

JAMES "KIMO" APANA  
Mayor

JOHN E. MIN  
Director

CLAYTON I. YOSHIDA  
Deputy Director



COUNTY OF MAUI  
DEPARTMENT OF PLANNING  
**RECEIVED**

March 9, 2000

00 MAR 14 P2:11

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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

Dear Ms. Salmonson:

RE: Final Environmental Assessment (EA) for Na Leo Pulama O Maui, Change in Zoning Application to Construct and Operate the Punana Leo O Maui Hawaiian Language Preschool and Family Language Resource Center, at Lunalilo and Liholiho Streets, Tax Map Key: 3-8-07:47, Wailuku, Island of Maui, Hawaii (EA 2000/0002)

The Maui Planning Department (Department) has reviewed the Final Environmental Assessment (EA) which included comments received during the 30-day public comment period which began on February 8, 2000. The Department has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the March 23, 2000, OEQC Environmental Notice.

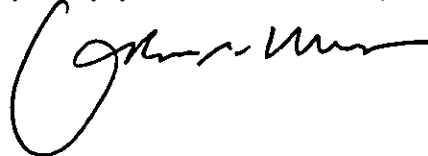
The Department received comments from seven agencies regarding the Change in Zoning application. Four agencies, Police, Parks and Recreation, the Office of Planning, and the Office of Hawaiian Affairs had no comments or concerns. The Department of Public Works and Waste Management commented on the availability of wastewater capacity, payment of assessment fees for wastewater improvements, road-widening and improvements, and off-street parking, loading and landscaping requirements. The applicant stated that they will comply with their requirements. The State Department of Transportation commented that the developer should be responsible for roadway and signalization improvements. The applicant stated that they will resolve this matter at the time of development.

We have enclosed a completed OEQC Publication Form, four copies of the Final EA, and the project summary. The Publication Form and project summary have been e-mailed to your office by the Applicant's attorney, Isaac Hall.

Ms. Genevieve Salmonson, Director  
March 9, 2000  
Page 2

Please call Ms. Julie Higa, Staff Planner, of this office at 270-7814 if you have any questions.

Very truly yours,



JOHN E. MIN  
Planning Director

JEM:JH:cmb

Enclosures

c: Clayton Yoshida, AICP, Deputy Planning Director  
Isaac Hall, Esq., Applicant's Attorney  
Julie Higa, Staff Planner  
Project File  
General File  
S:\ALL\JULIE\NALEO.CIZ\EA.FIN

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MAR 23 2000

**FILE COPY**

**FINAL ENVIRONMENTAL ASSESSMENT**

in support of a

*Change in Zoning*

~~1999~~ 2000-03-23-MA-FEA-

NA LEO PULAMA O MAUI'S

\*PUNANA LEO O MAUI HAWAIIAN LANGUAGE\*  
PRESCHOOL AND  
FAMILY LANGUAGE RESOURCE CENTER

WAILUKU, MAUI, HAWAII  
TMK: (II) 3-8-007:47

Prepared for:

Na Leo Pulama o Maui, Inc.  
PO Box 1038  
Wailuku HI 96793

Prepared by:

Maui Architectural Group, Inc.  
2331 W. Main St.  
Wailuku HI 96793

Law Office of Isaac Hall  
2087 Wells St.  
Wailuku HI 96793

March, 2000

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I. INTRODUCTION

Punana Leo o Maui is one preschool among eleven operated in the State of Hawaii which is conducted entirely in the Hawaiian language. These preschools insure the survival of the Hawaiian language, perpetuate Hawaiian culture and provide an important cultural, traditional and religious grounding for native Hawaiians. For ten years, Punana Leo o Maui had been operated at the Wailuku Baptist Church at 473 High Street, Wailuku Hawaii 96793, TMK No. (II) 3-5-09:05, and last year moved to an adjacent property at 425 High Street. It has at all times operated through a County Special Use Permit issued by the Maui Planning Commission.

Parents take an active role in reinforcing the language in the home environment and are required to take evening Hawaiian language classes at the preschool. Thus, both parents and children are served by the program. Willingness of the family to speak Hawaiian is a major criterion for acceptance into the preschool and not Hawaiian blood quantum. Parents formed Na Leo Pulama in 1989 to support the preschool operations administered by the 'Aha Punana Leo. Na Leo Pulama is a Hawaii non-profit corporation with a 501(c)(3) status.

Several years ago, Na Leo Pulama o Maui, Inc. decided that Punana Leo o Maui needed a site of its own to accommodate the expanded interest in its programs. Na Leo Pulama embarked upon an extensive search for land which would be appropriate for its needs. Ultimately this 1.679 acre parcel of land owned by the County of Maui and located at the corner of Lunalilo and Liholiho Streets was secured through a 55 year lease from the County of Maui

dated January 6, 1997. This property is a portion of a larger parcel purchased in 1937 for Baldwin High School. It now lies within the R-3 zoning district.

The parcel is designated as Public/Quasi-public in the current and proposed Wailuku-Kahului Community Plans. The mix of uses proposed here is most appropriately designated as Public/Quasi-public. As such, a request is hereby submitted to change the zoning from R-3 to Public/Quasi-public to bring the zoning designation of this parcel into conformity with the Wailuku-Kahului Community Plan.

This land was one of the last unencumbered parcels of county property available for lease. Na Leo Pulama accepted it even though topographical features and the discovery of a significant archaeological site covering almost one third (1/3) of the site have constricted development options and made it more difficult and expensive to construct the kinds of facilities which will suit the long-term needs of the children, parents and staff of Na Leo Pulama. Na Leo Pulama has accepted these challenges, has designed facilities which can meet these needs and now respectfully requests that a Change in Zoning be granted for Na Leo Pulama's Punana Leo o Maui Hawaiian Language Preschool and Family Language Resource Center.

II. IDENTIFICATION OF APPLICANT AND APPROVING ENTITY

A. The Applicant

The Applicant is Na Leo Pulama o Maui, Inc., a Hawaii non-profit corporation and a federal 501(c)(3) entity, whose business address is PO Box 1038, Wailuku HI 96793.



B. The Approving Entity

The final decision-making authority for a Change in Zoning is a legislative body, the Maui County Council. The Council is not considered an "agency."<sup>1</sup>

This document is only to be considered a Draft Environmental Assessment and processed pursuant to Chapter 343 HRS if and when Corporation Counsel of Maui County issues a written opinion that an Environmental Assessment is required even when the final decision-making authority is a legislative body such as the Maui County Council.

III. LOCATION AND OWNERSHIP

The project site is a triangular parcel 1.679 acres in size and is located at the juncture of Lunalilo and Liholiho Streets in Wailuku, Maui, Hawaii, immediately above Baldwin High School and the Boy Scouts facility. See "Location Maps": Figure 1 shows the general location of the parcel and Figure A-1 shows the specific location of the land.

The property is owned by the County of Maui. It has been leased to Na Leo Pulama o Maui, Inc. for 55 years beginning in 1997 and ending in 2052, subject to renewal. The purpose of the lease is to construct and operate the Punana Leo o Maui Hawaiian Language Preschool and Family Language Resource Center.

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<sup>1</sup> See Sandy Beach Defense Fund v. City Council, 70 Haw. 361, 773 P.2d 250 (1989); Kailua Community Council v. City and County of Honolulu, 60 Haw. 428, 591 P.2d 602 (1979). In these cases, the Hawaii Supreme Court ruled that even if several agencies served in a preliminary advisory capacity, because the final decision-making authority was a legislative body and not an agency, the application was not subject to contested case proceedings pursuant to Chapter 91 HRS. The same analysis applies here. Because the final decision-making authority is a legislative body and not an agency, no agency approval is involved and an Environmental Assessment is not required as a matter of law.

The project site is a portion of a large tract of land almost 50 acres in size originally purchased by the County of Maui in 1937 for the Baldwin High School. The traversal of the High School parcel by Liholiho Street left the project site as a triangular remnant. It was given its own Tax Map Number in 1959. Other small portions of the High School tract have been devoted to public/quasi-public uses. The Army Reserves facility, 4.591 acres in size, (TMK (II) 3-8-7:57), was set aside in 1960. Just makai of this remnant, another portion of the High School tract, .979 acres in size, was leased by the County in 1966 to the Boy Scouts of America for 55 years (TMK (II) 3-8-7:80).

The High School tract is itself part of a much larger public/quasi public complex comprised of the War Memorial Gymnasium and playing fields (TMK (II) 3-8-7:55), the War Memorial Stadium and Baseball Stadium (TMK (II) 3-8-7:94), Keopuolani Park (TMK (II) 3-8-7:1) and the Maui Community College (TMK (II) 3-8-7:40). The noise generated by these uses can be heard from the site both during the day and during nighttime events at these facilities.

The site lies just below the top and on the eastern slope of the Pu'u One sand dune system that extends between Waihee and Waikapu. From the site, there are broad views of Haleakala, the north shore and the Pacific Ocean in this direction. There are partially obstructed views of the West Maui Mountains as well.

Across Lunalilo Street from the project site lie several residential lots. Lunalilo Street, for all practical purposes, serves as a driveway to two residential lots which lie atop the dunes and on the Wailuku side of the site.

These lots have broad views of the West Maui Mountains and some views of Haleakala, the north shore and the ocean in that direction.<sup>2</sup> Further toward Kaahumanu Avenue, across Lunalilo Street from the project, lie other residential lots.<sup>3</sup> Even though Lower Main Street appears to be close to the site on the vicinity map, it is actually "a world away" because of the sand dune system.

The parcel is triangular in shape with the mauka portion at the point of the triangle and the makai portion running along Liholiho Street at the bottom of the triangle. There was a slight ridge at approximately 234 feet above mean sea level ("AMSL") which separated the upper third of the parcel. This upper third contained a roughly circular area or "bowl" the lowest point of which was approximately 224 feet AMSL. From the ridge at approximately 234 AMSL the property slopes down to a bank above Liholiho Street. Liholiho Street gently descends from 215 feet AMSL to 200 feet AMSL. See Figure A-2 for pre-development contours.

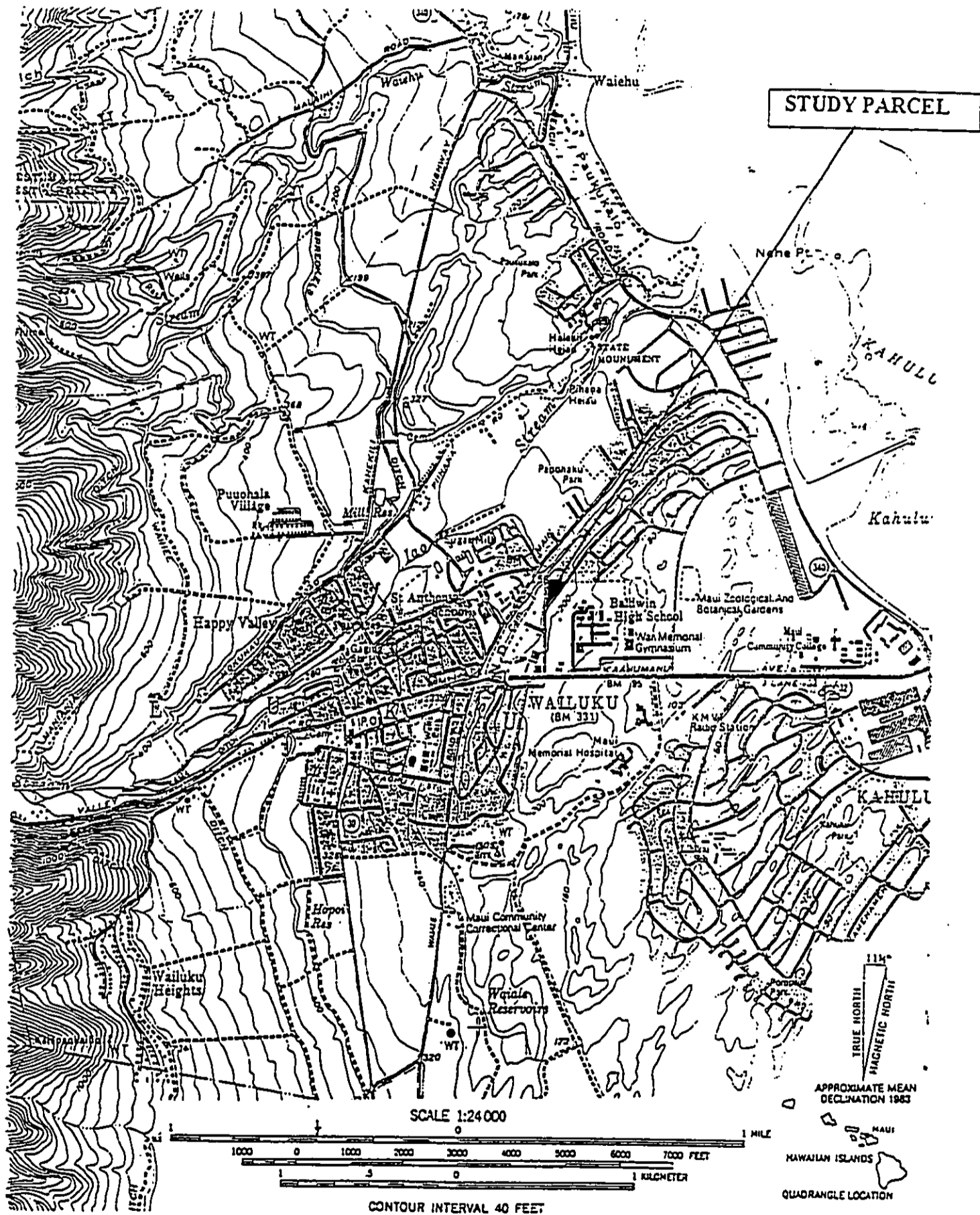
The site, when turned over to Na Leo Pulama o Maui by the County, was covered, from the highest portions to the lowest portions, by kiawe trees approximately 25 to 30 feet tall. These trees blocked any views from the Haling house to the east towards Haleakala. The subject parcel was also vegetated by lantana and castor bean plants. Alien grasses and annual weeds formed a dense ground cover. Indigenous 'ilima and 'uhaloa were present in areas of exposed sand deposits.

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<sup>2</sup> Mrs. Kenneth K. Haling owns TMK (II) 3-4-39:52. On the northeasterly side of the site lies a residential lot owned by First National Bank of Hawaii on TMK (II) 3-4-39:28. Beyond that lot is another owned by Jessie R. Munoz, designated as TMK (II) 3-4-39:29.

<sup>3</sup> These are the residences of Andrew H. Kutsunai Trs. on TMK (II) 3-4-38:37, Mr. and Mrs. Robert Kimura on TMK (II) 3-4-38:36 and Mr. and Mrs. Carl Anbe on TMK (II) 3-4-38:20.

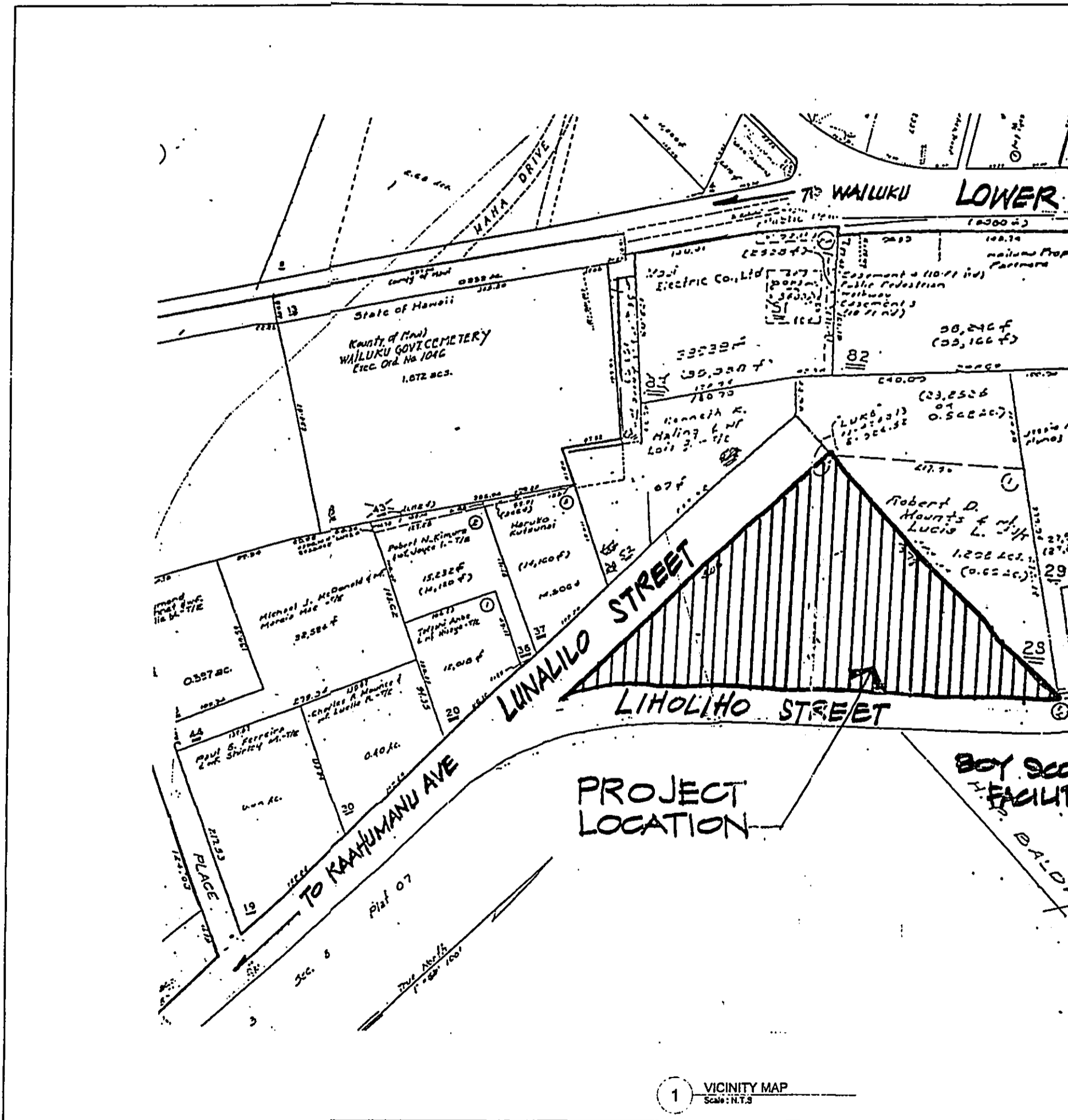
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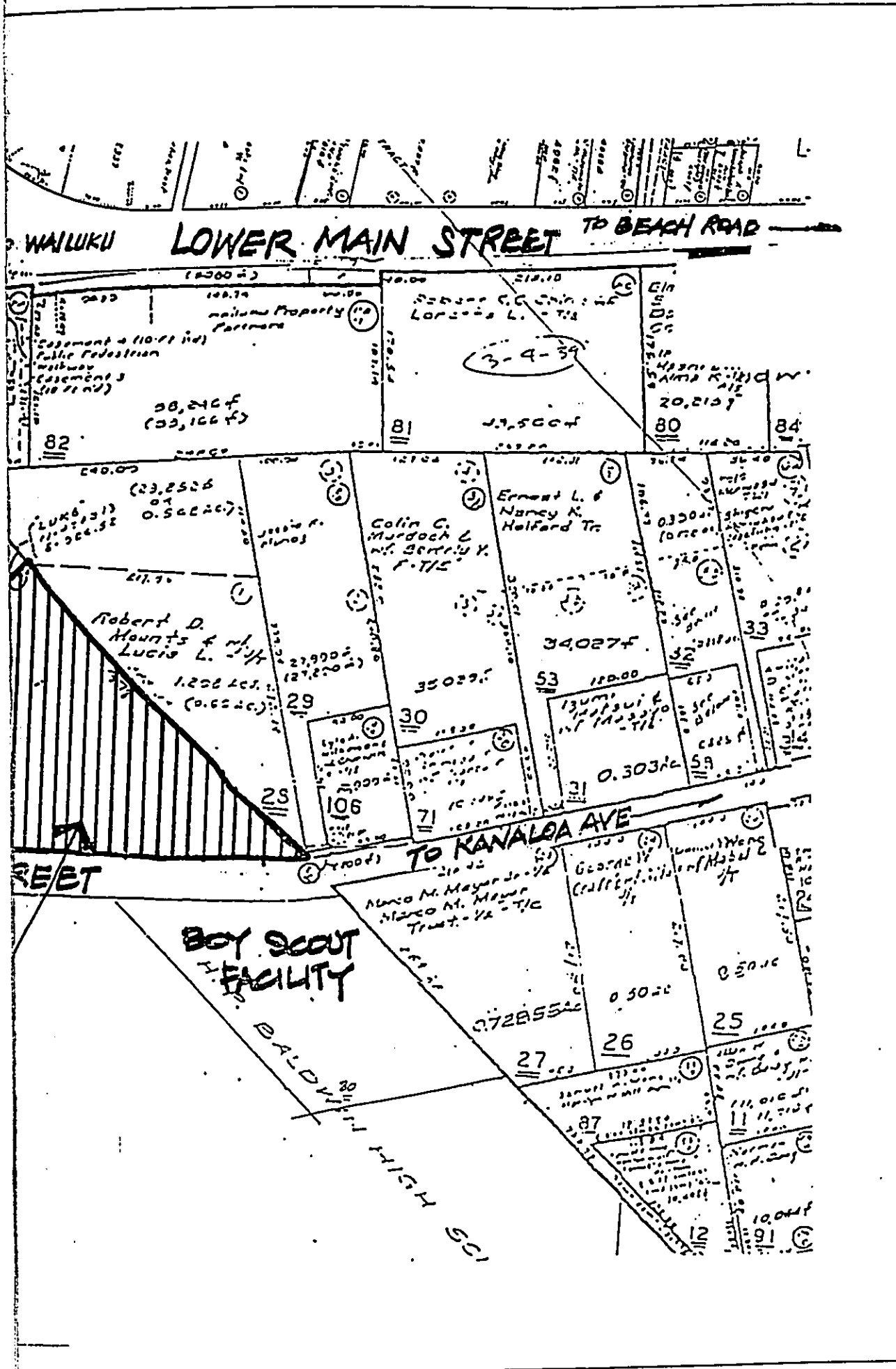
Map 1 - Topographic Map, U.S.G.S. Wailuku Quadrangle, 1983.

FIGURE 1

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**MALT ARCHITECTURAL GROUP INC.**  
 2011 W. MAIN STREET  
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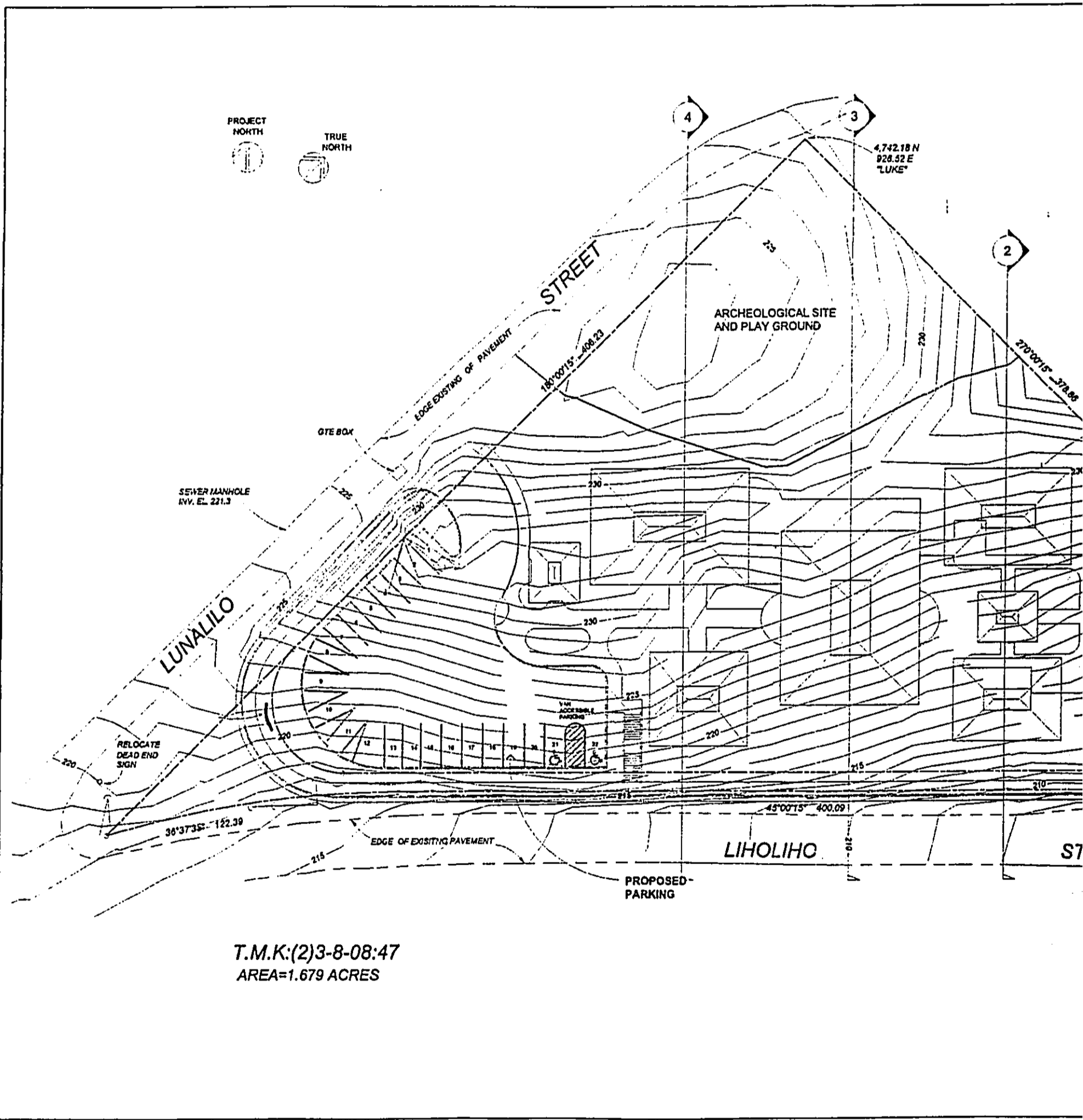
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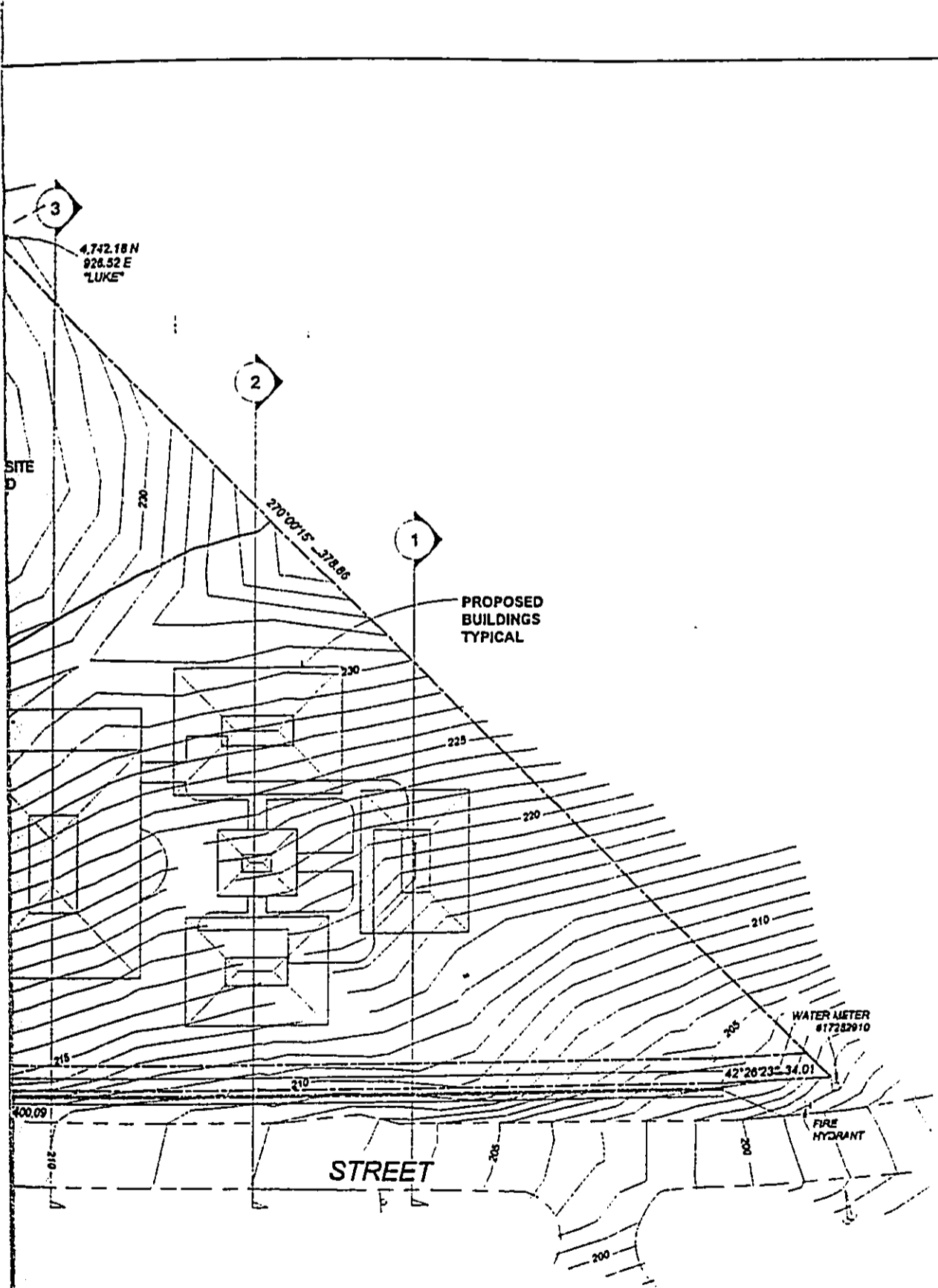
**Na Leo Pu'ama O Maui, Inc.**  
 Pu'ama Leo O Maui Hawaiian Language Preschool  
 and Family Language Resource Center  
 Wailuku, Maui, Hawaii  
 T.M.K.: (2) 3-8-07 : 47

Vicinity Map	17 JUNE 98
AS NOTED	
A1 Vicinity Map PUNLAY	
XXX-XX	
<b>A-1</b>	

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AREA=1.679 ACRES



1 EXISTING SITE GRADING PLAN  
Scale: 1:20



MAUI  
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STATE OF HAWAII. MY LICENSE NO. IS  
[Blank] I AM NOT PROVIDING ARCHITECTURAL  
SERVICES TO ANY OTHER PARTY.  
Professional Seal: No. [Blank]  
Signature: [Blank]

**Na Leo Pulama O Maui, Inc.**  
Punana Leo O Maui Hawaiian Language Preschool  
and Family Language Resource Center  
Wailuku, Maui, Hawaii  
T.M.K.: (2) 3-8-07 : 47


Existing Site Grading  
Plan

Date: 6-18-98

Notes: AS NOTED

File Name: A2 Exist Site PUN.LAY

Job: XXX-000

Sheet Number:  
**A-2**

Sheet 2 of 9



#### IV. PROJECT DESCRIPTION

Architectural plans for the project have been prepared for Na Leo Pulama o Maui by the Maui Architectural Group, Inc. which include a Site Plan, Three-Dimensional Views, Elevations and Cross Sections. These have been submitted with the Application. See Figure A-3 which is the Plot Plan. It also shows post-development contours and the Landscaping Plan. See also Figure A-6 which gives various "perspectives" of the project.

An archaeological site was discovered by Na Leo Pulama's archaeologist on roughly the top 1/3 of the parcel. It is a subsurface habitation site dating between 1400 to 1600 A.D. The site appears to be significant for its information content as an unusual type of site in the Wailuku sand dunes outside of the stream valley. Burials may be associated with the habitation site and, if so, the site may have traditional cultural significance. The site lies 10-30 cm below the ground. Na Leo Pulama has always been willing to preserve this site *in situ*. The particular and approved method of preservation is to place 60 cm of fill over the site. It will thereafter be used as a playground area for the project. No buildings will be located upon this significant historic site. See Figure A-3.

Once the archaeological site was discovered, it was necessary to conduct preliminary grading (below those limits which require a grading permit) to determine if on the remainder of the site there were other archaeological features and whether the remaining area would be sufficient for the school facilities. After this preliminary grading took place, it was determined that it was feasible to continue with the project.

The remainder of the site will be leveled, through grading and filling, at approximately 228-230 AMSL. This will require retaining walls along Liholiho Street and a portion of Lunalilo Street. The buildings and parking lot will be constructed within this level area.

The existing contours show that Liholiho Street descends from 218 to 200 AMSL, going from west to east. The project site rises above the street between 2 and 5 feet almost immediately. See Figure A-2. With the site preparation, there will be a net rise from street level to post-development level of approximately 9 feet by the parking area, approximately 11 feet by the Media Building, approximately 8 feet by Classroom A and at the very eastern end, approximately 24 feet.

There will be earth terraces increasing in elevation and approximately 15 feet to 25 feet wide between the Liholiho Street sidewalk and the retaining walls. See Figures A-3, A-4, A-5 and A-6. Native trees (some with broad canopies) and native ground cover will be planted in these terraced areas. See Figure A-3.

The retaining walls rise behind and above this landscaping. See Figures A-3, A-4 and A-5. To avoid the appearance of a massive wall (at the eastern side of the project along Liholiho Street), the retaining wall has been divided into three separate sections each progressively set back behind a terraced area which will be landscaped. See Figure A-6.

The project includes a significant amount of landscaping all along Liholiho Street. See Figure A-3. Additional landscaping will be planted as necessary to mitigate any possible adverse visual impacts that these retaining walls may create for those passing the project along Liholiho Street.

Six buildings will be constructed on the site. There will be a cluster of three classrooms for the preschool at the eastern end of the site. In the middle will be an Hawaiian language multi-resource building for the staff of the preschool and Family Language Resource Center. To the west will be a media center which can be used by children in the K-8 Hawaiian Language Immersion Program for the after school A-Plus Program. A multi-purpose building will also be constructed for the use of the Family Language Resource Center and other programs. The elevations and sections are shown as follows: in Figure A-7 the multi-purpose and media buildings; in Figure A-8, the Hawaiian language multi-resource building and the general classroom and in Figure A-9 the two breakout classrooms and the two shelters.

The buildings are designed in an indigenous or native Hawaiian style. The buildings have been designed to allow for an outdoor island lifestyle. The buildings are one story tall with Hawaiian hale-style roofs. Ample open areas under roof are provided, thus protecting these areas from the rain and sun. All of the buildings are less than 30 feet tall from the finished floor except for the Hawaiian language multi-resource building which is 33 feet 4 inches tall and the administration building which is 38 feet tall. See Figures A-7 and A-8. Because of the natural grades encountered, a variance is necessary for the following buildings: breakout classroom B (+/- 7 feet), breakout classroom A (+/- 7 feet), the Hawaiian language multi-resource building (+/- 12 feet) and the media building (+/- 3 feet). See Figures A-4 and A-5. An application for a variance is being processed concurrently with the understanding that the zoning must be changed through this application before any variance can be granted.

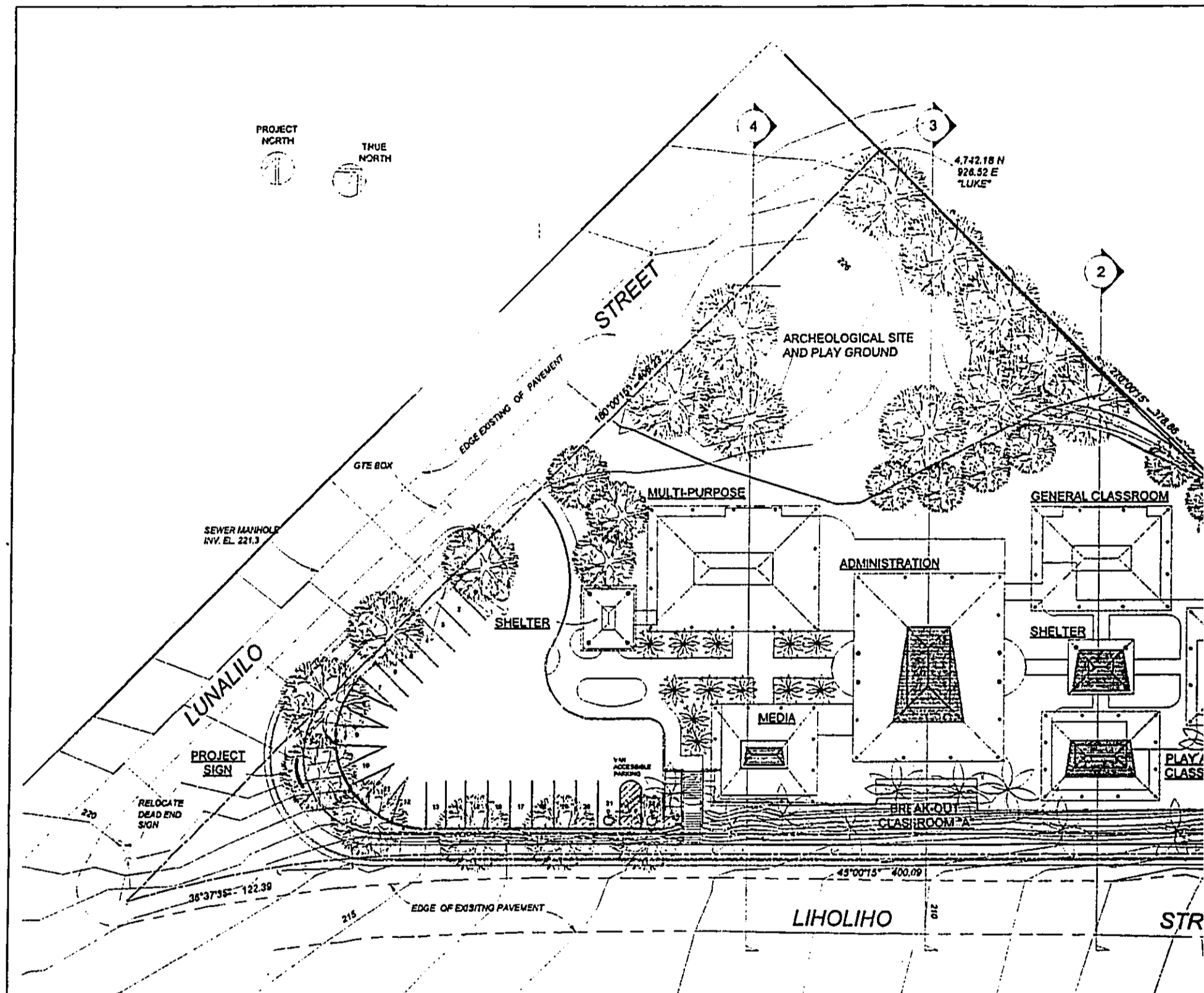
Play areas have been designated. There will be an herb and edible plant garden and an area for lo'i or dryland taro patches. See Figure A-3. Na Leo Pulama does not intend to use any chemicals or fertilizers which could possibly be harmful in maintaining landscaped areas on the site, to avoid harm to the children, parents, staff members and other users of the facilities.

A 22-stall paved parking area, with 2 stalls reserved for handicapped parking, is provided in the western portion of the site. See Figure A-3. Other improvements include landscaping, road widening with curbs, gutters and sidewalks and a water line extension. There will also be 20 public parking stalls along the Liholiho Street side of the site which may be used by parents picking up A-Plus students. There will be 10 parking stalls along the Lunalilo Street side of the site which may be used by the ten staff members.

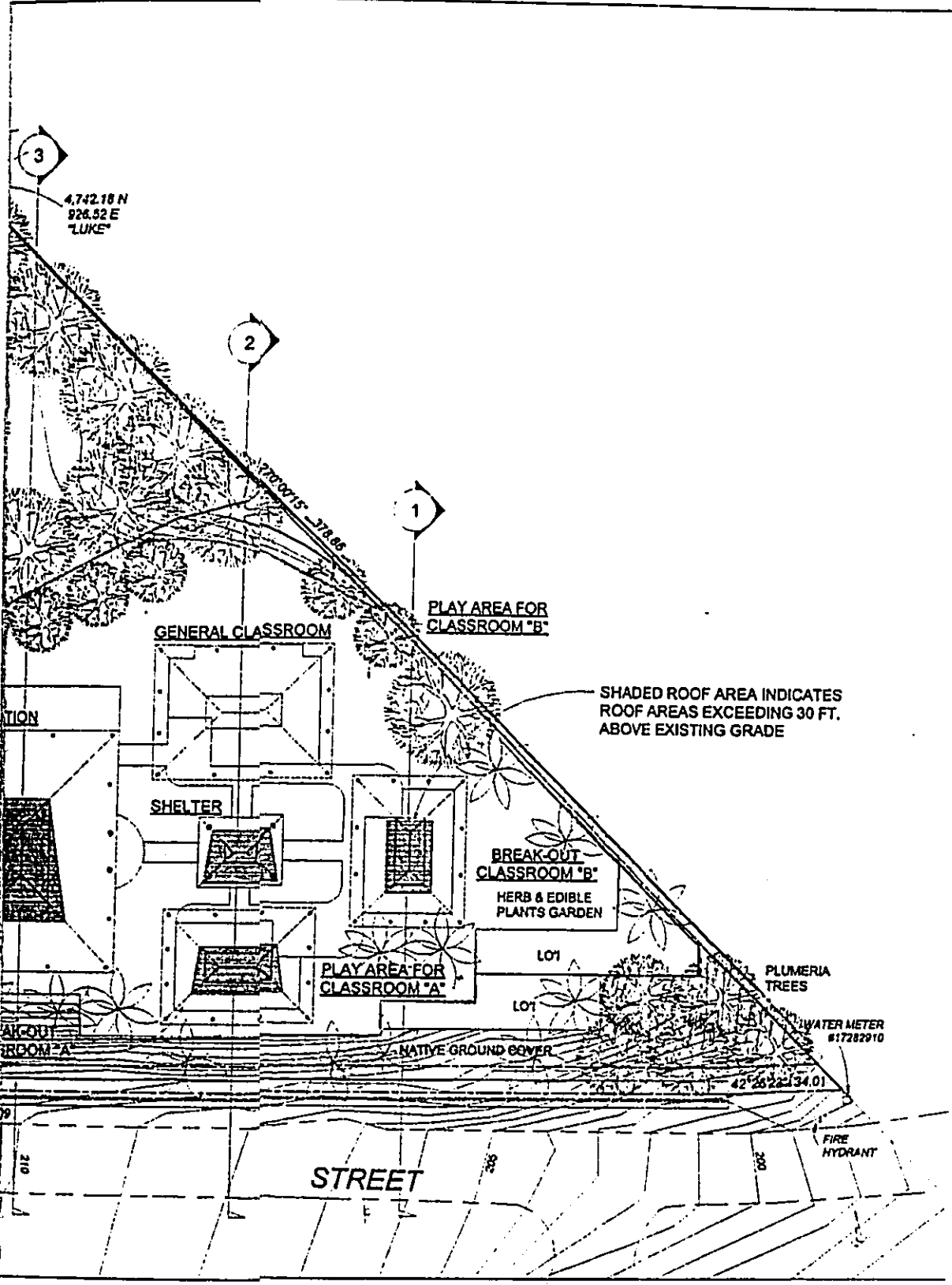
The entrance to the preschool will be from Lunalilo Street. It will be possible to come to the school or leave the school from Lunalilo Street, leading to Kaahumanu Avenue, and from Liholiho Street leading to Kanaloa Avenue and Kahului Beach Road.

Liholiho Street joins Lunalilo Street at an approximately 45 degree angle at the northwest corner of the site. To address traffic concerns and to provide multiple turning movements, this corner of the triangle has been "rounded," resulting in a loss of some of the project site through roadway widening.

There are joint electric and telephone poles and wires running along Lunalilo and Liholiho Streets. Roadway widening lots have been required along both Liholiho and Lunalilo Streets. As such, the majority of these poles and wires will need to be re-placed either underground or above ground just within the project site.



T.M.K:(2)3-8-08:47  
 AREA=1.679 ACRES



**MAUI ARCHITECTURAL GROUP INC.**

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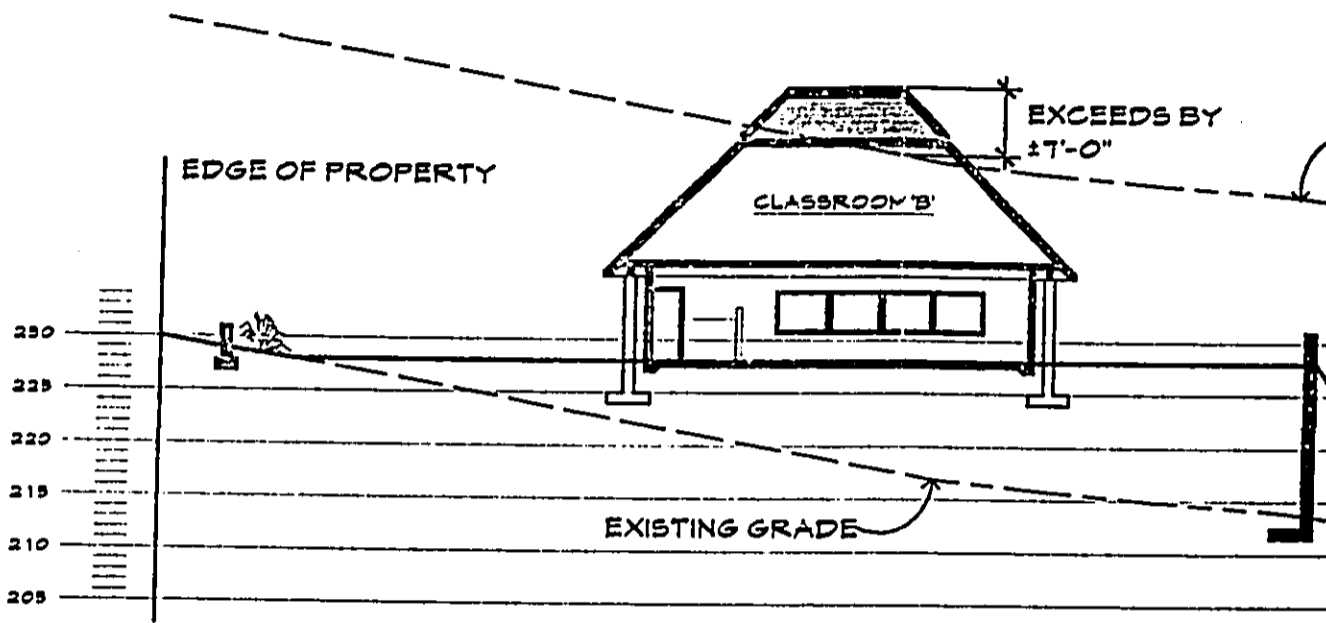
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Pumana Leo O Maui Hawaiian Language Preschool  
and Family Language Resource Center  
Wailuku, Maui, Hawaii  
T.M.K.: (2) 3-8-07 : 47


New Site Grading Plan

Date: 6-18-98  
Scale: AS NOTED  
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Job: XXX-28

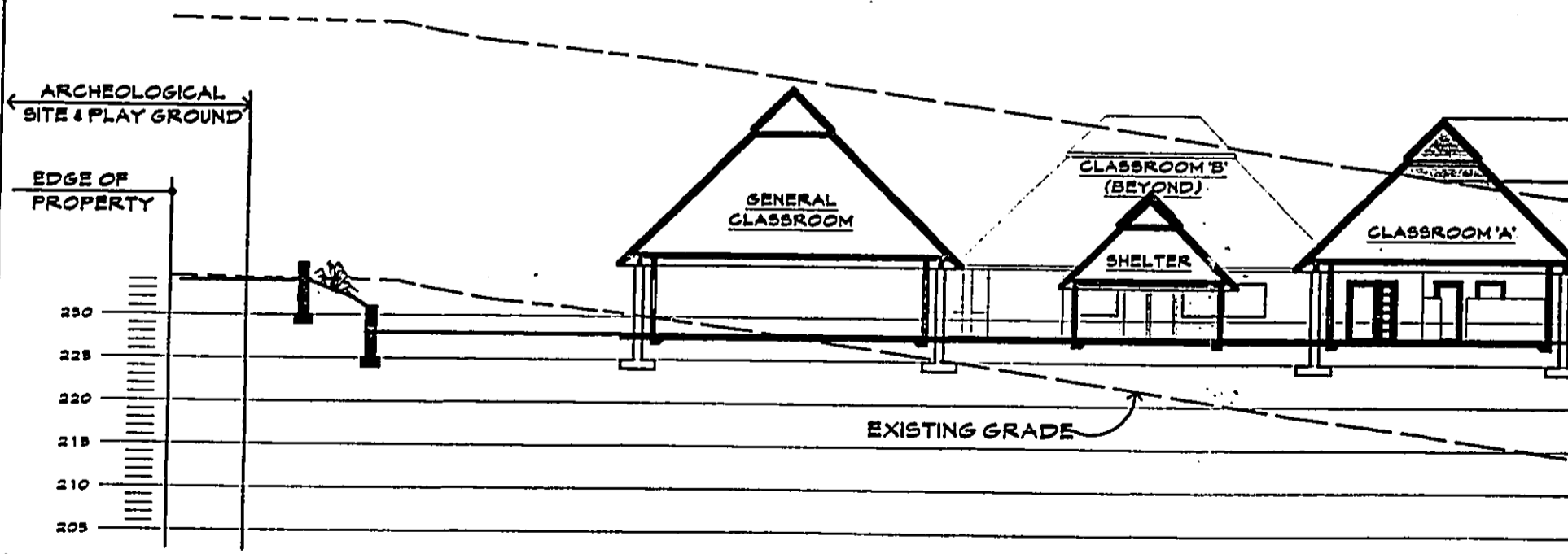
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Sheet 3 of 9

**1 SITE PLAN**  
Scale: 1/20



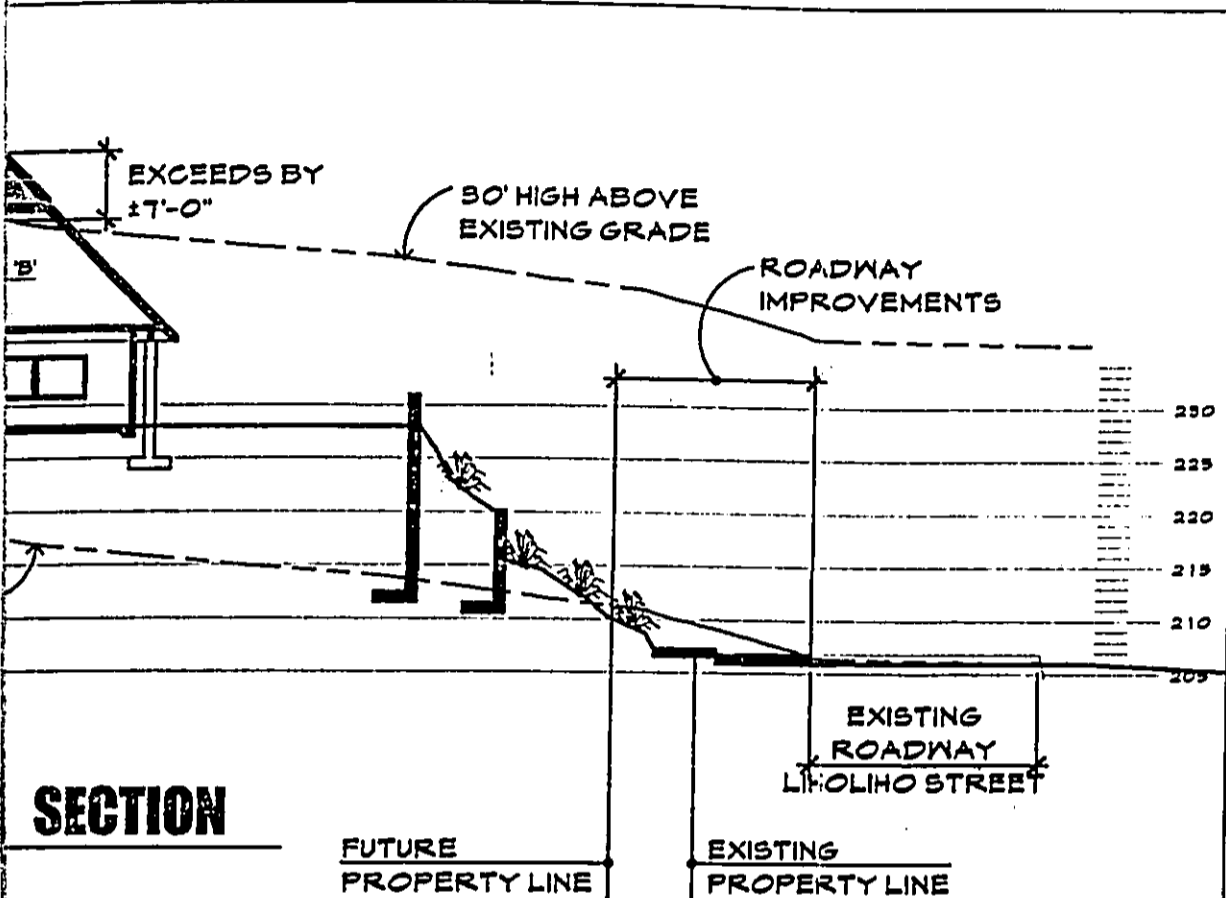
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FUTURE PROPE



2 SITE SECTION

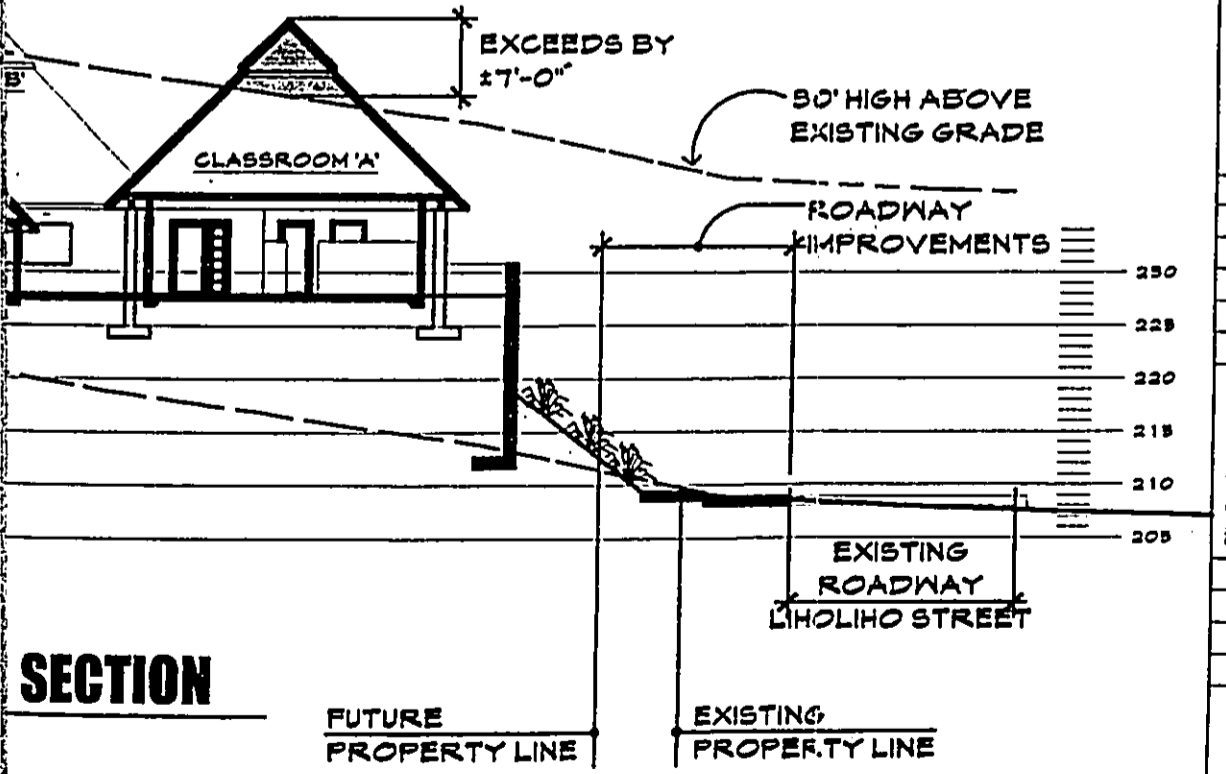
FUTURE PROPE



**SECTION**

FUTURE PROPERTY LINE

EXISTING PROPERTY LINE



**SECTION**

FUTURE PROPERTY LINE

EXISTING PROPERTY LINE



**MAUI ARCHITECTURAL GROUP INC.**

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**Na Leo Pulama O Maui, Inc.**  
Punana Leo O Maui Hawaiian Language Preschool  
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Wailuku, Maui, Hawaii  
T.M.K.s: (2) 3-8-07 : 47

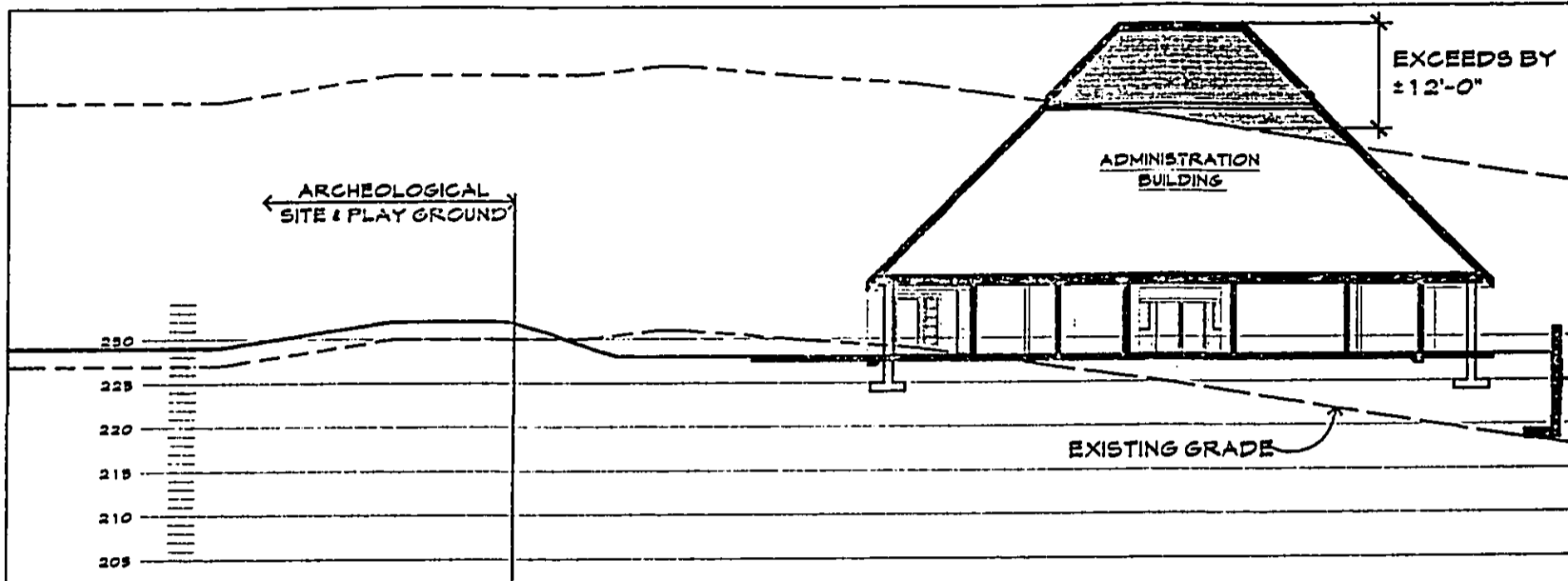
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**A-4**

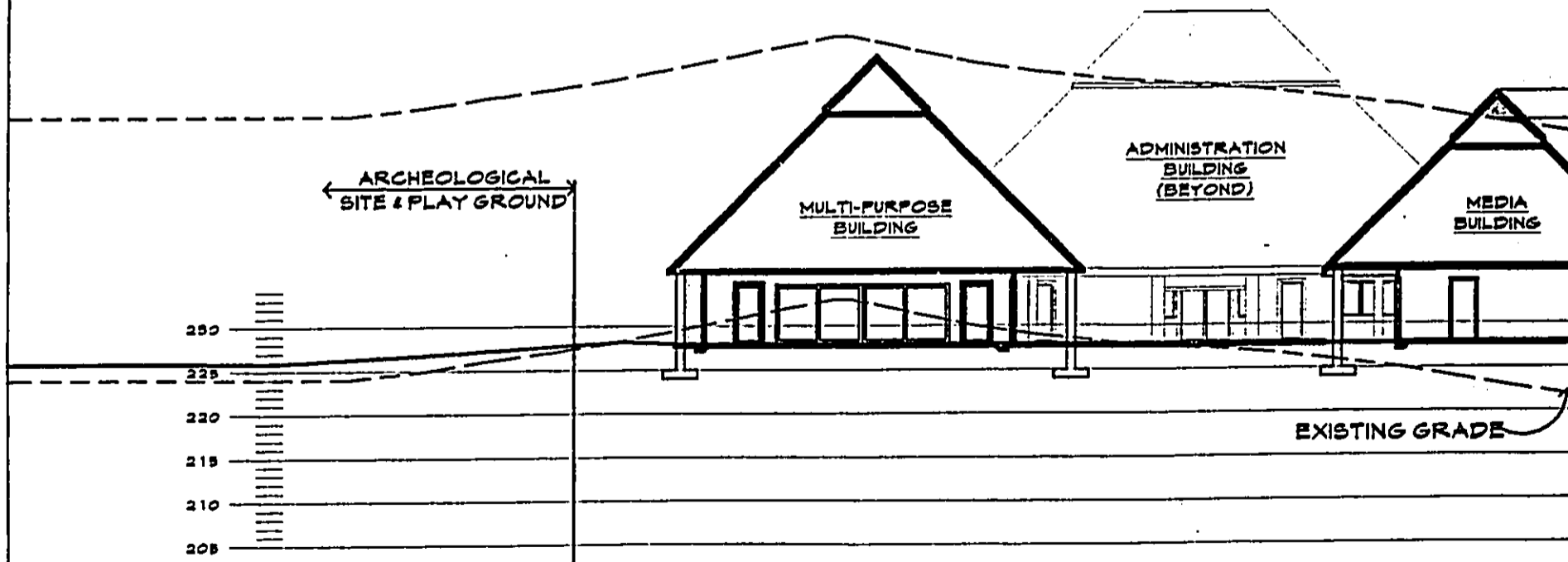
Page 4 of 5





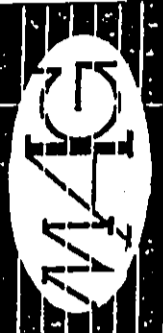
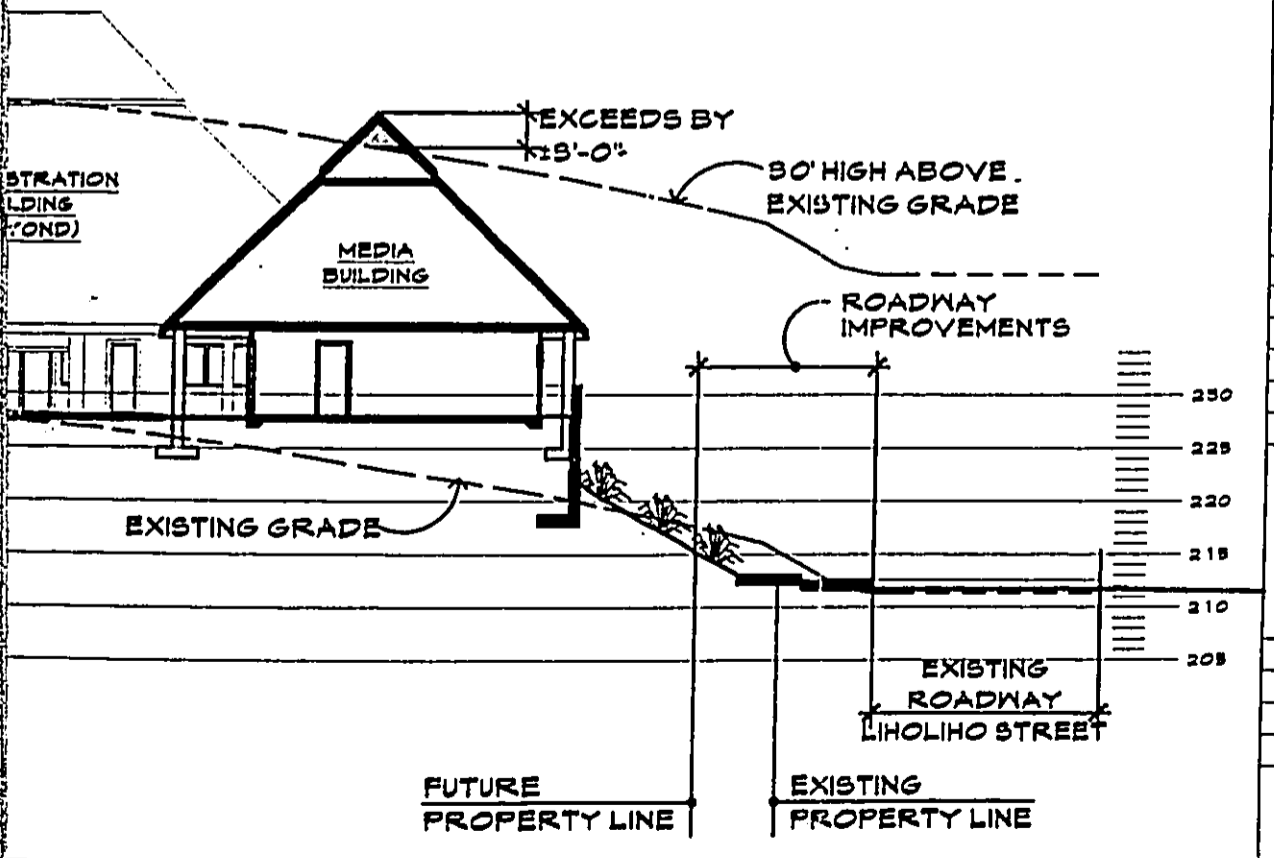
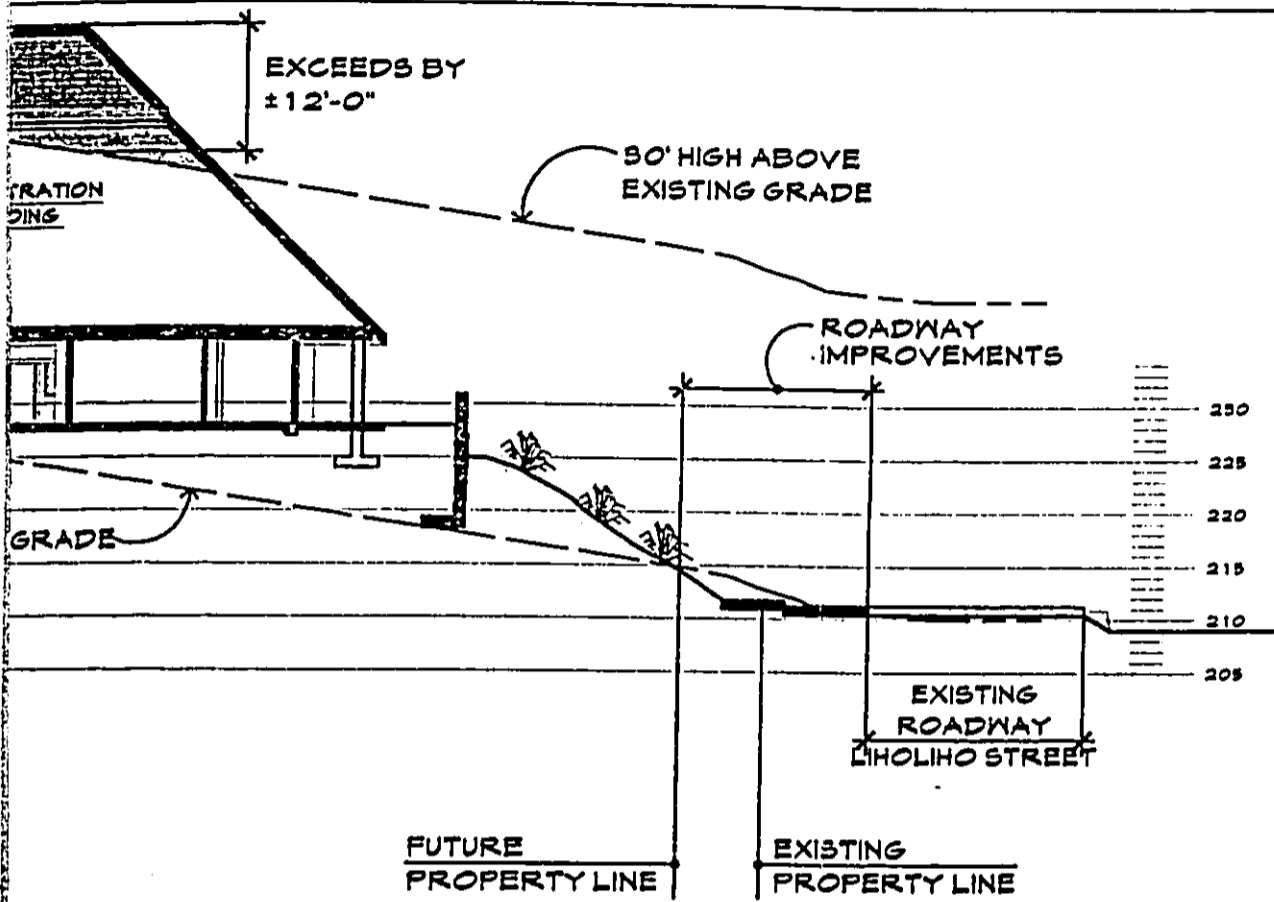
**3 SITE SECTION**

FUT  
PRC



**4 SITE SECTION**

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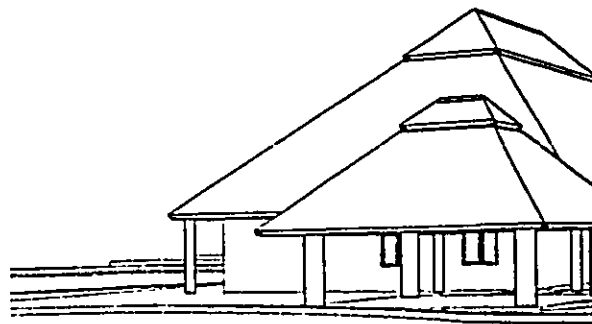
**MAUI ARCHITECTURAL GROUP INC.**  
 2111 A MAUI STREET  
 HAWAII ISLAND HONOLULU HI 96813  
 TELEPHONE (808) 242-8011  
 FAX (808) 242-1176

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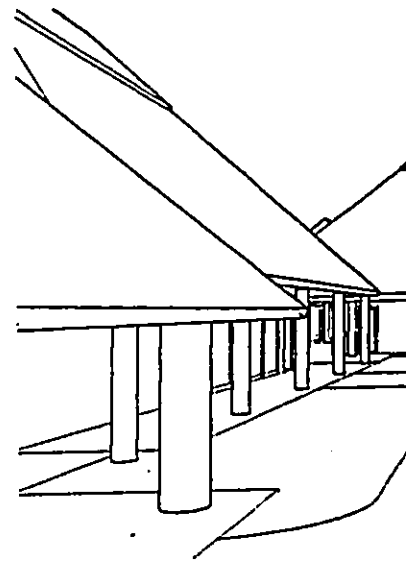
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**Na Leo Pūlama O Maui, Inc.**  
 Pūlana Leo O Maui Hawaiian Language Preschool  
 and Family Language Resource Center  
 Wailuku, Maui, Hawaii  
 T.M.K.: (2) 3-8-07 : 47

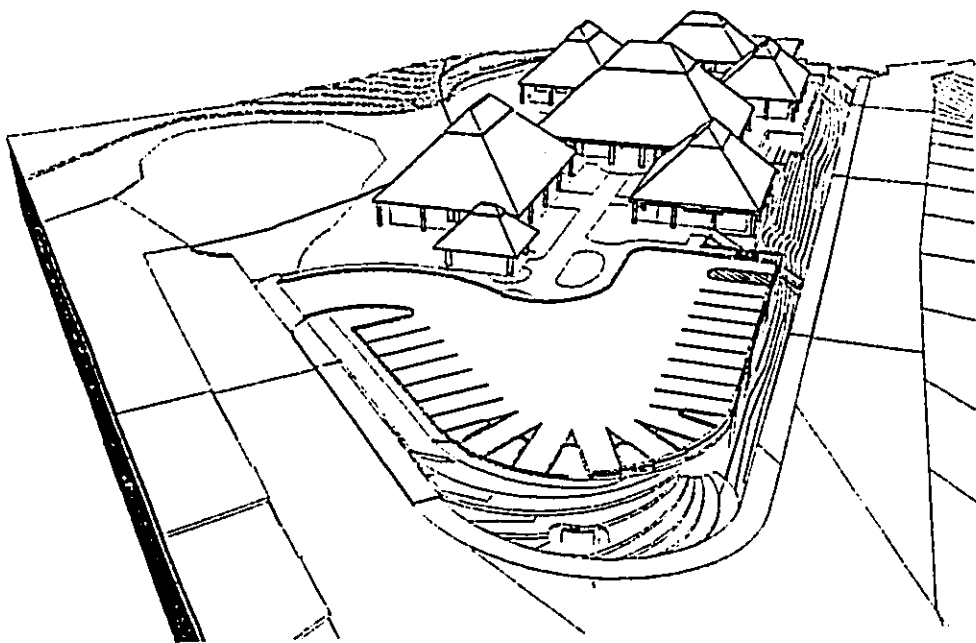
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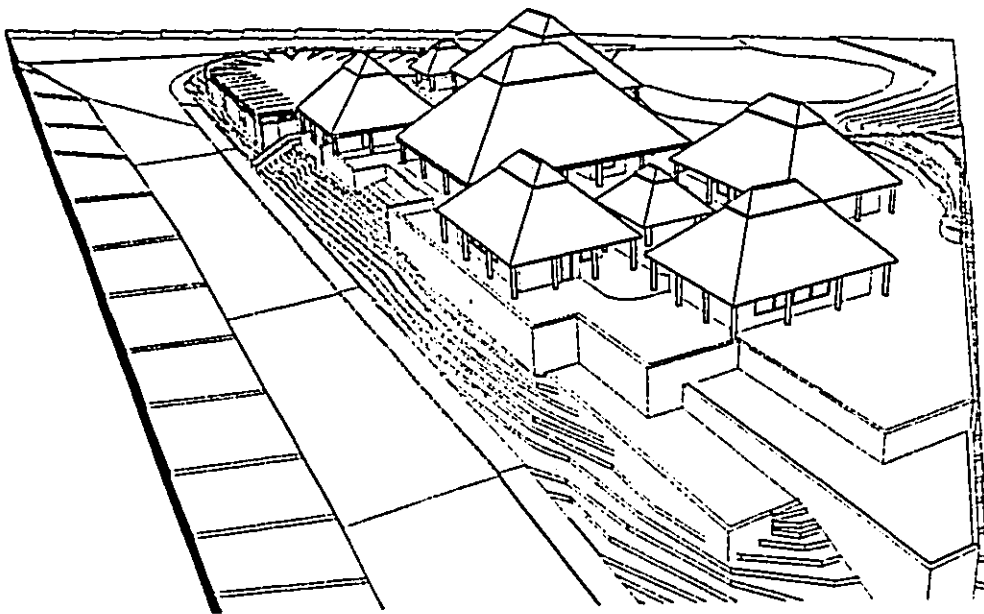
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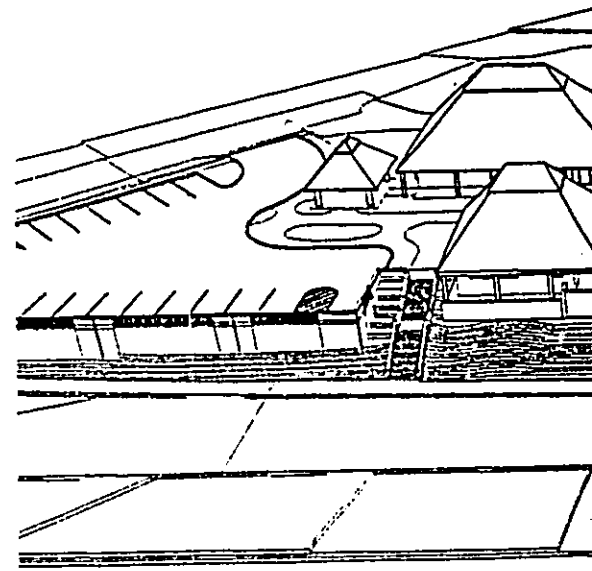
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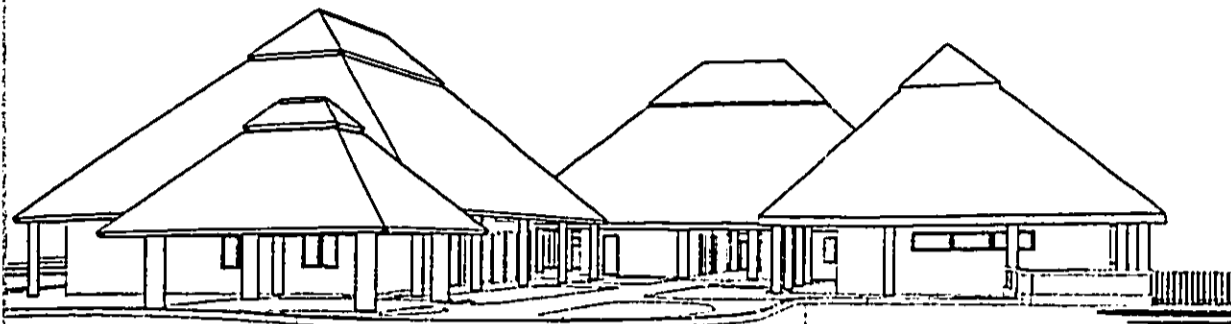
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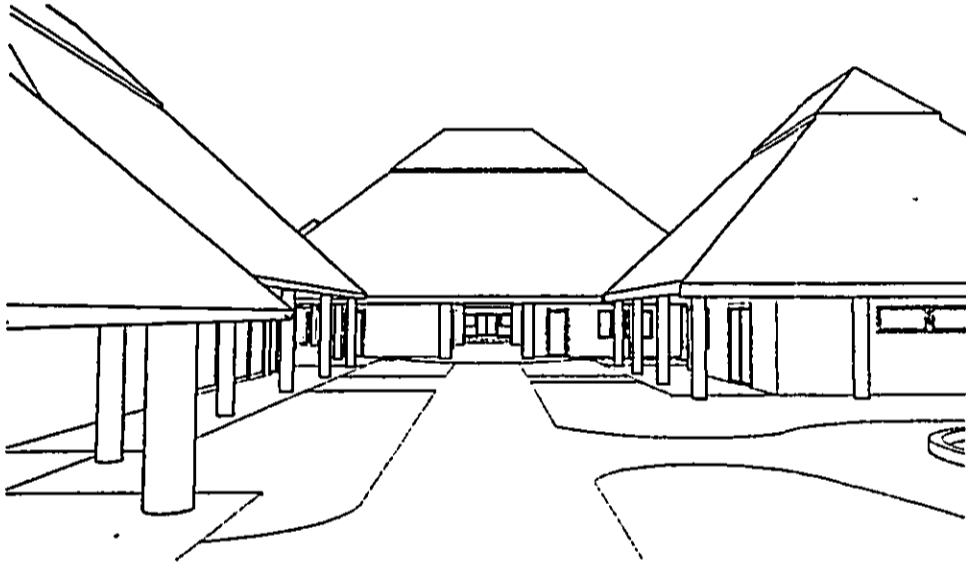
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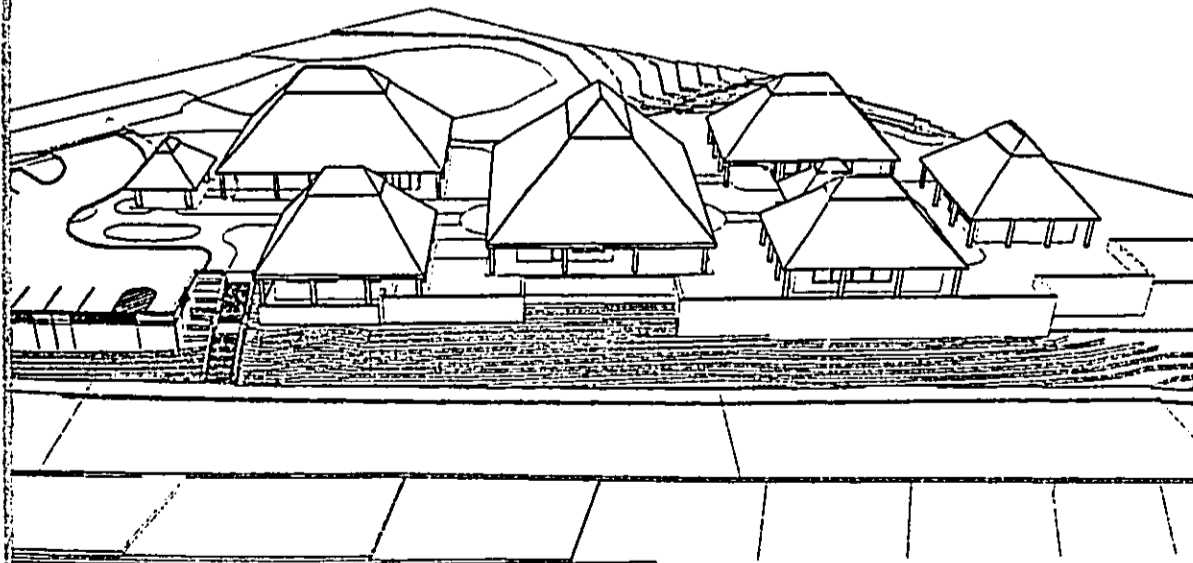
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1 PERSPECTIVE VIEW FROM PARKING  
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2 PERSPECTIVE VIEW FROM ENTRY  
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4 PERSPECTIVE VIEW FROM ACROSS LIHOLIHO STREET  
NTS



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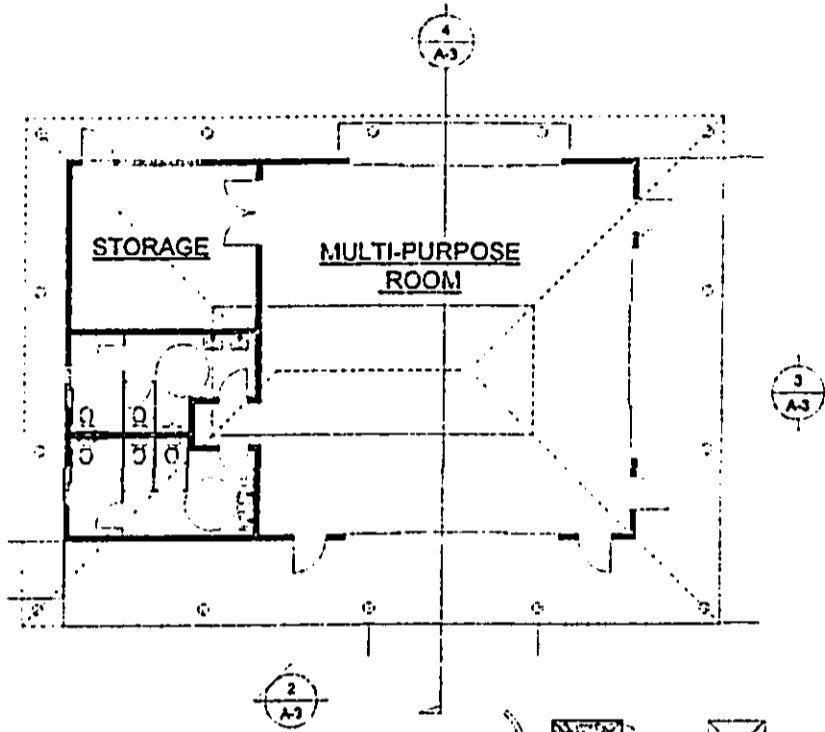
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THE ARCHITECT FOR THIS PROJECT.  
Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

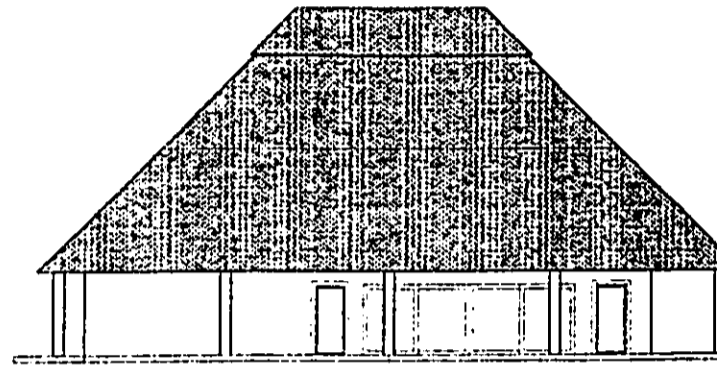
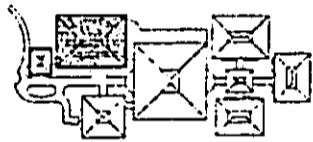
**Na Leo Pulama O Maui, Inc.**  
Punana Leo O Maui Hawaiian Language Preschool  
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Wailuku, Maui, Hawaii  
T.M.K.C. (2) 3-8-07 : 47


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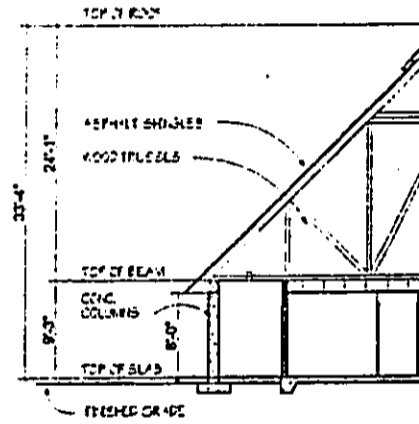
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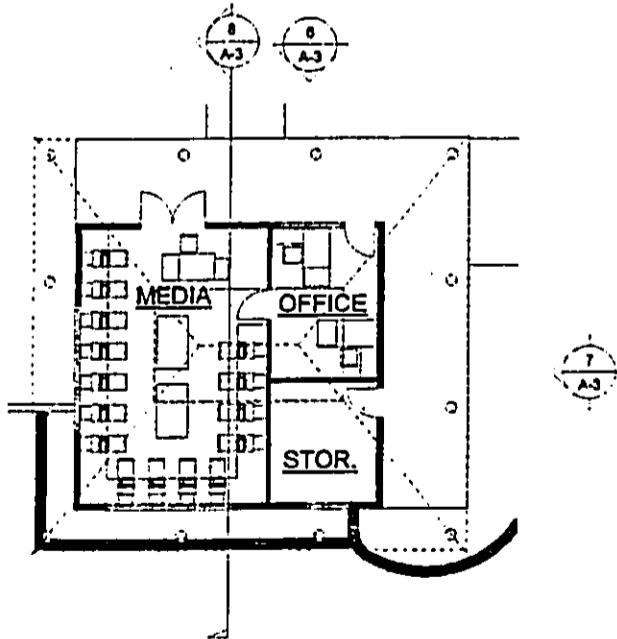
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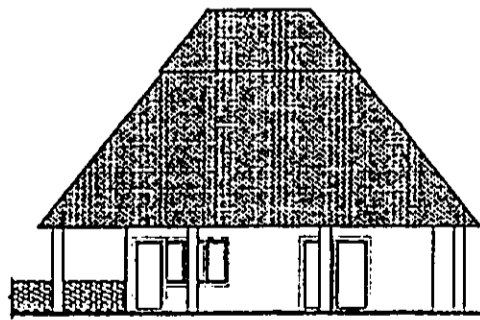
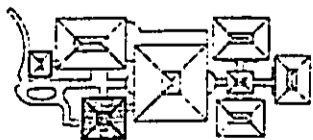
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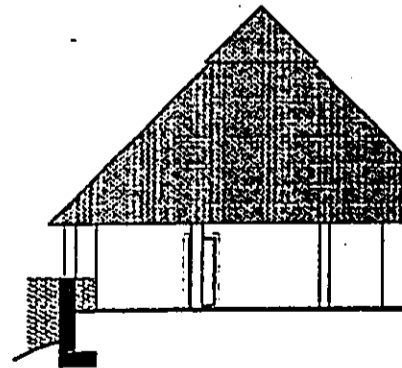
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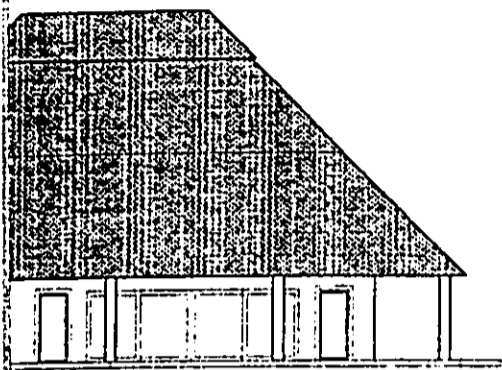
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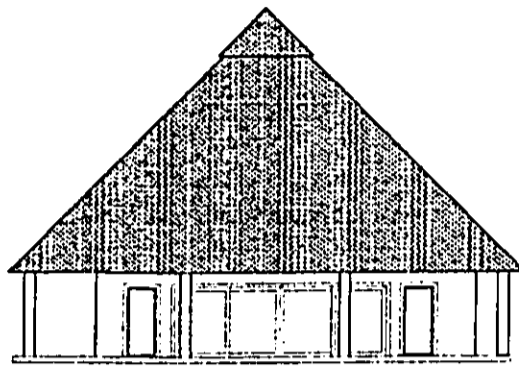
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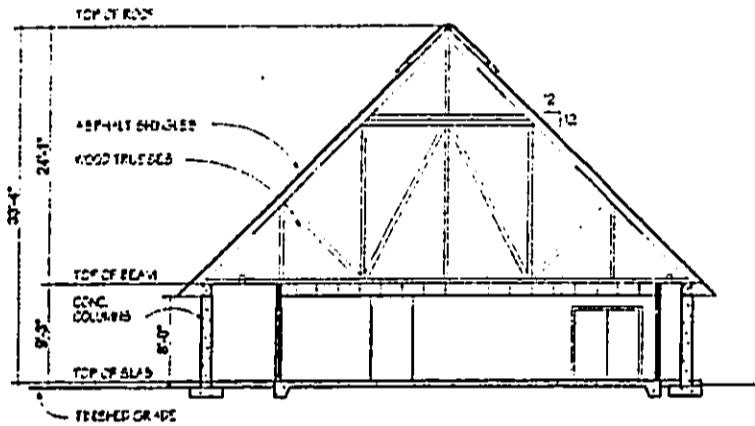
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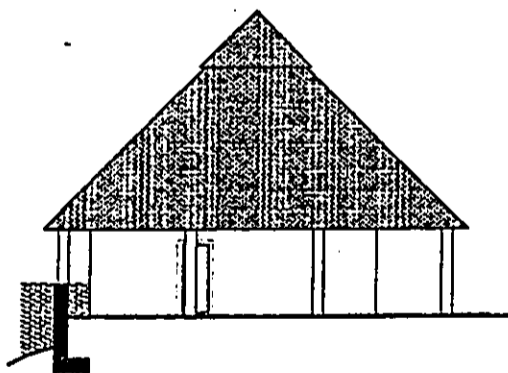
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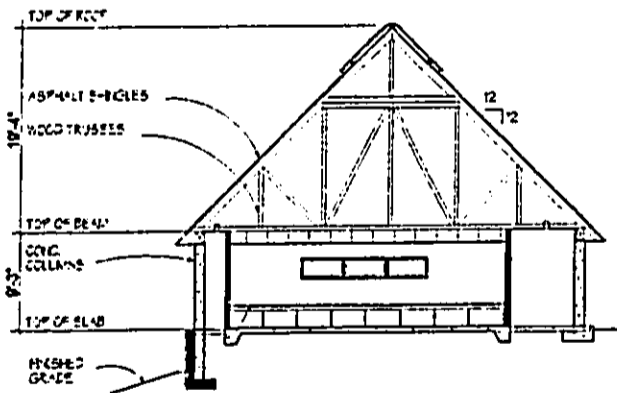
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4 MULTI PURPOSE CROSS SECTION  
Scale: 1/8"=1'-0"



7 MEDIA EAST ELEVATION  
Scale: 1/8"=1'-0"



8 MEDIA SECTION  
Scale: 1/8"=1'-0"



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DATE: 08/13/98

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T.M.K. (2) 3-8-07 : 47

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MULTI PURPOSE  
MEDIA

08-13-98

AS NOTED

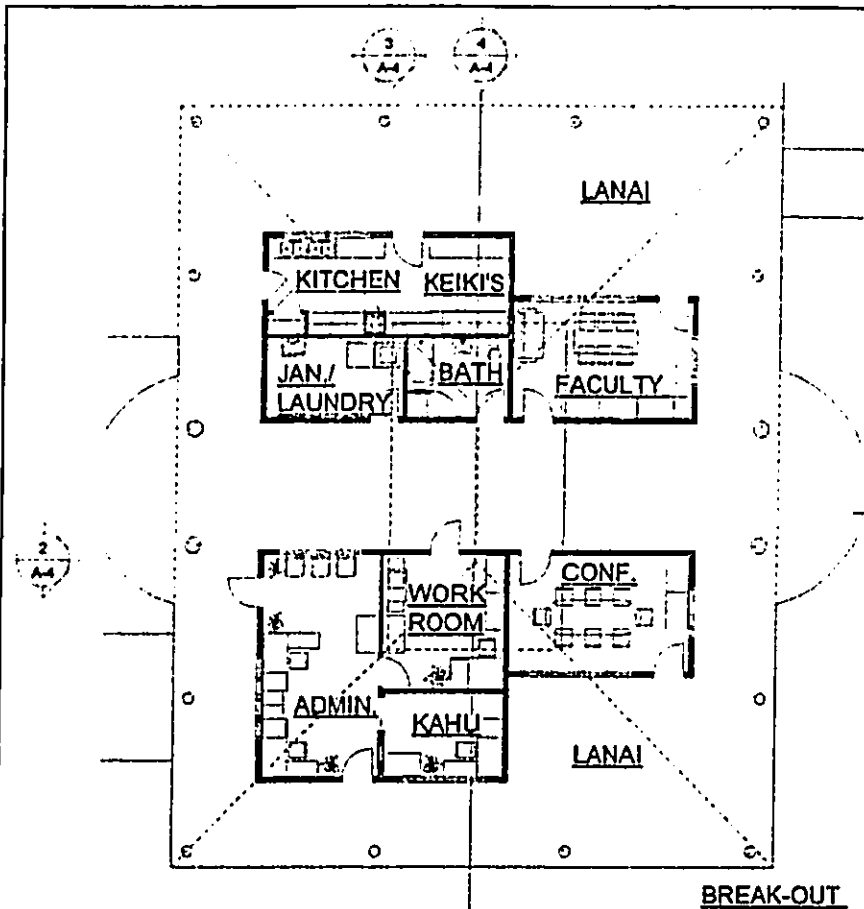
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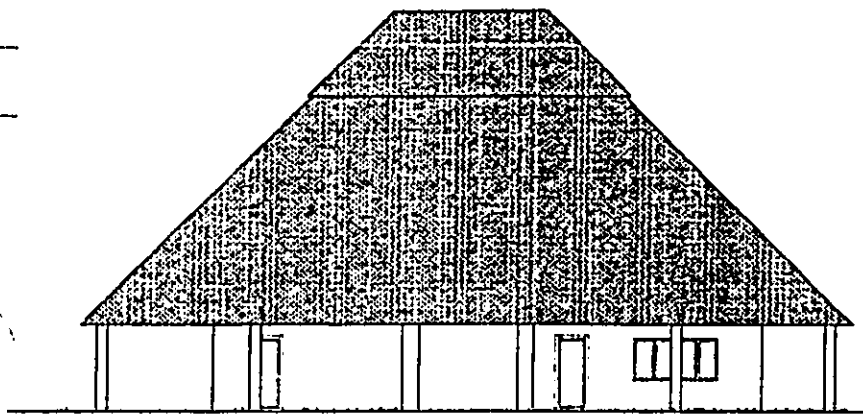
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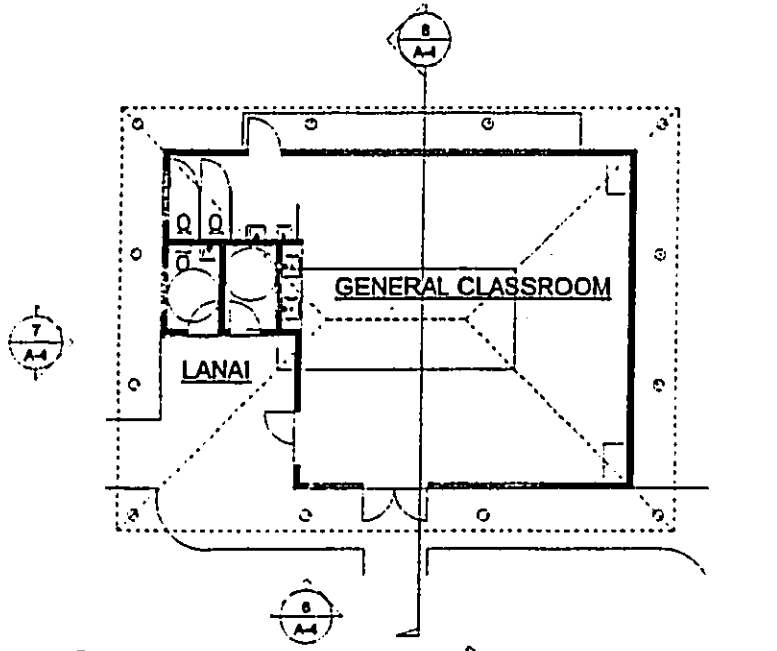
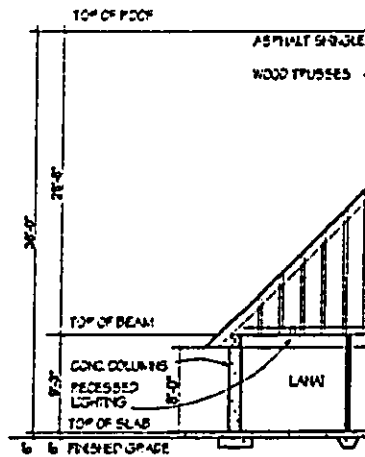
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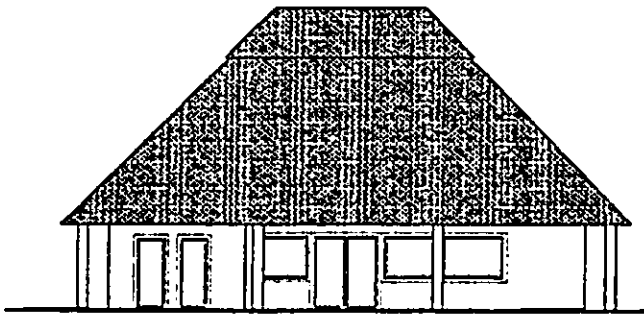
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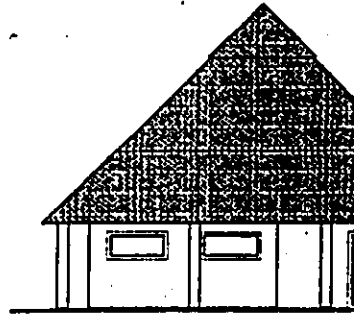
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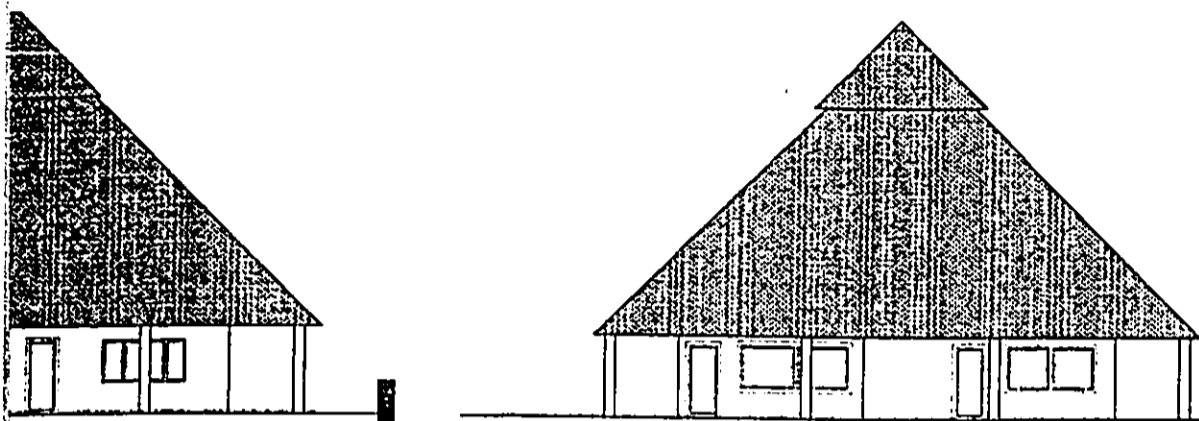
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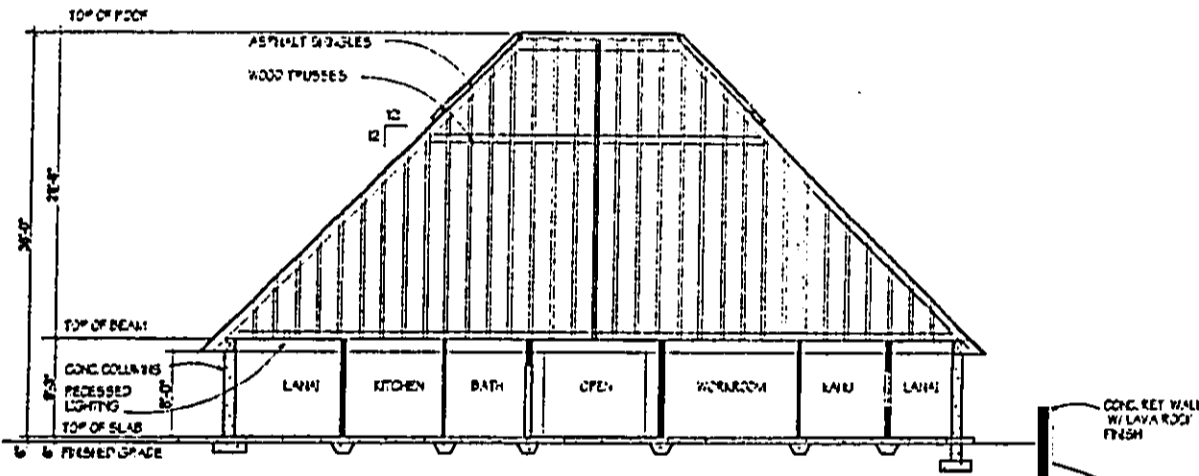
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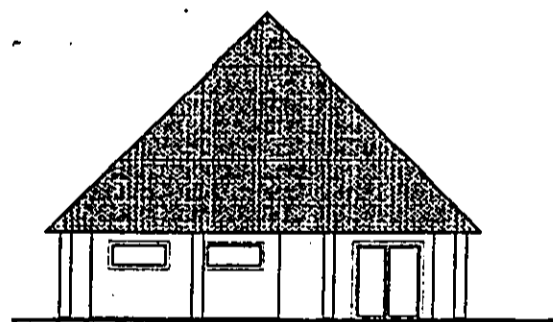
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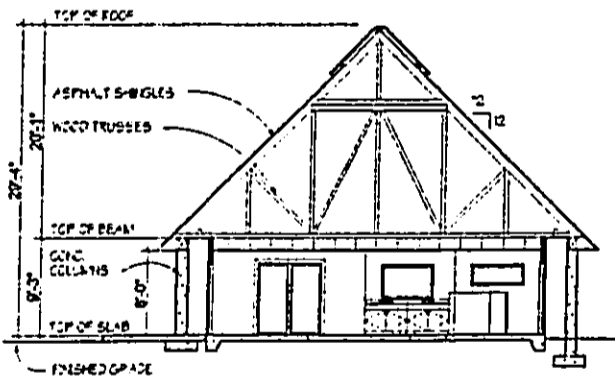
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7 GENERAL CLASSROOM WEST ELEVATION  
Scale: 1/8"=1'-0"



8 GENERAL CLASSROOM CROSS SECTION  
Scale: 1/8"=1'-0"



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and Family Language Resource Center  
Wailuku, Maui, Hawaii  
T.M.K.C: (2) 3-8-07 : 47

ADMINISTRATION  
GEN. CLASSROOM

0-18-00

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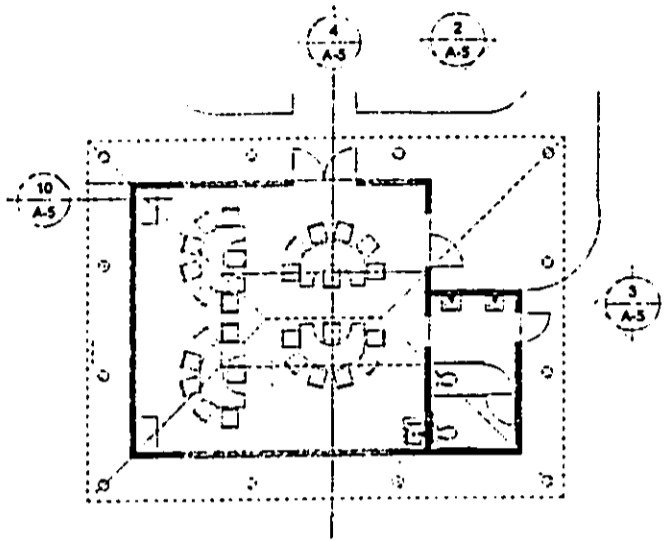
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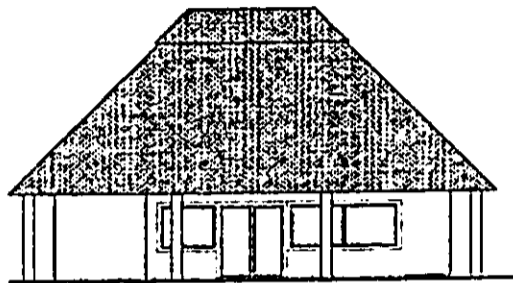
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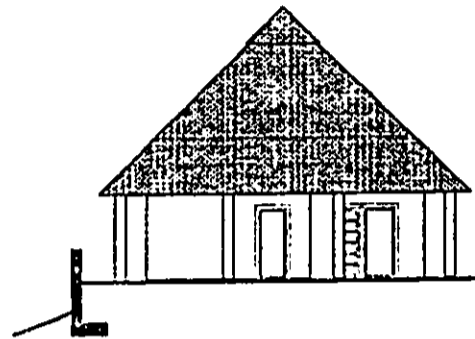




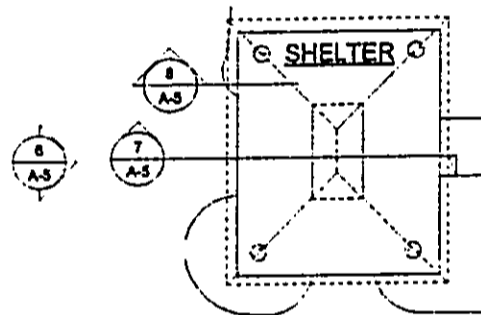
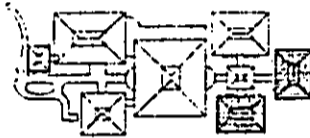
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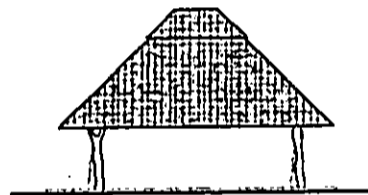
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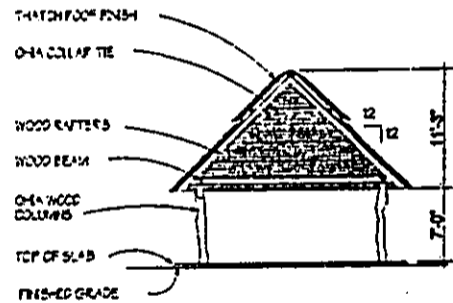
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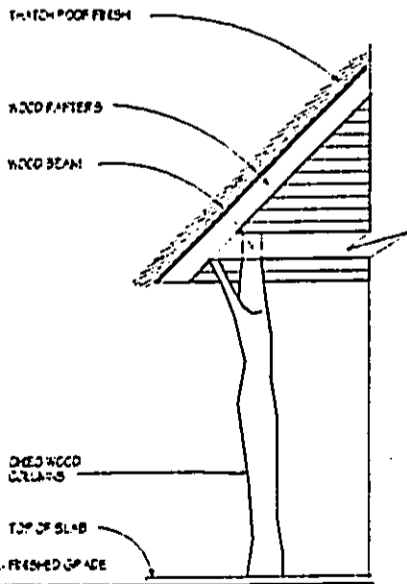
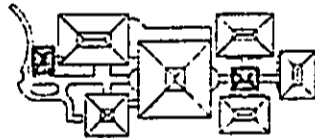
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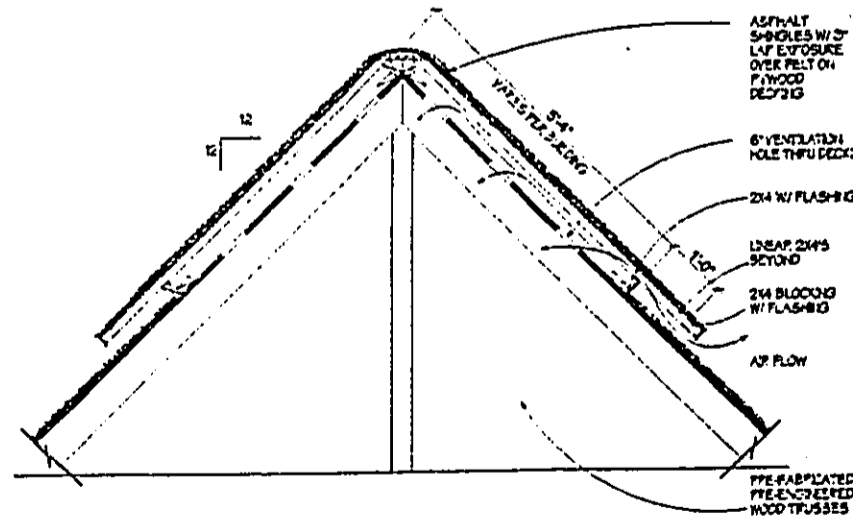
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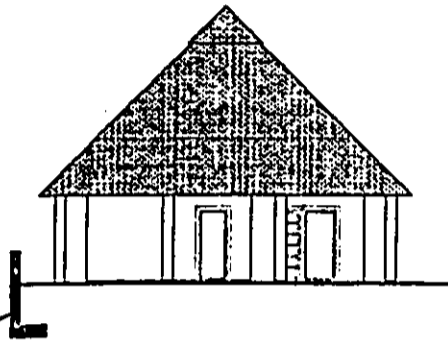
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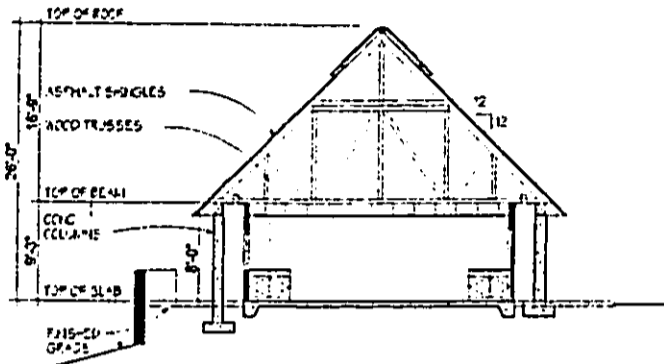


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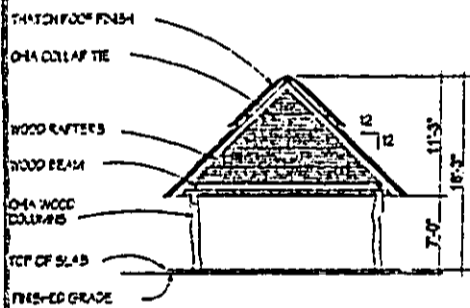
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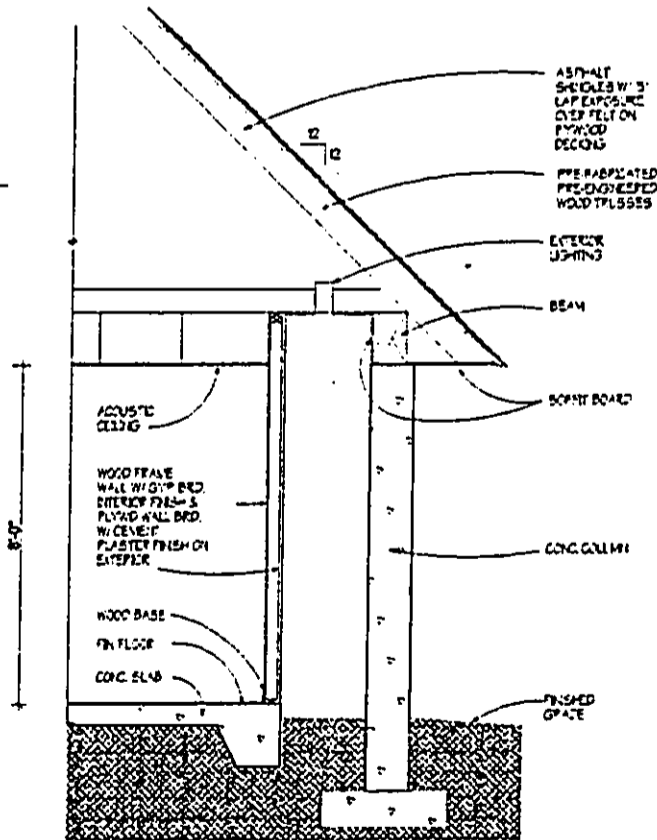
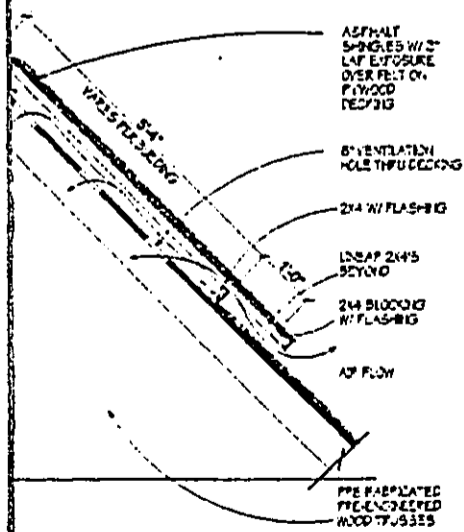
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7

**TYPICAL SHELTER SECTION**  
Scale: 1/8"=1'-0"



10

**TYPICAL WALL SECTION**  
Scale: 1/2"=1'-0"



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STATE OF HAWAII. I HEREBY  
CERTIFY THAT I AM THE  
DESIGNER OF THIS PROJECT.

**Na Leo Pulama O Maui, Inc.**  
Punana Leo O Maui Hawaiian Language Preschool  
and Family Language Resource Center  
Wailuku, Maui, Hawaii  
T.M.K.C. (2) 3-8-07-47

DATE	9-18-88
BY	AS NOTED
FOR	A9 Bldg Sec PUN LAY
NO.	000-000
REV.	

**BREAK OUT CLASS ROOM ROOF DETAIL WALL SECTION SHELTER**

**A-9**

V. PROPOSED USES AND OPERATIONS/GENERAL CHARACTERISTICS OF THE ACTION

This new facility will be operated by the Board of Directors and staff of Na Leo Pulama o Maui, Inc. Facility usage guidelines and agreements will support the group's mission, overseen by the Board and strictly administered by on-site staff members. The preschool facility will be leased to the 'Aha Punana Leo for continued Hawaiian immersion programming. Other facility usage will be on a pre-approved scheduled basis either for long-term regular operations or one-time events. The facility will be available for use seven days a week starting at 7:30 a.m. Functions will begin later on weekends. All functions will be required to be cleaned-up with lights out by 10:00 p.m.

There will be approximately ten staff members. Seven of these will be teachers at the preschool. There will be two Hawaiian language multi-resource positions, one for the director of the preschool and one for an assistant to the director. The final staff member will be the administrator for the Family Language Resource Center complex.

The tuition for the preschool is \$350 per month. Tuitions are highly subsidized however, through federal funding available through the Native Hawaiian Education Act. Subsidies are available up to \$245 per month for families needing them. Many qualified families take advantage of other community subsidy programs, such as Open Doors, IN PEACE and Childcare Connection. In addition, through the fundraising of Na Leo Pulama, \$10-\$50

per family per month is available. The 'Aha Punana Leo covers the staffing and Hawaiian language multi-resource costs for the preschool.

A. Primary Usage - The Preschool

The preschool will use the three buildings on the far north/east end of the property: the large main classroom and the two smaller "breakout" classroom buildings for age-group lessons and nap time. Students and staff will also have access to the certified kitchen (situated in the large Hawaiian language multi-resource building) throughout the day and with weather permitting will eat snacks and lunch on the large lanai area bordering the playground.

Full capacity for the new preschool will be 50 students and 10 staff though it is most likely that those numbers will be not be reached until at least the second or third year of operation.

Outdoor play areas are situated within a fenced area bordered by the large classroom building and terraced retaining walls. Play periods will be from 10:30 a.m. to 11:30 a.m. and from 3:30 p.m. to 5 p.m.

School hours will be Monday through Friday from 7:30 a.m. to 5 p.m. Assuming full facility capacity, traffic will peak at approximately 50 cars entering and leaving the property between 7:30 a.m. and 8:30 a.m. and then again during afternoon pick-up between 3:30 p.m. and 5 p.m. Staff and business operations will have another 10 to 15 cars coming and going throughout the day.

B. Family Language Resource Center

The Family Language Resource Center will occupy the west end of the property -- with programming being run out of the main Hawaiian language

multi-resource building, certified kitchen, media center, outdoor spaces and multi-purpose building.

The centrally-located Hawaiian language multi-resource building holds office space and a small conference room along with storage, janitor and bathroom facilities. The building also holds the certified kitchen and teacher work room which will primarily support the preschool operation. The kitchen will be available to community groups on a pre-approved, scheduled basis.

The media center will primarily be used for after-school programming on school days from 2 p.m. to 5 p.m. and support approximately 40 students in grades K-8. School busses will drop the students off. The students will utilize the media center, multi-purpose room and outdoor areas in supervised programming until parents pick them up between 4 p.m. and 5 p.m. The parents will be directed to pick them up on the Liholiho Street side.

Whereas the multi-purpose building will support the after-school program, it will also be made available for the evening parent language classes required by the preschool, as well as for other language and cultural classes offered by other community-based programs. The building will be available on a pre-approved scheduled basis to these programs seven days a week from 7:30 a.m. to 10 p.m. Maximum capacity for the building is 80 people.

Outdoor gathering space is also available at the facility on a pre-approved scheduled basis. No sound amplification systems will be allowed without prior approval of the facility board.

Na Leo Pulama has discussed joint programming with the Boy Scouts and looks forward to working near them. The Boy Scouts Center has a parking area which contains approximately 20 parking stalls. Na Leo Pulama would like

to make some arrangements with the Boy Scouts to use this parking area, if necessary, for special events.

A community meeting with all immediate neighbors invited to attend was conducted on June 24, 1997. Invitations were hand-delivered to residents. About 12 neighbors attended. Most of those who attended were supportive of the project. Noise was an issue raised by one neighbor who appeared to be satisfied once the relationship of that neighbor's lot to the site was discussed. Measures to address the traffic concerns and safety for the children were raised and have been incorporated into the project. The original driveway entrance was moved from Liholiho Street to Lunalilo Street. The Applicant will conduct another community meeting to update neighbors upon the filing of this application.

Na Leo Pulama hopes to commence construction in the Spring of 1999. It is hoped that construction will be completed by the end of 1999.

C. Phases

This project may be constructed in two phases. In Phase I, the Hawaiian language multi-resource building, the general classroom, the two breakout classrooms and all of the infrastructure would be constructed. Construction of Phase I is anticipated to commence in the Fall of 2001. The estimated cost of this Phase is approximately \$1,962,000.

In Phase II, the multi-purpose and media buildings would be constructed. The construction of Phase II is anticipated to commence in the Fall of 2002. The estimated cost of Phase II is approximately \$468,000.

Phasing will in all likelihood be elected so that the project may commence with some but not all of the funding for the project in place.

Phasing will also have the benefit of increasing impacts (at whatever degree) on an incremental basis. In result, such impacts as traffic impacts will not all be experienced at the commencement of the project. The impacts experienced initially will be less than the impacts of the project upon full implementation. This will allow impacts to be monitored by the Applicant and adjustments to be made by the Applicant to assure that impacts are kept to an acceptable level.

D. Permits or Approvals Required

<u>Permit or Approval</u>	<u>Final Decision-Making Authority</u>
Change in Zoning	Maui County Council
Height Variance	Board of Variances and Appeals
Grading Permit	Dept. of Public Works
Building Permits	Dept. of Public Works

VI. PROJECT IMPACT ASSESSMENT BASED UPON AN ANALYSIS OF THE CRITERIA FOR A CHANGE IN ZONING APPROVAL

A. Methodology

The criteria for a Change in Zoning are set out in Maui County Code §19.510.040.4a.-f. Applications for such permits must contain the certain information and documents as set out in Maui County Code §19.510.010.D.1.-25. This information has been deemed necessary to allow a determination as to whether these criteria have been met. The required information has been organized and presented here based upon the subject matter of each criterion. Secondary impacts are discussed throughout.

This section includes a summary of the affected environment. It identifies project impacts and alternatives which have been considered

B. This Project Satisfies the Criteria for a Change in Zoning

1. The Proposed Request Meets the Intent of the General Plan and the Objectives and Policies of the Applicable Community Plan of the County

a. The General Plan

(i) The Intent of the General Plan

The 1990 Update of the General Plan of the County of Maui was adopted by Ordinance No. 2039 which took effect on September 27, 1991. The General Plan was subsequently amended by Ordinance No. 2234 which took effect on April 23, 1993.

Five major themes emerged through the 1990 Update of the General Plan. These themes manifest an intent to de-emphasize a larger dependency on the visitor industry and to re-focus upon providing a physical and social infrastructure meeting the needs of local residents.

(ii) Objectives and Policies on Education

Objectives and policies on education are contained within Section V of the General Plan entitled "Social Infrastructure."

Educational Objectives

Objective 1 is:

To provide Maui residents with continually improving quality educational opportunities which can help them better understand themselves and their surroundings and help them realize their ambitions.

The Na Leo Pulama project fully satisfies this intent of the General Plan. The Punana Leo preschool provides continually improving quality educational opportunities for native Hawaiian and other children on the Island of Maui. By teaching in Hawaiian, native Hawaiian children, in particular, can better



understand themselves and their surroundings through an appreciation of the Hawaiian language and native Hawaiian traditions and customs. Punana Leo reinforces the connection of native Hawaiian children, in particular, to their cultural identities and provides a setting within which they can grow and flourish in a positive manner which, in the long run, helps them realize their ambitions as native Hawaiians.

Educational Policies

Policy b.     Require that quality educational facilities and services be available to all residents

The Hawaiian and English languages are the official languages of the State of Hawaii, according to Hawaii's Constitution. Yet there are far too few educational facilities and services which provide quality educational opportunities in the Hawaiian language. Na Leo Pulama provides an early opportunity for Hawaii's children to be educated in the Hawaiian language. The County of Maui has recognized Na Leo Pulama's important role in agreeing to lease this land to Na Leo Pulama.

Policy c.     Seek to Continue Improvement in the Quality of Education at all Levels for all Residents

The construction and operation of this Na Leo Pulama facility constitutes one form of the continued improvement in the quality of education for Maui's residents. Na Leo Pulama provides important educational opportunities at the pre-school level, for the K-8 after-school program and for adult language classes.

Policy g. Support the State and the Maui Community in the Provision of Pre-school Curriculum for Four Year Olds

Na Leo Pulama satisfies the intent of this policy by providing a pre-school curriculum for four year olds.

Policy j. Encourage the State to Continue Funding Preschool Language Immersion Programs

This educational policy includes a specific reference to supporting "preschool language immersion programs." Na Leo Pulama's Punana Leo is such a preschool Hawaiian Language Immersion Program. The approval of this application will assure the long-term existence of such a preschool on the Island of Maui.

(iii) Land Use Objectives and Policies

It is a land use objective of the General Plan:

... to use the land within the County for the social and economic benefit of all the County's residents.

The County of Maui has leased this property to Na Leo Pulama so that Na Leo Pulama may construct and operate a preschool which provides educational opportunities in the Hawaiian language. This satisfies one of the land use objectives of the General Plan because this property is being made available to Na Leo Pulama for uses which are of social and economic benefit to County residents.

(iv) Cultural Resources Objectives

It is a cultural resources objective of the General Plan:

... to preserve for present and future generations the opportunity to know and experience the arts, culture and history of Maui County.

One of the general purposes of Na Leo Pulama is to provide the opportunity to know and experience the arts, culture and history of Maui

County. It does so for present and future generations by teaching the arts, culture and history of Maui to preschool children at a time when they are most receptive to learning the Hawaiian language and about arts, culture and history in the native Hawaiian language. Na Leo Pulama preserves these opportunities at a particularly important time when elder native Hawaiian speakers are diminishing in number and a new generation of speakers are necessary in order to preserve the Hawaiian language and present and future generations and in order to foster a truer understanding of the arts, culture and history of native Hawaiians in Maui County through the Hawaiian language.

b. The Wailuku/Kahului Community Plan

The proposed request meets the objectives and policies of the applicable community plan of the County. This plan is the Wailuku-Kahului Community Plan which is dated October, 1981. An update of this plan has been commenced, however the October, 1981 Plan will probably be in effect throughout the review of this request for a County Special Use Permit.

The Wailuku-Kahului Community Plan recognizes that Wailuku is the civic and business center of Maui as well as the cultural center of Maui. Kahului is viewed as a business and industrial center of Maui.

The residential districts surrounding Kahului and Wailuku are different in character. The Kahului residential areas are newer, with wide curvilinear streets. Wailuku however is composed of older residential areas, intermixed with business uses, varying lot sizes, and a more haphazard street pattern representative of older subdivision practices, according to this community plan.

Locating preschools within residential areas is a common mix of land uses woven into the fabric of the residential areas in Wailuku and Kahului. Preschools of all types have existed for years throughout the residential communities within Kahului and Wailuku without any significant incompatibility.

The Punana Leo preschool has operated for many years in a residential community within the Wailuku Baptist Church and its adjacent property, both located on High Street on the way out of Wailuku town. Na Leo Pulama already has valuable experience on the responsible manner in which to operate a preschool within a residential district.

There are no specific objectives and policies within the current Wailuku-Kahului Community Plan which discuss preschools and the location of preschools within residential districts. Permitting Na Leo Pulama to construct its facility on this parcel does help to revitalize Wailuku and to contribute to its renewal, which supports economic activity objectives listed on page 9 of the plan. The location of this preschool is in close proximity to other public and quasi-public uses such as Baldwin High School, and the War Memorial Gymnasium and playing fields, and is an appropriate manner in which to meet Wailuku-Kahului Community Plan objectives and policies to further Wailuku as the cultural center of the island.

2. The Proposed Request is Consistent with the Applicable Community Plan Land Use Map of the County

The parcel upon which the proposed request is to be located in designated Public/Quasi-public on the Wailuku-Kahului Community Plan Land Use Map which is applicable in this instance. The Plan indicates that the

Public/Quasi-public land use category includes: "schools, libraries, fire/police stations, government office buildings, public utilities, hospitals, churches, cemeteries and community centers." (Emphasis added.) The uses proposed by Na Leo Pulama are public/quasi-public in nature and are therefore consistent with the land use map.

In addition, the Maui Comprehensive Zoning Ordinance defines a "quasi-public use or quasi-public facility" as "a use conducted by, or a facility or structure owned or operated by, a non-profit, religious, or a eleemosynary institution which provides educational, cultural, recreational, religious or other similar types of public services." (Emphasis added.) See Maui County Code §19.04.040. Thus, in Maui County, a non-profit organization providing educational services constitutes a quasi-public use and is therefore appropriately located within an area designated for Public/Quasi-public uses in a local community plan.

3. The Proposed Request Meets the Intent and Purpose of the Applicable District

The parcel upon which the Na Leo Pulama facility is to be located is zoned R-3 Residential. Residential districts are established to provide for harmonious residential neighborhoods for single-family dwellings without the detraction of commercial and industrial activities. Maui County Code §19.08.010. Nevertheless, greenhouses, parks and playgrounds, elementary, intermediate, high schools and colleges, government buildings and preschool kindergartens serving six or fewer children are permitted uses within Residential districts. Maui County Code §19.08.020.A-H.

Preschool kindergartens serving more than six children are declared special uses in the Residential district for which approval must be obtained from the Maui Planning Commission. Maui County Code §19.080.030.B.

The Maui County Council has established procedural and substantive standards for the issuance of Special Use Permits. Maui County Code §19.510.070. Before the Maui Planning Commission may permit a preschool serving more than eight children in a Residential district as a special use, the eight criteria for a special use permit set out in Maui County Code §19.510.070.B. must be met. Because this project satisfies these eight criteria or can satisfy these eight criteria once appropriate conditions are imposed, this request meets the intent and purpose of the Residential District.

4. The proposed development will not adversely affect or interfere with public or private schools, parks, playgrounds, water systems, sewage and solid waste disposal, drainage, roadway and transportation systems, or other public requirements, conveniences and improvements

This criterion is intended to determine if the project will overburden the existing infrastructure. If so, further analysis is required through criterion 7 which provides that public service demands created by the proposed use must be fulfilled.

To assess the infrastructural impacts of this project, the Applicant retained licensed professional engineer Ms. Annette H. Maelua of the Engineering Dynamics Corp. to prepare the following technical reports: a Traffic Assessment Report (Appendix "A"), a Drainage Report (Appendix B"), a Domestic Flow Report (Appendix "C"), a Sewage Flow Report (Appendix "D"), and a Solid Waste Disposal Report (Appendix "E"). These reports have been prepared to a degree of detail which is commensurate with the relatively small

size and scope of this project. In addition, at the request of several reviewing agencies, a full traffic impact study has been prepared by Randall Okaneku.

a. Traffic Impacts

(i) The Maielua Report

The Traffic Report acknowledges that the new facility will increase the amount of traffic traveling along Lunalilo and Liholiho Streets. The school's morning peak period, an estimated 40 vehicles per hour, will occur after the recorded peak period for Liholiho Street. The afternoon Liholiho Street traffic will be moderately increased due to the regular distribution of parental pick-up times between 3:30 and 5:00 p.m.

The roadway improvements for this project are ample to accommodate the anticipated traffic. The Lunalilo Street pavement will be widened to 26 feet from pavement edge to curb face. Liholiho Street pavement will be widened to 28 feet from pavement edge to curb face. The fork intersection of the two streets will be enlarged by roadway dedication to provide multiple turning movements. There is ample site distance at the new driveway location.

Vehicles may approach or leave the facility via Lunalilo Street from or to Kaahumanu Avenue or via Liholiho Street to or from Kanaloa Avenue and Kahului Beach Road. This will tend to spread traffic impacts evenly.

The installation of the traffic light at the Baldwin High School entrance and exit has created periods of time when turns from Lunalilo Street onto Kaahumanu Avenue and turns from Kaahumanu Avenue to Lunalilo Street can take place without congesting traffic. Some residents have complained about speeders along Liholiho Street. Na Leo Pulama agrees with these residents and supports speed bumps being placed on Lunalilo and Liholiho Streets.

While the proposed project will have an impact on traffic, the roads with proposed improvements will have sufficient capacity to accommodate this anticipated increase in traffic.

(ii) The Okaneku Report

Based upon the comments of the Maui Police Department, the County Department of Public Works and the State Department of Transportation, the Applicant retained Randall Okaneku to prepare a more detailed traffic impact analysis for the preschool. This analysis is attached hereto as Appendix A-1. Its contents are summarized below.

The roadways within the immediate vicinity of the project have the capacity to accommodate this project. The intersection of Kaahumanu Avenue and Lunalilo Street already has low levels of service.

During the morning peak hour, the existing left turn and through volumes from Lunalilo Street were relatively low. The traffic signals on Kaahumanu Avenue at Baldwin High School driveway created gaps in the west-bound traffic, permitting Lunalilo Street traffic to turn onto Kaahumanu Avenue. The median on Kaahumanu Avenue provided shelter for some crossing vehicles. Left turn and through traffic from Lunalilo Street, crossing half of Kaahumanu Avenue at a time, experienced LOS "D" conditions. Vehicles on Lunalilo Street, attempting to cross or turn left onto Kaahumanu Avenue in one movement experience LOS "F" conditions.

The afternoon peak hour of traffic occurred between 4:00 p.m. and 5:00 p.m. Lunalilo Street at Kaahumanu Avenue operated at LOS "F" during this period of time. The gap-creating effect of the Kaahumanu Traffic signals at Baldwin High School driveway was less evident. The existing peak hour traffic



demand on Lunalilo Street did not meet the minimum peak hour volume warrant for the installation of traffic signals.

With 50 students attending the preschool and 40 students attending the after-school program, the proposed Punana Leo preschool is expected to generate a total of 42 vehicle trips per hour during the a.m. peak hour and 77 vehicles per hour during the p.m. peak hour (36 vehicles per hour entering and 41 vehicles per hour exiting).

The traffic assessment reviews the anticipated future development of (1) the Maui Memorial Medical Center, (2) Maui Lani, (3) the J. Walter Cameron Center and (4) Mahalani Street.

As a worst case scenario, Mr. Okaneku assumed that all of the Punana Leo traffic would arrive and depart using the Lunalilo Street and Kaahumanu Avenue intersection. This is highly unlikely to occur because a significant number of users living in places such as Waihee and Waiehu are probably going to arrive and depart via Kanaloa Avenue.

Peak hour traffic with the project is analyzed. The report concludes that "the intersection of Kaahumanu Avenue and Lunalilo Street/Kainani Street is not expected to significantly be impacted by the proposed Punana Leo o Maui, during the AM peak hour of traffic." The left turn movement from Lunalilo Street to eastbound Kaahumanu Avenue is expected to operate at LOS "F", however the right turn movement is expected to improve to LOS "B". The overall approach on Lunalilo Street is expected to operate at LOS "D" during the AM peak hour of traffic with the proposed project. The projected AM peak hour traffic demand on Lunalilo Street is not expected to meet the MUTCD

peak hour volume warrant for the installation of traffic signals under the improved roadway conditions.

During the PM peak hour of traffic with the proposed project, Lunalilo Street is expected to continue to operate at LOS "F" at Kaahumanu Avenue. The right turn movement is expected to improve to LOS "B" as a result of the proposed exclusive right turn lane, however the operation of the overall approach is expected to remain at LOS "F". The AM and PM peak hour traffic with the proposed project and results of the capacity are depicted on Figure 5.

The traffic report contains the three recommendations set out below:

1. Drop-off and pick-up activities should be accommodated within the project site.
2. The approach of the north leg of Lunalilo Street at Liholiho Street should be realigned to reduce the skewed angle of the intersection. Appropriate intersection sight distances should be established in the design phase and verified during the construction phase of the development.
3. Lunalilo Street should be widened at Kaahumanu Avenue to provide an exclusive right turn lane or;

The Applicant believes that these mitigation measures are necessary now, even without this project. The traffic report finds that this project will not have an increased impact upon this intersection during the a.m. peak hour of traffic and will not have an impact on this intersection during the p.m. peak hour of traffic that would change its current LOS "F" designation. The Applicant discusses these recommendations in more detail in § VIII of this report/assessment.

Three agencies -- the Maui Police Department, the Maui Department of Public Works and the State Department of Transportation -- had earlier expressed concerns about the traffic impacts of this project on the intersection

of Kaahumanu Avenue and Lunalilo Streets. After reviewing the above-described TIAR, the Maui Police Department and the Department of Public Works have withdrawn their concerns so long as the three recommendations set out above are implemented. The State Department of Transportation believes that a traffic signal must be installed at the intersection of Lunalilo Street and Kaahumanu Avenue. The Applicant does not believe that this is necessary or that the traffic impacts from the project project have the requisite nexus with the requirement for the installation of a traffic signal. Nevertheless, the Applicant is willing to continue discussions with the State Department of Transportation on the traffic signal recommendation.

b. Drainage Impacts

The project site is currently vacant land with existing grades ranging between 233 feet and 200 feet AMSL. The runoff from the property primarily

sheet flows in two directions, northwest and southeast, due to a ridge in the terrain. The flow in the northwest direction ponds in a low area within the parcel. The runoff on the southeast side of the ridge flows to Liholiho Street. Hydrologic calculations show that the amount of runoff generated by the existing conditions is 1.3 cfs. Runoff on Liholiho Street flows northeasterly to a low point near Kapiolani Street. There is a new 24" concrete pipe that directs the water to a wooded low area behind the "Iron" Maehara Stadium. Storm runoff also reaches the same low area via Kalama Street.

By the grading plan for the project, the ridge will be regraded to allow for the construction of new buildings and therefore will reduce the runoff to Liholiho Street. The runoff from the site will be collected and directed to the natural low point within the property. The post-development runoff for the property will be 2.8 cfs, an increase of 1.5 cfs.

The majority of the runoff from the project currently flows down Liholiho Street and ultimately drains to the wooded low area behind the "Iron" Maehara Stadium. Regrading of the project site will reduce the runoff to Liholiho Street. On-site runoff will be directed to the existing low point where it will be retained until the water percolates into the ground.

Runoff to adjoining properties will be reduced. There will be no adverse affects on any adjoining or downstream properties as a result of this project.

c. Domestic Flow Impacts

The design flow for the project is 72 gallons per minute, based upon the anticipated number of fixture units (37 gallons per minute) and the irrigation needs (35 gallons per minute) for the project. As such, a 1 - 1-1/2 inch water

meter with a capacity of 100 gallons per minute is all that is necessary for this project.

This project lies within the Central Maui water system. Water meters of this size for this type of project are being issued by the Department of Water Supply.

d. Sewage Flow Impacts

The project will have an estimated sewage flow of 550 gallons per day. The project is located within the service area of the Department of Public Works and Waste Management. The sewage treatment plant in this area has sufficient capacity to receive this additional amount of sewage flow.

e. Solid Waste Impacts

A rubbish bin will be located in the parking area to allow for easy access for private refuse collection, with recycling capabilities, to dispose of solid wastes. Recyclable items include aluminum, glass, plastic, cardboard and newspaper. Green waste from landscaping maintenance will be used in on-site and/or off-site composting operations whenever possible.

f. Other Infrastructural Impacts

Other infrastructural impacts specifically listed are impacts upon public or private schools, parks and playgrounds. This project will perpetuate a private school and provide a playground area and meets the additional need for both of these instead of adversely affecting or interfering with schools or playgrounds.

5. The Proposed Development will not Adversely Impact the Social, Cultural, Economic, Environmental and Ecological Character and Quality of the Area

The focus of this criterion is upon the impact that the proposed project will have upon the existing "character and quality of the area." These impacts

may be "social, cultural, economic, environmental and ecological." Should any of these impacts be significant or "deleterious," the project must be designed or conditions to this approval must be added to protect the public from these effects, according to criteria 6.

The "character and quality of the area" is shaped by three important factors. First, the project site is a portion of a large tract of land originally set aside for Baldwin High School. Other small portions of this tract have been devoted to public/quasi-public uses such as the Boy Scouts facility and the Army Reserves facility. The High School tract itself is part of a much larger "public/quasi-public" complex comprised of the War Memorial Gymnasium and playing fields, the War Memorial Stadium, the Baseball Stadium, Keopuolani Park and Maui Community College. It is these collective uses which comprise the "character and quality of the area." So long as the environmental impacts of this project are like in nature to those of Baldwin High School, Maui Community College and the stadiums, this project is compatible with surrounding uses.

Second, public schools, elementary, intermediate and high schools, are permitted uses within the R-3 zoning district. Again, so long as the impacts of this project do not exceed the impacts which could be anticipated from permitted uses, such as these, within the district, the proposed uses will be compatible with surrounding uses.

Third, preschools have been allowed in residential districts through Special Use Permits on numerous occasions throughout Wailuku and Kahului. These preschools are part of the land use fabric of these areas. Na Leo Pulama has operated in the Wailuku Baptist Church facilities and on its property

adjacent to the facility, both of which are located in a residential district, through a Special Use Permit and has already learned how to be a good neighbor in a residential neighborhood.

The environmental impacts, including social, cultural, economic and ecological impacts, on the character and quality of this area, within the parameters discussed above, are addressed below.

a. Historic/Cultural Resources

All governmental entities in issuing discretionary approvals have a constitutional obligation to protect native Hawaiian traditional and customary rights and a statutory obligation to protect cultural and historic resources. PASH v. Hawaii County Planning Commission; 79 Haw. 425, 903 P.2d 1246 (1995).

A pre-contact habitation site was located and investigated on the northwestern portion of the triangular shaped property. This is an environmentally sensitive area. It has been designated SIHP No. 50-50-04-4418. It was dated to the 16th and 17th century by radiocarbon analysis. The archaeological site is in good condition and has been little impacted by post-contact activities on the subject parcel. The archaeological site is a rare example of a surviving habitation site in this area and has been deemed significant applying the criteria established under federal and state historic preservation guidelines. Preservation *in situ* was recommended. In addition, archaeological monitoring is the recommended mitigation for all grubbing and earth moving activities on this parcel which lies in the Pu'u One sand dune area. See Archaeological Report prepared by Xamanek Researches, attached as Appendix "F". The State Historic Preservation Division has corresponded with

Na Leo Pulama and its archaeologist through letters dated August 18, 1997 and October 6, 1997, attached as Appendices "F-1" and "F-2". The Revised Inventory Survey Report was found to be acceptable through a letter dated February 23, 1998, attached as Appendix "F-3".

Na Leo Pulama is pleased that this archaeological site was discovered on this property and that it can be incorporated into the project. From a purely site development feasibility perspective, it has increased the challenges faced by Na Leo Pulama. The preservation of the site provides important educational opportunities. It merges with and reinforces Na Leo Pulama's goal of preserving the Hawaiian language and culture.

There is no indication that mountain or beach access trails existed across this property.

On October 18, 1997, previously disturbed, fragmented human remains were found on the project site. The project archaeologist determined that the previously disturbed remains represented at least two individuals. The inadvertent discovery of these human skeletal remains was discussed by the Maui/Lana'i Islands Burial Council during the Council's November 26, 1997 and December 18, 1997 meetings. Once all ground disturbing activities have been completed, a Burial Treatment Plan will be prepared. The Applicant plans to rebury the human skeletal remains in an appropriate place on the site.

b. Views

The residences located on top of or near the top of the dunes have vistas which are undoubtedly considered important to the owners and lessees of these residences. The view corridors available post-development will not be any worse than the view corridors which were available when the parcel was covered with



kiawe trees which were 25-30 feet tall. This is so even given the height of the school facilities. For example, there is a bank approximately 7 feet tall, with its top at approximately 232 feet AMSL, across from the Haling residence.

Immediately makai of this bank were kiawe trees approximately 25-30 feet tall such that the tops of these trees would be at the equivalent of approximately 255 feet AMSL. These kiawe trees blocked any view from the Haling residence over and across this parcel. These kiawe trees have now been removed temporarily creating a view from this residence. The Haling residence will

ultimately gain a view it never had before across the parking lot area of the site.

The Bank of Hawaii residence is located on a high point of the sand dunes in the northeasterly direction. The "wrap-around" views from this residence will not be obstructed in any significant way by the preschool.

c. Noise

Preschool sites tend to generate more noise than purely residential uses, especially when the children are in the playground areas out of doors and in the open areas under roof. This noise is not, however, any greater than the noise which would be generated by a public school on the site which is a permitted use in this district. In addition the War Memorial Stadium which has been in existence for a long period of time, creates far more noise than will be generated by this project.

d. Property Values

Because the residences will maintain their vistas and the noise is not anticipated to increase ambient noise levels significantly, property values should not be decreased because of the location of the preschool here. This site has always been shown as a portion of the larger Baldwin High School tract and surrounding landowners have been on notice that facilities equivalent to public schools could be located on this site.

e. Employment

A few more long-term employment opportunities will be created by this project because the preschool will be slightly larger than the facility currently used and because of the existence of the Family Language Resource Center. A significant number of short-term construction jobs will also be created.

6. That the Public Shall be Protected from the Deleterious Effects of the Proposed Use

Mitigation measures have already been incorporated into the project to reduce to non-significant levels traffic impacts and noise impacts. As such, the public has been protected from any deleterious effects of this proposed use. See § VIII. below.

7. That the Need for Public Service Demands Created by the Proposed Use Shall be Fulfilled

This project does not create any unfulfilled infrastructural deficits based upon the mitigation measures which have already been incorporated into the project. See § VIII. below.

8. If the Use Is Located in the State Agricultural and Rural District, the Commission Shall Review Whether the Use Complies with the Guidelines Established in Section 15-15-95 of the Rules of the Land Use Commission of the State

This property is not located within the State Agricultural or Rural District and therefore this criterion is inapplicable.

VII. AGENCY REVIEW

The Applicant originally sought a County Special Use Permit for the identical project. That application was filed on June 22, 1998 and proceeded through full agency review before it was decided to seek a Change in Zoning rather than a County Special Use Permit. In result, agencies and individuals have already been consulted and their comments have received responses. Where warranted, mitigation measures have been incorporated into the plans to construct and implement this project. The comments and responses are

attached as Appendix G. These comments and responses are briefly summarized below in the same chronological order in which they were received.

Land Division, Department of Land and Natural Resources, State of Hawaii

Comment Dated May 15, 1998

The Department of Land and Natural Resources has no comment to offer on the subject matter at this time.

Response Dated December 16, 1999

The Applicant appreciates the position of the Land Division, Department of Land and Natural Resources, State of Hawaii.

State Land Use Commission

Comment Dated July 9, 1998

The subject parcel is within the State Land Use Urban District. An area immediately south of the petition area is the subject of a reclassification petition. No further comments are offered.

Response Dated December 16, 1999

The project site will be noted as being located within the State Land Use Urban District.

Department of Housing and Human Concerns, County of Maui

Comments Dated July 14, 1998

The Department recommends approval of the application.

Response Dated December 16, 1999

The Applicant appreciates the support of the Department of Housing and Human Concerns, County of Maui.

Department of Health, Maui District Office, State of Hawaii

Comment Dated July 15, 1998

The noise created during the construction phase of the project may exceed maximum allowable levels such that a noise permit may be required.

Maximum noise levels are established for air conditioning units, compressors and generators.

The "certified kitchen" must meet the requirements of H.A.R. Chapter 11-12, "food establishment sanitation."

Response Dated December 16, 1999

If required, the Applicant will obtain a noise permit. If stationary sources such as air conditioning units, compressors and generators are used, noise attenuation measures will be considered during the design phase of the project.

The Applicant will comply with the requirements of H.A.R. Chapter 11-12 "Food Establishment Sanitation."

Department of Hawaiian Home Lands, State of Hawaii

Comment Dated July 16, 1998

The Department of Hawaiian Home Lands has no comment to offer.

Response Dated December 16, 1999

The Applicant appreciates the position of the Department of Hawaiian Home Lands.

Maui Electric Company, Ltd.

Comment Dated July 17, 1998

Maui Electric has no objections to the proposed project. MECO is in discussion with project representatives regarding overhead line relocations related to this project. Additional electrical requirements should be discussed with MECO as soon as practicable.

Response Dated December 16, 1999

The Applicant appreciates the lack of objection by the Maui Electric Company to this project. Overhead line relocations have been investigated with MECO. Additional electrical requirements are being discussed now.

Police Department, County of Maui

Comment Dated July 21, 1998

Based upon a site inspection, no adverse impact on traffic in the area chosen for development exists and the roadway improvements mentioned in the application should allow traffic to flow smoothly in the area.

A concern is raised that with the added traffic flow at the intersection of Kaahumanu Avenue and Lunalilo Street, the traffic signal at Baldwin High School may not be enough to reduce the potential of having a major vehicle accident at this location and it is recommended that a traffic signal be installed at this intersection.

Response Dated December 16, 1999

At the request of a number of agencies a full traffic impact assessment has been prepared by Randall Okaneku. He has determined that a

traffic signal is not necessary at this intersection but that other traffic mitigation measures should be implemented.

Office of Hawaiian Affairs, State of Hawaii

Comment Dated July 23, 1998

The Office of Hawaiian Affairs ("OHA") has no concerns at this time. OHA praises Na Leo Pulama o Maui for its commitment to the preservation of archaeological features and the use of these archaeological features as an educational aid to teach preservation and conservation of Hawaiian culture and heritage.

Response Dated December 16, 1999

The Applicant thanks the Office of Hawaiian Affairs for its position and support of the application of Na Leo Pulama o Maui.

Department of Land and Natural Resources, Land Division

Comment Dated July 27, 1998

The Land Division - Engineering Branch confirms that the proposed project is located in Zone C, an area of minimal flooding.

Response Dated December 16, 1999

The Applicant has noted that the proposed project is located in Zone C and is subject to minimal flooding.

Commission on Water Resource Management

Comment dated July 29, 1998

A request is included to identify the water quantities required for the project. Notice is provided of the limitations of the Iao Aquifer as a source of water. Coordination with the County government to incorporate this project into the County's Water Use and Development Plan is requested.

Applicant's Response Dated December 16, 1999

This Application now identifies the water quantities required for the project. The Applicant is aware of the limitations of the Iao Aquifer. The Applicant is relocating an existing facility already served by the Iao Aquifer to a new location. While there will be some increase in water usage, it will be far less than the initiation of a completely new use. Through this Application, the County government can incorporate this project into the County's Water Use and Development Plan.

Department of Fire Control, County of Maui

Comment Dated July, 1998

The Department of Fire Control has no objection to granting the permit and reserves the right to comment during the plans and specifications submittal stage of the project.

Response Dated December 16, 1999

The Applicant appreciates the position of the Department of Fire Control.



Department of Parks and Recreation, County of Maui

Comment Dated August 4, 1998

The Department of Parks and Recreation, County of Maui, has no objections to the proposed action.

Applicant's Response Dated December 16, 1999

The Applicant appreciates the lack of objections.

Department of Transportation, Highways Division, State of Hawaii

Comment Dated August 5, 1998

A full traffic impact report is recommended to address nine particular issues, including but not limited to:

- (1) The substantial increase in traffic caused by the project and its impacts upon the intersection of Kaahumanu Avenue and Lunalilo Street;
- (2) The additional traffic generated by the media center;
- (3) Whether the break in the traffic signal at Kaahumanu Avenue and Baldwin High School is adequate to accommodate project related traffic;
- (4) Justification for the trip generation figures used;
- (5) The traffic assignments for the project before and after development;
- (6) An operational analysis of the affected intersections, especially at Kaahumanu Avenue and Lunalilo Street;
- (7) The recommendation of the Maui Police Department that a traffic signal be installed at Kaahumanu Avenue and Lunalilo Street;
- (8) Identify the deficiencies with the project and the improvements to be made at no cost to the State; and

(9) An evaluation of the percent of the traffic generated which will use Kaahumanu Avenue.

Applicant's Response Dated December 16, 1999

Based upon this comment, among others, the Applicant retained Randall Okaneku, a traffic engineer, to prepare a full traffic impact report addressing all of the issues raised in this comment letter. This traffic report is attached to the application and, the Applicant believes, satisfactorily addresses all of the concerns.

Department of Public Works and Waste Management, County of Maui

Comments dated August 18, 1998

These comments address traffic impacts, waste water and off-street parking.

Roadway/Traffic Improvements

The DPWWM recommends roadway widening lots along Lunalilo Street and Liholiho Street.

A minimum 30 foot radius is required for the driveway and adjoining subdivision roads and State roads.

A full traffic impact and analysis report is requested reviewing impacts during school hours to show what traffic improvements should be made as a result of this project. The report is also to substantiate why the traffic signal at Maui Lani Parkway and Kaahumanu Avenue will improve left turns onto Kaahumanu from Lunalilo. .

Drainage Report and Erosion Control Plan

A detailed final drainage report and erosion control "Best Management Practices" plan is required to be submitted with the construction plans for review and approval.

Wastewater

Wastewater contribution calculations are required before a building permit is issued.

Off-Street Parking

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

Applicant's Response Dated December 16, 1999

Roadway/Traffic Impacts

The road widening lots identified by DPWWM will be provided.

The minimum 30 foot radius required by DPWWM will be provided.

The Applicant has retained Randall Okaneku to prepare a traffic impact and analysis report which is now included within this application. It analyzes traffic impacts during school hours and shows what traffic improvements should be made as a result of this project. In addition, it demonstrates how, and to what degree, the traffic signal at Maui Lani Parkway and Kaahumanu Avenue will improve left turns onto Kaahumanu Avenue from Lunalilo Street.

Drainage

A detailed final drainage report and an erosion control "Best Management Practices" plan will be submitted with the construction plans for review and approval.

Wastewater

The Applicant understands that DPWWM cannot insure wastewater system capacity will be available for the project.

Wastewater contribution calculations will be submitted with the building permit application and any appropriate assessment fees will be paid.

Off-Street Parking

The plans of the Applicant will meet code requirements for off-street parking, loading spaces and landscaping per Maui County Code Chapter 19.36.

State Historic Preservation Division, Dept. of Land and Natural Resources,  
State of Hawaii

---

Comment Dated October 12, 1998

The Archaeological Inventory Survey for the project was completed in 1997. A short-term Preservation Plan was approved. Archaeological monitoring of land-altering activities is to take place. The remnants of two burials were found which appeared to have been disturbed long ago. Additional monitoring is to occur when utility poles are relocated. A monitoring report and acceptable burial treatment plan will occur in consultation with the local Burial Council.

Response Dated December 16, 1999

The Applicant has a strong independent interest in historic preservation and has cooperated in every step of the process to protect and preserve any significant historic, archaeological or cultural sites.

The Department of Water Supply, County of Maui

Comment Letter Dated December 30, 1998

Using state standards, the project would use approximately 2,850 gallons per day. Domestic, fire and irrigation calculations will be reviewed in detail during the development process.

The project is served by the central Maui system. The major source of water for this system is the Iao Aquifer. The Applicant has been made aware that the timing of the project may be affected with possible delays until new sources can be brought on-line. Water availability will be reviewed at the time of the application for meter or meter reservation. Certain water conservation measures were recommended.

Response Dated December 16, 1999

The Applicant is aware of the limitations discussed by the Department of Water Supply. Conservation measures will be implemented.

VIII. PROPOSED MITIGATION MEASURES

The only impact of this project which has the potential for being significant is traffic. To keep this issue in perspective, it must be recognized that the existing traffic situation requires improvements, even without this project. Na Leo Pulama as a Hawaii non-profit corporation and federal 501(c)(3) entity can hardly be made responsible for mitigating the traffic impacts created by others throughout a long period of time in the past. Some of the contributions to this traffic are businesses with a much greater capacity to pay for traffic mitigation measures.

Second, the impacts which have been identified are not at any roadway intersection nearby the project. They are, instead, anticipated to occur at the intersection of Lunalilo Street and Kaahumanu Avenue. There are many existing contributors to this overburdening. Na Leo Pulama should only be responsible for its "fair share" of these improvements.

Third, Na Leo Pulama has reviewed the long-term and cumulative potential traffic impacts resulting from the full implementation of its project over a number of years. The Applicant should not be required to install traffic improvements as a condition to the issuance of a Certificate of Occupancy for the project. If anything, whatever improvements are determined to be necessary should be required at some date in the future when the project is determined to contribute so significantly to the overburdening of the roadway infrastructure that these improvements are caused by the Applicant and can be required.

Fourth, there is no adverse traffic impact created by those turning right from Lunalilo Street onto Kaahumanu Avenue or from those turning right from Kaahumanu Avenue onto Lunalilo Street. The problems which have been identified are with respect to those who wish to turn left from Lunalilo Street onto Kaahumanu Avenue or who wish to turn left from Kaahumanu Avenue onto Lunalilo Street.

The Applicant proposes a mitigation measure to avoid any obligation to construct roadway improvements at the intersection of Lunalilo Street and Kaahumanu Avenue. Fortunately, there are two ways in which to enter and leave the project site. The intersection at Kaahumanu Avenue and Lunalilo Street does not need to be used by those coming to or leaving the project's facilities. Instead, those who ultimately arrive or leave using Kaahumanu

Avenue can travel to the intersection of Kaahumanu Avenue and Kanaloa Street, which has traffic lights, and turn onto Kanaloa Street and then use Liholiho Street to gain access to the project's facilities. The reverse would be true in leaving. By using this alternative route, the project will not overburden the Kaahumanu Avenue/Lunalilo Road intersection.

In lieu of the intersection improvements there, the Applicant will require parents of students and others using these facilities not to use that intersection when a left hand turn would be required. Parents of students and others will be required to use the alternative route.

This alternative traffic mitigation measure is reasonable under these circumstances, as they have been described above and the Applicant would be willing to have this alternative mitigation measure attached to any approval from the Maui County Council.

Should the Maui County Council determine that at least some improvements are necessary to the Lunalilo Street/Kaahumanu Avenue intersection, the Applicant believes that the most reasonable of these improvements is the widening of Lunalilo Street at Kaahumanu Avenue to provide an exclusive right turn lane. If absolutely necessary, and this is determined to be the Applicant's "fair share" of the improvements recommended at Kaahumanu Avenue and Lunalilo Street, the Applicant believes that it can marshal the resources necessary to construct this particular improvement.

**IX. THE IMPACTS OF THE PROJECT, WITH THE MITIGATION MEASURES WHICH HAVE BEEN INCORPORATED, ARE NOT SIGNIFICANT**

Even after every phase of the action, the primary and secondary consequences and the cumulative as well as short term and long terms effects of this project have been considered, it cannot be reasonably determined that this project will have a significant effect on the environment. Instead, a finding can be entered that this project will not have a significant effect on the environment. Applying the "significance criteria" used in environmental analysis, this ultimate finding is supported.

1. This project does not involve an irrevocable commitment to loss or destruction of any natural or cultural resource. Instead, a significant cultural resource (the historic site) is being preserved *in situ*.

2. This project does not curtail the range of beneficial uses of the environment. Instead, it increases the range of beneficial uses, particularly for the native Hawaiian children who will benefit from this project.

3. This project does not conflict with the State's long-term environmental policies or goals. Instead, it fosters these policies and goals.

4. This project does not substantially affect the economic or social welfare of the community or state. Instead, it implements the educational goals of this community and state.

5. This project does not substantially affect public health.

6. This project does not involve substantial secondary impacts.

It will not cause a population change. Any impacts upon public facilities have been mitigated.



7. This project does not involve a substantial degradation of environmental quality.
8. This project does not have cumulative impacts upon the environment or involve any commitment to a larger action.
9. This project does not affect a rare, threatened or endangered species, or its habitat.
10. This project does not detrimentally affect air or water quality or ambient noise levels.
11. This project is not located in an environmentally sensitive area.
12. This project does not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.
13. This project does not require substantial energy consumption, particularly because it involves the relocation of an existing pre-school.

X. COMMENTS AND RESPONSES



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

*1949 - 1999 Celebrating 50 Years of Service*

December 23, 1999

Mr. Isaac D. Hall, Esq.  
2087 Wells Street  
Wailuku, Hawaii 96793

Re: Na Leo Pulama o Maui Hawaiian Language Pre-School and Family Language Center,  
Wailuku, Maui, TMK 3-8-07:47

Dear Mr. Hall,

Please refer to our comments to this project, dated December 30, 1998. Our comments would be the same for a Change in Zoning application. Fire system improvements may be required for the project. Domestic, fire and irrigation calculations will be reviewed in detail during the development process. The applicant may contact our Engineering Division at 270-7835 for a preliminary review.

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

Sincerely,

David Craddick  
Director

emb

cc: Planning Department

enclosure



**DEPARTMENT OF WATER SUPPLY  
COUNTY OF MAUI  
P.O. BOX 1109  
WAILUKU, MAUI, HAWAII 96793-7109  
Telephone (808) 243-7816 • Fax (808) 243-7833**

12/30/98

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

Re: I.D.: CUP 980006  
TMK: 3-8-07:047  
Project Name: Na Leo Pulama o Maui Hawaiian Language Pre-School and Family Language Center

Dear Ms. Nuyen,

Thank you for the opportunity to review this application. The Department of Water Supply has the following comments.

Using State Standards, the project would use approximately 2850 gallons per day. Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. The applicant will need to provide domestic and fire flow calculations. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991. The applicant may contact our Engineering Division at 243-7835 for a preliminary review.

This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of December 1, 1998 were 17.85 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. On August 13, 1997, the State Commission on Water Resource Management (CWRM) elected not to designate Iao Aquifer as a State Groundwater Management Area. However, if rolling annual average withdrawals exceed 20 mgd, CWRM will designate Iao Aquifer. Two wells in North Waihee, pumping at a combined rate of 1.5 mgd, were brought on-line in July 1997. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. No moratorium is currently in effect. Nevertheless,

Lisa Nuyen  
Na Leo Pūlama o Maui's Pūnana Leo O  
Maui Hawaiian Language Preschool and  
Family Language Center  
December 18, 1998  
Page 2

the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments or the approval of the requested permits. Water availability will be reviewed at the time of application for meter or meter reservation.

To further conserve water resources, the applicant should refer to the attached documents and consider these measures:

Eliminate Single-Pass Cooling: Single-pass, water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.

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

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

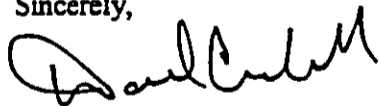
Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 4. Please refer to the "Maui County Planting Plan", and to the attached documents. We encourage the applicant to consider using climate-adapted native plants. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

Look for Opportunities to Conserve Water: A few examples: When clearing driveways and parking areas of debris, use a broom instead of a hose. When washing vehicles, windows or other items, use a hand-operated spray nozzle instead of an open hose. Periodically check for leaks in faucets and toilet tanks.

If you need more information, please contact our Water Resources and Planning Division anytime at (808) 243-7199.

Sincerely,



David Craddick  
Director

emk

Lisa Nuyen  
Na Leo Pulama o Maui's Pūmāna Leo O  
Maui Hawaiian Language Preschool and  
Family Language Center  
December 18, 1998  
Page 3

c: engineering division  
applicant, with attachments

"The Costly Drip"

Maui County Planting Plan

Invasive Plant list

Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"

"XERISCAPE - Water Conservation through Creative Landscaping"

"A Checklist for Water Conservation Ideas for Cooling"

"A Checklist for Water Conservation Ideas for Schools and Public Buildings"

References for Further Reading from "The Megamannual - Nonpoint Source Management Manual".  
Commonwealth of Massachusetts

Selected BMPs from "Guidance Specifying Management Measures for Sources of Nonpoint Pollution In Coastal Waters".

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

David Craddick, Director  
Dept. of Water Supply  
County of Maui  
PO Box 1109  
Wailuku HI 96793-7109

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear David Craddick:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's Draft Environmental Assessment and Change in Zoning application for its proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

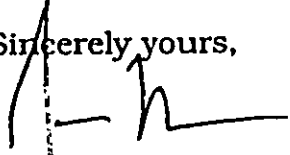
We have received your comment letter dated December 23, 1999 which basically restates the comments which you had already submitted in a letter dated December 30, 1998. We respond as follows.

In your comment letter you stated that, using state standards, the project would use approximately 2,850 gallons per day, and that domestic, fire and irrigation calculations would be reviewed in detail during the development process.

We have noted that the project is served by the central Maui system. The major source of water for this system is the Iao Aquifer. The Applicants have been made aware that the timing of the project may be affected with possible delays until new sources can be brought on-line. Water availability will be reviewed at the time of the application for meter or meter reservation. Certain water conservation measures were recommended.

Thank you for your comments on this project.

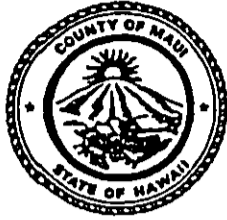
Sincerely yours,

A handwritten signature in black ink, appearing to read 'Isaac Hall', with a stylized 'I' and 'H'.

Isaac Hall

IH/jp  
nalco/ictdws2





DEPARTMENT OF  
**PARKS AND RECREATION**  
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793 '00 FEB -2 P12:25

JAMES "KIMO" APANA  
Mayor

FLOYD S. MIYAZONO  
Director

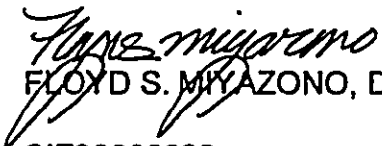
ELIZABETH D. MENOR  
Deputy Director

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

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

January 31, 2000

MEMO TO: John E. Min, Planning Director

FROM:  FLOYD S. MIYAZONO, Director

SUBJECT: CIZ20000002  
Na Leo Pulama O Maui's Punana Leo O Maui Hawaiian Language  
Preschool and Family Language Center

We have reviewed the subject application and have no objections to the proposed action.

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

c: Patrick Matsui, Chief-Planning and Development

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

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

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear Floyd S. Miyazono:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's Draft Environmental Assessment and Change in Zoning  
application for its proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunalilo  
Street in Wailuku, Maui.

We have received a copy of your comment letter to John E. Min, Director  
of Planning, Department of Planning, County of Maui, dated January 31, 2000.  
We respond as follows.

In your comment letter you stated that the Department of Parks and  
Recreation, County of Maui, had no objections to the proposed action. The  
Applicant appreciates your lack of objections.

Thank you for your comments on this project.

Sincerely yours,

  
Isaac Hall

IH/jp  
nalco/letparks2



JAMES "KIMO" APANA  
MAYOR

OUR REFERENCE  
YOUR REFERENCE

# POLICE DEPARTMENT

COUNTY OF MAUI FEB -2 AIO:24

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



THOMAS M. PHILLIPS  
CHIEF OF POLICE

DEPUTY CHIEF OF POLICE

February 1, 2000

## MEMORANDUM

TO : DIRECTOR, PLANNING DEPARTMENT

FROM : THOMAS M. PHILLIPS, CHIEF OF POLICE

SUBJECT : I.D.: CIZ 20000002  
 TMK: 3-8-007:047  
 Project Name: Na Leo Pulama o Maui's Punana Leo O Maui  
 Hawaiian Language Preschool and Family Language  
 Center  
 Applicant: Na Leo Pulama o Maui, Malia Kupahu, President

No recommendation or special condition is necessary or desired.

Refer to attachment.

*AK [Signature]*  
Assistant Chief Robert Tam Ho  
For: THOMAS M. PHILLIPS  
Chief of Police

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

Thomas M. Phillips, Chief of Police  
Police Department  
County of Maui  
55 Mahalani Street  
Wailuku, Maui, Hawaii 96793

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear Thomas M. Phillips:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's Draft Environmental Assessment and Change in Zoning to  
construct and operate the Punama Leo o Maui Hawaiian Language Preschool  
and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment letter to Director of Planning,  
Department of Planning, County of Maui, dated February 1, 2000. We respond  
as follows.

In your comment letter you stated that no recommendation or special  
condition is desired. The Applicant appreciates your lack of objections.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
naleo/letpolice2

1014

PHONE (808) 594-1888

FAX (808) 594-1865



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

'00 FEB 16 P12:32

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

February 15, 2000

John E. Min, Planning Director  
Maui County Planning Commission  
250 South High Street  
Wailuku, Hawaii'i 96793  
Attention: Julie Higa

PA #00-359

Re: Application for a Change in Zoning for the Na Leo Pulama o Maui's Punana Leo  
O Maui Hawaiian Language Preschool, Wailuku, Maui, TMK: 3-8-007:047

Dear Mr. Min:

Thank you for the opportunity to comment on the change in zoning application for the Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian Language Preschool . The applicants have leased a 1.679 acre parcel from the County of Maui and intend to build a preschool on the now vacant lot.

The lot is a part of the of the Pu'u One sand dune system that stretches between Waihee and Waikapu. Approximately 1/3 of the lot contains the remains of a prehistoric occupation site. Na Leo Pulama o Maui's intends to preserve this sub-surface site. And will not build or grade the area. Instead, it will be used as playground area.

The Office of Hawaiian Affairs (OHA) has no concerns with this project. We appreciate the applicant's efforts to ensure that these cultural remains will be protected

If you have any questions concerning our comments, please contact Lynn J. Lee, Policy Analyst at 594-1936.

Sincerely,

Colin Kippen, Jr.  
Deputy Administrator

cc: Board of Trustees  
Maui Community Affairs Office

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

Mr. Colin Kippen, Jr. Deputy Administrator  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96813

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear Colin Kippen:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's Draft Environmental Assessment and Change in Zoning application for its proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

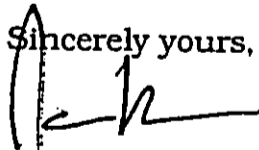
We have received a copy of your comment letter to John E. Min, Director of Planning, Department of Planning, County of Maui, dated February 15, 2000. We respond as follows.

In your comment letter you stated that the Office of Hawaiian Affairs had no concerns about the project and appreciates the Applicant's efforts to ensure that cultural remains will be protected.

The Applicant thanks the Office of Hawaiian Affairs for its position and support of the application of Na Leo Pulama o Maui.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
naleo/letoha2



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

BENJAMIN J. CAYETANO  
GOVERNOR  
SEIJI F. NAYA, Ph.D.  
DIRECTOR  
Philip J. Bossert  
DEPUTY DIRECTOR  
DAVID W. BLANE  
DIRECTOR, OFFICE OF PLANNING

**OFFICE OF PLANNING**

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

Telephone: (808) 587-2846  
Fax: (808) 587-2824

'00 FEB 18 P12:49

Ref. No. P-8472

February 15, 2000

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

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

Dear Mr. Min:

Subject: I.D.: CIZ20000002  
TMK: 3-8-007: 47  
Project Name: Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian  
Language Preschool and Family Language Center  
Applicant: Na Leo Pulama o Maui, Malia Kupahu, President

The Office of Planning (OP) has reviewed the subject application for a Change in Zoning, and the accompanying Draft Environmental Assessment (DEA) providing information on the proposal to construct and operate a Hawaiian Language Preschool and Family Language Resource Center on Lunalilo Street in Wailuku, Maui.

The property is within the State Land Use Urban District. The Maui County zoning designation is R-3 and West Maui Community Plan designation is Public/Quasi-Public. Current uses include residential and agricultural. The applicant is requesting a zone change from R-3 to Public/Quasi-Public, to make the zoning compatible with the West Maui Community Plan designation.

Na Leo Pulama o Maui, is one of eleven preschools in the State of Hawaii that conducts its programs entirely in the Hawaiian Language. For the past eleven to twelve years, Na Leo Pulama o Maui has been leasing facilities, and conducting its operations under a Special Use

Mr. John E. Min  
Page 2  
February 15, 2000

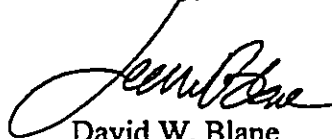
Permit issued by the Maui Planning Commission. Two years ago, the applicant obtained from the County of Maui a 55-year lease on the subject property identified by tax map key 3-8-007: 47.

The triangular shaped 1.679-acre property is owned by the County of Maui and is a portion of a parcel that was purchased in 1937 for Baldwin High School. The applicant is proposing to construct six buildings in an indigenous or native Hawaiian style on the property that will include a cluster of three classrooms, a Hawaiian language resource building for the staff of the preschool, family language resource center and a multi-purpose building.

We have no objections to the proposal based on the existing zoning, and the applicant's proposed measures to mitigate impacts.

Thank you for the opportunity to provide these comments. If you have any questions, please contact Judith Henry at 587-2803.

Sincerely,



David W. Blane  
Director  
Office of Planning

cc: Ms. Esther Ueda, LUC



ISAAC DAVIS HALL

ATTORNEY AT LAW

2087 WELLS STREET

WAILUKU, MAUI, HAWAII 96793

(808) 244-9017

FAX (808) 244-6775

March 10, 2000

Mr. David W. Blane, Director  
Office of Planning  
Dept. of Business, Economic Development & Tourism  
235 S. Beretania St., 6th floor  
Honolulu HI 96813

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear David W. Blane:

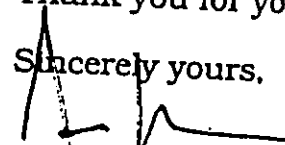
The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's Draft Environmental Assessment and Change in Zoning  
application for its proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunalilo  
Street in Wailuku, Maui.

We have received a copy of your comment letter to John E. Min, Director  
of Planning, Department of Planning, County of Maui, dated January 31, 2000.  
We respond as follows.

In your comment letter you stated that the Office of Planning, State of  
Hawaii, had no objections to the proposal based on the existing zoning, and  
the Applicant's proposed measures to mitigate impacts. The Applicant  
appreciates your lack of objections.

Thank you for your comments on this project.

Sincerely yours,

  
Isaac Hall

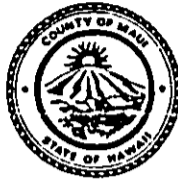
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JAMES "KIMO" APANA  
Mayor

CHARLES JENCKS  
Director

DAVID C. GOODE  
Deputy Director

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



COUNTY OF MAUI  
**DEPARTMENT OF PUBLIC WORKS  
AND WASTE MANAGEMENT** P3:51  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793

February 18, 2000

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

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

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

BRIAN HASHIRO, P.E.  
Highways Division

ANDREW M. HIROSE  
Solid Waste Division

DEPT. OF PLANNING  
COUNTY OF MAUI  
RECEIVED

MEMO TO: JOHN E. MIN, DIRECTOR OF PLANNING

FROM: *hc* CHARLES JENCKS, DIRECTOR OF PUBLIC WORKS  
AND WASTE MANAGEMENT *Jan*

SUBJECT: CHANGE IN ZONING APPLICATION  
NA LEO PULAMA O MAUI - PUNANA LEO O MAUI  
TMK: (2) 3-8-007:047  
CIZ 2000/0002

We reviewed the subject application and have the following comments.

1. The Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for this project. Provide a sewer impact study to substantiate that existing wastewater capacity will be available for this project. Wastewater contribution calculations are required before a building permit is issued.
2. The developer shall pay assessment fees for treatment plant expansion costs and wastewater transmission line upgrades and fund any necessary off-site improvements to the collection system and wastewater pump stations.
3. Road widening lots shall be provided for the adjoining half of Liholiho Street to provide for future 56-foot wide right-of-way and improved to County standards to include, but not be limited to, pavement widening, construction of curb, gutter, and sidewalk, streetlights, and relocation of utilities underground. Said lot shall be dedicated to the County upon completion of the improvements.
4. A minimum 30-foot radius shall be provided at the intersection of the proposed driveway and adjoining roads.



**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

Charles Jencks, Director  
Dept. of Public Works and Waste Management  
County of Maui  
200 S. High St.  
Wailuku, Maui, Hawaii 96793

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear Charles Jencks:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's Draft Environmental Assessment and Change in Zoning to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment letter to John E. Min, Director of Planning, Department of Planning, County of Maui, dated February 18, 2000. We respond as follows.

Your comments track earlier comments in your letter dated August 18, 1998 to which we have responded in our letter dated December 16, 1999, agreeing to comply with your comments.

Paragraph 5 now states that the Applicant shall construct the traffic improvements listed as A.1. and A.2. on p. 14 of the Traffic Impact Analysis Report dated December 18, 1999 by traffic engineer Randall Okaneku. The Applicant is willing to comply with these if the Maui County Council decides that they are necessary and have an appropriate nexus for this particular project.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/letdpw2

BENJAMIN J. CAYE LANE  
GOVERNOR



KAZU HAYASHIDA  
DIRECTOR

DEPUTY DIRECTORS  
EMMAN K. MINAJI  
GLENN M. OKIMOTO

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

IN REPLY REFER TO  
STP 8.9443

March 6, 2000  
DEPT. OF TRANSPORTATION  
COUNTY OF MAUI  
RECEIVED

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

Dear Mr. Min:

Subject: Na Leo Pulama O Maui's Punana Leo O  
Hawaiian Language Preschool and Family Language Center  
Change in Zoning CIZ20000002  
TMK: 3-8-007: 047

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

Our comments are as follows:

1. The developer should be responsible for widening Lunalilo Street at Kaahumanu Avenue to provide an exclusive right turn lane.
2. While the TLAR indicated that right turn traffic onto Kaahumanu Avenue will improve with an exclusive lane, left turn traffic onto Kaahumanu Avenue will go from LOS D to F during AM peak and remain at LOS F during the PM peak. As such, the developer should be responsible for the installation of traffic signals at the intersection of Kaahumanu Avenue and Lunalilo Street. The developer should coordinate with our Maui Highways District, before preparing a traffic signal warrant study.
3. Plans for any construction work within the State right-of-way must be submitted for our review and approval.

We appreciate the opportunity to provide comments.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Kazu Hayashida".

KAZU HAYASHIDA  
Director of Transportation

01504

# CORRECTION

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

DOCUMENT CAPTURED AS RECEIVED

BENJAMIN J. GAYE IANO  
GOVERNOR



KAZU HAYASHIDA  
DIRECTOR  
DEPUTY DIRECTORS  
BRIAN K. MINAJI  
GLENN M. OKIMOTO

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

IN REPLY REFER TO:  
STP 8.9443

March 6, 2000  
DEPT. OF PLANNING  
COUNTY OF MAUI  
RECEIVED

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

Dear Mr. Min:

Subject: Na Leo Pulama O Maui's Punana Leo O  
Hawaiian Language Preschool and Family Language Center  
Change in Zoning CIZ20000002  
TMK: 3-8-007: 047

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

Our comments are as follows:

1. The developer should be responsible for widening Lunalilo Street at Kaahumanu Avenue to provide an exclusive right turn lane.
2. While the TIAR indicated that right turn traffic onto Kaahumanu Avenue will improve with an exclusive lane, left turn traffic onto Kaahumanu Avenue will go from LOS D to F during AM peak and remain at LOS F during the PM peak. As such, the developer should be responsible for the installation of traffic signals at the intersection of Kaahumanu Avenue and Lunalilo Street. The developer should coordinate with our Maui Highways District, before preparing a traffic signal warrant study.
3. Plans for any construction work within the State right-of-way must be submitted for our review and approval.

We appreciate the opportunity to provide comments.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation

01506

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

March 10, 2000

Kazu Hayashida  
Director of Transportation  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Re: Environmental Assessment and Change in Zoning Application for  
Na Leo Pulama o Maui Hawaiian Language Preschool and Family  
Language Center, Wailuku, Maui, TMK 3-8-07:47

Dear Kazu Hayashida:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's Draft Environmental Assessment and Change in Zoning to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment letter to John E. Min, Director of Planning, Department of Planning, County of Maui, dated March 6, 2000. We respond as follows.

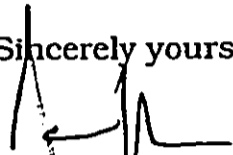
We agree with your first and third comments. With respect to your second comment we do not agree at this time that the Punana Leo o Maui Hawaiian Language Preschool should be responsible for the installation of traffic signals at the intersection of Kaahumanu Avenue and Lunalilo Street. Our traffic impact study does not make this recommendation. The preschool will not necessarily generate significant traffic at the intersection of Kaahumanu Avenue and Lunalilo Street because parents will be directed to approach and leave the school from another system of roadways. We also do not believe that there is a sufficient nexus between the requirement of a traffic signal and the traffic generated by a non-profit preschool a fair distance away from this intersection. It has also been suggested that a traffic signal should not be placed in that location because it would not be visible for those leaving Wailuku in time for stopping. We would also note that other agencies which had been concerned about whether such a traffic signal was necessary, including but not limited to the Maui Police Department and the Maui Department of Public Works, are satisfied with the mitigation measures in the TIAR and are not requiring that a traffic signal be placed at this intersection.



We would therefore propose that further discussions take place with you concerning whether or not Punana Leo should be required to pay the full cost of a traffic signal at the intersection of Kaahumanu Avenue and Lunalilo Street.

Thank you for your comments on this project.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Isaac Hall', with a stylized flourish at the end.

Isaac Hall

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naleo/letdot2

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5. LIST OF OWNERS AND  
LESSEES ADJACENT TO  
PROJECT SITE  
(TMK (II) 3-8-007:47)

ATTACHMENT A

TO: Owner

DATE: 21 December 1999

NOTICE OF FILING OF APPLICATION

Check Appropriate Line:

- CHANGE IN ZONING (From R-3 to Public/Quasi-Public)
- COUNTY SPECIAL USE
- PROJECT MASTER PLAN

Please be advised that the undersigned will be applying to the Department of Planning of the County of Maui for the above-referenced application(s) for the following parcel(s):

1. Tax Map Key No.: (II) 3-8-007:47  
(NOTE: Please attach an 8 1/2" x 14" location map)
2. Location (Street Address): Lunalilo Street, Wailuku, Maui, Hawaii 96793
3. Existing Land Use Designations:
  - a. State Land Use District: Urban
  - b. Community Plan Designation: Public/Quasi Public
  - c. County Zoning: \_\_\_\_\_
4. Description of the Existing Uses on Property: Raw land
5. Description of the Proposed Uses on Property: Construction and operation of Na Leo Pulama o Maui's Punana Leo o Maui Hawaiian Language Preschool and Family Language Resource Center

By: C. Kili Namau'u  
 (Owner/Applicant)  
C. Kili Namau'u  
 (Signature)  
 P.O. Box 1038  
 (Address)  
 Wailuku, HI 96793  
 (808) 244-5676  
 (Telephone)

Isaac Hall, Esq.  
 (Agent)  
Isaac Hall  
 (Signature)  
 2087 Wells Street  
 (Address)  
 Wailuku, HI 96793  
 (808) 244-9017  
 (Telephone)

ATTACHMENT B

NOTARIZED AFFIDAVIT OF MAILING OF  
NOTICE OF APPLICATION

C. Kili Namauu, being first duly sworn, on oath, deposes  
and says:

1. Affiant is the applicant for a Change in Zoning for  
land situate at Wailuku, Maui, Hawaii, TMK No.: (II) 3-8-007:47.

2. Affiant did on \_\_\_\_\_, \_\_\_\_\_, deposit in the United  
States mail, postage prepaid, a copy of a Notice of Filing of Application with location  
map, a copy of which is attached hereto as "Exhibit A" and made a part hereof,  
addressed to each of the persons identified in the list of recorded owners and lessees  
identified as "Exhibit B", attached hereto and made a part hereof.

Further, Affiant sayeth naught.

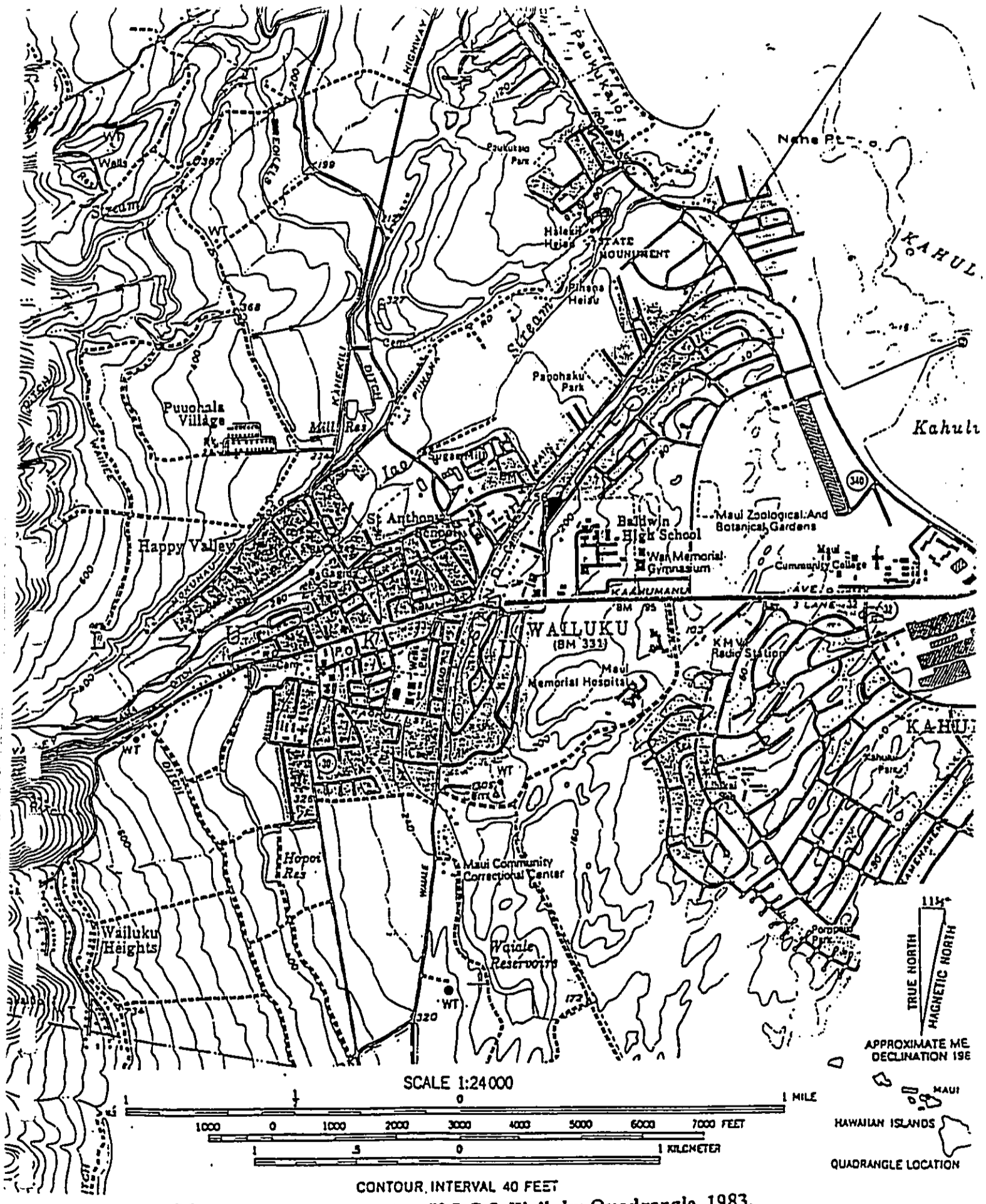
C. Kili Namauu

Subscribed and sworn to before me this  
21<sup>st</sup> day of December,

1999.

ls. Sheila Nakagawa  
Notary Public, State of Hawaii  
My commission expires: 10/3/2003

DOCUMENT CAPTURED AS RECEIVED



Map 1 - Topographic Map, U.S.G.S. Wailuku Quadrangle, 1983.

NĀ LEO PŪLAMA'S  
PŪNANA LEO O MAUI  
HAWAIIAN IMMERSION SCHOOL  
& FAMILY LANGUAGE RESOURCE CENTER

Pūnana Leo TMK: 3-8-07:47

<u>Tax Map Key</u> (Site)	<u>Owner(s)</u>
3-4-19:1 (Mill St.)	Hale Makua, 472 Kaulana St, Kahului, HI 96732
3-4-19:4 (1500 Lower Main)	Renata E. Foster-Au, 590 Stable Rd. #Z, Pā'ia, HI 96779
3-4-19:6 (Mill St.)	Hale Makua, 472 Kaulana St., Kahului, HI 96732
3-4-19:7 (Mill St.)	State of Hawai'i
3-4-21:27	Gulsons, 307 Lewers St., 6th Flr., Honolulu, HI 96815
3-4-21:30	Leona R. Borge, 224 Ainahou Pl., Wailuku, HI 96793
3-4-21:31 (1464 Lower Main)	Franklin F. & Elaine Hamasaki - Classic Maui Properties 2439 S. Kihei Road #205A Kihei, HI 96753 Midori Hamasaki Tr. Etal., Worrall-McCarter-Maui, Inc., 2439 S. Kihei Rd., Ste 205 A Kihei, HI 96753
3-4-21:55	Edward T. Matsushita, 293 Ekoa Pl., Wailuku, HI 96793
3-4-21:61	A&B Properties, Inc., P.O. Box 156, Kahului, HI 96732
3-4-21:62	Frank & Jessie R. Munoz, 500 Ohukea St., Hilo, HI 96720-6028
3-4-21:67 (1508 Mill St)	Dale Tagami, Etal., 95-321 Kamalei St., Mililani Town, HI 96789

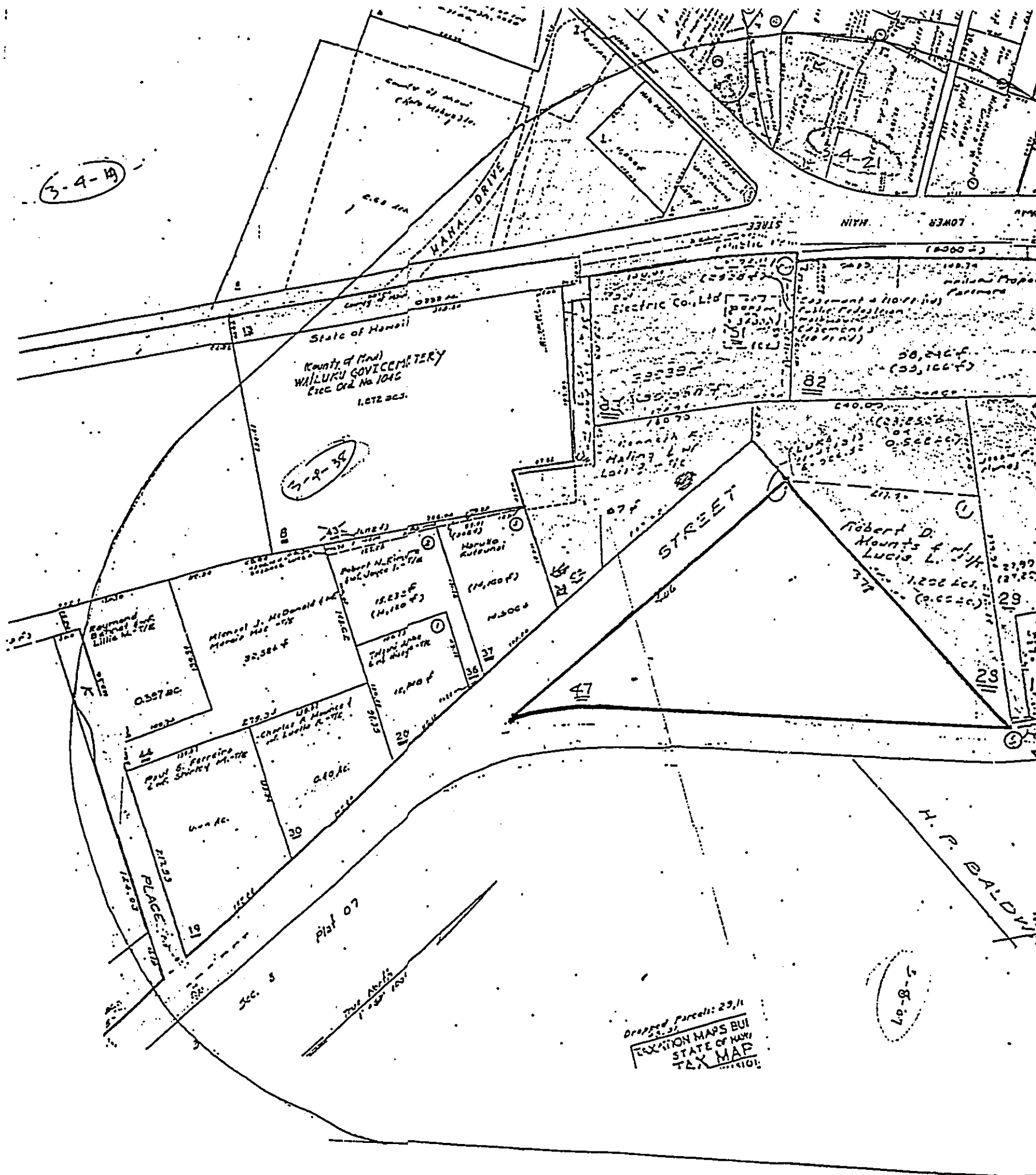
3-4-21:94 (1522 Mill St.)	Leslie M. & Juenn Shigetani, 1538 Mill St., Wailuku, HI 96793
3-4-22:15	Maui Wing Sing Chop Suey, Inc., c/o Robin Yarborough, 672 Hilinai St., Wailuku, HI 96793
3-4-22:16	Fukuji & Hifumi Tanaka, 231 Ainahou Dr., Wailuku, HI 96793
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3-4-38:07 (RC Cemetery)	Roman Catholic Mission, Hawaiian Trust Co., Ltd., P.o. Box 3170, Honolulu, HI 96802-3170
3-4-38:08	County of Maui, Wailuku Government Cemetery 1.872 ac.
3-4-38:13	County of Maui 0.232 ac.
3-4-38:16	Denis J. & Gwendolyn Fu, 1711 Kamamalu Pl. Wailuku, HI 96793
3-4-38:17	Herbert Y. & Christine C. Ushiroda, 1731 Kamamalu Place, Wailuku, HI 96793
3-4-38:18	Thomas & Claire Mae Cerizo, 1740 Kamamalu Pl., Wailuku, HI 96793
3-4-38:19	Paul S. & Shirley Ferreira, 91 Lunalilo St., Wailuku, HI 96793
3-4-38:20 (Lunalilo St.)	Carl & Janet E. Anbe, 45-123 Popoki St., Kaneohe, HI 96744
3-4-38:30 (95 Lunalilo St.)	Satish K. Gholkar Etal, P.O. Box 250, Hana, HI 96713
3-4-38:33	Chieko Sasaki, 83 Lunalilo St., Wailuku, HI 96793
3-4-38:36	Robert N. & Joyce I. Kimura, 99 Lunalilo St., Wailuku, HI 96793
3-4-38:37 (101 Lunalilo St.)	Andrew H. Kutsunai Trs., 1581 A'a St., Lahaina, HI 96761
3-4-38:44	Aldeleno & Fausta C. Torres, 1736 Kamamalu Pl., Wailuku, HI 96793

3-4-39:11 (Leileihoku St.)	Allen W. & Daisy Doong, Alda Mae D. Takabayashi, P. O. Box 17782, Honolulu, HI 96817
3-4-39:12	Samuel A. Wong, 253 Leileihoku St., Wailuku, HI 96793
3-4-39:24	Theodore R. & Naomi M. Kesaji, 272 Liholiho St., Wailuku, HI 96793
3-4-39:25 (Liholiho St.)	Justin Fleming Wong, 706 Hoopi'i Pl., Honolulu, HI 96825
3-4-39:26	Eric S. Marilyn M. Umetsu, 242 Liholiho St., Wailuku, HI 96793
3-4-39:27	Marco M. Meyer, Sr., 94-1107 Lelehu St., Waipahu, HI 96797
3-4-39:28 (Lunalilo St.)	First National Bank of Hawai'i P.O. Box 3200, Honolulu, HI 96801
3-4-39:29	Jessie R. Munoz, 209 Liholiho St., Wailuku, HI 96793
3-4-39:30	Anna M. Mayeda Tr., 223 Liholiho St., Wailuku, HI 96793
3-4-39:31	Izumi Matsui Trs., et al., 227B Liholiho St., Wailuku, HI 96793
3-4-39:32 (259 Liholiho St.)	Kevin K.S. & Patricia S.M. Lau, P.O. Box 341, Wailuku, HI 96793
3-4-39:33	Shigeru Moriyasu Trs. Et al., 267 Liholiho St., Wailuku, HI 96793
3-4-39:34	Akira Moriyasu Tr. Est. et al., 271 Liholiho St., Wailuku, HI 96793
3-4-39:52	Lois Z. Haling Trust, 301 Lunalilo St., Wailuku, HI 96793
3-4-39:53 (255 Liholiho St.)	Carol Mae Ball Trs., 70 E. Ka'ahumanu Ave., A6 Kahului, HI 96732
3-4-39:58	Tanji & Kaneko Yamamura, 255 Liholiho St., Wailuku, HI 96793

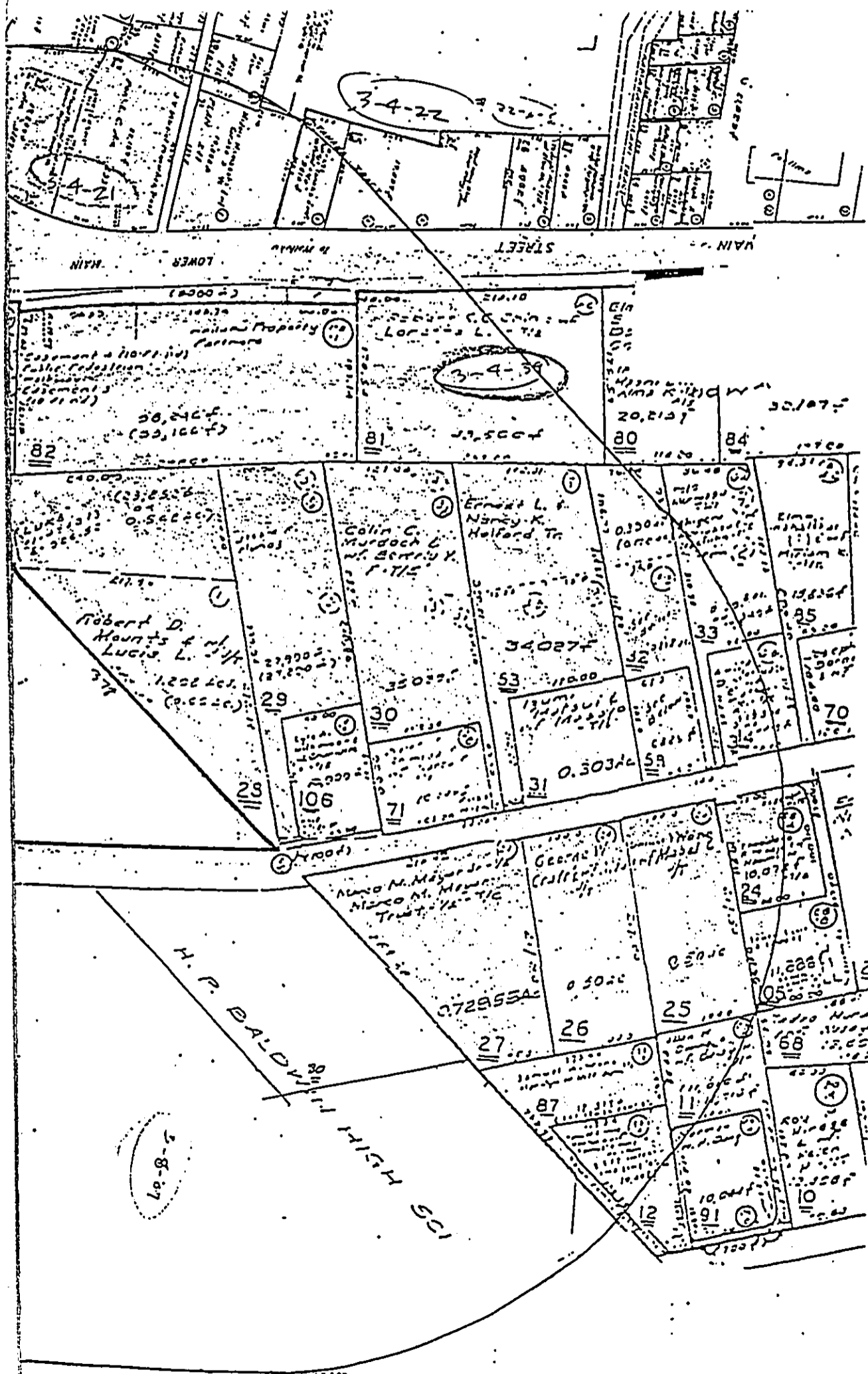


3-4-39:71	Walter T. & Nancy K. Shimoda, 221 Liholiho St., Wailuku, HI 96793-2507
3-4-39:80 (1311 Lower Main)	J & C - 1371 Terrace Ltd. Partnership, 51 Waiale Drive, Wailuku, HI 96793
3-4-39:81 (Lower Main St.)	M & S Vending, Inc., 2864 Mokunoa St., Honolulu, HI 96819
3-4-39:82	Charal LLC, 902 Pu'uomao PL, Honolulu, HI 96825
3-4-39:83	Maui Electric Co.
3-4-39:87	Samuel A. Wong, 253 Leleihoku St., Wailuku, HI 96793
3-4-39:91 (213 Leleihoku)	Don Dang, P.O. Box 2, Wailuku, HI 96793 Elizabeth Dang, 1975 Vineyard St., Wailuku, HI 96793
3-4-39:105 (272 Liholiho)	Thoedore R. & Naomi M. Kesaji, 272 Liholiho St., Wailuku, HI 96793
3-4-39:106 (211 Liholiho St.)	Lyle A. & Charlotte Wilkinson, P.O. Box 69, Pu'unene, HI 96784
<hr/>	
3-8-07:80	Boy Scouts of America, 200 Liholiho St., Wailuku, HI 96793

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**APPENDICES**

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PRELIMINARY  
TRAFFIC ASSESSMENT

for

**Punana Leo O Maui Preschool**

Wailuku, Maui, Hawaii

TMK (2) 3-8-07: 47

Prepared for:

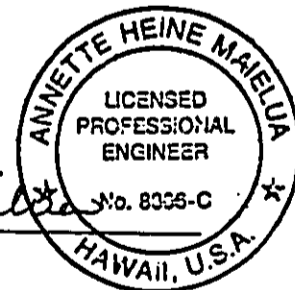
Maui Architectural Group, Inc.  
2331 West Main Street  
Wailuku, Hawaii 96793

Prepared by:

**ENGINEERING DYNAMICS CORP.**  
66 Wailani Street  
Wailuku, Hawaii 96793  
Phone: (808) 242-1644  
Fax: (808) 242-0838

This work was prepared by me  
or under my supervision

*Annette H. Maigelua*  
Annette H. Maigelua  
Professional Engineer  
State of Hawaii Certificate #8306



April 27, 1998

This report is an "instrument of service" and part of an integrated process of technical design. Use outside this process is inappropriate and transfer of its observations, conclusions, or methodology to any other work may have serious consequences. Definitions used have only the meanings assigned to them by the engineer in the context employed.

**APPENDIX A**

## INTRODUCTION

The Punana Leo O Maui Preschool conducts classes at the Wailuku Baptist Church located on High Street in Wailuku. The proposed project will consist of a new facility constructed at the intersection of Lunalilo Street and Liholiho Street in Wailuku.

## EXISTING CONDITIONS

The parcel, a portion of the H.P. Baldwin High School property, is designated as TMK (2) 3-8-07: 47 and has an area of 1.69 acres. The site is currently vacant land surrounded by residences. The Boy Scouts' facility is located across Liholiho Street.

## PROPOSED IMPROVEMENTS

The proposed facility will consist of 6 new buildings and paved parking for 22 cars. A 24-foot wide driveway is proposed on Lunalilo Street. Road widening and improvements along the property frontage are proposed for Lunalilo Street and Liholiho Street. The fork intersection will be enlarged and restriped to provide multiple turning movements.

## CURRENT USE

The school's operating hours are 7:30 a.m. to 5:00 p.m., Monday through Friday, with evening meetings or classes twice a week from 5:00 to 8:00 p.m. The current enrollment is 26 students with 5 full time teachers.

The new facility will be available for use seven days a week from 7:30 a.m. to 10:00 p.m. This will allow for additional evening or weekend classes, meetings and workshops. While the preschool hours will not change, the new facility will be able to accommodate a maximum of 50 students and 10 full time teachers. Maximum enrollment is not expected to occur until the third year after the new facility is constructed. After-school programs are also being developed to accommodate approximately 40 children.

The peak traffic hour is between 8:00 and 8:30 a.m. when the children are being dropped off for the day. Pick up time is between 3:30 and 5:00 p.m. and the traffic flow is evenly dispersed. Traffic generated from staff and other business operations ranges from 10 to 15 vehicles per day.

## TRAFFIC DATA

Lunalilo Street and Liholiho Street are the two County roads that front the subject property. Traffic counts were available for Liholiho Street only. The posted speed limit in the project's vicinity is 20 mph.

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Lunalilo Street is a two lane, two way road which connects to Kaahumanu Avenue and dead ends in front of the subject parcel. The portion of the road fronting the property has a pavement width of 13 feet with grassed shoulders within a 60 feet wide right-of-way.

Liholiho Street is also a two lane, two way road which begins at Lunalilo Street and continues to Kanaloa Avenue. The portion of the road fronting the property has 20 feet wide pavement with grassed shoulders within a 40 feet wide right-of-way.

The traffic data for Liholiho Street was obtained from the Engineering Division of the County's Department of Public Works and Waste Management. Traffic counts were collected between 2:33 p.m., Friday, June 27, 1997 and 3:37 p.m., Tuesday, July 1, 1997 for the Speed Hump Program.

The data shows the eastbound lane toward Kanaloa Avenue consistently carries higher volumes than the westbound lane to Kaahumanu Avenue. There were 1,344 vehicles per day (vpd) on Saturday and 1,168 vpd on Sunday. The daily count during the week was greater than 1,600 vpd.

During the week, the data showed three distinct peak periods, 7:00 to 8:00 a.m., noon and 4:30 to 6:00 p.m. The weekends had increased activity between 9:00 a.m. and 6:00 p.m. with no obvious peak periods. The data between 6:00 p.m. and 6:00 a.m. is similar for week days and weekends.

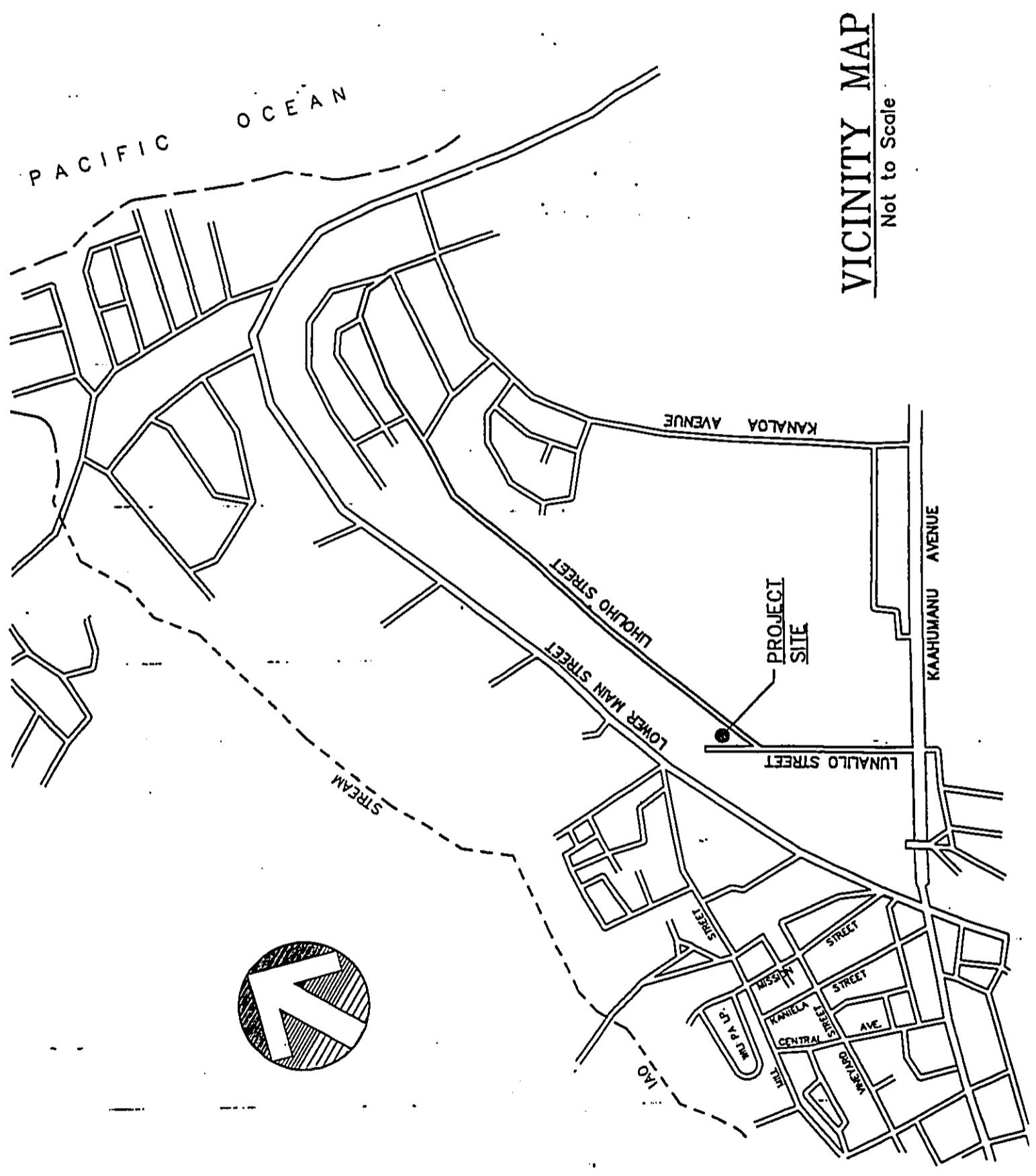
**CONCLUSION**

The construction of this new facility will increase the existing traffic patterns. The school's morning peak period, an estimated 40 vph, will occur after the recorded peak period for Liholiho Street. The afternoon Liholiho Street traffic will be moderately increased due to the regular distribution of parental pick-up times between 3:30 and 5:00 p.m.

The Lunalilo Street pavement will be widened to 26 feet from pavement edge to curb face. Liholiho Street pavement will be widened to 28 feet from pavement edge to curb face. The fork intersection of the two streets will be enlarged by roadway dedication to provide multiple turning movements.

There is ample sight distance at the new driveway location. While the proposed project will have an impact on the traffic flow, the roads with proposed improvements will have sufficient capacity to accommodate the anticipated increase in traffic.

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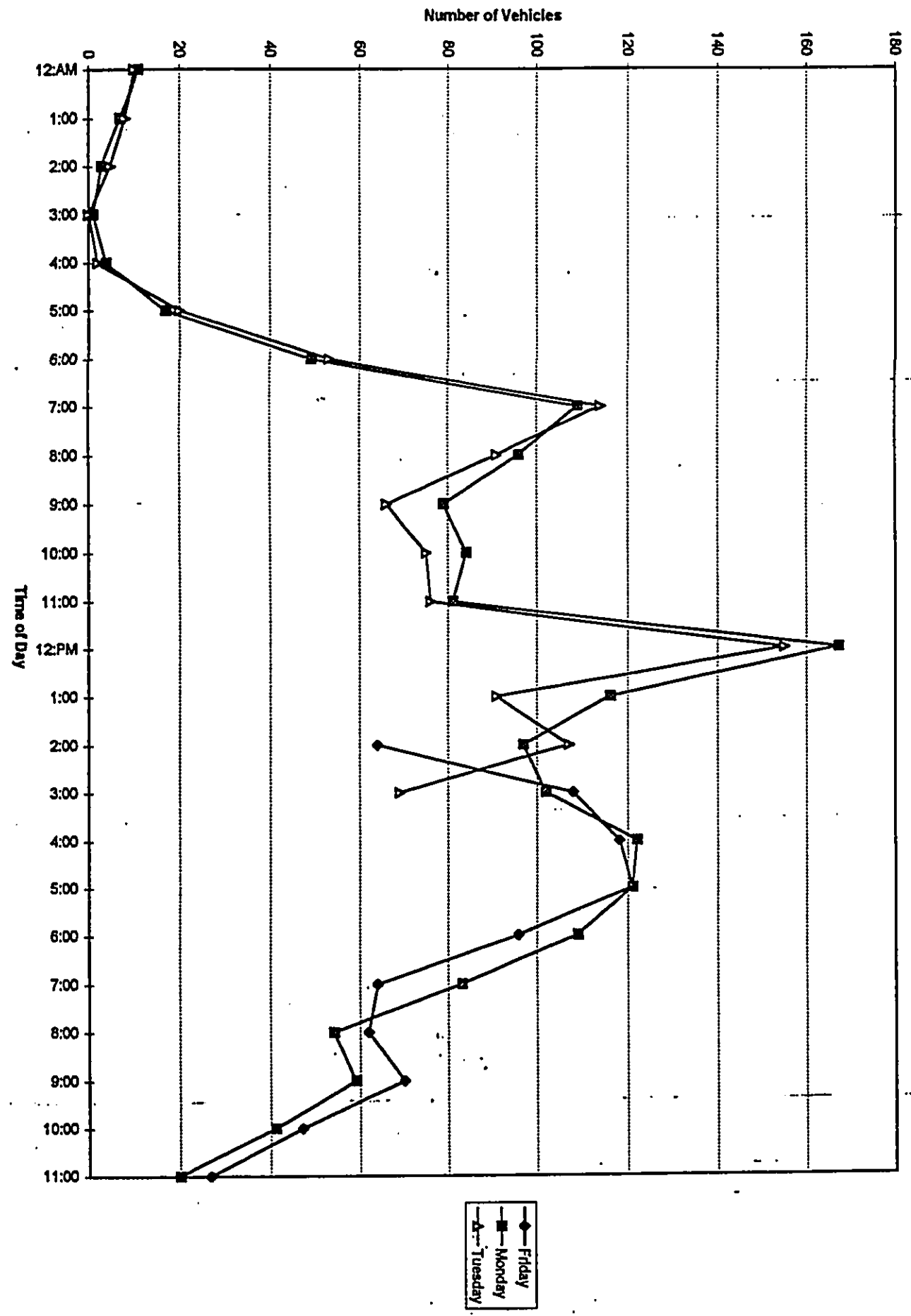
VICINITY MAP  
Not to Scale



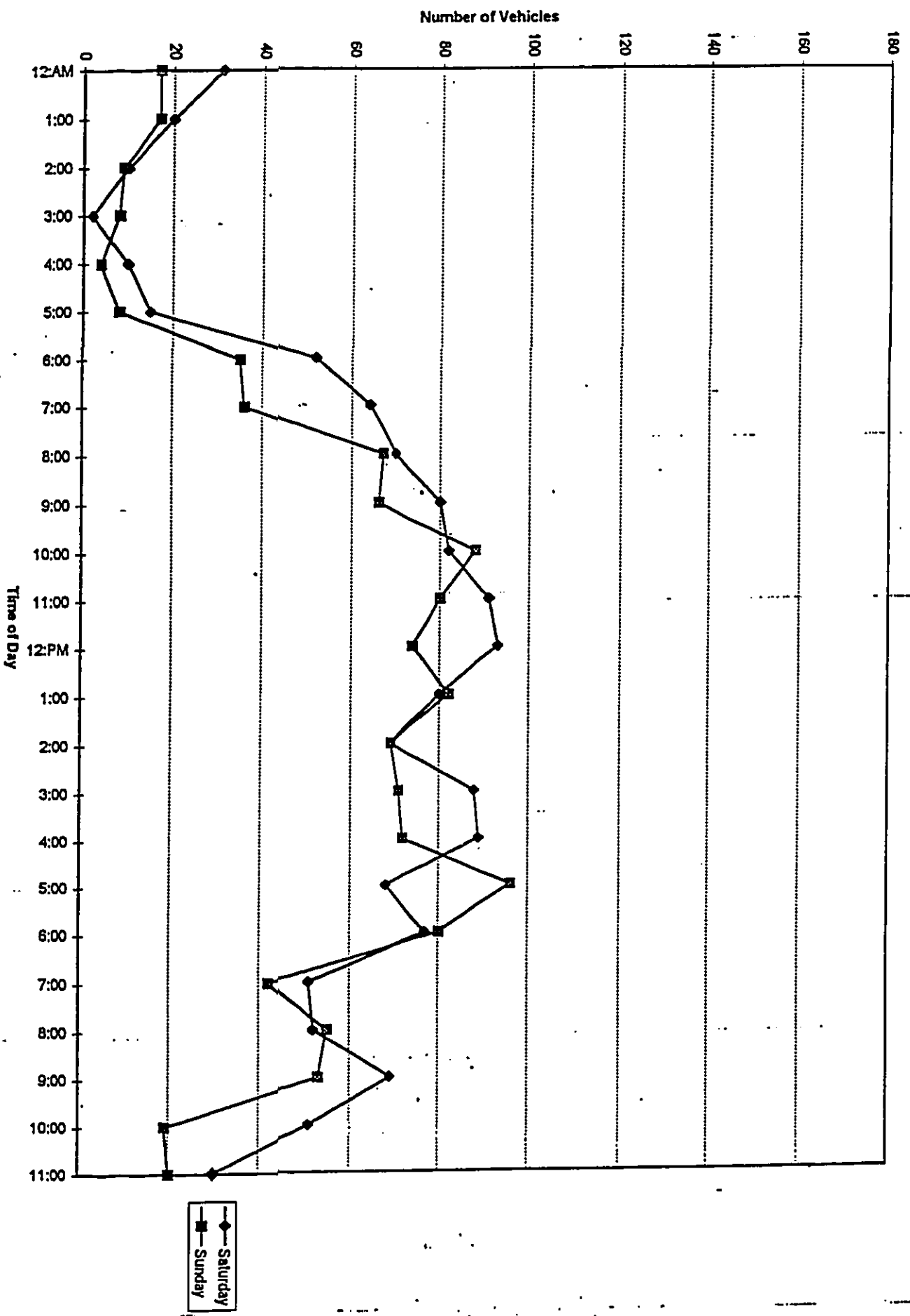
24-HOUR TRAFFIC VOLUME



WEEKDAY TRAFFIC COUNT DATA



WEEKEND TRAFFIC COUNT DATA



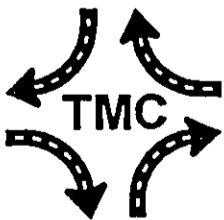
**TRAFFIC IMPACT ANALYSIS REPORT  
FOR THE PROPOSED**

**PUNANA LEO O MAUI  
HAWAIIAN LANGUAGE PRESCHOOL AND  
FAMILY LANGUAGE RESOURCE CENTER**

**PREPARED FOR  
MAUI ARCHITECTURAL GROUP, INC.**

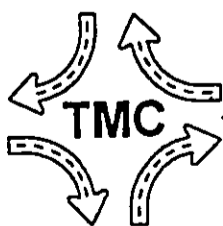
**PREPARED BY  
THE TRAFFIC MANAGEMENT CONSULTANT**

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**TRAFFIC IMPACT ANALYSIS REPORT  
FOR THE PROPOSED  
PUNANA LEO O MAUI  
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FAMILY LANGUAGE RESOURCE CENTER**

**PREPARED FOR  
MAUI ARCHITECTURAL GROUP, INC.  
DECEMBER 15, 1999**



**PREPARED BY**

**THE TRAFFIC MANAGEMENT CONSULTANT**

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**TRAFFIC IMPACT ANALYSIS REPORT  
FOR THE PROPOSED  
PUNANA LEO O MAUI  
HAWAIIAN LANGUAGE PRESCHOOL AND  
FAMILY LANGUAGE RESOURCE CENTER**

**I. Introduction**

**A. Purpose of the Study**

The purpose of this study is to analyze the traffic impacts resulting from the proposed development of Na Leo Pulama o Maui's Punana Leo o Maui Hawaiian Language Preschool and Family Language Resource Center in Wailuku, Maui, Hawaii. The study recommends improvements that would mitigate the traffic impacts, identified in this analysis. This report presents the findings and recommendations of the study.

**B. Scope of the Study**

The scope of this study includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic conditions.
3. Estimation of future traffic resulting from the construction of planned roadway improvements the area and regional development.
4. Assessment of future roadway and traffic conditions without the proposed project.
5. Development of trip generation characteristics of the proposed project.

6. The identification and analysis of traffic impacts resulting from the development of the proposed project.
7. Recommendation of improvements that would mitigate the traffic impacts, identified in this study.

### C. Project Description

Punana Leo o Maui is a preschool, which is conducted entirely in the Hawaiian language. Punana Leo o Maui has been operating at the Wailuku Baptist Church at 473 High Street in Wailuku, Maui, Hawaii. The preschool would be relocated to a 1.679 acre property, identified as Tax Map Key 3-8-7:57. The project site is located the northeast corner of Lunalilo Street and Liholiho Street. Figure 1 depicts the vicinity map. The site plan is illustrated on Figure 2. Six (6) buildings are proposed to be constructed on the site:

- Three (3) classrooms on the east side of the site would be used for the preschool.
- A media center on the south side of the site would be used for kindergarten to eighth grade after-school Hawaiian Language Immersion Program.
- A multi-purpose building on the west side of the site would be used for the Family Language Resource Center and other programs.
- An administration building in the center of the structures would house staff, coordinating the various activities.

A 22-stall parking lot would be constructed on the Lunalilo Street/Liholiho Street corner of the site. Access to the site is proposed on Lunalilo Street.

## II. Existing Conditions

### A. Roadway System

#### 1. Kaahumanu Avenue

Kaahumanu Avenue is a four-lane, divided arterial highway between Kahului and Wailuku. Kaahumanu Avenue provides two through lanes, an exclusive left turn lane, and an exclusive right turn lane in both directions at its unsignalized intersection with Lunalilo Street/Kainani Street.





## 2. Lunalilo Street

Lunalilo Street is a two-way, two-lane local roadway, which provides access to the Aloha Bowling Center, an office building, U.S. Army Reserve Center, and residential dwelling units. Lunalilo Street is stop-controlled at its intersection with Kaahumanu Avenue, opposite Kainani Street. Lunalilo Street intersects Liholiho Street at an unsignalized Tee-intersection. Lunalilo Street terminates at the northwest corner of the project site. The north leg of Lunalilo Street is stop-controlled at its intersection with Liholiho Street.

## 3. Liholiho Street

Liholiho Street is a two-way, two-lane, collector street that leads to Kanaloa Avenue. Liholiho Street provides access to residential area located to northeast of the project site.

## 4. Kainani Street

Kainani Street is a two-way, two-lane, collector street, which provides access to residential area located to east of Wailuku Town. Kainani Street connects to Halenani Drive and Naniloa Drive, which leads to Waiale Drive in Wailuku Town. Kainani Street is stop-controlled at Kaahumanu Avenue. Kainani Street provides a wide approach to permit an exclusive right turn movement onto eastbound Kaahumanu Avenue.

## B. Existing Traffic Volumes and Operating Conditions

### 1. General

#### a. Field Investigation

A manual traffic count survey was conducted in the project vicinity on April 8-9, 1999, during the peak periods of traffic from 6:00 AM to 9:00 AM, and from 2:00 PM to 6:00 PM.

#### b. Capacity Analysis Methodology

The highway capacity analysis performed for this study is based upon procedures presented in the "Highway Capacity Manual" (HCM), Special Report 209, Transportation Research Board, and the "Highway Capacity Software", Federal Highways Administration.

Level of Service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS such as: speed, delay, vehicle density, freedom to maneuver, traffic interruptions, driver comfort, and safety. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition and LOS "F" is an unacceptable condition.

"Volume-to-capacity" (v/c) ratio is another measure indicating the relative traffic demand to the facility's traffic carrying ability. A v/c ratio of 0.50 indicates that the traffic demand is utilizing 50 percent of the roadway's capacity.

## 2. Existing AM Peak Hour Traffic Analysis

The AM peak hour of traffic occurred between 7:00 AM and 8:00 AM. The left turn movement from westbound Kaahumanu Avenue to Kainani Street operated at LOS "F", during the existing AM peak hour of traffic. The through/left turn movement from Kainani Street also operated at LOS "F" at Kaahumanu Avenue.

The existing left turn and through volumes from Lunalilo Street were relatively low during the AM peak hour of traffic. The traffic signals on Kaahumanu Avenue at Baldwin High School driveway created gaps in westbound traffic, permitting Lunalilo Street traffic to turn onto Kaahumanu Avenue. The median on Kaahumanu Avenue provided shelter for at least one vehicle crossing or turning left onto the highway. Left turn and through traffic from Lunalilo Street, crossing half of Kaahumanu Avenue at a time, experienced LOS "D" conditions. Vehicles on Lunalilo Street, attempting to cross or turn left onto Kaahumanu Avenue in one movement experienced LOS "F" conditions.

## 3. Existing PM Peak Hour Traffic Analysis

The PM peak hour of traffic occurred from 4:00 PM to 5:00 PM. Both Lunalilo Street and Kainani Street operated at LOS "F" during the existing PM peak hour of traffic. The gap-creating effect of the Kaahumanu Avenue traffic signals at the Baldwin High School driveway was less evident during the PM

peak hour of traffic. The existing peak hour traffic demand on Lunalilo Street did not meet the minimum peak hour volume warrant for the installation of traffic signals according to the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD), Federal Highway Administration.

The left turn movement from westbound Kaahumanu Avenue to Kainani Street operated at LOS "E". Figure 3 depicts the existing AM and PM peak hour traffic and results of the capacity analysis.

### III. Projected Traffic

#### A. Trip Generation

##### 1. Trip Generation Methodology

The trip generation methodology, used in this study, is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in the "Trip Generation", 6th Edition. ITE trip rates are developed by correlating the total vehicle trip generation data with various land use characteristics, such as the vehicle trips per student.

ITE trip rates for daycare centers were used to estimate the traffic generated by the proposed preschool during the AM and PM peak hours of traffic. The PM peak hour trip rates for private schools were used to estimate the traffic generated by the after-school programs. The Family Resource Language Center activities are expected to occur after the PM peak hour of traffic and therefore was not included in this analysis. Other activities at the multi-purpose building are assumed to occur on an infrequent basis and/or outside the peak hours of traffic and were not included in this analysis.

##### 2. Trip Generation Characteristics

The trip generation characteristics for the proposed project were based upon the 50 students attending the preschool and 40 students attending the after-school program. Table 1 summarizes the trip generation characteristics.

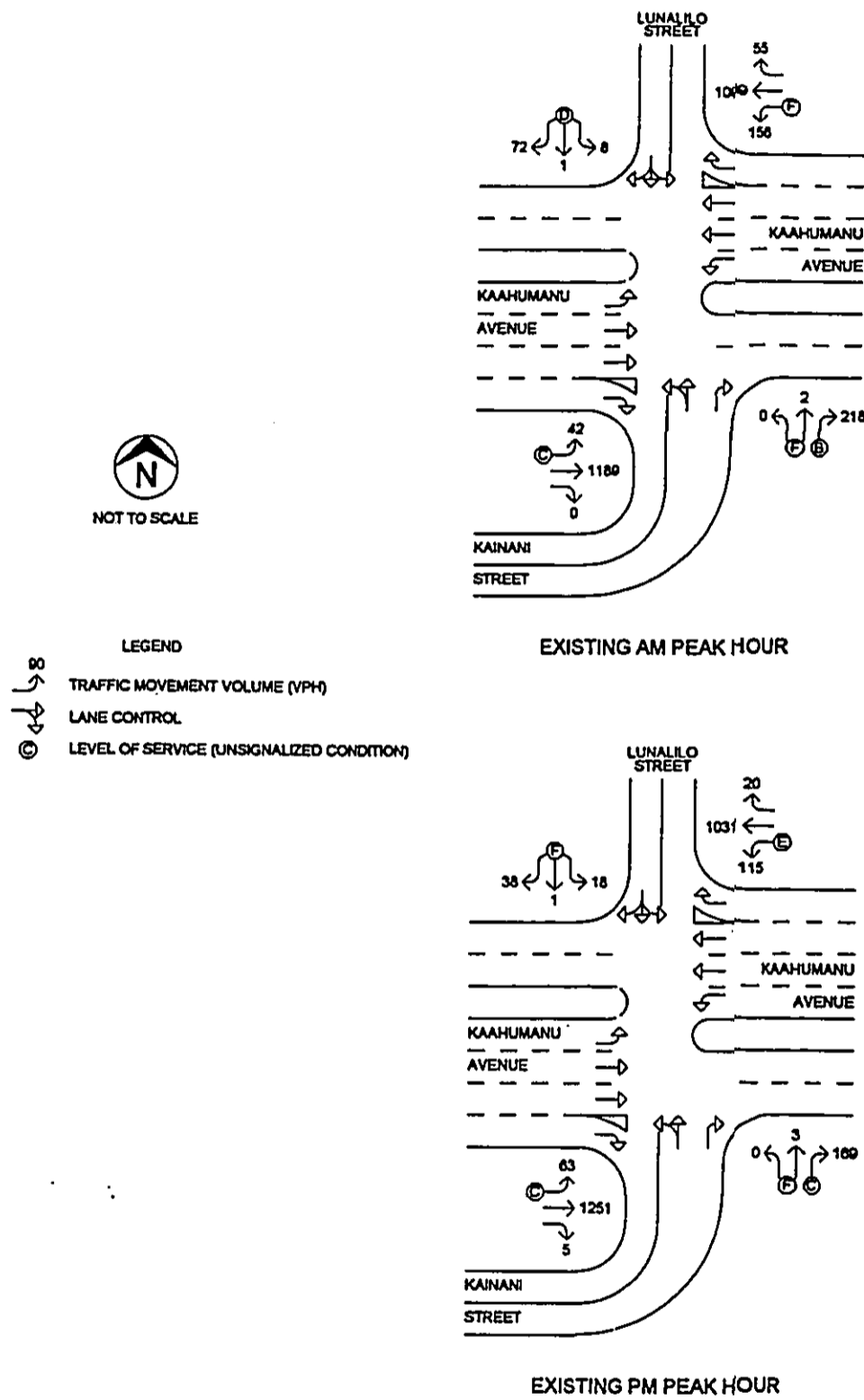


Figure 3. Existing Peak Hour Traffic



Land Use	Students	AM Peak Hour (vph)			PM Peak Hour (vph)		
		Enter	Exit	Total	Enter	Exit	Total
Preschool	50	22	20	42	20	23	43
After-School Program	40	N/A	N/A	N/A	16	18	34
Total		22	20	42	36	41	77

The proposed Punana Leo o Maui is expected to generate a total of 42 vehicle trips per hour (vph) during the AM peak hour of traffic – 22 vph entering traffic and 20 vph exiting traffic. During the PM peak hour of traffic, preschool and after-school program is expected to generate 77 vph – 36 vph entering traffic and 41 vph exiting traffic.

**B. External Traffic**

The background growth in traffic was estimated at 3.00 percent per year through the Year 2001 planning horizon, which corresponds to the projected population growth on Maui, developed for the "Maui Long Range Land Transportation Plan" (MLRLTP) prepared for the State of Hawaii Department of Transportation in cooperation with the County of Maui Departments of Public Works and Planning, dated February 1997. The background growth rate was applied uniformly throughout the study area.

**C. Anticipated Future Development**

**1. Maui Memorial Medical Center**

Maui Memorial Medical Center (MMMC) is proposing to expand its facility to meet the needs of a growing residential population and an even more rapidly growing non-resident or visitor population. Maui Memorial Medical Center is located to the east of the project site on Mahalani Street.

The expansion of MMMC is comprised of four primary components: a new six level building addition, a three level parking garage, an expanded surface parking lot, and a new helistop. The following improvements are included in the proposed hospital expansion:

- The building addition would add 50,728 square feet of gross floor area (SFGFA).
- The parking garage would provide a total of about 225 parking stalls and eliminate about 75 existing surface parking stalls for a net increase of 150 parking stalls.
- The surface parking, located at the end of the West Driveway, would provide an additional 70 stalls.
- The helistop represents the relocation and improvement of existing helicopter landing facilities.

The total employee count is not expected to increase with the MMMC expansion. The total bed count is expected to increase from the current 194 beds to 201 beds. The "Traffic Impact Analysis Report for the Proposed Maui Memorial Medical Center Expansion", May 1999, analyzed the traffic impacts resulting from the hospital expansion. The traffic, generated by the proposed expansion of the Maui Memorial Medical Center, was added to the background traffic forecast for this study.

## **2. Maui Lani**

Maui Lani is a planned residential community located to the southeast of the project site. The golf course has been completed. By the Year 2002 planning horizon for this study, the following phases of Maui Lani are expected to be developed:

- a. Phases 1B and 1C (also known as the "Bluffs") would contain 384 single family dwelling units. Phases 1B and 1C are located along the southwest limits of Kahului, between Kea Street and Kamehameha Avenue. Kamehameha Avenue, Onehee Avenue, and Kea Street would be extended as part of the subdivision development.

b. Phase 2 (also known as the "Island") would contain 225 single family dwelling units. Access would be provided on the extension of Maui Lani Parkway, opposite the Mahalani Street Extension and by the extension of Onehee Avenue. The extensions of Maui Lani Parkway and Onehee Avenue are expected to be included as part of this phase.

c. Phase 3 is planned as a commercial development containing 274,428 SFGFA. Phase 3 is located on Kaahumanu Avenue, opposite Baldwin High School. The activities envisioned include physicians offices, pharmacy, and other health related commercial businesses. Access would be provided on Maui Lani Parkway.

The section of Maui Lani Parkway, which intersects Kaahumanu Avenue opposite the main entrance to Baldwin High School, has been constructed but not yet opened to traffic. Maui Lani Parkway is expected to open between Kaahumanu Avenue and the Mahalani Street Extension within this study's time frame. The traffic, generated by the aforementioned Phases of Maui Lani, was added to the background traffic forecast for this study.

### **3. J. Walter Cameron Center**

The "Traffic Impact Analysis Report for the Proposed J. Walter Cameron Center", December 1997, analyzed the traffic impacts resulting from the expansion of the existing J. Walter Cameron Center, located on Mahalani Street to the north of MMMC. The Cameron Center expansion would include a child care center and the Maui Economic Opportunity (MEO) family center. The traffic, generated by the expansion of the J. Walter Cameron Center, was added to the background traffic forecast for this study.

### **4. Mahalani Street**

The County of Maui and the State Department of Transportation are in the design phase, at this writing, to widen Mahalani Street between Kaahumanu Avenue and Maui Lani Parkway. The County also is constructing the Mahalani Street Extension between Maui Lani Parkway and Waiale Drive. The Mahalani Street improvements and the Maui Lani Parkway is expected to improve access between Wailuku and Kahului and result in the diversion of through traffic from Kaahumanu Avenue in the vicinity of the project site.

#### **D. Traffic Assignment**

The Mahalani Street Extension is expected to provide an alternate access for the existing and planned uses on Mahalani Street, as well as the future phases of Maui Lani. It also would provide another route between Wailuku and Kahului. The traffic assignment of the proposed Punana Leo o Maui and other proposed land use activities in the vicinity were estimated based upon the population distribution on the island, developed by the "Maui Long Range Land Transportation Plan".

The regional impacts of the proposed roadways are beyond the scope of this study. These roadways may provide a more convenient route between Kahului and South and West Maui. However, the effects would be temporary until other roadways – such as the Maui Lani Parkway, Lono Avenue extension, the widening of Mokulele Highway, Airport Access Road, and the Puunene Bypass – complete the roadway network in Central Maui.

#### **E. Peak Hour Traffic Analysis Without Project**

The LOS on the side street movements at the intersection of Kaahumanu Avenue and Lunalilo Street/Kainani Street are not expected to be affected during the AM peak hour of traffic without the proposed project.

During the PM peak hour of traffic without the proposed project, the left turn movement from Kaahumanu Avenue to Kainani Street is expected to operate at LOS "F". The LOS on the other side street movements at the intersection are not expected to be affected. The AM and PM peak hour traffic without the proposed project and the results of the capacity analysis are depicted on Figure 4.

### **IV. Traffic Impact Analysis**

#### **A. Proposed Traffic Improvement**

An exclusive right turn lane is proposed on Lunalilo Street at its intersection with Kaahumanu Avenue. The proposed improvement is expected to reduce the delay for right turn traffic and improve the overall operation of the Lunalilo Street approach. The traffic impact analysis is performed, assuming this proposed improvement has been implemented.

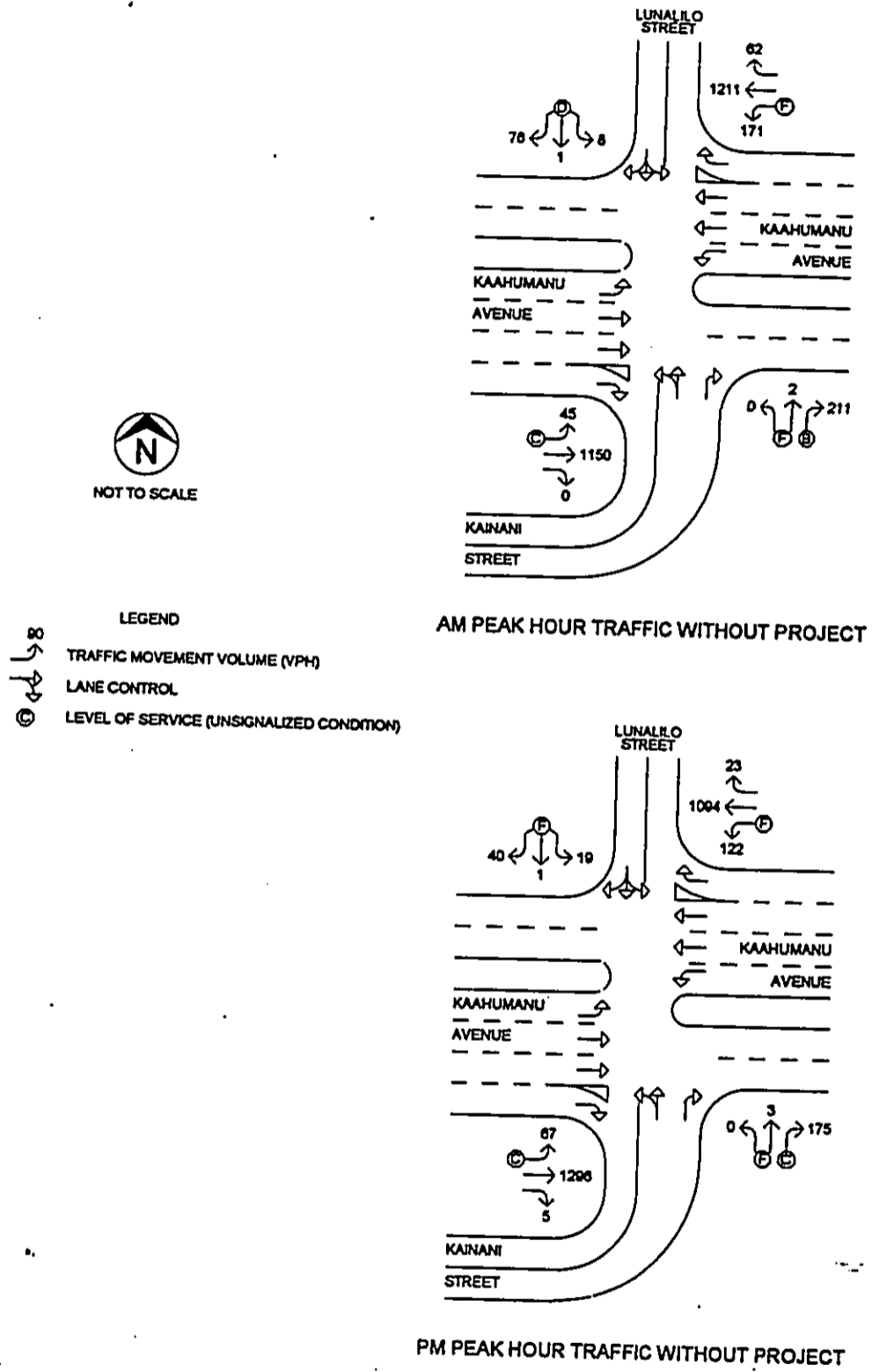


Figure 4. Peak Hour Traffic Without Project

## B. Peak Hour Traffic With Project

The intersection of Kaahumanu Avenue and Lunalilo Street/Kainani Street is not expected to be significantly impacted by the proposed Punana Leo O Maui, during the AM peak hour of traffic. The left turn movement from Lunalilo Street to eastbound Kaahumanu Avenue is expected to operate at LOS "F", however the right turn movement is expected improve to LOS "B". The overall approach on Lunalilo Street is expected to operate at LOS "D", during the AM peak hour of traffic with the proposed project. The projected AM peak hour traffic demand on Lunalilo Street is not expected to meet the MUTCD peak hour volume warrant for the installation of traffic signals under the improved roadway conditions.

During the PM peak hour of traffic with the proposed project, Lunalilo Street is expected to continue to operate at LOS "F" at Kaahumanu Avenue. The right turn movement is expected to improve to LOS "B" as a result of the proposed exclusive right turn lane, however the operation of the overall approach is expected to remain at LOS "F". The AM and PM peak hour traffic with the proposed project and results of the capacity analysis are depicted on Figure 5.

## V. Recommendations and Conclusions

### A. Recommendations

#### 1. Traffic Improvements Proposed to Mitigate Existing Deficiencies

Lunalilo Street should be widened at Kaahumanu Avenue to provide an exclusive right turn lane.

#### 2. Traffic Improvements Proposed to Mitigate Project-Related Deficiencies

- a. Drop-off and pick-up activities should be accommodated within the project site.
- b. The approach of the north leg of Lunalilo Street at Liholiho Street should be realigned to reduce the skewed angle of the intersection. Appropriate intersection sight distances should be established in the design phase and verified during the construction phase of the development.

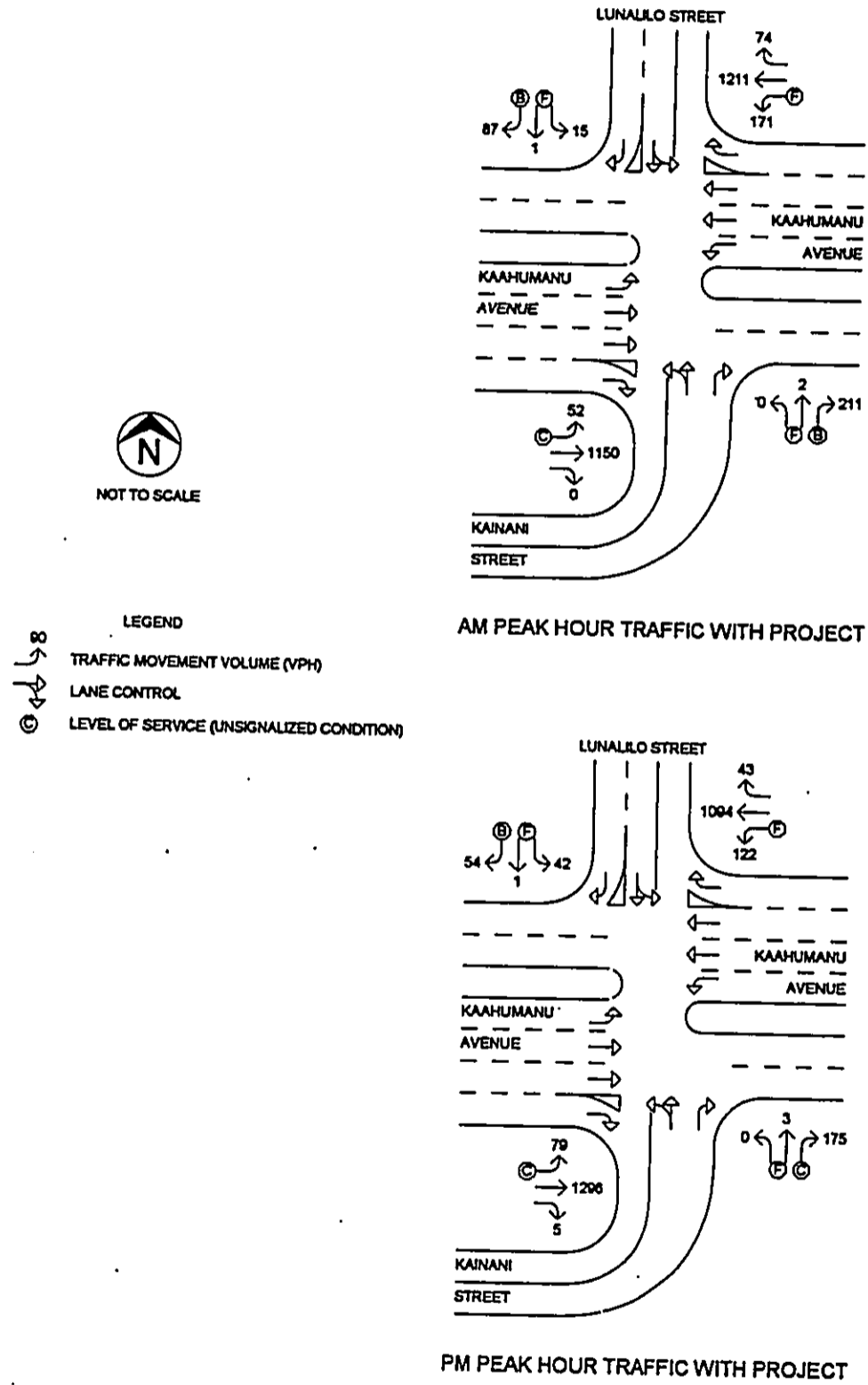


Figure 5. Peak Hour Project With Project

**B. Conclusions**

The projected AM peak hour traffic demand only marginally meets the MUTCD peak hour volume warrant for the installation of traffic signals under existing roadway conditions. The projected PM peak hour traffic demand is not expected to meet the signal warrant. Where the peak hour volume warrant is met under the existing one lane approach on Lunalilo Street, the traffic signal warrant is not met under a two lane approach, i.e., with the construction of an exclusive right turn lane on Lunalilo Street at Kaahumanu Avenue.

Although the left turn and through traffic demands on Lunalilo Street are relatively small, the overall approach LOS is expected to be affected by the delay experienced by the right turn traffic, waiting in the single lane queue behind a through or left turn vehicle. The exclusive right turn lane on Lunalilo Street would reduce the overall delay of traffic turning onto Kaahumanu Avenue, by improving the right turn movement. The traffic improvements recommended in this report are expected to mitigate the traffic impacts resulting from the proposed Punana Leo O Maui Hawaiian Language Preschool and Family Language Resource Center in Wailuku, Maui, Hawaii.



PRELIMINARY  
DRAINAGE REPORT

for

**Punana Leo O Maui Preschool**

Wailuku, Maui, Hawaii

TMK (2) 3-8-07: 47

Prepared for:

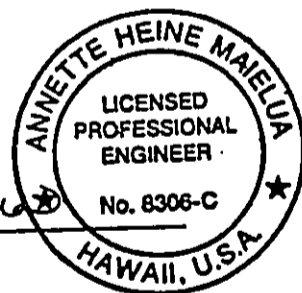
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Annette H. Maielua  
Professional Engineer  
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April 27, 1998

This report is an "instrument of service" and part of an integrated process of technical design. Use outside this process is inappropriate and transfer of its observations, conclusions, or methodology to any other work may have serious consequences. Definitions used have only the meanings assigned to them by the engineer in the context employed.

**APPENDIX**

**B**

## PROJECT DESCRIPTION

The project site is located at the intersection of Lunalilo Street and Liholiho Street and is designated by Tax Map Key (2) 3-8-07: 47, Wailuku, Maui, Hawaii. The parcel has an area of 1.69 acres.

The proposed improvements include 6 new buildings with paved parking and landscaping, road widening with curbs, gutters and sidewalks and water line extension.

## EXISTING CONDITIONS

The project site is currently vacant land. The existing grades range from 200 feet to 233 feet above mean sea level (MSL).

The runoff from the property primarily sheetflows in two directions, northwest and southeast, due to a ridge in the terrain. The flow in the northwest direction ponds in a low area within the parcel. The runoff on the southeast side of the ridge flows to Liholiho Street. Runoff on Liholiho Street flows northeasterly to a low point near Kapiolani Street. There is a 24" concrete pipe that directs the water to a wooded low area behind the "Iron" Maehara Stadium. Storm runoff also reaches the same low area via Kalama Street.

## FLOOD HAZARD

The property is located in Zone C as indicated by the *Flood Insurance Rate Map*, Community Panel Number 150003 0190C and therefore is not subject to the *Flood Hazard District Ordinance*, Chapter 19.62 of the Maui County Code.

## GENERAL DRAINAGE SCHEME

The ridge will be regraded to allow for the construction of new buildings and therefore reducing the runoff to Liholiho Street. The runoff from the site will be collected and directed to the natural low point within the property.

## BASIS OF DESIGN

The hydrologic calculations are based on the formulas, charts and tables from the *Drainage Master Plan for the County of Maui* and *Rules for the Design of Storm Drainage Facilities in the County of Maui*, Department of Public Works and Waste Management. For drainage areas of 100 acres or less, the rational method is used for the 10-year, 1-hour recurrence interval. The rational formula is:

$$Q = CIA$$

Where Q = Rate of flow in cfs

C = Runoff Coefficient

I = Rainfall intensity in inches per hour or as adjusted by a factor related to the time of concentration :

A = Drainage area in acres

See Appendix A for hydrologic calculations.

### CONCLUSION

The hydrologic calculations show the amount of runoff generated by the existing conditions is  $Q_{10} = 1.3$  cfs. The proposed conditions will yield  $Q_{10} = 2.8$  cfs. The increase in runoff due to the proposed improvements will be  $Q_{10} = 1.5$  cfs.

The majority of the runoff from the project currently flows down Liholiho Street and ultimately drains to the wooded low area behind the "Iron" Maehara Stadium. Regrading of the project will reduce the runoff to Liholiho Street. Onsite runoff will be directed to the existing low point where it will be retained until the water percolates into the ground.

Runoff to adjoining properties will be reduced. There will be no adverse effects on any adjoining or downstream properties as a result of this project.

## REFERENCES

1. *Rainfall Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43*, Cooperative Studies Section, Hydrological Services Division, U.S. Weather Bureau, U.S. Department of Commerce, dated 1962.
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3. *Storm Drainage Standards*, Department of Public Works, City and County of Honolulu, March 1969.
4. *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, U. S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii, August 1972.
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7. *Drainage of Highway Pavements, Hydraulic Engineering Circular No. 12*, U. S. Department of Transportation, Federal Highway Administration, March 1984.
8. *Rules for the Design of Storm Drainage Facilities in the County of Maui, Chapter 4, Title MC-15*, Department of Public Works and Waste Management, County of Maui, State of Hawaii, July 1995.

APPENDIX A

## HYDROLOGIC CALCULATIONS

### Existing Conditions

<u>Total Area</u>	A = 1.69 acres
<u>Runoff Coefficient</u>	C = 0.20 (sandy lawns, steep)
<u>Time of Concentration</u>	$t_c = 15$ minutes
<u>1-Hour Rainfall</u>	$R_{10} = 2.0$ inches
<u>Intensity</u>	$I_{10} = 3.7$ inches/hour
<u>Runoff</u>	$Q_{10} = CIA = (0.20 * 3.7 * 1.69) = \underline{1.3 \text{ cfs}}$

### Proposed Conditions

<u>Total Area</u>	A = 1.69 acres, 37% impervious area
<u>Runoff Coefficient</u>	C = 0.95 (impervious) C = 0.15 (sandy lawns, average slope)
<u>Time of Concentration</u>	$t_c = 15$ minutes
<u>1-Hour Rainfall</u>	$R_{10} = 2.0$ inches
<u>Intensity</u>	$I_{10} = 3.7$ inches/hour
<u>Runoff</u>	$Q_{10} = CIA = (0.95)(3.7)(1.69*0.37) + (0.15)(3.7)(1.69*0.63)$ $= 2.2 + 0.6 = \underline{2.8 \text{ cfs}}$

PRELIMINARY  
DOMESTIC FLOW REQUIREMENTS

for

**Punana Leo O Maui Preschool**

Wailuku, Maui, Hawaii

TMK (2) 3-8-07: 47


Prepared for:

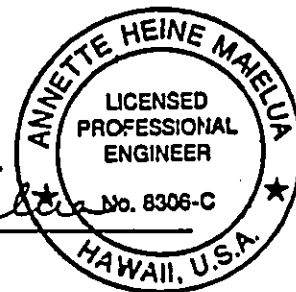
Maui Architectural Group, Inc.  
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April 27, 1998

This report is an "instrument of service" and part of an integrated process of technical design. Use outside this process is inappropriate and transfer of its observations, conclusions, or methodology to any other work may have serious consequences. Definitions used have only the meanings assigned to them by the engineer in the context employed.

**APPENDIX C**

## DOMESTIC FLOW REQUIREMENTS

### DESCRIPTION:

The proposed preschool consists of 6 buildings for administration, media, multipurpose and classrooms. The project site is located within the service area of the Department of Water Supply.

<u>FIXTURE</u>	<u>NO. OF FIXTURES</u>	<u>FIX U/FIX</u>	<u>TOTAL FIX U</u>
<u>Administration</u>			
Lavatory - private	1	0.6	0.6
Water Closet - private	1	1.7	1.7
Tub/Shower	1	1.6	1.6
Clothes Washer	1	2.0	2.0
Laundry Sink	1	1.6	1.6
Kitchen Sink	2	3.2	6.4
			<u>13.9</u>
<u>Multi-Purpose</u>			
Lavatory - public	4	1.2	4.8
Water Closet - public	5	2.8	14.0
Urinal	1	2.8	2.8
			<u>21.6</u>
<u>General Classroom</u>			
Lavatory - public	3	1.2	3.6
Water Closet - public	3	2.8	8.4
Urinal	2	2.8	5.6
			<u>17.6</u>
<u>Classroom "A"</u>			
Lavatory - public	2	1.2	2.4
Water Closet - public	2	2.8	5.6
Sink	1	3.2	3.2
			<u>11.2</u>
<u>Classroom "B"</u>			
Lavatory - public	2	1.2	2.4
Water Closet - public	2	2.8	5.6
Sink	1	3.2	3.2
			<u>11.2</u>



**DOMESTIC FLOW REQUIREMENTS**

**TOTAL FIXTURE UNITS:**  $13.9 + 21.6 + 17.6 + 11.2 + 11.2 = 75.5 \text{ FU} \rightarrow 37 \text{ gpm (Hunter Curve)}$

**DESIGN FLOW:**  $37 \text{ gpm} + 35 \text{ gpm (irrigation)} = 72 \text{ gpm}$

**REQUIRED:** 1 - 1½" Water Meter,  $Q_{\text{capacity}} = 100 \text{ gpm}$

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PRELIMINARY  
SEWAGE FLOW REQUIREMENTS

for

**Punana Leo O Maui Preschool**

Wailuku, Maui, Hawaii

TMK (2) 3-8-07: 47

Prepared for:

Maui Architectural Group, Inc.  
2331 West Main Street  
Wailuku, Hawaii 96793

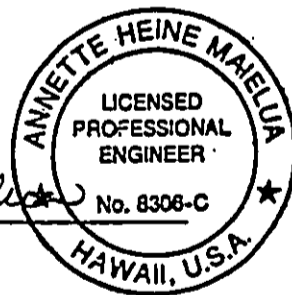
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April 27, 1998

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**APPENDIX D**

## SEWAGE FLOW REQUIREMENTS

### DESCRIPTION:

The proposed preschool consists of 6 buildings for administration, media, multipurpose and classrooms. The project site is located within the service area of the Department of Public Works and Waste Management.

### DESIGN CRITERIA:

School: 15 gpd/student  
Office: 20 gpd/employee

### ESTIMATED USE:

Classroom: 30 students  
Office: 5 teachers

### ESTIMATED SEWAGE FLOW:

$$\begin{array}{rcl} Q_{\text{classroom}} & = & 15 * 30 = 450 \\ Q_{\text{office}} & = & 20 * 5 = 100 \\ & & \hline & & 550 \text{ gpd} \end{array}$$

**SOLID WASTE DISPOSAL**

for

**Punana Leo O Maui Preschool  
TMK (2) 3-8-07: 47**

A rubbish bin will be located in the parking area to allow for easy access for private refuse collection, with recycling capabilities, to dispose of solid wastes. Recyclable items include aluminum, glass, plastic, cardboard and newspaper. Green waste from landscaping maintenance will be used in composting operations whenever possible.

**APPENDIX E**

**AN ARCHAEOLOGICAL INVENTORY  
SURVEY OF A 1.679 ACRE PARCEL,  
NA LEO PULAMA O MAUI HAWAIIAN  
IMMERSION PRESCHOOL AND FAMILY  
LANGUAGE RESOURCE CENTER,  
LOCATED IN WAILUKU  
AHUPUA`A, WAILUKU DISTRICT,  
MAUI ISLAND (TMK: 3-8-07: 47)**

**Prepared for:**

**Ms. Kili Namau`u  
Na Leo Pulama O Maui**

*Prepared by:*

*Erik M. Fredericksen  
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*Xamanek Researches  
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*November 1997  
(Revised January 1998)*

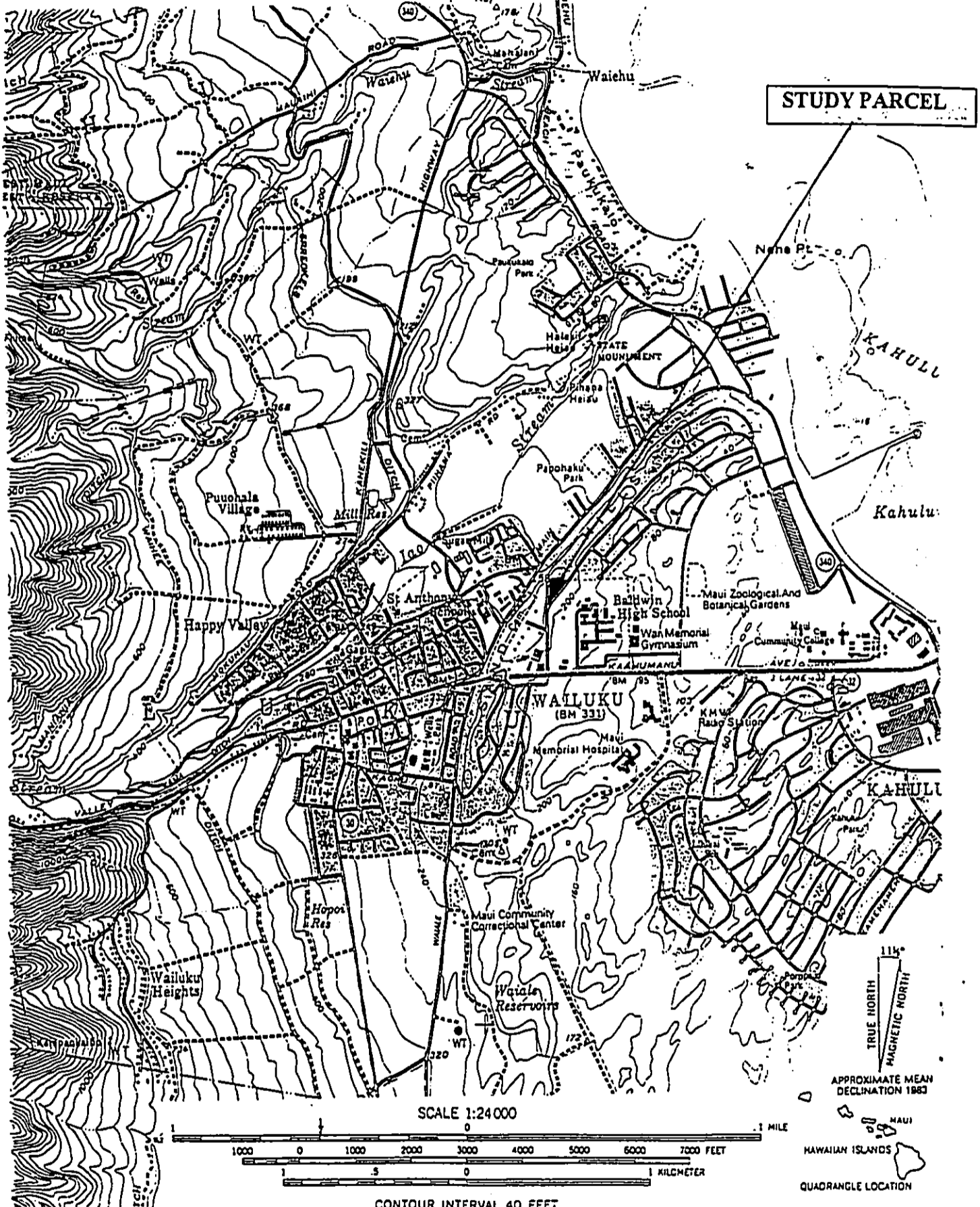
**APPENDIX F**

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Map 1 - Topographic Map, U.S.G.S. Wailuku Quadrangle, 1983.







## INTRODUCTION

Following discussions with Ms. Kili Namau'u of Na Leo Pulama O Maui in June of 1997, Xamanek Researches conducted an archaeological inventory survey of TMK: (2) 3-8-07: 47. Field work was carried out in July and September 1997. Plans call for the construction of a preschool and family resource center on the 1.67 acre parcel. The completed project will be known as the Punana Leo O Maui Hawaiian Preschool and Family Resource Center. We would like to thank Ms. Kili Namau'u and Ms. Diane Lee of Na Leo Pulama O Maui, Ms. Dana Naone Hall and Mr. Les Kuloloio of the Maui and Lana'i Islands Burial Council, and Dr. Sara Collins and Dr. Boyd Dixon of the State Historic Preservation Division. This was a unique and interesting project.

## STUDY PARCEL

The triangular shaped study area consists of a 1.679 acre piece of land that is located in Wailuku *ahupua`a*, Wailuku District, on the Island of Maui. It is bordered on the west by Lunalilo Street, on the northeast by Liholiho Street, and the north by a residential property. The subject parcel ranges from c. 200 to 236 ft. AMSL. Development plans call for the construction of the previously mentioned preschool and family resource center on the property. The study parcel is located in the residential area known as Sand Hills in the Pu'u One sand dune formation. The property is currently unutilized.

### Natural History

The study area is located along the ridge of a large sand dune, which is part of the extensive Pu'u One formation. This aeolian sand dune formation essentially extends south from Kahului Harbor to Waikapu. The property lies about 1 km. west or *mauka* of the Pacific Ocean and Kahului Harbor. The dune area is classified as Pu'u One Sand (PZUE) which creates 7 to 30 percent slopes near the ocean (Foote, 1972, p. 117). Soils which underlie the dune sands generally consists of Iao silty clay (IbD) [Ibid., p. 46].

Geologically, lower Iao Stream valley has resulted from interacting processes of late stage lava flows (University of Hawaii, 1983, pp. 38-43). *Mugearite* and *trachyte* are the basic rock structures resulting from the lava flows. They tend to be more alkaline than the East Maui (Haleakala) series.

Foote (1972, p. 46) describes the soils in the area as:

*"... well-drained soil on valley fill and alluvial fans. These soils developed in alluvium derived from basic igneous rock. They are nearly level to moderately sloping. Elevations range from 100 to 500 ft. The annual rainfall amounts to 25 to 40 inches. The mean annual soil temperature is 74 degrees F. Iao soils are geographically associated with Paia, Pulehu and Wailuku soils."*

These soil types are generally classified as oxisols, which occur on the geologically older islands in the lower elevations (University of Hawaii, 1983, pp. 46, 47). The subject parcel lies exclusively on a portion of the Pu'u One Sand dune. However, the dune in this area rests on Iao silty clay.

The subject parcel is vegetated by drought tolerant alien and native species (Photos 1 and 2). *Kiawe* (*Prosopis pallida*) is the only tree species on the parcel, while *koa haole* (*Leucaena leucocephala*) is the most common shrub. Other less common alien shrubs included lantana (*Lantana camara*) and castor bean (*Ricinus communis*). Alien grasses and annual weeds typically form a dense ground cover. While the study area is dominated by alien species, indigenous *'ilima* (*Sida fallax*) and *'uhaloa* (*Waltheria americana*) are present in areas of exposed aeoleanite or lithified sand and shallow sand deposits.

## BACKGROUND RESEARCH

Iao Stream is the largest of the major streams reaching the ocean, which originate in the West Maui mountains. It is one of the "Na Wai Eha" (the Four Waters) valleys of Maui, the others being Waikapu, Waiehu and Waihe'e (Cole, 1969). It is located in the large *ahupua'a* and district of Wailuku. The district stretches across the isthmus between East and West Maui, and Kahului and Ma'alaea Harbors. The *ahupua'a* of Wailuku is a large land division stretching around Kahului Bay from Paukukalo to Kapukaulua. It includes Iao Valley and the northern half of the Kahului Isthmus. This single land division comprises nearly half of the District of Wailuku, and is noted as a place where chiefs were buried and wars were fought. It was a population center, and the central place of religious and political power on Maui in precontact times. The core area of this center was located between the sand dunes situated on the north and south side of Lower Iao Stream bed. The word Wailuku itself can be translated as "water of destruction" (Pukui, et. al., 1974, p. 225), which is in reference to the battles that occurred there.

The district of Wailuku stretches across the isthmus between East and West Maui, and Kahului and Ma'alaea Harbors. This district encompasses the eastern flank of the West Maui mountains, and contains the other *ahupua'a* of Waiehu, and Waihe'e, Kahakuloa to the north, and Waikapu, and Pulehunui to the south.

In discussing the origin of the name of Iao, Cole (1969, pp. 4-5) relates a story of Hawaii-loa, the legendary discoverer of Hawaii. It is said that he embarked on his travels with 8 navigators who were called by the names of the guide-stars used in inter-island voyaging. One of these navigators was named Iao, after the "star" which is actually the planet Jupiter positioned as the "Morning Star".

Cole tells of another legend about Maui and his wife Hina having a beautiful daughter named Iao, who was so lovely that her father allowed no one to approach her. In spite of this, she became the lover of Puuokamoa, whom Maui turned in to a pillar of stone as punishment (Iao Needle). Iao is also said to mean "supreme point", and indeed it is certainly possible that warriors could have used Iao Needle as a lookout (Ibid.).

### Precontact Period

Two large *heiau* near the mouth of Iao Stream, Haleki'i and Pihana, are the only remaining precontact Hawaiian religious structures in the Wailuku area. "Traditional history credits the *menehune* with construction of both structures in a single night with rocks collected from Paukukalo beach (Beckwith, 1907, pg. 333)" [in Naone, 1996]. Other accounts credit Kihäpi'ilani, Ki'ihewa and Kahekili as the builders. Haleki'i is thought to have been a chiefly compound which had thatched *hale* on top of the stone platform, guarded by the *ki'i* (images) placed on the surrounding terraces. Pihana, the full name of which is Pihanakalani, or "gathering place of the ali'i", is reported to be a *luakini*-type *heiau* (Naone, 1996).

Naone (Ibid.) goes on to describe the place of these *heiau* in the late precontact and early post-contact periods:

*"Keopuolani, a chiefess of divine rank and descendant of the ruling chiefs of Maui and Hawaii was born at Pihana. She became the wife of Kamehameha I and mother of Liholiho (Kamehameha II) and Kauikeaouli (Kamehameha III). The body of Kamehameha Nui, an uncle of Kamehameha I, who ruled Maui before his brother Kahekili succeed [sic.] him, was laid at Pihana before being taken to a final resting place on Molokai. Kahekili lived at Haleki'i around 1765 and Kekaulike, father of Kahekili and Kamehameha Nui, died at Haleki'i in 1736 (Kamakau, 1961).*

*Kahekili's main residence at Wailuku was known as Kahalelani, although he also had residence at Paukukalo and Pihana. The Wailuku area was a major gathering place and residential site of the Maui chiefs and those of rank. The area from Waihe'e to Wailuku was the largest continuous area of wet taro cultivation in the Hawaiian Islands (Handy and Handy, 1972, pg. 496). To the southeast of Iao Stream, below Pihana Heiau, was Kauahea where warriors dwelt, and were trained in war skills. This was a boxing site in the time of Kahekili.*

*Pihana was demolished by Kalanimakamauli'i and Kauanaulu during Ka'ahumanu's proclamation in 1819 (Stokes, 1916)".*

Iao Valley and the two associated dune formations on the north and south sides of the river, constituted the core area of Wailuku. This was the central place of religious and political power on Maui, which culminated during the time of Pi'ilani (c. 1600 AD). In the late precontact period, warfare increased as the chiefs from Maui, Oahu and Hawaii vied for political and military dominance. High Chief Pi'ilani unified the districts of

Maui by warfare, but after his death, his sons fought with one another. Each tried to establish political control. Eventually Kiha-a-Pi'ilani became victorious (Speakman, 1978, pp. 9-13). Each succeeding generation of chiefs had to struggle through warfare to secure their positions of political domination.

During the reign of the last powerful paramount chief or king, Kahekili (who ruled from 1765 to 1790), Wailuku again became the site of intense warfare. Kahekili's royal residence, Kalanihale, was located in Wailuku.<sup>1</sup> In the mid-1770s, Kalanihale was marched upon by a Big Island chief named Kalani'opu'u and his *alapa* (the name given to his warriors). News of his coming preceded him, and Kahekili hid his warriors in the sand dunes above Haleki'i *heiau* to surprise the invading troops. A fierce battle ensued, and Kalani'opu'u's army was pushed to the sea and slaughtered (Speakman, pp. 16-17).

By 1786, Kahekili controlled not only Maui, but Molokai, Lanai, and Oahu as well. This undisputed political control lasted for only 4 years, however. In 1790, Kamehameha I made his move on Kahekili's domain, an action which ended in the battle of Kepaniwai<sup>2</sup> and the defeat of the Maui ruler. The word Kahului can be translated as "the winning", and the Bay takes this name because Kamehameha I gathered his warriors there prior to fighting the battle in Iao Valley (Pukui, et. al., 1974).

#### Early Post-Contact Period

The reign of Kamehameha I was intertwined with the increasing presence of foreigners (*haoles*) in the islands. The arrival of Captain Cook offshore at Kahului Bay in 1778 began the steady flow of outside influences which would forever alter the indigenous population and environment. One of the first of these influences came with missionaries, whose charge it was to save heathen souls. The first missionaries arrived in Wailuku in 1832, and the traditional religion began to wane under their influence. A girls' seminary (Central Female Boarding School) was established by Rev. Jonathan Green in 1836, where young Hawaiian women were taught the language and customs of the foreigners, as well as their religion.

Another influence to bring change to the Hawaiians was foreign commercialism, and it came initially in the form of sugar production. The first sugar cane crops grown in the *ahupua'a* were harvested and processed in 1828. Kamehameha III, with the help of two Chinese technicians, established a water-powered mill in Wailuku. This was known as Hungtai Sugar Works, and its location was fairly close to the later location of the Wailuku Sugar Mill, which was established in 1862. Hungtai Sugar Works continued to operate until the opening of the new mill.

<sup>1</sup> The location is said to be located just north of the intersection of High Street and Main Street leading into Iao Valley in Wailuku town.

<sup>2</sup> Kepaniwai means literally "water dam" in reference to Iao Stream, because the stream was choked with human bodies after the slaughter there (Pukui, et. al., 1974, p. 109).

The population of the *ahupua'a* of Wailuku was listed in the 1831-32 census as 2,256, with the bulk of it concentrated in the northern portion, presumably in Iao Valley (Cordy, 1978, p. 59).

In Central Maui, on the southern and eastern side of the Iao Valley Pu'u One dunes, commercial activity took the form of cattle raising. This sizable area was used for pasturage. By as early as 1845, large herds of cattle were roaming the Kahului Isthmus (cattle had been introduced on the Big Island by Vancouver in 1793). They were so destructive to the environment that Native Hawaiian landowners protested, and finally in 1846 laws were enacted to punish those individuals who allowed their animals to run wild. From this time onward, rock cattle walls became a feature of the landscape of Maui (Barrere, 1975, p. 52).

In addition to the commercial raising of cattle, there were also other commercial efforts, one being a brief attempt at the production of cotton in the 1830s. This endeavor met with little commercial success however<sup>3</sup>, and further adversely impacted the island environment.

#### Post-1850s Period

After the Mahele in 1848, most of the *ahupua'a* of Wailuku was designated as Crown Land, to be used in support of the royal "state and dignity". In 1872 Kamehameha V died, and his sister Princess Ruth Ke'elikolani inherited the land. She was designated as the owner of the *Ka'a* lands of Wailuku, the southern portion of the *ahupua'a*. The *ili* of *Owa* comprised of 743.40 acres, (LCA 420) was granted to Kuihelani, a steward to Kamehameha I. The much smaller northern section (the *ili* of *Kalua*-LCA 7713, Apana 23--391 acres) was awarded to Princess Ruth's half-sister, Victoria Kamamalu. In 1882, Princess Ruth sold one-half of the Crown Lands of Hawaii to sugar producer, Claus Spreckels, in order to settle her debts with him. Spreckels already held a lease for 16,000 acres of Wailuku *ahupua'a*, dating from 1878. Worried about what Spreckels might do with half of the Crown Lands, King Kalakaua gave him Land Grant 3343, a 24,000 acre portion of the southeastern section of Wailuku *ahupua'a*, in return for the surrender of his claim (Adler, 1966, pp. 262-264).

---

<sup>3</sup>The Anglican Church felt that "the Hawaiian people, freed from their service to and dependence on the chiefs should be self-supporting and thought that the encouragement of the manufacture of cloth from the superior cotton which grew luxuriantly in the islands would be a means to that end. They therefore suggested that a manufacturer be sent with sufficient machinery to get the project started. They felt that the people would continue to work with the encouragement and cooperation of the chiefs." (Lemmon et. al., 1973, p. 2.B.3). To this end they sent Miss Lydia Brown in 1835 with "a quantity of domestic spinning apparatus' (presumably spinning wheels and a loom)" (Ibid.), and "charged with the responsibility of teaching the Hawaiian girls the arts of carding, spinning, weaving and knitting locally grown cotton and wool." (Ibid.) As each class grew proficient enough to teach others, a new class was formed (Ibid., 2.B.4).



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<sup>3</sup>The Anglican Church felt that "the Hawaiian people, freed from their service to and dependence on the chiefs should be self-supporting and thought that the encouragement of the manufacture of cloth from the superior cotton which grew luxuriantly in the islands would be a means to that end. They therefore suggested that a manufacturer be sent with sufficient machinery to get the project started. They felt that the people would continue to work with the encouragement and cooperation of the chiefs." (Lemmon et. al., 1973, p. 2.B.3). To this end they sent Miss Lydia Brown in 1835 with "a quantity of domestic spinning apparatus" (presumably spinning wheels and a loom)" (Ibid.), and "charged with the responsibility of teaching the Hawaiian girls the arts of carding, spinning, weaving and knitting locally grown cotton and wool." (Ibid.) As each class grew proficient enough to teach others, a new class was formed (Ibid., 2.B.4).

The Reciprocity Treaty of 1876 with the United States gave a boost to the sugar industry by increasing the prices of sugar. The dry eastern part of the *ahupua'a* became attractive as potential sugar land if water could be brought to it. In 1880, Spreckels began construction of what was called "Spreckels' Ditch", located *makai* of the Hamakua Ditch, built earlier by Alexander and Baldwin to water their Maui Agricultural Company's fields. The "Spreckels' Ditch" brought Haleakala, or East Maui water to the arid Kahului isthmus. The ditch was 30 miles long, delivered about 60 million gallons of water a day, and cost \$500,000 to construct. Spreckels also built another ditch, the Waihe'e ditch in 1882, which tapped the water resources from the West Maui Mountains, thus bringing water to both sides of the Wailuku Commons isthmus area (Adler, 1966, pp., 48-49). These endeavors enabled him, in 1882, to found Hawaiian Commercial and Sugar Company. He continued involvement in that company until 1898, when control was wrested from his hands. The parent company still bears the name of Alexander and Baldwin, the principal participants in the transfer of corporated control. The production of sugar cane continues to be an activity in the isthmus area to this day, although some portions operated by C. Brewer and Company have shifted to pineapple production and macadamia nut production.

Environmental conditions in lower Iao Valley in precontact times were ideal for agricultural production necessary to support a large population. These favorable conditions included a wide valley floor, rich alluvial soils, and a constant supply of water from Iao Stream. Such factors combined with the access to Kahului Bay, rich in marine resources, made this the prime precontact location on West Maui for a political and religious center. The lower portion of Iao Valley contained some of the most productive taro land on the island, and the abundance of Land Commission Awards in the lower valley attest to this. There are 66 LCAs, primarily taro patch *kuleana*, and 39 *po'alima* between the old Wailuku Mill site and Paukukalo. In addition, 13 awards were made directly to individual chiefs by Kamehameha IV (Theresa Donham, Minutes of the County of Maui Cultural Resources Commission [CMCRC] meeting, June 1, 1995).

On the southern side of Iao Stream, Lower Main Street was built along the route of an old government road, which probably followed the course of existing, traditional transportation routes from the ocean inland. Nearly all of the LCAs border on the road, indicating that it was an important transportation corridor at the time the *kuleana* were granted (Ibid.).

The route of the Kahului Railroad from Kahului Harbor to Wailuku Sugar Mill can be seen on the 1954 USGS topographic map. The remnants of this old railroad bed can still be noted in a few places along Lower Main and Waiale Road. The present study area lies c. 69 m. east of this former railroad bed.

Railroad construction was begun in the late 1870s and continued for nearly 2 decades, as routes were added and service expanded. The railroad continued operations until after World War II. Then slowly, demands began to change, and segments of the system were phased out. An article in *The Maui News* of October 15, 1957 bore the

headline "Iron Horses Bow Out As Wailuku Sugar Company Discontinues Use of Railroad". However, the railroad continued to serve other areas until 1966, when it ceased operation altogether.

The commercial and residential growth along Lower Main Street is related, no doubt, to the growth of the railroad. After the railroad's closure, development on the southern side of the street began, and the dune typically was cut down near the present street level in the developed portions. At the time of this construction and development, little or no attention was paid to the archaeological sites which were impacted by such construction. If burials were encountered, the bones were simply collected and turned over to the local mortuary for disposal.

In Iao Valley itself, people continued to live in a more traditional style long after economic changes were taking place in Wailuku. By the 1900s, the residential population in the valley had diminished, but people remaining there still maintained the traditional life-style of taro farming and fishing from Iao Stream (Connolly, 1974, p. 5). As sugar became a major factor in the economic picture of Wailuku District, water was needed to irrigate the sugarcane fields.<sup>4</sup> Iao Stream was the logical source of this valuable resource, and lands were obtained in and around the valley, in order to build a system of waterways to supply the cane fields. On the southern side of Iao stream the Kama Ditch runs from its source in the valley, down to the Hopoi Reservoir located below Wailuku Heights.

According to oral testimony, there was a devastating flood in 1916 which swept through Iao Valley, destroying all of the taro *lo`i* and a Portuguese camp which had been built in the stream bed for the plantation workers. The flood deposited a great deal of debris on the taro *lo`i* and the original *kamani* trees were replaced by *koa haole* and *kukui* which are the dominant trees today (Connolly, pg. 6). This seemed to have been a turning point for many families, who moved out of the valley and took up their livelihood in the new society on Maui.

In the 1970s, the Iao Stream Flood Control project stabilized the path of the stream with a concrete channel and stone and concrete levees—built by the U. S. Army Corps of Engineers. Portions of the flood plain have been developed with multifamily housing and light industrial commercial enterprises. A portion inland remains undeveloped, and can be seen from the northwestern part of the present study parcel, as one looks toward the north. Also clearly in view to the north are the two *heiau*, Haleki`i and Pihana.

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<sup>4</sup> Wailuku Sugar Company was formed in 1862 by James Robinson and Company, Thomas Cummins, J. Fuller, and C. Brewer and Company. In 1865 controlling interest was purchased by C. Brewer (Kennedy, 1992, p. 14).

## PREVIOUS ARCHAEOLOGICAL WORK

### Iao Valley/Pu'u One Dunes Area

Several studies have been undertaken in the Iao Valley area, and many have been conducted in the Lower Main Street and Waiale Drive corridor. No previous archaeological work has been conducted along the Sand Hills ridge in the vicinity of the project area.

In 1974, the Bishop Museum conducted a detailed site recording survey on the proposed flood-control project for Iao Stream bed (Connolly, 1974). Two major areas of agricultural terracing were recorded, west or *mauka* of the present study area. Both were interpreted as historic structures, given the surface artifact and midden finds associated with them. The remnants of the Portuguese workers camp was also identified. "No positive structural evidence of a prehistoric occupation was observed, although ethno-historical information indicates cultivation of this area in prehistoric times." (Ibid., p. ii). All of these features had been impacted by the flood of 1916 mentioned above.

Archaeological Consultants of Hawaii conducted an inventory survey with subsurface testing on a 3½ acre parcel about 3 kilometers *mauka* (west) of the study area (Kennedy, et. al., 1992). Eighteen backhoe test trenches, and two test units were excavated. No structures or deposits of historic significance were found. Much of the property lies within the flood zone. No further archaeological work was recommended.

The earliest archaeological work in the Wailuku area was part of the island-wide survey done by Winslow Walker in 1931. He reported that there were a number of *heiau* in the general area of Wailuku. Two lie on the northern side of Iao Stream atop the large dune formation there--Pihana and Haleki'i. Both have been restored and are designated as the Halekii-Pihana Heiau State Monument, under the supervision of the Division of State Parks (DLNR). Walker also reported that there were a number of other *heiau* in this area of Wailuku, which were said to have been consecrated by Liholiho during his visit to Maui for that purpose in 1801 (Walker, 1931, pp. 146-147). At the time of his survey, none of these reported *heiau* (named Keahuku, Olokua, Olopio, Malena, Pohakuokahi, Lelemako, Kawelowelo, Kaulupala, Palamaihiki, and Oloolokalani) could be found (Ibid., p. 148).

A personal communication (1992) from Mr. Charles Keau, a well-respected authority on history and prehistory of Maui, provides more information about some of

these *heiau* which Walker could not find. By Mr. Keau's account, there were 3 *heiau* located in the Lower Main Street corridor from Kahului Harbor to the intersection of Lower Main and Mill Streets. One was situated across the street from the Maui Soda Company. Another was located between the Maui Electric Substation and the County of Maui Wailuku Government cemetery. A third may have been located near the Home Maid Bakery. During the construction of the parking lot next to the bakery, Mr. Keau reported that Wesley Wong, a well-known local antiquity collector, found 5 adzes of "Tahitian" style. He did not specify when this was, but thought there might still be portions of the *heiau* there as well as some burials. Recent archaeological work has corroborated at least the latter part of this supposition (see discussion on Home Maid Bakery).

#### Nisei Veterans Memorial Center

In February of 1992, the present authors began an inventory survey on the site for the Nisei Veterans Memorial Center, a 2 acre parcel of land at the intersection of Lower Main and Waiehu Beach Road (Fredericksen and Fredericksen, December 1992). The most notable surface feature was the railroad bed which runs the length of the property (Site 3112). Another historic site (Site 3119A) was a refuse disposal area about 20 cm. below the surface. The predominant historic items were bottles and ceramics dating from the late 1800s, about the time the railroad was in use. A subsurface excavation which cut through the historic site located a subsurface precontact site designated as Site 3119B.<sup>5</sup>

This site took on a new dimension when a very early radiocarbon date of AD 233-410 was obtained. However, later data recovery work did not produce material of a comparable date. The deposits from which it came turned out to have been previously disturbed by excavations done during the construction of the railroad bed, and the original source was not located.

In another area of the site, test excavations produced a number of artifacts, including coral files, bone picks, an unfinished fishhook, and worked bone, along with large quantities of food midden. This was designated as Site 3120. Data recovery research has shown this to be a large habitation site, which contains a cluster of burials. The latter have remained *in situ* and will be preserved as a permanent burial/grave site. A number of fire pit features were encountered and a series of 12 radiocarbon dates were obtained. They range from the very early date mentioned above (AD 233-410) to AD 1200-1740, with the majority of the precontact dates falling in a AD 1400 to 1700 range.<sup>6</sup> An interim data recovery report was prepared in 1995 (Fredericksen, et. al., November 1995) and the final data recovery report was completed in 1997 (Fredericksen, et. al., October 1997).

<sup>5</sup>Later data recovery work at this site has caused a revision in numbering. All precontact components of the site are designated as Site 3120, while the historic components bear the Site 3119 designation.

<sup>6</sup> See Table 7 for a complete list of the radiocarbon dates from Site 3120, and other sites along Lower Main Street.

What remains of the subsurface habitation site will be preserved. The burials will be left in place in a burial preserve, and the Nisei Veterans Memorial Center grounds will be landscaped in such a way as to ensure that the burials and the habitation site will not be impacted by future activity.

#### Home Maid Bakery

In 1995, grading work at the Home Maid Bakery uncovered human remains. Subsequently, Theresa Donham, State Historic Preservation Division archaeologist, ordered that an inventory survey be undertaken. During this survey, two sites were identified. Site 3924 contained 2 *in situ* burials, and a thin remnant of a cultural layer. Much of the cultural layer had been displaced by the previous bulldozer action. Marine shell, 2 edge altered flakes, small waterworn stones, 6 basalt flakes, and 6 pieces of volcanic glass were found, along with a piece of coal and a chert flake, which they think probably have an historic origin (Burgett and Spear, 1995, pp. 20-24).

The second site, Site 3925, represents a site with 2 primary cultural layers, and three very narrow, restricted cultural layers, along with 6 features. These are interpreted as hearth features, pits, and a possible post hole. A radiocarbon date from one fire pit yielded a date of AD 1436 to 1671. Another fire pit produced charcoal dated at AD 1430 to 1529. Ninety-nine artifacts were recovered, including 87 pieces of basalt debitage, 4 basalt flakes with polish, 3 coral abraders, 2 edge altered flakes, 1 adze perform, 1 chert flake, and 1 worked mammal bone (Ibid., pp. 24-30). Quantities of shell midden were also located.

Theresa Donham gave a presentation at the June 1995 meeting of the Maui County Cultural Resources Commission, in which she described these recent archaeological projects in Wailuku to commissioners. She feels that the two sites mentioned above are probably part of the same site which has been significantly disturbed. It was most likely part of a complex habitation and activity area which was associated with the *heiau* reported by Mr. Keau (Minutes, MCCRC, June 1, 1995).

Another site on the same Home Maid Bakery property, Site 4066 was identified during archaeological monitoring of a County of Maui road widening project along Lower Main, in 1995. A test trench, just 2 feet from the roadway bisected an intact portion of the dune which contained boulder alignments, fire pits, artifacts, and midden. An area c. 10 feet wide by 134 feet long was impacted. The remains of 4 individuals recovered were reburied in a crypt, along with the 2 *in situ* burials around which the crypt was built (Spear, December 1995).

#### Additional Sites Along Lower Main Street

Other burial sites along Lower Main include Site 3556, which contained both historic and prehistoric burials (Donham, 1994); Site 3996 which is an identified human burial that is eroding from the face of the dune; Site 3928 is a remnant of a habitation site

which contained burials. A radiocarbon date from that site gives a range from AD 1424 to 1635 (Donham, CRC Meeting).

Site 1172 was identified by a Bishop Museum archaeological team in 1971, as the Lower Main Street site. It consists of at least one cultural layer containing shell (*opihi*, *pipipi*, drupe, cowrie and land shells), coral, charcoal and water-worn stones. Three precontact artifacts included a coral file, a hammerstone fragment, and a possible hammerstone, triangular in shape (Connolly, 1973). Later sand mining activity apparently uncovered burials which were reburied upslope from the existing excavation, but their exact location is not known (Personal communication, Theresa Donham, recorded in minutes of the Cultural Resources Commission, June 1, 1995). Two additional burials were discovered eroding from this site in June 1994. They were recorded and disinterred by Ms. Donham, and have since been reinterred on the property (Burgett and Spear, 1995, p. 17).

#### Oceanhouse Site

In 1990, the present authors surveyed a half-acre commercial parcel in the Lower Main Street corridor (TMK: 3-4-39: 77). At the time of the study a good portion of the dune had been excavated to street level. No significant surface archaeological finds were made, but monitoring was recommended during any subsurface excavation, since the inventory survey did not include subsurface testing (Fredericksen and Fredericksen, 1990). This parcel was studied again in 1996, for Oceanhouse, Inc. by Scientific Consultant Services, Inc., following considerable alteration by grading. A site remnant was identified on the lip of the dune (Site 4004), and a few fragments of human bone were also found on the cliff face. A radiocarbon date range from AD 1420 to 1640 was established for the site remnant (Burgett and Spear, 1996).

#### Lower Main and Mill Street Intersection

Xamanek Researches has carried out archaeological inventory and data recovery work on a nearby parcel of land which lies to the northwest of the Punana Leo O Maui project. A surface archaeological survey was conducted on parcel 82 (TMK 3-4-39) in January of 1992. No surface features were found, with the exception of the raised railroad bed (Site 50-50-04-3112) directly adjacent to Lower Main Street. However, the parcel was densely vegetated making surface inspection difficult. Monitoring was recommended, in part, due to poor surface visibility and because no subsurface testing was undertaken (Fredericksen and Fredericksen, January 1992).

In 1995, an inventory survey, with subsurface testing, was conducted on a narrow strip of this parcel alongside Lower Main Street, as well as on parcels 81 and 83 (Fredericksen and Fredericksen, July 1995). This was in response to a proposed County of Maui Public Works project to widen the road and install traffic signals at the intersection of Lower Main and Mill Streets.

The dominant surface feature in this study area was the Kahului Railroad Bed (Site 3112), which rose c. 1 to 1.5 meters above the street level. Beneath this historic feature, a fairly extensive subsurface habitation site was located in the 2 most northern backhoe tests, which was given the SIHP site number 50-50-04-4127. An unfinished bone fishhook and a dense basalt hammerstone were recovered from Backhoe Trench 1, along with shell midden. In Backhoe Trench 2, a large pit was identified, which was thought to possibly be associated with a human burial. Data recovery was recommended.

Data recovery was completed on Site 4127 in 1996. This site underlies several fill layers derived from historic activities in the area associated with construction of Kahului Railroad Company track and Lower Main Street. Following removal of the fill by a backhoe, 4 stratigraphic layers were located and sampled. *In situ* material culture remains were recovered from the upper 2 soil layers.

The Layer I deposit consisted of soft to slightly hard sandy clay. This stratum may be an alluvial deposit. The upper 5 to 15 cm. of Layer I have been impacted by historic activities on the study area. Material evidence of these disturbances includes: coal, rusted metal and broken bottle glass. The glass bottle fragments are from the late 19<sup>th</sup> to early 20<sup>th</sup> century. The lower 10 to 15 cm. of Layer I did not contain any clearly post-contact materials such as bottle glass and metal. One radiocarbon sample was recovered from a feature in Layer I. This sample returned a date range of AD 1580-1700. This date range is similar to the 3 dates recovered from the underlying Layer II deposit. Feature 3 extended into the underlying Layer II deposit and may have contained some charcoal from the lower layer. No other concentrations of charcoal were found in the Layer I deposit.

A total of 18 features were located in Layer I. Over 94% (17) of these features consisted of pits, 2 of which contained coal and 2 which were sterile. These last 4 features may represent historic disturbances at Site 4127. While Layer I contained a total of 714.2 gm. of food midden, none of the features encountered in this stratum are interpreted as cooking pits.

The sandy Layer II deposit yielded nearly twice (1369.7 gm.) the quantity of food midden found in Layer I. Unlike Layer I, Layer II did not exhibit any signs of historic disturbances. Three radiocarbon samples returned age ranges (AD 1590-1780) which fall in the late precontact period.

Although the Layer II deposit contained greater quantities of portable remains than Layer I, about the same number of features were found in this lower stratum. However, the 16 features present in Layer II tended to be larger and/or deeper than those found in Layer I. Three cooking pits were identified in the Layer II cultural deposit along with several features interpreted as post holes. While Layer I contained 1 possible post hole, a total of 9 features interpreted as post holes (6) and possible post holes (3) were located in Layer II. These post holes did not produce a horizontal patterning which would indicate that they were parts of habitation structures. Rather, they seem to be



randomly placed, and represent activity of an undetermined nature. It appears that the site was more intensively utilized during the Layer II occupational sequence.

One feature produced perhaps the most unusual find of the project. The skeleton of an intentionally buried, immature Hawaiian monk seal (*Monachus schauinslandi*) was located in an elongated basin-shaped pit. It had been placed on its left side in a roughly E-W orientation, and covered with clean sand. The skull exhibited severe fracturing—more than would be expected from ordinary decomposition and bone displacement due to being buried. It is tempting to interpret it as some kind of ritualistic offering. However, there were no cultural materials associated with it, which might indicate such a function.

The artifact assemblage recovered from Site 4127 indicates that a variety of activities took place at this site. A total of 42 basalt artifacts and common basalt waste flakes suggest that stone tool making was one of these activities. In addition, adze fragments and flakes may indicate that these tools were used in other work activities associated with a habitation area. The presence of various categories of materials which include shell fishhook tabs, worked shell, worked bone and an unfinished bone fishhook (from 1995 Inventory Survey) indicate that fishhook manufacturing also took place here. The presence of coral abraders, coral files and coral manuports further point to fishhook production occurring at Site 4127. The majority of the coral artifacts and over 70% of the coral manuports were recovered from Layer II. This suggests that fishhook manufacturing was more common during this occupational sequence. While there was not a large quantity of volcanic glass present, 43% of the material found exhibited signs of utilization wear. Much of the material was of relatively poor quality. It does not appear likely that Site 4127 was actively used to reduce volcanic glass raw material. Rather, it appears that some slight refining of a possibly scarce resource took place and the available material was then utilized.

In summary, Site 4127 is interpreted as a habitation site with 2 components. The archaeological record represented in the upper cultural deposit (Layer I) was impacted by later historic activities associated with the railroad and road construction. The undisturbed indigenous cultural activity represented in this layer falls into the same late precontact temporal bracket as the other component in Layer II. This component (Layer II) represents an intact cultural deposit which contains more features indicative of habitation (i.e. post holes and cooking pits). In addition, larger amounts of food midden and other portable remains recovered from the Layer II cultural deposit further indicate that this occupational sequence in the late precontact period was more intensive than the upper component.

Another archaeological inventory survey was conducted by Xamanek Researches on the rest of Parcel 82 in the summer of 1997.<sup>7</sup> Proposed plans called for the construction of a Texaco Service Station on the 1.34 acre parcel. The property rises from c. 144 to 150 ft. AMSL near Lower Main Street to c. 205 ft. AMSL along its eastern

<sup>7</sup> The eastern boundary of Parcel 82 lies c. 20 m. northwest of the Punana Leo O Maui project.

boundary. Inventory level results indicate that the area below c. 150 to 160 ft. AMSL has been heavily impacted by post-contact activities, while the upper parcel is relatively undisturbed.

Excavation on the lower portion of the study area revealed a remnant cultural deposit. We did not recover a charcoal sample that would date this deposit, but it appears likely that it is part of Site 4127 which was studied in 1995 and 1996 by Xamanek Researches (Fredericksen and Fredericksen, September 1997).

While the lower project area was extensively impacted by post-contact activities, the upper part of parcel 82 was found to have been much less affected. A largely intact cultural deposit was located which essentially spanned the width of the parcel between c. 162 and 171 ft. AMSL. The *in situ* cultural deposit is interpreted as a precontact habitation site and has been designated Site 50-50-04-4414. A radiocarbon sample obtained from a small hearth in the Site 4414 deposit returned a date range of AD 1390 to 1670 (Ibid.).

A burial containing at least 2 individuals was also located during this inventory survey. This precontact burial was associated with the Site 4414 deposit and lies c. 40 m. northwest of the proposed Punana Leo O Maui project. Initial mitigation measures for the Site 4414 burial have been undertaken, and its final disposition is pending and under the jurisdiction of the Maui and Lana'i Islands Burial Council.

Proposed mitigation measures for Parcel 82 included 1) in-place preservation for the Site 4414 deposit above c. 162 ft. AMSL, 2) in-place preservation for the Site 4414 burial, 3) in-place preservation for the remnant of Site 4127, 4) data recovery for any portions of Site 4127 impacted by subsurface excavation, and 5) archaeological monitoring during any grubbing and earthmoving activities on the project.

#### Waiale Road Corridor/Pu'u One Dunes

A precontact burial was found while road crews were excavating under the Kaahumanu Avenue bridge crossing Waiale Road (Site 4126).

Along Waiale Road, which forms the western border of the Wailuku Sand Hills (Pu'u One Sand Dunes), monitoring for a drainage project for C. Brewer found human remains which had been disturbed by a former pipe line trench that runs perpendicular to the road (Site 4005). Site 3502 also contains burials, an historic coffin burial and another disturbed burial that is thought to be precontact. Site 4067 is the remnant of a habitation site identified during the monitoring for the pipe line that revealed Site 4005. Site 4068 is a habitation site with an associated cluster of human burials (Dunn and Spear, 1995).

During construction for the Maui Homeless Shelter in May of 1992, 3 human burials were inadvertently discovered (Site 50-50-04-2916). These skeletal remains were

investigated by Theresa Donham. She found the remains of an adult male in a grading cut, roughly 2 feet below the original surface (Burial 1). No cultural materials were associated, and a burial pit could not be identified. On May 21, a cranium (Burial 2) was exposed during construction of a desilting basin located along the lower slope of the dune at the southeastern<sup>8</sup> corner of the project area (Donham, 1992, p. 3). A test unit measuring 5 by 3 meters was excavated to a depth of 0.50 to 0.75 meters below the surface. All sand material was screened and a total of 280 identifiable elements or fragments were recovered, along with 235 miscellaneous fragments. Two individuals were represented, an adult female, and a smaller adult individual of undetermined sex.

The parcel adjacent to and south of the Maui Homeless Shelter was surveyed by Xamanek Researches in 1995 (Fredericksen and Fredericksen, June 1995). While no sites or human remains were located during the inventory survey, it was recommended that archaeological monitoring take place during earthmoving activities. Human remains were located in April of 1996, but not before they had been seriously disturbed by unmonitored grading activity during initial construction of the Ka Hale A Ke Ola affordable housing development. The remains were scattered over a 100 by 10 meter strip near the fence of the Homeless Shelter where the Site 2916 burials had been discovered earlier. It is felt that these remains may be part of that burial complex, but have been issued a separate SIHP site number—50-50-04-4192. Approximately 9 large truckloads of sand containing human remains were collected and moved west of Waiale Road. This sand was subsequently sifted by a mechanical sifter. This activity was completed in September, 1996, and skeletal remains of at least 4 individuals were identified—3 adults and 1 child (Fredericksen, February 1997).

Xamanek Researches mitigated a series of burials disturbed by sand mining operation located ca. 1 km. to the south, at the Maui Scrap Metal Company in Waikapu. Sand from this site was transported to Lahaina for use at the Sewer Plant, and was found to contain human remains. Their origin was established, and for a period of several months, from November 1994 to March of 1995, sand was screened by a large mechanical sifter in an effort to recover the human remains disturbed by the earlier sand mining activities. The burial site was designated as Site 50-50-04-3525. A minimum number of 22 individuals were identified following completion of the mitigation. These remains were reinterred at Site 3525 by members of the Maui and Lana'i Islands Burial Council in early March, 1995. The site is to be fenced and preserved as a burial site (Fredericksen and Fredericksen, February 1996).

#### Maui Lani Partners Project Area

Early surveys by Barrera (1976) of the 1,000 acre Maui Lani project and of the Hale Laulea Subdivision (Barrera, 1983) in Kahului did not identify any sites. Neller (1984) investigated the area known as the "sand borrow site" after sand from there, used

<sup>8</sup> This desilting basin extends to the border shared by the Homeless Shelter and the Ka Hale A Ke Ola affordable housing development.

at a construction site in Lahaina, was discovered to contain human remains. His research revealed one complete *in situ* burial, and skeletal fragments of at least 3 other individuals scattered in the vicinity.

In 1987, in response to a call from the Maui Police Department, the present authors visited this same general area ("sand borrow site") to determine the nature of skeletal material reported by local residents. The disturbed, flexed burial of a young female (18 to 25 years of age), and a 4 or 5 year old child nearby, lay partially exposed in a trail used by dirt bikers. At the request of the Police Department, the burials were removed. The presence of a shattered 4th thoracic rib and lower scapula blade on the left side, suggested that a frontal, traumatic puncture wound caused the death of the young female. The remains were curated at Maui Community College until they were turned over to SHPD on Maui for final disposition.

In 1990, the Anthropology Department of the Bishop Museum under contract to Maui Lani Partners conducted test excavations on 4 sites which had been identified in a reconnaissance survey done in January 1990 (Rotunno and Cleghorn, February 1990). The sites included 2 parallel alignments, 2 adjacent rock mounds, and a single rock mound. These sites were determined to be of recent origin related to off-road vehicular traffic, and not archaeologically significant. The fourth site (Site 50-50-04-2797) is the human burial site found at the sand borrow pit near the eastern boundary of the Maui Lani project area. No intact burials were recovered, but the scattered remains of at least 3 individuals were recovered in the surface layer (Rotunno-Hazuka et. al., May 1994a). A subsequent burial search was undertaken. These investigations resulted in the identification of at least 12 individuals from 10 burial features. Six features were preserved *in situ* (Rotunno-Hazuka et. al., May 1994b).

The most recent work has been archaeological subsurface sampling of the Maui Lani Development Phases 1 and 1A, conducted by Aki Sinoto Consulting. The objective of the work was to implement a strategy for subsurface sampling to test for the predictability of burials based on topographic features within the unmodified dune areas, and to address the deficiencies in the inventory survey (Pantaleo and Sinoto, January 1996).

A total of 90 backhoe trenches, 2 shovel scrapes and 1 manual trench were excavated in 58 localities (Ibid., p. iii). Six previously unrecorded burials were found—4 associated with the sand borrow site (Site 2797); one on top of a high dune (Site 4146), and another exposed in a road cut (Site 4147). The authors state: "No predictable pattern of traditional interment of the dead based on preference for topographic features was established during the current investigation. Rather, the resultant data indicates only one concentration or complex of multiple burials at Site 2797 and isolated individual burials at the top of dunes in the highest locations in the project area". (Ibid.)

No further archaeological work at the inventory level was deemed necessary. However, monitoring was recommended during the grading phase of construction.

### Maui Lani Parkway, Lot 11-A and Mahalani Street Extension

Three inventory surveys in the central Maui area south of Baldwin High School and the study area were completed by Xamanek Researches during 1997.

Maui Lani Parkway is a roadway connecting Kaahumanu Avenue to the north with the proposed Mahalani Street Extension to the south. This corridor is c. 2500 feet in length and ranges from c. 200 to 300 feet in width, and encompasses approximately 12 acres. It crosses two dune features. A 172 acre 18-hole golf course is planned for the area to the west, as part of the Maui Lani Partners project discussed above.

Subsurface testing included 31 backhoe test trenches, placed in areas which appeared to have a relatively high potential for locating archaeological finds. No significant material cultural remains were encountered during inventory level testing in the project area. However, human remains (Site 50-50-04-4368) were discovered on the western flank of one of the dunes just outside the proposed project area. These remains were located during our pedestrian inspection in the vicinity of Hole #10 on the adjacent proposed golf course. The scattered surface remains consisted of several cranium fragments and a cervical vertebra. These were turned over to SHPD immediately after their discovery. Subsequently, Theresa Donham, SHPD, and a monitor for Aki Sinoto Consulting accompanied Erik Fredericksen to the find spot. Aki Sinoto Consulting conducted the appropriate mitigation measures, as the remains were within their monitoring project area.

Because of the burial find, and the fact that burials have been reported in the Pu'u One Dune formation elsewhere, monitoring during grubbing and earthmoving activities was recommended (Fredericksen and Fredericksen, January, 1997). Xamanek Researches subsequently located human remains during monitoring of construction activities associated with the Maui Lani Parkway road project. A previously *in situ* burial was inadvertently disturbed during mass excavation. This set of remains was designated Site 50-50-04-4435. Aki Sinoto Consulting subsequently completed mitigation of these remains because again they were located on the proposed Maui Lani Partners golf course property. Additional human remains were located by Xamanek Researches during monitoring of continued work on the Maui Lani Parkway road project. It was determined that these remains had been previously disturbed by the construction of a vehicle access road during World War II. These remains were designated Site 50-50-04-4419.

A 20.7 acre section of land, identified as Maui Lani Lot 11-A, lies on the eastern and western sides of Maui Lani Parkway corridor, near its intersection with Kaahumanu Avenue. Xamanek Researches carried out an inventory survey on this project area in February, 1997. A series of 53 backhoe test trenches and 2 manual test units were excavated in the study area. In Backhoe Trench #41, the flexed burial of an adult male individual was discovered, and given Site number 50-50-04-4401. This site is located c. 150 ft. west of the Maui Lani Parkway right of way and c. 100 feet south of Kaahumanu Avenue (Fredericksen and Fredericksen, June 1997, p. v). No other significant findings

were made in the subsurface portion of the inventory survey. However, because of the burial find and the probability that other burials are present on the property, archaeological monitoring was recommended during grubbing and earthmoving activities on Lot 11-A. Final disposition of Site 4401 will be determined by SHPD and the Maui and Lana'i Islands Burial Council.

An inventory level survey of the proposed Mahalani Street Extension corridor was conducted in February of 1997 by Xamanek Researches. A Programmatic Agreement (PA) between SHPD, DOT and FHWA was made as to what areas were to be covered by the survey. Since the proposed roadway will cross areas which have been substantially disturbed, the subsurface testing portion of the inventory survey was conducted in the 3 areas recommended in the PA. Eight subsurface backhoe tests were dug in these 3 areas. No significant historic features were located. However, intact sand dune deposits were present in several test instances. Monitoring was recommended in the sensitive areas, because of the continued discovery of human burials in the surrounding sand dune area (Fredericksen and Fredericksen, May 1997).

#### Other Central Maui Archaeological Studies

The authors have conducted studies at Maui Community College, Maui Central Parkway (Fredericksen and Fredericksen, December 1992a; Fredericksen, et. al., 1994), and at the Keiki Zoo Maui (Fredericksen and Fredericksen, September 1995)—all with negative results. Archaeological Consultants of Hawaii conducted a survey for the Maui Arts and Cultural Center, again without significant findings (Kennedy, 1990). An inventory survey for the 110-acre Maui Central Park area, in which a large intact dune is present, was conducted by Cultural Surveys of Hawaii in 1996. Here again, no indigenous cultural sites were found. However, scattered remains (Site 50-50-04-4211) were located on the surface near the Maui Arts and Cultural Center, during a botanical survey conducted by Xamanek Researches. Subsequent archaeological work at the inventory level suggested that no additional human remains were present, and Site 4211 was evaluated as no longer significant (Heidel, Pyle and Hammatt, January 1997, p. 97).<sup>9</sup> Other historic sites noted in the Maui Central Park inventory survey include Site 4232, a former WW II military facility, and Site 3112, the Kahului Railroad Berm. Both sites will be partially preserved by being incorporated into the landscaping of the Park (Ibid., p. 96).

#### Settlement Pattern and Land Use

The settlement pattern revealed by ongoing archaeological studies appears to be one of intensive land usage in the Iao Valley and the Lower Main Street and Waiale Road corridor area, along the northern and western sides of the Pu'u One Dune formation.

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<sup>9</sup> During monitoring of earthmoving activities in late July 1997, additional human remains were located on the sand dune in the vicinity of the archery range. c. 30 to 40 m. northwest of Site 4211 (Personal communication with Dr. Boyd Dixon, SHPD).

The lower Iao Valley portion of Wailuku *ahupua'a* was an important political and religious area of West Maui. Its fertile taro lands and close proximity to the sea, produced conditions which supported a large population. Wherever large population clusters are found in Hawaii, the social framework of chiefly importance and religious expression is also present. This is attested to by the existence of the 2 *heiau* (Haleki'i and Pihana) atop the northern dune system, and others reported by Walker (1931) and Keau (1992, oral communication) within the Lower Main Street corridor. The middle and upper reaches of Iao Valley were also rich in *lo'i* and *'auwai* which produced additional food stuffs to support political and religious activities. The Upper Iao Valley had been traditionally known as a very significant sacred place in the history of Maui (Donham, MCCRC minutes, June 1, 1995).

Coastal sites, such as Site 3120, have been occupied since the 1200s (and possibly much earlier), and no doubt provided the complex with marine resources. Archaeological work conducted in the Lower Main Street corridor has produced an apparent temporal settlement pattern. Radiocarbon dates from sites closer to the ocean are earlier than those recovered from sites further inland in this corridor (Table 1). This information strongly suggests that settlement occurred first along the sea shore and gradually moved inland as population numbers increased in late precontact times.

An intensification of usage appears to have occurred during the 16th century, and seems to have peaked around the time of Pi'ilani, in the 1600s (Ibid.). All radiocarbon dates which have been recovered from the sites along this corridor fall into this temporal framework (refer to Table 1). The proximity of Site 4127 along Lower Main Street, and Site 4414 at about the 170 foot elevation above it, lying to the northwest of the present study area, strongly suggested that precontact habitation extended onto the ridge of the Sand Hills portion of the Pu'u One dune area. We expected to find sites which reflected habitation activities, and recognized the high probability that human burials would also be present.

**TABLE 1**

**Listing of Archaeological Studies Done in Lower Main Street/Waiale Road Corridor, and Central Maui Area.**

<b>AUTHORS</b>	<b>LOCATION</b>	<b>FINDINGS</b>
Burgett and Spear, 1995	TMK: 3-8-37: 48, Lower Main St., Home Maid Bakery. Sites 3924 and 3925	Habitation sites; human burials. Dated c. AD 1430 to 1671.
Burgett and Spear, 1996	TMK: 3-4-39: 77, Lower Main St., Oceanhouse, Inc., Site 4004	Habitation site remnant; human burials. Dated 1420 to 1640 AD.
Connolly, 1973	TMK: 3-8-36: 94, Lower Main St., Site 1171	Habitation site; burials discovered 1994 eroding from dune face.
Donham, 1994	TMK: 3-8-37: 49, Lower Main St., Home Maid Bakery, Site 3556	Inadvertent burial discovery, both historic and precontact burials
Donham, 1992	TMK: 3-8-46: 21, Waiale Road, Maui Homeless Shelter, Site 2916.	Human burials
Dunn and Spear, 1995	TMK: 3-4-02: 36, RR bed along Waiale Rd. Sites 4068, 4067; Site 3502 at Waiale Rd. and Kaohu Street	Habitation site and burials (Site 4068); Habitation (Site 4067).
Fredericksen, W. and Fredericksen, D, December 1992a	TMK:3-8-07: 40 and 43; Maui Community College Parking Lot Extension.	Historic sites from WWII. No precontact cultural materials.
Ibid., September 1995	TMK: 3-8-07: por. 1; Keiki Zoo Maui.	No findings of significance.
Ibid., February 1996	TMK: 3-8-07: 104; Maui Scrap Metal Company, Waikapu. Borrow Site, Site 3525.	Remains of at least 22 individuals recovered from mined sand.
Fredericksen D. and Fredericksen, W. December 1992b	Inventory Survey: TMK: 3-8-07: 123, at Lower Main and Waiehu Road, Nisei Veterans Memorial Center.	Historic site, Kahului Railroad (Site 3112); large precontact habitation site, with continuous occupation from c. 1200 AD to c. 1740 (Site 3120); numerous burials to be preserved <i>in situ</i> .
Fredericksen, et. al., November 1995 (Interim report) October 1997	Data Recovery: TMK: 3-8-07: 123, at Lower Main and Waiehu Road, Nisei Veterans Memorial Center. Final Data Recovery Report	
Fredericksen, et. al., July 1995;	Inventory Survey- TMK: 3-4-39: por. 81, 82, 83 at Lower Main and Mill Streets, Site 4127	Habitation site (Site 4127); data recovery recommended
Fredericksen, E. and Fredericksen, D. September 1996	Data Recovery - TMK: 3-4-39: por. 82	Habitation site (Site 4127); dated c. AD 1450 to 1675
Fredericksen D., and Fredericksen E. September 1997	Inventory Survey: TMK: 3-4-39: 82, proposed Maui Texaco Service Station project	Habitation site and burials (Site 4414) dated c. AD 1325 to 1670; data recovery and monitoring recommended



Table 1 (cont.)

AUTHORS	LOCATION	FINDINGS
Fredericksen, E., D., and W., August 1994	TMK: 3-8-46: 30; Maui Memorial Park	No significant findings.
Ibid., (Revised) March 1997	TMK: 3-4-36: parcel A; Mokuahau Water Storage Tank	No significant findings.
Fredericksen, E., W., and D., September 1994	TMK: 3-8-07: por. 125; Maui Central Park, 10 acres along Kahului Beach Road	No significant findings.
Fredericksen E., and Fredericksen, D., June 1995	TMK: 3-8-46: 21, Waiale Road; Ka Hale A Ke Ola.	No significant findings during inventory survey—monitoring recommended.
Fredericksen, D. February 1997	TMK: 3-8-46: 21, Waiale Road; Ka Hale Ke Ola.	Human burials uncovered during grading—remains of at least four individuals recovered.
Fredericksen, E., and Fredericksen D., January 1997	TMK: 3-4-07: por. 121, Maui Lani Parkway corridor	No precontact finds in corridor—human remains (Site 4368) on Golf Course Hole #10—monitoring recommended.
Ibid., in process	Maui Lani Parkway corridor monitoring project	<i>In situ</i> burial (Site 4435) and previously disturbed remains (Site 4419) found during monitoring.
Fredericksen, D., and Fredericksen E. May 1997	TMK: 3-8-47: por. 1, 2, 3, 4, 17, 18, 30, and 32; 3-9-07: por. 121 Mahalani Street Extension	No significant findings - monitoring recommended.
Fredericksen, E., and D. June 1997	TMK: 3-4-07: por. 121, Lot 11-A, Maui Lani Project—20.7 acres	One indigenous <i>in situ</i> burial (Site 50-50-04-4401). Monitoring recommended.
Heidel, Pyle and Hammatt, 1997	TMK: 3-8-07: 1 and 3-7-01: 2; Maui Central Park	Historic sites: 4232-WW II military camp; 3112-Kahului Railroad Berm; 4211-scattered human remains.
Kennedy, 1992	TMK: 3-8-07; Maui Arts and Cultural Center.	No findings.
Kennedy, Denham and Reintsema, 1992	TMK: 3-5-03: 1; International Zen Dojo Mission; Iao Valley	No significant findings.
Pantaleo, J. and A. Sinoto, January 1996	TMK: 3-8-07: 2, 110; Phase I and Phase IA, Maui Lani Partners Development, Wailuku.	No habitation sites. Human burials in several locations. Monitoring recommended. Additional burials during monitoring.
Rotunno and Cleghorn, 1990 Rotunno-Hazuka, et. al. May 1994a	TMK: 3-8-07: 2, 110: Maui Lani Development Property.	No precontact sites other than burials (Site 2797).
Spear, 1995	TMK: 3-8-37: 48; Lower Main St.	Human burials and habitation (Site 4066)

## ARCHAEOLOGICAL FIELD METHODS

Field work was carried out at various times during July and September 1997 by 2 to 3 personnel. Erik M. Fredericksen (MA) was the field director, and Walter M. Fredericksen (Professor emeritus—University of Hawaii) and Demaris L. Fredericksen (Ph.D., ABD) were the project coordinators.

Our archaeological inventory level survey of the study area was conducted in 2 phases. A pedestrian inspection of the 1.69 acre parcel formed the initial phase of the project. A c. 5 m. spacing was maintained in the field and sweeps were oriented north to south. Mapping was carried out with metric survey tapes and a digital compass. Subsurface testing followed the walk-over inspection of the subject parcel.

Our subsurface investigation consisted of 5 backhoe trenches, 5 soil trenches, and 3 manual test units. In addition, a total of 12 shovel probes were utilized to help define the extent of the Site 4418 deposit. The backhoe trenches were c. 5 to 6 m. long by 0.9 m. wide by a maximum of 2.3 m. deep. The soil test trenches were c. 4 to 5 m. long by 0.9 m. wide by a maximum of 2.9 m. deep. Backdirt from the backhoe trenches and soil trenches was visually inspected and spot-checked with 1/8 inch screen. In addition, trench profiles were visually inspected and, when possible, recorded. After the backhoe trenches and soil test trenches were completed, additional inventory level work was carried out on a portion of a subsurface cultural deposit. Three test units were manually excavated in this cultural deposit in order to obtain additional information regarding the site's function and age. These 3 manual test units were 1.0 by 1.0 m. by up to 0.82 m. deep. All soil was sifted through 1/8 inch screen and 100 percent of the portable remains were collected for later laboratory analysis. Two charcoal samples were recovered from TU 3 and placed in aluminum foil in the field. Sample No. 2, obtained from a fire hearth, was subsequently submitted to Beta Analytic, Inc. for radiocarbon analysis. All 3 manual test units were profiled. Written descriptive notes were kept in the field, and photographs were taken with color film. Cultural materials recovered during the inventory survey include portable remains and artifacts which are presently curated by Xamanek Researches, Pukalani, Hawaii.

## ARCHAEOLOGICAL FIELD RESULTS

During the walk-over survey, exposed material culture remains were found on the northwestern quadrant of this triangular parcel. Subsurface investigation revealed a largely intact precontact habitation site. This cultural deposit has been assigned SIHP No. 50-50-04-4418. The Site 4418 deposit appears to cover at least 2000 square meters of the northwestern portion of the project area. Subsurface testing in this area and elsewhere on the parcel indicates that intact sand dune deposits cover the entire 1.69 acre property. In addition, it appears that the study area has been minimally impacted by post-contact activities in the general area.

In the discussion below, backhoe and soil test trench results are first presented, followed by manual excavation findings in the Site 4418 deposit. Refer to Tables 2 and 3 for subsurface results for backhoe trenches (BT) and soil test trenches (ST), respectively. Tables 4 and 5 present subsurface results for the Site 4418 deposit, while Table 6 lists the various features encountered during testing in this deposit. Table 7 summarizes shovel probe findings. See Map 3 for the approximate locations of the Site 4418 deposit and the previously noted subsurface tests. Refer to Appendix B for a discussion of the artifacts recovered.

### BACKHOE TRENCHES AND SOIL TRENCHES

Following discussions with Sara Collins<sup>10</sup>, SHPD, and Kili Namau'u of Punana Leo O Maui, the decision was made to incorporate soil testing in the inventory survey. Erik Fredericksen, Xamanek Researches, coordinated field times with Charles Biegel, Island Geotechnical Services, in order to help minimize costs to Punana Leo O Maui. A total of 5 backhoe trenches and 5 soil trenches were utilized. These 10 trenches were initially excavated on the study parcel in order to ascertain subsurface conditions. Stratigraphy encountered in all mechanical subsurface tests indicated that intact dune deposits cover the subject parcel.

#### Backhoe Trench 1

This trench was excavated near the northeastern corner of the project at c. 215 ft. AMSL. Trench orientation was approximately E-W, while trench dimensions were c. 6 m. in length by 0.9 m. in width by a maximum of 2.1 m. in depth. Vegetation in the vicinity consisted of *kiawe* trees, *koa haole*, alien grasses and annual weeds. Three soil layers were present in this subsurface test (Figure 1).

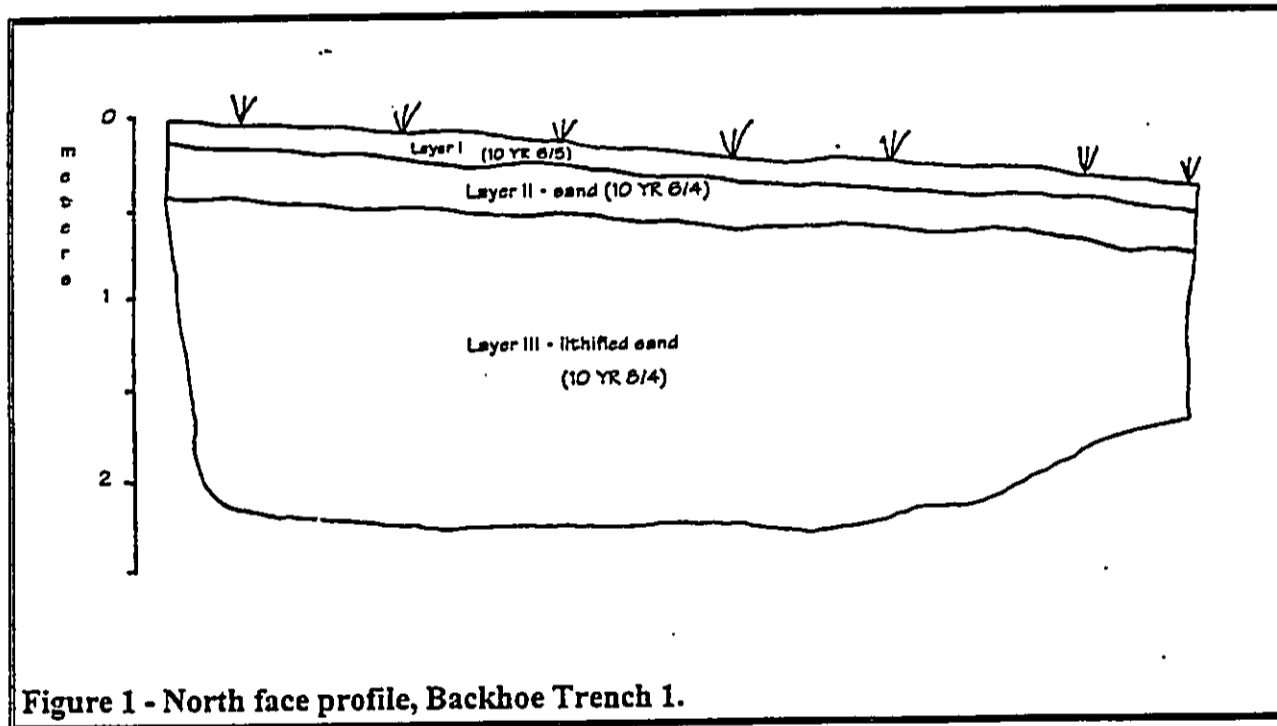
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<sup>10</sup> Boyd Dixon subsequently took over the SHPD Maui Archaeologist position.

Layer I was made up of pale brown (10 YR 6/3) sand with moderate amounts of organic materials, rootlets, and woody roots (*kiawe*). This thin stratum was up to 10 cm. thick, and appeared to be sterile.

Layer II consisted of light yellowish brown (10 YR 6/4) sand which was a maximum of 30 cm. deep. This loose, dry stratum appeared to be undisturbed and sterile. This layer overlaid aeoleonite or lithified sand.

Layer III was encountered between 30 and 40 cmbs and extended to the bottom of BT 1. It was very pale brown (10 YR 8/4) in color and sterile. Excavation of BT 1 was terminated at a maximum depth of 2.1 mbs in this very hard, dry stratum.



#### Backhoe Trench 2

Backhoe Trench 2 was located c. 20 m. northwest of Liholiho Street near the central portion of the study area at c. 226 ft. AMSL. Vegetation in the general area consisted of *kiawe* trees, scattered *koa haole*, and alien grasses and annual weeds. The dimensions of BT 2 were c. 6 m. in length by 0.9 m. in width by 2.2 m. in depth. Stratigraphy encountered in this trench was similar to BT 1 and included 2 thin sand layers which overlaid lithified sand or aeoleonite (Figure 2).

Layer I consisted of pale brown (10 YR 6/3) sand which contained low to moderate amounts of organic matter, and common rootlets. This loose, dry layer was up to 15 cm. thick. Two waterworn pebbles c. 3 and 5 cm. in diameter were recovered from

the backdirt pile from Layer I. No other material remains were found during inspection of the backdirt. In addition, Layer I was spot-checked with 1/8 inch screen, and no other portable remains were located.

Layer II consisted of light yellowish brown (10 YR 6/4) sand. This loose, dry stratum was up to 50 cm. thick. It contained moderate amounts of rootlets and a few woody roots (*kiawe*). No material culture remains were found in this layer.

Lithified sand (10 YR 8/3) was located between 50 and 60 cmbs and extended to the bottom of BT 2. Excavation was halted at a maximum depth of 2.2 mbs in this very hard Layer III deposit.

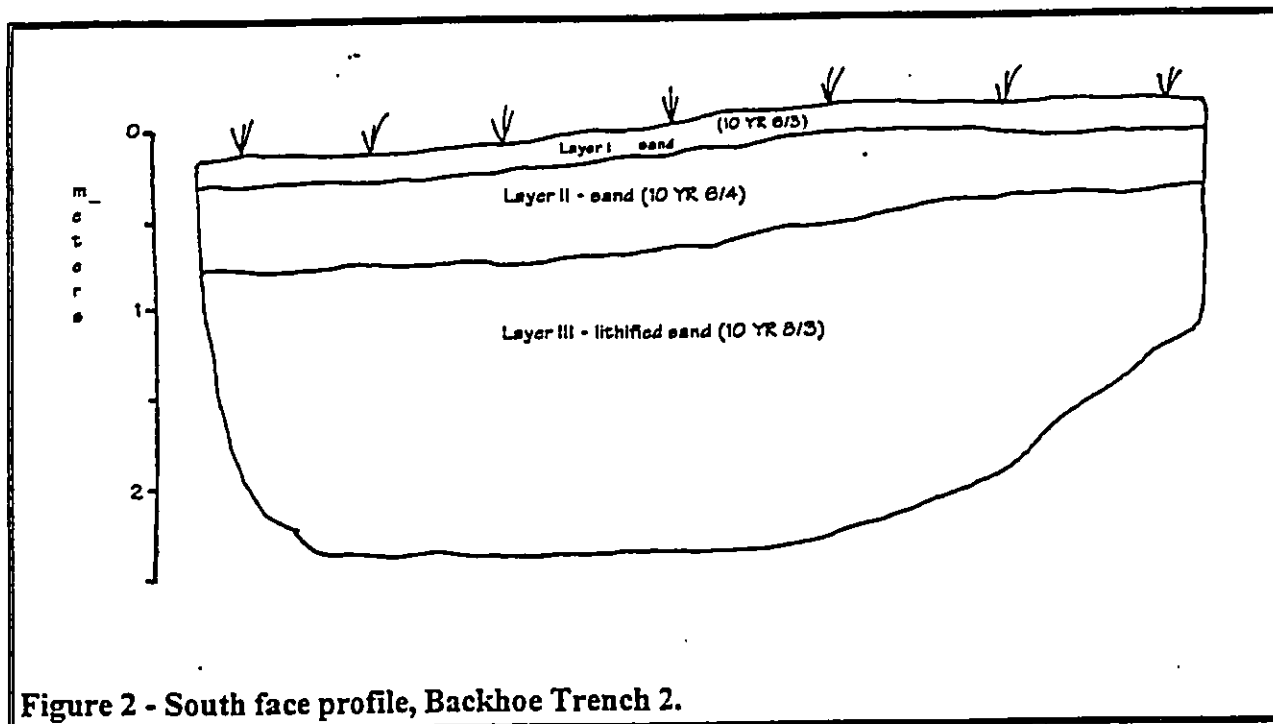


Figure 2 - South face profile, Backhoe Trench 2.

#### Backhoe Trenches 3, 4 and 5

Backhoe Trenches 3, 4 and 5 were placed in the northwestern quadrant of the study parcel (see Photo 1). During the earlier pedestrian inspection of the project, scattered cultural materials were noted in this area. The above trenches were subsequently excavated in order to verify whether or not an intact subsurface cultural deposit was present. A cultural layer was located in all 3 test instances and subsequently designated SIHP No. 50-50-04-4418.

#### Backhoe Trench 3

This trench was located at c. 226 ft. AMSL on the flank of the dune ridge which transects the project area from the northeast to the southwest. Vegetation in the vicinity

of BT 3 was composed of *kiawe* trees, alien grasses, some annual weeds, and scattered *koa haole*. Backhoe Trench 3 was c. 6 m. long by 0.9 m. wide by a maximum of 1.8 m. deep. A total of 4 sand layers were identified in BT 3, including a thin cultural deposit.

Layer I was composed of dark grayish brown (10 YR 4/2) silty sand. This loose, dry stratum was c. 20 cm. thick and stained with charred *kiawe*. Scattered modern materials were noted along with low amounts of marine shellfish remains, a few waterworn pebbles, and 1 piece of unutilized coral. This layer impacted the underlying stratum.

Layer II consisted of grayish brown (10 YR 5/2) loose, dry sand. This c. 6 to 11 cm. thick layer represents a partly intact portion of the Site 4418 cultural deposit. Material culture remains observed in Layer II included low amounts of various marine shellfish including cone (*Conus* sp.), cowrie (*Cypraea* sp.), *pipipi* (*Nerita picea*), and planaxids. Other portable remains included 2 pieces of unutilized coral and 1 waterworn basalt pebble. In addition, a possible pit feature was noted in the western face of BT 3.

Feature BT 3.1 appeared to be a shallow basin-shaped pit (10 YR 5/2) which extended c. 10 to 15 cm. into the underlying layer. This pit was c. 40 cm. across and is interpreted as a probable fire hearth. Unfortunately, this end of BT 3 collapsed before a profile or photograph of the feature could be obtained. No items interpreted as artifacts were found in the Layer II cultural deposit. The soil boundary with the underlying layer was wavy and somewhat indistinct.

Layer III was made up of very pale brown (10 YR 8/3) sand which appeared to be sterile. This loose, dry stratum was c. 20 cm. thick and extended to a maximum depth of c. 50 cmbs.

The common lithified sand extended to the bottom of BT 3. It was very pale brown (10 YR 8/4) in color. Excavation of BT 3 was halted because of very hard digging and unstable subsurface conditions. It was not possible to profile BT 3.

#### Backhoe Trench 4

Backhoe Trench 4 was located c. 12 m. to the south of the subject parcel's northern boundary. This trench was placed near the base of the low dune which crosses the property from the northeast to the southwest (Photo 3). The ground surface of BT 4 was c. 226 ft. AMSL. Vegetation in the general area consisted of *kiawe* trees, alien grasses and annual weeds, and scattered *koa haole*. The dimensions of BT 4 were c. 6.0 m. in length by 0.9 m. in width by 2.2 m. in depth. Stratigraphy encountered in this trench included the Site 4418 cultural deposit and 3 sand layers (Figure 3).

Layer I consisted of dark grayish brown ((10 YR 4/2) silty sand. This loose, dry layer was up to 20 cm. thick and stained by charred *kiawe*. It contained moderate amounts of rootlets and woody roots (*kiawe*). Low amounts of modern and probable

indigenous materials were noted in this uppermost layer. Indigenous remains included shellfish, a waterworn pebble, and 2 unutilized piece of coral. This layer also impacted the underlying cultural deposit.

The Layer II cultural deposit in BT 4 extended up to 40 cmbs and was a maximum of 20 cm. thick. Layer II was composed of grayish brown (10 YR 5/2) sand. This loose, dry stratum represents a mostly intact portion of the Site 4418 cultural deposit. Marine shellfish remains observed in the profile of BT 4 include cone (*Conus* sp.), cowrie (*Cypraea* sp.), pipipi (*Nerita picea*), opihi (*Cellana* sp.) and planaxids. One waterworn basalt pebble and charcoal flecking were also noted in the profile. An indigenous artifact was also recovered from the Layer II deposit. Artifact 1 (118 g.) is interpreted as a pecking stone which was likely broken by high temperature (i.e. from a fire). In addition to the above noted portable remains, a pit was noted on the south face profile of BT 4.

Feature BT 4.1 extended from the Layer II cultural deposit into the underlying stratum. This basin-shaped pit was c. 20 cm. deep by c. 45 cm. wide and extended into the south face profile of BT 4. Only scattered charcoal flecking was noted in this pale brown (10 YR 6/3) feature suggesting that it was not used as a cooking pit, this feature may represent a shallow refuse pit or a low area which was simply leveled off.

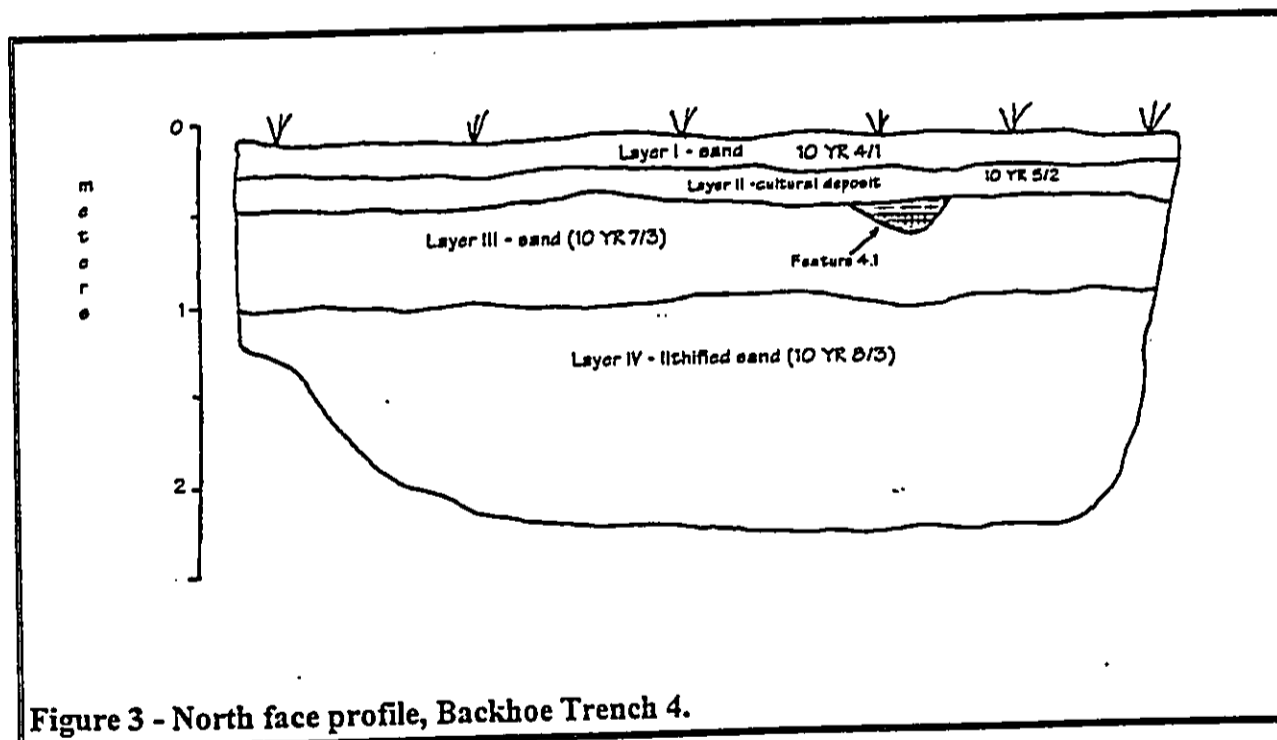


Figure 3 - North face profile, Backhoe Trench 4.

Layer III was composed of very pale brown (10 YR 7/3) sterile sand. This loose, dry stratum was up to 60 cm. thick and overlaid lithified sand.

The Layer IV deposit was made up of very pale brown ((10 YR 8/3) lithified sand. This sterile, very hard stratum was present to the bottom of BT 4. The trench was halted because of very difficult subsurface digging conditions.

### Backhoe Trench 5

This fifth trench was excavated along the western property boundary with Lunalilo Street in order to assess subsurface conditions near the street. Inspection of the general area suggested that minor surface disturbances had occurred in relatively recent times. Modern materials including tree trimming debris and refuse were noted in the immediate area. Vegetation consisted of *kiawe* trees, *koa haole*, alien grasses and annual weeds. Backhoe Trench 5 was located at c. 223 ft. AMSL in essentially the lowest portion of the northwestern study area. A total of 5 sand layers were present in BT 5 (Figure 4).

Layer I was up to 30 cm. thick. This loose, dry layer contained moderate amounts of organic matter, rootlets, and woody roots (*kiawe*). It was stained by charred *kiawe*. The grayish brown (10 YR 5/2) sand yielded mixed modern and indigenous cultural materials. Layer I exhibited signs of past disturbance (banding) and may have been associated with the construction of the nearby residential street. This layer impacted the underlying Site 4418 deposit.

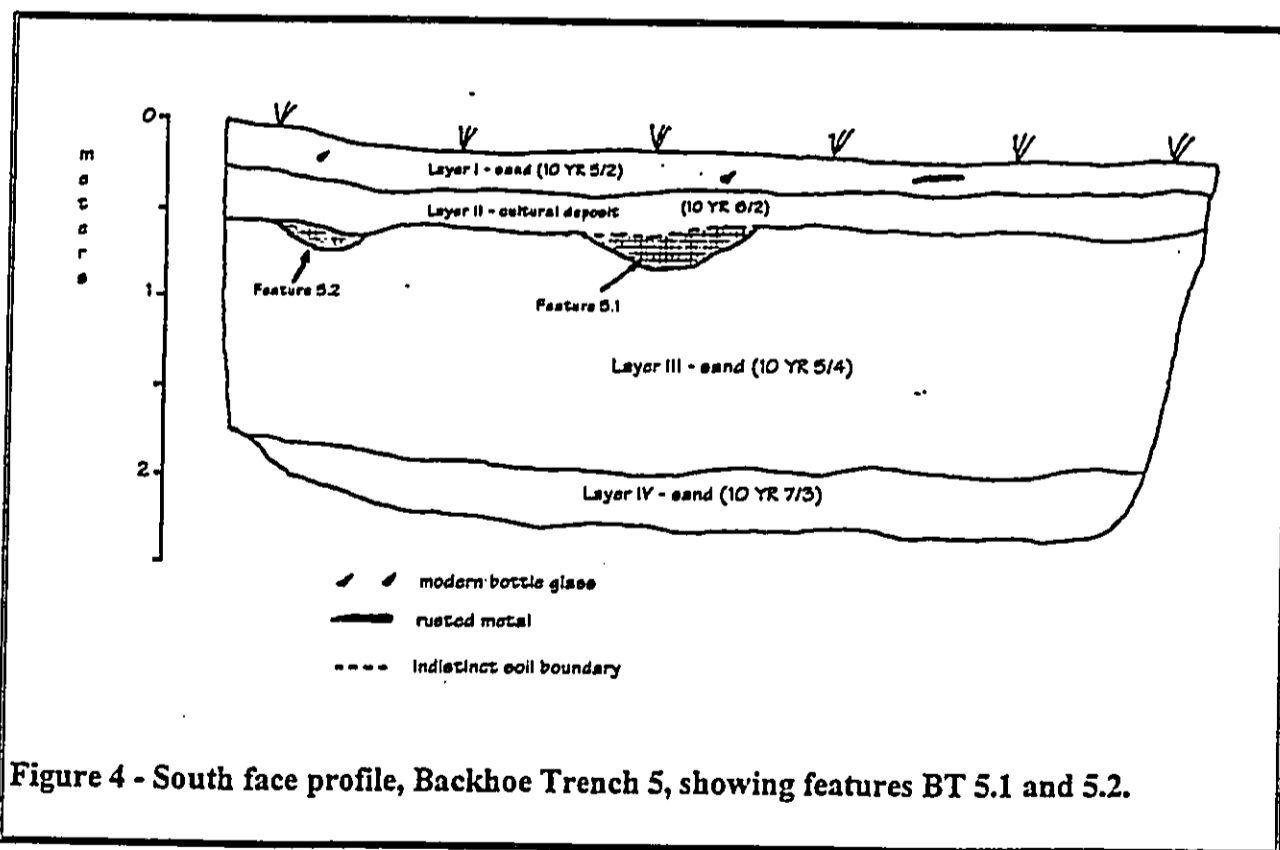


Figure 4 - South face profile, Backhoe Trench 5, showing features BT 5.1 and 5.2.



The intact portion of the cultural deposit was c. 30 cm. thick and extended to about 60 cmbs. Layer II was light gray to gray (10 YR 6/1) in color and contained at least 2 pit features. Observed material cultural remains included various shellfish species, sea urchin body parts, several pieces of coral, several waterworn basalt pebbles, fire-cracked rocks, and scattered charcoal flecking. In addition, 4 indigenous artifacts were also found.

Three of these artifacts are fashioned from coral, while the fourth is made from fine-grained basalt. The first coral artifact (Artifact 2, 71.3 g.) is interpreted as a fragment of a coral abrader. Artifact 3 (63.7 g.) and Artifact 4 (49.2 g.) are conical in shape. The former may have been utilized as an abrader or as a stopper for a drinking gourd. Artifact 4 does not exhibit use wear along its sides, and may represent an unfinished water container stopper or a "blank" conical abrader. The basalt artifact (Artifact 5) is interpreted as a pecking stone. It consists of a dense fine-grained triangular shaped waterworn basalt cobble (295.8 g.). End use wear is visible on the ends of this rock. It appears to have been utilized for relatively detailed light duty work.

As noted earlier, 2 pit features were also found in the profiles of BT 5. Feature BT 5.1 was located in the south face profile of the trench. It extended from the cultural deposit to a maximum depth of c. 85 cmbs. This basin-shaped pit was c. 90 cm. in diameter by c. 30 cm. thick. A few pieces of waterworn coral and basalt were found in the portion of this pit that was impacted by the backhoe bucket (Photo 4). This part of the dark grayish brown (10 YR 4/2) feature also had several fire-cracked rocks in it, along with scattered charcoal and food midden. It is interpreted as a probable cooking pit.

Feature BT 5.2 also consisted of a basin-shaped pit. This shallow feature extended from the cultural deposit to c. 70 cmbs. It was up to 40 cm. wide and a maximum of 15 cm. deep. It was light grayish brown (10 YR 6/2) in color. A few pieces of marine shellfish and a waterworn pebble were observed in this small pit feature. Its function is unclear.

Layer III was composed of yellowish brown (10 YR 5/4) sand. This loose, dry layer appeared to be sterile. It was up to 40 cm. thick and extended to c. 1 mbs. This stratum was not present in any of the other subsurface tests on the subject parcel.

Layer IV consisted of very pale brown (10 YR 7/3) sand. This loose, dry stratum was sterile and extended up to 1.8 mbs, and overlaid lithified sand.

The very hard Layer V was encountered between 1.7 and 1.9 mbs. Excavation was abandoned in this very pale brown (10 YR 8/3) stratum at a maximum depth of 2.3 mbs.

### Soil Trench 1

This trench was placed near the northwestern corner of the study area at c. 225 ft. AMSL. Vegetation in the general vicinity included *kiawe*, scattered *koa haole*, and alien grasses and annual weeds. This soil test trench was oriented 70 degrees magnetic. Dimensions for ST 1 were c. 4 m. in length by 0.9 m. in width by a maximum of 3.2 m. in depth. This trench was not profiled due to unstable subsurface conditions. A total of 5 layers were located before this subsurface test was abandoned in very hard lithified sand.

Layer I consisted of grayish brown (10 YR 5/2) silty sand. This stratum was stained by charred *kiawe* and contained moderate amounts of organic matter. The dry, loose layer was up to 20 cm. thick and contained scattered pre- and post-contact cultural materials. Observed material remains included modern bottle glass, metal, shellfish, a waterworn pebble, and a piece of coral. This layer impacted the Site 4418 underlying cultural deposit.

The layer II cultural deposit was dark grayish brown (10 YR 4/2) in color. This loose, dry sand was stained with charcoal and extended up to 60 cmbs. Two pit features were also noted in the profiles of this trench. Observed material remains included shellfish and sea urchin midden, coral, a few waterworn pebbles, fire-cracked rocks and some scattered charcoal, and 2 indigenous artifacts. Both artifacts are fashioned from fine grained basalt. The first, Artifact 6 (378.2 g.) consists of a fine grained waterworn basalt cobble fragment. This piece of utilized basalt has what appear to be use-wear scars along portions of it as well as a polished surface. Artifact 7 (79.1 g.) is a small pecking stone with use-wear on both ends and along portions of its sides. This elongated waterworn pebble was likely utilized in detailed light duty work.

Two pit features were present in ST 1. Feature ST 1.1 began at 35 cmbs and was c. 30 cm. thick by c. 60 cm. wide. This light grayish brown (10 YR 6/2) pit may represent a refuse pit. However, unstable subsurface conditions prevented close examination of this pit or Feature 1.2a.

Feature ST 1.2 was located near the eastern end of the north face profile of ST 1. This feature consisted of a large pit which extended into the eastern face of ST 1. Feature ST 1.2 began at c. 25 cmbs and extended to c. 75 cmbs and was c. 85 cm. wide. Three large fire-cracked rocks were noted in the profile, along with scattered shellfish remains. This grayish brown (10 YR 5/2) feature is interpreted as a probable cooking pit.

Layer III was composed of dark yellowish brown (10 YR 4/4) sand. This loose, dry layer was apparently sterile and extended from c. 0.6 to 1.2 mbs.

Layer IV was composed of very pale brown (10 YR 8/3) sand. This loose and dry stratum was relatively unstable. It appeared to be sterile and extended to lithified sand.

Sterile, lithified sand was located at c. 2 to 2.2 mbs. Layer V continued to the bottom of ST 1 at c. 3.2 mbs. Excavation was halted when a portion of the trench collapsed, and no profile was prepared.

### Soil Trench 2

This second test trench was located midway along the crest of the dune ridge which crosses the study area at c. 230 ft. AMSL. Trench orientation was 40° magnetic. It measured c. 4 m. long by 0.9 m. wide by a maximum of 2.0 m. deep. This trench yielded 3 sand layers before it was abandoned.

Layer I consisted of pale brown (10 YR 6/3) silty sand. Low amounts of organic matter along with some rootlets and woody (*kiawe*) roots were present. This loose, dry layer was up to 15 cm. thick and did not yield any material culture remains.

The Layer II deposit consisted of unconsolidated dune sand. This very pale brown (10 YR 8/3) stratum was sterile and extended up to 50 cmbs.

Lithified sand was located between 40 and 50 cmbs. This very pale brown (10 YR 8/4) deposit was present to the bottom of ST 2. The trench was halted because of very difficult subsurface excavation conditions and no profile was recorded.

### Soil Trench 3

This trench was located along the dune ridge at c. 232 ft. AMSL near Lunalilo Street c. 35 m. southwest of ST 1. Vegetation in the general area consisted of scattered *kiawe* trees, *koa haole*, alien grasses and annuals, and scattered 'ilima and 'uhaloa. Trench orientation was E-W and ST 3 was c. 4.5 m. long by 0.9 m. wide by 3.0 m. deep. Three sand layers were found before this trench was halted because of unstable subsurface digging conditions.

The loose, dry surface layer was up to 10 cm. thick. Layer I was composed of pale brown (10 YR 6/3) sand which was sterile and overlaid lithified sand.

The Layer II deposit was very pale brown (10 YR 8/4) in color and extended to c. 1.5 mbs. The lithified sand was sterile and very hard.

Loose, dry, unconsolidated dune was encountered under the lithified sand deposit. Layer III extended to the bottom of ST 3. No material culture remains were found in this stratum. Soil Trench 3 was abandoned after it partially collapsed and no profile was made for the trench.

#### Soil Trench 4

This subsurface test was located near the southern end of the subject parcel at c. 222 ft. AMSL. Vegetation in the vicinity of ST 4 consisted of scattered *kiawe*, common *koa haole*, alien annual weeds and grasses, and isolated *'ilima*. Orientation for ST 4 was E-W, while its dimensions were c. 4 m. in length by 0.9 m. in width by 3.6 m. in depth. Three soil layers were found before ST 4 was halted due to unstable subsurface conditions.

Layer I was up to 10 cm. thick and consisted of pale brown (10 YR 6/3) sand. This loose, dry layer contained low amounts of organic matter, common rootlets, and some woody roots (*koa haole*). No cultural materials were found in this stratum.

Layer II was made up of aeoleonite or lithified sand which extended to c. 2.8 mbs. This very pale brown (10 YR 8/4) stratum was sterile and overlaid dune sand.

Unconsolidated dune sand was encountered between c. 2.6 and 2.8 mbs. Layer III was very pale brown (10 YR 8/3) in color and appeared to be sterile. The trench was halted because of unstable subsurface conditions and it was not profiled.

#### Soil Trench 5

This last soil trench was placed near the northeastern corner of the parcel. The previously discussed BT 1 was c. 20 m. to the southwest of ST 5. Observed vegetation in the area included *kiawe*, *koa haole*, and alien grasses and weeds. Trench orientation was E-W and ST 5 dimensions were c. 4.5 m. in length by 0.9 m. in width by 3.1 m. in depth. Four soil layers were encountered before ST 5 was halted in very hard lithified sand (Figure 5).

Layer I was composed of brown (10 YR 5/3) silty sand. This loose, dry layer was up to 15 cm. thick and contained common rootlets and some woody roots (*kiawe*). Moderate amounts of organic matter were present in this soil trench. No material culture remains were present in this surface layer.

The underlying Layer II was composed of light yellowish brown (10 YR 6/4) sand. This loose, dry layer was up to 50 cm. thick and did not yield any material culture remains. It did not appear to have been disturbed in the past. The soil boundary with the underlying dune sand deposit was relatively clear.

Layer III consisted of very pale brown (10 YR 8/3) unconsolidated dune sand. This loose, dry stratum was up to 0.9 m. thick and extended to a maximum depth of 1.4 m. No material culture remains were found.

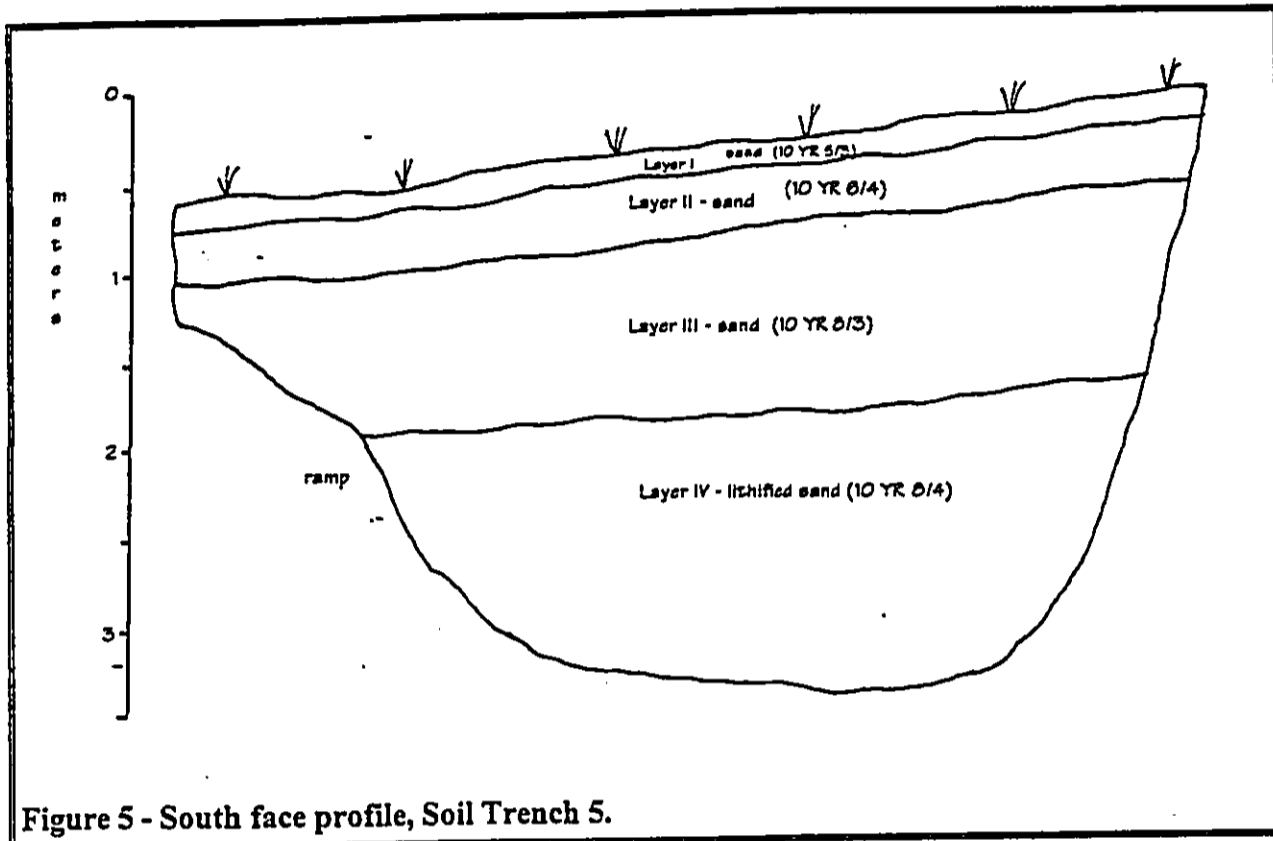


Figure 5 - South face profile, Soil Trench 5.

Layer IV was made up of very dense lithified sand or aeoleonite. This very pale brown (10 YR 8/4) layer extended to the bottom of ST 5. No material culture remains were encountered and ST 5 was halted because of very hard subsurface conditions.

### TEST UNITS 1, 2, AND 3

These 3 manual test units were excavated after the previously described backhoe trenches and soil trenches were completed. All 3 test units were located on the western slope of the low dune ridge at c. 229 to 231 ft. AMSL. These units were utilized to further investigate the Site 4418 cultural deposit in the area near the 230 ft. contour line, because plans call for grading to the east of the site. A low berm along this 230 ft. contour line will be left as a buffer for the site. A main goal of these test excavations was the procurement of a radiocarbon sample to submit for dating analysis. Subsurface results from the 3 test units provided useful information about the age and function of this precontact site.

#### Test Unit 1

This first manual unit was placed at c. 230 ft. AMSL in the area along the eastern boundary of Site 4418 and the northern boundary of the project. It was located in this area because plans call for grading along the 230 ft. contour line to the east of the site.

Vegetation in the general vicinity included *kiawe* trees, scattered *koa haole*, and alien grasses and weeds. Two sand layers overlaid lithified sand in TU 1 (Figure 6; Photo 5).

Layer I consisted of dark grayish brown (10 YR 4/2) silty sand with moderate amounts of organic matter. Rootlets were common in this surface deposit along with a few woody roots (*kiawe*). This layer was stained with charred *kiawe* root. Scattered modern materials including chicken, fish and cow bones, plastic tubing, green plastic and aluminum were found. This loose, dry stratum was up to 18 cm. thick. It appeared to have been mechanically pushed. Given the proximity of TU 1 to the northern boundary of the project area, it is probable that this area was impacted by past grading activity on the adjacent parcel.

The Layer II deposit consisted of yellowish brown (10 YR 5/4) sand. This loose, dry stratum extended to a maximum depth of 31 cmbs. It did not yield any material culture remains.

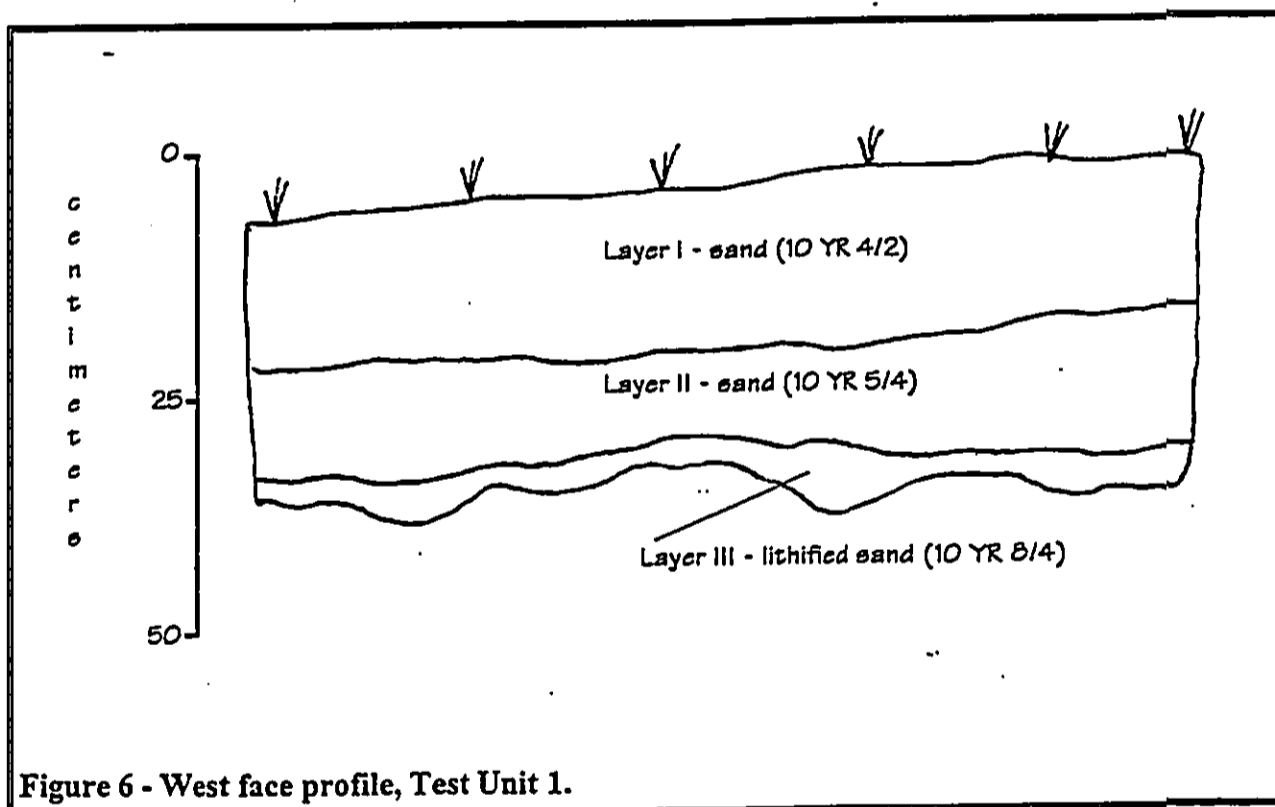


Figure 6 - West face profile, Test Unit 1.

Layer III consisted of lithified sand which was very pale brown (10 YR 8/4). Excavation in this culturally sterile layer was halted due to very hard subsurface conditions at a maximum depth of 40 cmbs.

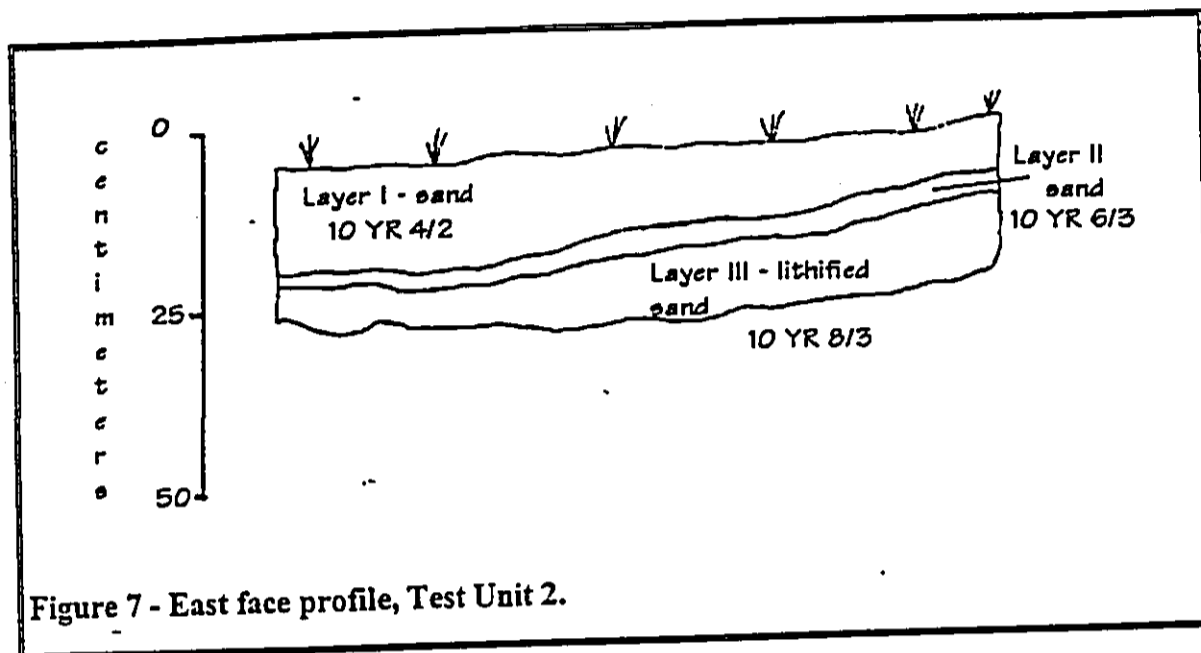


Figure 7 - East face profile, Test Unit 2.

#### Test Unit 2

This test unit was located about 2 m. south of TU 1 at c. 229 to 230 ft. AMSL. It was placed near the contour line flagged by Akamai Land Surveyors Surveying. A total of 2 sand layers overlaid lithified sand (Figure 7).

Layer I was composed of dark grayish brown (10 YR 4/2) silty sand which contained moderate amounts of organic matter. This loose, dry layer also held common rootlets and some woody roots (*kiawe*). Recovered portable remains included 2 pieces of rusted metal, 0.9 g. of chicken bone, 0.4 g. of bovine bone, 1 waterworn pebble, and 1 fire-cracked rock were found in Layer I which was c. 10 to 15 cm. thick. This deposit did not appear to have been mechanically pushed.

Layer II consisted of pale brown (10 YR 6/3) sand. This loose, dry stratum was c. 2 to 4 cm. thick. It contained low amounts of material culture remains, and appears to represent the marginal extent of the Site 4418 deposit in this area. Recovered materials included 0.6 g. of mammal bone, a piece of unutilized coral, a waterworn pebble and 3 fire-cracked rocks. In addition, a cone (*Conus* sp.) shell artifact was located in this thin layer. Artifact No. 8 (18.7 g.) consists of the head or crown of a cone shell which has had its lower portions purposefully broken off. It is likely that suitable pieces of the shell wall were utilized in the fish hook manufacturing process. Similar artifacts were located during a recently completed inventory survey on the nearby Site 4414 habitation site (Fredericksen and Fredericksen, September 1997). Layer II extended to a maximum depth of 15 cmbs and overlaid lithified sand.

Layer III was very pale brown (10 YR 8/3) in color. This sterile layer was very hard and excavation of TU 2 was abandoned at a maximum depth of 25 cmbs.

### Test Unit 3

This last manual unit was located at c. 229 ft. AMSL, to the west of the 230 ft. contour line. This area will not be impacted by the proposed grading and will be preserved. Test Unit 3 were excavated here, in order to sample the 4418 deposit. Our main goal was to obtain a radiocarbon sample for radiometric dating purposes. An additional goal was the recovery of a sample of the material remains from the Site 4418 cultural deposit. A total of 3 sand layers overlaid lithified sand in this subsurface test (Figure 8).

Layer I was composed of brown (10 YR 5/3) silty sand which was c. 10 to 14 cm. thick. This loose, dry stratum contained moderate amounts of organic matter and was lightly stained by small amounts of charred *kiawe* wood. Layer I also contained quantities of rootlets and a few woody (*kiawe*) roots. This layer yielded relatively recent material remains, likely associated with the adjacent property to the north. Traces of cowrie (*Cypraea* sp.) shell and fish bone were found, along with 0.7 g. of sawn bovine bone, and 2 waterworn basalt pebbles. In addition, an intrusive pit was located in the southeastern corner of TU 3 (see Figures 8, 9 and 10). This pit was a maximum of 34 cm. deep, and contained a piece of clear bottle glass and what appeared to be old citrus rinds. This feature is interpreted as an intrusive modern pit and it was not assigned a feature number.

The Layer II cultural deposit extended from c. 10 to 29 cmbs. This light brownish gray (10 YR 6/2) sand yielded moderate quantities of material culture remains. Materials interpreted as food midden included 87.6 g. of marine gastropods, 3.5 g. of bivalves, 3.4 g. of sea urchin body parts, 1.4 g. of crab shell and 23.6 g. of bone. The bone included 4.9 g. of pig teeth (5), 15.3 g. of fish bone and 3.4 g. of pig bone. Floral remains in the cultural deposit were composed of 0.6 g. of scattered charcoal in the general layer and 10.2 g. of charcoal associated with 2 features. Additional portable remains consisted of 5 unutilized basalt flakes (13.6 g.), 3 pieces of unutilized coral (23.8 g.), and 15 fire-cracked rocks. A total of 12 indigenous artifacts were also found in this portion of the Site 4418 deposit.

The 12 artifacts were made from various materials including basalt, coral, pencil urchin, and bone<sup>11</sup>. The 3 lithic artifacts included a pecking stone (Artifact 16) and 2 utilized basalt flakes (Artifacts 10 and 18). Both coral artifacts are interpreted as abraders (Artifacts 9 and 20), while the pencil urchin spines represent files (Artifacts 12 and 13). The 4 bone artifacts are fashioned from mammal (non-human), human, and fish bone. Artifact 11 is a probable fish hook tab which has 2 visible cut marks on it. The shank of a fish hook (Artifact 14), a piece of worked human tibia (Artifact 15) and several other

<sup>11</sup> Artifact No. 15, a piece of work human tibia, was not photographed.



Layer III was very pale brown (10 YR 8/3) in color. This sterile layer was very hard and excavation of TU 2 was abandoned at a maximum depth of 25 cmbs.

### Test Unit 3

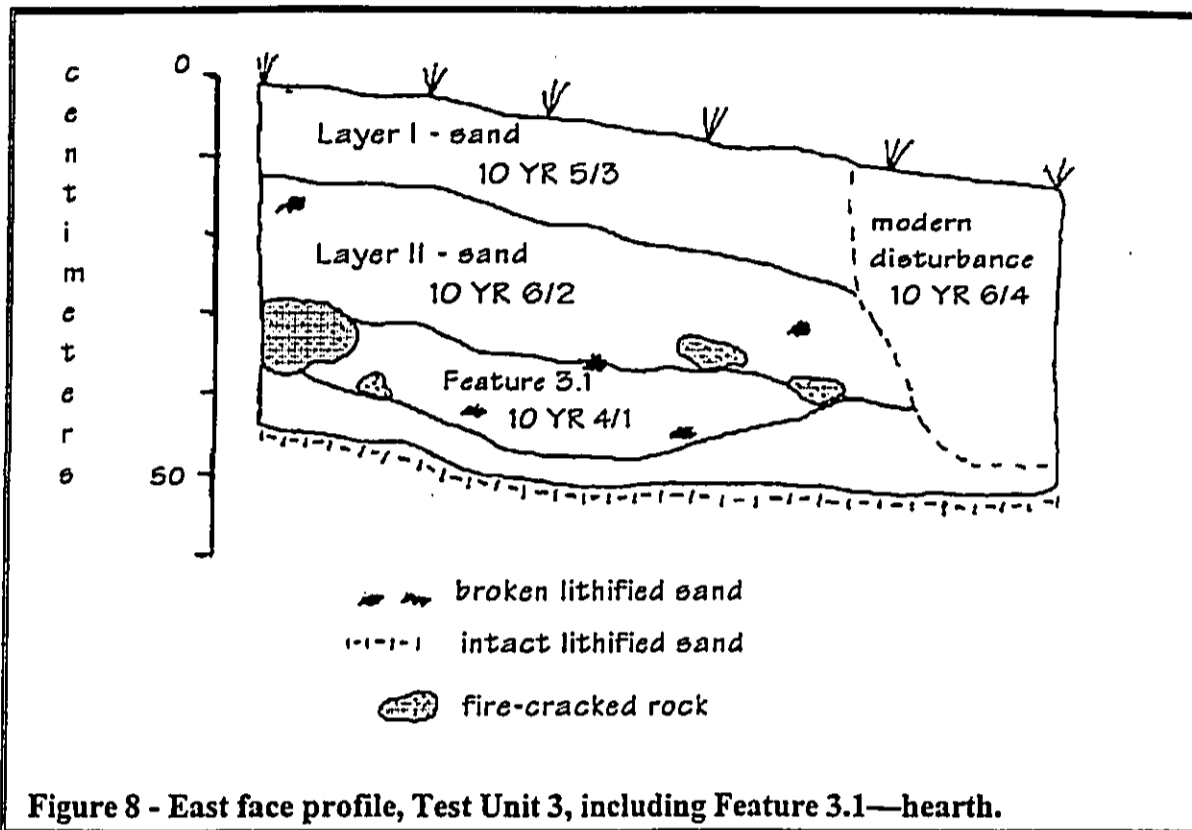
This last manual unit was located at c. 229 ft. AMSL, to the west of the 230 ft. contour line. This area will not be impacted by the proposed grading and will be preserved. Test Unit 3 were excavated here, in order to sample the 4418 deposit. Our main goal was to obtain a radiocarbon sample for radiometric dating purposes. An additional goal was the recovery of a sample of the material remains from the Site 4418 cultural deposit. A total of 3 sand layers overlaid lithified sand in this subsurface test (Figure 8).

Layer I was composed of brown (10 YR 5/3) silty sand which was c. 10 to 14 cm. thick. This loose, dry stratum contained moderate amounts of organic matter and was lightly stained by small amounts of charred *kiawe* wood. Layer I also contained quantities of rootlets and a few woody (*kiawe*) roots. This layer yielded relatively recent material remains, likely associated with the adjacent property to the north. Traces of cowrie (*Cypraea* sp.) shell and fish bone were found, along with 0.7 g. of sawn bovine bone, and 2 waterworn basalt pebbles. In addition, an intrusive pit was located in the southeastern corner of TU 3 (see Figures 8, 9 and 10). This pit was a maximum of 34 cm. deep, and contained a piece of clear bottle glass and what appeared to be old citrus rinds. This feature is interpreted as an intrusive modern pit and it was not assigned a feature number.

The Layer II cultural deposit extended from c. 10 to 29 cmbs. This light brownish gray (10 YR 6/2) sand yielded moderate quantities of material culture remains. Materials interpreted as food midden included 87.6 g. of marine gastropods, 3.5 g. of bivalves, 3.4 g. of sea urchin body parts, 1.4 g. of crab shell and 23.6 g. of bone. The bone included 4.9 g. of pig teeth (5), 15.3 g. of fish bone and 3.4 g. of pig bone. Floral remains in the cultural deposit were composed of 0.6 g. of scattered charcoal in the general layer and 10.2 g. of charcoal associated with 2 features. Additional portable remains consisted of 5 unutilized basalt flakes (13.6 g.), 3 pieces of unutilized coral (23.8 g.), and 15 fire-cracked rocks. A total of 12 indigenous artifacts were also found in this portion of the Site 4418 deposit.

The 12 artifacts were made from various materials including basalt, coral, pencil urchin, and bone<sup>11</sup>. The 3 lithic artifacts included a pecking stone (Artifact 16) and 2 utilized basalt flakes (Artifacts 10 and 18). Both coral artifacts are interpreted as abraders (Artifacts 9 and 20), while the pencil urchin spines represent files (Artifacts 12 and 13). The 4 bone artifacts are fashioned from mammal (non-human), human, and fish bone. Artifact 11 is a probable fish hook tab which has 2 visible cut marks on it. The shank of a fish hook (Artifact 14), a piece of worked human tibia (Artifact 15) and several other

<sup>11</sup> Artifact 15, a piece of work human tibia, was not photographed.



artifacts were located in a pit feature discussed below. It is likely that this latter artifact represents raw material for the fish hook manufacturing process. The last bone artifact is a piece of fish spine with use-wear on its tip. This artifact (Artifact 17) is interpreted as a pick for extracting meat from shellfish.

In addition to the above artifacts, 3 recognizable subsurface features originated in the Site 4418 cultural deposit. Feature TU 3.1 was encountered at c. 26 cmbs and extended to a maximum depth of 41 cmbs (Figures 8 and 9; Photo 6). Approximately half of this basin-shaped pit was located in TU 3. This feature was a maximum of 75 cm wide and extended into the east face profile of the unit. It is interpreted as a fire hearth. However, no food midden was present in the very dark grayish brown (10 YR 4/1) pit. A total of 6.7 g. of charcoal and 7 fire-cracked rocks were recovered from Feature TU 3.1. A radiocarbon sample was collected from this pit between 34 and 38 cmbs. This sample was subsequently submitted to Beta Analytic, Inc. for radiometric analysis (Beta - 109723), and returned a conventional radiocarbon age of  $370 \pm 70$  BP. Calibrated results (2 sigma, 95% probability) were cal AD 1425 to 1665. The intercept date for this sample is cal AD 1495 (intercept of the radiocarbon age with the calibration curve).

Feature TU 3.2 is interpreted as a refuse pit which was dug into the underlying lithified sand deposit from Layer II (Figure 5, 8, 9 and 10; Photo 7). This brownish gray

(10 YR 5/2) pit was a maximum of 88 cm. in diameter and extended from c. 28 to 82 cmbs. Food midden remains recovered from this feature included 41.9 g. of common marine shellfish remains, 2.2 g. of sea urchin body parts, a trace (0.2 g.) of crab shell, 11.3 g. of fish bone, and 4 (3.3 g.) pig teeth. Floral materials consisted of 3.5 g. of scattered charcoal throughout the pit. Additional portable remains were comprised of 2 unutilized basalt flakes (12.2 g.), a piece of unutilized coral (0.3 g.), a waterworn pebble (6.4 g.), and 7 indigenous artifacts. These artifacts (Artifacts 9 through 15) were briefly described in the Layer II section. Two of these artifacts were located *in situ* (see Figure 9). Artifact 10, a utilized basalt flake, was found at c. 52 cmbs, while Artifact 15, a piece of worked human tibia, was recovered from c. 61 cmbs. Feature 3.2 extended into the underlying dune sand deposit.

**Feature TU 3.3** is interpreted as a possible post-hole. This brown (10 YR 5/3) feature was semi-circular in cross-section, a maximum of 11 cm. wide, and extended from c. 29 to 48 cmbs. No material remains were found in this small feature which angled slightly downwards from west to east. This feature extended into the underlying dune sand deposit.

Layer III was composed of very pale brown (10 YR 7/3) unconsolidated dune sand. This sterile layer was up to 12 cm. thick and overlaid intact, lithified sand.

Layer IV was encountered between 38 and 45 cmbs. As previously noted, Feature 3.2 extended into this very hard lithified sand layer. Excavation of TU 3 was halted in this intact dune sand deposit at a maximum depth of 84 cmbs.

**Discussion of artifacts recovered (See Appendix B)**

**Discussion of site stratigraphy (See Appendix C)**

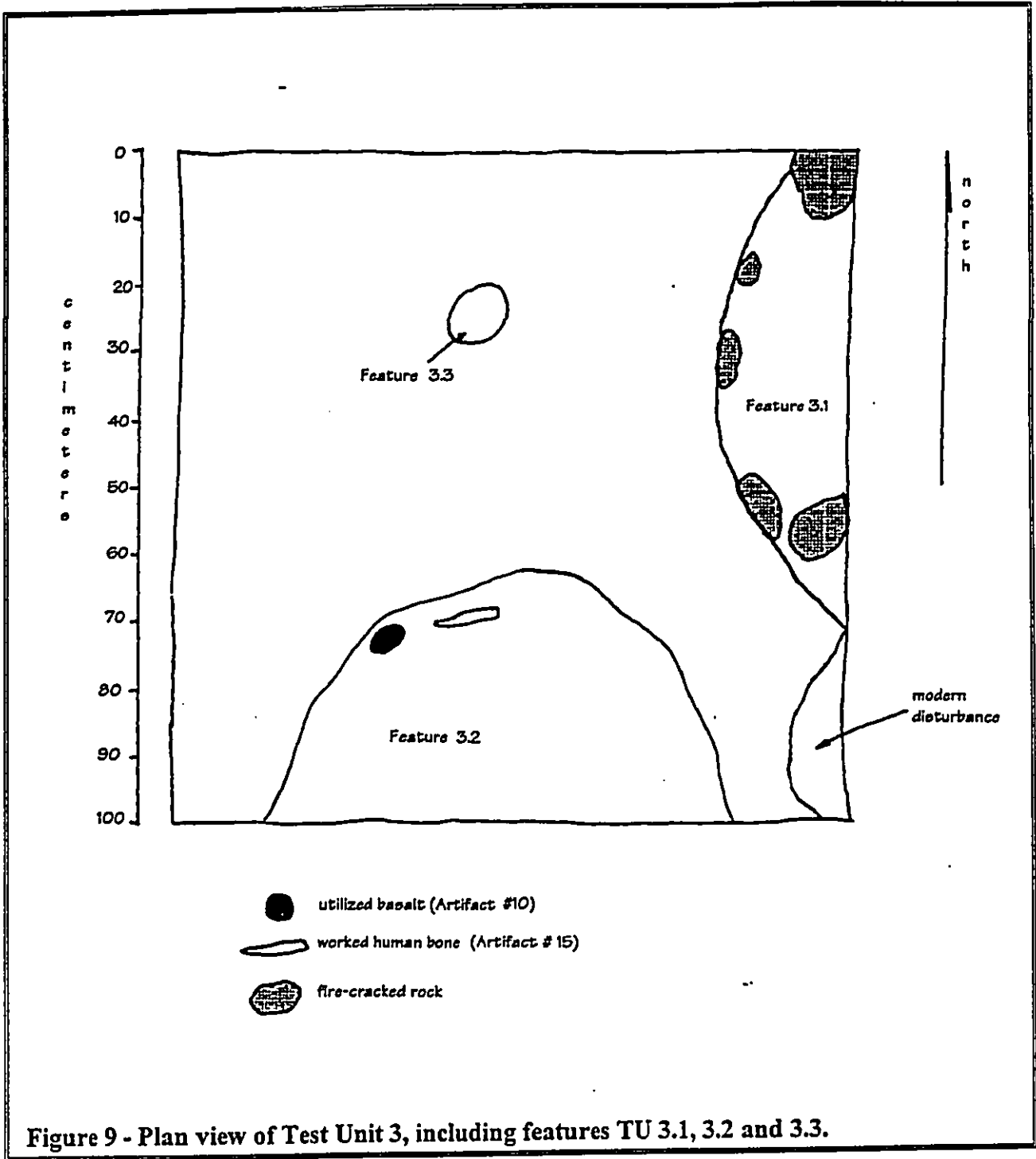
**Discussion of Radiocarbon Date Obtained From Site 4418**

Two charcoal samples were recovered during excavation of TU 3. Sample #1 was obtained from the Feature TU 3.1 fire hearth, while sample #2 was collected from a refuse pit (TU 3.2). The first sample was submitted to Beta Analytic, Inc. for radiocarbon analysis and returned a conventional date of  $370 \pm 70$  BP (see Appendix A). Calibrated results at 2 sigma, 95% probability were cal AD 1425 to 1665. The intercept date for this sample is cal AD 1495.

This date is very similar to the one obtained from Site 4414, which is located about 40 meters northwest, at an elevation of c. 170 feet AMSL.

#### **Shovel Probes 1 through 12**

These 12 shovel probes were utilized in order to help establish the horizontal subsurface extent of Site 4418. The probes were placed along the eastern and southern portions of the site (see Map 3). These subsurface tests were c. 20 to 44 cm. deep. No artifacts were located during these probes and no samples of the Site 4418 cultural deposit were taken. See Table 6 for a summary of these probes.



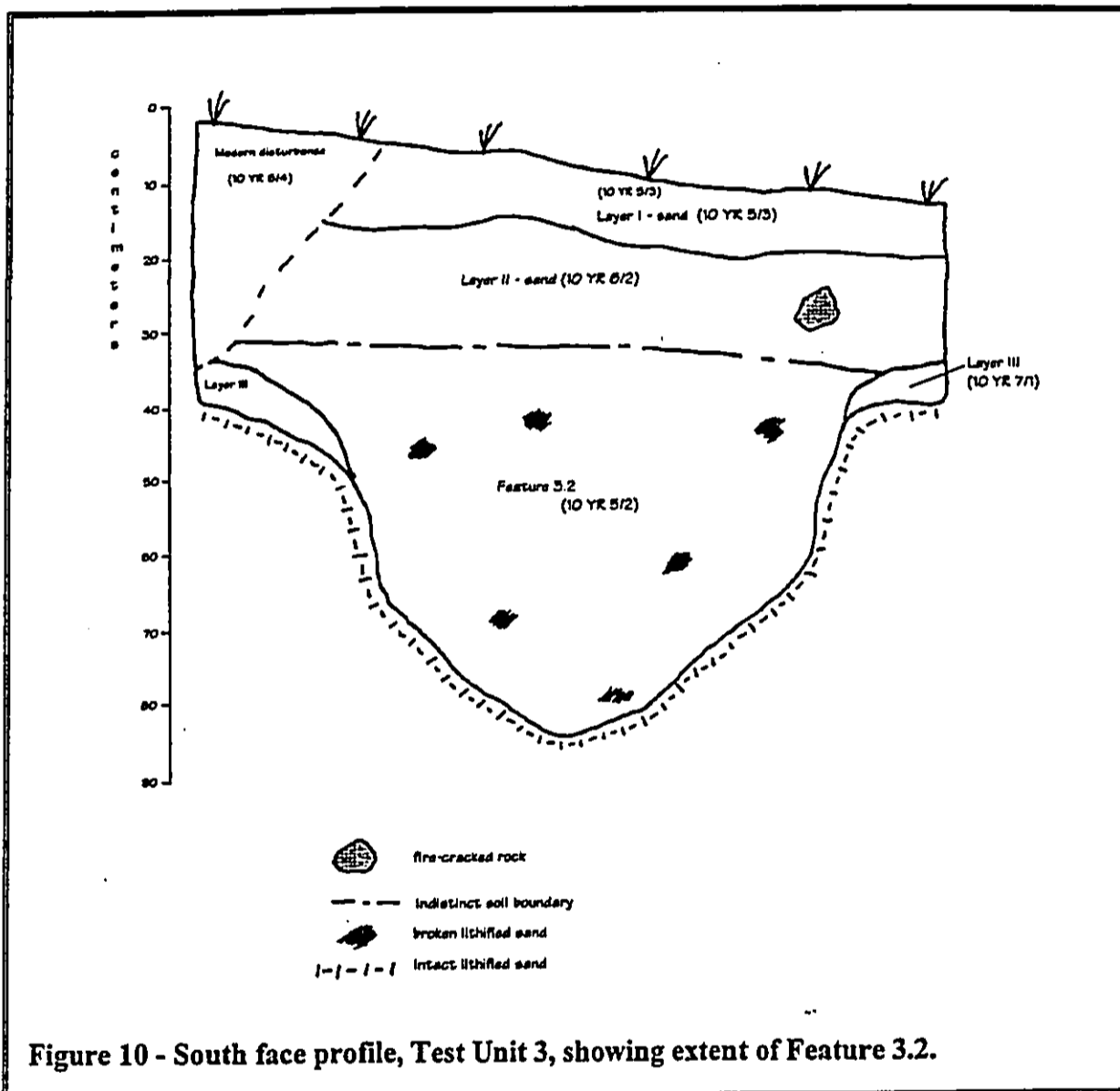


Figure 10 - South face profile, Test Unit 3, showing extent of Feature 3.2.

## SUMMARY AND CONCLUSIONS

The surface walkover of this 1.679 acre parcel revealed what appeared to be a precontact habitation site in the northwestern corner of the study area between c. 223 and 230 ft. AMSL. In addition, surface inspection of the project area indicated that all of it contains sand dune deposits. Subsequent subsurface testing confirmed these observations. The habitation site was designated SIHP No. 50-50-04-4418.

Subsurface testing at Site 4418 indicates that it is largely intact and ranges from c. 15 to 24 cm. in thickness where sampled. This deposit lies from c. 10 to 30 cm. below the present surface. A total of 9 subsurface features were located in test instances, and include 2 fire hearths, a possible post-hole, 5 basin-shaped pits, and a refuse pit. A radiocarbon sample obtained from a fire hearth in the Site 4418 deposit returned a late precontact calibrated date of cal AD 1425 to 1665.

While no burials were located during our inventory survey, the entire parcel lies on Pu'u One sand deposits, which are often found to contain human burials in this part of Wailuku *ahupua'a*. The proximity of known burials, some 40 m. to the northwest (Site 4414), and southwest (Site 4458) strongly suggests that human remains may be associated with Site 4418 or the sand dune deposit.

Site 4418 is associated with the Lower Main Street/Waiale Road habitation corridor. While this site was not extensively sampled, it appears probable that it represents a permanent habitation site. The relative proximity of Site 4418 to potable water and nearby taro *lo'i* in late precontact times, coupled with the site's size (at least 2000 square meters) strongly suggest a permanent habitation function. It is a rare example of a surviving habitation site on the Sand Hills portion of the Pu'u One dune formation to the east and south of the lower Main Street/Waiale Road habitation corridor. Unfortunately, the bulk of the Sand Hills area has been developed, and the other sites that may have existed there probably have been destroyed.

### Significance Evaluations

Site 4418 qualifies for significance under Criterion D of Federal and State historic preservation guidelines. It is in good condition and is largely intact. As previously noted, it is a rare example of a surviving precontact habitation site on the Sand Hills side of the important Lower Main Street/Waiale Road corridor of the Pu'u One dune formation.

## MITIGATION RECOMMENDATIONS

Based upon the results of our archaeological inventory survey, we recommend the following mitigation measures for Site 4418 and TMK: (2) 3-8-07: 47:

1. In-place preservation is recommended for the Site 4418 deposit. Passive use of this portion of the project area (i.e. as a playground) is acceptable with a buffer of c. 60 cm. or more of approved sand fill.
2. It is further recommended that all *kiawe* trees be cut down in the vicinity of Site 4418 and their roots be left in place to rot. These felled trees will need to be removed by nonmechanical means.
3. Archaeological monitoring is recommended for all grubbing and subsurface disturbances elsewhere on the parcel. Sand dune deposits cover the entire study area and the possibility exists that human burials are present in unsampled portions of the project. Two known burials, Site 4414 to the northwest, and Site 4458 to the southwest, lie within c. 40 m. of the Na Leo Pulama O Maui project.

It is felt that the above steps will effectively mitigate the impact that the proposed Na Leo Pulama O Maui Hawaiian Preschool and Family Resource Center will have on Site 4418 and the subject parcel.

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TABLE 3

Summary of Soil Trench Results

EST. #	DEPTH (mbs)	STRATA	RESULTS
1	3.2	Layer (L) I silty sand (10 YR 5/2) to c. 0.2 mbs L II sand (10 YR 4/2) with cultural material to c. 0.6 mbs L III sand (10 YR 4/4) to c. 1.2 mbs L IV sand (10 YR 8/3) to c. 2.0 mbs L V lithified sand (10 YR 8/4) to bottom	L I contains mixed pre- and post-contact material remains L I impacts L II L II cultural deposit contains 2 pit features L III, L IV and L V and sterile
2	2.0	L I silty sand (10 YR 6/3) to c. 0.15 mbs L II sand (10 YR 8/3) to c. 0.5 mbs L III lithified sand (10 YR 8/4) to bottom	All layers sterile
3	3.0	L I sand (10 YR 6/3) to c. 0.1 mbs L II lithified sand (10 YR 8/4) to c. 1.5 mbs L III sand (10 YR 8/3) to bottom	All layers sterile
4	3.6	L I sand (10 YR 6/3) to c. 0.1 mbs L II lithified sand (10 YR 8/4) to c. 2.8 mbs L III sand (10 YR 8/3) to bottom	All layers sterile
5	3.1	L I silty sand (10 YR 5/3) to c. 0.15 mbs L II sand (10 YR 6/4) to 0.5 mbs L III sand (10 YR 8/3) to 1.4 mbs L IV lithified sand (10 YR 8/4) to bottom	All layers sterile

TABLE 4

Summary of Portable Remains Recovered During Manual Excavation of the Site 4418 Deposit

UNIT	UNIT	UNIT	UNIT	UNIT	UNIT	UNIT	UNIT
LAYER/LEVEL	LAYER/LEVEL	LAYER/LEVEL	LAYER/LEVEL	LAYER/LEVEL	TU 5.1A (28-41)	TU 5.2 (30-64)	LAYER/LEVEL
DEPTH (cm)	DEPTH (cm)	DEPTH (cm)	DEPTH (cm)	DEPTH (cm)	DEPTH (cm)	DEPTH (cm)	DEPTH (cm)
<b>GASTROPODA</b>							
Cellana sp.						1.3	2.6
Conus sp.						8.0	0.9
Cypraea sp.			0.3		7.2		5.7
Nerita picea					15.1	0.2	13.9
Planaxis sp.					15.9	0.6	16.2
<b>TOTALS</b>			<b>0.3</b>			<b>39.5</b>	<b>39.3</b>
<b>BIVALVIA</b>							
Isognomon sp.						1.3	
Brachidontes sp.						1.1	0.1
<b>TOTALS</b>						<b>2.4</b>	<b>1.0</b>
<b>ECHINOIDEA</b>							
Sea urchin						2.2	0.1
<b>TOTALS</b>						<b>2.2</b>	<b>0.1</b>
<b>CRUSTACEA</b>							
Crab	0.7					0.2	0.1
<b>TOTALS</b>	<b>0.7</b>					<b>0.2</b>	<b>0.1</b>
<b>BONE</b>							
Bird	6.7	0.9					
Fish	3.9			0.1		11.3	4.0
Mammal	5.3	0.4		0.7			3.4
Tooth (pig)						3.3 (4)	1.6
Unidentified			0.6				
<b>TOTALS</b>	<b>15.9</b>	<b>1.3</b>	<b>0.6</b>	<b>0.8</b>		<b>14.6</b>	<b>9.0</b>
<b>FLORAL</b>							
Charcoal					6.7	3.5	0.1
<b>TOTALS</b>						<b>10.2</b>	<b>0.1</b>
<b>UNUTILIZED BASALT FLAKES (pieces)</b>							
						12.2 (2)	1.4 (3)
<b>UNUTILIZED CORAL (pieces)</b>							
	181.5 (1)		4.2 (1)			0.3 (1)	8.4 (1)
<b>WATERWORN PEBBLES (pieces)</b>							
		16.3 (1)	69.2 (1)	44.1 (2)		6.4 (1)	127.4 (3)
<b>FIRE-CRACKED ROCKS (pieces)</b>							
			3		7		4

Weight in grams

TABLE 5

Summary of Indigenous Artifacts Recovered at Site 4418

TEST & UNIT	LAYER/LEVEL FEATURE	ARTIFACT NUMBER	DESCRIPTION	PIECES	L x W x H (mm.)	WEIGHT (g.)	
		1	basalt pecking stone (broken)	-	64.0 x 55.0 x 49.0	228.9	
BT 4	-	2	coral abrader fragment	-	51.0 x 42.0 x 38.0	71.3	
BT 5	-	3	coral stopper/abrader	-	62.0 x 55.0 x 34.0	63.7	
BT 5	-	4	coral stopper/abrader	-	42.0 x 32.0 x 32.0	49.2	
BT 5	-	5	basalt pecking stone	-	77.0 x 62.0 x 30.0	295.8	
BT 5	-	6	dense basalt pecking stone	-	69.0 x 63.0 x 33.0	378.2	
ST 1	-	7	basalt pecking stone	-	58.0 x 24.0 x 17.0	79.1	
ST 1	-	8	worked conus shell (fish hook material)	-	37.0 x 37.5 x 31.8	18.7	
TU 2	II						
TU 3	3.2	9	coral abrader	-	57.0 x 48.0 x 32.0	30.6	
		10	utilized basalt flake	-	61.0 x 38.0 x 13.0	30.9	
		11	worked bone (poss. fish hook tab)	-	24.5 x 15.0 x 6.0	0.7	
		12	pencil urchin file	-	31.0 x 7.5 x 7.0	1.1	
		13	pencil urchin file	-	36.0 x 7.5 x 7.0	1.1	
		14	fish hook (shank)	-	27.0 x 6.0 x 4.0	0.6	
		15	worked human tibia	-	100.0 x 24.0 x 4.5	6.0	
		16	basalt pecking stone	-	66.0 x 42.0 x 22.0	83.4	
		II/1	17	fish bone pick	-	40.0 x 8.0 x 3.5	0.2
		II/2	18	utilized basalt flake	-	31.0 x 21.0 x 8.5	2.3
	19	worked bone (cut)	-	41.0 x 66.5 x 16.5	3.0		
	20	coral abrader	-	73.0 x 66.5 x 16.5	44.0		

TABLE 6

Summary of Subsurface Features Encountered In  
Site 4418 Cultural Deposit

UNIT	FEATURE	DIMENSIONS (width & depth)	DESCRIPTION	INTERPRETED FUNCTION
BT 3	BT 3.1	40 cm. by 15 cm.	dark grayish brown (10 YR 4/2) pit	probable fire hearth
BT 4	BT 4.1	45 cm. by 20 cm.	shallow basin-shaped pit (10 YR 6/3)	possible refuse pit, or filled in depression
BT 5	BT 5.1	90 cm. by 30 cm.	basin-shaped pit (10 YR 4/2)	cooking pit
BT 5	BT 5.2	40 cm. by 15 cm.	shallow basin-shaped pit (10 YR 6/2)	unknown, possible filled in depression
ST 1	ST 1.1	60 cm. by 30 cm.	light grayish brown (10 YR 6/2) pit	probable refuse pit
ST 1	ST 1.2	85 cm. by 50 cm.	grayish brown (10 YR 5/2) pit	probable cooking pit
TU 3	TU 3.1	75 cm. by 15 cm.	very dark grayish brown (10 YR 4/1) pit	fire hearth
TU 3	TU 3.2	88 cm. by 55 cm.	deep brownish gray (10 YR 5/2) pit	refuse pit
TU 3	TU 3.3	11 cm. by 19 cm.	small, elongated pit (10 YR 5/3)	possible post-hole

TABLE 7  
Summary of Shovel Probe Results

SHOVEL PROBE	DEPTH (cmbs)	ELEVATION (ft. AMSL)	STRATA	RESULTS
1	39	230	Layer (L) I sand (10 YR 4/2) to c. 15 cmbs L II sand (10 YR 5/4) to c. 34 cmbs L III lithified sand to bottom	Modern material in L I L II and L III sterile
2	20	231	L I sand (10 YR 4/2) to c. 12 cmbs L II lithified sand (10 YR 8/3) to bottom	Both layers sterile
3	35	229	L I sand (10 YR 5/2) to c. 14 cmbs L II sand (10 YR 6/3) to c. 16 cmbs L III lithified sand to bottom	L I contains scattered modern materials L II contains very low amounts of marine shellfish ( <i>planaxids</i> ) L III sterile
4	20	230	L I sand (10 YR 6/3) to c. 48 cmbs L II lithified sand (10 YR 8/3) to bottom	Both layers sterile
5	35	228	L I sand (10 YR 5/2) to c. 12 cmbs L II sand (10 YR 6/2) to c. 25 cmbs L III lithified sand (10 YR 8/3) to bottom	L I contains scattered modern materials L II is low density cultural deposit L III sterile
6	28	230	L I sand (10 YR 5/2) to c. 12 cmbs L II sand (10 YR 6/3) to 18 cmbs L III lithified sand (10 YR 8/3) to bottom	L I contains scattered modern materials L II and L III sterile
7	34	229	L I silty sand (10 YR 4/2) to c. 14 cmbs L II sand (10 YR 6/2) to c. 20 cmbs L III sand (10 YR 7/3) to c. 26 cmbs L IV lithified sand (10 YR 8/4) to bottom	L I sterile L II is low density cultural deposit L III and L IV sterile
8	22	230	L I sand (10 YR 5/3) to c. 14 cmbs L II sand (10 YR 6/3) to c. 18 cmbs L III lithified sand (10 YR 8/3) to bottom	All layers sterile
9	24	228	L I sand (10 YR 5/3) to c. 14 cmbs L II sand (10 YR 6/3) to c. 17 cmbs L III lithified sand (10 YR 8/3) to bottom	All layers sterile
10	34	227	L I sand (10 YR 4/2) to c. 17 cmbs L II sand (10 YR 6/3) to c. 25 cmbs L III lithified sand (10 YR 8/3) to bottom	Modern debris in vicinity L I contains scattered modern materials L II and L III sterile
11	44	224	L I disturbed silty sand (10 YR 5/2) to c. 22 cmbs L II sand (10 YR 6/3) to c. 40 cmbs L III lithified sand (10 YR 8/3) to bottom	L I contains modern materials L II and L III sterile
12	40	222	L I silty sand (10 YR 4/2) to c. 25 cmbs L II sand (10 YR 6/2) to 39 cmbs L III sand (10 YR 7/3) to bottom	L I partially disturbed L II is medium density cultural deposit L III sterile





Photo 1 - General view of project area, looking northeast from Lunalilo Street.  
Note: Site 4418 deposit is on this portion of the study parcel.



Photo 2 - General view of project area, looking to the southeast from Lunalilo Street.

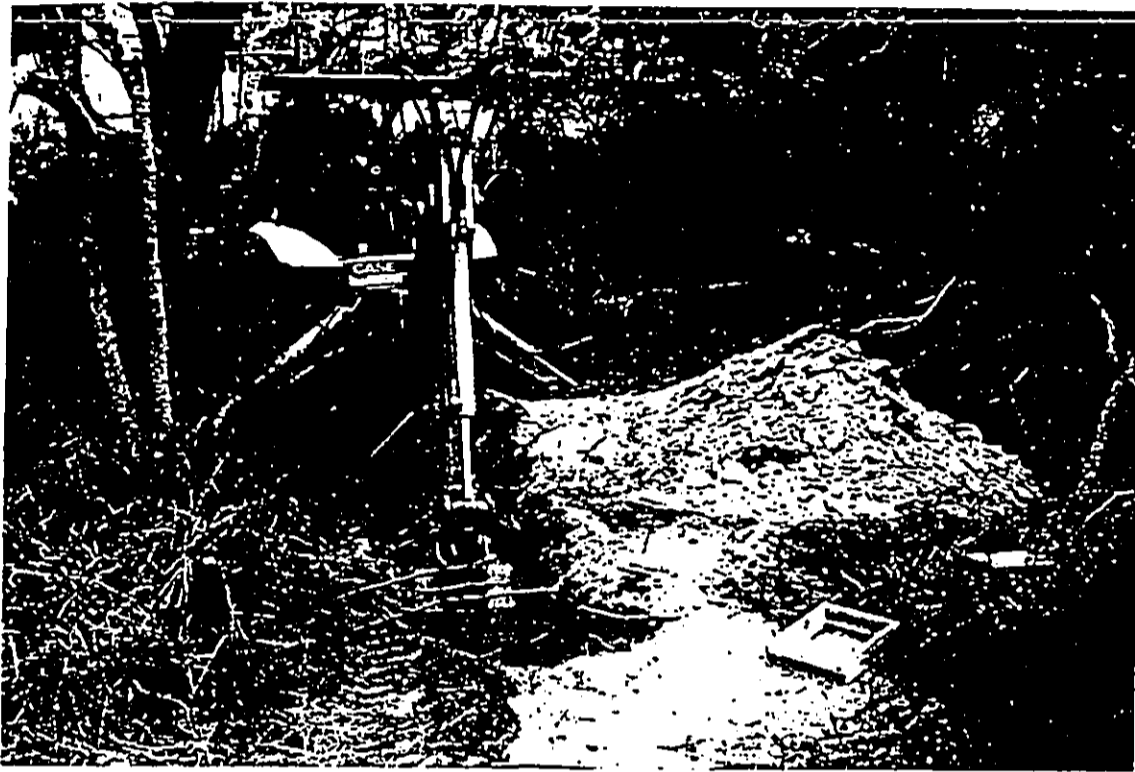


Photo 3 - Excavation of Backhoe Trench 4—view to the west.

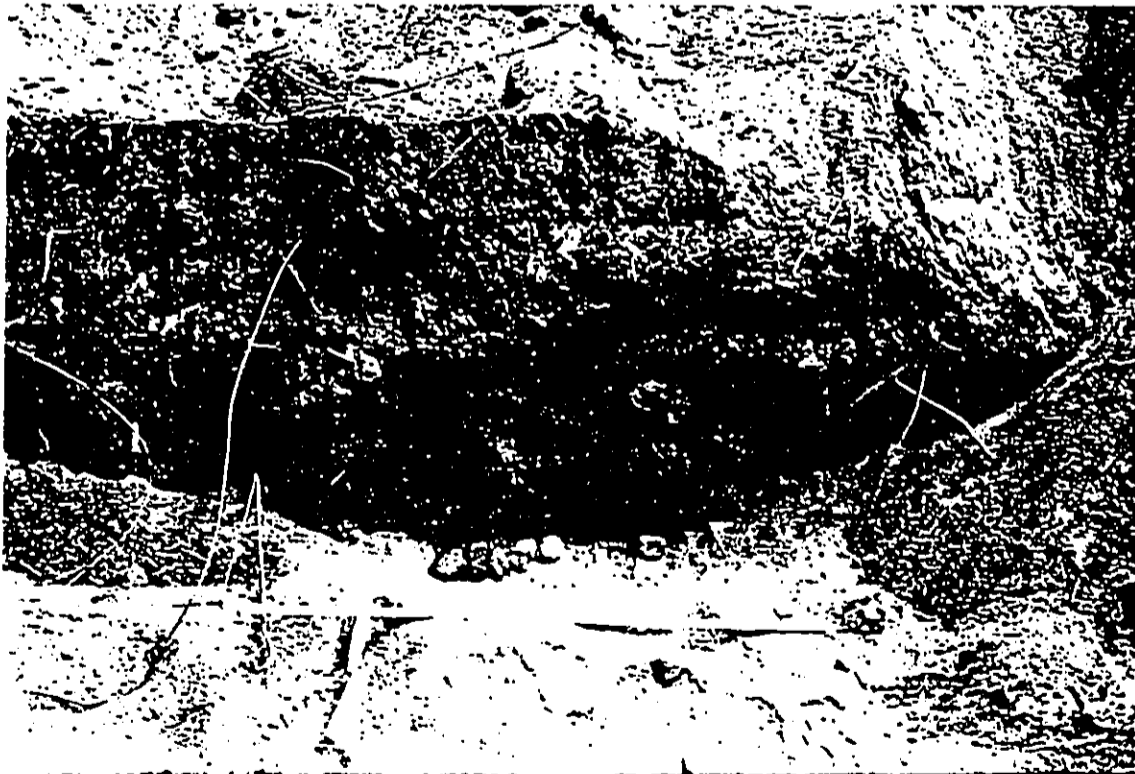


Photo 4 - South face profile, Backhoe Trench 5, including Feature BT 5.1.

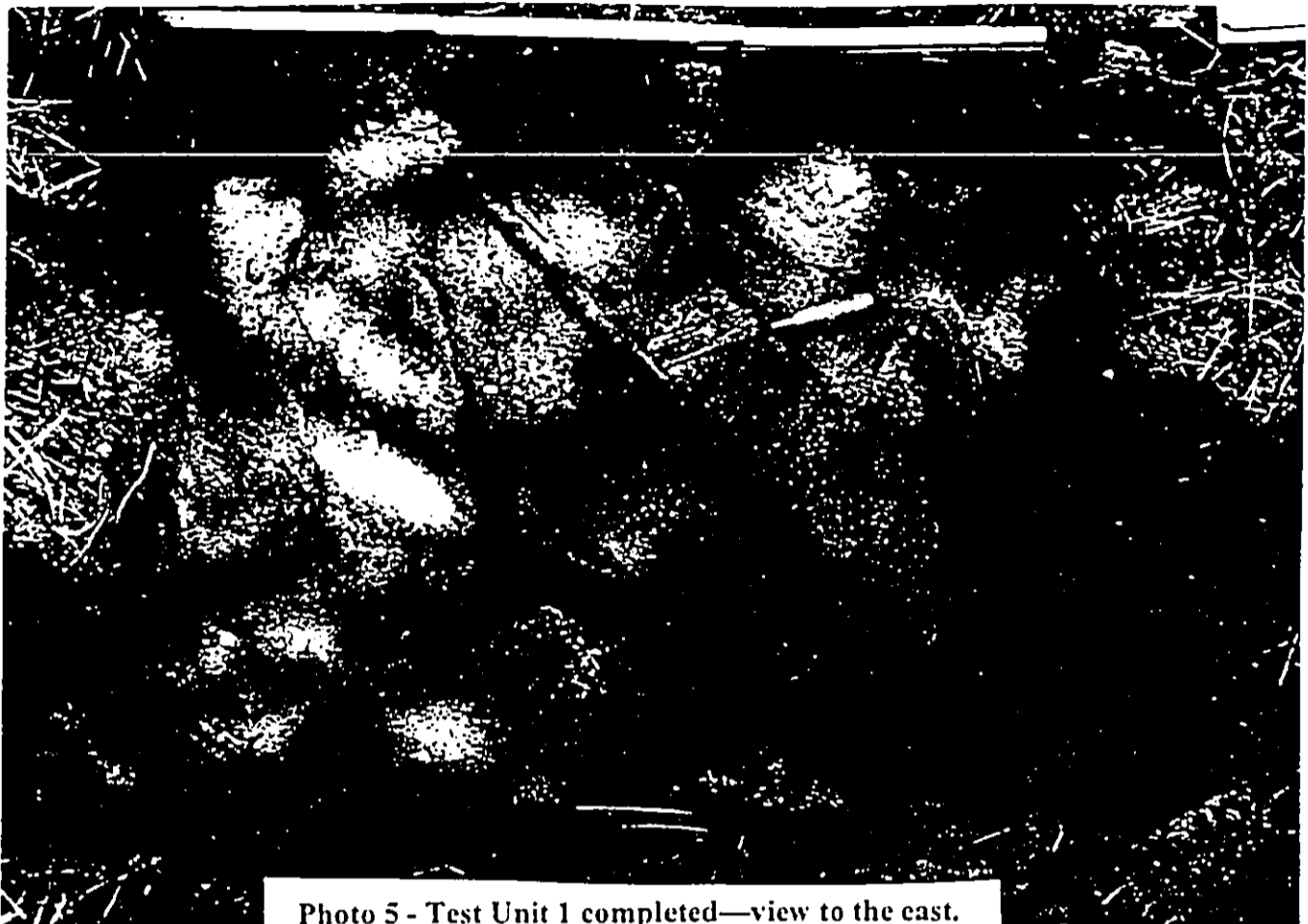


Photo 5 - Test Unit 1 completed—view to the east.

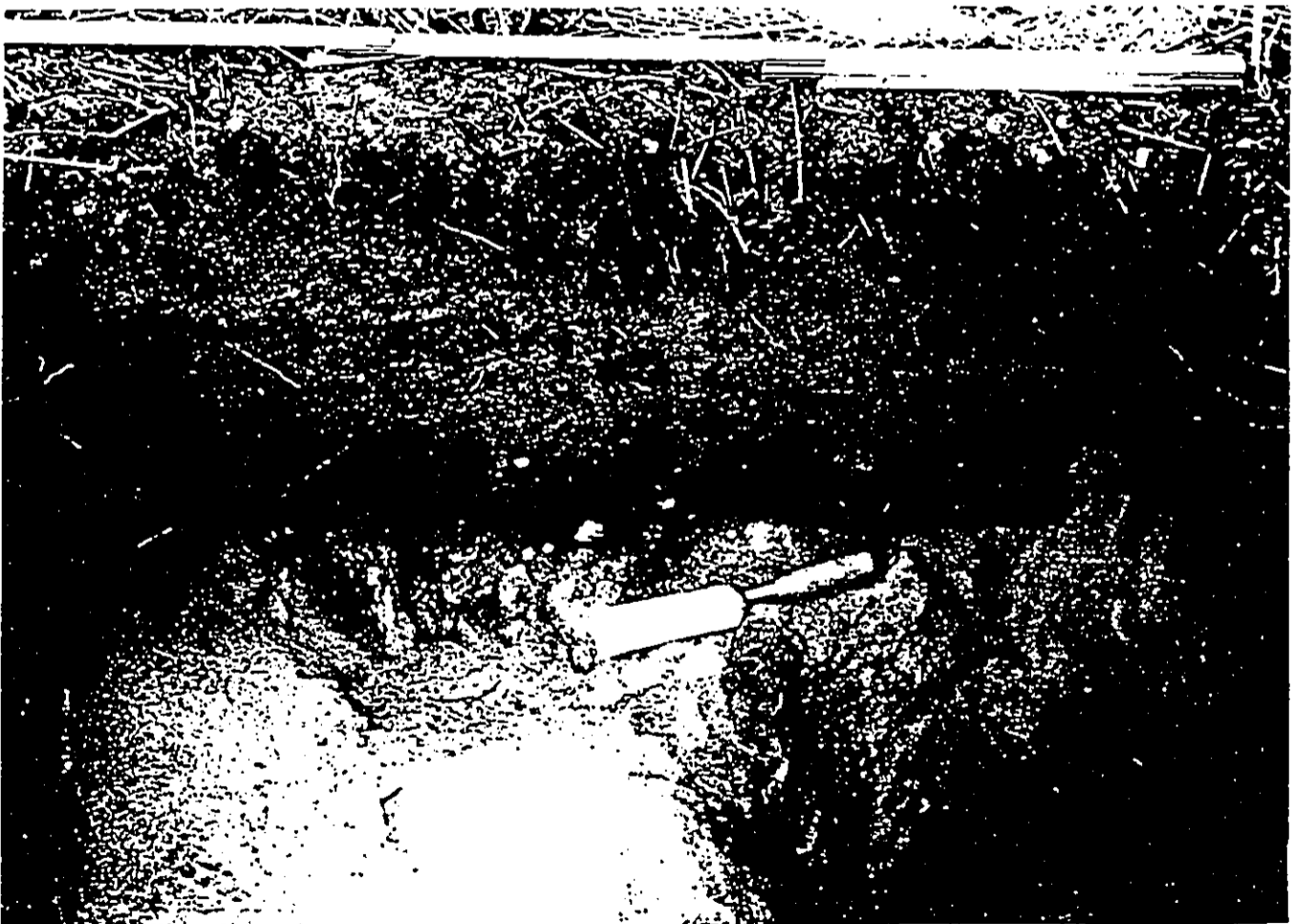


Photo 6 - Test Unit 2 completed—view to the east.



Photo 7 - South face profile, Test Unit 3, including Feature TU 3.2—refuse pit.



Photo 8 - Coral artifacts; (clockwise from upper left) Artifact #20; #9; #4; #3; #2.

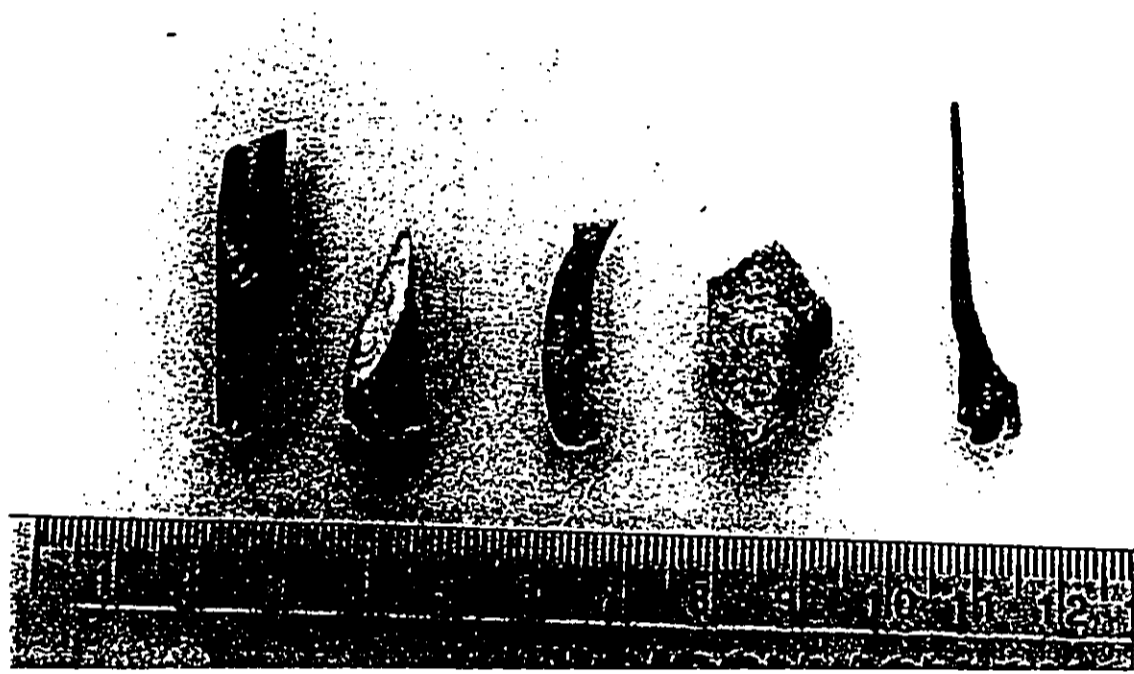


Photo 9 - (left to right): pencil urchin files #13 & #12; fishhook shank #14; fishhook tab #11; fish bone pick #17.

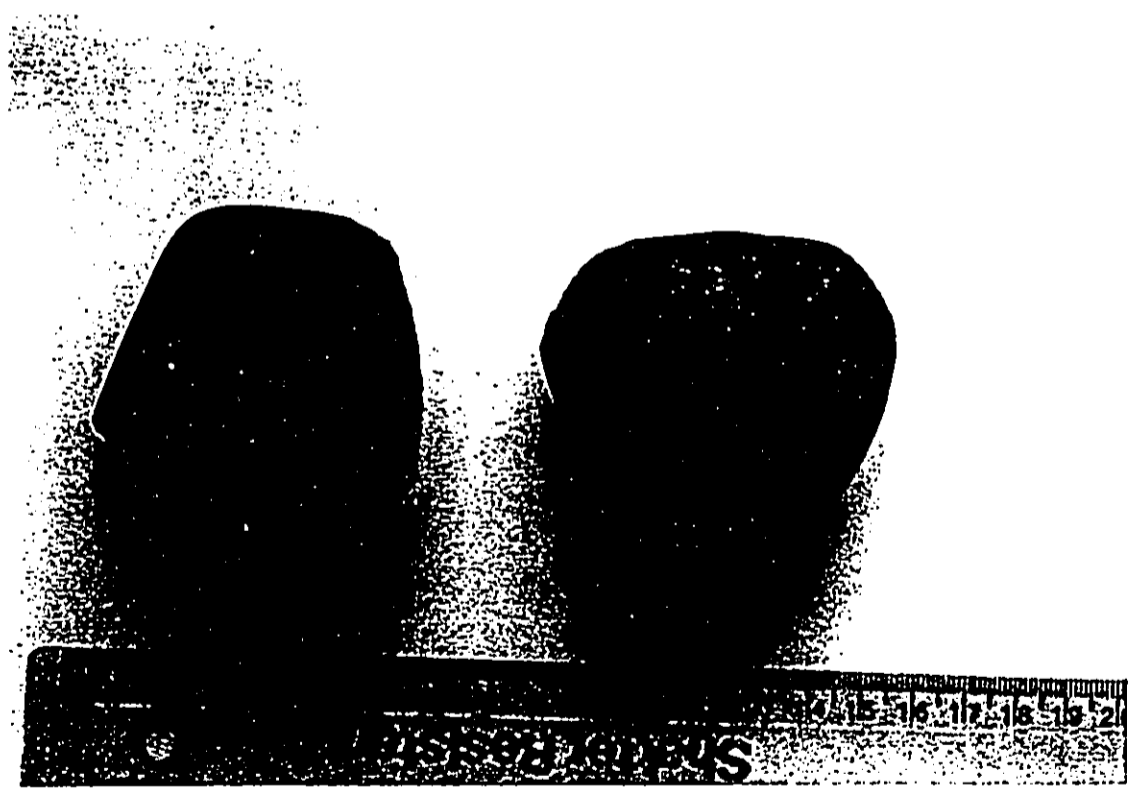


Photo 10 - Dense basalt pecking stone #6; basalt pecking stone #5.

**APPENDIX A**

**Radiocarbon Analysis Data  
Beta Analytic, Inc.**



# BETA ANALYTIC INC.

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## REPORT OF RADIOCARBON DATING ANALYSES

FOR: Dr. Walter Fredericksen  
Xamanek Researches

DATE RECEIVED: September 15, 1997  
DATE REPORTED: September 19, 1997

Sample Data	Measured C14 Age	C13/C12 Ratio	Conventional C14 Age (*)
Beta-109315	400 +/- 70 BP	-26.7 o/oo	370 +/- 70 BP

SAMPLE #: PUNANA LEO Sample #1  
ANALYSIS: radiometric-PRIORITY  
MATERIAL/PRETREATMENT:(charred material): acid/alkali/acid

NOTE: It is important to read the calendar calibration information and to use the calendar calibrated results (reported separately) when interpreting these results in AD/BC terms.

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (\*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables:C13/C12=-26.7:lab mult.=1)

Laboratory Number: Beta-109315

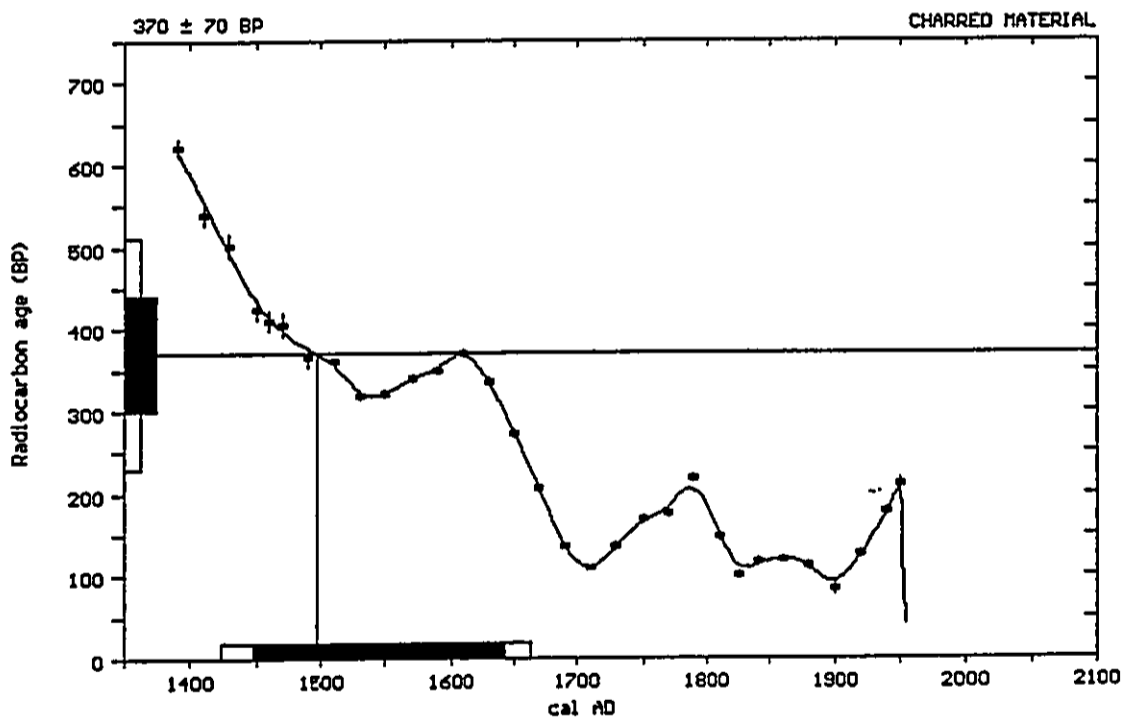
Conventional radiocarbon age:  $370 \pm 70$  BP

Calibrated results:  
(2 sigma, 95% probability) cal AD 1425 to 1665

Intercept data:

Intercept of radiocarbon age  
with calibration curve: cal AD 1495

1 sigma calibrated results:  
(68% probability) cal AD 1450 to 1640



### References:

- Pretoria Calibration Curve for Short Lived Samples*  
Vogel, J. C., Fuls, A., Visser, E. and Becker, B., 1993, *Radiocarbon* 35(1), p73-86
- A Simplified Approach to Calibrating C14 Dates*  
Talma, A. S. and Vogel, J. C., 1993, *Radiocarbon* 35(2), p317-322
- Calibration - 1993*  
Stuiver, M., Long, A., Kra, R. S. and Devine, J. M., 1993, *Radiocarbon* 35(1)

## Beta Analytic Radiocarbon Dating Laboratory

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## APPENDIX B

### Discussion of Artifacts

A total of 20 indigenous artifacts were recovered during our inventory level investigations of Site 4418. These artifacts were fashioned from 5 material types, including lithics, coral, marine shell, pencil urchin spine, and bone. These various artifacts have been discussed in the body of the report. This Appendix provides a more detailed summary. Refer to Table 5 for additional information on the artifacts.

#### Lithics

The 7 lithic artifacts consist of 5 pecking stones (Artifacts 1, 5, 6, 7 and 16), and 2 utilized basalt flakes (Artifacts 10 and 18). Two of the pecking stones (Artifacts 5 and 6) are shown in Photo 10. All of the pecking stones were generally dense waterworn basalt pebbles and cobbles. All appeared to have been repeatedly utilized for relatively low-impact work. The 2 utilized basalt flakes also appeared to have been used many times. No hammerstones or other lithic artifacts were located, but this may simply reflect the limited subsurface sample of the cultural deposit.

#### Coral artifacts

A total of 5 coral artifacts (Artifacts 2, 3, 4, 9, and 20) were located. These include 2 conical stoppers/abraders, and 3 abraders (see Photo 8). The conical stoppers or abraders resemble ones which we have found during data recovery work at Site 4127, and inventory level work at Site 4414. Both habitation sites are nearby to the northwest of the present project area. The 3 abraders are well utilized. All of the coral artifacts are interpreted as multi-use tools.

#### Bone artifacts

Five bone artifacts were recovered during subsurface testing. These include a piece of worked human tibia (Artifact 15); a probable fishhook tab made from pig bone (Artifact 11); a fishhook shank made from pig bone (Artifact 14); a piece of cut pig bone (Artifact 19); and a fish bone pick (Artifact 17) [Photo 9—Note: The human bone was not included in the photographed artifacts].

The presence of the broken fishhook shank and probable fishhook tab suggests that the inhabitants of Site 4418 were producing fishing gear to exploit the nearby coastal

resources. In addition, the 2 pieces of cut bone likely represent raw material for the fishhook manufacturing process.

#### **Urchin spines**

The 2 pencil urchin files recovered further indicate that detailed work occurred at the site. Both files are well utilized and may have been used in fishhook production (Photo 9).

#### **Marine shell**

A single piece of worked Conus shell crown represents the only shell artifact recovered (Artifact 8). The sides of the shell have been removed, and were probably used as the raw material for shell fishhooks.

The 20 indigenous artifacts recovered are consistent with those found in other habitation sites along the Lower Main Street/Waiale Road corridor. The overall artifact complement suggests that fishhook manufacture was an important activity at this site, while the fish bone pick would represent activity associated with food processing and consumption.

## APPENDIX C

### Discussion of General Site Stratigraphy

Our subsurface investigation included 5 backhoe trenches (BTs 1-5), 5 soil trenches (STs 1-5) and 3 manual excavation units (Tus 1-3). The Site 4418 deposit was encountered in BTs 3, 4, 5; ST 1; and TUs 2 and 3. The remaining 7 subsurface test were located outside the limits of Site 4418 on the study parcel.

The stratigraphy encountered during testing in Site 4418 was similar and consisted of 4 to 5 sand layers. Layer I typically consisted of 10 to 30 cm. of grayish brown to dark grayish brown (10 YR 5/2 to 4/2) silty sand. Layer II represents the Site 4418 cultural deposit in all 6 subsurface test excavations. This was up to 30 cm. thick and ranged from light grayish brown to grayish brown (10 YR 6/2 to 5/2) in color.

A total of 9 subsurface features were found in Layer II (cultural deposit) [see Table 6].

The Layer II cultural deposit was underlain by sterile dune sand and lithified sand in all 6 subsurface test excavations in Site 4418.

Stratigraphy encountered on the study parcel outside the limits of Site 4418 consisted of 2 to 3 culturally sterile dune sand layers, underlain by lithified sand.

BENJAMIN J. CAYetano  
GOVERNOR OF HAWAII



MICHAEL D. WILSON, CHAIRPERSON  
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Gilbert Coloma-Agaran

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

AQUACULTURE DEVELOPMENT  
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CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
DIVISION  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

August 18, 1997

Ms. Kili Namau'u, Director  
Punana Leo O Maui  
P.O. Box 337  
Wailuku, Maui, Hawaii 96793

LOG NO: 19981 ✓  
DOC NO: 9708SC09

Dear Ms. Namau'u:

**SUBJECT: Chapter 6E-42 Historic Preservation Comments on Mitigation Work Needed at Future Site of Punana Leo O Maui School  
Wailuku, Wailuku District, Maui  
TMK: 3-8-007: 047**

We understand that you have several questions regarding the completion of archaeological field work at the future site of Punana Leo O Maui school. We hope that the following comments are useful to you.

Often, if a development is to occur on land which has not been previously altered, it will be necessary to conduct an archaeological inventory survey. The purpose of the survey is to locate any historic sites which may be on the property, and to describe the function and historical significance of such sites. If a significant historic site is present on the property, then some form of mitigation will be needed to "mitigate the effects" of development, if any, on the historic site. Mitigation can include data recovery (collecting more information), preservation, and/or preservation with interpretation (such as informational signs for the public).

To date, your archaeological consultant, Xamanek Researches, has nearly completed the field portion of the inventory survey and has located one historic site (SIHP 50-50-04-4418), a subsurface cultural deposit. Site -4418 is likely to be significant under one or more criteria, and therefore eligible for placement on the Hawai'i and/or National Registers of Historic Places. We further understand that you have decided to place fill over much of the land area containing Site -4418, and preserve the site in place. The exception to preservation-in-place will be the small portion of Site -4418 within the area to be cut down to the 230-foot level. In view of these facts, it appears that the following steps will be needed to complete historic preservation requirements at the subject parcel:

- (1) The 230-foot topographic level along which the proposed cut will be made needs to be accurately surveyed in order to identify what portion of Site -4418 will be affected by the grading of the cut.
- (2) Subsurface testing of the portion of Site -4418 affected by the proposed cut and grading will need to be conducted prior to any ground disturbance.
- (3) Once field work has been completed at the portion of Site -4418 to be affected, your consultant can notify our office by letter immediately, with the understanding that a full report documenting the results of the inventory survey will be prepared and submitted later for review and approval.

**APPENDIX F-1**

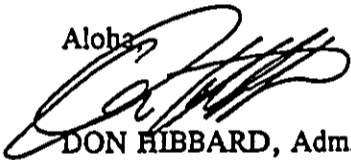
Ms. Kili Namau'u  
Page 2

- (4) Since a significant historic is present in the sand deposits on the property, and since we know from previous experience that human burials can also be inadvertently found during construction site, it is likely that archaeological monitoring of earth-moving work will be needed. Prior to beginning any construction work (including the grading for the cut down to the 230-foot line), an acceptable archaeological monitoring plan needs to be prepared for review and approval by our office.
- (5) Once our office receives notice of completion of fieldwork, and an acceptable monitoring plan, we can notify the County of Maui that a grading permit can be issued. The monitoring plan will then be implemented when construction begins. A monitoring report will need to be prepared for review and approval by our office, after the completion of the monitoring fieldwork.

We hope that this outline of tasks provides you with clear guidance on the remaining expectations of the State Historic Preservation Division with regard to the subject project. We appreciate the opportunity to work with you on this undertaking, and look forward to its successful completion.

Should you have any questions, please feel free to call Sara Collins at 587-0013.

Aloha



DON HIBBARD, Administrator  
State Historic Preservation Division

SC:jen

cc: Ms. Elizabeth Anderson, Cultural Resources Commission, Maui Planning Department,  
250 S. High Street, Wailuku, HI 96793  
Ms. Dana Naone Hall, Chairperson, Maui/Lana'i Islands Burial Council

DOCUMENT CAPTURED AS RECEIVED

BENJAMIN F. QUAYTANO  
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  
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- FORESTRY AND WILDLIFE HISTORIC PRESERVATION DIVISION
- LAND DIVISION
- STATE PARKS
- WATER AND LAND DEVELOPMENT

October 6, 1997

Mr. Bert Ratte  
Department of Public Works  
Land Use and Codes Administration  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

LOG NO: 20249  
DOC NO: 9709BD29

Dear Mr. Ratte:

**SUBJECT:** Chapter 6E-42 Historic Preservation Review of Monitoring Plan for Na Leo Pulania O Maui Property Wailuku Ahupua'a, Wailuku District, Island of Maui TMK 3-8-07:47

This letter is a Historic Preservation review of the proposed historic preservation mitigation for the Punana Leo o Maui Hawaiian Preschool and Family Resource Center (W. Fredericksen 1997. *Archaeological Monitoring Plan for the Proposed Punana Leo O Maui Hawaiian Preschool and Family Resource Center and Preservation Plan for Site 50-50-04-4418 (TMK: (2) 3-8-07:47), Wailuku, Wailuku District, Maui, Hawaii.* Xamanek Researches.). The archaeological inventory survey report for this project has not yet been submitted to our office for review. A letter report outlining the preliminary results of an archaeological inventory survey of the property was reviewed by our Maui Archaeologist Boyd Dixon on September 11, 1997. No field check was conducted of the subject property.

It is generally our policy not to review mitigation proposals until an acceptable archaeological inventory survey report is completed, so we can carefully evaluate the nature and significance of historic sites found in the project area and then evaluate mitigation proposals, and so the concerned public can have access to this information. The archaeological consulting firms should be aware of this policy. However, in this case, we have enough information to proceed with our review, and we will do so in this specific case.

The archaeological survey found 1 historic site in the project area (site 4418). This is a subsurface habitation site (whether this was a permanent habitation or temporary habitation site is not clear until we receive the inventory survey report). The site has been dated to the A.D. 1400s-1600s. No burials have been found in the site, although it is possible burials were associated with the habitation site and might be present. The site seems to be significant for its information content, as an unusual type of site in the Wailuku sand dunes outside of the stream valley (a habitation site), and possibly for its traditional cultural significance if burials prove to be present.

APPENDIX F-2

B. Rarte  
Page 2

The applicant (Na Leo Pulema'o Maui) is willing to preserve the site in its entirety, and we commend the applicant for this action. It is proposed to place a 60 cm fill over the site and use part of the filled over area as a playground. We agree with this preservation commitment.

The applicant proposes to initiate grading/grubbing and other work. A short-term preservation plan is proposed to avoid damage to the site. We can approve this plan, with the following key elements to occur:

1. Marking off the boundaries of the site at the 230 foot contour line. We understand that this boundary is currently marked with flagging tape. We would prefer that this border be marked off with high, plastic construction fencing -- to avoid inadvertent intrusion into the site area by construction equipment. We have found this to be the best and safest approach for site protection. Such fencing should be placed with the supervision of the consulting archaeologist. However, if the applicant wishes instead to have the border flagged, the flagging must be highly visible and be approved by our Maui Archaeologist (Dr. Boyd Dixon, 243-5544) prior to the start of construction.
2. The construction crews must be briefed regarding the value of this historic site and the penalties that will be involved if the site is damaged. This is to ensure that the site is not damaged. This briefing can be done by our Maui Archaeologist or the applicant's consulting archaeologist, and it must occur prior to the start of construction.
3. No monitoring of the boundary is needed during construction if it is properly marked and the construction crews adequately briefed.
4. Kiawe trees in the site area shall be cut near ground level and their roots be left to rot. The trees shall be removed. The site is only 10-30 cm below ground surface so procedures need to be developed in consultation with the applicant's consulting archaeologist to avoid damage to the site. We believe if acceptable procedures are developed, an archaeologist need not monitor this work.
5. A 60 cm layer of soil shall be placed over the site. Procedures must be developed in consultation with the applicant's consulting archaeologist to lay this soil to avoid damage to the site, which is again only 10-30 cm below ground surface. For example, trucks dumping fill might first dump the fill from outside the site into the margins of the site and then level off the fill, and then proceed from the leveled fill to fill in the next portion of the site. This would avoid having heavy machinery impact the site. Our Maui Archaeologist must be contacted to approve the procedures that are developed. The construction crew must be briefed on these procedures, and the initial day of construction work must be monitored by the applicant's consulting archaeologist to ensure that the procedures are being carried out. [If local Pu'uone dune sand is to be used as fill, archaeological monitoring of its excavation and re deposition must be conducted, to ensure that any human skeletal material from burials are properly identified and treated.]
6. A final condition must be the commitment to submit an acceptable archaeological inventory survey report to our office and your agency. A due date for the draft of this report needs to be set, and we suggest January 1, 1998. If this is not acceptable, the applicant should contact our office for another date to be agreed upon.

There is a chance that undiscovered burials might be found in the remainder of the parcel to be grubbed/graded. To handle this possibility, an archaeological monitor must be present during initial land

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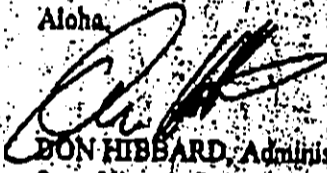
B. Ratte  
Page 3

altering construction activities. Work must stop in the immediate vicinity of the find and the monitor must review the situation. Compliance with Chapter 6E, Hawaii Revised Statutes, must then follow. [The monitor and the construction firm shall meet prior to the start of work and develop acceptable procedures to carry out this monitoring responsibility in compliance with State law.] An acceptable report on monitoring findings must be submitted to our office, even should findings be negative.

Last, as the long-term preservation plan for this site, the applicant again proposes to have it preserved under the 60-cm fill, with the school's playground on top of the fill. We approve this plan. Any digging in the area that would penetrate the fill must be approved by our office and your agency as an amendment to the plan. This would include infrastructure for landscaping (water pipes), if it will penetrate the fill. If the applicant would like an interpretive sign (to inform the students and public about the significance of the site) to be erected at the site, an amendment to the plan needs to be approved by our office and your agency. We will be glad to help prepare the sign text for the applicant in this case. With these understandings we agree to the long-term preservation plan for this site.

With the implementation of the above items, we believe that impacts to the significant historic site in the project area and to any undiscovered burials will be acceptably mitigated. If you have any questions please contact Boyd Dixon at 243-5169.

Aloha,



DON HIBBARD, Administrator  
State Historic Preservation Division

BD:ds

- c. Elizabeth Anderson, Maui County Planning Department (fax: 243-7634)
- c. Dana Hall, Maui / Lanai Island Burial Council (fax: 244-6775)
- c. Erik Fredericksen, Xaminnek Researches (fax: 573-2237)

OCT - 6 1997



BENJAMIN F. CAYLANO  
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

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HISTORIC PRESERVATION

DIVISION  
LAND DIVISION  
STATE PARKS  
WATER AND LAND DEVELOPMENT

February 23, 1998

Mr. Eric Fredericksen  
Xamaneck Researches  
P.O. Box 131  
Pukalani, Hawaii 96768

LOG NO: 21082  
DOC NO: 9802BD15

Dear Mr. Fredericksen:

**SUBJECT: Chapter 6E-42 Historic Preservation Review of a Revised Inventory  
Survey Report for Na Leo Pulama O Maui  
Wailuku Ahupua`a, Wailuku District, Island of Maui  
TMK 3-8-07: 47**

This letter is a Historic Preservation review of a revised document entitled *An Archaeological Inventory Survey of a 1.679 Acre Parcel, Na Leo Pulama O Maui Hawaiian Immersion Preschool and Family Language Resource Center, Located in Wailuku Ahupua`a, Wailuku District, Island of Maui (TMK 3-8-07: 47)* resubmitted by Xamaneck Researches in February, 1998. Our office reviewed a draft of this report (SHPD DOC NO: 9712BD23) with minor revisions suggested. This revised report has now addressed all our comments, and we find it to be acceptable.

It is our understanding that archaeological monitoring is presently being conducted at the site under terms of the approved monitoring plan (SHPD DOC NO: 9709BD29).

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

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator  
State Historic Preservation Division

BD:jen

**APPENDIX F-3**

cc. David Blane, Maui County Planning Department (fax: 243-7634)  
Ralph Nagamine, Maui County Department of Public Works (fax: 243-7972)  
Dana Hall, Maui / Lana`i Island Burial Council (fax: 244-6775)

5774



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

'98 JUL 15 P12:18

DEPT OF LAND AND NATURAL RESOURCES  
COUNTY OF MAUI  
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AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND DIVISION  
STATE PARKS  
WATER RESOURCE MANAGEMENT

May 15, 1998

LD-NAV  
Ref.: CUP98006.RCM

Honorable Lisa M. Nuyen  
Planning Director  
County of Maui  
Planning Department  
250 S. High Street  
Wailuku, Hawaii 96793

Dear Ms. Nuyen:

SUBJECT: Review : County Special Use Application  
I.D. No. : CUP 980006  
Project : Wailuku Parkside  
Project : Na Leo Pulama o Maui's Punana Leo O Maui  
Hawaiian Language Preschool and Family  
Language Resources Center  
Applicant: Na Leo Pulama o Maui, Maui Kupahu  
Location : Wailuku, Island of Maui, Hawaii  
TMK : 2nd/ 3-8-007: Parcel 47

Thank you for the opportunity to review and comment on the subject matter.

The Department of Land and Natural Resources has no comment to offer on the subject matter at this time.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-808-587-0438.

Very truly yours,

DEAN Y. UCHIDA  
Administrator

c: Maui Land Board Member  
Maui District Land Office

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Mr. Dean Y. Uchida, Administrator  
Land Division  
Dept. of Land and Natural Resources  
State of Hawaii  
PO Box 621  
Honolulu, Hawaii 96809

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Dean Uchida:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunaliilo Street in Wailuku, Maui.

We have received a copy of your comments to Lisa Nuyen, then-Director of Planning, County of Maui, dated May 15, 1998 and July 29, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your first comment letter, you stated that the Department of Land and Natural Resources had no comment to offer on the subject matter at the time. In your second comment letter, you stated that the Land Division - Engineering Branch confirmed that the proposed project is located in Zone C, an area of minimal flooding.

The Applicant appreciates the position of the Land Division, Department of Land and Natural Resources, State of Hawaii. The Applicant has noted that the proposed project is located in Zone C and is subject to minimal flooding.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp

naleo/letdlnr

11/11/11 11:11 AM

BENJAMIN J. CAYETANO  
GOVERNOR



ESTHER UEDA  
EXECUTIVE OFFICER

STATE OF HAWAII  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
LAND USE COMMISSION  
P.O. Box 2359  
Honolulu, HI 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

'98 JUL 10 P1:01

July 9, 1998

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

Dear Ms. Nuyen:

Subject: County Special Use Permit (CUP 980006) for Na Leo  
Pulama O Maui Hawaiian Language Preschool and  
Family Language Center, Wailuku, Maui, TMK 3-8-07:  
47

We have reviewed the application for the subject permit forwarded by your transmittal dated July 6, 1998, and confirm that the subject parcel, as represented in Figure 1, is located within the State Land Use Urban District.

We note that the subject parcel is located immediately south of the petition area in LUC Docket No. A98-724/Stanford S. Carr Development Corporation, which proposes to reclassify approximately 24.267 acres of land from the Agricultural District into the Urban District for a single-family residential subdivision and a park site.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject application.

Should you have any questions, please feel free to call me or Bert Saruwatari of our office at 587-3822.

Sincerely,

A handwritten signature in cursive script, appearing to read "Esther Ueda".

ESTHER UEDA  
Executive Officer

EU:th

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Ms. Esther Ueda, Executive Officer  
State Land Use Commission  
Dept. of Business, Economic Dev. &  
Tourism  
PO Box 2359  
Honolulu HI 96804-2359

Re: Change in Zoning Application for Na Leo Pulama o Maui  
Hawaiian Language Preschool and Family Language Center,  
Wailuku, Maui; TMK 3-8-07:47

Dear Esther Ueda:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated July 9, 1998.

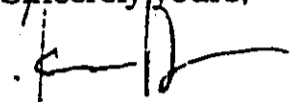
After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the subject parcel is within the State Land Use Urban District and that an area immediately south of the petition area is the subject of a reclassification petition. No further comments were offered.

We will note that the project site is located within the State Land Use Urban District.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/letsluc



5408



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
COUNTY OF MAUI

LINDA CROCKETT LINGLE  
Mayor  
STEPHANIE AVEIRO  
Director  
MARK PERCELL  
Deputy Director

'98 JUL 16 P4:49

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 243-7805 • FAX (808) 243-7829

July 14, 1998

TO: Ms. Lisa Nuyen  
Director of Planning

FROM: Ms. Stephanie Aveiro  
Director of Housing and Human Concerns

SUBJECT: Na Leo Pulama o Maui Hawaiian Language Pre-School  
And Family Language Center  
Application For County Special Use Permit  
I.D. No. CUP 980006  
TMK: 3-8-007:047

We have reviewed Na Leo Pulama o Maui's application for a County Special Use Permit for the subject project, and would like to recommend that the application be approved.

Please call Wayde Oshiro of our Housing Division at extension 7351 if you have any questions.

WTO:wo

xc: Housing Administrator  
Project File

TO SUPPORT AND ENHANCE THE SOCIAL WELL-BEING OF THE CITIZENS OF MAUI COUNTY

PRINTED ON RECYCLED PAPER



ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Ms. Stephanie Aveiro, Director  
Dept. of Housing and Human Concerns  
County of Maui  
200 S. High St.  
Wailuku HI 96793

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Stephanie Aveiro:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunalilo  
Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of  
Planning, County of Maui, dated July 14, 1999.

After further consultation with the Planning Department, we have  
decided that it would be appropriate to apply for a change in zoning instead of  
a special use permit. The criteria to be met are virtually the same. The project  
is identical to that described earlier. The Planning Department has suggested  
that we proceed to respond to your comments. We do so now.

In your letter you stated that the Department of Housing and Human  
Concerns recommended approval of the application.

The Applicant appreciates the support of the Department of Housing and  
Human Concerns, County of Maui.

Thank you for your comments on this project.

Sincerely yours,

  
Isaac Hall

IH/jp  
naleo/letdephous

5411

BENJAMIN J. CAYETANO  
GOVERNOR



98 JUL 16 P4:46

LAWRENCE MIKE  
DIRECTOR OF HEALTH

ALFRED M. ARENSDORF, M.D.  
District Health Officer

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE

54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793

July 15, 1998

Ms. Lisa M. Nuyen  
Director  
Planning Department  
County of Maui  
250 South High Street  
Wailuku, Hawai'i 96793

Dear Ms. Nuyen:

Subject: Na Leo Pulama O Maui's Punana Leo O Maui Hawaiian  
Language Preschool and Family Language Center  
TMK: (2) 3-8-007: 047  
CUP 980006

Thank you for the opportunity to comment on the application. 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 (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained prior to the commencement of work.
2. HAR, Chapter 11-46, "Community Noise Control" also sets maximum allowable levels for noise from stationary sources such as air conditioning units, compressors, and generators. The attenuation of noise from these potential sources should be considered during the design phase of the project.
3. The "Certified Kitchen" shall meet the requirements of HAR, Chapter 11-12, "Food Establishment Sanitation".

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

Sincerely,

A handwritten signature in black ink, appearing to read "Herbert S. Matsubayashi".

HERBERT S. MATSUBAYASHI  
District Environmental Health Program Chief

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Mr. Herbert S. Matsubayashi  
District Environmental Health Program Chief  
Dept. of Health, State of Hawaii  
Maui District Office  
54 High Street  
Wailuku, Maui, Hawaii 96793

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Herbert Matsubayashi:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated July 15, 1998 .

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the noise created during the construction phase of the project may exceed maximum allowable levels such that a noise permit may be required; that maximum noise levels are established for air conditioning units, compressors and generators and that the "certified kitchen" must meet the requirements of H.A.R. Chapter 11-12, "food establishment sanitation."

If required, the Applicant will obtain a noise permit. If stationary sources such as air conditioning units, compressors and generators are used, noise attenuation measures will be considered during the design phase of the project. The Applicant will also comply with the requirements of H.A.R. Chapter 11-12 "Food Establishment Sanitation."

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/letdephealth

5467

BENJAMIN J. CAYETANO  
GOVERNOR  
STATE OF HAWAII



KALI WATSON  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION

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

STATE OF HAWAII '98 JUL 20 P12:51  
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879  
HONOLULU, HAWAII 96805

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

July 16, 1998

Mr. David W. Blane, Planning Director  
County of Maui, Planning Department  
250 S. High Street  
Wailuku, Maui, Hawaii 96793

Dear Mr. Blane:

Subject: Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian  
Language Preschool and Family Language Center,  
CUP 980006, TMK 3-8-7:47, Wailuku, Maui, Dated  
June, 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  
586-3836.

Aloha,

*Daniel Ornellas*  
KALI WATSON, Chairman  
Hawaiian Homes Commission

fu

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Kali Watson, Chairman  
Hawaiian Homes Commission  
State of Hawaii  
PO Box 1879  
Honolulu HI 96805

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Kali Watson:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunalilo  
Street in Wailuku, Maui.

We have received a copy of your comment to David W. Blane, a prior  
Director of Planning, County of Maui, dated July 16, 1998.

After further consultation with the Planning Department, we have  
decided that it would be appropriate to apply for a change in zoning instead of  
a special use permit. The criteria to be met are virtually the same. The project  
is identical to that described earlier. The Planning Department has suggested  
that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the Department of Hawaiian  
Home Lands had no comment to offer.

The Applicant appreciates the position of the Department of Hawaiian  
Home Lands.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/lethawhom



'98 JUL 21 P1:10

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

July 17, 1998

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

Dear Ms. Nuyen:

Subject: Na Leo Pulama o Maui's Puana Leo O Maui Hawaiian Language Preschool  
and Family Language Center  
CUP 980006 (TMK: 3-8-007;047, Wailuku, Maui)

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

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

MECO is currently in discussion with project representatives regarding overhead line relocations related to this project. Additional electrical requirements should be discussed with MECO as soon as practical so that adequate time is given for planning.

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

Sincerely,

Edward Reinhardt  
Manager, Engineering

ER:fo:lh

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Mr. Edward Reinhart, Manager, Engineering  
Maui Electric Company, Ltd.  
PO Box 398  
Kahului, Maui, Hawaii 96733-6898

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Edward Reinhart:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated July 17, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that Maui Electric had no objections to the proposed project, that MECO was in discussion with project representatives regarding overhead line relocations related to this project, and that additional electrical requirements should be discussed with MECO as soon as practicable.

The Applicant appreciates the lack of objection by the Maui Electric Company to this project. Overhead line relocations have been investigated with MECO. Additional electrical requirements are being discussed now.

Thank you for your comments on this project.

Sincerely yours,

  
Isaac Hall

IH/jp  
nalco/letmecco



55cc



LINDA LINGLE  
MAYOR

OUR REFERENCE  
at  
YOUR REFERENCE

# POLICE DEPARTMENT COUNTY OF MAUI

55 MAHALANI STREET JUL 22 P 3:14  
WAILUKU, HAWAII 96793  
(808) 244-6400  
FAX (808) 244-6411



THOMAS PHILLIPS  
ACTING CHIEF OF POLICE

DEPT OF POLICE  
COUNTY OF MAUI  
RECEIVED

July 21, 1998

MEMORANDUM


TO : DIRECTOR, PLANNING DEPARTMENT

FROM : THOMAS M. PHILLIPS, ACTING CHIEF OF POLICE

SUBJECT : I.D.: CUP 980006  
 TMK: 3-8-007:047  
 Project Name: Na Leo Pulama o Maui's Punana Leo  
 O Maui Hawaiian Language Preschool  
 and Family Language Center  
 Applicant: Na Leo Pulama o Maui, Malia Kupahu,  
 President

No recommendation or special condition is necessary or desired.

Refer to attachment(s).

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

TO : GERALD MATSUNAGA, CAPTAIN WAILUKU PATROL  
VIA : CHANNELS  
FROM : RYAN RODRIGUES, COMMUNITY POLICE OFC. - KAHULUI  
SUBJECT : NA LEO PULAMA O MAUI'S PUNANA LEO ASSIGNMENT

*Alice  
Letter  
Lover*

Sir, this communication is being submitted for your information regarding the above mentioned assignment.

The above mentioned assignment refers to a special use permit application, for the construction of an Hawaiian language resource center and preschool.

A review of the application reveals that the construction site for this plan is located at the corner of Lunalilo Street and Liholiho Street.

After further review of the application, I did an on site inspection of the site selected for this project. At this time I can find no adverse impact on traffic in the area chosen for development. The roadway improvements mentioned in this application should allow traffic to flow smoothly in this area.

However I do have a concern with the added traffic flow at the intersection of Kaahumanu Avenue and Lunalilo Street in relation to this project. Even with the mention of Baldwin High Schools traffic signal creating a break in traffic allowing vehicles to exit onto Kaahumanu Avenue. I feel this will not be enough to reduce the potential of having a major vehicle accident at this location. I suggest that like Baldwin High School, traffic signals be installed at this intersection. At this point an time this is the only traffic hazard I feel this project would create.

Submitted for your information.

*Noted.  
Suggest forward  
to State Highway  
Division.  
A.L.T. [Signature]  
7-15-98*

RYAN RODRIGUES E#0312

7/17/98 1125 HOURS

*[Signature]*

*CONCUR, AS HEAVY  
TRAFFIC COMES DOWN  
KAAHUMANU AVE. TRAVELLING  
IN THE KAHULUI DIRECTION*

*Also  
C.H. [Signature]  
7-17-98*

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Thomas M. Phillips, Acting Chief of Police  
Police Department  
County of Maui  
55 Mahalani Street  
Wailuku, Maui, Hawaii 96793

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Thomas M. Phillips:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to the Director of the Planning Department, County of Maui, dated July 21, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that based upon a site inspection, no adverse impact on traffic in the area chosen for development existed and the roadway improvements mentioned in the application should allow traffic to flow smoothly in the area. A concern was raised that with the added traffic flow at the intersection of Kaahumanu Avenue and Lunalilo Street, the traffic signal at Baldwin High School might not be enough to reduce the potential of having a major vehicle accident at this location and it was recommended that a traffic signal be installed at this intersection.

At the request of a number of agencies a full traffic impact assessment was prepared by Randall Okeneku. He determined that a traffic signal is not necessary at this intersection but that other traffic mitigation measures should be implemented.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
naleo/letpolice

PHONE (808) 594-1888



FAX (808) 594-1865

STATE OF HAWAII '98 JUL 28 12:49  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

July 23, 1998

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

**Subject:** County Special Use Permit for Na Leo Pulama O Maui's, Punana Leo O Maui Hawaiian Language Preschool and Family Language Resource Center, Wailuku, Island of Maui

Dear Ms. Nuyen:

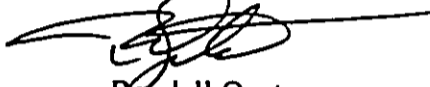
Thank you for the opportunity to review the County Special Use Permit for Na Leo Pulama O Maui's, Punana Leo O Maui Hawaiian Language Preschool and Family Language Resource Center, Wailuku, Island of Maui. Na Leo Pulama O Maui is requesting a special permit to build a set of facilities for a preschool designed to provide education entirely in the Hawaiian language. The property is located at the juncture of Lunalilo and Liholiho Streets in Wailuku. The property has a variable topography and contains an archaeological feature deemed significant for its information content and unusual location in the Wailuku sand dunes outside of the Iao Stream valley.

The Office of Hawaiian Affairs (OHA) has reviewed the Special Use Permit and has no concerns at this time. OHA praises Na Leo Pulama O Maui for its (i) commitment to preserve and conserve a valuable archaeological feature within the school settings, and (ii) efforts to use this archaeological feature as an educational aid to teach preservation and conservation of Hawaiian culture and heritage.

Letter to Ms. Lisa M. Nuyen  
July 23, 1998  
Page 2

Please contact Colin Kippen (594-1938), LNR Officer, or Luis Manrique (594-1758), should you have any questions on this matter.

Sincerely yours,



Randall Ogata  
Administrator



Colin Kippen  
Officer,  
Land and Natural  
Resources Division

cc: Board of Trustees  
CAC, Island of Maui

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Randall Ogata, Administrator  
State of Hawaii  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96813

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Randall Ogata:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated July 23, 1998.

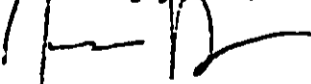
After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the Office of Hawaiian Affairs had no concerns at that time, and that OHA praised Na Leo Pulama o Maui for its commitment to the preservation of archaeological features and the use of these archaeological features as an educational aid to teach preservation and conservation of Hawaiian culture and heritage.

The Applicant thanks the Office of Hawaiian Affairs for its position and support of the application of Na Leo Pulama o Maui.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/letoha

-5819



STATE OF HAWAII '98 JUL 29 P12:27  
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION  
P.O. BOX 621  
HONOLULU, HAWAII 96809

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

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

JUL 27

Ref.:LD-PEM

LD Ref.:CUP98006.COM

Honorable Lisa M. Nuyen, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Attention: Julie Higa, Staff Planner

Dear Ms. Nuyen:

Subject: Request for Comments - County Special Use Application, Na Leo Pulama O Maui's Punana Leo O Maui Language Resource Center, Wailuku, Maui, Tax Map Key: 3-8-07:47

This is a follow-up to our letter dated July 21, 1998 regarding the subject request. At this time we would like to offer the following comments:

Land Division - Engineering Branch

We confirm that the proposed project is located in Zone C (unshaded), an area of minimal flooding.

Thank you for the opportunity to provide additional comments for the County Special Use Application for the subject project. Should you have any questions, please contact Patti Miyashiro of our Land Division in Honolulu at (808) 587-0430.

Very truly yours,

Dean Y. Uchida  
Administrator

c: Maui Land Board Member  
Maui District Land Office  
Ld-Engineering Branch





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

July 29, 1998

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

*Received  
 7/31/98  
 Maui Planning Dept*

LD-NAV  
 Ref.: CUP98006.2RC

Honorable Lisa M. Nuyen, Director  
 Department of Planning  
 County of Maui  
 250 South High Street  
 Wailuku, Hawaii 96783

Attention: Julie Higa, Staff Planner

Dear Ms. Nuyen:

SUBJECT: Review : County Special Use Application  
 I.D. No. : CUP98006  
 Project : Na Leo Pulama o Maui's Punana Leo O Maui  
 Location : Wailuku, Island of Maui, Hawaii  
 TMK : 2nd/ 3-8-007: Parcel 47

This is a follow-up to our correspondence to you dated July 27, 1998 (Ref: CUP98006.COM), regarding our review of the subject matter.

Attached herewith is a copy of our Commission on Water Resource Management's comments related to water resources for the proposed project.

Should you have any questions, please feel free to contact Mr. Charley Ice of the Commission on Water Resource Management at 1-808-587-0255 or Nick Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

*Deana Y. Uchida*  
 DEAN Y. UCHIDA  
 Administrator

c: Maui Land Board Member  
 Maui District Land Office

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



MICHAEL D. WILSON  
CHAIRPERSON  
ROBERT G. GIRALD  
DAVID A. NOBRIGA  
LAWRENCE H. MIKE  
RICHARD H. COX  
HERBERT M. RICHARDS JR.  
TIMOTHY E. JOHNS  
DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
P.O. BOX 921  
HONOLULU, HAWAII 96809

July 27, 1998

TO: Mr. Dean Uchida, Administrator  
Land Division

FROM: Timothy E. Johns, Deputy Director *Timothy E. Johns*  
Commission on Water Resource Management (CWRM)

SUBJECT: Pūnana Leo o Maui Preschool/Family Resource Center County SUP

FILE NO.: CUP98006.COM

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas which are important for the maintenance of streams and the replenishment of aquifers.

- We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.
- We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- A Well Construction Permit and a Pump Installation Permit from the CWRM would be required before ground water is developed as a source of supply for the project.
- The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the CWRM would be required prior to use of this source.
- Groundwater withdrawals from this project may affect streamflows. This may require an instream flow standard amendment.
- If the proposed project diverts additional water from streams or if new or modified stream diversions are planned, the project may need to obtain a stream diversion works permit and petition to amend the interim instream flow standard for the affected stream(s).
- If the proposed project performs any work within the bed and banks of a stream channel, the project may need to obtain a stream channel alteration permit and a petition to amend the interim instream flow standard for the affected stream(s).
- We recommend that no development take place affecting highly erodible slopes which drain into streams within or adjacent to the project.
- OTHER:  
Water quantities required for this project are not identified. The water supply source for this project is being pumped at about 96% of the sustainable yield of the aquifer, and the Commission will designate the aquifer as a water management area if pumpage reaches 100%. If the aquifer is designated, all groundwater withdrawals to the purveyor would be subject to water use permits. The service area would be subject to a declaration of a water shortage or a water emergency. If withdrawals are constrained, uses may be subject to allocation to users by the purveyor.

If there are any questions, please contact Charley Ice at 587-0251.

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Timothy E. Johns, Deputy Director  
Commission on Water Resource Management  
Dept. of Land and Natural Resources  
PO Box 621  
Honolulu, Hawaii 96809

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Timothy Johns:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunailo  
Street in Wailuku, Maui.

We have received a copy of your comments dated July 27, 1998.

After further consultation with the Planning Department, we have  
decided that it would be appropriate to apply for a change in zoning instead of  
a special use permit. The criteria to be met are virtually the same. The project  
is identical to that described earlier. The Planning Department has suggested  
that we proceed to respond to your comments. We do so now.

In your comment letter you requested that the water quantities required  
for the project be identified; you provided notice of the limitations of the Iao  
Aquifer as a source of water, and you requested coordination with the County  
government to incorporate this project into the County's Water Use and  
Development Plan.

The Applicant now identifies the water quantities required for the  
project. The Applicant is aware of the limitations of the Iao Aquifer. The  
Applicant is relocating an existing facility already served by the Iao Aquifer to a  
new location. While there will be some increase in water usage, it will be far  
less than the initiation of a completely new use. Through this Application, the  
County government can incorporate this project into the County's Water Use  
and Development Plan.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
naleo/letcwrn

12 11 10 9 8 7 6 5 4 3 2 1

- 5292

LINDA CROCKETT LINGLE  
MAYOR



**COUNTY OF MAUI**  
DEPARTMENT OF FIRE CONTROL  
200 DAIRY ROAD  
KAHULUI, MAUI, HAWAII 96732  
(808) 243-7561

RONALD P. DAVIS  
CHIEF

HENRY A. LINDO, SR.  
DEPUTY CHIEF

'98 JUL 13 P4:32

DEPT OF FIRE CONTROL  
COUNTY OF MAUI  
RECEIVED

July, 1998

Ms Julie Higa, Staff Planner  
County of Maui, Department of Planning  
250 South High Street  
Wailuku, HI 96793

RE: Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian  
Language Preschool and family Language Center;  
TMK: 3-8-07:47; CUP 980006

Dear Ms Higa,

The Department of Fire Control has no objection to granting the change in use permit requested by Malia Kupahu.

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

If you have any questions, you may contact me at extension 7566.

Sincerely,

*Leonard F Niemczyk*  
LEONARD F NIEMCZYK  
Captain, FPB

**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Mr. Leonard F. Niemczyk, Captain, FPB  
Department of Fire Control  
County of Maui  
200 Dairy Road  
Kahului, Maui, Hawaii 96732

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Leonard Niemczyk:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received your comment letter to Julie Higa, Staff Planner, Department of Planning, County of Maui, dated July, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the Department of Fire Control had no objection to granting the permit and reserved the right to comment during the plans and specifications submittal stage of the project.

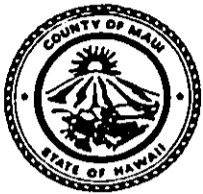
The Applicant agrees with the position of the Department of Fire Control and will submit more detailed plans later for Fire Department review.

Thank you for your comments on this project.

Sincerely yours,

  
Isaac Hall

IH/jp  
nalco/letfirecon



DEPARTMENT OF  
**PARKS AND RECREATION**  
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793-3988 AUG -5 P3:57

LINDA LINGLE  
Mayor

HENRY OLIVA  
Director

ALLEN SHISHIDO  
Deputy Director

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

DEPARTMENT OF  
COUNTY OF MAUI  
August 4, 1998 RECEIVED

MEMO TO: Lisa Nuyen, Director of Planning

  
FROM: Henry Oliva, Director

SUBJECT: Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian Language  
Preschool and Family Language Center

Thank you for the opportunity to review and comment on the above referenced project. At this time, we have no objections to the proposed action as described in the Special Use Permit.

Should you have any questions, please feel free to contact Mr. Patrick Matsui, Chief of Parks Planning and Development, at extension 7387.

HO:am

c: Patrick Matsui, Chief of Planning and Development

s:\planning\am\punaleo.wpd

ISAAC DAVIS HALL . . .

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Henry Oliva, Director  
Dept. of Parks and Recreation  
County of Maui  
1580-C Kaahumanu Avenue  
Wailuku, Maui, Hawaii 96793

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Henry Oliva:

The Maui Planning Department requested your comments on Na Leo  
Pulama o Maui's proposed project to construct and operate the Punama Leo o  
Maui Hawaiian Language Preschool and Family Language Center on Lunalilo  
Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of  
Planning, County of Maui, dated August 4, 1998.

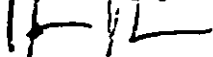
After further consultation with the Planning Department, we have  
decided that it would be appropriate to apply for a change in zoning instead of  
a special use permit. The criteria to be met are virtually the same. The project  
is identical to that described earlier. The Planning Department has suggested  
that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the Department of Parks and  
Recreation, County of Maui, had no objections to the proposed action.

The Applicant appreciates the lack of objections.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/letparks



BENJAMIN J. CAYETANO  
GOVERNOR



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

KAZU HAYASHI  
DIRECTOR  
DEPUTY DIRECTORS  
BRIAN K. MINAII  
GLENN M. OKIMOTO

'98 AUG 10 AM 11:45  
IN REPLY REFER TO:

DEPT. OF TRANSPORTATION  
RE: Hwy-M 2.237-98

## MEMORANDUM

August 5, 1998

TO: Julie Higa, Staff Planner  
County of Maui Planning Department

FROM: Ferdinand Cajigal *FJC*  
State Highways

SUBJECT: Na Leo Pulama O Maui's Punana Leo O Maui Hawaiian  
Language Preschool and Family Language Center  
TMK3-8-7:47; I.D. No. ME-98-45

These are our comments:

1. Page 9 of the report says that 50 cars will be entering and leaving the property between 7:30 A.M. and 8:30 A.M. which is also the peak hour of Kaahumanu Avenue. This is a substantial increase in traffic and requires an analysis of project's impacts on Kaahumanu Avenue and Lunalilo Street;
2. The media center will be used for "after school" program for grades K to 8. Although the students will be dropped off by school bus, additional traffic will be generated when parents pick the students up between 4:00 P.M. and 5:00 P.M.
3. No calculations and/or justification to support that the break in the traffic signal at Kaahumanu and Baldwin High School is adequate to accommodate project related traffic;
4. Traffic assessment report should include calculation and/or justification to obtain the 40 vph generated by the project;

Ms. Julie Higa  
Page 2  
August 5, 1998

Hwy-M 2.237-98

5. *Include traffic assignment in the traffic report, including "before and after" development;*
6. *Include operational analysis of affected intersection, especially at Kaahumanu and Lunalilo Street;*
7. *Maui Police Department recommends installation of traffic signals at Kaahumanu Avenue and Lunalilo Street. Revised study should address this concern;*
8. *Identify existing deficiencies and "w/ project" deficiencies. Improvements to mitigate "w/ project" deficiencies shall be made at no cost to the state;*
9. *We estimate that 95% of the traffic generated will come from Kaahumanu Avenue. Assuming a 60/40 split, 30 vph approach the intersection from the east and 20 vph from the west. The capacity of the turning bays must also be analyzed with the revised report;*
10. *We recommend preparation of a full traffic impact report.*

/fmc

BENJAMIN J. CAYETANO  
GOVERNOR



KAZU HAYASHIDA  
DIRECTOR  
DEPUTY DIRECTORS  
ORIAN K. MINAII  
GLENN M. OKIMOTO

XEROX COPY WITH NON-REMOVABLE ATTACHMENT

FILE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
YS DIVISION

IN REPLY REFER TO:

Post-It® Fax Note	7671	Date	8/17	Pages	2
To	Edith Tschirner	From	Ferdinand		
Co./Dept	SIP	Co.	State Highways		
Phone #		Phone #			
Fax #		Fax #			

DISTRICT  
IPALA DRIVE  
HAWAII 96737

Hwy-M 2.237-98

MEMORANDUM

August 5, 1998

**TO:** Julie Higa, Staff Planner  
County of Maui Planning Department

**FROM:** Ferdinand Cajigal *FJC*  
State Highways

**SUBJECT:** Na Leo Pulama O Maui's Punana Leo O Maui Hawaiian Language Preschool and Family Language Center  
TMK3-8-7:47; I.D. No. ME-98-45

These are our comments:

1. Page 9 of the report says that 50 cars will be entering and leaving the property between 7:30 A.M. and 8:30 A.M. which is also the peak hour of Kaahumanu Avenue. This is a substantial increase in traffic and requires an analysis of project's impacts on Kaahumanu Avenue and Lunalilo Street;
2. The media center will be used for "after school" program for grades K to 8. Although the students will be dropped off by school bus, additional traffic will be generated when parents pick the students up between 4:00 P.M. and 5:00 P.M.
3. No calculations and/or justification to support that the break in the traffic signal at Kaahumanu and Baldwin High School is adequate to accommodate project related traffic;
4. Traffic assessment report should include calculation and/or justification to obtain the 40 vph generated by the project;

Ms. Julie Higa  
Page 2  
August 5, 1998

Hwy-M 2.237-98

5. *Include traffic assignment in the traffic report, including "before and after" development;*
6. *Include operational analysis of affected intersection, especially at Kaahumanu and Lunalilo Street;*
7. *Maui Police Department recommends installation of traffic signals at Kaahumanu Avenue and Lunalilo Street. Revised study should address this concern;*
8. *Identify existing deficiencies and "w/ project" deficiencies. Improvements to mitigate "w/ project" deficiencies shall be made at no cost to the state;*
9. *We estimate that 95% of the traffic generated will come from Kaahumanu Avenue. Assuming a 60/40 split, 30 vph approach the intersection from the east and 20 vph from the west. The capacity of the turning bays must also be analyzed with the revised report;*
10. *We recommend preparation of a full traffic impact report.*

/fmc

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Kazu Hayashida  
Director of Transportation  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Ferdinand Cajigal, State Highways  
Department of Transportation,  
Highways Division  
State of Hawaii, Maui District  
650 Palapala Drive  
Kahului, Maui, Hawaii 96732

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Kazu Hayashida and Ferdinand Cajigal:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Julie Higa, Staff Planner, Planning Department, County of Maui, dated August 5, 1998, and your comment to then-Planning Director Lisa Nuyen dated September 17, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated the following:

A full traffic impact report is recommended to address nine particular issues, including but not limited to:

- (1) The substantial increase in traffic caused by the project and its impacts upon the intersection of Kaahumanu Avenue and Lunalilo Street;
- (2) The additional traffic generated by the media center;
- (3) Whether the break in the traffic signal at Kaahumanu Avenue and Baldwin High School is adequate to accommodate project related traffic;
- (4) Justification for the trip generation figures used;

(5) The traffic assignments for the project before and after development;

(6) An operational analysis of the affected intersections, especially at Kaahumanu Avenue and Lunalilo Street;

(7) The recommendation of the Maui Police Department that a traffic signal be installed at Kaahumanu Avenue and Lunalilo Street;

(8) Identify the deficiencies with the project and the improvements to be made at no cost to the State; and

(9) An evaluation of the percent of the traffic generated which will use Kaahumanu Avenue.

Based upon this comment, among others, the Applicant retained Randall Okaneku, a traffic engineer, who prepared a full traffic impact report addressing all of the issues raised in this comment letter. This traffic report is attached to the application and, the Applicant believes, satisfactorily addresses all of these concerns.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

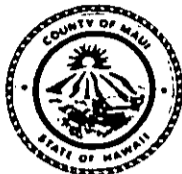
IH/jp  
nalco/letdot

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

'98 AUG 19 P2:58

August 18, 1998

MEMO TO: LISA M. NUYEN, DIRECTOR OF PLANNING

FROM: *for* CHARLES JENCKS, DIRECTOR OF PUBLIC WORKS AND WASTE  
MANAGEMENT *Charles Jencks*

SUBJECT: COUNTY SPECIAL USE PERMIT APPLICATION  
NA LEO PULAMA O MAUI'S PUNANA LEO O MAUI  
TMK (2) 3-8-007:047  
CUP 98/006

We reviewed the subject application and have the following comments.

1. Road widening lots shall be provided for the adjoining halves of Lunalilo Street and Liholiho Street to provide for future 56 foot wide right-of-way and improved to County standards to include, but not be limited to, pavement widening, construction of curb, gutter and sidewalk, streetlights and relocation of utilities underground. Said lot shall be dedicated to the County upon completion of the improvements.
2. A minimum 30 foot radius shall be provided at the intersection of proposed subdivision road/driveway and the adjoining subdivision roads and State roads.
3. A detailed final drainage report and an erosion control Best Management Practices (BMP) plan shall be submitted with the construction plans for review and approval. 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 for 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.

Ms. Lisa M. Nuyen  
August 18, 1998  
Page 2

4. The developer should be informed that Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for the project.
5. Wastewater contribution calculations are required before a building permit is issued. The developer shall pay assessment fees for treatment plant expansion costs in accordance with ordinance setting such fees.
6. Off-street parking, loading spaces and landscaping shall be provided per Maui County Code Chapter 19.36.
7. A traffic impact and analysis report (TIAR) should be included in the subject application. While the applicant maintains that the traffic signal at Maui Lani Parkway and Kaahumanu will improve left turns onto Kaahumanu from Lunalilo, no information has been submitted to support this claim. A TIAR taken during school hours will show what, if any, traffic improvements should be made as a result of this project.

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

DG:co/mt



**ISAAC DAVIS HALL**

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

Charles Jencks, Director  
Dept. of Public Works and Waste Management  
County of Maui  
200 S. High St.  
Wailuku, Maui, Hawaii 96793

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Charles Jencks:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunailo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated August 18, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you addressed traffic impacts, waste water and off-street parking:

Roadway/Traffic Improvements

The DPWWM recommended roadway widening lots along Lunailo Street and Liholiho Street. A minimum 30 foot radius was required for the driveway and adjoining subdivision roads and State roads. A full traffic impact and analysis report was requested reviewing impacts during school hours to show what traffic improvements should be made as a result of this project. The report was also to substantiate why the traffic signal at Maui Lani Parkway and Kaahumanu Avenue will improve left turns onto Kaahumanu from Lunailo.

Drainage Report and Erosion Control Plan

A detailed final drainage report and erosion control "Best Management Practices" plan was required to be submitted with the construction plans for review and approval.

Wastewater

Wastewater contribution calculations were required before a building permit would be issued.

Off-Street Parking

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

Our response to these comments follows:

Roadway/Traffic Impacts

The road widening lots identified by DPWWM will be provided. The minimum 30 foot radius required by DPWWM will be provided. The Applicant retained Randall Okaneku to prepare a traffic impact and analysis report which is now included within this application. It analyzes traffic impacts during school hours and shows what traffic improvements should be made as a result of this project. In addition, it demonstrates how, and to what degree, the traffic signal at Maui Lani Parkway and Kaahumanu Avenue will improve left turns onto Kaahumanu Avenue from Lunalilo Street.

Drainage

A detailed final drainage report and an erosion control "Best Management Practices" plan will be submitted with the construction plans for review and approval.

Wastewater

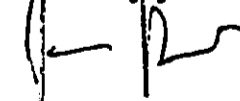
The Applicant understands that DPWWM cannot insure wastewater system capacity will be available for the project. Wastewater contribution calculations will be submitted with the building permit application and any appropriate assessment fees will be paid.

Off-Street Parking

The plans of the Applicant will meet code requirements for off-street parking, loading spaces and landscaping per Maui County Code Chapter 19.36.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
naleo/letdpw

BENJAMIN J. CAYITANO  
GOVERNOR OF HAWAII



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

DEPUTIES

GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT  
PROGRAM

AQUATIC RESOURCES  
CONSERVATION AND

RESOURCES ENFORCEMENT  
CONVEYANCES

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION

DIVISION  
LAND DIVISION

STATE PARKS  
WATER AND LAND DEVELOPMENT

'98 OCT 20 12:28

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

October 12, 1998

Lisa M. Nuyen  
Planning Director  
Department of Planning-Maui  
250 South High Street  
Wailuku, Maui, Hawaii 96793

LOG NO: 22369 ✓  
DOC NO: 9810RC04

Dear Ms. Nuyen:

**SUBJECT: CUP 98-6 -- Na Leo Pulama o Maui's Punana Leo O Maui Hawaiian  
Language Preschool and Family Language Center  
Wailuku ahupua'a, Wailuku, Maui  
TMK 3-8-7: 47**

This responds to your letter of October 1, 1998 and the phone call last week that our Branch Chief for Archaeology (Ross Cordy) had with Julie Higa of your staff. As you know, currently our Maui Archaeologist position is vacant. Your July 6, 1998 request for comment on this project was apparently misplaced when our Archaeologist departed. We have just spoken with the private archaeological firm doing the work for this project (Xamenek -- Mr. Erik Fredericksen), in order to get an update on their work.

The applicant has been extremely cooperative in the historic preservation review process, and the process is almost complete for this project.

The archaeological inventory survey for this project was completed in 1997. One significant historic site was found (site 4418, a subsurface archaeological habitation deposit which dates back to the A.D. 1400s-1600s). The applicant agreed to preserve the site and place a fill over the site. An approved short-term preservation plan was specified in our letter of October 6, 1997, to Mr. Ratte of Public Works. In the remainder of the parcel that was to be grubbed/graded, there was a chance that undiscovered burials might be found, and archaeological monitoring of initial land altering activities was to occur in this area (noted in the same letter).

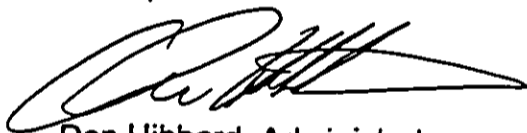
Lisa M. Nuyen  
Page 2

Grubbing/grading has occurred, according to Mr. Fredericksen, with sand brought in from the nearby Texaco station project to be placed over site 4418. Archaeological monitoring of this sand took place both at the Texaco project and this project to ensure that no skeletal remains were present. None were found. Site protection is proceeding as agreed. Archaeological monitoring away from site 4418 found the remnants of 2 burials which appear to have been disturbed long ago. According to Mr. Fredericksen, some additional monitoring is still to occur when utility poles are relocated, and after that work is concluded a monitoring report will be sent to our office and acceptable burial treatment will occur in consultation with our Maui & Lana'i Islands Burial Council to conclude the project.

Thus, this school project is complying with the agreed upon historic preservation commitments. The last steps of monitoring remain (some fieldwork and a report) and the last steps of burial treatment remain.

If you have any questions, please call Dr. Cordy at 587-0012.

Aloha,



Don Hibbard, Administrator  
State Historic Preservation Division

RC:jen

c: Dept. of Public Works, County of Maui  
Charles Maxwell, Chair, Maui and Lana'i Islands Burial Council

7527-

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

98 SEP 21 P1:53

IN REPLY REFER TO:

STP 8.8818

September 17, 1998

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

Dear Ms. Nuyen:

Subject: Na Leo Pulama o Maui's Punana Leo O Maui  
Hawaiian Language Preschool and Family Language Center  
Subject I.D.: CUP 980006  
TMK: 3-8-007: 047

Thank you for your transmittal requesting our comments on the subject application.

In general, the proposed development is anticipated to have a significant impact on the transportation facilities in the area. The applicant should be required to prepare a Traffic Impact Analysis Report (TIAR) for our review and approval. It should address the impact and required mitigation measures the development will have on the intersections along Kaahumanu Avenue, particularly at Lunalilo Street and at Baldwin High School. The developer should be responsible for mitigating the impacts attributable to his development.

The comments contained in the attached letter from our Maui Highways District Office, HWY-M 2.237-98, are still applicable. It specifies operational concerns and recommendations which should be addressed and incorporated into the TIAR.

We appreciate the opportunity to provide comments.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation

Attach.

cc: xili (for...)

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6715

December 16, 1999

Don Hibbard, Administrator  
State Historic Preservation Division  
Dept. of Land and Natural Resources  
555 Kakuhihewa Bldg.  
601 Kamokila Blvd.  
Kapolei, Hawaii 96707

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear Don Hibbard:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated October 12, 1998.

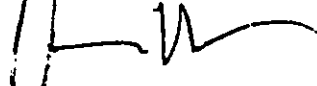
After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that the Archaeological Inventory Survey for the project was completed in 1997, a short-term Preservation Plan was approved, and that archaeological monitoring of land-altering activities was to take place. The remnants of two burials were found which appeared to have been disturbed long ago. Additional monitoring was to occur when utility poles are relocated. A monitoring report and acceptable burial treatment plan will occur in consultation with the local Burial Council.

The Applicant has a strong independent interest in historic preservation and has cooperated in every step of the process to protect and preserve any significant historic, archaeological or cultural sites.

Thank you for your comments on this project.

Sincerely yours,



Isaac Hall

IH/jp  
nalco/lethistpres



'99 JAN -4 P3:52

**DEPARTMENT OF WATER SUPPLY**  
**COUNTY OF MAUI**  
P.O. BOX 1109  
WAILUKU, MAUI, HAWAII 96793-7109  
Telephone (808) 243-7816 • Fax (808) 243-7833

12/30/98

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

Re: I.D.: CUP 980006  
TMK: 3-8-07:047

Project Name: Na Leo Pulama o Maui Hawaiian Language Pre-School and Family Language Center

Dear Ms. Nuyen,

Thank you for the opportunity to review this application. The Department of Water Supply has the following comments.

Using State Standards, the project would use approximately 2850 gallons per day. Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. The applicant will need to provide domestic and fire flow calculations. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991. The applicant may contact our Engineering Division at 243-7835 for a preliminary review.

This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of December 1, 1998 were 17.85 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. On August 13, 1997, the State Commission on Water Resource Management (CWRM) elected not to designate Iao Aquifer as a State Groundwater Management Area. However, if rolling annual average withdrawals exceed 20 mgd, CWRM will designate Iao Aquifer. Two wells in North Waihee, pumping at a combined rate of 1.5 mgd, were brought on-line in July 1997. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. No moratorium is currently in effect. Nevertheless,



Lisa Nuyen  
Na Leo Pulama o Maui's Punana Leo O  
Maui Hawaiian Language Preschool and  
Family Language Center  
December 18, 1998  
Page 2

the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments or the approval of the requested permits. Water availability will be reviewed at the time of application for meter or meter reservation.

To further conserve water resources, the applicant should refer to the attached documents and consider these measures:

Eliminate Single-Pass Cooling: Single-pass, water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.

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

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

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 4. Please refer to the "Maui County Planting Plan", and to the attached documents. We encourage the applicant to consider using climate-adapted native plants. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

Look for Opportunities to Conserve Water: A few examples: When clearing driveways and parking areas of debris, use a broom instead of a hose. When washing vehicles, windows or other items, use a hand-operated spray nozzle instead of an open hose. Periodically check for leaks in faucets and toilet tanks.

If you need more information, please contact our Water Resources and Planning Division anytime at (808) 243-7199.

Sincerely,



David Craddick  
Director

emk

Lisa Nuyen  
Na Leo Pulama o Maui's Punana Leo O  
Maui Hawaiian Language Preschool and  
Family Language Center  
December 18, 1998  
Page 3

c: engineering division  
applicant, with attachments

"The Costly Drip"

Maui County Planting Plan

Invasive Plant list

Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"

"XERISCAPE - Water Conservation through Creative Landscaping"

"A Checklist for Water Conservation Ideas for Cooling"

"A Checklist for Water Conservation Ideas for Schools and Public Buildings"

References for Further Reading from "The Megamanual - Nonpoint Source Management Manual".  
Commonwealth of Massachusetts

Selected BMPs from "Guidance Specifying Management Measures for Sources of Nonpoint Pollution In Coastal Waters".

ISAAC DAVIS HALL

ATTORNEY AT LAW  
2087 WELLS STREET  
WAILUKU, MAUI, HAWAII 96793  
(808) 244-9017  
FAX (808) 244-6775

December 16, 1999

David Craddick, Director  
Dept. of Water Supply  
County of Maui  
PO Box 1109  
Wailuku HI 96793-7109

Re: Change in Zoning Application for Na Leo Pulama o Maui Hawaiian  
Language Preschool and Family Language Center, Wailuku, Maui,  
TMK 3-8-07:47

Dear David Craddick:

The Maui Planning Department requested your comments on Na Leo Pulama o Maui's proposed project to construct and operate the Punama Leo o Maui Hawaiian Language Preschool and Family Language Center on Lunalilo Street in Wailuku, Maui.

We have received a copy of your comment to Lisa Nuyen, then-Director of Planning, County of Maui, dated December 30, 1998.

After further consultation with the Planning Department, we have decided that it would be appropriate to apply for a change in zoning instead of a special use permit. The criteria to be met are virtually the same. The project is identical to that described earlier. The Planning Department has suggested that we proceed to respond to your comments. We do so now.

In your comment letter you stated that, using state standards, the project would use approximately 2,850 gallons per day, and that domestic, fire and irrigation calculations would be reviewed in detail during the development process.

The project is served by the central Maui system. The major source of water for this system is the Iao Aquifer. The Applicants have been made aware that the timing of the project may be affected with possible delays until new sources can be brought on-line. Water availability will be reviewed at the time of the application for meter or meter reservation. Certain water conservation measures were recommended.

Thank you for your comments on this project.

Sincerely yours,

A handwritten signature in black ink, appearing to be 'Isaac Hall', written over a vertical line.

Isaac Hall

IH/jp  
nalco/letdws