or for momentary loads.

All loose and disturbed soil at the bottom of footing excavations shall be removed to firm soil or the disturbed soil shall be compacted prior to laying of steel or placing of concrete.

Settlement

Under the fully applied recommended bearing pressure, it is estimated that settlement of footings up to 2 feet continuous or 4 feet square bearing on firm on-site soils or properly compacted fill will be less than ½ inch. Settlement of footings bearing on the moderately hard to hard ROCK is estimated to be less than 1/4 inch.

Differential settlement between footings will vary according to the size, bearing pressure and bearing material of the footing.

Lateral Resistance

For resistance of lateral loads, such as wind or seismic forces, an allowable passive resistance equivalent to that exerted by a fluid weighing 300 pounds per cubic foot may be used for footings, or other structural elements, provided the vertical surface is in direct contact with undisturbed soil or properly compacted fill.

Frictional resistance between footings and the underlying materials may be assumed as 0.4 times the dead load for soil and 0.7 times the dead load for ROCK.

Lateral resistance and friction may be combined.

Retaining Walls

Foundations for retaining walls shall be designed as per the foundation section of this report.

For design of free-standing retaining walls with properly draining backfill, the following equivalent fluid pressures may be used:

Imported granular soil as retaining wall backfill material:

Backfill Slope	Horizontal Component	Vertical Component
Level Backfill	30 pcf	0
3H:1V Backfill	35 pcf	10 pcf
2H:1V Backfill	40 pcf	20 pcf

On-site SILT or CLAY material as retaining wall backfill:

Backfill Slope	Horizontal Component	Vertical Component
Level Backfill	45 pcf	0
3H:1V Backfill	50 pcf	16 pcf
2H:1V Backfill	60 pcf	30 pcf

For restrained walls, the above active earth pressures shall be increased by 50 percent for "at-rest" conditions.

Drainage for the retaining wall backfill shall be accomplished by providing 4-inch diameter weepholes spaced 8-feet on-center (horizontally as well as vertically) or by using a minimum 4-inch diameter perforated PVC footing drain pipe. A 2-foot thick layer of crushed gravel, which is wrapped with geotextile filter fabric, shall be placed above the pipe; the crushed gravel shall be continuous from weephole to weephole, or in the case of a footing drain pipe, laid throughout the full length of the pipe. Geotextile fabric shall be

AMOCO 4545 or similar.

The backfill for the retaining wall shall be properly compacted in accordance with the Site Preparation and Grading section to this report. Site grading should be designed to drain surface water away from the backfill area.

The above active pressures do not include surcharge loads such as footings located within a 45 degree plane projected upwards from the heel of the footing, and/or from hydrostatic pressures. If such conditions occur, the active pressure shall be increased accordingly.

Slabs-on-Grade

Laboratory testing indicates the on-site soils have very low expansion potential.

Conventional type slab-on-grade construction may be used. See Plate A for recommended Slab-On-Grade Detail.

Site grading should be designed to minimize ponding of water adjacent to slab and footing areas.

Slopes

Cut and fill slopes into soil materials shall not exceed 2 horizontal to 1 vertical. Cut slopes

into the moderately hard to hard ROCK may be made at 1 horizontal to 2 vertical.

Exposed slopes shall be covered as soon as practical after construction to minimize erosion.

Fill slopes shall be constructed by overfilling and cutting back to compacted soil.

Pavement Design

It is recommended that flexible pavements consist of 2 inches of asphalt concrete, 6 inches of base course gravel and 6 inches of compacted subgrade.

Concrete pavement sections may consist of 5 inches of concrete poured on compacted subgrade. Reinforcement recommendations are to be provided by others.

The base course gravel and top 6 inches of the subgrade shall be compacted to at least 95 percent of the maximum dry density as determined by the ASTM D 1557-91 test procedure.

Site Preparation and Grading

It is recommended that the site be prepared in the following manner:

1. All vegetation, weeds, brush, roots, stumps, rubbish, debris, plastic, soft soil and

other deleterious material shall be removed and disposed of off-site.

2. In areas to receive fill and at finished subgrade in cut areas, the exposed surface shall then be scarified to a depth of 6 inches, moisture conditioned to near optimum moisture and then compacted to the degree of compaction specified below. If soft or loose spots are encountered, the loose/soft areas shall be removed to firm material and the resulting depression shall be filled with properly compacted fill.

3. Where fill is placed on existing ground that is steeper than 5 horizontal to 1 vertical, the existing ground surface shall be benched into firm soil as the fill is placed.

4. Fill and Backfill in Structural Areas Structural areas shall be defined as areas beneath and 3 feet beyond the edges of buildings and pavement areas.

Structural fill and backfill material shall consist of soil which is free of organics and debris. The material shall be well-graded with no particle larger than 3 inches in greatest dimension. The on-site soils are acceptable for use as structural fill provided the above gradation requirements are met and the material is free of organics and man made debris.

Each layer shall be placed in lifts not exceeding 8 inches in loose thickness. Prior

to compacting the soil, the soils moisture content shall be adjusted to near optimum moisture content. Each layer shall be thoroughly compacted to at least 95 percent of the maximum dry density (ASTM D1557-91) if the material is granular, or 90 percent of the maximum dry density if the material is fine-grained, prior to placing of any subsequent lifts. Determination of "granular" and "fine-grained" shall be determined by a qualified soils engineer.

5. Fill and Backfill in Non-Structural Areas Non-structural areas shall be defined as areas beyond 3 feet from the edge of any building and non-pavement areas. The ballfields are non-structural areas.

Non-structural fill and backfill material shall consist of material which is free of organics and debris. In the upper 3 feet from finished grade, the material shall be less than 3 inches in greatest dimension. Below 3 feet from finished grade, the material shall be less than 12 inches in greatest dimension, provided there is sufficient fines to fill the interstices. The on-site soils are acceptable for use as non-structural fill at any depth provided the above gradation requirements are met and the material is free of organics and man made debris.

Each layer shall be placed in lifts not exceeding 12 inches in loose thickness. Prior to compacting the soil, the soils moisture content shall be adjusted to near optimum

moisture content. Each layer shall be thoroughly compacted prior to placing of any subsequent lifts to at least 90 percent of the maximum dry density as determined by the ASTM D 1557-91 test procedure.

6. During construction, drainage shall be provided to minimize ponding of water adjacent to or on foundation and pavement areas. Ponded areas shall be drained immediately or water pumped out without damaging adjacent structures and property. If water accumulation softens the subgrade materials, the affected soils shall be removed and replaced with properly compacted fill.

It is particularly important to see that all fill and backfill soils are properly compacted in order to maintain the recommended design parameters provided in this report.

INSPECTION

During the progress of construction, so as to evaluate compliance with the design concepts, specifications and recommendations contained herein, a representative from this office should be present to observe the following operations:

1. Site preparation.
2. Placement of fill and backfill.
3. Footing excavations.

REMARKS

The conclusions and recommendations contained herein are based on the findings and observations made at the test pit locations. If conditions are encountered during construction which appear to differ from those disclosed by the explorations, this office shall be notified so as to consider the need for modifications.

This report has been prepared for the exclusive use of Hiyakumoto Higuchi Architects and their respective design consultants. It shall not be used by or transferred to any other party or to another project without the consent and/or thorough review by this facility. Should the project be delayed beyond the period of one year from the date of this report, the report shall be reviewed relative to possible changed conditions.

Samples obtained in this investigation will deteriorate with time and will be unsuitable for further laboratory tests within one (1) month from the date of this report. Unless otherwise advised, the samples will be discarded at that time.

The following are included and complete this report:

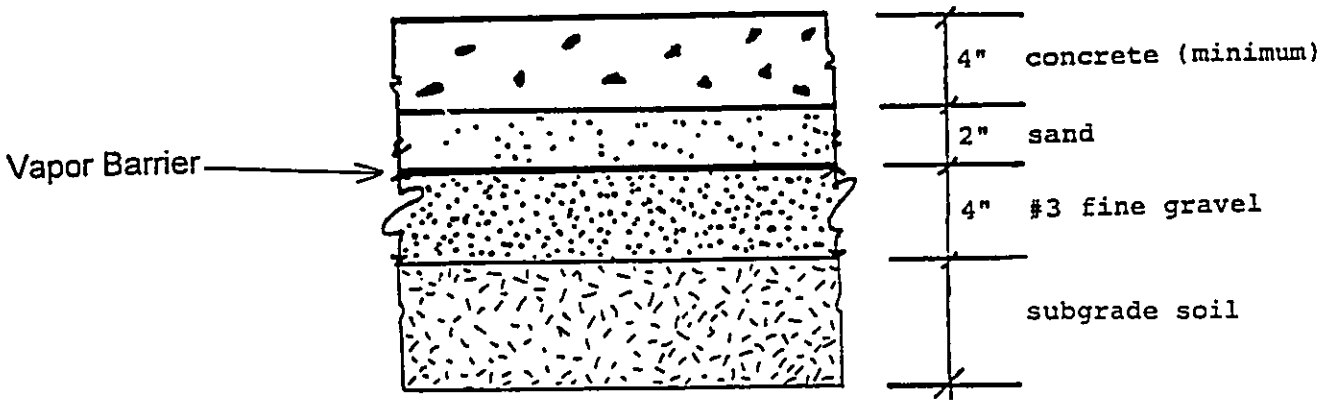
Slab-On-Grade Detail ---------- Plate A

Vicinity Map ---------- Plate 1

Plot Plan ---------- Plate 2

Appendix: Field Investigation, Laboratory Testing, Logs of Test Pits, Results of Laboratory Tests

SLAB-ON GRADE DETAIL



Notes:

1. The subgrade soil should be moisture conditioned to within 3 percent of optimum moisture content and compacted to a minimum of 90% of the maximum dry density as determined by the ASTM D 1557-91 test procedure.

2. The #3 fine gravel shall be compacted by means of a vibratory plate compactor making a minimum of 4 passes.

3. The vapor barrier is for moisture sensitive floor slabs. Exterior pedestrian sidewalks may omit the vapor barrier. If the vapor barrier is omitted, the SAND can be omitted.

4. The SAND shown above is for concrete curing purposes and should be dry (do not add water) prior to the concrete pour.

5. The concrete reinforcing and curing compound recommendations are to be provided by others.

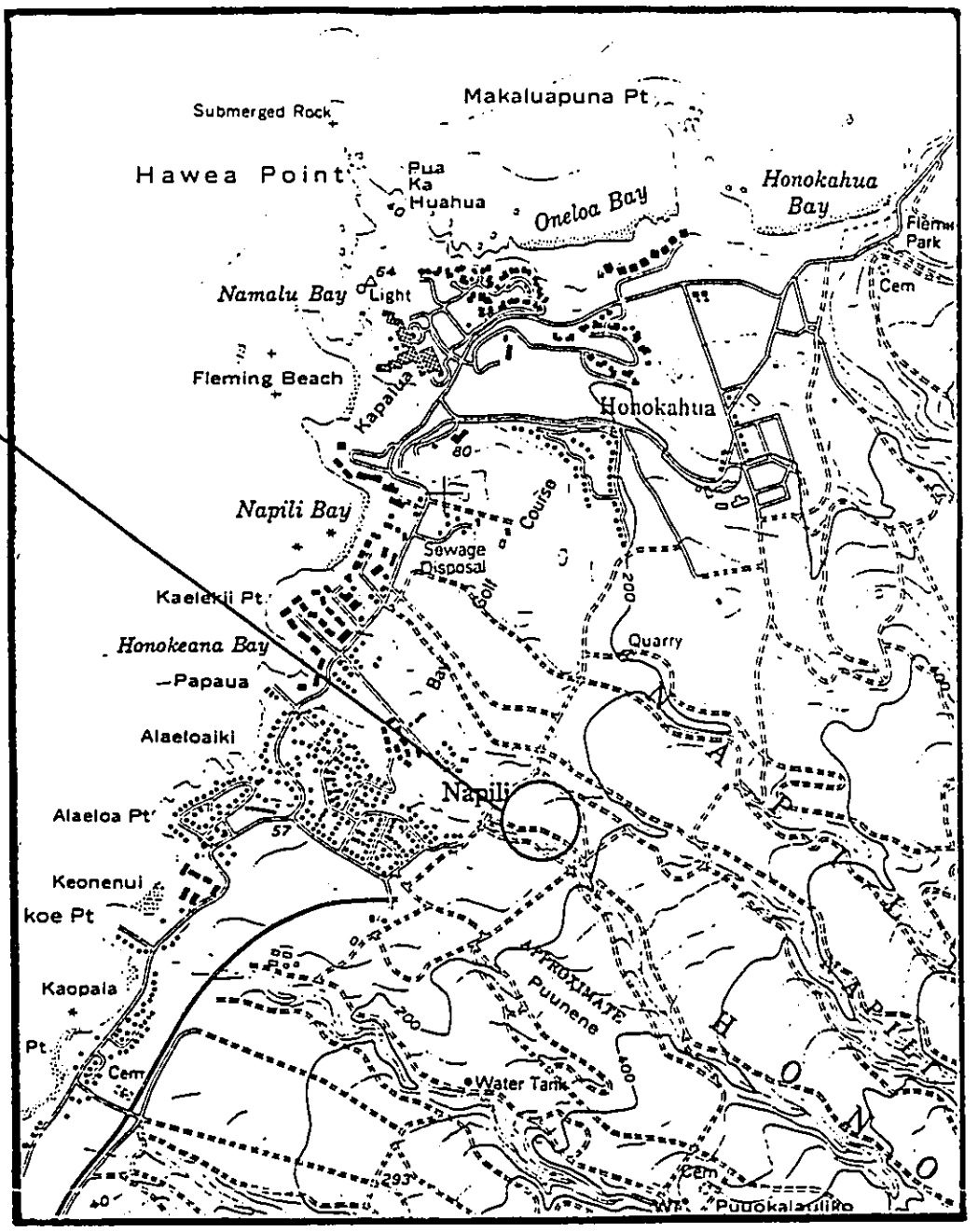
Project : NAPILI PARK

Project No. : 98116-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

PLATE A

VICINITY MAP



SITE LOCATION

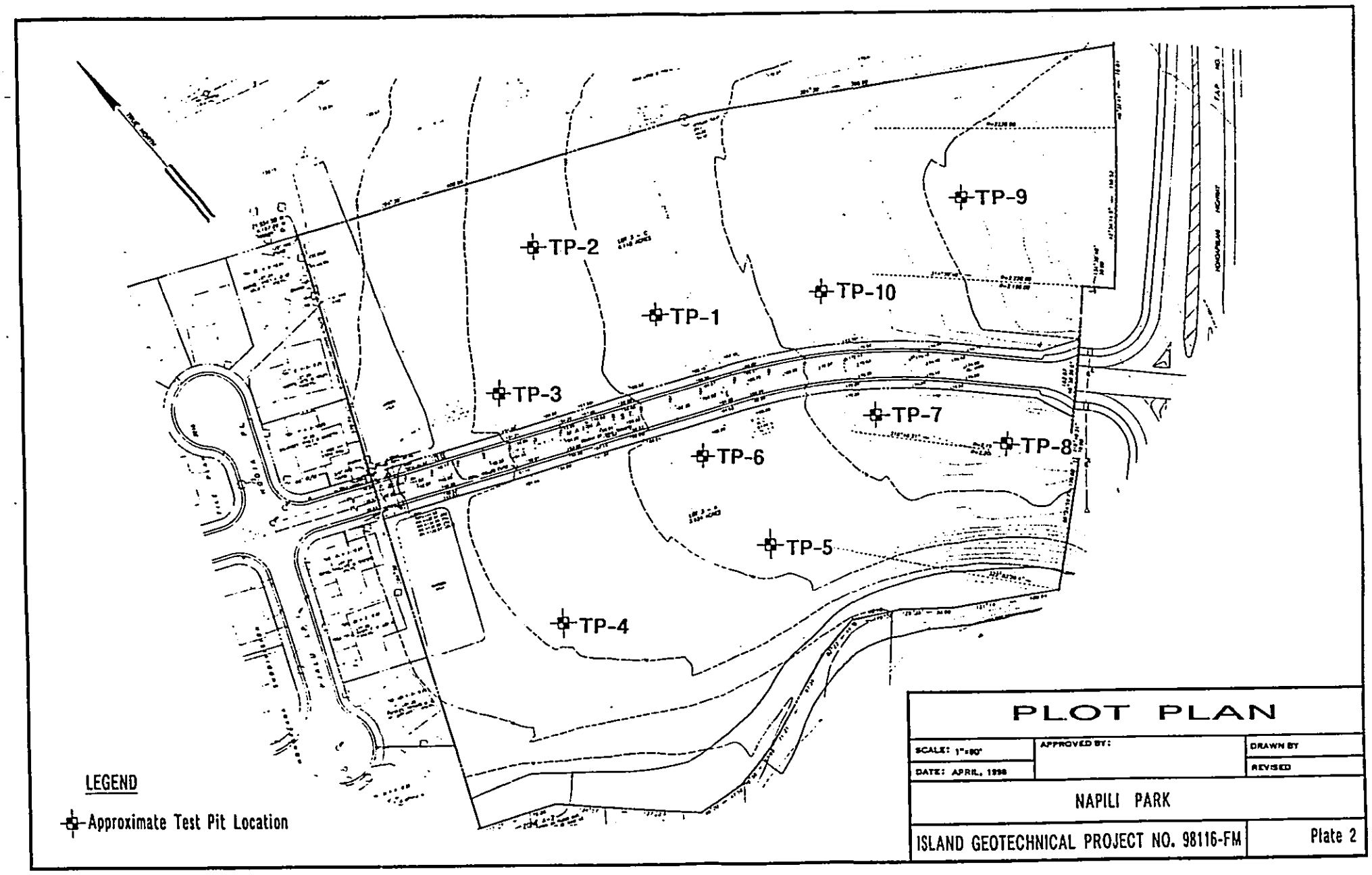
N

REFERENCE:
USGS TOPOGRAPHIC MAP
NAPILI QUADRANGLE
Dated: 1983

NAPILI PARK

ISLAND GEOTECHNICAL ENGINEERING, INC.
Geotechnical Consultants

PROJECT NO.	98116-FM
DATE	Apr. 1998
SCALE	1"= 2000'
PLATE	1


TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
TP-10
LEGEND
Approximate Test Pit Location
PLOT PLAN
SCALE: 1"=80'
APPROVED BY:
DRAWN BY
DATE: APRIL, 1998
REVISED
NAPILI PARK
ISLAND GEOTECHNICAL PROJECT NO. 98116-FM
Plate 2

APPENDIX

FIELD INVESTIGATION AND LABORATORY TESTING

FIELD INVESTIGATION

General

The field investigation consisted of performing explorations at the locations shown on the Plot Plan. The method used for the exploratory work is shown on the respective exploration log. A description of the various method or methods used is presented below.

Test Borings Using Truck-Mounted Drilling Equipment

Truck-mounted borings are drilled using a gas-powered drilling rig. The hole is advanced using continuous flight augers, wash boring and/or NX coring.

Auger drilling is used in soils where caving does not occur. The augers are 4-1/2 inch diameter continuous helical flight augers with the lead auger having a head equipped with changeable cutting teeth. Soil cuttings are brought to the surface by the continuous flights. After the bore hole is advanced to the required depth and cleaned of cuttings by additional rotation of the augers, the augers are retracted for soil sampling or in-situ testing.

In soils where caving of the bore hole occurs, the hole is advanced by wash boring or hollow-stem augering. Wash boring consists of advancing steel casing by rotary action and water pressure to flush the soil from the casing. The lead section of the casing is equipped with a carbide or diamond casing bit. After the casing has been advanced to the required depth, soil samples are obtained through the inside of the casing. Hollow-stem drilling consists of advancing the hole with 7-5/8 inch outside diameter and 4-1/4 inch inside diameter augers. The leading drill bit is connected to drilling rods through the central portion of the auger. At the required sampling depth, the interior drill rods and lead bit are removed, and the soil sample is taken by driving a sampler

through the "hollow" section of the augers.

Coring is used for hard formations such as rock, coral or boulders. The core barrel, consisting of a 5-foot long double tube, hardened steel barrel with either a carbide or diamond bit, is attached to drilling rods and set on the hard formation. The core barrel is advanced through the formation by rotation of the core barrel. Water is used to flush out the cuttings. Upon completion of the core run, the sample is removed from the core barrel and inspected. The total core recovery length and the sum of all intact pieces over 4-inch in length are measured. The length of core recovery divided by the length of the core run is the recovery ratio. The combined length of the 4-inch or longer pieces divided by the length of core run is the Rock Quality Designation (RQD). The values provide an indication of the quality of the formation.

Test Borings Using Portable Drilling Equipment

In areas inaccessible to truck-mounted equipment, portable drilling equipment is used to drill the test boring. The boring is advanced by either 1) continuous drive sampling or by 2) using a small gas-powered drill rig with continuous flight augers, wash boring or NX coring.

Soil samples are obtained with a tripod and cathead assembly using soil sampling methods described below.

Test Pits Using Excavators/Hopto

Test pits are excavated using a hopto or backhoe. Material excavated from the pit and the sides and bottom of the pit are visually inspected and a continuous log of the hole is kept.

Explorations Using Hand Tools

In inaccessible areas requiring only shallow explorations, borings and test pits are made using hand equipment. Borings are drilled using hand augers. Test pits are excavated using hand tools. Cuttings from the boring and/or pit are inspected and visually classified.

Soil Sampling

Relatively undisturbed samples of the underlying soils are obtained from borings by driving a sampling tube into the subsurface material using a 140-pound safety hammer falling from a height of 30 inches. Ring samples are obtained using a 3-inch outside diameter, 2.5 inch inside diameter steel sampling tube with an interior lining of one-inch long, thin brass rings. The tube is driven approximately 18 inches into the soil and a section of the central portion is placed in a close fitting waterproof container in order to retain field conditions until completion of the laboratory tests. Standard Penetration Test (SPT) values and disturbed soil samples are obtained with a 2-inch (outside diameter) split-barrel sampler instead of the 3-inch sampler. The number of blows required to drive the sampler into the ground is recorded at 6-inch intervals. The blow count for the last 12-inches is shown on the boring logs.

From test pit excavations, relatively undisturbed soil samples are obtained by pushing the 3 inch outside diameter sampling tube (mentioned above) into the ground with the backhoe bucket. In addition, undisturbed bulk samples are retained from cohesive type soil formations and disturbed bulk samples are retained from friable and cohesionless soil formations.

The soil samples are visually classified in the field using the Unified Soil Classification System. Samples are packed in moisture proof containers and transported to the laboratory for testing.

LABORATORY TESTING

General

Laboratory tests are performed on various soil samples to determine their engineering properties. Description of the various tests are listed below.

Unit Weight and Moisture Content

The in-place moisture content and unit weight of the samples are used to correlate similar soils at various depths. The sample is weighed, the volume determined, and a portion of the sample is placed in the oven. After oven-drying, the sample is again weighed to determine the moisture loss. The data is used to determine the wet-density, dry-density and in-place moisture content.

Direct Shear

Direct shear tests are performed to determine the strength characteristics of the representative soil samples. The test consists of placing the sample into a shear box, applying a normal load and then shearing the sample at a constant rate of strain. The shearing resistance is recorded at various rates of strain. By varying the normal load, the angle of internal friction and cohesion can be determined.

Consolidation Test

Consolidation tests are performed to obtain data from which time rates of consolidation and amounts of settlement may be estimated. The test is performed by placing a specimen in a consolidation apparatus. Loads are applied in increments to the circular face of a one (1) inch high sample. Deformation or changes in thickness of the specimen are recorded at selected time intervals. Water is introduced to or allowed to drain from the sample through porous disks placed

against the top and bottom faces of the specimen. The data is then used to plot a stress-volume strain curve which is used in estimating settlement.

Expansion Index Test

Expansion Index of fine-grained soils is determined in accordance with ASTM D 4829-88 test procedure. The soil specimen is compacted into a metal ring so that the degree of saturation is between 40 and 60 percent. The specimen and the ring are placed in a consolidometer. A vertical confining pressure of 1 psi is applied to the specimen and then the specimen is inundated with water. The deformation of the specimen is recorded for 24 hours. The data is used to determine the expansion potential of the soil.

Classification Tests

The soil samples are classified using the Unified Soil Classification System. Classification tests include sieve and hydrometer analysis to determine grain size distribution, and Atterberg Limits to determine the liquid limit, plastic limit and plasticity index.

California Bearing Ratio Test

California Bearing Ratio (CBR) tests are performed on materials to determine the bearing strength of the soil for determination of pavement sections. The sample is compacted into a 6-inch diameter mold in 5 equal layers. Each layer is compacted with a 10-pound hammer falling from a height of 18-inches, with each layer receiving 56 blows. The mold is then placed in a water bath for 4-days and the vertical swell is measured under a surcharge weight of 10 pounds. After the soaking period, the sample is placed in a CBR apparatus that has a 3-square inch penetrometer. The penetrometer is pressed vertically into the soil at constant strain and the loads required to

press the penetrometer are recorded. A plot of the load-strain relationship is made to determine the CBR value.

Maximum Dry Density/Optimum Moisture Content

The maximum dry density and optimum moisture content of the material is determined in accordance with the ASTM D1557-91 test procedure. The sample is compacted into a mold in 5 equal layers using a 10 pound hammer falling from a height of 18 inches. The diameter of the mold is either 4-inches or 6-inches depending on the proportion of gravel in the sample. The sample is compacted at various moisture contents to develop a compaction curve for the soil. The curve is usually bell-shaped with a peak indicating the maximum dry density and optimum moisture content.

Penetrometer Test

Penetrometer tests are performed on clayey soils to determine the consistency of the material and an approximate value of the unconfined compressive strength.

Torvane

Torvane tests are used to determine the approximate undrained shear strength of clayey soils. The torvane apparatus consists of a torque device with a small diameter plate that has vanes situated perpendicular to the plate. The vanes are pushed into the soil and torque is applied until failure occurs. The torque required to cause failure is converted to approximate undrained strength of the soil.

LOG OF TEST PIT NO. 1

ELEVATION: +164' (estimate)

EQUIPMENT USED: Backhoe: Case 580 Super K

DEPTH OF TEST PIT (FT.): 8

DATE EXCAVATED: April 21, 1998

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY with black plastic		dark reddish brown	moist	stiff to very stiff	84.2	24.1		47	26	21
1.5			---no black plastic						22.8				
		ML	sandy SILT		very dark gray				23.4	4.5			
3													
4.5													
6					dark brown				23.4				
		(RX)	BASALT ROCK		brownish gray		soft to mod. hard rock						
7.5			REFUSAL										
			END OF TEST PIT				mod. hard to hard rock						
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 3

LOG OF TEST PIT NO. 2

ELEVATION: +156' (estimate)

EQUIPMENT USED: Backhoe: Case 580 Super K

DEPTH OF TEST PIT (FT.): 8

DATE EXCAVATED: April 21, 1998

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY with black plastic & roots		dark reddish brown	moist	soft to mod. stiff	84.7	29.0	1.5			
							mod. stiff to stiff						
1.5			---end black plastic, end roots				stiff to very stiff			4.5			
3					reddish brown								
4.5		ML	SILT with sand and gravel		very dark gray	moist to very moist			25.9				
6													
7.5			END OF TEST PIT										
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 4

LOG OF TEST PIT NO. 3

EQUIPMENT USED: Backhoe: Case 580 Super K

DATE EXCAVATED: April 21, 1998

ELEVATION: +152' (estimate)

DEPTH OF TEST PIT (FT.): 8

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY		dark reddish brown	moist	mod. stiff	86.6	27.2	0.8			
1.5						moist to very moist	stiff to very stiff			2.0			
					yellow brown					3.5			
3			---with gravel and sand										
4.5					gray brown								
6		(RX)	BASALT ROCK				soft to mod. hard rock						
7.5					very dark brown				17.2				
			REFUSAL END OF TEST PIT				mod. hard to hard rock						
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 5

LOG OF TEST PIT NO. 4

EQUIPMENT USED: Backhoe: Case 580 Super K

DATE EXCAVATED: April 21, 1998

ELEVATION: +152' (estimate)

DEPTH OF TEST PIT (FT.): 4.5

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY with black plastic		brown	moist	mod. stiff						
			---end black plastic				stiff to very stiff	80.9	29.0	3.0 4.5			
1.5					gray brown								
		(RX)	BASALT ROCK				soft to mod. hard rock						
3													
4.5			REFUSAL				mod. hard to hard rock						
			END OF TEST PIT										
6													
7.5													
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 6

LOG OF TEST PIT NO. 5

EQUIPMENT USED: Backhoe: Case 580 Super K

DATE EXCAVATED: April 21, 1998

ELEVATION: +163' (estimate)

DEPTH OF TEST PIT (FT.): 4.5

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		ML	sandy SILT		very dark brown	mod. moist	stiff to very stiff	91.2	30.0				
						moist			23.1				
1.5					light gray brown								
3													
4.5		(RX)	BASALT ROCK				soft to mod. hard rock						
			REFUSAL										
			END OF TEST PIT				mod. hard to hard rock						
6													
7.5													
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 7

LOG OF TEST PIT NO. 6

ELEVATION: +164' (estimate)

EQUIPMENT USED: Backhoe: Case 580 Super K

DEPTH OF TEST PIT (FT.): 8.5

DATE EXCAVATED: April 21, 1998

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY		dark reddish brown	mod. moist to moist	mod. stiff to stiff	81.7	28.4				
1.5									23.7	1.8			
3					light brown	moist to very moist	stiff						
4.5					dark gray brown								
6													
7.5		ML	sandy SILT		very dark gray				26.9				
9			END OF TEST PIT										
10.5													

PROJECT NAME: NAPILI PARK

PROJECT NO.: 98116-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 8

LOG OF TEST PIT NO. 7

ELEVATION: +174' (estimate)

EQUIPMENT USED: Backhoe: Case 580 Super K

DEPTH OF TEST PIT (FT.): 8

DATE EXCAVATED: April 21, 1998

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY with black plastic & drip line, few gravels		light gray brown	mod. moist	soft	90.8	22.8				
1.5			—no plastic or drip line		dark reddish brown		mod. stiff to stiff						
3					light brown		stiff to very stiff						
4.5					dark brown								
6					gray brown								
7.5		(RX)	BASALT ROCK		light gray		soft rock						
9			END OF TEST PIT										
10.5													

PROJECT NAME: NAPILI PARK

PROJECT NO.: 98116-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 9

LOG OF TEST PIT NO. 8

EQUIPMENT USED: Backhoe: Case 580 Super K

DATE EXCAVATED: April 21, 1998

ELEVATION: +176' (estimate)

DEPTH OF TEST PIT (FT.): 7.75

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		ML	sandy SILT		gray brown	mod. moist to moist	mod. stiff to stiff	90.6	28.6				
									25.3				
1.5					very dark gray	moist							
					light gray								
3							stiff						
4.5													
6		(RX)	BASALT ROCK		dark gray		very soft rock		22.9				
7.5			REFUSAL END OF TEST PIT				mod. hard to hard rock						
9													
10.5													

PROJECT NAME: NAPILI PARK

PROJECT NO.: 98116-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 10

LOG OF TEST PIT NO. 9

EQUIPMENT USED: Backhoe: Case 580 Super K

DATE EXCAVATED: April 21, 1998

ELEVATION: +182' (estimate)

DEPTH OF TEST PIT (FT.): 8

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY		dark reddish brown	mod. moist	soft to mod. stiff	89.0	27.8				
						mod. moist to moist							
1.5					dark gray brown		mod. stiff to stiff			1.2			
										2.0			
3							very stiff			4.5			
4.5			---some yellow mottling										
6													
7.5			END OF TEST PIT										
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 11

LOG OF TEST PIT NO. 10

ELEVATION: +174' (estimate)

EQUIPMENT USED: Backhoe: Case 580 Super K

DEPTH OF TEST PIT (FT.): 8

DATE EXCAVATED: April 21, 1998

DEPTH TO GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0		CL	CLAY with black plastic		dark reddish brown	mod. moist to moist	soft to mod. stiff	86.4	28.4				
			---end black plastic										
1.5					light red brown		mod. stiff to stiff						
3					dark gray brown								
4.5													
6					light gray brown	mod. moist							
		ML	sandy SILT with gravel		dark gray				23.4				
7.5													
			END OF TEST PIT										
9													
10.5													

PROJECT NAME: NAPILI PARK PROJECT NO.: 98116-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	PLATE 12

EXPANSION INDEX TEST REPORT

SAMPLE LOCATION	DEPTH	MOLDING WATER CONTENT	INITIAL DRY DENSITY (PCF)	% SAT.	FINAL WATER CONTENT	EXPANSION INDEX MEASURED	CORR. E.I. AT 50% SAT.
Test Pit 1	0.5'	22.4%	78.6	49.0	39.4%	13	13

EXPANSION CLASSIFICATION

Expansion Index, EI	Potential Expansion
0 to 20	Very Low
21 to 50	Low
51 to 90	Medium
91 to 130	High
over 130	Very High

Project: NAPILI PARK — Project No.: 98116-FM

ISLAND GEOTECHNICAL ENGINEERING, INC. — PLATE 13

VII. LIST OF CONSULTANTS

Prime Consultant:	Calvin S. Higuchi AIA Hiyakumoto + Higuchi Architects, Inc. 1860 Main Street Wailuku, HI 96793 Phone: (808) 242-9705, Fax: (808) 242-2898
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Landscape Architect:	Rick Mayberry Mayberry & Associates 358 Papa Place Kahului, HI 96732 Phone: (808) 871-4771, Fax: (808) 877-4585
Soils Engineer:	Charles Biegel, P.E. Island Geotechnical Engineering, Inc. 222-A Kawaipuna Place Wailuku, HI 96793 Phone: (808) 243-9355, Fax: (808) 244-8997
Traffic Engineer:	Ted Kawahigashi, P.E. Austin Tsutsumi & Associates, Inc. 501 Sumner Street, Suite 521 Honolulu, HI 96817 Phone: (808) 533-3646, Fax: (808) 526-1267