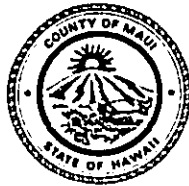


JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING RECEIVED

May 10, 1999

'99 MAY 12 P2:02

OFFICE OF
QUALITY CONTROL

Mr. Gary Gill, Director
Office of Environmental Quality Control (OEQC)
State Office Tower, Room 702
235 South Beretania Street
Honolulu, Hawaii 96813-2437

Dear Mr. Gill:

RE: Final Environmental Assessment (EA) for A & B Properties, Inc.
Haliimaile Residential Subdivision at TMK: 2-5-03:Por. 10,
Haliimaile, Maui, Hawaii (EA 980012)

The Maui County Planning Department (Department), as the accepting authority, is transmitting for publication in the upcoming OEQC Bulletin, the Final Environmental Assessment for the Haliimaile Residential Subdivision in which a Finding of No Significant Impact (FONSI) has been determined. ✓

A description of the proposed action is attached to the OEQC Bulletin Publication Form and will also be sent by E-Mail from the applicant to OEQC in a WordPerfect format. In addition, the Department has enclosed four (4) copies of the Draft Environmental Assessment Report (prepared by the applicant).

Thank you for your cooperation. If additional clarification is required, please contact Ms. Ann T. Cua, Staff Planner, of this office at 243-7735.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John E. Min".

JOHN E. MIN
Director of Planning

Mr. Gary Gill, Director
May 10, 1999
Page 2

JEM:ATC:cmb
Enclosures

c: Clayton Yoshida, AICP, Deputy Director of Planning
Joanne Hiramatsu, Townscape, Inc.
Stanley M. Kuriyama, A & B Properties, Inc.
Ann T. Cua, Staff Planner
Project File
General File
(s:\all\ann\haliifon.si)

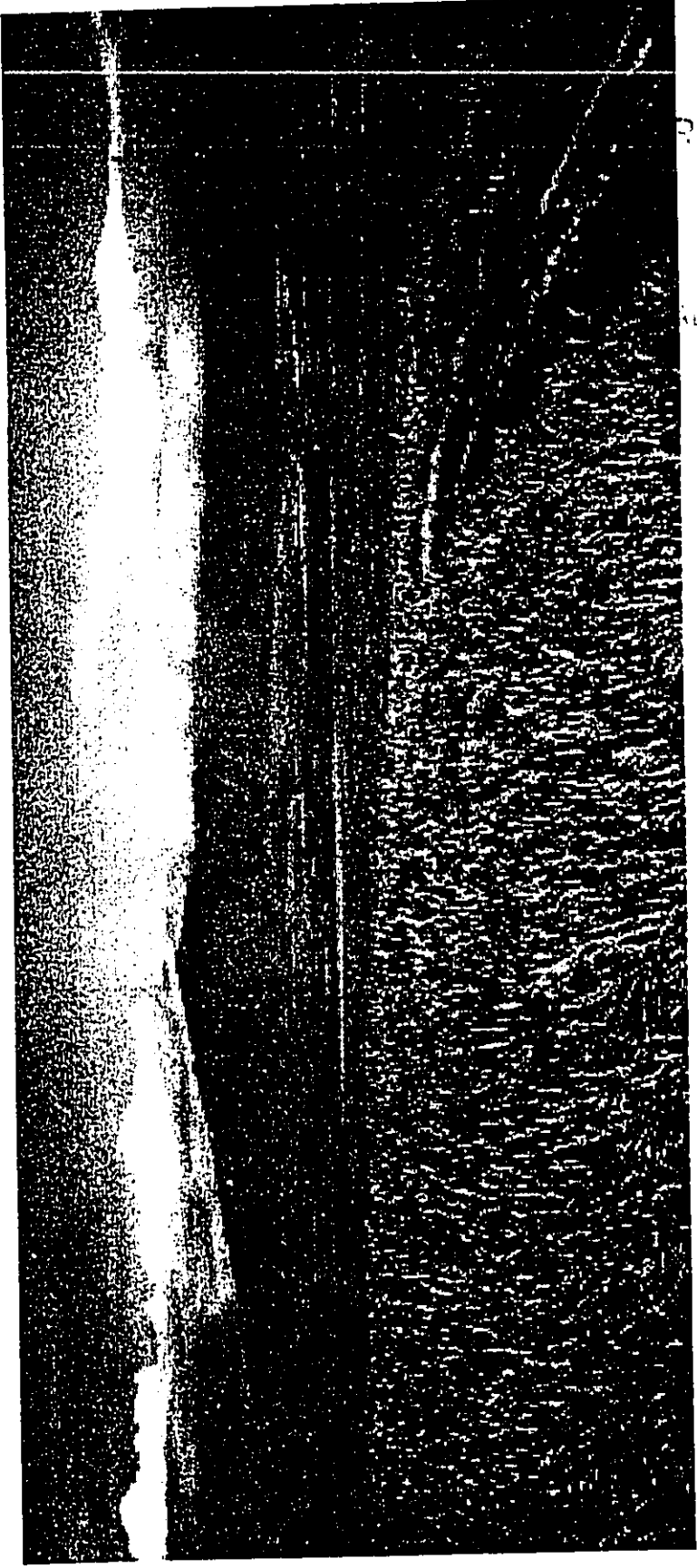
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MAY 23 1999

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

HALI'IMAILE RESIDENTIAL PROJECT



Prepared for:
MAY 12
A&B Properties, Inc.
Honolulu, Hawaii
April 1999

**FINAL
ENVIRONMENTAL ASSESSMENT**

**Hali'imaile Residential
Hali'imaile, Maui, Hawaii
TMK: (2) 2-5-03: Portion 10**

Prepared for:

**A&B Properties, Inc.
822 Bishop Street
P.O. Box 3440
Honolulu, Hawaii 96801-3440**

Prepared by:

**Townscape, Inc.
900 Fort Street Mall, Suite 800
Honolulu, Hawaii 96813**

April 1999

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Appendix A	Authorization Letter
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Appendix E	Consultation Letters/Documentation
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Appendix I	Faunal (Birds and Mammals) Field Survey of the Hali'imaile Residential Expansion Project
Appendix J	Engineering Report
Appendix K	Potential Water Source Development for A&B's 63-Acre Residential Project
Appendix L	Preliminary Engineering Report, Hali'imaile Residential Subdivision Wastewater Treatment and Disposal Options
Appendix M	Comment Letters and Responses on the Draft Environmental Assessment

PREFACE

The Applicant, A&B Properties, Inc., is proposing to develop the Hali'imaile Residential Project ("Project") consisting of approximately 196 single family residential dwelling units on 45 acres and a ten-acre park at Hali'imaile, Maui. The Project will be supported and serviced by a drainage retention basin and a sewage treatment facility located on approximately eight acres. Both the single family residential and park uses are reflected on the County of Maui's Makawao-Pukalani-Kula Community Plan. Since the adoption of the Community Plan in 1996, more detailed planning studies for the Project were undertaken. These studies have resulted in a proposed reconfiguration of the park site that better serves the Project and the surrounding community. This change to the park boundary, together with the proposed designation of the drainage and sewage treatment facilities to "Public/Quasi-Public" necessitated an amendment to the Community Plan Map, which in turn required preparation of this Environmental Assessment (EA).

PROJECT SUMMARY

Project Name: Hali'imaile Residential Project

Applicant: A&B Properties, Inc.
822 Bishop Street
P.O. Box 3440
Honolulu, Hawaii 96801
Contact: Stanley M. Kuriyama, 525-6611

Landowner: A&B-Hawaii, Inc.

Tax Map Key: (2) 2-5-03: Portion 10

Project Area: 63 Acres

Existing Use: Sugarcane

Proposed Use: Single family, park, drainage basin and sewage treatment facility

State Land Use District: Urban District

Community Plan Designation: Single Family, Park and Agriculture

Zoning District: Interim

Special Management Area: The project is not located within the Special Management Area

Action Requested: Environmental Assessment processed in compliance with Chapter 343, Hawaii Revised Statutes and Hawaii Administrative Rules, Title 11, Chapter 54

Approving Agency: Planning Department, County of Maui
250 South High Street
Wailuku, Maui, Hawaii

I. THE APPLICANT

A&B Properties, Inc.
822 Bishop Street
P.O. Box 3440
Honolulu, Hawaii 96801
Phone: (808) 525-6611

Agent: Joanne Hiramatsu
Townscape, Inc.
900 Fort Street Mall, Suite 800
Honolulu, Hawaii 96813
Phone: (808) 536-6999

II. THE OWNER

A&B-Hawaii, Inc.
822 Bishop Street
P.O. Box 3440
Honolulu, Hawaii 96801
Phone: (808) 525-6611

See letter from A&B-Hawaii, Inc. (Appendix A) authorizing A&B Properties, Inc. to seek an amendment of the Makawao-Pukalani-Kula Community Plan Map.

III. THE APPLICATION

This Environmental Assessment (EA) is being filed pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200, Hawaii Administrative Rules (HAR) of the

Department of Health, by A&B Properties, Inc. ("Applicant"), with respect to the Hali'imaile Residential Project (the "Overall Project"). The Overall Project consists of approximately 63 acres in the Makawao District, situate at Hali'imaile, Island of Maui, County of Maui, identified as Tax Map Key No. (2) 2-5-03: por. 10 (hereinafter the "Property"). See Figures 1 and 2 for property location.

IV. PURPOSE OF THE APPLICATION

The Overall Project is planned to consist of approximately 196 single family residential units on 45 acres, a ten-acre park site, a seven-acre drainage retention basin and a sewage treatment facility at Hali'imaile, Maui. The single family and park uses are currently designated on the County of Maui's Makawao-Pukalani-Kula Community Plan (the "Community Plan"). The areas of the drainage basin and the sewage treatment facility are designated "Agriculture" (see Figure 3). As shown in Figure 3, the ten-acre park is aligned perpendicular to Hali'imaile Road with single family use on the west and north sides of the park.

Subsequent to the adoption of the Community Plan in July 1996, planning studies were performed by the Applicant for the Overall Project. These studies resulted in a change in the configuration of the park space such that the park would occupy the entire Hali'imaile Road frontage of the property and all of the single-family areas would be located north of the park (see Figure 4).

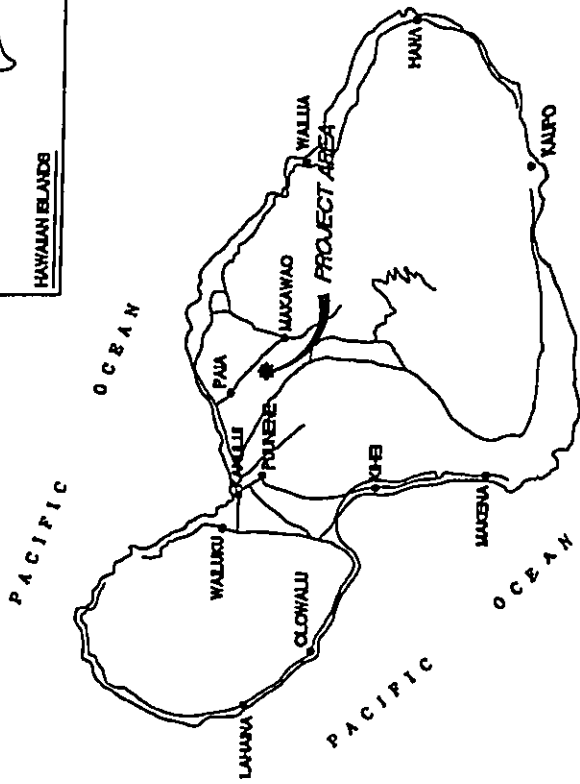
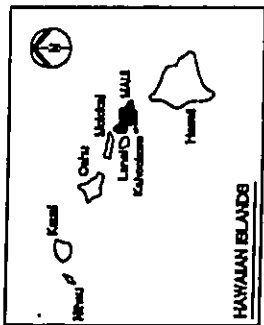


FIGURE 1

LOCATION MAP
 Halimaile Residential
 For: A&B Properties, Inc.
 By: Townscape, Inc.
 October 1988

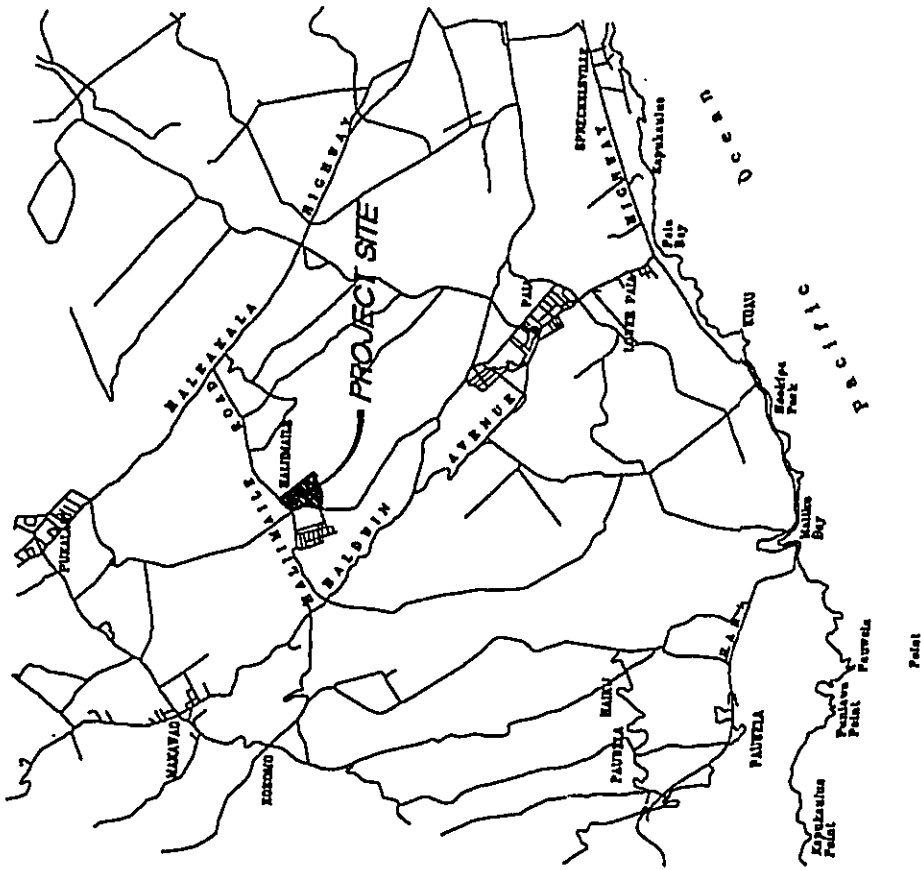
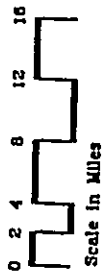
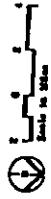


FIGURE 2

VICINITY MAP
 Halimaile Residential
 For: A&B Properties, Inc.
 By: Townscape, Inc.
 October 1988



This change in the configuration of the park was made to (a) create a buffer between the homes of the Overall Project and the Maui Pineapple Company maintenance facilities east of the project and Hali'imaile Road on the south side of the project, (b) create an open space entry feature for the Overall Project, and (c) preserve a green open space corridor along Hali'imaile Road and help maintain the rural character of the area. The drainage basin and sewage treatment facility are located to the north of the single family areas; a "Public/Quasi-Public" Community Plan designation for this area is being sought.

This proposed change in the park configuration and the proposed "Public/Quasi-Public" designation for drainage and sewage facilities necessitates an amendment to the Community Plan Map, which in turn requires the preparation of the EA. It is important to note that the Community Plan amendment being sought is extremely limited in scope. The Overall Project is already reflected in and approved by the Community Plan. The amendment now being sought is to reconfigure the residential and park areas currently shown on the Community Plan Map, by shifting some of the park space into the residential designated area, and vice-versa. The drainage basin and sewage treatment facilities required for the project are also proposed to be included on the Community Plan Map as "Public/Quasi-Public" uses. The amendment does not seek to change the type of project being proposed, or change the total number of acres devoted to residential and park uses.

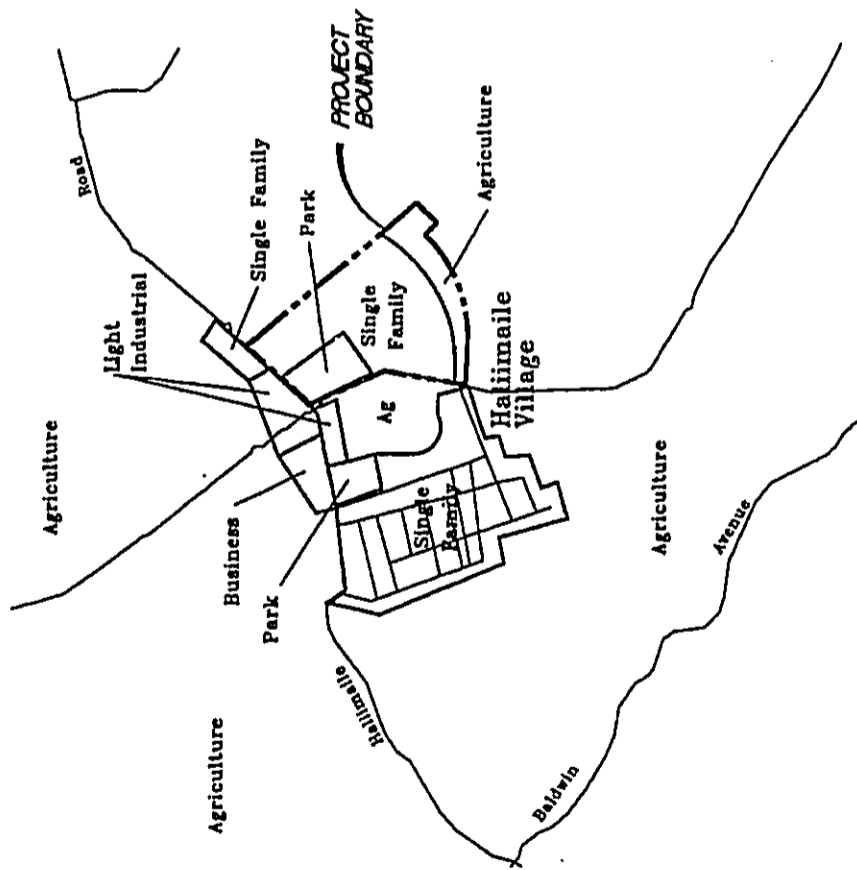
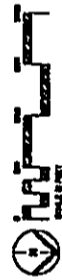


FIGURE 3
 EXISTING MAKAWAO-PUKALANI-KULA
 COMMUNITY PLAN MAP
 Hali'imaile Residential
 For: A&B Properties, Inc.
 By: Townscape, Inc.
 October 1998



Various studies were performed to assess existing conditions and potential impacts that might result from the development of the Overall Project. These studies have been included as Appendices to provide additional information and include:

- Archaeological Inventory Survey (Appendix F)
- Traffic Impact Analysis Report (Appendix G)
- Botanical Resources Study (Appendix H)
- Faunal Field Survey (Appendix I)
- Engineering Report (Appendix J)
- Potential Water Source Development (Appendix K)
- Preliminary Engineering Report for Wastewater Treatment and Disposal Options (Appendix L)

V. APPROVING AGENCY

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

Contact Persons: Ms. Lisa M. Nuyea / Mr. John E. Min
 Planning Director
 Ms. Ann T. Cua, Planner
 (808) 243-7735

Phone:

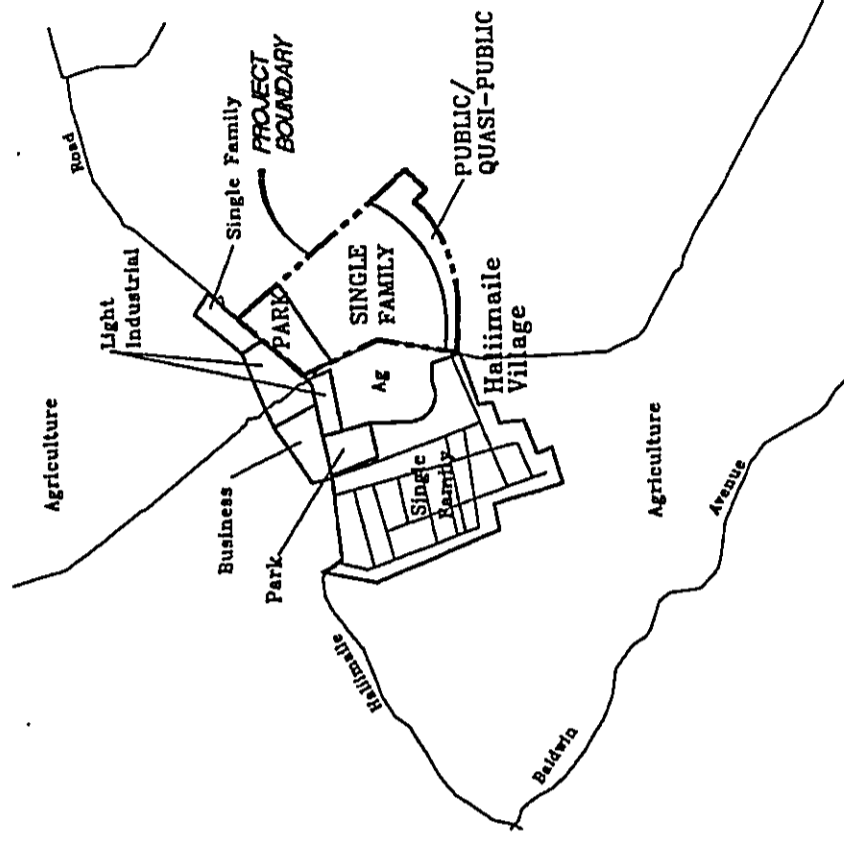


FIGURE 4
 PROPOSED MAKAWAO-PUKALANI-KULA
 COMMUNITY PLAN MAP
 For: A&B Properties, Inc.
 Haliimaile Residential
 By: Terrascape, Inc.
 October 1988



VI. ANTICIPATED DETERMINATION

A "Finding of No Significant Impact" (FONSI) is anticipated because the intended uses of the area affected by the proposed Community Plan amendment have not changed, the amendment is entirely consistent with and supportive of the goals, objectives and policies of the Community Plan, and the amendment is minor in scope and impact.

VII. CONSULTING AGENCIES

In October 1998, the Overall Project was reclassified by the State Land Use Commission (SLUC) from "Agricultural" to "Urban" (Docket No. A98-723) (see Appendix B and Figure 5). In connection with the Applicant's petition to the SLUC requesting such reclassification, various Federal, State and County agencies have had the opportunity to provide comments on the Overall Project. Written testimonies by the Office of Planning and the County of Maui Planning Department have been included as Appendices C and D, respectively. Figure 5-6 shows the schematic site plan that was presented to the SLUC and for which comments were received.

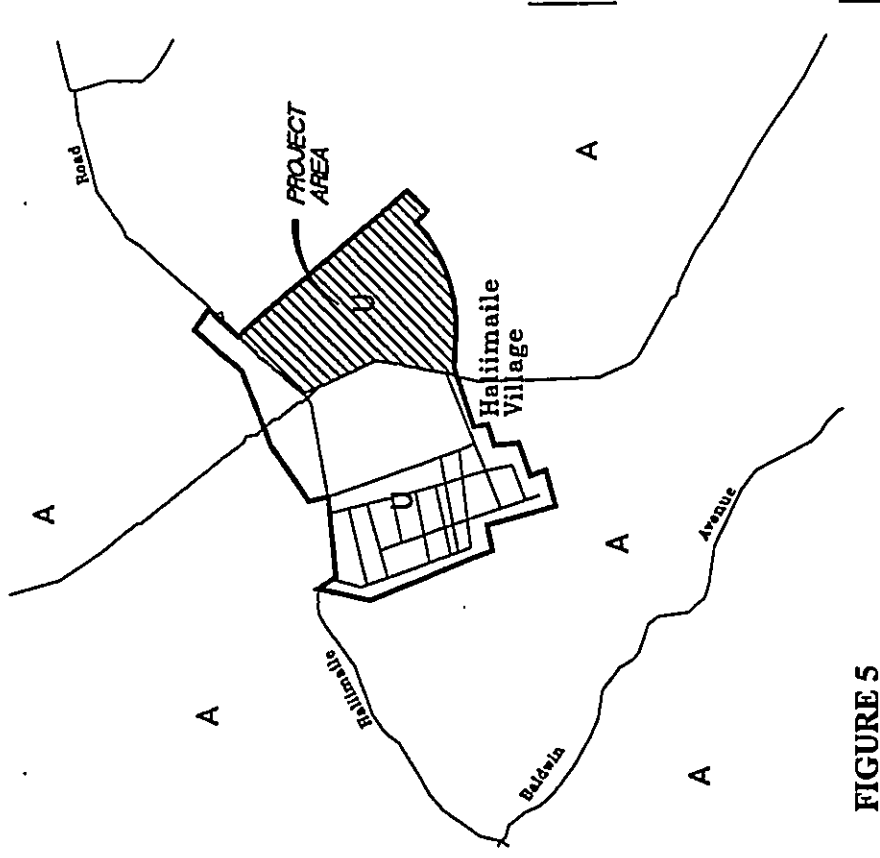


FIGURE 5
STATE LAND USE MAP
Halimaile Residential
For: A&B Properties, Inc.
By: Townscape, Inc.
December 1988



Additional consultation for the Overall Project was conducted by the Applicant or its agent in the form of telephone conversations, meetings and correspondence. Written documentation or correspondence with these additional consulted parties are included in Appendix E, together with comment letters received by the State Office of Planning and the SLUC. The following is a list of agencies and individuals consulted (the dates listed below are the dates of written correspondence or documentation included in Appendix E):

- State of Hawaii, Land Use Commission (D&O, Appendix B)
- State of Hawaii, Office of Planning (Written Testimony, Appendix C)
- State of Hawaii, Dept. of Land & Natural Resources, Land Division, 6/22/98, 6/24/98
- State of Hawaii, Dept. of Land & Natural Resources, Historic Preservation Division, 7/17/98, 7/23/98
- State of Hawaii, Dept. of Land & Natural Resources, Aquatic Resources Division, 6/3/98 (6/15/98 hand written comments)
- State of Hawaii, Dept. of Land & Natural Resources, Forestry and Wildlife Division, 6/9/98
- State of Hawaii, Dept. of Land & Natural Resources, Commission on Water Resource Management, 4/23/98
- State of Hawaii, Department of Accounting and General Services, 4/22/98, 5/20/98

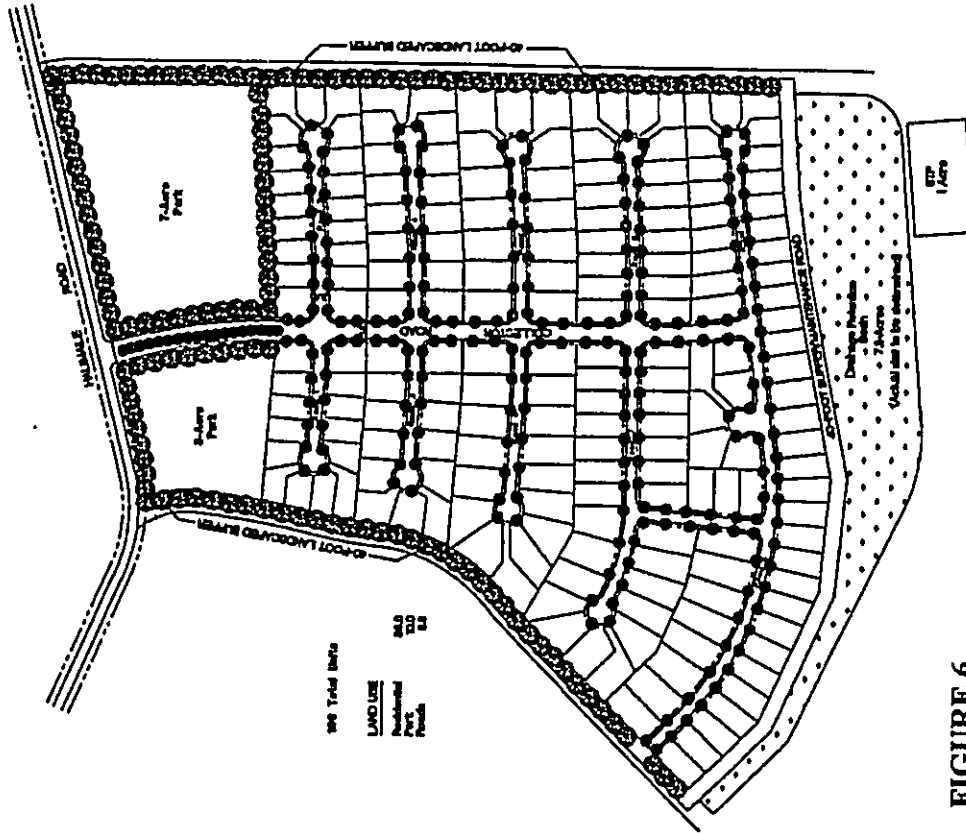


FIGURE 6
SCHEMATIC SITE PLAN
 Halimaile Residential
 For: A&B Properties, Inc.
 By: Townscape, Inc.
 October 1988

- State of Hawaii, Department of Education, 10/3/97, 4/13/98, 5/26/98
- State of Hawaii, Department of Transportation, 6/17/98
- State of Hawaii, Department of Health, 6/2/98
- State of Hawaii, Department of Agriculture, 4/16/98
- State of Hawaii, Department of Defense, 4/9/98
- State of Hawaii, Department of Budget and Finance, Housing Finance and Development Corporation, 5/6/98
- State of Hawaii, Office of Environmental Quality Control, 4/9/98
- State of Hawaii, Department of Hawaiian Home Lands, 5/8/98
- U.S. Department of Interior, U.S. Geological Survey, Water Resources Division, 4/7/98
- U.S. Department of Agriculture, 4/20/98, 6/2/98
- U.S. Fish and Wildlife Service, 6/12/98
- Department of the Army, U.S. Army Engineer District, 4/10/98
- County of Maui, Planning Department (Written Testimony, Appendix D)
- County of Maui, Department of Public Works and Waste Management, 5/13/98
- County of Maui, Department of Water, 5/12/98 w/o enclosures
- County of Maui, Fire Department (Telephone Conversation)
- County of Maui, Police Department (Telephone Conversation)

- GTE Hawaiian Telephone (Telephone Conversation)
- Maui Electric Company (Telephone Conversation)
- TCI Cable Company (Telephone Conversation)
- Harry Matsuura, Allen Ibara, Evangeline Trajac, Virginia Constantino, Rogelio Soriano, Joe Takahashi, Frank Gouveia, Eddie Bak and Sidney Inokuma (Hali`imaile residents - meeting)

VIII. GENERAL DESCRIPTION

- A. The Overall Project is located within Tax Map Key Number: (2) 2-3-5: por. 10, Makawao, Maui, Hawaii.
- B. The land use designations for the Overall Project are as follows:
1. State Land Use District: Urban
 2. Community Plan: Single Family, Park and Agriculture
 3. County Zoning: Interim
 4. Special Management Area: not applicable
 5. Other Special Districts: not applicable
- C. The surrounding land uses are as follows:
1. North: sugarcane fields
 2. East: HC&S reservoir and Maui Pineapple Company maintenance yard
 3. South: Hali`imaile Road, Maui Pineapple Company maintenance yard and single family residences
 4. West: sugarcane fields

- D. The Property is currently being used for sugarcane cultivation.
- E. Existing Services:
1. Water - An 8-inch diameter waterline is located along Hali`imaile Road, and fire hydrants are located along Hali`imaile Road in the vicinity of the existing residential areas.
 2. Sewers - The area is serviced by a private wastewater system; there is no municipal sewer system in the Upcountry region.
 3. Roadways - Hali`imaile Road fronts the Property. Regional roadways in the area include Haleakala Highway (approximately 1.5 miles to the west) and Baldwin Avenue (less than a mile to the east).
 4. Drainage - Drainage currently sheet flows across the site in a south to north direction. Offsite storm water runoff entering the Property is mainly from Hali`imaile Road. Storm water runoff from areas mauka of Hali`imaile Road flow away from the site in the east and west directions.
 5. Solid Waste Disposal - Solid waste from residences in the area is disposed of at the Central Maui Sanitary Landfill in Puunene.
6. Utilities - Maui Electric Company provides electrical power to the area. GTE Hawaiian Telephone Company provides telephone service and TCI of Hawaii provides Cable TV service. These utilities are provided via overhead lines.
 7. Recreational Services/Resources - An existing 5.2-acre County park is located immediately to the east of the Property. Other recreational facilities are located in Makawao (2-1/2 miles south of the site) and Pukalani (3-1/2 miles south of the site). These facilities include the Eddie Tam Park, Pukalani Community Center, and Pukalani Golf Course. Paia, located four miles north, offers land-based as well as coastal and water related recreational facilities.
 8. Police and Fire Protection - The Upcountry area is serviced by three shifts, each consisting of four patrol officers that operate out of the Wailuku Police Station. Makawao Fire Station, located 2-1/2 miles from the Property, provides fire protection service to the area. Response time to the Property is estimated at five to ten minutes.
 9. Schools - Elementary school children attend Makawao Elementary School (2-1/2 miles from the Property), intermediate school students attend Kalama Intermediate School (four miles from the Property), and high school students attend King Kekaulike High School (four miles from the Property).

IX. DESCRIPTION OF THE PROPOSED DEVELOPMENT

The Overall Project consists of 45 acres of single family use and ten acres of park space, together with a sewage treatment facility and drainage and buffer areas serving the development. Approximately 196 lots are planned with lot sizes ranging from 6,000 to 10,000 square feet. The land uses for the Overall Project and the surrounding land uses are shown on Figure 4.

The area currently designated "Park" on the Community Plan Map is oriented perpendicular to Hali'imaile Road (see Figure 3). This area is proposed to be reconfigured so that the park will be situated entirely along Hali'imaile Road, as shown on Figure 4. In addition, the drainage basin and sewage treatment facility are proposed to be designated "Public/Quasi-Public" on the Community Plan Map. An application has been filed to amend the Community Plan Map to reflect this reconfiguration of the park space and the "Public/Quasi-Public" designation, and it is that amendment which is the subject of this EA.

The reconfigured park boundary will not change the uses or acreage in the Overall Project (the park will continue to consist of ten acres and the single-family use will continue to be located on 45 acres). The drainage basin and sewage treatment facility will be situated on approximately eight acres.

X. AFFECTED ENVIRONMENT

A. Agriculture

The Overall Project is planned on lands currently in sugarcane cultivation. Approximately half of the site is located on lands designated "Other Important Agricultural Lands" on the Agricultural Lands of Importance to the State of Hawaii maps (see Figure 76). The other half of the site is designated "Prime" agricultural land. The Land Study Bureau, Detailed Land Classification, Island of Maui, rates the productivity of the lands as "C". However, because the Applicant has invested resources to irrigate the lands, the State Department of Agriculture has determined that the productivity rating has been improved to "A".

The removal of the Overall Project area from the approximately 37,000 acres in sugarcane cultivation by HC&S and the 355,000 acres in aggregate being farmed on Maui (State Data Book, 1997), will not have a significant adverse impact on the agricultural industry.

B. Archaeological, Cultural or Historical Resources

An Archaeological Inventory Survey covering the Property was performed by Cultural Surveys Hawaii in May 1997 (see Appendix F). No archaeological sites were found on or near the Property. Historical records indicate that this area was not settled by native Hawaiians.

The Property is located 4.5 miles from the nearest shoreline and contains no trails, gulches, streams, hills or water features. It has been continuously planted in pineapple or sugarcane for decades, and is not used by the public or any other person or group for any purpose other than sugarcane cultivation. The Property contains no features or other evidence that would indicate any customary and traditional use of the land by native Hawaiians for subsistence, cultural or religious purposes, or for any other historically or culturally significant use, requiring protection or regulation under Article XII, Section 7 of the Hawaii State Constitution.

Should archaeological resources be discovered during the development of the Property, work will stop and the State Historic Preservation Division will be notified and mitigative measures will be implemented as appropriate.

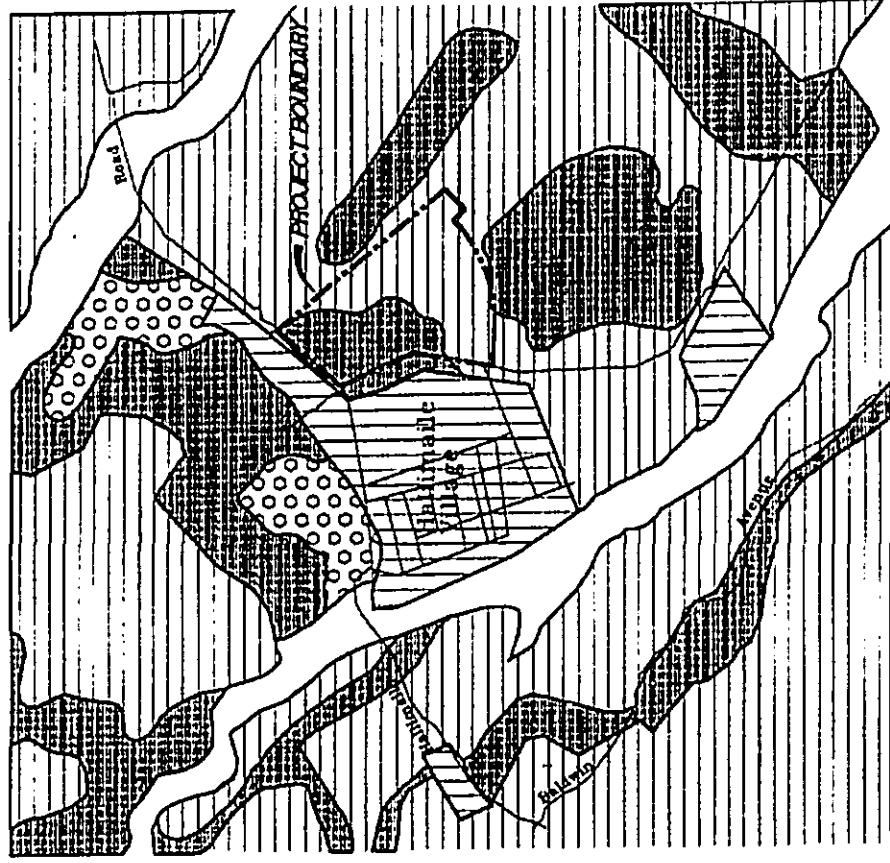


FIGURE 7

ALISHI MAP
Hali'imaile Residential
For: AAB Properties, Inc.
By: Townscape, Inc.
October 1998

LEGEND:
FINE AGRICULTURAL LAND
UNIMPROVED AGRICULTURAL LAND
OTHER IMPORTANT AGRICULTURAL LAND
EXISTING URBAN DEVELOPMENT



C. Impacts on Infrastructure and Services

1. Water - The existing regional potable water system is not adequate to service the Overall Project. The Applicant will be responsible for providing or securing the additional potable water source, storage and transmission facilities required to service the Overall Project, and therefore no adverse impacts on existing potable water infrastructure or services are anticipated.

Any potable water system developed by the Applicant will comply with Hawaii Administrative Rules, Title 11, Chapter 20, "Rules Relating to Potable Water Systems," and at the appropriate time, an Engineering Report will be prepared and submitted to Department of Health for approval. The potable water system will be constructed in accordance with applicable rules and regulations that are in effect at the time of development. The Commission on Water Resources Management will also be contacted regarding a well construction permit for any new well.

2. Sewers - A package-type sewage treatment facility will be constructed to service the Overall Project (see Appendix L). Sewage will flow by gravity via an underground collection system within future

roadways and buffer areas to the sewage treatment facility located north of the Overall Project. The sewage treatment facility will be constructed and operated in accordance with County of Maui Department of Public Works and Waste Management (DPWWM) and State Department of Health (DOH) regulations. No impact to existing sewer infrastructure or services is anticipated.

3. Roadways/Traffic - Access to the Overall Project will be provided via Hali`imaile Road. A 15-foot wide strip of land along Hali`imaile Road has been reserved for future roadway widening improvements. A Traffic Impact Analysis Report was prepared by Julian Ng, Incorporated in June 1997 (see Appendix G). Due to the relatively small amount of traffic that will be generated by the Overall Project, only minor impacts on regional traffic conditions are expected. Although the Overall Project will add to the existing poor traffic conditions at the Hali`imaile Road/Haleakala Highway intersection, the analysis concluded that signalization of the intersection is not warranted.

The intersection of Hali`imaile Road and Baldwin Avenue is currently operating below capacity, and will continue to operate below capacity even after development of the Overall Project. For the intersection of Hali`imaile Road and the Overall

Project road, a separate left turn lane into the project from Hali`imaile Road is recommended. No other improvements at existing intersections were deemed necessary. However, the Applicant has agreed to work with the County in improving the right turn lane from Hali`imaile Road onto Haleakala Highway.

All roads within the subdivision will be constructed to County standards. A variance will be requested in the event roads within the subdivision are constructed to be compatible with existing roadways in the area.

4. Drainage – Excess storm water runoff from the Overall Project will be conveyed through an underground drainage system to a drainage retention basin located north of the site. The drainage retention basin will be designed to hold a 50-year storm in accordance with State and County regulations. Overflow from the basin for storms greater than the 50-year event is planned to be directed to an existing HC&S. The planned drainage system will not have an adverse impact on surrounding land uses.

A detailed final drainage report and erosion control Best Management Practices (BMP) plan will be submitted to the County for review and approval prior to the issuance of a grading permit. Should the basin impound more than 50-acre-feet of storm water runoff, a Dam Permit will be filed with the State Department of Land and Natural Resources.

5. Solid Waste Disposal – Solid waste generated from the Overall Project will be taken to the Central Maui Sanitary Landfill. The Landfill has the capacity to service the Overall Project, and therefore no significant adverse impacts on the Landfill or solid waste disposal services are anticipated.

6. Utilities – Maui Electric Company, GTE Hawaiian Telephone Company and TCI of Hawaii have sufficient capacity to provide electrical, telephone and cable television service, respectively, to the Overall Project, and no adverse impacts on these utility systems are anticipated.

7. Recreational Services/Resources – The Overall Project's ten-acre park is anticipated to have a positive impact on the recreational facilities in the area. Its large size will accommodate a variety of passive and active recreational uses that will service not only the Overall Project, but will benefit the entire Hali`imaile

region as well. (The park acreage represents four times the amount of land required for the Overall Project under the County park dedication ordinances.) The Applicant will work with the County Department of Parks and Recreation on the details of the park site.

8. Police and Fire Protection - The Upcountry area is serviced by three shifts, each consisting of four patrol officers that operate out of the Wailuku Police Station. The Makawao Fire Station, located 2-1/2 miles from the Property, provides fire protection service to the area. Response time to the Property is estimated at five to ten minutes. No significant adverse impacts on police and fire protection services are expected.

9. Schools - Elementary school children attend Makawao Elementary School (2-1/2 miles from the Property), intermediate school students attend Kalama Intermediate School (four miles from the Property), and high school students attend King Kekaulike High School (four miles from the Property). As a condition to the reclassification of the Overall Project into the State Urban District, the Applicant agreed that it shall contribute its fair share to the development, funding, and/or construction of public school facilities as

determined by and to the satisfaction of the State Department of Education.

D. Impacts on the Environment

1. Flora - A survey of botanical resources was performed for the Property in May 1997 (see Appendix H). Except for three indigenous plants, all of the plants found on the Property were introduced or alien weedy species. The indigenous plants found at the site are not listed, proposed or candidate threatened or endangered species, and therefore no adverse impacts on any significant flora resources will occur.

2. Fauna - A faunal survey of the Property was conducted in April 1997 (see Appendix I). Two native, one migratory, and 14 introduced bird species were observed during a two-day survey of the Property and a nearby irrigation reservoir.

The two native birds were the Black-necked Stilt (*Himantopus mexicanus*) and the Black-crowned Night Heron (*Nycticorax nycticorax*). The stilt is listed as endangered but the heron is not considered threatened or endangered. A pair of stilts was seen foraging at the man-made reservoir adjacent to the existing Hali'imaile village.

The reservoir is located over 160 feet from the property line of the planned park, and the development of the Overall Project is not expected to have any adverse impact on any endangered fauna. As a condition to the reclassification of the Overall Project into the State Urban District, the Applicant is required to conduct seasonal surveys to determine if the reservoir is being used as a nesting habitat by the stilts or other endangered species of waterbirds, and to provide mitigation measures as required by the U. S. Fish & Wildlife Service.

3. Flooding Hazard – According to the Federal Emergency Management Agency (FEMA) maps, the Property is within Zone "C", "areas of minimal flooding", and is therefore not subject to flooding hazards.

4. Noise – Short-term noise impacts can be expected during the construction phase of the Overall Project. These impacts can be mitigated by the establishment of appropriate start and curfew times. A permit from the DOH will contain the necessary construction noise conditions to mitigate excessive noise impacts.

5. Air Quality – Short-term air quality impacts during construction can be expected. These impacts can be

mitigated with the use of dust screens and frequent watering of the soil. Dust control measures will be implemented during construction in accordance with DOH regulations.

E. Impacts on the Social and Economic Environment

1. Population Characteristics – The population of Hali'imaile village in 1990 was 841 people, which represented a 100-person increase in population during the decade 1980 to 1990. The development of the Overall Project is projected to contribute an additional 590 people to the area. However, the Community Plan amendment being sought will not increase the amount of land designated for residential development, and will therefore have no impact on population growth in the region.

2. Economic Characteristics – The Overall Project will expand the County's economic base through the capital invested in, and the jobs created by, the project's design and construction. An estimated \$15 million will be spent on the design and construction of subdivision infrastructure, and an additional \$21 million will be spent on the construction of homes. These figures represent a substantial infusion of capital into Maui's economy.

Based on these development costs, it is estimated that approximately 240 cumulative full-time construction jobs will be generated during the four to six-year construction phase of the Overall Project (40 to 60 jobs per year). Indirect employment generated by the construction of the project is estimated at an additional 189 full-time positions, based on 0.79 indirect jobs per full-time job. Thus, a total of 429 cumulative full time jobs are estimated over a four to six-year construction time period (70 to 100 jobs per year).

Assuming that direct construction jobs have an average income of \$50,006 (exclusive of benefits) and that the indirect jobs generate an income equal to the 1994 average annual per capita income for the County of Maui, direct and indirect jobs would generate approximately \$16.5 million in aggregate personal income during the four to six-year construction phase of the Overall Project. Much of the money earned from these jobs is expected to be spent on the island of Maui.

Development of the project will have a positive impact on the County of Maui because of both the short-term jobs generated during the construction period, and the higher real property taxes permanently generated by the improved condition

of the land. The 1997 real property taxes allocated to the 45-acre area planned for single family use was about \$130. Based on a finished house and lot value of \$250,000 per home at full build-out, the project will generate real property taxes of \$230,000 per year, based on 1997 tax rates.

XI. COMPLIANCE WITH GOVERNMENT STATUTES, ORDINANCES AND RULES

A. Hawaii State Plan

The Overall Project and the Community Plan amendment being sought are consistent with the goals and objectives of the Hawaii State Plan with respect to economic benefit, physical environment, facilities systems, and social/cultural advancement. The project will create housing and recreational opportunities for Hawaii's residents, will stimulate the economy during the construction period, will be accompanied by the construction of the necessary infrastructure facilities to service the Overall Project, and will be developed in a manner that will minimize adverse effects on the physical and social environments.

B. State Functional Plan

The following summarizes the Overall Project's consistency with the goals and objectives of various State Functional Plans.

1. State Transportation Functional Plan - Improvements to the transportation system will be developed to provide an efficient and safe movement of traffic near the Overall Project. A 15-foot wide strip of land along Hali'imaile Road has been reserved for future roadway improvements, and the Applicant has agreed to cooperate in the improvement of the right turn lane from Hali'imaile Road onto Haleakala Highway. As a condition to the reclassification of the Overall Project into the State Urban District, the Applicant is required to participate in the pro-rata funding and construction of local and regional transportation improvements and programs necessitated by the project in designs and schedules accepted and determined by the State Department of Transportation and County Department of Public Works.
2. State Historic Preservation Functional Plan - An archaeological reconnaissance survey was performed on the Property and no archaeological sites were found. Historical research also concluded that the Property was not used for traditional cultural practices. However, should archaeological resources be discovered during the construction of the project, work will cease and the State Historic Preservation Division will be notified and mitigative measures will be implemented to its satisfaction.
3. State Housing Functional Plan - The Overall Project will provide a range of housing types and prices for Maui's residents.
4. State Conservation Lands Functional Plan - No conservation lands will be affected by this development.
5. State Agriculture Functional Plan - Removal of the 63 acres comprising the Overall Project from agriculture will not have any significant impact on agricultural production or on HC&S, which cultivates approximately 37,000 acres on Maui.
6. State Employment Functional Plan - Based on site development costs of \$15 million and \$21 million for housing construction, it is estimated that approximately 240 cumulative full-time construction jobs will be generated during the four to six-year construction phase of the Overall Project (40 to 60 jobs per year). Indirect employment generated by the construction of the project is estimated at an additional 189 full-time positions, based on 0.79 indirect jobs per full-time job. Thus, a total of 429 cumulative full time jobs are estimated over a four to six-year construction time period (70 to 100 jobs per year).

7. State Tourism Functional Plan -- The project will not detract from any tourist attractions or adversely impact any scenic qualities of the area.

8. State Recreation Functional Plan -- The project's ten-acre park will contribute significantly to the recreational resources of the region. The public will have easy access to the park because of its location along Hali'imaile Road.

9. State Health Functional Plan -- The Overall Project will be developed in accordance with all applicable regulations of the State Department of Health to ensure protection of the environment and public health and safety.

C. Coastal Zone Management and Special Management Area Regulations

The Overall Project is located approximately four (4) miles from the nearest shoreline, and is not within the Special Management Area established by the County of Maui. It will have no impact on the Coastal Zone Management Area, and its development is consistent with various objectives and policies of the Coastal Zone Management Program, as set forth in Section 205A, HRS.

Due to the Overall Project's inland location, the development of the project will have no impact upon any coastal recreational resources, historic resources, scenic and open space resources, coastal ecosystems, beaches or marine resources, in accordance with the objectives and policies described in Sections 205A-2(b) (1), (2), (3), (4), (9) and (10), HRS and Sections 205A-2(c) (1), (2), (3), (4), (9) and (10), HRS.

The Overall Project will not be subject to any coastal hazards, as described in Sections 205A-2(b) (6) and 205A-2(c) (6), HRS. None of the storm waters or sewage generated by the project will reach or affect the ocean waters or shoreline, consistent with the policies described in Section 205A-2(c) (1) (b) (vi), HRS. In accordance with Section 205A-2(c) (2) (A), HRS, an archaeological review and analysis of the Overall Project has been performed, disclosing no resources of any archaeological significance.

The development of the project is expected to require no extraordinary grading or cutting of the land, or have any material impact on existing public views to and along the shoreline, and thus conforms to the policies expressed in Section 205A-2 (c) (3) (B), HRS. Finally, the project implements the policy set forth in Section 205A-2 (c) (3) (D), HRS, to "Encourage those developments which are not coastal dependent to locate in inland areas."

D. County of Maui General Plan

The Overall Project is consistent with the following objectives and policies of the County General Plan:

I. Population, Land Use, the Environment and Cultural Resources

Population

Policy I.A.1.a - Manage population growth so that the County's economic growth will be stable and the development of public and private infrastructures will not expand beyond the growth limits specified in the appropriate community plans or negatively impact our natural resources.

Existing Maui residents will be the primary purchasers of the homes in the project, and therefore the project will not contribute to the island's population growth. Development of the project's infrastructure will not expand beyond the growth limit specified in the Community Plan and is not expected to negatively impact natural resources. The infrastructure will be developed to specifically service the single family and park uses identified in the Community Plan.

Policy I.A.1.d - Provide for population density and distribution patterns within the appropriate community plans which balance with the County's fiscal ability to provide necessary essential services.

The Overall Project has been identified in the Makawao-Pukalani-Kula Community Plan for single family and park uses, and is consistent with the County's population density and distribution patterns.

Land Use

Objective I.B.1 - To preserve for present and future generations existing geographic, cultural and traditional community lifestyles by limiting and managing growth through environmentally sensitive and effective use of land in accordance with the individual character of the various communities and regions of the County.

The land use objective of preserving community lifestyles in keeping with the character of the existing community will be accomplished wherever possible and practicable by maintaining a rural ambience. The Community Plan amendment being sought will preserve the green open space along Hali'imaile Road, and mitigate the project's visual impact upon surrounding areas. Rural roadway design standards similar to those of the existing roads in Hali'imaile

village will be utilized wherever practicable and permitted by County roadway and drainage requirements (for example, grassed swales could be used in place of curbs, gutters and sidewalks). Home design will be influenced by the character and style of traditional plantation homes. Landscaping is planned along the roadways to provide a visually pleasing streetscape.

Objective I.B.2 - To use the land within the County for the social and economic benefit of all the County's residents.

The objective of using land for the social and economic benefit of residents will be achieved by developing an environmentally sensitive community with minimal adverse impacts on natural resources. The Overall Project includes substantial park space that can be utilized by new and existing residents, and will provide a range of housing prices and home designs for Maui's residents.

Environment

Objective I.C.1 - To preserve and protect the county's unique and fragile environmental resources.

Botanical and biological surveys were performed on the Property (attached as Appendices H and I, respectively). As documented in these surveys, there are no rare, endangered or threatened botanical or biological resources on the Property. Hawaiian stilt were observed at a nearby HC&S irrigation reservoir, and the Applicant has agreed with the U.S. Fish & Wildlife Service's request to conduct seasonal surveys to determine if the reservoir is being used as a nesting site by stilts or other endangered waterbird species.

Policy I.C.1.b - Preserve scenic vistas and natural features.

The Property does not contain any important or significant scenic vistas or natural features. The park area proposed along Hali'imaile Road will provide significant spatial separation and a buffer between the project and Hali'imaile Road and the existing residents across the street from the project. The Community Plan amendment being sought will preserve the green open space along Hali'imaile Road, and mitigate the project's visual impact upon surrounding areas.

Cultural Resources

Policy I.D.1.e - Identify and maintain an inventory of significant and unique cultural resources for special protection.

An archaeological inventory survey (attached as Appendix F) was performed for the Property. No archaeological or cultural sites or resources were found on the Property. If any subsurface archaeological resources are uncovered during construction, work will stop and the State Historic Preservation Division will be consulted.

II.

Economic Activity

General

Objective II.A.1 - To provide an economic climate which will encourage controlled expansion and diversification of the County's economic base.

The project will expand the County's economic base through the capital invested in, and the jobs created by, the project's design and construction. An estimated \$15 million will be spent on the design and construction of subdivision infrastructure, and an additional \$21 million will be spent on the construction of homes. These

figures represent a substantial infusion of capital into Maui's economy.

At full development, the project is anticipated to increase real property tax revenue to the County from the current \$130 per year for the property to approximately \$230,000 per year (at 1997 tax rates).

Agriculture

Policy II.C.1.a - Support programs to maintain the viability of the sugar and pineapple industry.

The Property represents a negligible portion of the approximately 37,000 acres devoted to sugarcane cultivation by HC&S, and will not in any manner affect the viability of the sugar industry.

III.

Housing and Urban Design

Housing

Objective III.A.1 - To provide a choice of attractive, sanitary and affordable homes for all our residents.

The project will provide housing for a broad spectrum of Maui's residents. Lot prices could range from \$90,000 to \$140,000 and house and lot prices could range from \$180,000 to \$270,000 in 1997

dollars. The Property is an excellent location for residential use: it is in close proximity to Haleakala Highway and urban areas of Pukalani, Makawao and Kahului, it provides scenic views of the central Maui isthmus below, and it will be well serviced by nearby parks and schools. The project's ten acres of park space and surrounding 40-foot buffers will mitigate impacts from nearby traffic and agricultural operations.

Urban Design

Objective III.B.1 - To see that all developments are well designed and are in harmony with their surroundings.

The project is planned to be designed in harmony with the rural character of Hali`imaile. See discussion in "Land Use - Objective I.B.1" on page 17.

IV. Transportation (Water, Liquid and Solid Waste, Energy, Public Utilities and Facilities)

Transportation

Objective IV.A.1 - To support an advanced and environmentally sensitive transportation system

which will enable people and goods to move safely, efficiently and economically.

Objective IV.A.2 - To develop a program for anticipating and enlarging the local street and highway system in a timely response to planned growth.

A Traffic Impact Analysis Report (attached as Appendix G) identifies the traffic impacts associated with the development of the Overall Project. The analysis indicates that a separate left turn lane into the project site from Hali`imaile Road is required to ensure efficient movement of traffic in the vicinity of the project. A road-widening setback has also been provided along Hali`imaile Road to accommodate future growth in the area. Further, the Applicant has agreed to work with the County in improving the right turn lane from Hali`imaile Road onto Haleakala Highway.

Water

Objective IV.B.1 - To provide an adequate supply of potable and irrigation water to meet the needs of Maui County's residents.

Objective IV.B.2 - To make more efficient use of our ground, surface and recycled water sources.

New potable water source, storage and transmission facilities will be constructed as needed to meet the needs of the project. An Engineering Report describing the existing potable water system and proposed facilities required to accommodate the project is attached as Appendix J. The Applicant recognizes that a potable water source will have to be secured to meet the potable water requirements for the project, and the Applicant has begun investigating the possibility of drilling a well near Kailua town for that purpose (see attached Appendix K), or will take other measures to secure the necessary water source for the project.

Effluent from the project's sewage treatment facility is planned to be recycled for irrigation of landscaped areas via a drip irrigation system, thereby reducing the demand for potable water. Other water conservation measures, such as the installation of low-flow fixtures and devices in homes, and use of climate-adaptive or low water demand plants for landscaping, are planned.

Liquid and Solid Waste

Objective IV.C.1 - To provide efficient, safe and environmentally sound systems for the disposal and reuse of liquid and solid wastes.

A private sewage treatment facility will be constructed to provide an efficient, safe and environmentally sound system to service the project. A Preliminary Engineering Report for the Wastewater Treatment Plant and Disposal Options is attached as Appendix L. Sludge from the sewage treatment facility will be transported to the County's co-composting facility where it will be processed into compost material for use in landscaping and agriculture.

Public Utilities and Facilities

Objective IV.E.1 - To anticipate and provide public utilities which will meet community needs in a timely manner.

All utilities required for the project will be provided by the Applicant or third-party utility providers. As described above, the project will be served by a potable water source secured by the Applicant and a private sewage treatment facility constructed by the Applicant. Electricity, telephone and cable television service will be provided by

Maui Electric Company, GTE Hawaiian Telephone Company and TCI of Hawaii, respectively.

is large enough to accommodate diverse recreational uses.

Special Programs

V. Social Infrastructure

Recreation and Open Space

Objective V.F.1 - To create a community in which the needs of all segments of the population will be recognized and met.

Objective V.B.1 - To provide high-quality recreational facilities to meet the present and future needs of our residents of all ages and physical ability.

This project will provide Maui's citizens with an opportunity to live in an Upcountry location and rural setting, and to select from a variety of home prices and designs.

Policy V.B.1.b - Maintain recreational facilities for both active and passive pursuits.

E. Makawao-Pukalani-Kula Community Plan

Policy V.B.1.d - Develop facilities that will meet the different recreational needs of the various communities.

The Makawao-Pukalani-Kula Community Plan that became effective on July 23, 1996, has identified this area for "Park" and "Single Family" uses. However, the orientation of the park space on the Community Plan Map is proposed to be amended, thereby necessitating this EA. The drainage basin and the sewage treatment facility is also proposed to be designated "Public/Quasi-Public". The Overall Project and the proposed Community Plan amendment continue to be consistent with and supportive of the following goals, objectives, and policies of the Community Plan:

The project includes ten acres of park land to be dedicated to the County. These ten acres are approximately four times the amount of land required to be dedicated under the County's park dedication ordinances, and will contribute significantly to the passive and active recreational needs of not only the project, but the entire Hali`imaile area as well. The park will be easily accessible to the general public because of its location along Hali`imaile Road,

Economic Activity

Goal

A stable and diverse economic environment which supports a level of community prosperity in order to provide social services and environmental amenities and which respects the region's rural and agricultural lifestyle, open space and natural resources.

Objectives and Policies

5. *Recognize the rural, open space character of the Upcountry region as an economic asset of the island.*

Land Use

Goal

The maintenance and enhancement of Upcountry's unique and diverse rural land use character with sensitivity to existing land use patterns, natural resource values, and economic and social needs of the region's residents.

Objectives and Policies

1. *Recognize the value of open space, including agricultural lands and view planes to preserve the region's rural character.*

7. *Ensure that adequate lands are set aside for recreational and open space purposes.*

8. *Preserve and enhance the "country" atmosphere in all communities by maintaining the small-scale, unique and independent character of each of the three sub-regions. "Country" atmosphere is defined by building style, a low-density mix of residences, ranches, open spaces, greenways, plantings and cultivated lands.*

16. *Recognize the four (4) semi-urban centers of Makawao Town, Pukalani, Hali`imaile and Waiakoa Village. Within them, support the following land use and circulation patterns:*

Within Hali`imaile:

- *Future neighborhood commercial use.*
- *Single family expansion contiguous with existing residential uses.*
- *Public and park uses reflecting existing uses and areas for expansion.*
- *Existing agricultural operations and baseyard.*

18. *Where appropriate, support the reclassification of State Land Use districts to ensure consistency between State Land Use designations and land use designations defined by the Makawao-Pukalani-Kula Community Plan and land use map."*

Urban Design

Goal

Recognition and preservation of the unique design characteristics of the Makawao, Pukalani and Kula communities in order to enhance Upcountry's man-made environment.

Objectives and Policies

- 7. Encourage the use of appropriate landscaping, with greenways where possible, along major roadways, parking areas and land use transition areas to establish and maintain landscape themes which are consistent with the character of each Upcountry community.*

Housing

Goal

Housing opportunities for the residents of Makawao-Pukalani-Kula, to include all income and age groups, which are affordable, safe, and environmentally and culturally compatible.

Social Infrastructure

Goal

An efficient and responsive system of people-oriented public services which enable residents to live a safe, healthy and enjoyable lifestyle, and offer the youth and

adults of the region opportunities and choices for self and community improvement.

The Overall Project will infuse a significant amount of capital into the island's economy, and establish a larger population base with which to support Upcountry business establishments. It will also provide a range of housing styles and prices for the benefit of Maui's residents. These benefits will be provided in a manner consistent with the objective of preserving community lifestyles in keeping with the character of the existing community. Wherever feasible and permitted by the County, rural roadway design standards similar to those of the existing roads in Hali'imai village will be utilized (such as grassed swales in place of curbs, gutters and sidewalks). Home design will be influenced by the character and style of traditional plantation homes. Landscaping is planned along the roadways to provide a visually pleasing streetscape, and the project can be developed without detracting from the rural lifestyle and ambience of the Upcountry region.

The ten acres set aside for park purposes will provide an open space amenity for the entire Upcountry region, and the homes and economic activity generated by the development of the project will accrue to the benefit of all of the County's residents.

The proposed amendment to the Community Plan Map will allow the park space to front entirely along

Hali`imaile Road, and will shift the single family uses makai of the park space. This change in the location and orientation of the park will significantly enhance the rural character of the project by ensuring that green open space continues to exist along Hali`imaile Road, and by visually buffering the project's residences from persons travelling along Hali`imaile Road and living mauka of the project.

In October 1998, the Overall Project was reclassified into the State Urban District, and the project approvals sought by this application are therefore consistent with its State land use classification.

Environment

Goal

Protection of Upcountry's natural resources and environment as a means of preserving and enhancing the region's unique beauty, serenity, ecology, and productivity, in order that future generations may enjoy and appreciate an environment of equal or higher quality.

Objectives and Policies

3. *Recognize and protect rare, endangered and unique biological resources in the region.*
6. *Preserve the existing visual, noise, odor and air quality characteristics found in*

agricultural/rural neighborhoods of the Makawao-Pukalani-Kula region.

A botanical survey performed on the Property concluded that the Property does not contain any rare or endangered plant species and that the development of the project would not have any negative botanical impact.

A faunal (bird and mammal) survey was also performed, and that study concluded the Property is free of any rare or endangered fauna; however, Hawaiian stilt were observed foraging at a reservoir located over 160 feet east of the Property. As a condition to the reclassification of the Overall Project into the State Urban District, the Applicant is required to conduct seasonal surveys to determine if the reservoir is being used as a nesting habitat by the stilts or other endangered species of waterbirds, and to provide mitigation measures as required by the U. S. Fish & Wildlife Service.

The project's park space will preserve the existing visual quality of the area, and the proposed Community Plan amendment will further enhance the visual quality by extending the park along the project's entire Hali`imaile Road frontage. During construction, mitigative measures will be implemented to reduce impacts from excessive noise and air pollution.

Cultural Resources

Goal

The identification, preservation and where appropriate, restoration and promotion of cultural resources and practices which reflect the rich and diverse heritage found in the Upcountry region.
Objectives and Policies

1. *Recognize the importance of historically and archaeologically sensitive sites, both known and undiscovered, and encourage their preservation and protection.*
2. *Support public and private efforts to inventory, evaluate, classify, register, and protect, as appropriate, cultural resources to increase public knowledge of the region's rich and diverse cultural character.*

An archaeological survey of the Property concluded that no archaeological sites are located on the Property. However, should any burials, archaeological or historic sites be found, the Applicant shall stop work in the immediate vicinity and the State Historic Preservation Division of the Department of Land and Natural Resources shall be notified immediately.

Physical Infrastructure

Goal

The timely and environmentally sensitive development and maintenance of infrastructure systems which protect and enhance the safety and health of Upcountry's residents and visitors, including the provision of domestic water, utility and waste disposal services, and effective transportation systems which meet the needs of residents and visitors while maintaining the region's rural character.

Transportation – Objectives and Policies

1. *Ensure the safe and convenient movement of people and goods by providing maintained roadways having adequate carrying capacities.*
6. *Improve the road through Hali`imaile or provide an additional access road between the terminus of the proposed Upcountry-Kihei Highway, if built, and the communities east of Baldwin Avenue, in order to relieve traffic congestion in Makawao town.*

All infrastructure needed to service the project will be provided or arranged for by the Applicant, including water, utility and sewage treatment facilities. Road widening setbacks will be established along Hali`imaile Road, and the Applicant has agreed to work with the County in improving the right turn lane from Hali`imaile Road onto Haleakala Highway.

Water – Objectives and Policies

7. *Support the development of separate domestic and irrigation water systems.*
12. *Encourage cooperative efforts among Federal, State, and County agencies, and developers to ensure that water storage and delivery needs of the region are met in a timely and orderly manner.*

Liquid and Solid Waste Disposal – Objectives and Policies

3. *Support wastewater reclamation and grey water alternatives as a means of reducing demands upon limited water resources in the Upcountry area.*

The Applicant will work with the appropriate government agencies to ensure timely and orderly distribution of potable and non-potable water supply systems for the project, including the provision of potable water source required for the development. Effluent from the sewage treatment facility is proposed to be used for irrigation purposes, thereby reducing the project's potable water demands.

Drainage – Objectives and Policies

1. *Respect and preserve natural drainageways as part of good land development practices and recognize their value as open-space corridors.*
2. *Implement comprehensive drainage improvements and maintenance procedures to ensure that the overall system will meet public safety and welfare needs of the region's residents.*

The Property does not contain any natural drainageways. Excess storm water runoff generated by the project will be directed to a drainage basin to be located on the makai end of the project. The drainage system will be designed to County standards to ensure that the system meets public safety requirements.

F. Maui Zoning Code

The Property is currently zoned "Interim". An application will be submitted to change the zoning designation to "R-1" and "PK-1". The drainage basin and sewage treatment facility are permitted uses in the "Interim" zoning designation and will, thus, remain in the "Interim" zone. These facilities are also considered accessory uses to the subdivision.

XII. PERMITS/APPROVALS REQUIRED

The following permits will be needed to develop the Overall Project:

- Community Plan Amendment
- Zoning Change
- Erosion and Dust Control Plan Approval, Department of Health
- Potable Water Engineering Report, Department of Health (if required)
- Dam Permit, Department of Land and Natural Resources (if required)
- Grading Permit, County Department of Public Works and Waste Management
- Building Permit, County Department of Public Works and Waste Management
- Subdivision Approval, County Departments of Planning and Public Works and Waste Management
- Drainage Report, County Department of Public Works and Waste Management

XIII. ALTERNATIVES TO THE PROPOSED ACTION

A. No Action Alternative

The no action alternative would mean that the Community Plan will not be amended, and the configuration of the park will remain as shown on the Community Plan Map, and the drainage basin and wastewater treatment facility will remain designated as "Agriculture" on the Community Plan Map.

B. Alternatives Considered

Subsequent to the adoption of the current Community Plan Map in July 1996, the Applicant caused additional planning, engineering and environmental studies for the development of the Overall Project to be performed. Based on those more detailed studies, it was determined that the orientation of the park as proposed in this EA would provide a better relationship with existing and future land uses in the area. The proposed location of the park provides a visually pleasing open space amenity along Hali'imaile Road that will maintain the rural character of the area, provides easy access for existing and future residents, and serves as a buffer between existing industrial uses and traffic along Hali'imaile Road, and the future single family residences. The positive benefits provided by the proposed configuration of the park cannot be supplied by any other alternative, and therefore no other

alternatives were considered. The Public/Quasi-Public designation for the drainage and wastewater treatment facility areas is the most accurate designation for these proposed uses, and therefore, no other alternatives were considered.

XIV. DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

The following is an assessment, based on the 13 "Significance Criteria" of Title 11, Chapter 200-12 of the Department of Health Administrative Rules.

1) *Involves a loss or destruction of any natural or cultural resources.*

The project will not involve the loss or destruction of any natural or cultural resources in the area. Botanical, biological and archaeological surveys of the Property all clearly indicate that the Property does not contain any important natural or cultural resources.

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

Development of the project will not curtail any beneficial uses other than the ability to cultivate the land for agricultural purposes. However, the loss of the 63 acres comprising the

project will have no material impact on the agricultural resources of the State or region, nor will it have any material impact on HC&S, which cultivates approximately 37,000 acres of sugarcane.

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

For the reasons described elsewhere in this EA, the proposed development will not have significant environmental impacts, and therefore does not conflict with the long-term goals or guidelines expressed in Chapter 344. In addition, the State and the County have designated these lands for residential and park uses.

4) *Substantially affects the economic or social welfare of the community or state.*

The project will have a significant beneficial impact on the economy and the social welfare of the community. The construction of the project will result in a large infusion of capital into the economy, a large number of jobs during the project's four to six-year construction period, and permanent increased revenues (real property taxes) for the County. The project will provide both a range of housing types and prices for the residents of Maui, and an important recreational amenity for the community.

5) *Substantially affects public health.*

Short-term noise and air quality impacts may occur during the construction phase of the project. However, these impacts can be adequately mitigated, and the project, developed in accordance with all applicable State Department of Health and County Department of Public Works laws and regulations, will have no adverse impact on the public health.

6) *Involves substantial secondary effects, such as population changes or infrastructure demands.*

The project's 196 residential units are expected to house approximately 590 people. The vast majority of the home buyers are expected to be existing Maui residents, and therefore no substantial population changes will be generated by the project. All infrastructure requirements for the project will be provided or arranged for by the Applicant, without any material impact to any existing infrastructure.

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

The project will consist of single-family homes and a park, and related infrastructure support, and is not located in the vicinity of any sensitive environmental areas. The sewage treatment facility for the project will be developed in accordance with all applicable State Department of Health standards, and drainage from the project will be captured in the planned retention basin.

No noxious uses or emissions will result from the project, and no degradation of environmental quality is expected from its development.

8) *Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions.*

The project is not a part of or linked to a larger project, involves no commitment to any larger action, and will have no cumulative impacts.

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

A faunal survey of the Property identified no rare, threatened or endangered species or habitat on the Property. However, two endangered Black-necked Stilt (*Himantopus mexicanus*) were seen at a man-made reservoir located over 160 feet from the property line of the project. The development of the project is not expected to have any adverse impact on the stilt or any other endangered fauna. However, as a precautionary condition to the reclassification of the Property into the State Urban District, the Applicant is required to conduct seasonal surveys to determine if the reservoir is being used as a nesting habitat by the stilts or other endangered species of waterbirds, and to provide mitigation measures as required by the U. S. Fish & Wildlife Service.

10) *Detrimintally affects air or water quality or ambient noise levels.*

No air quality impacts are anticipated by the project. The sewage treatment facility will be operated in accordance with Department of Health standards, and is not expected to have any air, water or ambient noise impacts. Project drainage will be captured by the planned retention basin, and will therefore have no impact to surrounding lands. The project is situated approximately 1,000 feet above the aquifer, and will not have any wells or discharges that will impact the aquifer. The project will be surrounded by cane fields and a ten-acre park, and the project's residences and park will have no adverse impact on ambient noise levels.

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

The project is not located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater, or coastal waters.

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

The planned park will serve as a buffer between the project's residences and Hali`imaile Road and existing mauka homes. Due to the substantial size of this park and the slope of the project's terrain (away from Hali`imaile Road), the project will not materially affect any scenic vistas or view planes.

13) *Requires substantial energy consumption.*

The project will consist of approximately 196 homes, a park, a drainage retention basin and a small sewage treatment facility. None of these uses is expected to require a substantial or extraordinary consumption of energy. The use of energy conservation devices, such as solar heating, will be encouraged to reduce the demand on electricity.

For the reasons cited in this EA, no significant adverse environmental impacts are expected from the Community Plan amendment being sought by the Applicant or from the development of the Overall Project.

Appendix A
AUTHORIZATION LETTER

Halfimaile Residential Project

Final Environmental Assessment
April 1999



A&B-HAWAII, INC.

December 1, 1998

A&B Properties, Inc.
822 Bishop Street
Honolulu, Hawaii 96813

Re: Haliimaile Residential Project

Ladies and Gentlemen:

A&B-Hawaii, Inc. is the owner in fee simple of that certain property located at Haliimaile, Maui, Hawaii, identified by Tax Map Key No. 2-5-3: 10. A&B Properties, Inc. intends to develop approximately 63 acres of said parcel 10, for residential, park, drainage and wastewater treatment purposes.

A&B Properties, Inc. is hereby authorized to file all applications with the County of Maui for zoning changes and community plan amendments needed for the development of the property, including any environmental assessments required for such applications.

Sincerely,

A&B-HAWAII, INC.

By

Robert K. Sasaki
Its Senior Vice President

Appendix B

**FINDINGS OF FACT, CONCLUSIONS OF LAW,
DECISION AND ORDER
DOCKET NO. A98-723**

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)
A&B PROPERTIES, INC.,)
To Amend The Agricultural Land Use)
District Boundary Into The Urban)
Land Use District For Approximately)
62.994 Acres At Halimaile,)
Makawao, Island of Maui, County of)
Maui, Tax Map Key No. 2-5-03:)
portion of 10.)

DOCKET NO. A98-723
FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND
DECISION AND ORDER

This is to certify that this is a true and correct
copy of the Decision and Order on file in the office
of the State Land Use Commission, Honolulu, Hawaii.

CCI 22 1998 by _____
Date Executive Officer

FINDINGS OF FACT,
CONCLUSIONS OF LAW, DECISION AND ORDER

LAND USE COMMISSION
STATE OF HAWAII
OCT 22 12 35 PM '98

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of)
A&B PROPERTIES, INC.,)
To Amend The Agricultural Land Use)
District Boundary Into The Urban)
Land Use District For Approximately)
62.994 Acres At Halimaile,)
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Maui, Tax Map Key No. 2-5-03:)
portion of 10.)

DOCKET NO. A98-723
FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND
DECISION AND ORDER

FINDINGS OF FACT,
CONCLUSIONS OF LAW, DECISION AND ORDER

A&B Properties, Inc. ("petitioner"), a Hawaii corporation, filed this Petition for District Boundary Amendment on May 6, 1998, pursuant to Chapter 205, Hawaii Revised Statutes ("HRS"), and Title 15, Subtitle 3, Chapter 15, Hawaii Administrative Rules ("HAR") to amend the Land Use District Boundary of certain lands at Halimaile, Makawao, Island of Maui, County of Maui, Tax Map Key No. 2-5-03: portion of 10, covering approximately 62.994 acres of land from the Agricultural Land Use District to the Urban Land Use District ("Property" or "Petition Area") for development of a planned residential community to include single-family residential, park, drainage and wastewater treatment facility uses.

The Land Use Commission ("Commission"), having heard and examined the testimony, evidence and argument of the parties, both written and oral, presented during the hearing held on July 30,

1998; and having reviewed Petitioner's Proposed Findings of Facts, Conclusions of Law, and Decision and Order, the Office of Planning's Response to Petitioner's Proposed Findings of Fact, Conclusions of Law and Decision and Order, the County of Maui Department of Planning's Response to Petitioner's Proposed Findings of Fact, Conclusions of Law and Decision and Order and the record herein, hereby makes the following findings of fact, conclusions of law and decision and order:

FINDINGS OF FACT

PROCEDURAL MATTERS

1. On May 6, 1998, a Petition for District Boundary Amendment was filed with the Land Use Commission ("Commission") in which Petitioner sought to amend the Agricultural District boundary at Haliimalie, Island of Maui, County of Maui, to reclassify approximately 63 acres into the Urban District.

2. On July 14, 1998, a prehearing conference was conducted in Conference Room 405 of the Leiopapa A Kamehameha Building, 235 South Beretania Street, in Honolulu, Hawaii, with representatives of the Petitioner and the Office of Planning, State of Hawaii, present.

3. On July 30, 1998, the Commission conducted a hearing on this Petition at its meeting in Waikapu, Maui, pursuant to a notice published in the Honolulu Star Bulletin and Maui News on May 15, 1998.

4. Entering appearances at the hearing were Benjamin M. Matsubara, Esq. and Stanley M. Kuriyama for Petitioner; Brian Moto, Esq., Ann Cua and Lisa Nuyen for the County of Maui Department of

Planning ("Maui Planning Department"); and Ann Ogata-Deal, Esq., Abe Mitsuda, and Lorene Maki for the Office of Planning, State of Hawaii ("Office of Planning").

5. The Maui Planning Department supported the Petition and filed Position Of The Maui Planning Department on June 5, 1998. The Maui Planning Department also filed Testimony Of The Maui Planning Department on June 22, 1998.

6. The Office of Planning supported the Petition and filed its Statement of Position In Support Of The Petition with conditions on June 5, 1998. The Office of Planning also filed its Testimony In Support Of The Petition with conditions on June 25, 1998.

7. No person appeared and testified as a public witness and/or submitted written testimony at the hearing.

8. No requests for intervention were filed.

DESCRIPTION OF THE PROPERTY

9. The Property is located at Haliimalie, on the northern slopes of Haleakala, District of Makawao, Island and County of Maui, State of Hawaii. The Property consists of approximately 62.994 acres, and is specifically identified as Tax Map Key No. 2-5-03: portion of 10. The Property is located within the State Agricultural District and is zoned "Interim" under the County of Maui zoning ordinance.

10. The Property is bordered on the northern and western boundaries by sugarcane fields. The eastern boundary is adjacent to a Maui Land & Pineapple Company maintenance yard and HC&S irrigation reservoir. To the east of the maintenance yard and

reservoir is the existing Halimaile residential community. The southern boundary is across the street from a Maui Land & Pineapple Company maintenance yard and a smaller single-family residential subdivision.

11. The existing Halimaile residential community contains approximately 175 single-family residences, a five-acre park, a neighborhood commercial area, and the maintenance facilities for Maui Land & Pineapple Company. The smaller residential subdivision contains 15 single-family residences.

12. An HC&S irrigation reservoir is located approximately 160 feet away and to the southwest of the Petition Area. The irrigation reservoir is man-made and used by HC&S for its sugarcane operations. Due to the topography of the Property and surrounding area, the irrigation reservoir is not visible from the Property nor is it an amenity to the residential development.

13. The Property is situated approximately 3-1/2 miles from Pukalani, 2-1/2 miles from Makawao, 4 miles from Paia, 9 miles from Kahului, and 10 miles from Wailuku.

14. The Property has been in sugarcane cultivation over the past two years and is currently in sugarcane cultivation.

15. The Property is owned by A & B-Hawaii, Inc. ("A&B"), a Hawaii'i corporation, which in turn is a wholly-owned subsidiary of Alexander & Baldwin, Inc., a Hawaii'i corporation.

16. The Petitioner is a wholly-owned subsidiary of A&B, and has been authorized by A&B to submit the Petition as set forth in the authorization letter dated October 20, 1997.

17. The elevation of the Property is from 950 feet above mean sea level ("msl") to approximately 1,075 feet msl in the southeastern corner of the Petition Area.

18. The Property has a gently sloping terrain, with slopes averaging five percent. The Property does not consist of lands having a slope of twenty percent or more.

19. According to the Atlas of Hawaii rainfall maps, the average annual rainfall in the vicinity of the Petition Area is between 30 to 40 inches.

20. According to the Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, soils at the site are the Halimaile Soil Series, types HhB and HhC. This soil series has a moderately rapid permeability. Runoff is slow to moderate and the erosion hazard is slight to moderate. These soils are developed from weathered igneous rock, are approximately 60 inches or more in depth and are well-drained. During construction the soils will be graded and compacted for house pads and roadway construction. The soil provides very good foundation for structures.

21. The Land Study Bureau's Detailed Land Classification, Island of Maui, classifies the Property's productivity rating as "C" with a land type of "21". Due to the drip-irrigation system installed by HC&S, the Property's overall productivity rating improves from "C" to "A".

22. The Agricultural Lands of Importance to the State of Hawaii'i ("ALISH") system classifies approximately one half of the

Property as "Prime Agricultural Lands." The remaining half of the Property is designated "Other Important Agricultural Lands".

23. According to the flood insurance rate map prepared by the Federal Emergency Management Association, the Property is located within Zone "C" ("area of minimal flooding"). There are no designated floodways through the Property.

PROPOSAL FOR RECLASSIFICATION

24. The Petitioner proposes to develop the Property as a single-family residential subdivision (45 acres), park space (10 acres), a drainage basin with buffer/maintenance road (7 acres) and a wastewater treatment facility (1 acre) (collectively "Project"). The total Project will consist of approximately 62.994 acres.

25. The proposed Project is currently planned to consist of approximately 196 single-family residential lots, thereby creating a density of approximately 4.4 lots per acre.

26. Residential lots within the Project are proposed to range in size from approximately 6,000 square feet to approximately 10,000 square feet, with an average size of 7,780 square feet per lot.

27. The Petitioner intends to seek a change in zoning designation from the County of Maui from "Interim" to "R-1 Residential" and "P-1 Park" districts.

28. At today's prices, the Petitioner projects that (a) the lots may be sold at prices ranging from approximately \$90,000 to approximately \$140,000 per lot, with an average price of approximately \$115,000 per lot, and (b) house and lot packages may

be sold at prices ranging from approximately \$180,000 to approximately \$270,000 per house and lot package.

29. The intended market for the residential lots will be Maui residents.

30. The Petitioner intends to provide a broad range of housing prices. At currently projected prices, approximately one-third of the units could be priced for persons in the 100% to 120% of median income category, a third could be priced for persons in the 120% to 140% of median income category, and the final third could be priced in excess of 140% of median income category.

31. The Petitioner estimates the total cost of the Project at \$35.8 million. The cost for the residential development is estimated at \$20.8 million. The cost for site development of the Project is estimated at \$15 million.

32. The Petitioner's proposed development timetable, besides this Petition, includes submitting applications for approvals and permits from the County of Maui within the following timeframes:

Zoning Change/Community Plan Amendment 24 months
(if necessary)

Subdivision approval (including
preparation of construction plans) 24 months

Building/grading permits 3 months

33. Once approvals have been received from the Commission and the County Zoning Application, it is estimated that the Project schedule will be as follows:

Project's design, engineering,
and construction plans 12 months

County approval of the subdivision construction plans 12 months
Construction of the Project infrastructure 1-2 years

PETITIONER'S FINANCIAL CAPABILITY TO UNDERTAKE THE PROPOSED DEVELOPMENT

34. The Petitioner's 1996 and 1995 balance sheet and income statement reflect Petitioner's pre-tax income in 1996 of \$12.9 million, total assets of \$92.4 million and shareholder's equity of \$70.1 million. The Petitioner's 1997 and 1996 balance sheet and income statement reflect Petitioner's pre-tax income in 1997 of \$16.6 million, total assets of \$94.4 million and shareholder's equity of \$80.4 million.

35. The Petitioner intends to finance the development of the Property from internally generated funds.

STATE AND COUNTY PLANS AND PROGRAMS

36. The Project is consistent with the policies and objectives of the Hawai'i State Plan.

37. The Project is consistent with the policies and objectives of the Maui County General Plan (1990 Update).

38. The County of Maui's Makawao-Pukalani-Kula Community Plan ("Community Plan") was approved by the County of Maui in July 1996 and has designated the Property for single-family and park uses as configured on the Community Plan Map.

39. The Project was the only project proposed by the Petitioner which received approval in this Community Plan region.

40. The Property is currently within the State Land Use Agricultural District as shown on the Land Use District Boundary Maps (USGS Quad) M-7 (Paia).

41. The Property is currently designated as Single-Family and Park under the County's Makawao-Pukalani-Kula Community Plan, as configured in the Plan. The Petitioner has represented that it will seek necessary amendments to the Community Plan or modification to the configuration of the Project in order to conform the Project to the Community Plan.

42. The County zoning for the Property is currently "Interim." The Petitioner has represented that it will seek a change in zoning from the County upon obtaining reclassification of the Property from the State Land Use Agricultural District to the State Land Use Urban District.

NEED FOR THE PROPOSED DEVELOPMENT Residential Market

43. The Petitioner's market consultants, RE' and Mikiko Corporation, prepared a market assessment report in July 1997 to analyze the existing and projected housing demand for the Project's 196 units. The study identified planned projects and projected the absorption of these units based on a number of factors, such as population growth, housing supply, home prices and location.

44. The study indicates that in 1990 through 1996 there was a surplus of units on the housing market. This was due partly to the substantial increase in home prices in the late 1980s. The median single-family home price doubled from the early 1980s to 1990 from \$120,000-\$150,000 to \$280,000. However, the median home

price has been falling recently, reflecting a price correction from the peak in the late 1980s, and home sales have been accelerating over the past few quarters.

45. By the year 2000, it is anticipated that there will be a shortfall of 2,000 housing units to satisfy the projected growth in the number of households, and there will still be a shortfall of units by the year 2010 of 1,300 units.

46. Comparable housing projects on Maui were analyzed to develop potential unit price ranges and absorption rates. Based on the analysis, house and lot prices could range from \$180,000 to \$270,000 in 1997 dollars, and lot-only prices could range from \$90,000 to \$140,000. These units are anticipated to be sold within 3 to 4 years, at a rate of 4 to 5 units per month.

47. Based on anticipated sales prices, lot sizes, locations and convenience to the Wailuku-Kahului urban core, the anticipated market for residences of this Project is Maui residents.

48. Mikiko Corporation prepared an updated report for the proposed Project in July 1998. The current market data supported the same conclusions reached in the original report.

ECONOMIC IMPACTS

49. The average annual per capita income for the County of Maui in 1994 was \$24,011, compared to \$27,734 for the City and County of Honolulu. The State's annual average was \$26,738.

50. Based on site development costs of \$15 million and approximately \$20.8 million for housing construction, it is estimated that approximately 240 cumulative full-time construction

jobs will be generated during the four to six year construction phase of the Project (40 to 60 jobs per year). This number is based on 50 percent of the development cost attributable to labor wage and benefits at \$74,000 per worker.

51. Indirect employment generated by the construction of the Project is estimated at an additional 189 full-time positions, based on 0.79 indirect jobs per full-time job. Thus a total of 429 cumulative full time jobs are estimated over the four to six year construction time period (70 to 100 jobs per year).

52. Assuming that direct construction jobs have an income of \$50,000 (exclusive of benefits) and the indirect jobs generate an income based on 1994 average annual per capita income for the County of Maui, direct and indirect jobs would generate approximately \$16.5 million in aggregate personal income during the four to six year construction phase of the Project. Much of the money earned from these jobs is expected to be spent on the island of Maui.

53. The 1997 real property taxes allocated to the 45 acre area planned for single-family use is currently estimated at \$130 per year. Based on a finished house and lot value of \$250,000 per home at full build-out, the Project will generate taxes of \$230,000 per year, based on 1997 dollars and tax rates.

54. Development of this Project will have a positive impact on the County of Maui because of both the short-term jobs generated during the construction period of the Project, and the higher real property taxes permanently generated by the improved condition of the land.

SOCIAL IMPACTS

55. Of the four major Hawaiian Islands, the island of Maui had the third largest population count of 100,504 people in 1990 (State Data Book, 1995). From April 1990 to July 1994, the population of Maui increased by 12.5 percent to 113,000 people, as compared to a 4.6 percent increase for the City and County of Honolulu.

56. The population of the existing Halimaile town in 1990 was 841 people, which represented a 100-person increase in population during the decade 1980 to 1990. Based on the average statewide household size of approximately three persons per household, the population of Halimaile is anticipated to be increased by approximately 600 people at full build-out and full occupancy of the proposed Project.

IMPACTS UPON RESOURCES OF THE AREA

AGRICULTURAL RESOURCES

57. On the island of Maui, A&B has 53,000 acres of its 69,000 acres designated for agriculture or pasture use. The balance of 16,000 acres are in conservation use.

58. Of the 53,000 acres, approximately 35,000 acres are used by HC&S for its sugarcane operations, about 2,000 acres are leased out for various diversified agricultural uses, and 6,300 acres are leased out for pasture purposes. The remaining lands are unused.

59. Since 1990, HC&S has been expanding its operation by the addition of over 2,000 acres in newly cultivated lands. A&B has leased 1,200 acres of former pineapple lands from C. Brewer and

approximately 1,200 leased from the State of Hawai'i. In total, HC&S has approximately 37,000 acres in sugarcane production.

60. In expanding its sugarcane operations, A&B has invested \$2 million in improving the leased lands from C. Brewer and approximately \$1 million jointly with Maui Land & Pineapple Company to convert an additional 300 acres of land that was not in any agricultural use into sugarcane production.

61. Over the past 10 years, A&B has invested over \$74 million in capital in HC&S's operations. This money was spent on equipment replacement, creating new fields to farm, conversion to drip irrigation, compliance with environmental laws, as well as in research and development to increase the yield per acre. The objective is to make HC&S as efficient and productive as possible.

62. HC&S foresees putting an additional 500 acres into sugarcane production over the next five-year time horizon. HC&S is constantly looking for areas that are currently not farmed, but with some capital expenditure can be rendered into farmable condition.

63. On the island of Kauai, A&B has approximately 8,000 acres of its 22,000 acres in agricultural use, approximately 13,000 acres are in conservation use, and approximately 1,000 acres comprise the Kukuila project.

64. As part of its diversification plan to keep agricultural lands productive after McBryde Sugar Company, Limited discontinued its sugar operations, A&B pursued the development of alternative crops such as coffee and macadamia nuts in the late 1980s.

65. A&B had approximately 600 acres in macadamia nuts, all of which were destroyed by Hurricane Iniki after the first crop was harvested. As a result, the operation had to be abandoned.

66. A&B continued with its coffee operation on Kauai, and today A&B is the largest coffee grower in the State, having 3,800 acres in coffee and producing about 60% of the State's coffee production in 1997. Approximately \$52 million of capital has been invested to date in A&B's coffee operation. However, coffee has yet to show a profit.

67. In considering the withdrawal of agricultural lands for nonagricultural uses, A&B evaluates the impacts that each project has on its overall economic viability and HC&S's long-term plans. These withdrawals are carefully reviewed to ensure that they are mutually supportive of, and will not in any manner jeopardize A&B's agricultural operations.

68. In evaluating the proposed Project, A&B considered the impacts of the removal of the approximately 62,994 acres from sugarcane production. A&B determined the conversion of the Property to urban development will not have a significant adverse impact on HC&S's sugarcane operation.

Flora and Fauna

69. Char & Associates conducted a botanical survey of the Property on May 16, 1997 to inventory and assess the botanical resources on the Property.

70. The botanical survey found a ready assortment of species associated with agricultural lands along the margins of the actively cultivated sugarcane fields, and alongside the roads and

irrigation ditches. Almost all of the plants found on the Property are introduced or alien species.

71. Three native species were observed on the Property during the field studies. These are two small shrubs: popolo (*Solanum americanum*) and 'uhaloa (*Walteria indica*); and *Pycneus polystachyos*, a sedge. The 'uhaloa and popolo were traditionally used by Hawaiians for their medicinal properties.

72. All three species are indigenous, that is, they are native to the Hawaiian Islands and found throughout the Pacific. These native species can also be found throughout Maui and are usually associated with disturbed open areas, such as along the perimeter of cultivated fields and in the scrub area that borders roadways.

73. The botanical survey did not encounter any rare, threatened or endangered plants on the Property. No adverse flora impacts are anticipated.

74. A faunal (bird and mammal) field survey was conducted by Phil Bruner, environmental consultant, on April 19-20, 1997.

75. The faunal field survey identified 14 species of introduced (non-native birds), two species of migratory birds and two native species.

76. The two native species, the Black-necked Stilt (*Himantopus mexicanus*) and the Black-crowned Night Heron (*Nycticorax nycticorax*) were observed foraging on the mud flats at the reservoir located to the southwest of the Property. The Black-

necked Stilt is listed as endangered, but the Black-crowned Night Heron is not considered threatened or endangered in Hawaii.

77. While the man-made reservoir near the Property offers foraging opportunities for shorebirds and water birds, it is not part of the Petition Area. A 160-foot buffer zone separates the reservoir from the Property. The construction and presence of the proposed Project is not anticipated to disturb or affect the birds.

78. Other animals found on the Property included feral cats and the Small Indian Mongoose (*Herpestes erpunctatus*). Rats and mice undoubtedly occur in the sugarcane fields.

79. The endangered native Hoary Bat (*Lasiurus cinereus semotus*) occurs on Maui, but none were observed on an examination of the Property at dusk on April 19, 1998. The distribution, abundance and ecology of this species has not been well studied.

80. The faunal field survey concluded that conversion of sugarcane fields to residential sites will alter the species composition and relative abundance of some birds, but these local changes are unlikely to have any negative impact on bird or mammal activity in the region.

Archaeological and Historic Resources

81. Cultural Surveys Hawaii, Inc. conducted an archaeological inventory survey of the Property, which included a field inspection on May 19, 1997 and a historic background research of the Property and surrounding ahupua'a of Halimaile. The archaeological field survey findings and recommendations are

described in the report dated June 27, 1997 and in an amended report dated July 1998.

82. Historical features found on the Property consisted of man-made irrigation ditches associated with the ongoing cultivation of sugarcane and a ditch-water control gate near the southwest corner of the parcel at the intersection of the ditch from Reservoir 20 and the ditch to Reservoir 16.

83. The ditches and ditch gate within the study area are typical of those found throughout other plantations on Maui and therefore, their preservation is not necessary since other examples are in existence. Also, these ditches are short, inter-reservoir connections and their removal will not impact the longer source ditches such as the Hamakua, Kauhikoa, Lowrie or Haiku. These ditches are quite common throughout Maui plantations.

84. There are no known historic features on the Property that may be impacted by development or use of the land. The Property is located 4.5 miles from the nearest shoreline and contains no trails, gulches, streams, hills or natural water features of historical or cultural significance. Additional work or preservation initiatives for the Property are unnecessary due to the absence of culturally significant sites and the lack of any impact from the removal of actively used irrigation ditches.

85. The historical records reveal that the Property and surrounding area were not settled by Hawaiians. Historical maps dating back to the 1870s indicate that the Property was used by Grove Ranch, then by T. Hobron's and Sharrat's Plantations in the mid to late 1870s. Therefore, the site has historically been used

for agricultural purposes, and to date continues to be used for agricultural purposes by HCS.

86. The absence of historical sites or features on the Property also indicates the absence of any cultural and/or spiritual practices thereon.

87. The Property, therefore, contains no features or other evidence indicating any customary and traditional use of the Property by Hawaiians for subsistence, cultural or religious purposes, or for any other historically or culturally significant use, requiring protection or regulation under Article XII, Section 7 of the Hawai'i State Constitution.

Groundwater Resources

88. The effluent from the proposed wastewater treatment facility will have no adverse impact on the groundwater aquifer in the area.

89. Storm water and wastewater effluent (treated to State Department of Health standards) will evaporate or be absorbed by the plants or by the soil before reaching the groundwater, which is about 1,000 feet below the surface.

Recreational and Scenic Resources

90. The Petitioner's planned new 10-acre park is proposed to be dedicated to the County of Maui. The additional park space will add to existing recreational resources in the immediate vicinity of the proposed Project, and represents four times the amount of land required to be dedicated under the County of Maui's park dedication ordinance.

91. An existing 5.2-acre county park is located immediately to the east of the Petition Area. Other recreational facilities that can be utilized by the residents of this community are located in close proximity to the proposed Project. Makawao and Pukalani offer a number of land-based indoor and outdoor facilities (such as Eddie Tam Park, Mayor Hannibal Tavares Community Center, and Pukalani Golf Course), while Paia offers numerous land-based as well as coastal and water-related recreational facilities.

92. The mauka and makai views from the Property consist of the northern coastline of the island, the West Maui Mountains, and Haleakala Mountain. As a result of the existing slope of the Property, the residents will have these views from their homes.

93. The Property is at a slightly lower elevation than the existing residential neighborhoods. Thus, the existing Halimalele town is not visible from the site except from the lower portions of the Property. The banks of the existing irrigation reservoir also block the views from that neighborhood to the Petition Area. This Project therefore will have no significant visual impact on the existing neighborhood.

94. The small residential subdivision south of the Project will be separated from this Project by Halimalele Road and the 10-acre park site. Therefore, views from the existing subdivisions are not expected to be affected by the lower elevation homes within this Project.

95. Views of Maui Pineapple Company's maintenance yard on the Project's northeastern boundary will be mitigated by the

placement of the park, which will serve as a spatial separation between the maintenance yard and the new homes.

Coastal/Aquatic Resources

96. The Property is located approximately four miles from the nearest shoreline, and is not within the Special Management Area established by the County of Maui.

ENVIRONMENTAL QUALITY

Noise

97. Short-term noise impacts associated with the construction of the Project can be expected. These impacts can be mitigated by the establishment of appropriate start and curfew times. A permit from the State Department of Health will contain the necessary construction noise conditions to mitigate excessive noise impacts.

98. Noise impacts to the Project subdivision could be generated by agricultural operations in the area. To mitigate potential noise and dust impacts from the agricultural roadways, a 40-foot buffer strip is planned along the east and west boundaries of the Petition Area. The park space along Halimaile Road will also mitigate noise impacts associated with Maui Pineapple Company maintenance yard operations and traffic on Halimaile Road.

Air Quality

99. A 40-foot wide buffer strip is proposed along the agricultural roadways on the east and west sides of the Petition Area. These buffer strips are intended to mitigate potential noise and dust impacts from the agricultural operations.

Water Quality

100. The groundwater table is about 1,000 feet below the surface of the Property. The Petitioner proposes to direct storm water into a drainage basin, which will then evaporate or be absorbed by the plants or by the soil before reaching the groundwater. The wastewater effluent will be treated to State Department of Health standards.

101. There are currently no drinking water wells in the area. According to the State Department of Health, there are plans for a future well west of the Project on the Pukalani-side of Haleakala Highway. The well will be approximately 1000 feet deep and the Project will be well outside the 1000-foot setback requirement.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES Highway and Roadway Facilities

102. A traffic impact analysis report was prepared by Julian Ng, Incorporated, in June 1997. The report concludes that due to the relatively small amount of traffic generated by this Project, only minor impacts on regional traffic conditions are expected.

103. The analysis of Halimaile Road and Haleakala Highway intersection indicated that signalization of the intersection is not warranted. Improvement to the existing right-turn lane from Halimaile Road onto Haleakala Highway has been requested by the County of Maui.

104. The intersection of Halliwaile Road and Baldwin Avenue is currently operating below capacity, and will continue to operate below capacity after development of the Project.

105. At the intersection of Halliwaile Road and the Project road, a separate left turn lane into the Project from Halliwaile Road is recommended.

Water Service

106. The County of Maui Department of Water Supply ("DWS") system serving the Halliwaile area is supplied by surface water pumped from the East Maui Irrigation Company's Waioa Ditch and treated to drinking water quality at DWS' Kamole Water Treatment Plant. The water is treated to meet Federal Safe Drinking Water Act standards, then pumped to upper elevation potable water tanks where the water flows by gravity to service the area. This system does not have the capacity to serve the proposed Project.

107. The approximate water requirements (average demand) in gallons per day ("GPD") for the proposed Project are estimated as follows:

	Average Demand
Residential (196 Units @ 600 GPD/Unit)	117,600
Parks (10 Acres @ 2500 GPD/Acre)	25,000
Roadway Landscape Buffer (7 Acres @ 2500 GPD/Acre)	17,500
TOTAL	160,100

108. The Petitioner is in the process of evaluating the development of a potable quality well above the community of Kailua in East Maui. A small portion of its supply would be utilized in Kailua to replace water now supplied from a shallow development tunnel above the Waioa Ditch. The balance of the well's water, if delivered into the Waioa Ditch, would be available for other projects in the service area of the Kamole Water Treatment Plant, including the Petitioner's proposed Project in Halliwaile.

109. Water lines within the Project will be installed underground in the roadway right-of-ways and possibly in the buffer strips.

110. The Petitioner is prepared to consider alternative potable water sources should the proposed well at Kailua prove to be inadequate to meet the needs of the proposed Project.

Wastewater Disposal

111. The Halliwaile area currently does not have a municipal sewerage system to service existing residents. To service the Project, Aqua Engineers, Inc. has prepared a Preliminary Engineering Report which proposes the use of a package-type wastewater treatment facility ("WWTF") situated on a one-acre site within the Petition Area to service the new community.

112. The report estimates that the total wastewater flows generated from the residential lots and park restroom facilities of the Project to be approximately 80,000 GPD.

113. A properly operated and maintained WWTF should generate minimal odors and noise. Potential adverse impacts will be further mitigated by the large buffer space between the plant

facilities and the nearest residential lot. The prevailing northeast trade winds will direct potential odors into the sugarcane fields rather than into the subdivision.

114. The WWTF will provide secondary level of treatment and produce R-2 quality effluent that is proposed to be reused for irrigation of the roadway landscaping, buffer strips, the drainage retention basin and park through a drip irrigation system. Reuse of the effluent will reduce the demand on the potable water system.

115. As a backup during emergencies, absorption fields are planned within the one-acre site. The actual size of the fields will depend on percolation rates that will be determined from soil testing.

116. Both the construction of the WWTF and use of the effluent for irrigation will be in accordance with State Department of Health reuse guidelines.

117. The excess biosolids generated at the WWTF are planned to be taken to the County of Maui's co-composting facility. This facility combines sludge and green wastes in a process that removes the pathogens and other organisms and produces a marketable compost for landscaping and agricultural uses.

118. Much of the WWTF is planned to be constructed below grade to minimize visual impacts, with the exception of an office, laboratory and mechanical/electrical equipment building. Landscaping is also planned around the buildings to screen views from the nearby residences.

119. The Petitioner proposes to dedicate the WWTF to the homeowners' association and have it operated by a professional operator.

Drainage

120. The Property slopes at approximately five percent from the southeast corner to the northwest corner. Storm water runoff on the site sheet flows across the Property and continues as sheet flow northwest, beyond the boundary into sugarcane fields.

121. Preliminary runoff calculations indicate that 65 cfs of additional storm water runoff will be created by the development of the Project. A drainage retention basin is proposed makai of the residential area and situated along the north side of the Petition Area. The drainage basin will be designed for a 50-year storm and retain excess storm water runoff. The actual configuration of the drainage retention basin will be determined during the design stage of the Project. An underground drainage system will be constructed to route flows to the drainage retention basin.

122. Due to the topography of lands mauka of the Property, mauka storm water runoff into the Project is minimal. Mauka storm water runoff generally flows towards a natural drainageway to the east and Kailua Gulch to the west. Additionally, the Hanakua ditch located mauka of the Property will also intercept the mauka storm water from the pineapple fields. Thus, no mitigative measures to prevent mauka storm waters entering the Property are needed.

Solid Waste Disposal

123. Based on an assumed population of 600 persons for this Project and the generation of five pounds of solid waste per capita per day, approximately 3,000 pounds or 1.4 tons of solid waste per day will be generated from the Project.

124. The solid waste will be collected by the County of Maui Department of Public Works and Waste Management and disposed of at the Central Maui Sanitary Landfill located in Puunene. This landfill is owned and operated by the County of Maui, and has adequate capacity for the collection of this waste.

125. To reduce impacts on the Central Maui Sanitary Landfill, recycling will be encouraged, possibly through the homeowners' association.

Schools

126. Children from the proposed Project will be able to attend Makawao Elementary School (2-1/2 miles), Kalama Intermediate (4 miles), and King Kekaulike High School (4 miles).

127. The proposed Project is anticipated to generate 21 elementary school students. Makawao Elementary School has the capacity to accommodate these students.

128. The proposed Project is anticipated to generate 18 intermediate school students; however, the Kalama Intermediate School is currently operating over capacity with approximately 1,300 students.

129. King Kekaulike High School is being constructed in phases as the need for new classrooms is generated. This school currently operates five classroom buildings and four specialty

classroom buildings. Approximately 20 high school students are anticipated to be generated by the development.

130. The Department of Education ("DOE") has requested that the Commission include a fair-share condition for school facilities as part of its approval.

Police and Fire Protection

131. Police service for the Upcountry area, that includes Halliwaile, consists of four patrol officers each on three shifts out of the Wailuku police station. Response time to the site in case of emergency is estimated at between five to ten minutes. New residents would be encouraged to establish a Neighborhood Crime Watch for additional security.

132. The Makawao Fire Station, located two and one half miles from the Property, provides fire protection for the Halliwaile area. Backup service would be provided by the Paia (9 miles) or Kahului (9 miles) stations.

Electricity, Telephone and Cable Services

133. Maui Electric Company, Limited ("MECO") has sufficient capacity to provide electric power to the proposed Project. An underground distribution system located within the roadway rights of way is planned according to MECO standards and will be operated and maintained by MECO.

134. GTE Hawaiian Telephone Company will provide service to the proposed Project. Telephone lines will be installed underground and operated and maintained by GTE.

135. TCI of Hawaii, Inc. will provide Cable TV service. The cable lines will also be installed underground and operated by TCI of Hawaii, Inc.

CONFORMANCE TO APPLICABLE DISTRICT STANDARDS

136. Pursuant to Section 205-17(2), HRS, and Section 15-15-77(2), HAR, reclassification of the Property conforms with applicable district standards set forth in Section 15-15-18, HAR, as amended, for determining the boundaries for the Urban district:

a. The Property is contiguous to existing urban areas which contain "city-like" concentrations of people, structures, streets, and urban levels of service. These urban lands are developed with residential homes, Maui Pineapple Company's maintenance yards, a neighborhood commercial area, and a County park. Lands south and east of the Property are classified as Urban under the Land Use Commission's classification system, and are designated Light Industrial, Business/Commercial, Park and Single-Family under the Community Plan, and are zoned Interim under the County Zoning Ordinances.

b. The Project is in close proximity to various centers of trading and employment, including Pukalani (3 1/2 miles), Makawoo (2 1/2 miles), Paia (4 miles), and Kahului (9 miles).

c. Adequate support services such as sewers, water, sanitation, schools, parks, and police and fire protection, are either immediately available to the proposed Project or can be so provided at reasonable costs.

d. The Property is located in an area with sufficient reserve for foreseeable urban growth.

e. The Property consists of satisfactory topography, drainage and soil conditions. The Property is not subject to flooding or tsunami inundation, unstable soil conditions, or other adverse environmental effects.

f. The Property is contiguous with or in close proximity to existing urban areas, and is designated on the Community Plan for single-family use. The proposed Project also conforms to the County of Maui's General Plan.

g. The Property is in an appropriate area for new urban concentration, as it represents an expansion of an existing residential community (Halimaile town), and is designated for single-family residential growth on the Community Plan.

h. The Property is adjacent to or in close proximity to existing urban development.

i. The 63 acres sought to be reclassified by this Petition represents a significant portion of the Halimaile Urban district, however, the proposed reclassification conforms to the Urban District standards in paragraphs (1) TO (5).

j. Urbanization of the Property will not contribute to scattered, spot urban development. The Property is adjacent to an existing residential community and will not contribute toward scattered spot urban development. The Petitioner will develop all additional infrastructure required to service the proposed Project. Public infrastructure and support service will

not be unreasonably burdened by or require any unreasonable investment as a result of the proposed Project.

k. The Property has a gently sloping terrain, with slopes averaging five percent. The Property does not consist of lands having a slope of twenty percent or more.

CONFORMANCE WITH GOALS, OBJECTIVES AND POLICIES OF HAWAII STATE PLAN: RELATIONSHIP WITH APPLICABLE PRIORITY GUIDELINES AND FUNCTIONAL PLANS

137. Pursuant to Section 205-17(1), HRS, and Section 15-15-77(1), HAR, reclassification of the Property conforms to the Hawaii State Plan, Chapter 226, HRS, as amended, with respect to the following objectives and policies:

- a. § 226-5(b)(2): "Encourage an increase in economic activities and employment opportunities on the Neighbor Islands consistent with community needs and desires."

Development of this Project will create housing and recreational opportunities, stimulate the economy during the construction period and, subsequently, enhance County revenue from a significant increase in real property taxes. The Project also will be developed in a manner that will minimize adverse effects on the physical and social environments.

Based on site development costs of \$15 million and approximately \$20.8 million for housing construction, it is estimated that a total of 429 direct and indirect full time jobs will be created over the four to six years construction time period.

- b. § 226-11(b)(3): "Take into account the physical attributes of areas when

planning and designing activities and facilities."

The Petition Area contains satisfactory topography, drainage and is reasonably free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects.

- c. (1) § 226-11(b)(8): "Pursue compatible relationships among activities, facilities, and natural resources."
- (2) § 226-12(b)(5): "Encouraging the design of developments and activities that complement the natural beauty of the islands."
- (3) § 226-13(b)(6): "Encourage design and construction practices that enhance the physical qualities of Hawaii's communities."

The Petitioner considered the Property as an appropriate place for residential development. The objective was to create a community that would compliment the existing Halimaile town in terms of size and location. The Project has been approved in the Community Plan.

- d. (1) § 226-13(b)(7): "Encourage urban developments in close proximity to existing services and facilities."
- (2) § 226-15(b)(1): "Encourage the adequate development of sewerage facilities that complement planned growth."
- (3) § 226-15(b)(2): "Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic."

The proposed Project will be serviced through existing public infrastructure or by systems or services provided or

arranged for by the Petitioner, including a wastewater treatment facility, potable water source and transmission system, roads and drainage systems. The R-2 quality effluent produced by the WWTF is proposed to be reused for irrigation of the roadway landscaping, buffer strips, the drainage retention basin and park through a drip irrigation system. Reuse of the effluent will reduce the demand on the potable water system. The excess biosolids generated at the WWTF are planned to be taken to the County of Maui's co-composting facility for conversion into a marketable compost for landscaping and agricultural uses. Recycling will be encouraged, possibly through the homeowners' association to reduce impacts on the Central Maui Sanitary Landfill.

- f. (1) § 226-19(b)(1): "Effectively accommodate the housing needs of Hawaii's people."
- (2) § 226-19(b)(2): "Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households."
- (3) § 226-19(b)(3): "Increase home ownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing."

The Petitioner intends to market the residential lots within the Property to Maui residents. The proposed Project will assist in providing a balanced housing supply for all economic and social groups on the Island of Maui.

- g. (1) § 226-19(b)(5): "Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other

concerns of existing communities and surrounding areas."

- (2) § 226-19(b)(7): "Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community."

The proposed Project is intended to be a logical expansion of the existing Halimaille town. The number of single-family lots, lot sizes and the proposed site plan for the Project are all intended to complement those presently found in the Halimaille community. The Petitioner is willing to work with the County of Maui to address specific concerns relating to the Project.

- i. § 226-23(b)(6): "Assume the availability of sufficient resources to provide for future cultural, artistic, and recreational needs."

The proposed Project includes the dedication of 10 acres for park uses. The amount of land dedicated represents four times the amount of land required under the County of Maui's park dedication ordinance.

138. Pursuant to Section 205-17(1), MRS, and Section 15-15-77(1), HAR, reclassification of the Property conforms to the following functional plans:

a. State Transportation Functional Plan

A Traffic Impact Assessment Report was prepared to determine what improvements would be needed to provide an efficient and safe movement of traffic near the Project site and on major

regional roadways. The study concluded that a separate left turn lane into the Project site is needed on Halimaile Road.

b. State Historic Preservation Functional Plan
An Archaeological Reconnaissance Survey and historical research was performed to determine whether archaeological or cultural resources of significance were present. The survey found no archaeological sites of significance, and no impacts on archaeological or cultural resources are anticipated. If subsurface archaeological resources are uncovered during construction, the State Historic Preservation Division will be contacted and work will cease until appropriate preservation measures are implemented.

c. State Housing Functional Plan
The Project directly supports the Housing Functional Plan because it will provide reasonably-priced housing opportunities in an excellent location for the resident population.

d. State Conservation Lands Functional Plan
No conservation lands will be affected by this development.

e. State Agriculture Functional Plan
Development of this Project will remove 63 acres from sugarcane production. Removal of this land from agriculture will not have any significant impact on HCs, which cultivates approximately 37,000 acres on Maui. This Project also is consistent with the Single-Family and Park uses identified in the Community Plan Map. The Petitioner will pursue either an amendment to the Community Plan or a modification to the configuration of the

Project in order to conform to the configuration of the Project on the Community Plan Map.

f. State Employment Functional Plan
The goals and objectives of the Employment Functional Plan will be satisfied through the creation of employment during the construction, marketing and sales phases of the Project. The expenditure of approximately \$15 million for the development of the subdivision and \$20.8 million for home construction, will provide a significant infusion of capital into the Maui's economy.

g. State Tourism Functional Plan
The Project is not expected to have any impact on the goals and objectives of the Tourism Functional Plan, as it will not detract from any tourist attractions or adversely impact any scenic qualities of the area.

h. State Recreation Functional Plan
Ten (10) acres of park space will be provided as part of this project. This space will supplement the nearby 5.2-acre Halimaile Park and will contribute significantly to the recreational resources of the region. The public will have easy access to the park space because of its location adjacent to Halimaile Road.

i. State Health Functional Plan
The Project will be developed in accordance with the regulations of the State Department of Health to ensure protection of the environment and public health and safety.

139. Pursuant to Section 205-17(3), HRS, and Section 15-15-77(3), HAR, reclassification of the Property conforms to the following areas of State concern:

- (a) Preservation or maintenance of important natural systems or habitats;
- (b) Maintenance of valued cultural, historical, or natural resources; and
- (c) Maintenance of other natural resources relevant to Hawaii's economy, including, but not limited to, agricultural resources.

The development of the Property will have no significant adverse effects upon agricultural, natural, environmental, recreational, scenic, historic, or other resources of the area.

- (d) Commitment of State funds and resources.

The Petitioner will be providing or arranging for the necessary onsite and additional offsite improvements for the proposed Project. Only minimal impacts upon State funds and resources are anticipated.

- (e) Provisions for employment opportunities and economic development.

The proposed Project is estimated to create a total of 429 direct and indirect full time jobs over the four to six years construction time period, based upon site development costs of \$15 million and approximately \$20.8 million for housing construction.

- (f) Provisions of housing opportunities for all income groups, particularly low, low-moderate, and gap group

Based on 1997 dollars, house and lot sales price are projected to range from \$180,000 to \$270,000. Based on median household income (\$53,600) established by the U.S. Department of

Housing and Urban Development for Maui in 1997, it is anticipated that approximately a third of the homes would be priced to be affordable to persons in the 100% to 120% of median income category, a third would be priced for persons in the 120% to 140% of median income category, and the final third would be priced above the 140% of median income category.

140. Pursuant to Section 205-17(4), HRS, and Section 15-15-77(5), HAR, the Petitioner has made the following representations and commitments:

a. The Petitioner is willing and does intend to provide a potable water source for the Project.

b. The Petitioner is willing and does intend to develop a package-type WWTF to handle all of the effluent produced by the Project.

c. The Petitioner will work with the County of Maui's Department of Public Works and Department of Transportation to improve the right turn lane from Hallimale Road onto Haleakala Highway.

d. If required by the County of Maui, the Petitioner will pursue either an amendment to the Community Plan or a modification to the configuration of the Project in order to conform the Project to the Community Plan.

e. The Petitioner will work with the County of Maui's Planning Department regarding the possible modification of the subdivision layout to a more grid-like pattern of streets.

141. Pursuant to Section 15-15-77(5), HAR, the Petitioner has the necessary economic ability to carry out the representations and commitments relating to the proposed Project.

142. Pursuant to Section 15-15-77(6), HAR, the removal of 63 acres from the Agricultural district (A) will not substantially impair actual or potential agricultural production in the vicinity of the Property, the County of Maui nor the State; and (B) is reasonably necessary for urban growth.

CONFORMANCE WITH COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES
143. The Property is located within the Coastal Zone Management Area, but is not within the Special Management Area as both are defined in Chapter 205A, HRS. The Petition Area is approximately 4.5 miles from the nearest shoreline and will not have any impact either on the Coastal Zone Management Area or Special Management Area. The development of the Project is consistent with various objectives and policies of the Coastal Zone Management Program, as set forth in Chapter 205A, HRS.

144. Due to the Property's inland location, the development of the Project will have no impact upon any coastal recreational resources, historic resources, scenic and open space resources, coastal ecosystems, beaches or marine resources, in accordance with the objectives and policies described in Sections 205A-2(b)(1), (2), (3), (4), (9) and (10), HRS, and Sections 205A-2(c)(1), (2), (3), (4), (9) and (10), HRS.

145. The Property will not be subject to any coastal hazards, as described in Section 205A-2(b)(6) and 205A-2(c)(6), HRS. None of the storm waters or wastewater generated by the

Project will reach or affect the ocean waters or shoreline, consistent with the policies described in Section 205A-2(c)(1)(B)(vi), HRS. In accordance with Section 205A-2(c)(2)(A), HRS, an archaeological review and analysis of the Property has been performed, disclosing the absence of any archaeological resource of significance.

146. The development of the proposed Project is not expected to require any extraordinary grading or cutting of the land, or have any material impact on existing public views to and along the shoreline, and thus conforms to the policies expressed in Section 205A-2(c)(3)(B), HRS.

147. Finally, the proposed Project implements the policy set forth in Section 205A-2(c)(3)(D), HRS, to "Encourage those developments which are not coastal dependent to locate in inland areas."

INCREMENTAL DISTRICTING

148. The Project is intended to be completed within 10 years from the Commission's action.

RULING ON PROPOSED FINDINGS OF FACT

Any of the proposed findings of fact submitted by the Petitioner or the other parties to this proceeding not already ruled upon by the Land Use Commission by adoption herein, or rejected by clearly contrary findings of fact herein, are hereby denied and rejected.

Any conclusions of law herein improperly designated as a finding of fact should be deemed or construed as a conclusion of law; any findings of fact herein improperly designated as a

conclusion of law shall be deemed or construed as a finding of fact.

CONCLUSION OF LAW

Pursuant to Chapter 205, Hawaii's Revised Statutes, and Chapter 15-15, Hawaii's Administrative Rules, the Land Use Commission finds upon the clear preponderance of the evidence that the proposed boundary amendment does conform to the standards established for the Urban District by the State Land Use District Regulations, is reasonable, and is not violative of Section 205-2, Hawaii's Revised Statutes, as amended; and is consistent with the Hawaii State Plan, as set forth in Chapter 226, Hawaii's Revised Statutes, as amended.

ORDER

IT IS HEREBY ORDERED that the Property, consisting of approximately 62.994 acres of land in the State Land Use Agricultural District situate at Halimaile, Makawao, Island of Maui, County of Maui, State of Hawaii, identified as Tax Map Key No. 2-5-03: portion of 10, and approximately shown on Exhibit "A", attached hereto and incorporated herein, shall be and is hereby reclassified to the State Land Use Urban District and the State Land Use District Boundaries shall be amended accordingly.

IT IS FURTHER ORDERED that the reclassification of the Property from the Agricultural District to the Urban District shall be subject to the following conditions:

1. Petitioner shall provide affordable housing opportunities for low, low-moderate, and moderate income residents in the State of Hawaii to the satisfaction of the County of Maui.

The County of Maui shall consult with the State Housing and Community Development Corporation of Hawaii prior to its approval of the Petitioner's affordable housing plan. The location and distribution of the affordable housing or other provisions for affordable housing shall be under such terms as may be mutually agreeable between the Petitioner and the County of Maui.

2. Petitioner shall contribute its fair share to the development, funding, and/or construction of public school facilities as determined by and to the satisfaction of the State Department of Education (DOE). Petitioner and the DOE shall submit a written agreement on this matter prior to the Petitioner obtaining approval for County zoning.

3. Petitioner shall fund and construct adequate wastewater transmission and disposal facilities for the proposed development, as determined by the County of Maui Department of Public Works ("DPW") and the State Department of Health ("DOH").

4. Petitioner shall participate in the pro-rata funding and construction of local and regional transportation improvements and programs necessitated by the proposed development in designs and schedules accepted and determined by the State Department of Transportation, and the County of Maui DPW.

5. Petitioner, developer and/or landowners of the affected properties shall fund and construct adequate civil defense measures as determined by the County and State Civil Defense agencies.

6. Should any previously unidentified burials, archaeological or historic sites such as artifacts, marine shell

concentrations, charcoal deposits, or stone platforms, pavings or walls be found, the Petitioner, developers and/or landowners of the affected properties shall stop work in the immediate vicinity and the State Historic Preservation Division of the Department of Land and Natural Resources ("SHPD") shall be notified immediately. Subsequent work shall proceed upon an archaeological clearance from the SHPD when it finds that mitigative measures have been implemented to their satisfaction.

7. Petitioner shall participate in an air quality monitoring program as specified by the DOH. Petitioner shall notify all prospective buyers of property of the potential odor, noise and dust pollution resulting from surrounding Agricultural District land. Petitioner shall notify all prospective buyers of property that the Hawaii Right-to-Farm Act, Chapter 165, HRS, limits the circumstances under which pre-existing farm activities may be deemed a nuisance.

8. Petitioner shall fund the design and construction of drainage improvements required as a result of the development of the Petition Area to the satisfaction of the DOH, Natural Resources Conservation Service of the U.S. Department of Agriculture, and County agencies.

9. Petitioner shall participate in the funding and construction of adequate water source, storage, and transmission facilities and improvements to accommodate the proposed Project. Water Transmission facilities and improvements shall be coordinated with and approved by appropriate State and County agencies. Petitioner shall coordinate with the Department of Water Supply and

provide the necessary information to facilitate the inclusion of the Project in the Water Use and Development Plan.

10. Petitioner shall retain the buffer strips as depicted in the Petitioner's preliminary site plan to mitigate adverse impacts from the agricultural activities in the surrounding area.

11. Petitioner shall conduct seasonal surveys during late winter/early spring (when water is present in the reservoir) to determine if the reservoir is being used as nesting habitat by stilts or other endangered species/subspecies of waterbirds (e.g., Hawaiian Coot, or Hawaiian Gallinule. Surveys should be conducted for at least two years. The surveyors should look for evidence of increased use of the area, as well as predation by dogs and cats. Should findings detect increased disturbance or predation to endangered waterbirds, the Petitioner shall provide mitigation measures as required by the U.S. Fish and Wildlife Service.

12. Petitioner shall develop the Property in substantial compliance with the representations made to the Land Use Commission. Failure to so develop the Property may result in reversion of the Property to its former classification, or change to a more appropriate classification.

13. Petitioner shall give notice to the Land Use Commission of any intent to sell, lease, assign, place in trust, or otherwise voluntarily alter the ownership interests in the Property, prior to development of the Property.

14. Petitioner shall timely provide without any prior notice, annual reports to the Land Use Commission, the Office of

Planning, and the County of Maui Planning Department in connection with the status of the subject Project and Petitioner's progress in complying with the conditions imposed herein. The annual report shall be submitted in a form prescribed by the Executive Officer of the Land Use Commission.

15. The Land Use Commission may fully or partially release the conditions provided herein as to all or any portion of the Property upon timely motion and upon the provision of adequate assurance of satisfaction of these conditions by the Petitioner.

16. Within seven (7) days of the issuance of the Land Use Commission's Decision and Order for the subject reclassification, the Petitioner shall (a) record with the Bureau of Conveyances a statement that the Property is subject to conditions imposed herein by the Land Use Commission in the reclassification of the Property, and (b) shall file a copy of such recorded statement with the Land Use Commission.

17. Petitioner shall record the conditions imposed herein by the Land Use Commission with the Bureau of Conveyances pursuant to Section 15-15-92, HAR.

Done at Honolulu, Hawaii, this 22nd day of October 1998,
per motion on October 8, 1998.

LAND USE COMMISSION
STATE OF HAWAII

By (excused)
HERLE A. K. KELAI
Chairperson and Commissioner

By *Lawrence K.C. Ung*
LAWRENCE K.C. UNG
Vice Chairperson and Commissioner

By *P. Roy Catalani*
P. ROY CATALANI
Commissioner

By *Rupert K. Chun*
RUPERT K. CHUN
Commissioner

By *Pavan Desai*
PAVAN DESAI
Commissioner

By *Isaac Fiesta, Jr.*
ISAAC FIESTA, JR.
Commissioner

By *M. Casey Jarman*
M. CASEY JARMAN
Commissioner

By (absent)
HERBERT S.K. KAOPUA, SR.
Commissioner

By *Peter Yukimura*
PETER YUKIMURA
Commissioner

Filed and effective on
October 22, 1998

Certified by:
Peter Yukimura
Executive Officer

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

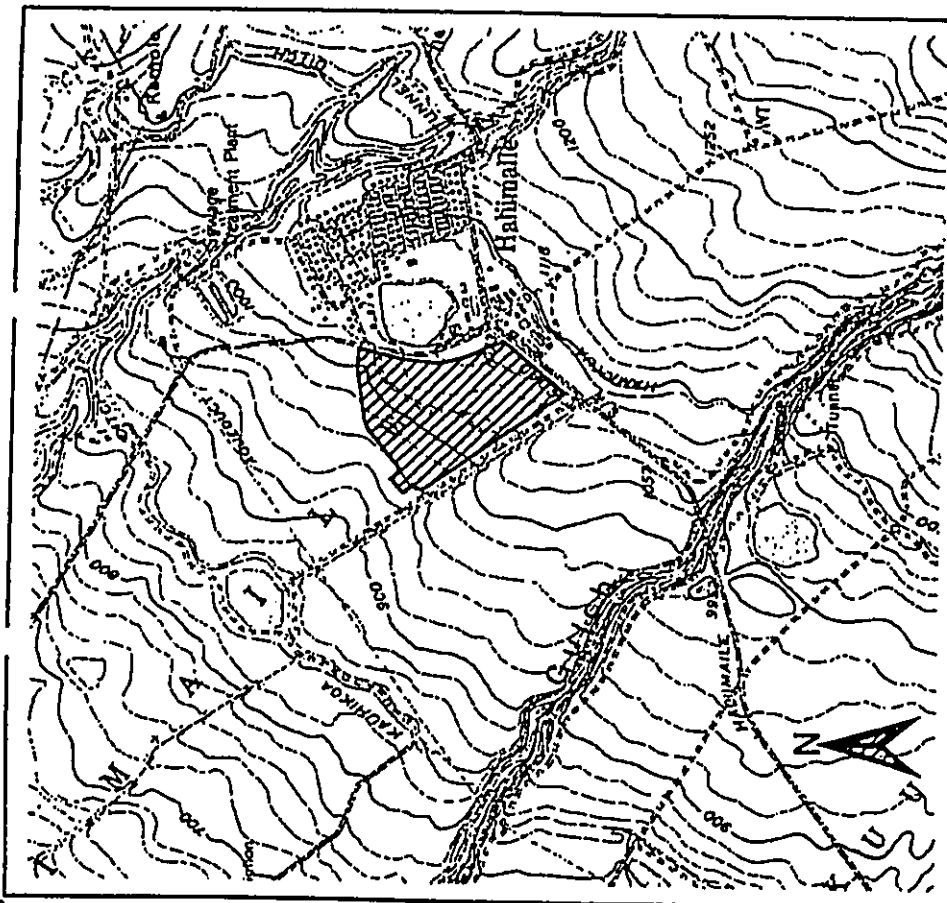
In the Matter of the Petition of
A&B PROPERTIES, INC.,
DOCKET NO. A98-723
CERTIFICATE OF SERVICE

To Amend The Agricultural Land Use District Boundary Into The Urban Land Use District For Approximately 62.994 Acres At Halimaile, Makawao, Island of Maui, County of Maui, Tax Map Key No. 2-5-05: portion of 10.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Findings of Fact, Conclusions of Law, and Decision and Order was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by certified mail:

- DEL. **BRADLEY J. MOSSMAN, Director**
Office of Planning
P. O. Box 2359
Honolulu, Hawaii 96804-2359
- CERT. **LISA M. NUYEN, Director of Planning**
Planning Department, County of Maui
250 South High Street
Wailuku, Hawaii 96793
- CERT. **JEFFREY SCHMIDT, ESQ.**
Corporation Counsel
Office of the Corporation Counsel
County of Maui
200 South High Street
Wailuku, Hawaii 96793
- CERT. **BENJAMIN MATSUBARA, ESQ., Attorney for Petitioner**
Matsubara Lee & Kotake
888 Hiliilani Street, Ste. 800
Honolulu, Hawaii 96813



A98-723 / A&B PROPERTIES, INC.

LOCATION MAP

TAX MAP KEY: 2-5-03: por. 10
HALIIMAILE, MAKAWAO, MAUI


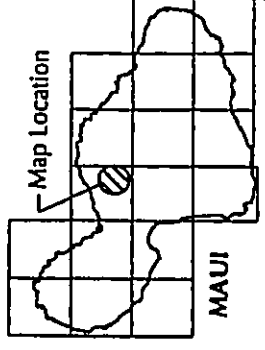
 APPROVED AREA

EXHIBIT "A"

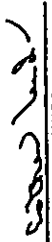
Map Location



MAUI

CERT. Stanley M. Kuriyama, Executive Vice President
A & B Properties, Inc.
P.O. Box 3440
Honolulu, Hawaii 96801-3440

DATED: Honolulu, Hawaii, this 22nd day of October 1998.


ESTHER UEDA
Executive Officer

Appendix C

**OFFICE OF PLANNING'S TESTIMONY
IN SUPPORT OF THE PETITION**

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

DOCKET NO. A98-723

In the Matter of the Petition of
A&B PROPERTIES, INC.
To Amend the Agricultural District Boundary
to Reclassify Approximately 63 Acres,
TRMK 2-5-03; POC 10 at Haliimaile,
Island and County of Maui, State of Hawaii
into the Urban District

OFFICE OF PLANNING'S TESTIMONY
IN SUPPORT OF THE PETITION

In accordance with the State Land Use Commission Rules, the Office of Planning (OP) recommends approval with conditions of the Petition by A&B Properties, Inc. (Petitioner), to reclassify approximately 63 acres, Tax Map Key No. 2-5-03; pcc. 10, at Haliimaile, Island and County of Maui, State of Hawaii (Petition Area) from the Agricultural to the Urban Land Use District.

OP's position for approval is based on the following considerations.

GENERAL INFORMATION

The Petitioner is a Hawaii Corporation with its principal office and mailing address at 822 Bishop Street, Honolulu, Hawaii 96813. The Petition Area is owned in fee simple by A & B-Hawaii, Inc., a Hawaii corporation. The Petitioner is a wholly owned subsidiary of A & B Hawaii, Inc., which in turn is a wholly-owned subsidiary of Alexander & Baldwin, Inc. a Hawaii Corporation. A&B-Hawaii has given written authorization to the Petitioner to file this Petition.

DESCRIPTION OF THE AREA

The Petition Area is located adjacent to the town of Haliimaile, Maui, a small existing urban area, located on the slopes of Haleakala. The Petition Area is located about 9 miles from Kahului, about 4 miles from Paia, about 3 miles from Pukalani, and about 2.25 miles from Makena. The Petition Area is contiguous to the Urban District along the south and east sides of the property, and to the Agricultural District on the north and west sides.

PETITIONER'S PROPOSED USE OF THE PROPERTY

The Petitioner proposes to develop approximately 196 single-family residential lots on 45 acres, for a density of about 4.4 lots per acre. The remaining 18 acres will be used for support facilities, such as a wastewater treatment plant (1 acre), a drainage basin with a buffer/maintenance road (7 acres) and 10 acres will be used for park space. The total project will consist of approximately 63 acres. However, we note that in Appendix A, Market Assessment for the Proposed Haliimaile Residential Expansion, the land uses shown in Exhibit 1-B are as follows: Residential 36.0 acres; Park 10 acres; Roads 8.8 acres; Drainage 7.2 acres; STP 1 acre; Buffer 5.1 acres, for a total of 68.1 acres.

PETITIONER'S FINANCIAL CAPABILITY TO UNDERTAKE THE PROPOSED DEVELOPMENT

According to the Petition and Petitioner's financial statement (Exhibit 8) for 1995 and 1996, the Petitioner's pre-tax income in 1996 was \$12.9 million, with total assets of \$92.4 million and shareholder's equity of \$70.1 million. The Petition indicates that the development of the Subject Property will be financed from internally generated funds.

NEED FOR THE PROPOSED DEVELOPMENT

According to the Petitioner, there is a market demand for the single family residential lots to be developed on the Petition Area. Petitioner's Exhibit 7, Appendix A, indicates that the market is currently slow, but sales are accelerating for competitively priced products. The market appears to be correcting itself by lowering prices to encourage sales. The study indicates

OP
EXHIBIT NO. 1

that by the time this project is ready for sales, much of the current inventory will have been sold.

STATE AND COUNTY PLANS AND PROGRAMS

The Petition Area is within the State Agricultural District. Urbanization is generally consistent with the County's Makawao-Pukalani-Kula Community Plan, which was adopted in July 1996. The Plan designates this area for single family residential and park sites, which is consistent with the proposal.

IMPACTS UPON THE RESOURCES OF THE AREA

Agricultural Resources

The Petition Area is situated on gently sloping land, which is currently in sugar cane cultivation. The soils on the Petition Area are Halimaile silty clay (HhB, HhC), 3 to 7, and 7 to 15 percent slopes. On the HhB lands, the erosion hazard is slight, runoff is slow and permeability is moderately rapid. For HhC lands (7 to 15 percent slopes) the runoff is medium and the erosion hazard is moderate. According to the State Department of Agriculture (DOA), the average yields for sugar cane and pineapple from these soil classifications are considered to be high, and are about 12 to 15 and 35 to 45 tons per acre respectively. Under the Agricultural Lands of Importance (ALISH) system, the Petition area is classified as Prime and Other Lands of Importance to the State. Approximately half of the Petition area is within each classification. According to the Detailed Land Classification-Island of Maui, the Overall Productivity Rating is C21 without irrigation or moderate productivity. However, a letter dated April 16, 1998, from the DOA indicates that the Petition Area is drip irrigated, and the Overall Productivity Rating would be A, reserved for the most productive land. The DOA indicates the following:

"Hawaiian Commercial and Sugar General Manager Steve Holliday said the loss of the 63 acres will not adversely affect the company. He also noted that affected field irrigation lines will be realigned, a 40-foot buffer will be separating the new residential area from the surrounding fields, and no heavy equipment traffic would be affected.

The proposed project almost doubles the size of Halimaile village which itself is located in the middle of pineapple and sugarcane fields.

Did the Petitioner consider alternative sites for the project which avoid prime agricultural lands and/or lands currently in cultivation?

Also, does the Petitioner have plans to urbanize more agricultural land around Halimaile in addition to what is being sought for reclassification?

While the project may not materially affect the economic viability of HC&S, we would prefer that reclassification of actively cultivated and/or prime agricultural lands be avoided. We prefer that lands within and immediately adjacent to larger Urban District areas such as Paia, Makawao, Pukalani, Waiuku, and Kahului should be considered for development prior to Halimaile.

Groundwater Resources

The State Commission on Water Resource Management (CWRM) indicates by letter dated April 23, 1998, that the Petitioner should coordinate with the county government to incorporate this project into the county's Water Use and Development Plan. Further, a Well Construction Permit and/or a Pump Installation Permit from the CWRM would be required before groundwater is developed as a source of supply for the project.

Petitioner's Exhibit 7 indicates that the proposal will not have an adverse impact on groundwater and aquifer resources from the drainage retention basin or from the wastewater effluent. The wastewater effluent will be treated to DOH Standards and used for landscaped areas through a drip irrigation system. The Petition states that infiltration basins will be used as a backup for effluent disposal. Like the drainage retention basin, the effluent will evaporate or be absorbed by the soil, prior to reaching the aquifer.

The State Department of Health indicates that they have no objections to the use of a private, package-type sewage treatment plant, since all wastewater plants must conform to applicable guidelines and administrative rules for wastewater systems and reuse and treatment of reclaimed wastewater.

Archaeological Resources

An archaeological inventory survey and historical research was performed by Cultural Surveys Hawaii in May 1997. No archaeological sites of significance were found on or near the property.

The State Historic Preservation Division (SHPD) indicates by letter dated June 17, 1998:

"Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field check was conducted of the subject property."

It appears that the field methods employed in this survey were adequate to locate all historic sites in the subject property, although the precise limits of the survey were not portrayed on the project area map. Historical background research and a review of previous archaeology are adequate, but no synthesis of ahupua'a settlement patterns and survey expectations was presented. While no historic sites were encountered during the survey due to the effects of modern agriculture, no discussion of the age of the irrigation ditches recorded during the survey was presented, nor were any recommendations presented based on these results. The report will need to be revised to address these and other concerns noted in Attachment 1, in order to be considered an acceptable report.

However, based on the negative findings, we can conclude the historic preservation review of the project. We find that no significant sites are present and that the proposed undertaking will have 'no effect' on such sites, with the condition that an acceptable revised report will be submitted to our office."

Flora and Fauna

According to the Petitioner's botanical survey, many of the plants on the Petition

Area are introduced or alien species. There were three indigenous plants found that are not listed, proposed or candidate threatened or endangered species.

A letter from the United States Department of the Interior Fish and Wildlife Service dated June 12, 1998 states:

"Based on the project report, a pair of endangered Hawaiian Stilts (*Himantopus mexicanus knudseni*), noted as Black-necked Stilts, (*Himantopus mexicanus*) were seen foraging at the reservoir. This observation was made in April 1997, which would have been during the peak breeding season of this species of waterbird. However, no nests or subadult birds were reportedly observed.

The Service feels that the Planning, Engineering and Environmental Report does not adequately address the long-term impacts that this project will have on any Hawaiian stilts present at the adjacent reservoir. Possible impacts include increased human use of the reservoir area and an increase in the number of predators such as dogs and cats. It is possible that stilts will utilize this reservoir for nesting during some years. Therefore, the proposed land use change will facilitate events that have the potential to impact the endangered Hawaiian Stilt.

The Service recommends that seasonal surveys be conducted during late winter/early spring, (when water is present in the reservoir) to determine if the wetland area is being used as nesting habitat by stilts or other endangered species/subspecies of waterbirds (e.g., Hawaiian Coot or Hawaiian Gallinule). Surveys should be conducted 2-3 times per year, at 1-2 month intervals depending on persistence of water in the reservoir (approximately December through May). Surveys should be conducted for at least two years. The surveys should look for evidence of increased use of the area, as well as predation by

dogs and cats. Should findings detect increased disturbance or predation to endangered waterbirds, fencing and other appropriate mitigation measures should be considered."

Scenic and Visual Resources

The Petition Area is adjacent to an existing reservoir. The setting for the Petition Area and the surrounding areas is, despite the adjacent Urban Land Use District, a rural pastoral environment. There are mountain and ocean views from Halliimaile Road and the Petition Area. The Petitioner plans to site a 10-acre park adjacent to Halliimaile Road, and build single family dwellings on land which gradually slopes towards the ocean. The park may provide a visual buffer along Halliimaile Road, and most of the existing views from the Halliimaile village may not be affected because the reservoir and proposed park will be situated between the existing and proposed areas. The older neighborhood of Halliimaile town will be visible from the lower portions of the new development.

Socio-Economic Impacts

According to the Petitioner, the house and lot sale prices could range from \$180,000 to \$270,000 in 1997 dollars and lot-only prices could range from \$90,000 to \$140,000.

The Housing Finance and Development Corporation, in a letter dated May 6, 1998,

states:

"Policies A(3) and B(3) of the State Housing Functional Plan seek to ensure that (1) housing projects and (2) projects which impact housing provide a fair share/adequate amount of affordable homeownership or rental housing opportunities. Presently, it is the Governor's policy to assign responsibility for determining and enforcing affordable housing requirements to the counties in which the proposed project is located."

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

Highway and Roadway Services and Facilities

The State Department of Transportation indicates by letter dated June 17, 1998, the

following:

Hoolimale Place. As stated in the Petition, the source water will be obtained from our Kamole Water Treatment Facility."

The Department of Hawaiian Home Lands indicated that they have some property interests in the area, and have concerns regarding water availability to facilitate development of their lands.

Wastewater Treatment and Disposal

The Petitioner proposes to construct a private sewage treatment plant (STP) on a one acre site makai of the single family dwellings and drainage retention areas. Effluent will be used to irrigate buffer strips and roadway landscaping. Absorption fields within the STP site will be used as an emergency measure. Noxious odors will be minimized with a property maintained STP, and a large buffer strip between the STP and the residential areas. Wind direction should be discussed.

Noise Impacts

According to the Petitioner, noise impacts to the development may occur from agricultural operations in the area. The Petitioner plans to place 40-foot wide buffer strips to mitigate noise impacts from agricultural areas.

Air Quality

The State Department of Health (DOH) and the State Department of Agriculture (DOA) had concerns regarding the impact sugar cane harvesting and other agricultural activities would have on the air quality of the Petition Area. The DOH indicated by letter dated June 2, 1998, that a study should be considered to address these potential impacts on air quality. The DOA had the following comments:

"We recommend that potential lot buyers be forewarned of the dust, noise, and odors that result from normal daily agricultural activities and that state law (Chapter 165, HRS) limits the circumstances under which farming activities can be considered a nuisance."

"The subject project is expected to have an impact at the intersection of Haleakala Highway and Haliimale Road. Haleakala Highway widening is under design, and construction is expected to begin around 2001. The developer should be required to coordinate with our Highways Division and participate in the costs for intersection improvements for Haleakala Highway and Haliimale Road.

Plans for construction work within the State highway right-of-way must be submitted for our review and approval."

The Department of Public Works and Waste Management (DPW/WM), sent a letter dated May 13, 1998, indicating the following.

"All roads within the subdivision shall be improved to County standards to include, but not limited to, pavement widening, construction of curb, gutter, and sidewalk, street lights and relocation of utilities underground.

A separate left-turn storage lane shall be constructed on Haliimale road at its intersection for this project as approved by the Department of Public Works and Waste Management, Engineering Division. A separate right-turn lane (acceleration lane) shall be constructed on Haleakala Highway with its intersection with Haliimale Road. Other improvements may be needed on Haliimale Road at the time the project is built if the traffic is greater than presently anticipated."

Water Service

The Petitioner indicates that they will develop their own water wells for potable water. Their studies indicate that adequate water wells can be developed in the area to service the proposed development.

By letter dated May 12, 1998, the County Department of Water Supply indicates that "the project is in the Upcountry area affected by the Shortage of Water Source Capacity Affecting Upcountry Areas" dated March 16, 1993. During the term of the shortage condition, measures include recommendations for denial of subdivision applications and building permit applications. These restrictions apply to the DWS water system and are therefore applicable to the domestic needs for this project. The applicant will be subject to the current standards, rules and regulations of the Department of Water Supply at the time of development. Currently, there is an existing 8 inch (EW8") waterline which fronts the project along Haliimale and ends just past

Drainage

The Petitioner proposes to build a drainage retention basin, approximately 7.2 acres, makai of the single family dwellings. The Department of Public Works and Waste Management, by letter dated May 13, 1998, indicates that the proposed project does not conflict with their programs and policies for drainage. "A drainage report and an erosion control Best Management Practices (BMP) plan shall be submitted with the construction plans for review and approval." They note that calculations for drainage facilities on the site were based on a 50-year storm.

By letter dated April 20, 1998, the Natural Resources Conservation Service indicates that "drainage outlets for the lands above Hana Highway from Spreckelsville to Kuan should be evaluated prior to any land use changes."

The Department of the Army, U.S. Army Engineer District, Corps of Engineers, indicated by letter on April 10, 1998, that a determination for a DA permit could not be made until a site inspection is conducted.

School Facilities

The Department of Education (DOE) indicates by letter dated April 13, 1998, that the proposed development will have an impact on school facilities in the area as shown in the table below. The DOE recommends that the Petitioner contribute to the development of school facilities.

School	1997 Enrollment Information		Additional Students from Development
	Enrollment	Capacity	
Makawao Elementary	636	739	41
Kahala Intermediate	1,298	1,098	18
King Kekaulike High	1,030	1,102	20

Civil Defense

By letter dated April 9, 1998, the Department of Defense, Office of the Director of Civil Defense, indicates that the proposed development is not within an area currently covered by existing warning devices (sirens and simulators), and so the Department "requests that the developer install a siren to help alert residents of an impending or actual event that threatens the

subdivision. This siren must be solar powered, have a minimum output of 121 dB and be compatible with the existing civil defense siren system for Maui County. The proposed siren requires a 250-foot radius buffer zone in which there is no residential building."

CONFORMANCE WITH LAND USE COMMISSION RULES AND THE HAWAII STATE PLAN

The proposed reclassification is in general conformance to 15-15-18 of the Land Use Commission Rules, standards for determining "U" Urban District boundaries.

The proposed reclassification will be in general conformance with the goals, objectives and policies of the Hawaii State Plan, Chapter 226, HRS, if the proposed conditions for approval are met.

(226-5) Objectives and policies for population.

(b)(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.

(226-15) Objectives and policies for facility systems-solid and liquid wastes.

(b)(1) Encourage the adequate development of sewerage facilities that complement planned growth.

(b)(2) Encourage re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.

(226-16) Objectives and policies for facility systems-water.

(b)(1) Coordinate development of land use activities with existing and potential water supply.

(226-17) Objectives and policies for facility systems-transportation.

(b)(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties.

(226-19) Objectives and policies for socio-cultural advancement-housing.

(b)(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, livable homes located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals.

(226-21) Objectives and policies for socio-cultural advancement-education.

(b)(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

ANALYSIS

The Petition Area is adjacent to the small town of Halliimalie, which is within the Urban District. It is partially separated from existing development by a large reservoir. We note that the proposed urban expansion was part of the County of Maui's recent update of the Makawao-Pukalani-Kula Community Plan. While OP does not object to the proposed reclassification, we are concerned about the impact to agricultural operations, the existing residents of Halliimalie Town, runoff to the reservoir, and the rural character of the area. The Department of Agriculture would prefer that other lands adjacent to larger urban areas, such as Paia, Makawao, Pukalani, etc., be developed prior to Halliimalie. Irrigation of these lands has upgraded the Land Study Bureau Classification to A, and according to the Agricultural Lands of Importance to the State of Hawaii (ALISH) prime lands are within the Petition Area. The Petitioner should address these and other issues, such as water supply, drainage, school facilities, civil defense, and transportation.

In addition, the Petitioner should clarify whether the buffer strips along the perimeter of the development are within the Petition Area. Petitioner has represented that these buffer strips will mitigate adverse impacts from the agricultural activities in the surrounding area. The Petitioner should also clarify whether a permit from the Department of the Army Corps of Engineers is required for drainage improvements and modifications.

Further, Petitioner is a major landowner in the Central Maui region and has been involved in land transactions, special permits and LUC petitions in the region, the most recent being the Petition by Maui Electric Co., Ltd. for the Wana Generating Station (LUC Docket No. A97-722). The lands immediately surrounding the site are owned by Alexander & Baldwin-Hawaii. The Petitioner should discuss the long-range plans for Central Maui to include the Upcountry areas in terms of agriculture, infrastructure, and future plans for urban development.

RECOMMENDATION

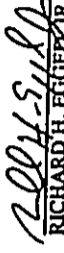
Based on the foregoing information, the Office of Planning recommends that the Petition to reclassify approximately 63 acres, TMK: 2-5-03: Por. 10, at Halliimalie, Island and

County of Maui, Hawaii, from the Agricultural to the Urban District, be approved subject to the following conditions:

1. Petitioner shall provide affordable housing opportunities for low, low-moderate, and gap group income residents of the State of Hawaii to the satisfaction of the County of Maui. The location and distribution of the affordable housing or other provisions for affordable housing shall be under such terms as may be mutually agreeable between the Petitioner and the County of Maui.
2. The Petitioner shall contribute to the development, funding, and/or construction of public school facilities as determined by and to the satisfaction of the State Department of Education (DOE). The Petitioner and the DOE shall submit a written agreement on this matter prior to the Petitioner obtaining approval for county zoning.
3. Petitioner shall fund and construct adequate wastewater transmission and disposal facilities, as determined by the County of Maui Department of Public Works (DPW) and the State Department of Health (DOH).
4. Petitioner shall participate in the pro-rata funding and construction of local and regional regional transportation improvements and programs necessitated by the proposed development in designs and schedules accepted and determined by the State Department of Transportation, and the County of Maui DPW.
5. The Petitioner, developers and/or landowners of the affected properties shall fund and construct adequate civil defense measures as determined by the County and State Civil Defense agencies.

- amended to reflect changes in water demand forecasts and in water development plans to supply the proposed project.
12. Petitioner shall retain the buffer strips as depicted in the Petitioner's preliminary site plan to mitigate adverse impacts from the agricultural activities in the surrounding area.
13. Petitioner shall conduct seasonal surveys to the satisfaction of the U.S. Fish and Wildlife Service to determine if the wetland area (reservoir) is being used as nesting habitat by stilts or other endangered species/subspecies of waterbirds (e.g., Hawaiian Coot, or Hawaiian Gallinule) and shall provide mitigation measures as required by the U.S. Fish and Wildlife Service.
6. Should any previously unidentified burials, archaeological or historic sites such as artifacts, marine shell concentrations, charcoal deposits, or stone platforms, pavings or walls be found, the Petitioner, developers and/or landowners of the affected properties shall stop work in the immediate vicinity and the State Historic Preservation Division of the Department of Land and Natural Resources (SHPD) shall be notified immediately. Subsequent work shall proceed upon an archaeological clearance from the SHPD when it finds that mitigative measures have been implemented to their satisfaction.
7. The Petitioner shall participate in an air quality monitoring program as specified by the State Department of Health.
8. The Petitioner shall notify all prospective buyers of property of the potential odor, noise and dust pollution resulting from surrounding Agricultural District land.
9. The Petitioner shall notify all prospective buyers of property that the Hawaii Right-to-Farm Act, Chapter 165, Hawaii Revised Statutes, limits the circumstances under which pre-existing farm activities may be deemed a nuisance.
10. Petitioner shall fund the design and construction of drainage improvements required as a result of the development of the Petition Area to the satisfaction of the State Department of Health, Department of Land and Natural Resources and County agencies.
11. Petitioner shall participate in the funding and construction of adequate water source, storage, and transmission facilities and improvements to accommodate the proposed project. Water transmission facilities and improvements shall be coordinated and approved by appropriate State and County agencies. The County's Water Use and Development Plan shall be

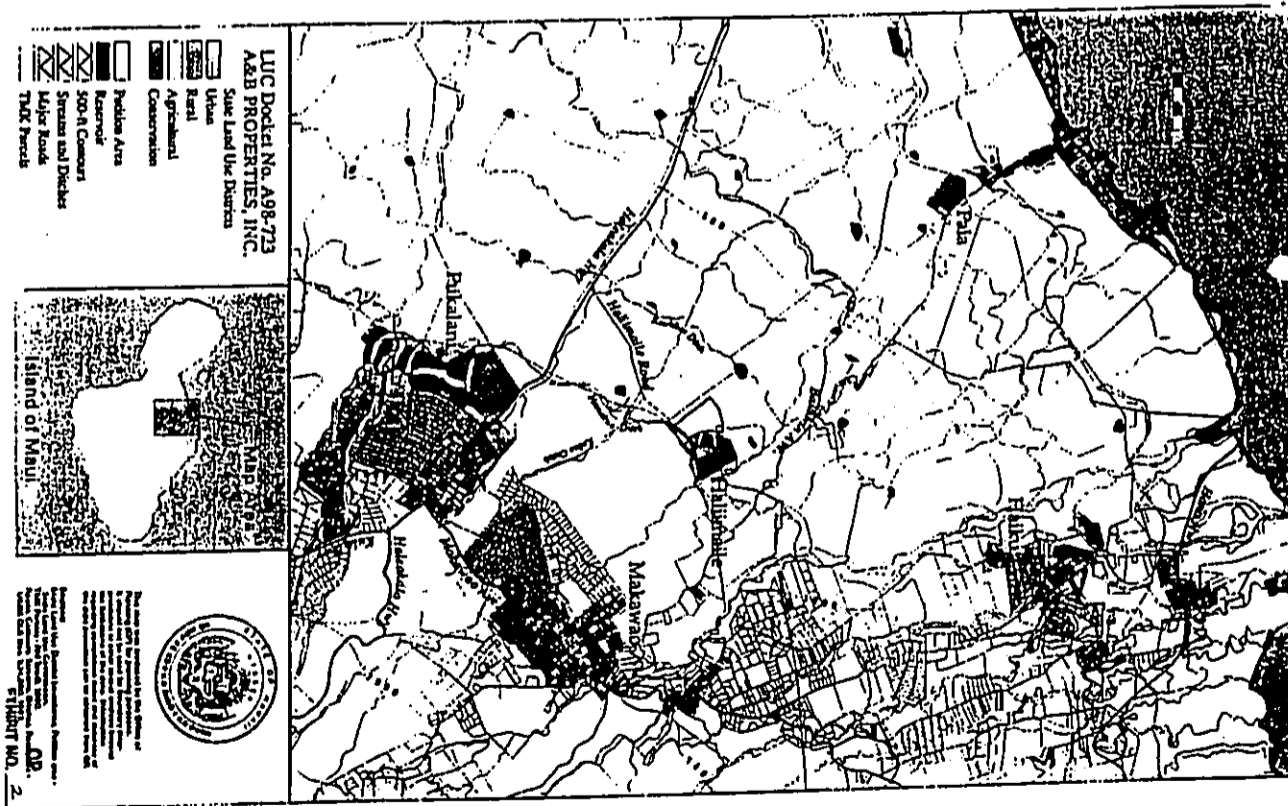
DATED: Honolulu, Hawaii, this 25th day of June, 1998.


 RICHARD H. EGGERT, JR.
 Director, Office of Planning
 State of Hawaii

DOCKET NO./PETITIONER: A98-723/A&B PROPERTIES, INC.
 PARTY: OFFICE OF PLANNING (OP)

LIST OF EXHIBITS

EXHIBIT NUMBER	DESCRIPTION	PARTY: OBJECTIONS	ADMT
1	Office of Planning Testimony		
2	Map of Petition Area		



Appendix D

TESTIMONY OF THE MAUI PLANNING DEPARTMENT

7 Makamaka file

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BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the matter of the Petition of)
A&B PROPERTIES, INC.,) Docket No. A98-723
A Hawaii Corporation,) A&B PROPERTIES, INC.,
To Reclassify approximately 62.994 Acres)
of land currently in the Agricultural District)
into the Urban District for Residential Units,)
Park, Drainage Basin, Wastewater Treatment)
Facility at Haliimaile, Makawao District)
Island of Maui. IMK 2-5-003:pol.10)

TESTIMONY OF THE MAUI PLANNING DEPARTMENT

The County of Maui Planning Department (hereinafter referred to as "MPD") recommends approval of the petition by A&B Properties, Inc., (hereinafter referred to as "Petitioner"), to reclassify approximately 62.994 acres at Tax Map Key 2-5-003:por. 10 (hereinafter referred to as "Property"); Haliimaile, Maui, Hawaii, from the Agriculture District to the Urban District.

APPLICABLE REGULATIONS:

Standards for reviewing a Land Use Commission Urban District Boundary Amendment are found under Title 15, Subtitle 3 State Land Use Commission, Chapter 15 Land Use Commission Rules, Subchapter 2, SS 15-15-18 of the Hawaii Administrative Rules as follows:

- (1) It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban level of services and other related land uses;
- (2) It shall take into consideration the following specific factors:
 - (A) Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;
 - (B) Substantiation of economic feasibility by the petitioner;
 - (C) Proximity to basic services such as sewers, transportation systems, water, sanitation, schools, parks, and police and fire protection; and
 - (D) Sufficient reserve areas for urban growth in appropriate locations based on a ten year projection;
- (3) It shall include lands with satisfactory topography and drainage and reasonably free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects;
- (4) In determining urban growth for the next ten years, or in amending the boundary, land contiguous with the existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans;
- (5) It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans;
- (6) It may include lands which do not conform to the standards in paragraphs (1) to (5);

- (A) When surrounded by or adjacent to existing urban development; and
- (B) Only when those lands represent a minor portion of this district:
- (7) It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services;
- (8) It may include lands with a general slope of twenty percent or more which do not provide open space amenities or scenic values if the commission finds that those lands are desirable and suitable for urban purposes and that official design and construction controls are adequate to protect the public health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

Standards for reviewing a Land Use Commission Urban District Boundary Amendment *Decision-making Criteria* are found under Title 15, Subtitle 3 State Land Use Commission, Chapter 15 Land Use Commission Rules, Subchapter 8, SS 15-15-77 of the Hawaii Administrative Rules as follows:

- (a) The commission shall not approve an amendment of a land use district boundary unless the commission finds upon the clear preponderance of the evidence that the proposed boundary amendment is reasonable, not violative of section 205-2, HRS, and consistent with the policies and criteria established pursuant to Sections 205-16, 205-17 and 205A-2, HRS.
- (b) In its review of any petition for reclassification of district boundaries pursuant to this chapter, the commission shall specifically consider the following:
 - (1) The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawaii State Plan and relates to the applicable priority guidelines of the Hawaii State Plan and adopted functional plans;
 - (2) The extent to which the proposed reclassification conforms to the proposed reclassification conforms to the applicable district standards.
 - (3) The impact of the proposed reclassification on the following areas of state concern:

- (A) Preservation or maintenance of important natural systems or habitats;
 - (B) Maintenance of valued cultural, historical, or natural resources;
 - (C) Maintenance of other natural resources relevant to Hawaii's economy including, but not limited to agricultural resources;
 - (D) Commitment of state funds and resources;
 - (E) Provision for employment opportunities and economic development; and
 - (F) Provision for housing opportunities for all income groups, particularly the low, low-moderate and gap groups; and
- (4) In establishing the boundaries of the districts in each county, the commission shall give consideration to the general plan of the county in which the land is located.
 - (5) The representations and commitments made by the petitioner in securing a boundary change, including a finding that the petitioner has the necessary economic ability to carry out the representations and commitments relating to the proposed use or development; and
 - (6) Lands in intensive agricultural use for two years prior to date of filing of a petition or lands with a high capacity for intensive agricultural use shall not be taken out of the agricultural district unless the commission finds either that the action:
 - (A) Will not substantially impair actual or potential agricultural production in the vicinity of the subject property or in the county of State; or
 - (B) Is reasonably necessary for urban growth.

DESCRIPTION OF THE PROPERTY

1. The Property which is approximately 62.994 acres is located north of the two-lane Haliimaile Road and west of the existing Haliimaile Village, Maui, Hawaii.
2. Land Use Designations ---
 - a. State Land Use District -- Agriculture
 - b. Makawao-Pukalani-Kula Community Plan -- Single Family & Park
 - c. County Zoning -- Interim

3. Surrounding Uses -- The northern and western boundaries of the Subject Property are adjacent to sugarcane fields. The eastern boundary is adjacent to a Maui Pineapple Company maintenance yard and an HC&S irrigation reservoir. The existing Haliimaile residential community is located on the eastern side of the maintenance yard and reservoir. The southern boundary is across the street from a Maui Pineapple Company maintenance yard and a single-family residential subdivision.

4. The Subject Property has been in cane cultivation over the past two years and is currently in cane cultivation.

EXISTING SERVICES

1. Water -- The Haliimaile area is served by the County Water System. Potable water to the Haliimaile area is supplied by the Makawao Water System. The major source of potable water is surface water from the Waiale Ditch system that is treated at the Department of Water Supply's (DWS) Kamaole Water Treatment Plant. The water is treated to meet Federal Safe Drinking Water Act standards, then pumped to upper elevation potable water tanks where the water flows by gravity to service the area.

Existing potable water sources and facilities are inadequate to service the proposed project, and new source, storage, and transmission facilities will be needed to service the project.

2. Sewers -- The Subject Property is unserved.

3. Drainage -- The Subject Property is located in Zone C as indicated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, which defines the area as experiencing minimal flooding. It is not located in any tsunami prone area.

4. Roadways, Curbs Gutters and Sidewalks -- Existing access to the project site is through Haliimaile Road. Haliimaile Road is two-lane 30 foot right-of-way highway. There are no curbs, gutters or sidewalks in the area.

5. Electrical and Telephone -- Overhead electrical and telephone services are available along Haliimaile Road.

6. Solid Waste -- The nearest landfill site is the Central Maui Sanitary Landfill in Puunene located off Pulehu Road.

7. Public Services -- The nearest fire protection is from the Makawao Fire Station. The Maui Police Department is located at the Wailuku Police Station on Mahalani Road. The nearest hospital is located at Maui Memorial Hospital located in Wailuku providing acute, general and emergency care services from its 185 bed facility.

DESCRIPTION OF THE PROJECT

The Subject Property is proposed to be developed as a single-family residential subdivision on 45 acres. Additional lands are intended to be used for park space (10 acres), a drainage basin with buffer/maintenance road (7 acres) and a wastewater treatment facility (1 acre). The total project will therefore consist of approximately 63 acres.

PETITIONER'S FINANCIAL CONDITION

According to the Petitioner, A&B Properties, Inc. showed a pre-tax income in 1996 of \$12.9 million, total assets of \$92.4 million and shareholder's equity of \$70.1 million. The Petitioner intends to finance the development of the Subject Property from internally generated funds.

ANALYSIS

NEED FOR THE PROJECT

A market assessment study was performed by RE2 in July 1997 to analyze the existing and projected housing market demand for the planned 196 units. The study identified planned projects and projected the absorption of these units based

on a number of factors, such as population growth, housing supply, home prices and location.

The study indicated that in 1990 through 1996 there was a surplus of units on the housing market. This was due partly to the substantial increase in home prices in the late 1980's. The median single-family home price doubled from the early 1980's to 1990 from \$120,000-\$150,000 to \$280,000. However, the median home price has been falling recently, reflecting a price correction from the peak in the late 1980's, and home sales have been accelerating over the past few quarters.

By the year 2000, it is anticipated that there will be a shortfall of 2,000 housing units to satisfy the projected growth in the number of households, and there will still be a shortfall of units by the year 2010 of 1,300 units.

LAND USE

State Plan:

The petition has been reviewed relative to the objectives and policies of the State Plan, in particular with regards to population growth, economic benefits, physical environment, facilities systems, and social/cultural advancement. The Haliimaile project is consistent with the goals and objectives of the Hawaii State Plan. Development of this project will create housing and recreational opportunities, stimulate the economy during the construction period and, subsequently, enhance County revenue from a significant increase in real property taxes. The project also will be developed in a manner that will minimize adverse effects on the physical and social environments.

GENERAL PLAN OF THE COUNTY OF MAUI

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

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

Objective: To see that all developments are well designed and are in harmony with their surroundings.

Policy: Require that appropriate principles of urban design be observed in the planning of all new developments.

Objective: To use the lands within the County for social and economic benefit of all the County's residents.

Policies:

Encourage land use methods that will provide a continuous balanced inventory of housing types in all price ranges.

Encourage land use patterns that foster a pedestrian oriented environment to include such amenities as bike paths, linear parks, landscaped buffer areas, and mini-parks.

Objective: To provide a choice of attractive, sanitary and affordable homes for all residents.

Policy: Encourage the construction of housing in a variety of price ranges and geographic locations.

Objective: To encourage development which reflects the character and culture of Maui county's people.

MAKAWAO-PUKALANI-KULA COMMUNITY PLAN

The Makawao-Pukalani-Kula Community Plan (July 1996) states under **PARI LAND USE**, Goal: The maintenance and enhancement of Upcountry's unique-end diverse rural land use character with sensitivity to existing land use patterns, natural resource values, and economic and social needs of the region's residents.

Item 18: Where appropriate, support the reclassification of State Land Use districts to ensure consistency between State Land Use designations and land use designations defined by the Makawao-Pukalani-Kula Community Plan land use map.

The Makawao-Pukalani-Kula Community Plan Map, Amendment No. 44, designates the subject property as Single-Family & Park.

The subject project is consistent with the intent of the Makawao-Pukalani-Kula Community Plan.

ZONING

The project site is located in an area zoned Interim District. Maui County Code, Title 19, Chapter 19.02 Interim Zoning Provisions, Section 19.02.020 Title and Purpose states that, "The ordinance codified in this title shall be known as the "Interim Zoning Ordinance" for the various districts of Maui as defined in this chapter for the purpose of providing interim regulations pending the formal adoption of a comprehensive zoning ordinance and map which are deemed as necessary in order:

- A. To encourage the most appropriate use of land;
- B. To conserve and stabilize the value of property;
- C. To prevent certain uses that will be detrimental to existing uses;
- D. To promote the health, safety and the general welfare of the respective districts."

The petitioner will be required to obtain a change in zoning from the County in order to receive final subdivision approval. The petitioner has indicated that they intend to file a change in zoning application immediately after an affirmative decision is issued by the Land Use Commission, or when it is apparent that any issues relating to this project have been raised and satisfactorily resolved. The petitioner anticipated that the change in zoning application will be filed prior to September of 1998.

AGRICULTURE

1. Approximately half of the site is designated as "Prime Agricultural Land" and the other half "Other Important Agricultural Land" according to the Agricultural Lands of Importance to the State of Hawaii (ALISH) map. The University of Hawaii Land Study Bureau's Detailed Classification designates the land as "C"
2. HC&S is currently cultivating sugarcane on the property. The removal of 63 acres of the approximately 36,000 acres in cane cultivation by HC&S and the 355,000 acres in aggregate being farmed on Maui (State Date Book, 1995), will not have a significant adverse impact on the agricultural industry.

ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCES

1. According to the archeological inventory survey and historical research performed by Cultural Surveys Hawaii in May 1997, no archaeological sites of significance were found on or near the property and the historical records indicate that this area was not settled by native Hawaiians.

INFRASTRUCTURE AND PUBLIC FACILITIES AND SERVICES

1. Water -- Existing Water System for Haliimaile is provided by the Department of Water Supply, County of Maui, through an 8-inch transmission line that extends from Baldwin Avenue to the 6-inch waterlines that serve the residential area of this community. There is an 8-inch waterline from the residential area along Haliimaile Road that passes by the project site to the Haliimaile Subdivision.

The source for this water system is the Wailoa Ditch. This water is processed through the Kamaole Water Treatment Plant, which is located east of the project site between Baldwin Avenue and Maliko Gulch, at about elevation 1,100 feet. This plant currently treats a maximum of 7 million gallons per day and provides water for the "upcountry" areas. Water is pumped from the plant to storage tanks located in Makawao. There is also a 47,000 gallon steel tank located on Baldwin Avenue at about elevation 1,329 feet.

The estimated average daily consumption for this proposed 196-unit project is about 78,400 gallons per day. This is based on an interim daily consumption of 400 gallons per residential unit. A new source will be required to provide water for this project. This source will have to supply additional water to the "upcountry" system.

The storage requirement for this project will be determined on the basis of fire flow plus maximum daily flow, or 1,000 gallons per unit, whichever one is the greater quantity. The estimated storage requirement will be about 200,000 gallons. Existing storage capacity for this area will not meet the storage requirement. A new storage tank is planned to be constructed at elevation 1,175 feet above sea level, or higher, in order to provide adequate water pressure to this development.

A new water transmission line may have to be constructed from the new water storage tank to the project site. If one is required, it will be designed and constructed to DWS standards. The onsite and onsite distribution water system will be designed and constructed to meet current DWS standards. The onsite and offsite water system improvements are intended to be dedicated to the Department

of Water Supply upon completion.

The DWS has commented that the project is in the Upcountry area and is affected by the "Shortage of Water Source Capacity Affecting Upcountry Areas" by the Director of Water Supply, dated March 16, 1993. During the term of the shortage condition, measures include recommendations for denial of subdivision applications and building permit applications, with the exception of a single family residence per lot existing as of March 16, 1993. Water service in excess of a single 5/8" meter for an existing lot is also being denied. These restrictions apply to the DWS water system and are therefore applicable to the domestic needs for this project.

The DWS further comments that the petitioner will be subject to the current standards, rules and regulations of the DWS at the time of development. No guarantee of water is granted or implied as a result of the DWS comments or the approval of the requested district boundary change.

Finally, the DWS has concurred with the petitioner's engineering report in that there is an 8 inch existing waterline which fronts the project along Haliimaile and ends just past Hoomaile Place. They further concur that the source water will be obtained from the County's Kamaole Water Treatment Facility. Treated water from the plant is pumped to the Haliimaile area via an eight (8) inch distribution waterline.

Relative to the protection of groundwater and surface water resources, the DWS recommends that the applicant utilize Best Management Practices (BMP's) designed to minimize infiltration and runoff from all construction and vehicle operations.

A&B has indicated that due to the water shortage condition in the Upcountry region, they recognize that developments such as this proposed Haliimaile project cannot proceed unless new water sources are developed.

To that end, A&B has begun analysis of drilling a well in the Kailua region to serve the water source needs of the Haliimaile project. Due to the wells location, their proposal is that water from the well would be transmitted by pipeline from the well to the Walloa Ditch, and then treated at the Department of Water Supply's Kamaole Treatment Plant. This well would be developed in conjunction with HC&S's plans to provide a potable water source for the residents of Kailua town.

A&B further states that if for any reason, the above water source should prove infeasible, then they will pursue the development of other Upcountry well sites prior to proceeding with the actual construction of the Haliimaile project.

2. Sewers -- There is no existing sewage system to serve the project. Maui Pineapple Company, Ltd. operates a private system to serve the Haliimaile residences, the company's offices and maintenance operations. Their wastewater treatment plant is located makai of the project site.

The County's design standard for wastewater flows for single family lots is 400 gallons per house. Using this average daily flow, this development will generate an estimated 78,400 gallons per day.

Onsite sewage will be collected in gravity sewer lines and flow to a proposed offsite package treatment plant to be located north (makai) of the project site. This plant will be separated from the residences by a 40-foot maintenance road and the drainage retention basin.

3. Drainage -- There are no existing drainage system improvements which serve the Subject Property. Storm water runoff sheet flows across the project site in a northwesterly direction, then continues onto adjacent undeveloped property. The runoff originates at Haliimaile Road, located at the southeast end of the site and continues to the northwest boundary. The majority of storm water runoff is generated from the site itself. The balance is generated from Haliimaile Road at the southeast boundary of the project.

The project site's proposed offsite drainage system is influenced by the topography of the site and mauka lands. Therefore, no significant amount of offsite storm water runoff will impact this project. An offsite storm drainage retention basin will be constructed at the northwest end of the subdivision to collect the storm water discharge from the onsite drainage system.

Onsite storm runoff will be collected by a system of catch basins, drain inlets, and pipes. Generally, there will be two main storm drain lines sloping towards the northwest, following the direction of the existing ground profile. One collector drain line will run along the main roadway through the center of the site; the other, running almost parallel, will be within the landscaped buffer which runs along the southwest boundary of the project site.

Surface runoff will sheet flow from the subdivision lots onto the roadways. Storm drain catch basins will collect this surface flow, which will then be transported by storm drain line branches to the main collector drains. The main drain lines will ultimately deposit its storm water (approximately 65 cubic feet per second) into the proposed offsite drainage basin located northwest of the project site. This basin will retain the entire discharge from the onsite storm drainage system.

The Department of Public Works and Waste Management (DPWWM) has commented that a detailed final drainage report and an erosion control BMP plan shall be submitted with the construction plans for review and approval prior to the issuance of grading permits. The report must comply with the provisions of the "Rules for Design 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.

The DPWWM further indicates that the petitioners drainage report on pages 19 and 20 states that a "drainage retention basin is needed makai of the project site to ensure that no excess runoff leaves the project site. Calculations are based on a 50 year storm, although Maui County standards would require design for only a 10 year storm. Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui," does, in fact, require that for "Retention and Detention Basins: TM (Recurrence interval) = 50 year based on an one hour storm for drainage areas 100 acres or less."

4. Roadways, Curbs, Gutters and Sidewalks -- Access to the development will be off of Haliimaile Road. Major regional roadways in the area are Haleakala Highway to the west, Baldwin Avenue to the east and Hana Highway to the north. Haleakala Highway and Hana Highway are State-owned roads and Baldwin Avenue is a County-owned road.

The internal subdivision streets are mainly cul-de-sacs to form "mini" or "sub" neighborhoods within the development. These short street segments also encourage slower driving speeds, thereby making the streets safer for families residing in this community.

The main entry roadway has a right-of-way width of 56 feet except in the vicinity of the parks, where an additional 10 feet has been added to the right-of-way width to create a landscaped median strip. This roadway segment will provide a visually pleasing entrance into the residential neighborhood. Other internal subdivision roads have a 44-foot right-of-way. Landscaping along the major collector road and internal subdivision roads will be in accordance with County of Maui standards.

All roadways within the project area are planned to be developed without curbs, gutters and sidewalks to harmonize with the rural character of the region. Grassed swales are planned in lieu of the hardscape that is typical of modern urban developments.

The DPWWM has commented that all roads within the subdivision shall be improved to County standards to include, but not be limited to pavement widening construction of curb, gutter, and sidewalk, street lights and relocation of utilities underground.

The DPWWM also comments that a separate left-turn storage lane shall be constructed on Haliimaile Road at its intersection for this project as approved by the DPWWM, Engineering Division. A separate right-turn lane (acceleration lane) shall be constructed on Haleakala Highway with its intersection with Haliimaile Road. Other improvements may be needed on Haliimaile Road at the time the project is built if the traffic is greater than presently anticipated.

5. Electrical and Telephone -- No adverse impacts on existing electrical and telephone services are anticipated.

6. Parks -- Ten (10) acres of park space within the project are planned to be dedicated to the County. This is approximately four times the amount of land required to be dedicated under the County's park dedication ordinance, and should contribute significantly to the recreational and park needs of the Haliimaile community.

An existing 5.2-acre County park is located immediately to the east of the project. Other recreational facilities that can be utilized by the residents of this community are located in close proximity to this project: Makawao and Pukalani offer a number of land-based indoor and outdoor facilities (such as Eddie Tam Park, Pukalani Community Center, and Pukalani Golf Course), while Paia offers numerous land-based as well as coastal and water-related recreational facilities.

7. Schools -- Children from the proposed project will be able to attend Makawao Elementary School (2-1/2 miles from the project site), Kalema Intermediate School (4 miles from the site), and King Kekaulike High School (4 miles from the site). Based on a multiplier of 0.21 elementary school children per unit a total of approximately 41 elementary school students will be generated from this development. According to discussions with the State Department of Education (DOE), Makawao Elementary School is not operating at capacity and would therefore be able to accommodate this growth.

For intermediate school children, approximately 18 students are anticipated, based on a multiplier of 0.09 students per unit. These students would attend Kalema Intermediate School that is currently operating over capacity with approximately 1,300 students.

King Kekaulike High School is being constructed in phases as the need for new classrooms is generated. This school currently operates 5 classroom buildings and four specialty classroom buildings (P.E., music, and two industrial arts). Based on DOE standards, approximately 20 students are anticipated to be generated by the development, using a multiplier of 0.10 students per unit.

8. **Solid Waste** -- Based on an assumed population of 600 persons for this project and the generation of 5 pounds of solid waste per capita per day, approximately 3,000 pounds or 1.5 tons of solid waste per day will be generated from the project. It is anticipated that the County will collect the solid waste and dispose of it at the Central Maui Sanitary Landfill located in Puunene. This landfill is owned and operated by the County of Maui, and has adequate capacity for the collection of this waste. To reduce impacts on the Central Maui Sanitary Landfill, recycling will be encouraged; possibly through the Homeowners' Association.

9. **Public Services** -- Police, fire and medical services are not expected to be adversely impacted by the project. The project will not extend existing service area limits for emergency services.

SOCIO-ECONOMIC IMPACTS

The project is anticipated to support construction and construction-related employment on a short-term basis. Once fully developed and occupied, the development of the subject property will contribute to the long-term support of the regional economy through purchases of goods and services from local merchants.

ENVIRONMENTAL IMPACTS

The subject property falls within lands which have been utilized for sugar cane cultivation for an extended period. Accordingly, there are no sensitive native plant or wildlife communities which remain. The utilization of the subject property's 63 acres for eventual residential development is not anticipated to adversely impact the area's environment.

CONCLUSIONS

- (1) *It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban level of services and other related land uses;*
- The petition adjoins areas of "city-like" concentrations of people, structures, streets, urban level of services and other related land uses.
- (2) *It shall take into consideration the following specific factors:*

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(A) *Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;*

(B) *Substantiation of economic feasibility by the petitioner;*

(C) *Proximity to basic services such as sewers, transportation systems, water, sanitation, schools, parks, and police and fire protection; and*

(D) *Sufficient reserve areas for urban growth in appropriate locations based on a ten year projection;*

Necessary infrastructure and public services to the site will be provided through either existing systems and services or by developing alternative measures such as, but not limited to, wastewater treatment plant, potable water system roads and drainage systems.

(3) *It shall include lands with satisfactory topography and drainage and reasonably free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects;*

The petition area contains satisfactory topography, drainage and is reasonable free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects.

(4) *In determining urban growth for the next ten years, or in amending the boundary, land contiguous with the existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans;*

The petition area is contiguous to an existing urban area and is designated Single Family and Park on the Makawao-Pukalani-Kula Community Plan Map.

(5) *It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans;*

The 55 acres for the single-family development and park are shown on the community plan. The seven acres for the drainage basin and sewage treatment plant are necessary offsite improvements to support the housing development. The petitioner will apply to the County of Maui for a Change in Zoning to establish the R-1 Residential and P-1 Park Designations.

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LAND USE COMMISSION

DOCKET NO./PETITIONER: A98-723 A&B PROPERTIES, INC.

PARTY: MAUI PLANNING DEPARTMENT

LIST OF EXHIBITS

EXHIBIT NUMBER	DESCRIPTION	PARTY: OBJECTIONS	ADMIT
1	Maui Planning Department Written Testimony		

BEFORE THE LAND USE COMMISSION OF THE STATE OF HAWAII

In the matter of the Petition of)
 A&B PROPERTIES, INC.,) Docket No. A98-723
 A Hawaii Corporation,) A&B PROPERTIES, INC.,
)
)
 To Reclassify approximately 62,994 Acres)
 of land currently in the Agricultural District)
 into the Urban District for Residential Units,)
 Park, Drainage Basin, Wastewater Treatment)
 Facility at Heiimaile, Makawao District)
 Island of Maui. TMK 2-5-003:ppr.10)

I HEREBY CERTIFY that a copy of this Testimony and the Witness and Exhibit Lists of the Maui Planning Department was served on the parties listed below by depositing the same in the United States Postal Service by certified mail, or by hand delivery:

- | | | |
|--|---------|-------------------------------|
| ESTHER UEDA, Executive Officer
Land Use Commission
P.O. Box 2359
Honolulu, Hawaii 96804-2359 (Original and 15 copies) | BY MAIL | Certified Mail #Z 225 255 736 |
| RICHARD EGGED, JR., Director
Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804-2359 | BY MAIL | Certified Mail #Z 225-255 737 |
| ABE MITSUDA, Administrator
Land Use Division
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804-2359 | BY MAIL | Certified Mail #Z 225 255 738 |
| ANN OGATA-DEAL, Esq.
Deputy Attorney General
Hale Auhau, Third Floor
425 Queen Street
Honolulu, Hawaii 96813 | BY MAIL | Certified Mail #Z 225 255 739 |

STANLEY M. KURIYAMA
Executive Vice-President
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BY MAIL
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JEFFREY SCHMIDT, Esq.
Corporation Counsel
County of Maui
200 South High Street
Wailuku, Hawaii 96793

HAND DELIVERY

PLANNING COMMISSION
County of Maui
250 South High Street
Wailuku, Hawaii 96793

HAND DELIVERY

Dated this 17 Day of June, 1998, Wailuku, Hawaii

Lisa M. Nguyen
LISA M. NUYEN
Director of Planning
(e:lsma@maui.gov)

Appendix E

CONSULTATION LETTERS/DOCUMENTATION



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION
HONOLULU, HAWAII 96804

AGRICULTURE DEVELOPMENT
PROGRAM
WATER RESOURCES
CONSERVATION AND
REGULATION
RESOURCES DEVELOPMENT
OPERATIONS
PLANNING
LAND DIVISION
LAND MANAGEMENT
WATER RESOURCES MANAGEMENT

LD-NAV
Ref.: A98723.RCM

Ref.: P-7325 (DBED&T)

Honorable Rick Egged
Director, Office of Planning
Department of Business,
Economic Development & Tourism
239 South Beretania Street, 6th Floor
Honolulu, Hawaii 96804

JUN 25 1998

Dear Mr. Egged:

SUBJECT: Review : Petition for District Boundary Amendment &
Certification of Services
File No.: A98-723/A6B Properties, Inc.
Request : Change Zone from Agriculture to Urban
Proposal: Single family residential subdivision
Location: Haimaiale, Maui, Hawaii
TMK : 2nd/ 2-5-03: PORTION OF LEXESS 10

Thank you for the opportunity to review and comment on the subject matter.

We have recently reviewed the proposed project for the County of Maui Planning Department. Attached herewith is a copy of our response letter dated May 4, 1998, (Ref.: P7325.RCM).

The Department of Land and Natural Resources has no other comment to offer on the subject matter at this time. Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division's Support Services Branch at 587-0438.

Very truly yours,

Nicholas Vaccaro
DEAN Y. UCHIDA
Administrator

c: Maui Land Board Member
Maui District Land Office

May 4, 1998

Ref.: P7325.RCM

LD-NAV

Honorable David M. Blane
Planning Director
County of Maui
Planning Department
250 S. High Street
Wailuku, Hawaii 96793

Dear Mr. Blane:

SUBJECT: Review : Petition for District Boundary Amendment
Petition : Zone Change from Agriculture to Urban
Proposal : Single Family Residential Subdivision
Applicant: A&B Properties, Inc. (File No. A98-723)
Location : Haimaiale, Island Of Maui, Hawaii
TMK : 2nd/ 2-5-03: PORTION OF LEXESS 10

Thank you for the opportunity to review and comment on the subject Petition for District Boundary Amendment. Our Commission on Water Resource Management (CWRM) has the following comments related to water resources for the proposed project:

1) We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan;

2) A Well Construction Permit and Pump Installation Permit from CWRM would be required before ground water is developed as a source of supply for the project; and

3) If the proposed project diverts additional water from streams or if a new or modified stream diversion is planned the project may need to obtain a stream diversion work permit and petition to amend the interim instream flow standard for the affected stream(s).

Our Land Division Engineering Branch has confirmed that the proposed project is located in Zone C, an area of minimal flooding.

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

Should you have any questions, please feel free to contact Charley Ice of the Commission Of Water Resource Management at 587-0257 or Nicholas A. Vaccaro of the Land Division Support Services Branch 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

c: Maui Land Board Member
Maui District Land Office

A&B PROPERTIES, INC.

James J. Nakatani, Chairperson
June 24, 1998
Page 2

A&B PROPERTIES, INC.

June 24, 1998

James J. Nakatani, Chairperson
Board of Agriculture
1428 South King Street
Honolulu, Hawaii 96814-2512

Re: Petition to Reclassify 63 Acres at Halimaille, Maui from Agriculture to Urban

Dear Mr. Nakatani:

Thank you for taking the time to meet with me and Scott last week to discuss the Land Use Petition A&B Properties has filed to reclassify 63 acres at Halimaille, Maui, from the State Agricultural District to the Urban District.

As I mentioned at our meeting, this site was the only A&B-owned property designated for urban use in Maui's Upcountry (Makawao-Pukalani-Kula) Community Plan region. This designation was granted in 1996 as part of Maui County's 10-year update of that Community Plan.

This site was deemed appropriate for urban growth because it represents an opportunity to build upon the existing Halimaille town, which consists of approximately 190 homes, Maui Pineapple Company facilities, and the Halimaille General Store. A&B's project, which consists of 45 acres of single-family residential use, does not, therefore, represent isolated growth or the establishment of a new community.

Perhaps more importantly, however, this project must be viewed in the larger context of A&B's future development plans on Maui and its commitment to its agricultural operations.

As you are aware, HC&S devotes approximately 37,000 acres to the cultivation of sugarcane on Maui. Over the next five- to eight-year period, assuming market conditions support such development, we foresee the withdrawal of perhaps up to 400 acres from cane cultivation for development by A&B or third parties (including this Halimaille project). This figure represents less than 1.2% of A&B's land currently in cultivation, and would not have any impact on the economic viability of A&B's sugar operations.

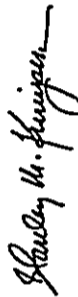
It is significant to note that over the past decade, A&B has in fact added acreage to its cane operations at a much faster rate than it has withdrawn, or plans to withdraw, land for development purposes. Since 1990, A&B has added over 2,000 acres in newly cultivated lands, while withdrawing fewer than 200 acres for A&B's development needs. These lands consist primarily of C. Brewer land formerly used for pineapple cultivation in Wailuku, and wastefields that A&B was willing to spend the capital on to convert into farmable fields. Moreover, A&B plans to add up to another 500 acres to cane production over the next few years (principally in the Waiale region), thereby increasing further the net amount of land to be devoted to sugar cane cultivation.

In addition to expanding its operations, A&B has also invested heavily in the business. Since 1990, A&B has expended over \$55 million in capital to support and enhance the plantation's operations (factory and field equipment, acreage expansion, research and development, etc.). And, through research, new varieties of cane and increased operational efficiency, A&B continuously seeks to increase yields from each acre planted in cane.

Perhaps more than any other company in this State, A&B has demonstrated, such as through our coffee operations on Kauai as well as our sugar operations on Maui, its commitment to the future of agriculture in Hawaii. From the larger perspective of the State, our planned withdrawals of land for development purposes are not material. To A&B, however, these withdrawals of land are critical to A&B's overall economic viability and its continuing ability to sustain and invest in its agricultural operations. Agriculture is as difficult a business to operate financially, as it is important to the State's future. Any assistance your Department can offer to support our efforts to sustain both our economic viability and our agricultural operations, would be greatly appreciated.

Thank you again for taking the time to meet with us on this very important concern, and I would be more than happy to meet with you and your staff at any time to review A&B's development plans in more detail.

Very truly yours,



Stanley M. Kuriyama
Executive Vice President

1991	1992	1993	1994	1995	1996	1997	1998



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

July 21, 1998

Dr. Hullett E. Hamman
 Cultural Resources Hawaii
 733 North Kalia Avenue
 Kailua, Hawaii 96724

Dear Dr. Hamman:

COMMUNITY Chapter 6E-42 Historic Preservation Review of a Revised Inventory Survey Report for a District Boundary Amendment and Certification of Services for A&B Properties Subdivision in Half Imalle, Maui
 Half Imalle, Maui, Makawao District, Island of Maui
 TMK 2-5-03: Portion of 10

This letter is a Historic Preservation review of a revised archaeological inventory survey report for a District Boundary Amendment and Certification of Services for A&B Properties Subdivision in Half Imalle, Maui. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field check was conducted of the subject property.

Our office previously reviewed an archaeological inventory survey report for this property in which we had a number of editorial comments to be addressed (SHPD DOC NO: 9806BD15). Although no significant historic sites were found, those comments have now been adequately addressed and we find the revised report to be acceptable. We therefore find the proposed undertaking to have "no effect" on public lands.

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

Boyd Dixon
 Don Hibbard, Administrator
 State Historic Preservation Division

cc. Lisa Noyes, Maui County Planning Department (fax: 243-7634)
 Ralph Nagamine, Maui County Department of Public Works (fax: 243-7972)
 Russ Ueda, Maui County Department of Public Works (fax: 243-7972)
 Lorenso Mackie, State Office of Planning (fax: 587-3359)

RODOLPH J. CATTEANO
 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

JUN 22 1998

June 17, 1998

MEMORANDUM

TO: Rick Egged, Director
 Office of Planning

FROM: Don Hibbard, Administrator
 Historic Preservation Division

SUBJECT: Chapter 6E-42 Historic Preservation Review of an Inventory Survey for a Petition for Amendment to the State Land Use District Boundaries for an A&B Properties Subdivision in Half Imalle
 Half Imalle, Maui, Makawao District, Island of Maui TMK 2-5-03: Portion of 10

This letter is a Historic Preservation review of a document entitled *Archaeological Inventory Survey of a 55-Acre Parcel Half Imalle, Makawao, Maui TMK 2-5-03: portion 10* (1997, Cultural Surveys Hawaii) submitted June 3, 1998, by the Office of Planning for a Petition for Amendment to the State Land Use District Boundaries for an A&B Properties subdivision located in Half Imalle, Maui. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field check was conducted of the subject property.

It appears that the field methods employed in this survey were adequate to locate all historic sites in the subject property, although the precise limits of the survey were not portrayed on the project area map. Historical background research and a review of previous archaeology are adequate, but no synthesis of *ohioppua* or settlement patterns and survey expectations was presented. While no historic sites were encountered during the survey due to the effects of modern agriculture, no discussion of the age of the irrigation ditches recorded during the survey was presented, nor were any recommendations presented based on these results. The report will need to be revised to address these and other concerns noted in Attachment 1, in order to be considered an acceptable report.

However, based on the negative findings, we can conclude the historic preservation review of the project. We find that no significant sites are present and that the proposed undertaking will have "no effect" on such sites, with the condition that an acceptable revised report will be submitted to our office.

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

BD:jcn

Attachment

cc. David Blane, Maui County Planning Department (fax: 243-7634)
 Ralph Nagamine, Maui County Department of Public Works (fax: 243-7972)
 Dr. Hullett Hamman, Cultural Surveys Hawaii (fax: 262-49510)

RODOLPH J. CATTEANO
 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

LOG NO: 21705
 DOC NO: 9806BD15

ATTACHMENT 1
NEEDED REVISIONS
HALI'IMAILE INVENTORY SURVEY
CULTURAL SURVEYS HAWAII



DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING

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

JUN 18 1998

Tel: (808) 587-2
Fax: (808) 587-2

Ref. No. P-7325

June 3, 1998

Introduction

Page 3, Figure 3 - The precise limits of the project area are not portrayed on the project area map. Please revise the map.

Previous Studies

Page 5, paragraph 3 - The distance from the 'ulu maika course noted in the Boundary Commission notes to the project area is listed as "0.0 miles" -- please provide the exact mileage.

Page 7, paragraph 4 - No synthesis of ahupua'a settlement patterns and project area expectations was presented. This is a required element of inventory survey reports. Please add this information.

Findings

Page 8, paragraph 1 - This section states that "no sites of historic significance" were recorded in the survey area, although there is no discussion of the age of the irrigation ditches which are mentioned in the following section and presented in Figures 5-10. Since no recommendations were presented based on the negative results of the survey, presumably these remains were not found to be historic sites or to be significant. Please make this explicit in separate Discussion and Recommendations sections of the report.

References

Page 9 - The reference to Folk and Hammatt 1992 found on page 8 is not present.

MEMORANDUM

TO: Mr. William S. Devick
Aquatic Resources Division, DLNR

FROM: Rick Egged *RLS/gk*
Director, Office of Planning

SUBJECT: Petition for Amendment to the State Land Use District Boundaries

We have received the following petition requesting a District Boundary change:

Petition: A98-723/A&B Properties, Inc...
Requested Change: Agricultural to Urban
Proposed Use: Single family residential subdivision
Location: Haliimaile, Maui
TRK: 2-5-03: por. 10
Area: Approximately 63 acres

We are transmitting the subject petition for your review and comments. We are particularly interested in information regarding your Department's existing and proposed programs for the subject area and the anticipated effects of the boundary change on these programs. In developing your comments, we request that the applicable interim planning documents be addressed. We also request that your comments address the applicable goals, objectives, policies, and priority guidelines embodied in the Hawaii State Plan. Any available maps, statistics or other information which you feel are applicable would also be appreciated.

No objections

Division of Aquatic Resources
6-15-98

REDAKING UNIT
DIRECTOR
DEPUTY DIRECTOR
PLANNING
OFFICE OF PLANNING

RS
ckp

al. Demand

The State's position on each petition must be filed with the Land Use Commission (LUC) within 30 days of the petition's acceptance as a proper filing by the LUC. To insure that your agency's comments are considered in the development of the State's position, it is important that your comments are received no later than June 27, 1998.

If there are any questions on the petition, or if you are not able to meet the above deadline for comments, please contact the Land Use Division at 587-2842.

Attachment: A98-723

BERNARD J. CAVITTANO
GOVERNOR OF HAWAII



MICHAEL G. BUCK
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF FORESTRY AND WILDLIFE

1151 PUNCHBOWA STREET
HONOLULU, HAWAII 96813

June 9, 1998

JAN 15 1998

DEPUTY
DIRECTOR

AGRICULTURE DEVELOPMENT
FORESTRY
HAWAIIAN RESOURCES
PLANNING AND DESIGN
CONSERVATION
COUNCIL
RECREATION AND TOURISM
INDUSTRY AND TRADE
LAND MANAGEMENT
WATER AND LAND DEVELOPMENT
WILDLIFE AND RESOURCES MANAGEMENT

Mr. Rick Egged
Director, Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

Subject: Petition for Amendment to the State Land Use District Boundaries,
Ref. No. P-7325, Ag to Urban, Residential subdivision, 63 acres,
Halimalele, Maui, TMK: 2-5-03:10.

We have reviewed the information provided for by A & B Properties, Inc, for reclassification of certain lands situate at Halimalele, Island and County of Maui, State of Hawaii.

The Department of Land and Natural Resources, Division of Forestry and Wildlife has no objections to the proposed Land Use reclassification from Ag to Urban as indicated by your letter dated June 3, 1998. Thank you for allowing us to comment on this land use petition.

Sincerely yours,

Michael G. Buck
Administrator

Copy: DOFAW, Maui District
ALB

MOHAMMAD J. CAHYANG
GOVERNOR OF HAWAII



APR 24 1998

MOHAMMAD J. CAHYANG
GOVERNOR
ROBERT S. ORLAND
COMMISSIONER
DAVID A. MORONGIA
LAWRENCE H. LIME
MICHAEL H. COE
ROBERT M. RICHARDS, JR.
EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 617
HONOLULU, HAWAII 96809

April 23, 1998

TO: Honorable Rick Egged, Director
Office of Planning

FROM: Edwin T. Sakoda, Acting Deputy Director
Commission on Water Resource Management

SUBJECT: Petition for Amendment to the State Land Use District Boundaries

FILE NO.: A98-723/A&B Properties, Inc.

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/or 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 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 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:

If there are any questions, please contact Mr. Ryan Inasa at 587-0255.



APR 22 1998

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 111, HONOLULU, HAWAII 96819

MOHAMMAD J. CAHYANG
GOVERNOR

APR 22 1998

TO: Mr. Rick Egged, Director
Office of Planning

SUBJECT: Petition for Amendment to the State Land Use District Boundaries

We have reviewed the subject petition for a District Boundary change from agricultural to urban for the proposed use of single family residential subdivision, Halimalie, Maui. We received the petition with your memorandum dated March 31, 1998, Ref. No. P-7325.

Thank you for the opportunity to review the petition. The petition does not impact any Department of Accounting and General Services projects or existing facilities. Thus, we have no comments to offer.

If there are any questions, please have your staff contact Mr. Ronald Ching of the Planning Branch at 886-0490.

Ronald Ching
GORDON MATSUOKA
Public Works Administrator

RC:JY

AJD



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 118, HONOLULU, HAWAII 96810

LETTER NO. (R) 1299-8

BENJAMIN J. CATTIANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2388
HONOLULU, HAWAII 96810

OFFICE OF THE SUPERINTENDENT

October 3, 1997

TO: Mr. Rick Egged, Director
Office of Planning
Department of Business, Economic Development
and Tourism

SUBJECT: State Land Use Commission (LUC)
Docket No. A98-723
A & B Properties, Inc.
(Halimaile, Maui)

We have reviewed the petitioner's submittal of additional information received with your May 11, 1998 memorandum (Ref. P-7433).

The petition with the additional information does not impact any Department of Accounting and General Services projects or existing facilities. Thus, we have no comments to offer.

If there are any questions, please have your staff contact Mr. Ronald Ching of the Planning Branch at 596-0490.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

RC:jy

Ms. Joanne Hiramatsu
Senior Planner
Townscape, Inc.
900 Fort Street Mall, Suite 800
Honolulu, Hawaii 96813

Dear Ms. Hiramatsu:

Subject: A&B Properties, Inc. Subdivision in Halimaile

The following information is in response to your letter dated September 19, 1997, regarding the upcoming State Land Use Commission Petition for a 196-lot subdivision in Halimaile.

1. Based on Department of Education (DOE) standards, we project the following enrollment impacts for the subject project:

School	Multiplier	Students
Makawao Elementary	0.21	41
Kalama Intermediate	0.09	18
King Kekaulike High	0.10	20

2. The DOE has no plans for a new intermediate school to service the Upcountry area. Students will need to be accommodated at Kalama Intermediate School which is very large and over capacity.

3. King Kekaulike High School currently has five general classroom buildings and four specialty classroom buildings (P.E., music, two industrial arts).

EXHIBIT 13

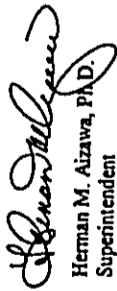
AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Ms. Joanne Hiramatsu
Page 2
October 3, 1997

4. As we do for all major developments, we will request that the Land Use Commission include a fair-share condition for school facilities as part of its approval. Based on our current formula, the 196-lot subdivision will result in a fair-share requirement of approximately \$166,470.

If you have any questions, please call Mr. Sanford Beppu at 733-4862.

Sincerely,


Herman M. Aizawa, Ph.D.
Superintendent

HMA:ly

cc: A. Suga, OBS
R. Murakami, MDO



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2380
HONOLULU, HAWAII 96810

OFFICE OF THE SUPERINTENDENT

April 13, 1998

20547
1-1034

MEMO TO: Mr. Rick Egged, Director
Office of Planning, DBEDT

A T T N: Mr. Abe Mitsuda

F R O M: Herman M. Aizawa, Ph.D., Superintendent
Department of Education

SUBJECT: A98-723/A&B Properties, Inc. - Halimaite Subdivision

Based on the development of 196 residential units, the Department of Education (DOE) projects the following enrollment impacts:

School	1997 Enrollment	1997 Capacity	Additional Students
Makawao Elementary	636	739	41
Kalama Intermediate	1,298	1,098	18
King Kekaulike High	1,030	1,102	20

We recommend that the Land Use Commission impose the DOE's standard condition for school facilities. The condition states:

"The Petitioner shall contribute to the development, funding, and/or construction of school facilities, on a pro-rata basis, as determined by and to the satisfaction of the Department of Education. Terms of the contribution shall be agreed upon by the Petitioner and the DOE prior to Petitioner applying for county rezoning."

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Mr. Rick Egged
Page 2
April 13, 1998

The DOE utilizes developer contributions only for capital improvements within the school complex affected by the proposed development.

Thank you for the opportunity to comment. If you have any questions, please call Mr. Sanford Beppu at 733-4862.

HMA:SB:hy

cc: A. Suga, OBS
R. Murakami, MDO

DELLUMI J. CAYTEIANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION

P.O. BOX 2388
HONOLULU, HAWAII 96810

IN - 1998

OFFICE OF THE SUPERINTENDENT

May 26, 1998

HERMAN M. AIZAWA, Ph.D.
SUPERINTENDENT

MEMO TO: Mr. Rick Egged, Director
Office of Planning, DBED&T

F R O M: Herman M. Aizawa, Ph.D., Superintendent
Department of Education

SUBJECT: LUC Docket No. A98-723
A&B Properties, Inc. (Haliimaile, Maui)

The Department of Education has no comment on the additional information submitted by the Petitioner.

Thank you for the opportunity to respond.

HMA:SB:hy

cc: A. Suga, OBS
R. Murakami, MDO

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

ROMANUS J. CAYTANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5087
June 17, 1998

KAZU HAYASHIDA
DIRECTOR
DEPUTY DIRECTOR
SPRINKLING
GENERAL COLLECTOR

JUN 22 1998

IN REPLY REFER TO:
STP 8.8617
4-7-98-34

ROMANUS J. CAYTANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3278
HONOLULU, HAWAII 96801

June 2, 1998

JUN - 8 1998

LAWRENCE MIKE
DIRECTOR OF HEALTH

53549 2-1305
98-075/epo

TO: MR. RICK EGGED, DIRECTOR
OFFICE OF PLANNING
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND
TOURISM

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: PETITION FOR AMENDMENT TO THE STATE LAND USE DISTRICT
BOUNDARIES-HALIIMAILE

Thank you for your transmittal requesting our comments on the subject amendment.

Our comments are as follows:

1. The subject project is expected to have an impact at the intersection of Haleakala Highway and Haliimaile Road. Haleakala Highway widening is under design, and construction is expected to begin around 2001. The developer should be required to coordinate with our Highways Division and participate in the costs for intersection improvements for Haleakala Highway and Haliimaile Road.
2. Plans for construction work within the State highway right-of-way must be submitted for our review and approval.

We appreciate the opportunity to provide comments.

TO: Rick Egged, Director, Office of Planning
Department of Business, Economic Development & Tourism

FROM: Lawrence Mike
Director of Health

SUBJECT: PETITION FOR AMENDMENT TO THE STATE LAND USE DISTRICT
BOUNDARIES

Petition No.: A98-723
Petitioner: A&B Properties, Inc.
Requested Change: Agricultural to Urban

Proposed Use: Single family residential
subdivision
Location: Haliimaile, Maui
Tax Map Key: 2-5-03; por. 10

Thank you for allowing us to review and comment on the subject request. We have the following comments to offer:

Solid Waste

The developer and/or landowner of the subject property shall cooperate with the State Department of Health and the County of Hawaii Department of Public Works to conform to the program goals and objectives of the Integrated Solid Waste Management Act, Chapter 342G, Hawaii Revised Statutes, and the County's approved integrated solid waste management plans in accordance with a schedule and timeframe satisfactory to the Department of Health.

If there are any questions on this matter, please contact Mr. John Harder of the Office of Solid Waste Management at 586-4240.

Air Pollution

1. Sugar cane fields are located along the north and west side of the proposed project site. Sugar cane burning activities as well as other agricultural operations may impact the proposed development. An assessment should be

considered to address the impact sugar cane harvesting and agricultural activities would have on this development.

2. An assessment should also be made regarding the impacts and any mitigative measures to control nuisance odors from the proposed wastewater treatment facility.

3. Control of Fugitive Dust:

Due to the nature of the project, there is a significant potential for fugitive dust to be generated during the construction and operation activities that would impact residential and business establishments and nearby thoroughfares. It is suggested that a dust control management plan be developed which identifies and addresses the activities that have a significant potential for fugitive dust. Implementation of adequate dust control measures during all phases of the project is warranted. Construction activities must comply with the provisions of Chapter 11-60.1, 'Air Pollution Control,' Hawaii Administrative Rules, Section 11-60.1-33 on Fugitive Dust.

If you have any questions on this matter, please contact Mr. Ronald Ho of the Clean Air Branch at 586-4200.

Drinking Water

The petition indicates that new sources of potable water will have to be developed for this project. These new sources will be subjected to the requirements of Hawaii Administrative Rules (HAR), Title 11, Chapter 23, 'Potable Water Systems.' Any questions regarding this matter should be directed to the Safe Drinking Water Branch, at 586-4258.

Wastewater

We have no objections to the use of a private, package-type sewage treatment plant (STP).

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, 'Wastewater Systems' and our reuse guidelines entitled, 'Guidelines for the Treatment and Use of Reclaimed Water.' We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

Should you have any questions, please contact the Planning/Design Section of the Wastewater Branch at (808) 586-4294.

Noise

The developer and/or landowner of the subject property shall not construct residential units within areas exposed to noise levels of 60 Ldn or greater.

Water Pollution

For any construction activity that may result in the discharge to waters of the State including storm water, construction runoff, dewatering activities, hydrotesting water from new water lines or storage tanks, groundwater remediation sites, and cooling water discharges from air conditioning units, and involves the clearing, grading and excavation of five or more acres of total planned development, the developer and/or landowner of the subject property shall obtain a National Pollutant Discharge Elimination System (NPDES) permit from the Department of Health. The permit application shall be submitted to the Director at least 90 days prior to the commencement of construction.

If there are any questions regarding these comments, please call Mr. Denis Lau, Chief, Clean Water Branch, at 586-4309.

c: CMB
OSMH
SDWB
WMB
NR&IAQB
CAB

BENJAMIN J. CAYETANO
Governor



APR 20 1998

JAMES J. MAKATANI
Chairperson, Board of Agriculture
LEITMAN UYENHARA
Deputy to the Chairperson

Building Address:
P.O. Box 21159
Honolulu, Hawaii 96821-0159

State of Hawaii
DEPARTMENT OF AGRICULTURE
1478 South King Street
Honolulu, Hawaii 96814-2512

Fax: (808) 973-8613
4-6672

13527
April 16, 1998

To: Rick Egged, Director
Office of Planning
Department of Business, Economic Development, and
Tourism

From: James J. Makatani, Chairperson
Board of Agriculture

Subject: Petition for Amendment to the State Land Use District
Boundaries
A&B Properties, Inc. (A98-723)
Agricultural to Urban
Single family residential (196 lots)
THK: 2-5-03: por. 10
Area: approximately 63 acres

The Department of Agriculture has reviewed the subject petition and offers the following comments.

Background:

According to the petition, the subject property is fee-owned by the petitioner and is adjacent to Halimaile town, HC&S sugarcane fields, and close to Maui Pineapple Company fields and maintenance yards. The subject site is cultivated in sugarcane. The Makawao-Pukalani-Kula Community plan was recently amended to designate the property for single family residential and park uses.

Agricultural productivity of the property:

The proposed project has an overall productivity rating of "C" according to the Land Study Bureau's Detailed Land Classification



Mr. Rick Egged
April 16, 1997
Page -2-

(map 62). These lands have a land type of "21" that, if irrigated, improves the overall productivity rating to "A". According to HC&S, the sugarcane field affected by the project is drip-irrigated, therefore the overall productivity rating would be "A".

The Natural Resources and Conservation Service Soil Survey identifies the soils as Halimaile silty clay (HhB, HhC) with 3 to 15 percent slopes. Average yields of sugarcane and pineapple from these two soils in tons per acre are 12 to 15 for sugarcane and 35 to 45 for pineapple. Both are considered high yields. The HhC soil has a slightly greater slope.

Impact on HC&S and Maui Pineapple Company:

Hawaiian Commercial and Sugar General Manager Steve Holliday said the loss of the 63 acres will not adversely affect the company. He also noted that affected field irrigation lines will be realigned, a 40-foot buffer will be separating the new residential area from the surrounding fields, and no heavy equipment traffic would be affected.

We recommend that potential lot buyers be forewarned of the dust, noise, and odors that result from normal daily agricultural activities and that state law (Chapter 165, HRS) limits the circumstances under which farming activities can be considered a nuisance.

A representative of Maui Pineapple Company had no comment on the proposed project nor its impact on their operations.

Impact on agricultural resources:

The proposed project almost doubles the size of Halimaile village which itself is in the middle of pineapple and sugarcane fields.

Mr. Rick Egged
April 16, 1997
Page -3-

- Did the petitioner consider alternative sites for the project which avoid prime agricultural lands and/or lands currently in cultivation?
- Also, does the petitioner have plans to urbanize more agricultural land around Halimaile in addition to what is being sought for reclassification?

State Agriculture Functional Plan (1991):

The following policy and action points to the importance of protecting prime agricultural lands and lands in agricultural use.

Policy H(2): Conserve and protect important agricultural lands in accordance with the Hawaii State Constitution.

Action H(2)(c): Administer land use district boundary amendments, permitted land uses, infrastructure standards, and other planning and regulatory functions on important agricultural lands and lands in agricultural use, so as to ensure the availability of agriculturally suitable lands and promote diversified agriculture.

CONCLUSION:

While the project may not materially affect the economic viability of HCSs, we would prefer that reclassification of actively cultivated and/or prime agricultural lands be avoided. We prefer that lands within and immediately adjacent to larger Urban District areas such as Paia, Makawao, Pukalani, Wailuku, and Kahului should be considered for development prior to Halimaile.

Mr. Rick Egged
April 16, 1997
Page -4-

Should you have any concerns, please call me at 973-9550, or Earl Yamamoto at 973-9466.

#00-723-61

BERNARD J. CANTREANO
GOVERNOR
MILTON S. BARNETT
DIRECTOR OF CIVIL DEFENSE



ROY C. PRICE, SR.
VICE DIRECTOR OF CIVIL DEFENSE

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
3945 DULACROIX ROAD
HONOLULU, HAWAII 96818-4495



PHONE 808 723-0200
FAX 808 723-0257

The Honorable Rick Egged
April 9, 1988
Page 2

Our SCD planners and technicians are available to discuss this further if there is a requirement. Please have your staff call Mr. Norman Ogasawara at 733-4300.

APR 14 1988

April 9, 1988

Enc.

c: Maui Civil Defense Agency
A&B Properties, Inc.

TO: The Honorable Rick Egged
Director, Office of Planning
Department of Business, Economic
Development & Tourism

FROM: Roy C. Price, Sr. *RCP*
Vice Director of Civil Defense

SUBJECT: PETITION FOR THE AMENDMENT TO THE STATE LAND USE
DISTRICT BOUNDARIES--PETITION #A98-723/A&B PROPERTIES, INC.

We appreciate this opportunity to comment on A&B Properties, Inc.'s request to amend the land use district boundary from agricultural to urban. The single family residential subdivision located at Halimalie, island of Maui, State of Hawaii, TMK: 2-5-03: por. of 10, is approximately 63 acres.

We do not have negative comments specifically directed at the petition requesting a district boundary change. The proposed subdivision is located in an area that is not covered by existing warning devices (siren and simulators). State Civil Defense (SCD) requests that the developer install a siren to help alert residents of an impending or actual event that threatens the subdivision. This siren must be solar powered, have a minimum output of 121dB and be compatible with the existing civil defense siren system for Maui County.

The proposed siren requires a 250-foot radius buffer zone in which there is no residential building. The suggested location is annotated in red on the enclosed Figure 4, "Schematic Site Plan."

Just as parks, schools, fire hydrants, underground/overhead utilities and sidewalks are planned as integral parts of planned developments, so must an emergency warning system and support infrastructure be purchased and installed by the developer for the safety and well-being of the residents of this development.

STATE OF HAWAII
 DEPARTMENT OF BUDGET AND FINANCE
 HOUSING FINANCE AND DEVELOPMENT CORPORATION
 677 QUEEN STREET, SUITE 300
 HONOLULU, HAWAII 96813
 FAX (808) 587-0800

ROY S. OSHIRO
 EXECUTIVE DIRECTOR

IN REPLY REFER TO
 98: PPE/1658

58422 4-1131
 MAY - 8 1998
 OFFICE OF PLANNING

May 6, 1998

TO: Mr. Rick Egged, Director
 Office of Planning

FROM: Roy S. Oshiro
 Executive Director

SUBJECT: Petition for Amendment to the State Land Use District Boundaries, A98-723/A9B Properties, Inc., Haliimaile, Maui

Thank you for the opportunity to review the subject petition. Policies A(3) and B(3) of the State Housing Functional Plan seek to ensure that (1) housing projects and (2) projects which impact housing provide a fair share/adequate amount of affordable homeownership or rental housing opportunities. Presently, it is the Governor's policy to assign responsibility for determining and enforcing affordable housing requirements to the counties in which the proposed project is located.

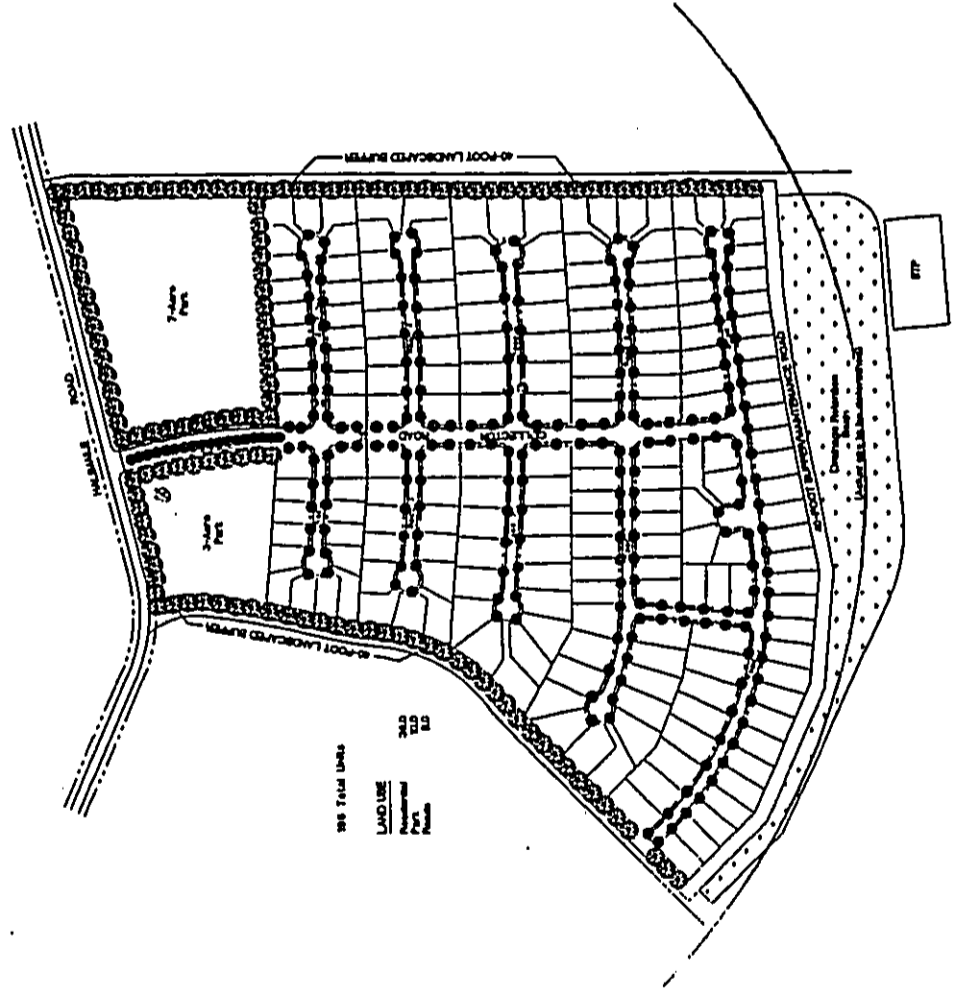


FIGURE 4
 SCHEMATIC SITE PLAN



BENJAMIN J. CAVETANO
DIRECTOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

234 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE: 595-1111
FACSIMILE: 595-1118

April 9, 1998

Mr. Rick Egged, Director
Office of Planning
235 South Beretania Street, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Egged,

Subject: State Land Use District Boundary Amendment
A&B Properties, Inc./Petition A98-723

In response to your request for comments on the above petition before the State Land Use Commission, we would like to bring to your attention the following list of nearby projects which have been under environmental review in the past ten years.

- Hookipa Park Improvements, FONSI, 5/23/90
- East Maui Well Sites Exploratory Drilling, FONSI, 6/23/91
- Paia Biomass Gasifier Facility, FONSI, 10/8/92
- Maui Farm Group Foster Home Construction, FONSI, 6/23/92
- Ike Drive Waterline Improvements, FONSI, 10/23/92
- Kanohe Weir Water Treatment Facility, FONSI, 6/8/95
- Hoomaka Hou - Residential Treatment Program, FONSI, 12/23/95

These studies indicate the intensity and nature of development that has taken place recently in the Halimaile area. Information on environmental conditions contained in these documents may be of use to your agency while considering the proposed land use district boundary amendment.

We have these studies on hand in our library and available for your review. Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Gary Gill
Director

c: LUC
AcP

BENJAMIN J. CAVETANO
DIRECTOR



STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879
HONOLULU, HAWAII 96818

April 8, 1998

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

Dear Mr. Egged:

Subject: Petition for Amendment to the State Land Use District
Boundaries, A98-723 / A&B Properties, Inc.
THK 2-5-3:10 por., Halimaile, Maui

Thank you for the opportunity to review the subject application.

The Department of Hawaiian Home Lands (DHHL) has property interests in "Upcountry" Maui and depends upon a reliable source of potable water to facilitate the development of homestead lands at Waiohuli, Keokea and UluPalakua.

The Engineering Report in Appendix F of the subject application estimates that the proposed 196 unit single-family residential project will consume an average of 78,400 gallons per day of potable water. The estimation is based on an interim daily consumption of 400 gallons per residential unit.

Maui County's Water System Standards indicate that the average daily demand for single family residential developments to be 600 gallons per unit per day. If County standards are followed, then estimated potable water consumption would be 117,600 gallons per day.

The subject application does not indicate the extent to which the proposed project will impact the existing water system that services the Halimaile community; however, it does state that:

"existing potable water sources and facilities are inadequate to service the proposed project and new source, storage and transmission facilities will be needed to service the project."

BENJAMIN J. CAVETANO
DIRECTOR

HONOLULU, HAWAII 96818

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879
HONOLULU, HAWAII 96818

APR 9 1998

595-1111

Mr. Rick Egged, Director
April 8, 1998
Page 2

DHHL does not oppose the land use district boundary amendment under the condition that future water consumption and water system improvements do not adversely impact the availability of adequate potable water for current and foreseeable development of Hawaiian Home Lands.

If you have any questions, please call Daniel Ornellas at 586-3836.

Aloha,

Kali Watson

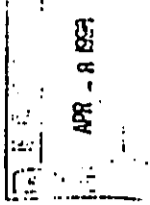
KALI WATSON, Chairman
Hawaiian Homes Commission



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
677 Ala Moana Boulevard, Suite 415
Honolulu, Hawaii 96813

April 7, 1998



53272 4-1059

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

Dear Mr. Egged:

Subject: Petition for Amendment to the State Land Use District Boundaries
A98-723/A&B Properties, Inc.
Haliimaile, Maui
TMK: 2-5-03; por. 10

The staff of the U.S. Geological Survey, Water Resources Division, Hawaii District office, has reviewed the subject petition. We have no existing or proposed programs for the subject area.

We are returning the petition to your office for your future use. If you have any questions, please feel free to contact us at 522-8290.

Thank you for allowing us to review the petition.

Sincerely,

William Meyer
William Meyer
District Chief

Enclosure



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

April 20, 1988

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

53348
4-16-88

United States
Department of
Agriculture
Natural
Resources
Conservation
Service
P.O. Box 50004
Honolulu, HI
96850


Dear Mr. Egged:

Subject: Reference No. P-7326 - Petition A88-723/A&B Properties, Inc.; Requested
Change from Agricultural to Urban; For single family residential subdivision,
Haliimaile, Maui, Hawaii

We have reviewed the above mentioned document and offer the following comment:
Prime Farmland and Other Lands of Importance to the State of Hawaii make up 50%
each of the total parcel. Drainage outlets for the lands above Hana Highway from
Spreckelsville to Kuau should be evaluated prior to making any land use changes.

Thank you for the opportunity to review this document.

Sincerely,


KENNETH M. KANESHIRO
State Conservationist

AOD

The Natural Resources Conservation Service works hand-in-hand with
the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



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

June 2, 1998

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

JUN - 9 1998
53560 A-723


Dear Mr. Egged:

Subject: Ref. No. P-7434 - State Land Use Commission (LUC) Docket no. A98-723 -
A&B Properties, Inc. (Haliimaile, Maui)

We have reviewed the above mentioned document and have no comments to offer at
this time.

Thank you for the opportunity to review this document.

Sincerely,


KENNETH M. KANESHIRO
State Conservationist

AOD

The Natural Resources Conservation Service works hand-in-hand with
the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Blvd., Room 3-122
P.O. Box 50088
Honolulu, Hawaii 96850

Telephone: (808)541-3441; Fax: (808)541-3470

In reply refer to: DHI

In Reply Refer To: DH

JUN 12 1998

Rick Egged, Director
Office of Planning
Dept. of Business, Economic Development & Tourism
235 South Beretania St., 6th floor
Honolulu, HI 96804

Re: Amended district boundary change from Agricultural to Urban, Halimaille, Maui (Ref. No. P-7326)

Dear Mr. Egged:

The U.S. Fish and Wildlife Service (Service) has reviewed the petition requesting a district boundary change in the Halimaille area of Maui County. The petition sponsor is the State Department of Business, Economic Development, and Tourism. The petition proposes that approximately 63 acres of land currently classified as Agricultural be reclassified as Urban to facilitate construction of a single family residential development. The Service offers the following comments for your consideration.

According to the consultants who prepared the Planning, Engineering and Environmental Report on the proposed development, Townscape Incorporated, there are no plans to develop or alter the reservoir that lies between the town of Halimaille and the proposed project site. The reservoir and its surrounding area will not be directly affected by the proposed development and it will remain zoned as Agricultural land. The reservoir is dry throughout much of the year, being dependent on rainfall. There will be buffer zone of approximately 40 feet between the project site and the edge of the reservoir. A dirt road, currently in place, lies between the buffer zone and the proposed development. Based on the project report, a pair of endangered Hawaiian Stilts (*Himantopus mexicanus knudseni*; noted as Black-necked Stilts, *Himantopus mexicanus*) were seen foraging at the reservoir. This observation was made in April 1997, which would have been during the peak breeding season of this species of waterbird. However, no nests or subadult birds were reportedly observed.

Aed

District Boundary Change
Halimaille, Maui

The Service feels that the Planning, Engineering and Environmental Report does not adequately address the long-term impacts that this project will have on any Hawaiian stilts present at the adjacent reservoir. Possible impacts include increased human use of the reservoir area and an increase in the number of predators such as dogs and cats. It is possible that stilts will utilize this reservoir for nesting during some years. Therefore, the proposed land use change, will facilitate events that have the potential to impact the endangered Hawaiian Stilt.

The Service recommends that seasonal surveys be conducted during late winter/early spring, (when water is present in the reservoir) to determine if the wetland area is being used as nesting habitat by stilts or other endangered species/subspecies of waterbirds (e.g., Hawaiian Coot or Hawaiian Gallinule). Surveys should be conducted 2-3 times per year, at 1-2 month intervals depending on persistence of water in the reservoir (approximately December through May). Surveys should be conducted for at least two years. The surveyors should look for evidence of increased use of the area, as well as predation by, dogs and cats. Should findings detect increased disturbance or predation to endangered waterbirds, fencing and other appropriate mitigation measures should be considered.

The Service appreciates the opportunity to provide comments on this proposed district boundary change. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Dave Hopper at 808/541-3441.

Sincerely,

Handwritten signature: Brooks Harper
for Brooks Harper
Field Supervisor
Ecological Services

cc: Townscape, Inc.
DOFAW, Maui
DOFAW, Honolulu



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96834-6440

MEMO TO
ATTENTION OF

April 10, 1998

APR 13 1998

Civil Works Branch

53291 4-10-98

Mr. Rick Egged, Director
State of Hawaii
Department of Business
Economic Development and Tourism
Office of Planning
235 South Beretania Street, 6th Floor
Honolulu, Hawaii 96804

Dear Mr. Egged:

Thank you for the opportunity to review and comment on the Petition for Amendment to the State Land Use District Boundaries for the Halimaile Single Family Residential Subdivision, Maui, Hawaii (Tax Map Key 2-5-3: por. 10). The following comments are provided in accordance with U.S. Army Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. A determination for a DA permit could not be made based on the information provided. Please contact Mr. William Lennan of our Regulatory Section at 438-9258 (extension 13) for further information and refer to file number 980000171.

b. The flood hazard information provided on page 12 of the Engineering Report is correct.

Sincerely,

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

LINDA LINGLE
Mayor
CHARLES JENCKS
Director
DAVID C. GOODE
Deputy Director



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

Telephone: (808) 243-7645
Fax: (808) 243-7955

May 13, 1998

Mr. Rick Egged, Director
Department of Business, Economic Development & Tourism
Office of Planning
235 S. Beretania Street, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Egged:

SUBJECT: DISTRICT BOUNDARY AMENDMENT 114-723
A&B PROPERTIES, INC.
TMK (2) 2-5-003:010

The subject submittal does not conflict with any programs for the subject area. Possible programs emanating from this department would include new roads, road widening, drainage improvements, and treatment of wastewater. For the Halimaile area, we have no present programs affecting these infrastructure improvements.

We do wish to comment on the subject application as it deals with our existing ordinances, rules, regulations, and policies.

1. All roads within the subdivision shall be improved to County standards to include, but not be limited to, pavement widening, construction of curb, gutter, and sidewalk, street lights and relocation of utilities underground.
2. A separate left-turn storage lane shall be constructed on Halimaile Road at its intersection for this project as approved by the Department of Public Works and Waste Management, Engineering Division. A separate right-turn lane (acceleration lane) shall be constructed on Haleakala Highway with its intersection with Halimaile Road. Other improvements may be needed on Halimaile Road at the time the project is built if the traffic is greater than presently anticipated.

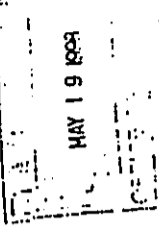
RALPH MACQUEME, L.S., P.E.
Land Use and Codes Administration

EASSE MILLER, P.E.
Wastewater Reclamation Division

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

BRIAN HARRIS, P.E.
Highways Division

Solid Waste Division



53461 4-

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 prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules 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.
4. The Planning, Engineering and Environmental section of the report (page 6) states that "all roadways within the project area are planned to be developed without curbs, gutters, and sidewalks to harmonize with the rural character of the region. Grassed swales are planned in lieu of the hardscape that is typical of modern urban developments." The improvements as proposed will not comply with the provisions of Section 18.20.080, Maui County Code, "Curbs and Gutters." This section provides that "concrete curbs and gutters shall be constructed on all streets within the urban areas to the standard specifications on file in the Department of Public Works."
5. Thus, a variance will need to be granted from the Board of Variances and Appeals for the improvements to be constructed as proposed.
6. The planning report on pages 19 and 20 states that "a drainage retention basin is needed makai of the project site to ensure that no excess runoff leaves the project site. Calculations are based on a 50 year storm, although Maui County standards would require design for only a 10 year storm."
7. Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui," does, in fact, require that for "Retention and Detention Basins: 1m (recurrence interval) = 50 year based on an one hour storm for drainage areas 100 acres or less."
8. The subdivision shall comply with the provisions of Title 18, Maui County Code, "Subdivisions."

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

Sincerely,



CHARLES JENCKS
Director of Public Works and
Waste Management

DG:co/mt
S:ILUCAICZMAA&B



**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI**

P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-7109
Telephone (808) 243-7816 • Fax (808) 243-7833

May 12, 1998

Mr. Rick Egged, Director
Office of Planning
Department of Business, Economic Development & Tourism
235 South Beretania Street, 6th Fl.
Honolulu, HI 96804

Subject: Petition for Amendment to the State Land Use District Boundaries
Halimalie, Maui HI

Dear Mr. Egged,

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

Finding of Inadequate Water Source

This project is in the Upcountry area affected by the "Shortage of Water Source Capacity Affecting Upcountry Areas" by the Director of Water Supply, dated March 16, 1993. During the term of the shortage condition, measures include recommendations for denial of subdivision applications and building permit applications, with the exception of a single family residence per lot existing as of March 16, 1993. Water service in excess of a single 5/8" meter for an existing lot is also being denied. These restrictions apply to the DWS water system and are therefore applicable to the domestic needs for this project.

The applicant will be subject to the current standards, rules and regulations of the Department of Water Supply at the time of development. No guarantee of water is granted or implied as a result of these comments or the approval of the requested district boundary change.

Source and System

Currently, there is an existing 8 inch (EW8") waterline which fronts the project along Halimalie and ends just past Hoomalie PL. As stated in the petition, the source water will be obtained from our Kamole Water Treatment Facility. Treated water from our plant is pumped up to Makawao (Pookia tank) via an EW24" force-main where it is then gravity fed down to the Halimalie area via an EW8" distribution waterline. A section from our fire protection map is attached for your reference.

AOL

Rick Egged, Director
Petition for Amendment
May 12, 1998
Page 2

Conservation
In order to protect groundwater and surface water resources, BWS recommends that the applicant utilize Best Management Practices (BMP's) designed to minimize infiltration and runoff from all construction and vehicle operations. We have attached sample BMP'S for principle operations and a list of references. Additional information is available from the State Department of Health.

In the Halimalie area there are numerous opportunities to conserve water. Listed are some conservation measures:

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20.675 requires the use of low flow water fixtures and devices in faucets, showerheads, water closets and hose bibs. Water conserving washing machines, and other units are also available, and can help cut back on water bills.

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 Planning Plan" - Plant Zone Water Conservation Through Creative Landscaping" and "Some of Maui's Native and Polynesian Plants." We encourage the applicants to review the attached documents, refer to the Planning Plan, and consider using climate-adapted and salt-tolerant 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.

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

Sincerely,

David R. Craddock

Director
RS

Attachments:

- 1) "The Costly Dip"
- 2) Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the planning code"
- 3) "Some of Maui's Native and Polynesian Plants"
- 4) "XERISCAPE - Water Conservation through Creative Landscaping"
- 5) "Hawaiian Alien Plant Studies - Pest Plants of Native Hawaiian Ecosystems"
- 6) References for Further Reading from "The Manual - Nonpoint Source Management Manual," Commonwealth of Massachusetts
- 7) Selected BMP'S from "Guidance Specifying Management Measures For Sources of Nonpoint Pollution in Coastal Waters," U.S. EPA.
- 8) Section of Maui DWS Fire Protection map

MAY 14 1998
53441
4-1136

Appendix F

**ARCHAEOLOGICAL INVENTORY SURVEY
OF A 55-ACRE PARCEL AT HALT'IMAILE**

ABSTRACT

Cultural Surveys Hawaii conducted an archaeological inventory survey on a 55-acre parcel at Halimale, Maui on May 19 1997. No archaeological features were found on the parcel. Historical features found on the parcel consisted of irrigation ditches associated with the ongoing cultivation of sugar cane within the project area. The ditches in the study area are short, inter-reservoir connections and their removal will not impact the longer source-ditches such as the Hamakua, Kaubikoa, and Lowrie or Haiku. These ditches have been documented in previous investigations of this region (Hammatt and Folk 1992) and do not represent significant cultural resources. Because no significant historical or archaeological sites were found on in the project area, development or other use of the land should not require cultural resource mitigation.

Archaeological Inventory Survey
of a 55-acre parcel at Halimale,
Makawao, Maui TMK 2-5-03:portion 10.

by
William H. Folk
and
Hallett H. Hammatt, Ph.D

for
Townscapes, Inc.

Cultural Surveys Hawaii, Inc.
June 1997

ACKNOWLEDGEMENTS

We would like to thank Joanne Hiramatsu and Bruce Truchida of Townsapes for coordinating the project. We would like to thank Pacific Helicopters Inc. for providing helicopter service for the aerial portion of the survey

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INTRODUCTION

On 19 May 1987 archaeological inventory-survey fieldwork was conducted on a 55-acre parcel at Hali'imaile known as TMK 2-5-03:portion 10 (Figures 1-4). The property's *mauka* boundary is Hali'imaile Road (see Figures 3 and 4), which runs between Haleakala Highway and Haldwin Avenue. The north project area boundary is a plantation road running *makai* from Hali'imaile Road along the south side of Reservoir 20. On the south the project area boundary is formed by a ditch that carries water from the New Hamakua Ditch *mauka* of Hali'imaile Road in a near straight line *makai* to Reservoir 16. The west, or *makai* boundary of the project area is an unmarked line through the sugarcane fields from the plantation road at the north to the ditch on the south.

Scope of Work

The scope of the fieldwork comprised an archaeological inventory level survey, and included the following:

1. Historic background research on previous land use, on adjacent previously recorded archaeological and historic sites, and a review of historic maps and other documents.
2. Field inspection of the property to assess potential for archaeological sites. The area is presently in sugarcane.
3. Preparation of a report to document the results of historical research and the field investigation. This report will include description of any archaeological resources, if encountered, and identification of mitigative measures, if appropriate.

Background

The present study parcel in Hali'imaile ahupua'a is within the Hawaiian land area of Hamakua Piko in Maui island's Makawao judicial district. The parcel is *makai* of the modern town of Makawao, and adjacent to the south side of the present day village of Hali'imaile. The area is at the one thousand foot elevation contour on the north rift zone of Haleakala volcano, on Pleistocene rocks of the Kula volcanics (McDonald and Abbot 1970). Soil in the project area is Hali'imaile silty clay on 8% to 15% slopes of the Waiakea-Keahua-Molokai Association formed in basic weathered igneous rock (Foote et al 1972). At this elevation temperatures (in degrees Fahrenheit) range from the high forties or low fifties to the low eighties and are generally higher in the summer months of June and July; typical for Hawaii in that the diurnal temperature range is usually greater than the annual range (Armstrong 1973).

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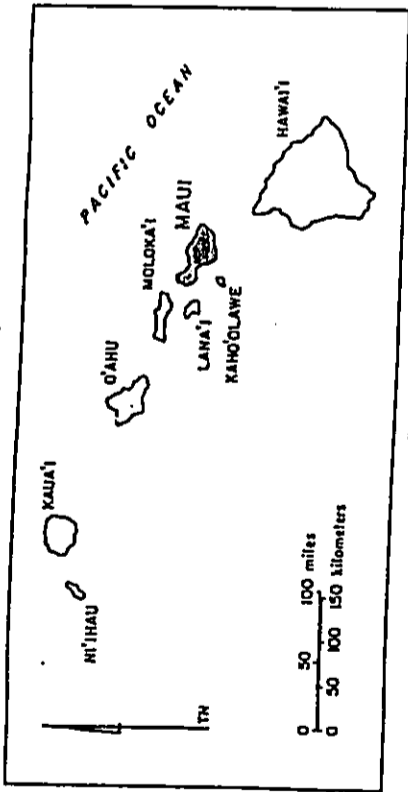


FIGURE 1
Map of the State of Hawaii

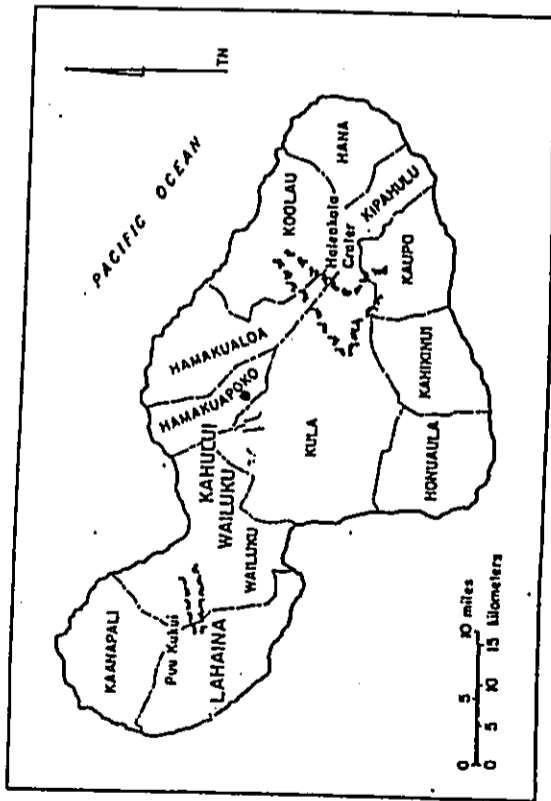


FIGURE 2
General Location Map, Maui Island

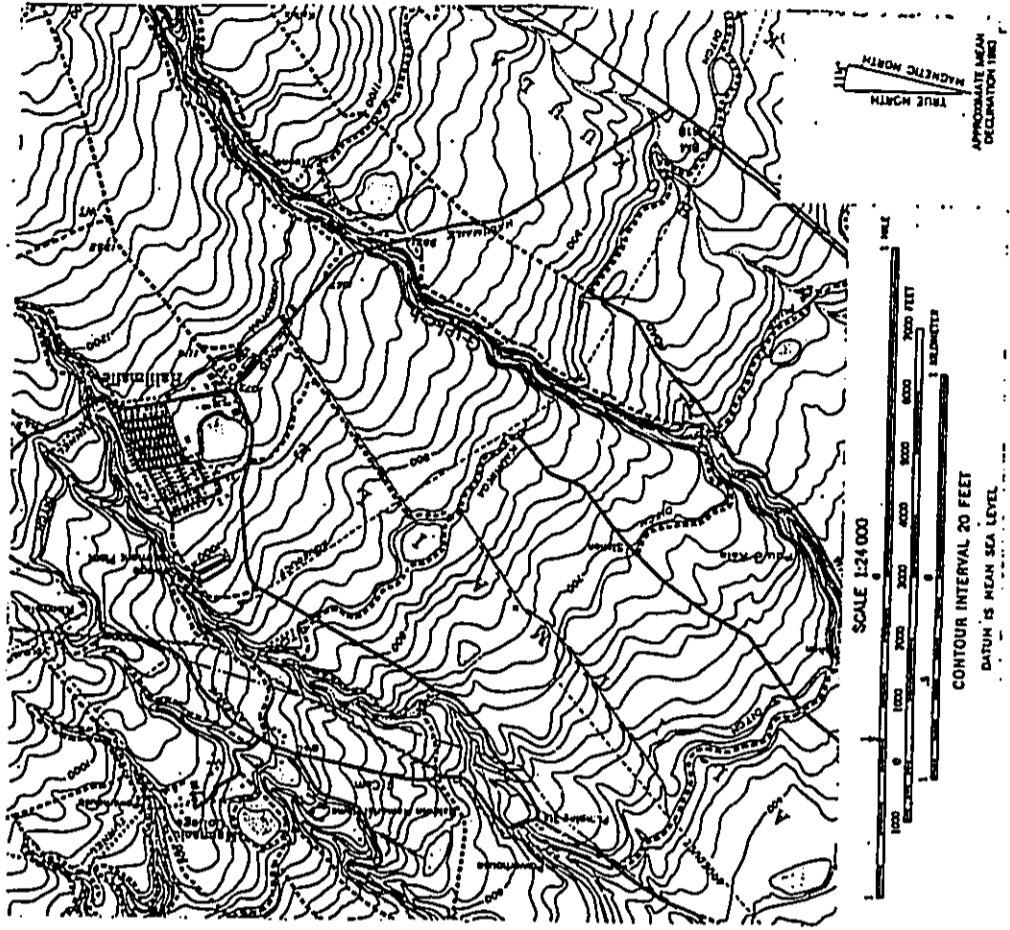


Figure 3 USGS Topographic map, 7.5 minute series, portion of the Paia Quadrangle; showing the location of the project area.

The north rift zone of Haleakala forms a barrier to the predominant tradewind weather pattern, increasing wind velocity and decreasing annual rainfall to the south side of the rift. The net result of the rift zone and tradewind interaction in the study area is an average annual rainfall of less than forty inches falling mainly in the winter months between October and April (Armstrong et al. 1973).

Previous Studies

There has been only one previous archaeological survey (Donham 1990) specific to Halii'maile ahupua'a that provides clues to pre-contact Hawaiian land usage and settlement in the immediate vicinity of the study area. Parcel 5 of five properties under study by Donham, for possible development of a new high school, was located in Halii'maile (TMK 2-4-01:portion 6) about one and one-half miles east of our project area (4). Donham's parcel 5 is adjacent to the Halii'maile ahupua'a mauka boundary (3). The parcel is in pineapple cultivation, but was newly plowed at the time of Donham's fieldwork. Donham found a small, quadrangular, basalt adz in her Parcel 5 study area; an isolated object in the plowed field (12).

Although not an archaeological study *per se* the survey notes of the Boundary Commission (vol. 1:191) for the ahupua'a report the boundary runs "...along an ancient ulu maka course, ..." (See Figure 3). This locale is about ".5 miles east of our project area. The first archaeological studies in this region of Maui were conducted in the early twentieth-century by John F. G. Stokes, Thomas Thrum and Winiflow Walker have recorded various archaeological remains near the sea and further mauka in the Pukalani and Kula areas, but not near the present project area in Halii'maile.

Ethnographic documentation of E.F. Craighill Handy and Elizabeth Handy during the 1930s outline likely general patterns in the several ahupua'a of Hamakua Poko:

Hamakua Poko (Short Hamakua) and Hamakua Loa (Long Hamakua) are two coastal regions where gently sloping kula lands intersected by small gulches come down to the sea along the northern coast line of East Maui. Maliko Stream, flowing in a gulch that widens and has a flat bottom to seaward, in pre-sugar-plantation days had a considerable number of lo'i. East of Maliko the number of named ahupua'a is evidence of habitation along this coast. Kuiaha Gulch, beyond Maliko, has a good stream and there were probably a few lo'i. Two kama'aina at Ke'anas said that there were small lo'i developments watered by Ho'olawa, Waipi'o, Hanehoi, Hoalua, Kailua, and Na'i'i'i'i'iaele Streams, all of which flow in deep gulches. Stream taro was probably planted along the watercourses well up into the higher kula land and forest taro throughout the lower forest zone. The number of narrow ahupua'a thus utilized along the whole of the Hamakua coast indicates that there must have been a very considerable population. This would be despite the fact that it is an area of only moderate precipitation because of being too low to draw rain out of trade winds flowing down the coast from the rugged and wet northeast. Ko'olau area that

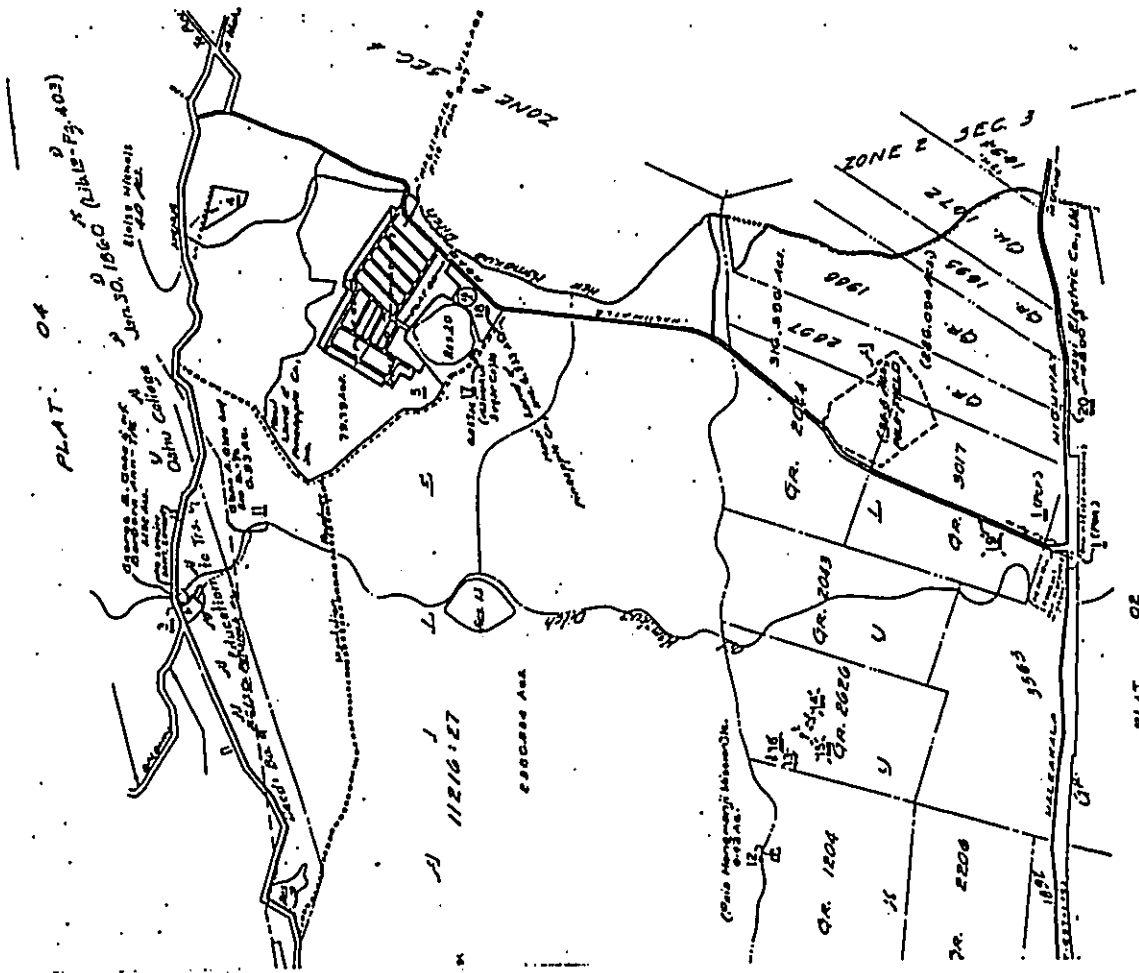


Figure 4 Maui County Tax map: TMK 2-6-03: portion 10

lies beyond. It was probably a favorable region for breadfruit, banana, sugar cane, arrowroot, and for yams and 'awa in the interior. The slopes between the gulches were covered with good soil, excellent for sweet-potato planting. (Handy and Handy 1972:498)

The Handy's observations suggest that the mauka lands of Halihimale - including those surrounding the present study parcel - would have offered areas amenable to plantings of several crops cultivated by the Hawaiian population. These areas may also have been sites of habitation - both permanent and temporary - associated with the care of cultivated lands.

Records associated with the mid-nineteenth century Mahele are often the first documentation that provides specific clues to traditional Hawaiian activity and settlement within specific lands. Testimonies for individual Hawaiians presenting land claims indicate land usages at mid-century which may continue from earlier times.

A total of seven claims for Land Commission Awards were recorded for Halihimale ahupua'a, but only one - the claim for the entire ahupua'a by Mikahela Kauonohi - was awarded. Nevertheless, patterns of land use are illustrated in the claimant's descriptions of the properties as follows:

- No. 3304C no description of land use (Native Testimony vol.V:456-457)
- No. 5504 "sweet potatoes, bananas, wauke, and ohia trees." (Native Register vol.VI:309)
- No. 5502 "only wauke" (Native Register vol VI:308); "pasture" (Native Testimony vol VII:36)
- No.5500B "an enclosure for his goats at Halihimale" (Native Register vol.VI:307)
- No. 4142 "kula land" (Foreign Testimony vol.VIII:93-94); "pasture" (Native Testimony vol III:470)
- No. 6510HH "kula land" (Foreign Testimony vol.VIII:142-143); "pasture" (Native Testimony vol VII:23-24)
- No. 11216 "Halihimale ahupua'a, Hamakua Poho, Maui (Native Register vol IV:360-363); "Halihimale ahupua'a Hamakua Poho, Maui (Native Testimony vol X:334-336)

The claim records indicate that Halihimale was primarily kula land, designating its use for pasture and other dryland agricultural activities, including growing wauke, sweet potatoes and bananas.

Later Nineteenth and Twentieth Centuries

In the mid-nineteenth century Mahele period the Boundary Commission surveyed the ahupua'a of Halihimale; the data of the survey are presented in graphic form on the Hawaiian Government Survey map of Makawao, Maui 1872 (Registered Map #603). As with other maps of the nineteenth and twentieth centuries discussed below there are no features noted or shown in the project area.

An historic map of the Paia Plantation (R.M. #1187) probably drawn in the 1870s by J.M. Alexander labels the adjacent land which contains the study area Grove Ranch; no features are shown in the study area. Another historic map, undated, unsigned and without registered map number in the map files of Cultural Surveys Hawaii, Inc. is titled Haiku Plantation, (Maui) and Adjoining Lands. This map labels the land surrounding and including the study area as the T. Hobron Plantation; there are no features shown in the study area on this map either.

The Hawaiian Government Survey of Kula, Maui was conducted and a map created between 1872 and 1879 (R.M. #913) by W.D. Alexander and M.D. Monsarrat. This map labels all of Halihimale ahupua'a as the T. Hobron's and Sharrat's Plantation; and again there are no features shown in the lands that comprise the present study area

On 1 January 1904 the Haiku Sugar Co., Paia Plantation and five one thousand acre corporations' merged to become the Maui Agricultural Co. (Conde and Best 1973). The lands of Halihimale including the study area may have been among those consolidated lands or may have been added later for the study area appears as a portion of Field 40 on a 1914 Map of Maui Agricultural Co. Sugar Plantation at Paia Maui (the map was updated in 1938).

SURVEY RESULTS

Methods

The project area was surveyed from the air by helicopter for the purpose of locating any field-rock clearing piles or any other features that should be ground checked in the mature cane fields. No field-rock piles are present within the project area.

The air survey was followed-up with a ground survey including inspection of the project area boundaries (except the west boundary which is an unmarked line through a filed of mature sugarcane which is inaccessible), and inspection of the roadways through the fields for indications of former cultural deposits or activities.

General area photographs were taken on the ground and from the air. A sample of these views of the project area are presented in the attached photographic appendix.

Findings

The surface survey of the 55-acre parcel in Halimale identified no sites of cultural significance. All of the accessible areas (field roads) of the subject parcel were covered on foot with visibility of the ground surface excellent. A major portion of the study area is covered by mature sugarcane and thus, was inaccessible. Nevertheless, the field roads provide a suitable group of north-south and east-west transects through the study area on which, when combined with the historical research, we base our statement of negative findings.

IMPACTS

There are no known historical properties on the subject Halimale parcel that may be impacted by development or use of the land. Ditches within the study area are short, inter-reservoir connections and their removal will not impact the longer source-ditches such as the Hamakua, Kauniko, and Lowrie or Haiku. The ditch-water control gate near the southwest corner of the parcel, at the intersection of the ditch from Reservoir 20 and the ditch to Reservoir 16, is the same type of gate used all across the isthmus; detailed drawings of this type of gate can be viewed in Folk and Hammatt 1992:25.

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M REF 01

PHOTOGRAPHIC APPENDIX



Figure 5 Aerial view of the study area. Reservoir 20 is at center of photo with modern village of Halimale behind it.

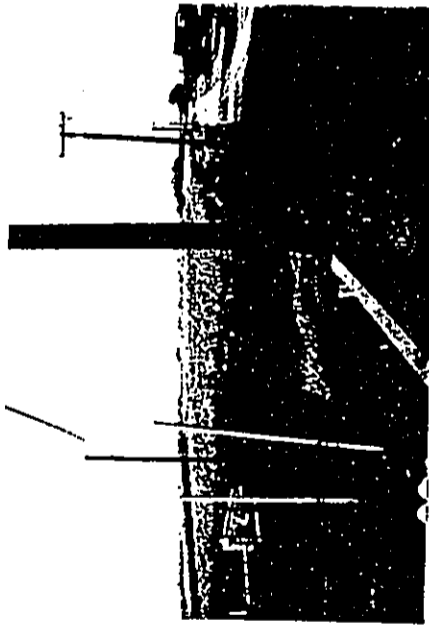


Figure 6 Halimale Road, the study area *mauka* (east) boundary. View is north from the southeast corner of the project area in photo center.



Figure 7 The project area south boundary is this ditch which carries water from the Hamakua ditch beyond the project area to *mauka* to Reservoir 16 *ma kai* of the project area.



Figure 8 View to the west from Reservoir 20 toward Reservoir 16. The *ma kai* project area boundary is in the cane field at the right and parallels the ditch at the photo center



Figure 9
Ditches in the project area. A view of ditches intersecting near the southwest corner of the project area; they carry water to Reservoir 16.

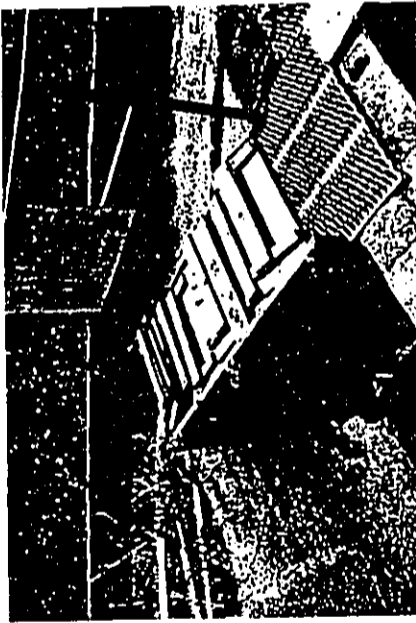


Figure 10
Close-up of flow-control gates at ditch intersections near southwest corner of the project area.

Appendix G

**TRAFFIC IMPACT ANALYSIS REPORT
HALI'IMAILE EXPANSION**

TRAFFIC IMPACT ANALYSIS REPORT
HALIMAILE EXPANSION

HALIMAILE, MAUI, HAWAII

prepared for:

A & B Properties, Inc.

prepared by:

Julian Ng, Incorporated
P. O. Box 816
Kaneohe, Hawaii 96744

June, 1997

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Traffic Impact Analysis Report
Haliimaile Expansion
Haliimaile, Maui, Hawaii

June, 1997

A & B Properties, Inc. has proposed to develop a residential community on land presently classified agricultural at Haliimaile, Maui. The proposed community would be an expansion of the existing Haliimaile town. Exhibit 1 shows the location of the project and the roadways in the vicinity of Haliimaile. The proposed project is located north of the two-lane Haliimaile Road and west of the existing Haliimaile village. The proposed project will include single family dwellings and a 10-acre park. Vehicular access is proposed through a collector street which will intersect with Haliimaile Road opposite an existing street which serves a small, existing single family subdivision.

A traffic study was conducted to evaluate the potential traffic impacts of the proposed project. Traffic impacts at three intersections were considered: the project access road with Haliimaile Road, Haliimaile Road and Haleakala Highway, and Haliimaile Road and Baldwin Avenue. Field counts were taken at the Haliimaile Road intersections with Haleakala Highway and with Baldwin Avenue during weekday peak periods to supplement data obtained from the State Highways Division.

This report includes analyses of intersection conditions. Operating conditions are described by a level of service (LOS) which is determined using analyses methods described in the *Highway Capacity Manual*^{1,2}. At unsignalized intersections, the volumes of the uncontrolled movements affect the capacity available for the other movements which must yield or stop. The analyses of unsignalized intersections used the procedure from the 1994 update of the *Highway Capacity Manual* to identify average delays and levels of service for each controlled movement. These Levels of Service (LOS) are defined using the letters A through F:

LOS	Average delay (seconds)	General Description
A	≤ 5 seconds	Little or no delay
B	> 5 and ≤ 10 seconds	Short traffic delays
C	> 10 and ≤ 20 seconds	Average traffic delays
D	> 20 and ≤ 30 seconds	Long traffic delays
E	> 30 and ≤ 45 seconds	Very long traffic delays
F	> 45 seconds	Very long traffic delays

¹ Transportation Research Board, National Research Council, *Highway Capacity Manual*, Special Report 209, Washington, D.C., 1985.

² Transportation Research Board, National Research Council, *Highway Capacity Manual - Third Edition*, Washington, D.C., 1994.

Julian Ng, Inc.
June, 1997

Traffic Impact Analysis Report
Haliimaile Expansion

Existing Traffic Conditions

The proposed project is located approximately 1/4 miles east of Haleakala Highway. Haleakala Highway is an undivided State highway which is the primary link between the communities on the slopes of Haleakala and the Kahului-Wailuku area. Near Haliimaile Road, Haleakala Highway is a three-lane highway with a posted speed limit of 45 miles per hour. Two lanes are provided for eastbound traffic, which travels uphill from Kahului toward Kula. A single lane serves the downhill westbound traffic. During the morning peak period between 5:30 AM and 9:00 AM, the center lane normally used by eastbound traffic is coned for contraflow use by westbound traffic.

At its intersection with Haliimaile Road, separate lanes are provided for the eastbound left turn and westbound right turn movements from the highway onto Haliimaile Road. An acceleration lane is provided for right turns from Haliimaile Road onto westbound Haleakala Highway for Kahului-bound traffic. Left turns from Haliimaile Road have a striped median, approximately 16 feet wide, which serve as a refuge area so that the turn can be made in two steps, first crossing the westbound traffic, then merging with the eastbound traffic. Haliimaile Road has a single-lane southbound approach controlled by a stop sign; however, a striped island allows access to the acceleration lane by vehicles wishing to turn right behind up to two cars stopped and waiting to make the left turn.

Haliimaile Road is a two-lane undivided roadway linking Haleakala Highway with Baldwin Avenue and serving Haliimaile, which includes Maui Pineapple Company's agricultural baseyard and an existing residential community. Each lane is 12 feet wide and the posted speed limit on most of Haliimaile Road is 35 miles per hour, except through Haliimaile, where it is 30 miles per hour. A local residential street and driveways serving the agricultural baseyard, offices, and a restaurant are located on the south side of Haliimaile Road. Farther east, local streets serving the main residential area of Haliimaile are located north of the road.

At its intersection with Baldwin Avenue approximately one mile east of Haliimaile, the eastbound approach of Haliimaile Road is controlled by a stop sign. Baldwin Avenue is a two-lane roadway between Paia to the north and Makawao to the south; at the intersection with Haliimaile Road, Baldwin Avenue is 24 feet wide. An agricultural roadway continues to the east through pineapple fields across from Haliimaile Road.

The *Traffic Summary, Island of Maui 1995* report published by the State Department of Transportation shows an average daily traffic (ADT) in 1995 of 26,443 vehicles per day (vpd) on Haleakala Highway north of Haliimaile Road and 24,218 vpd south of Haliimaile Road. Traffic volume during the morning peak hour is estimated to be 10% of the daily volume, with 85% of the volume in the peak direction. Afternoon peak hour traffic volumes are estimated to be 8.5% of the daily volume north of Haliimaile Road and 8% of the daily volume to the south, with 75% in the peak direction.

Julian Ng, Inc.
June, 1997

Traffic Impact Analysis Report
Haliimaile Expansion

Traffic counts are taken biannually by the State Highways Division at the intersection of Haleakala Highway and Haliimaile Road; the latest available data from counts taken in September 1995 are summarized in Table 1.

Table 1
STATE TRAFFIC DATA

Haleakala Highway and Haliimaile Road (Station 27-B)	24-hour count	AM Peak Hour	PM Peak Hour
Haleakala Highway, north leg southbound (approach)	13,032	344	2,300
northbound (departure)	13,422	1,675	468
Haleakala Highway, south leg northbound (approach)	12,668	2,133	462
southbound (departure)	11,918	335	1,533
Haliimaile Road, east leg westbound (approach)	2,107	247	162
eastbound (departure)	2,573	163	196

Source: State of Hawaii, Department of Transportation, Highways Division

Traffic count data at other locations in the vicinity of the proposed project were not available. Manual counts of turning movements during peak periods were taken at the Haliimaile Road intersections with Haleakala Highway and with Baldwin Avenue. The data from the counts are appended to this report and the peak hourly volumes are shown in Exhibit 2. The results of the unsignalized intersection analyses for the peak hour volumes shown in Exhibit 2 are presented in Table 2.

Table 2
EXISTING INTERSECTION CONDITIONS

	AM Peak Hour Delay * LOS	PM Peak Hour Delay * LOS
Haliimaile Road at Baldwin Avenue eastbound left turn	7.2 B	6.0 B
eastbound right turn	3.2 A	4.3 A
northbound left turn	2.6 A	2.7 A
Haliimaile Road at Haleakala Highway southbound left turn	41.5 E	8.8 B
westbound left turn	355.8 F	91.9 F

* average delay in seconds

The westbound right turn movement from Haliimaile Road to Haleakala Highway was evaluated as a merge condition. While newer methods of analyzing freeway merges include estimates of densities and operating speeds, the analytical method from the 1985 Highway Capacity Manual which based levels of service on total volume after the merge could be applied; LOS C and LOS B would describe conditions in the AM and PM Peak Hours, respectively, based on this analysis.

Future Traffic Conditions

The biannual traffic counts at the intersection of Haleakala Highway and Haliimaile Road indicate that traffic volumes on Haleakala Highway are increasing. The Maui Long Range Land Transportation Plan forecasted that the peak hour traffic volumes on Haleakala Highway would increase as shown in Table 3.

Table 3
PROJECTED INCREASES IN HIGHWAY TRAFFIC

Haleakala Highway east of Hana Highway	1990 volume	2020 forecast	Increase 2020/1990	Annual Increase
AM Peak Hour westbound	1,925	2,141	+11.2%	+0.36%
eastbound	564	866	+53.5%	+1.44%
total (2-way)	2,489	3,007	+20.8%	+0.63%
PM Peak Hour westbound	492	763	+55.1%	+1.47%
eastbound	1,635	2,021	+23.6%	+0.71%
total (2-way)	2,127	2,784	+30.9%	+0.90%

(annual increase assumes compounding)

Existing traffic patterns were analyzed and estimates of local and through traffic using Haliimaile Road were made. These estimates and a growth rate of 23% (0.9% per year, compounded annually) were applied to the turning movement counts to develop an estimate of future traffic on Haleakala Highway that would be consistent with the long-range projections for year 2020. These estimates are used herein for future without project conditions, and are shown in Exhibit 3.

These long-range projections include the effects of other improvements to the highway system, such as a proposed new road linking the upcountry area with Kihui. Several alternatives are being considered for this roadway; alternatives being considered for the upcountry terminus include two T-intersections with Kula Highway and the existing intersection of Haleakala Highway and Haliimaile Road.

A short-term projection, therefore, was also considered. The State Highways Division's estimates of average daily traffic (ADT) on Haleakala Highway (Hana Highway to Haliimaile Road) for the odd-numbered years between 1987 and 1995 were evaluated to develop a short-term projection based on a trendline. A regression of the daily traffic estimates show a close correlation with an annual growth (compounded) of 5.10%, as illustrated in Table 4.

Table 4
REGRESSION OF STATE TRAFFIC ESTIMATES

Haleakala Highway between Hana Highway and Haliimaile Road	Estimated ADT*	Regression estimate	variance
1987	17,593	17,822	+1.30%
1989	19,877	19,700	-0.89%
1991	22,112	21,774	-1.53%
1993	23,922	24,063	0.59%
1995	26,443	26,590	0.56%
1997 (extrapolation)	--	29,380	--
2000 (extrapolation)	--	34,117	--
2005 (extrapolation)	--	43,747	--

* Source: State Highways Division

The future traffic assignments shown in Exhibit 3 would represent future traffic conditions in the year 2001 if the recent 5.1% annual growth in traffic volumes were to continue. The *Maui Long Range Land Transportation Plan* recommends that highway improvements, specifically widening to four lanes, be done on Haleakala Highway between Hana Highway and Haliimaile Road, in the period 1996 to 2000. The traffic assignments shown in Exhibit 3, therefore, represent the future volumes prior to the implementation of major improvements in the highway system.

The capacity analyses at the Haliimaile Road intersections with Haleakala Highway and with Baldwin Avenue were repeated for the future traffic volumes assuming no improvements were made at either intersection. Table 5 summarizes the results of the analyses. The merging analysis of the acceleration lane for right turns from Haliimaile Road onto westbound Haleakala Highway shows LOS C conditions for both the AM Peak Hour and the PM Peak Hour.

The analyses indicate that the intersection of Baldwin Avenue and Haliimaile Road will continue to be adequate. The already poor peak hour conditions at the intersection of Haleakala Highway and Haliimaile Road would decline as traffic demand increases.

Table 5
FUTURE (WITHOUT PROJECT) INTERSECTION CONDITIONS

	AM Peak Hour Delay - LOS	PM Peak Hour Delay - LOS
Haliimaile Road at Baldwin Avenue	8.5 B	6.6 B
eastbound left turn	3.3 A	4.8 A
eastbound right turn	2.7 A	2.9 A
northbound left turn		
Haliimaile Road at Haleakala Highway	157.6 F	14.4 C
southbound left turn	**	F
westbound left turn		139.6 F

* average delay in seconds

** volume exceeds capacity, delay calculation not meaningful

Project Traffic

The proposed development consists of a subdivision to create 196 lots for single family dwellings and two parcels for park purposes, totaling 10 acres. The traffic volumes generated by the single family dwellings were estimated using factors for detached dwelling units published by the Institute of Transportation Engineers. The traffic generated by the park was estimated from the intended use; a portion of the trips generated by the park was expected to be linked to the project. Table 6 shows the estimated net traffic entering and leaving the site.

Table 6
PROJECT TRAFFIC GENERATION

Trip generation factor	% In		% Out	
	AM Pk. Hr.	PM Pk. Hr.	AM Pk. Hr.	PM Pk. Hr.
196 detached DUs	0.74	26%	1.01	65%
10 acres, park (net)	0.60	80%	1.60	80%
Net trips in and out of project site	43	108	142	72

The project traffic was distributed onto the roadway system using the distribution of existing traffic with origins or destinations in Haliimaile. The distribution was based on the field counts at the Haliimaile Road intersections, from which estimates of through traffic using Haliimaile Road to travel between Haleakala Highway and Baldwin Avenue were deducted. The distribution used for project traffic is shown in Table 7.

Table 7
PROJECT TRAFFIC DISTRIBUTION

	AM Peak Hour		PM Peak Hour	
	entering	exiting	entering	exiting
Haleakala Highway, north (Kahului)	23%	60%	55%	14%
Haleakala Highway, south (Pukalani)	35%	6%	20%	21%
Baldwin Avenue, north (Paia)	5%	11%	8%	10%
Baldwin Avenue, south (Makawao)	37%	23%	17%	55%

The project traffic estimates were added to the future baseline (without project) traffic projections; while the proposed project could be considered part of the growth expected in the future, the addition of project traffic to the baseline projection of future conditions represents the "worst case" scenario and the analyses would therefore be conservative. The future with project traffic assignments are shown in Exhibit 4. The capacity analyses at the Haleakala Road intersections with Haleakala Highway and with Baldwin Avenue were repeated for the future with project traffic volumes. The results of the analyses are shown in Table 8.

Table 8
FUTURE WITH PROJECT INTERSECTION CONDITIONS

	AM Peak Hour		PM Peak Hour	
	Delay * LOS	Delay * LOS	Delay * LOS	Delay * LOS
Haliimaile Road at Baldwin Avenue				
eastbound left turn	9.2 B	7.2 B		
eastbound right turn	3.4 A	5.2 B		
northbound left turn	2.8 A	3.0 A		
Haliimaile Road at Haleakala Highway				
southbound left turn	200.4 F	23.6 D		
westbound left turn	**	F 933.4 F		

- * average delay in seconds
- ** volume exceeds capacity, delay calculation not meaningful

The merging analysis for the right turn from Haliimaile Road onto westbound Haleakala Highway shows LOS D conditions in the AM Peak Hour and LOS C conditions in the PM Peak Hour. The analyses show that the project will have only a minor impact to conditions at the intersection of Baldwin Avenue and Haliimaile Road, where peak hour conditions will continue to be acceptable. The future peak hour turning delays at the intersection of Haleakala Highway and Haliimaile Road without the project would be lengthened with the addition of project traffic.

Evaluation of Future Conditions

The analyses show relatively long delays at the unsignalized intersection of Haleakala Highway and Haliimaile Road. However, the peak hour traffic volumes alone do not warrant signalization of the intersection. Without signalization, the through movement on Haleakala Highway will continue to increase if growth occurs as expected. However, the turn movements which must stop or yield will be affected by longer delays as other traffic increases, and the projected volumes will be constrained; drivers will find alternative paths and left turn volumes at the intersection of Haleakala Highway and Haliimaile Road will likely decrease from existing volumes.

The existing delays were used as a guideline to determine the turning volumes that could be serviced with higher future volumes on the highway. Exhibit 5 illustrates an estimate of the reassigned volumes for the future condition without the Haliimaile Expansion project. Exhibit 6 shows a comparable estimate for future peak hour volumes with the project. Table 9 compares the results of the intersection analyses for the future reassigned volumes with the existing conditions.

Table 9
INTERSECTION CONDITIONS - REASSIGNED TRAFFIC

	Existing Traffic		Future		Future	
	Delay * LOS	Delay * LOS	Delay * LOS	Delay * LOS	Delay * LOS	Delay * LOS
Haliimaile Road at Baldwin Avenue (AM Peak Hour)						
eastbound left turn	7.2 B	8.5 B	B 9.2 B			
eastbound right turn	3.2 A	3.1 A	A 3.2 A			
northbound left turn	2.6 A	2.7 A	A 2.8 A			
Haliimaile Road at Baldwin Avenue (PM Peak Hour)						
eastbound left turn	6.0 B	6.6 B	B 7.2 B			
eastbound right turn	4.3 A	5.0 B	B 5.9 B			
northbound left turn	2.7 A	2.9 A	A 3.0 A			
Haliimaile Road at Haleakala Highway (AM Peak Hour)						
southbound left turn	41.5 E	49.4 F	F 54.2 F			
westbound right turn	**	**	C **			
westbound left turn	355.8 F	358.5 F	F 442.6 F			
Haliimaile Road at Haleakala Highway (PM Peak Hour)						
southbound left turn	8.8 B	14.4 C	C 23.6 D			
westbound right turn	**	B **	C **			
westbound left turn	91.9 F	139.6 F	F 146.9 F			

- * average delay in seconds
- ** merging analysis

As noted earlier, existing delays at the Haleakala Highway intersection were considerably less than those from the analyses. The results in Table 9 should be used as an indication of the relative, rather than absolute, delays for the westbound left turn from Halliimaile Road to Haleakala Highway.

In order to determine the impact of the proposed project on roadways and intersections beyond the study area, comparisons were made of the traffic volumes on roadways entering and leaving the area. Table 10 compares the traffic volumes on various roadways for existing, future without project, and future with project.

Table 10
HIGHWAY VOLUMES - REASSIGNED TRAFFIC

	Existing Traffic Volume	Future Without Project	Future With Project Volume incr. %incr.
Baldwin Avenue (AM Peak Hour)	251	301	315 14 4.7%
north of Halliimaile Road	431	466	507 41 8.8%
Baldwin Avenue (PM Peak Hour)	284	339	357 18 5.3%
north of Halliimaile Road	535	645	744 99 15.4%
Halliimaile Road (AM Peak Hour)	316	317	372 55 17.4%
west of Baldwin Avenue	411	394	480 84 21.3%
east of Haleakala Highway	357	416	533 117 28.1%
Halliimaile Road (PM Peak Hour)	445	454	550 96 21.2%
Haleakala Highway (AM Peak Hour)	2,765	3,361	3,436 75 2.2%
north of Halliimaile Road	2,534	3,145	3,166 40 1.3%
Haleakala Highway (PM Peak Hour)	2,995	3,639	3,727 88 2.4%
north of Halliimaile Road	2,776	3,365	3,373 8 0.2%

Exhibits 5 and 6 and Tables 9 and 10 illustrate the probable future conditions: as traffic on Haleakala Highway increases, drivers who now turn left from Halliimaile Road toward Pukalani would be diverted and would likely use Baldwin Avenue and Makawao Avenue to get to Pukalani. Drivers who presently turn left from Haleakala Highway in the morning to use Halliimaile Road to travel to Makawao would continue south on Haleakala Highway and use Makani Road or Makawao Avenue to their Makawao destinations.

The project traffic would have a minor impact on traffic conditions, as the traffic on Haleakala Highway that could be attributed to the project is but a small portion of the expected growth in traffic volumes in the area. The project has a greater impact on volumes on Halliimaile Road and on Baldwin Avenue, but these roadways operate well below their capacities.

Improvements at the Intersection of Project Collector and Halliimaile Road

The intersection formed by the project access road and Halliimaile Road was also evaluated. The evaluation included capacity calculations and a determination if separate turn lanes are warranted on Halliimaile Road. The estimated peak hour traffic volumes at the intersection are shown in Exhibit 7. The results of the unsignalized intersection analysis are shown in Table 11.

Table 11
INTERSECTION CONDITIONS
Project Collector at Halliimaile Road

	AM Peak Hour Delay - LOS	PM Peak Hour Delay - LOS
Unconstrained		
eastbound left turn into project	3.0 A	2.7 A
westbound left turn into existing street	2.5 A	3.1 A
northbound shared lane out of existing street	5.6 B	6.5 B
southbound out of project collector		
separate right turn lane	4.0 A	3.1 A
shared left turn/through lane	6.9 B	9.1 B
Reassigned		
eastbound left turn into project	3.0 A	2.5 A
westbound left turn into existing street	2.3 A	3.1 A
northbound shared lane out of existing street	5.2 B	6.2 B
southbound out of project collector		
separate right turn lane	4.0 A	2.9 A
shared left turn/through lane	6.4 B	8.8 B

The need for acceleration lanes and separate turning lanes on Halliimaile Road at its intersection with the project collector was also evaluated. Acceleration lanes are provided to facilitate the entry of a vehicle from a side street onto a highway by permitting the entering vehicle to accelerate to reduce the difference in speeds between it and a vehicle traveling on a highway. The good levels of service found in the capacity analyses indicate that acceleration lanes are not needed.

Table 12
SEPARATE TURN LANE ANALYSES

Eastbound Haliimaile Road Peak Hour:	Left Turn		Right Turn	
	AM	PM	AM	PM
probability of queuing (shared lane)	0.028	0.113	0.001	0.005
probability of queuing (shared lane) for reassigned volumes	0.027	0.107	0.001	0.005
separate lane warranted? *	yes	yes	no	no

* separate lane warranted when probability exceeds 0.02 for design speed = 50 mph

Conclusions and Recommendations

The proposed project will have a minor impact to regional traffic demands. However, the addition of project traffic could have adverse impacts to the intersection of Haleakala Highway and Haliimaile Road.

The analysis included an estimate of future peak hour volumes if the delays at the Haleakala Highway intersection constrains the growth in traffic volumes on Haliimaile Road. The analysis indicates that the Haliimaile Road and Baldwin Avenue intersection will be able to handle the increases in traffic volumes due to this constraint.

The proposed unsignalized intersection of the project collector street and Haliimaile Road will adequately serve the peak hour traffic demands from the project. The project collector road should be aligned so that any traffic crossing between it and the existing street across the highway has minimal offset. Stop signs should be provided for the minor street approaches. A separate left turn lane is recommended on Haliimaile Road for eastbound traffic turning into the project collector road.

The design of the intersection should provide for adequate sight distances to the east and to the west for traffic approaching on the proposed roadway and wishing to enter Haliimaile Road. In addition, warning signs should be provided to alert eastbound drivers on Haliimaile Road of the new intersection.

Separate left turn lanes are provided at major intersections on high-speed two-lane highways to reduce the likelihood that vehicles will arrive behind another vehicle waiting to make a left turn against oncoming traffic. A separate left turn lane would provide space for a vehicle that must wait to go out of the through lane. Deceleration lanes provide a similar function for vehicles making right turns off of a highway.

The design of highway facilities is based on the American Association of State Highways and Transportation Officials (AASHTO) publication *A Policy on Geometric Design of Highways and Streets*. In this publication, a guide is provided for determining when a separate left turn lane should be provided on a two-lane highway (Table 1X-15). The table provides volumes which when exceeded for the given operating speed and the appropriate percentage of left turns, indicate that a separate left turn lane is warranted and should be considered. This table is based on an article⁴ written by M. D. Harmelink in 1967, which proposed a warrant based on the following:

On two-lane highways, it is the arrival of advancing, through vehicles behind a stopped left-turning vehicle that will affect safety and capacity (an arriving through vehicle is one that has been stopped or brought to creep speed by a left-turning vehicle in the advancing lane); the probability of this occurrence should not exceed:

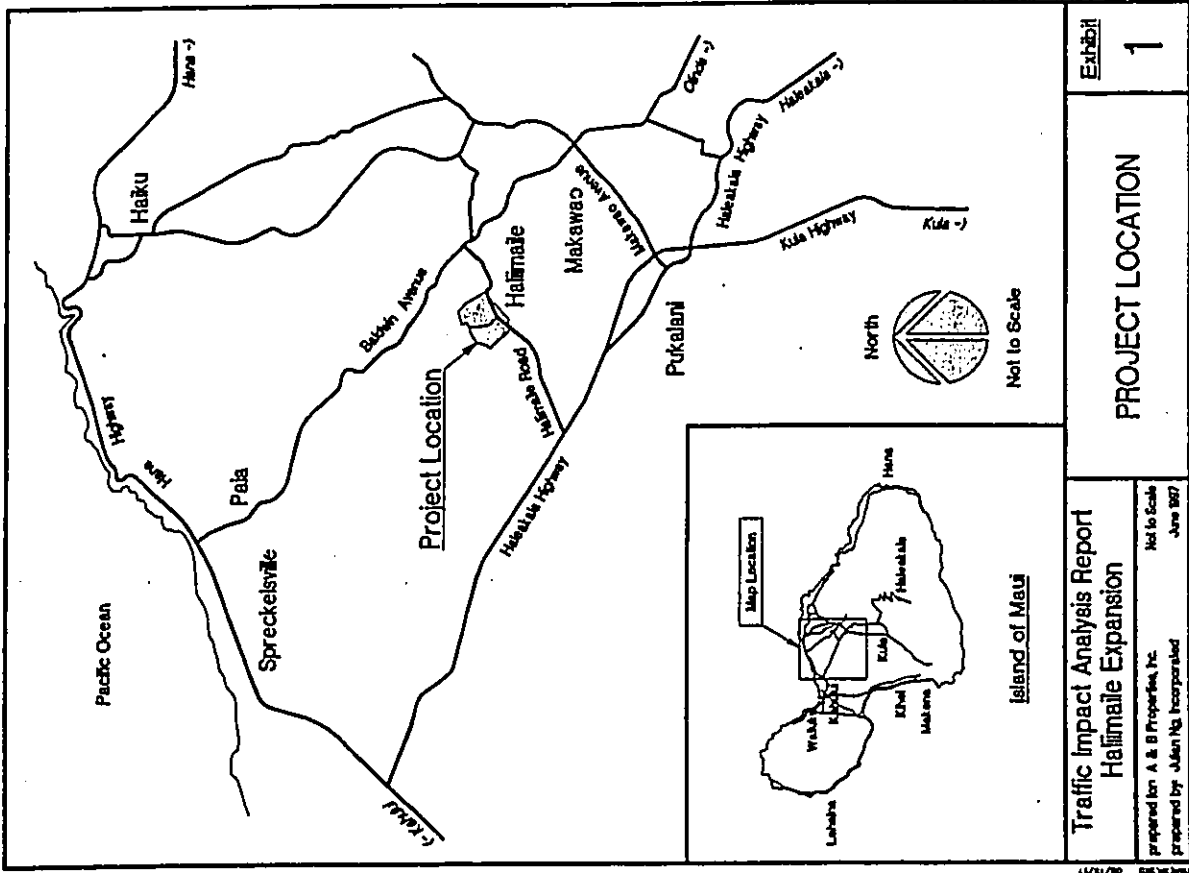
- 0.020 for design speed = 50 mph, operating speed (v) = 40 mph;
- 0.015 for design speed = 60 mph, operating speed (v) = 50 mph; and
- 0.010 for design speed = 70 mph, operating speed (v) = 60 mph.

For Haliimaile Road in the vicinity of the proposed project, the posted speed limit is 30 miles per hour (mph). Westbound traffic is through an urbanized area and the relatively low volume of traffic at the intersection, as indicated by the good peak hour levels of service, do not require additional lanes.

However, the project collector will be the first intersection for eastbound traffic that presently has been observed to operate at speeds higher than the posted 35 miles per hour. Using a design speed of 50 mph for eastbound traffic, a separate lane for left turns from eastbound Haliimaile Road into the project was determined to be warranted. A similar calculation was used to determine if a separate lane should be provided for right turns. If provided, the lane will permit right-turning vehicles to decelerate to a speed at which the turn can be safely made away from the through lane. Table 12 summarizes the evaluation for a shared lane (left turns and through traffic) on Haliimaile Road.

³ American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, Washington, D.C., 1990.

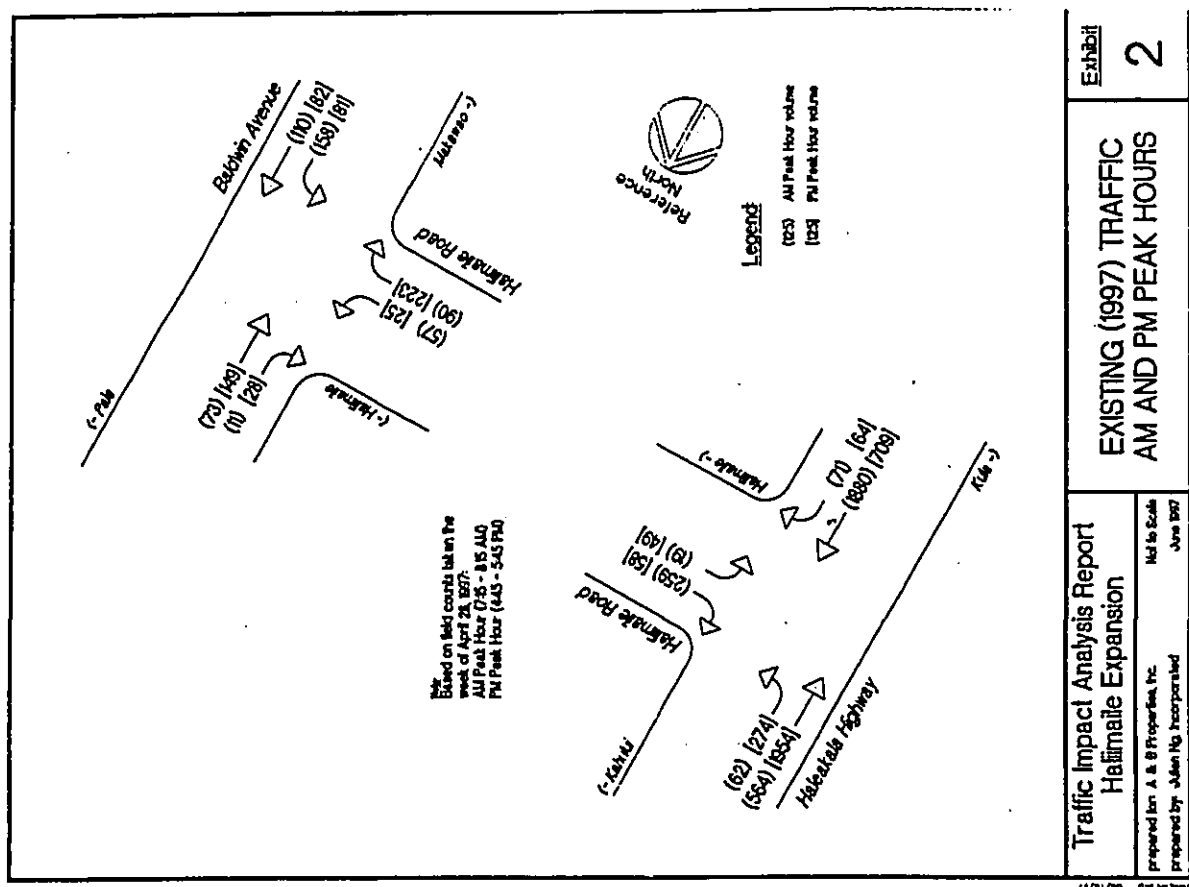
⁴ M. D. Harmelink, "Volume Warrants for Left-Turn Storage Lanes at Unsignalized Grade Intersections," Highway Research Record No. 211, 1967



Traffic Impact Analysis Report
 Haliimaile Expansion
 Prepared for: A & B Properties, Inc. Not to Scale
 Prepared by: Julian Ng Incorporated June 1997

PROJECT LOCATION

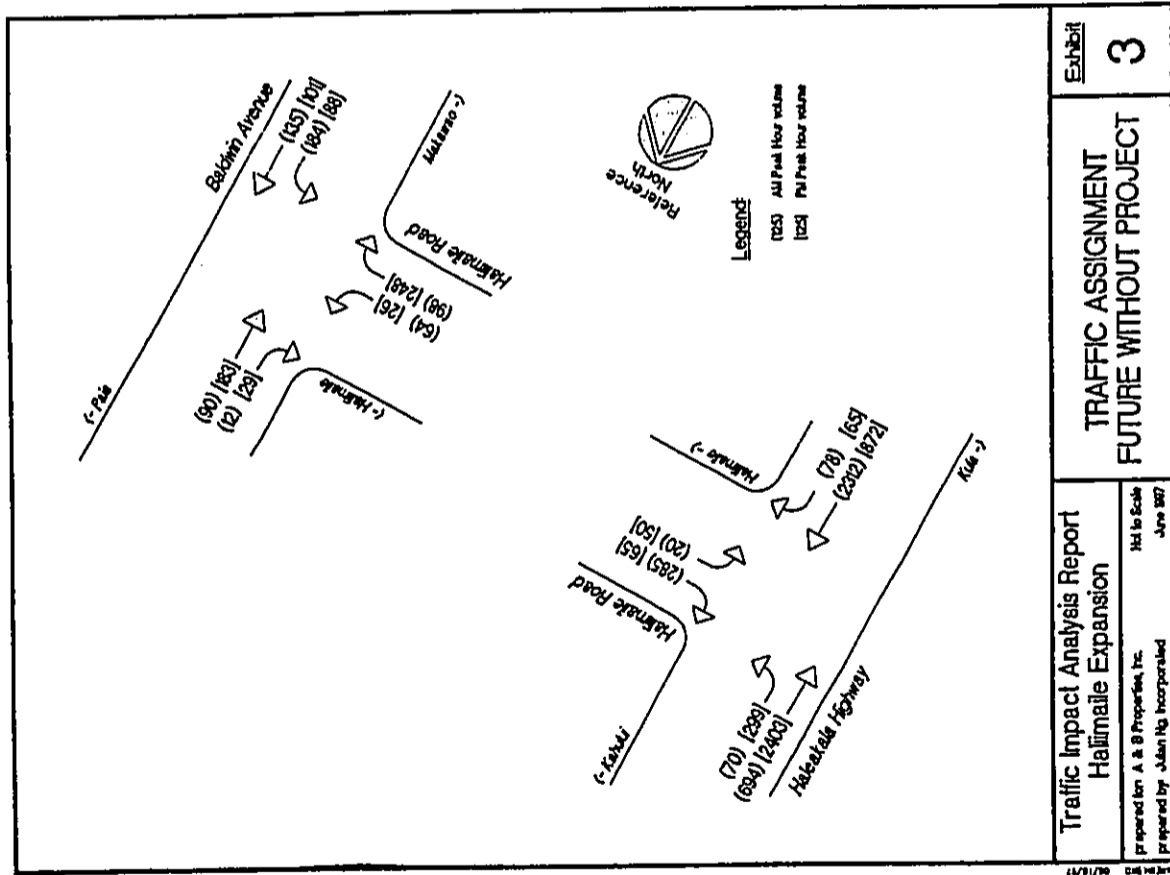
Exhibit **1**



Traffic Impact Analysis Report
 Haliimaile Expansion
 Prepared for: A & B Properties, Inc. Not to Scale
 Prepared by: Julian Ng Incorporated June 1997

**EXISTING (1997) TRAFFIC
 AM AND PM PEAK HOURS**

Exhibit **2**



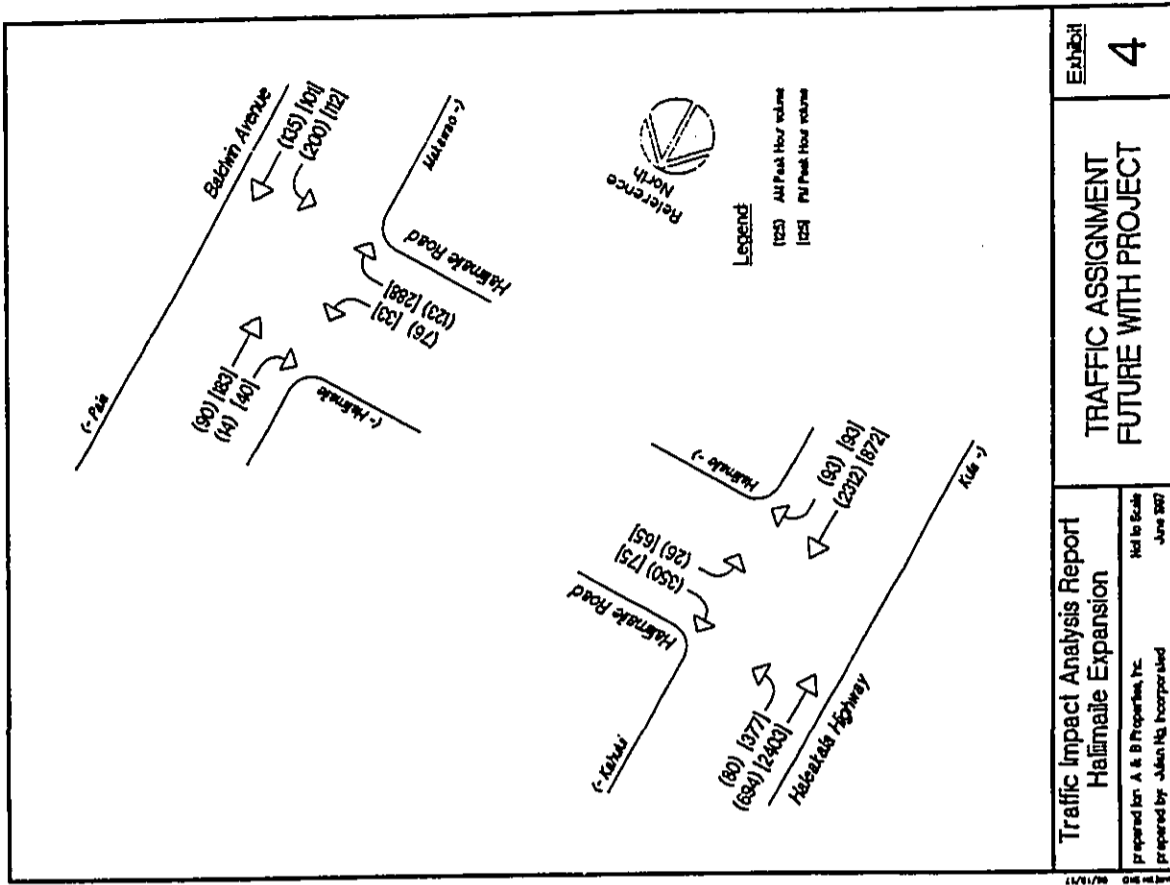
Traffic Impact Analysis Report
Halimatic Expansion

Exhibit **3**

TRAFFIC ASSIGNMENT
FUTURE WITHOUT PROJECT

Not to Scale
June 1997

Prepared for: A & B Properties, Inc.
Prepared by: Julian Ng Incorporated



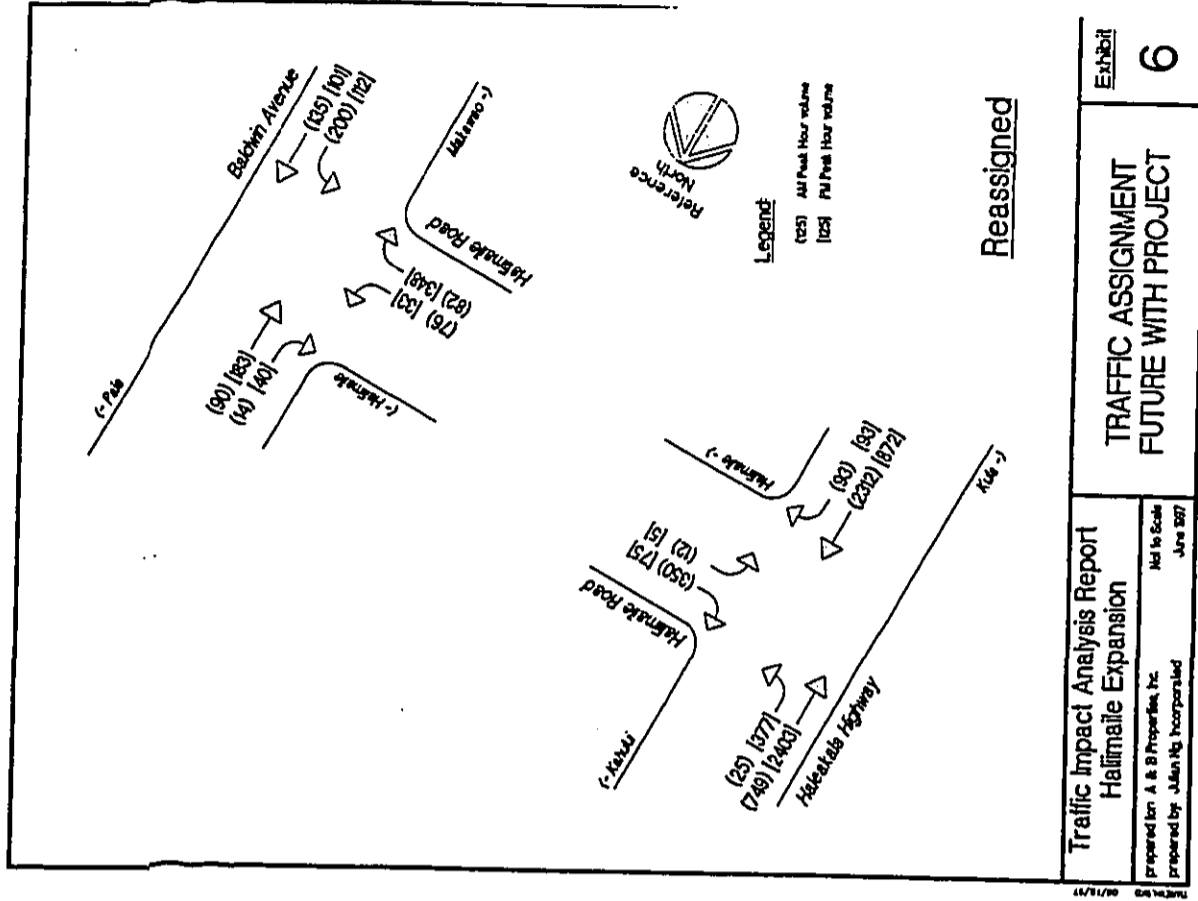
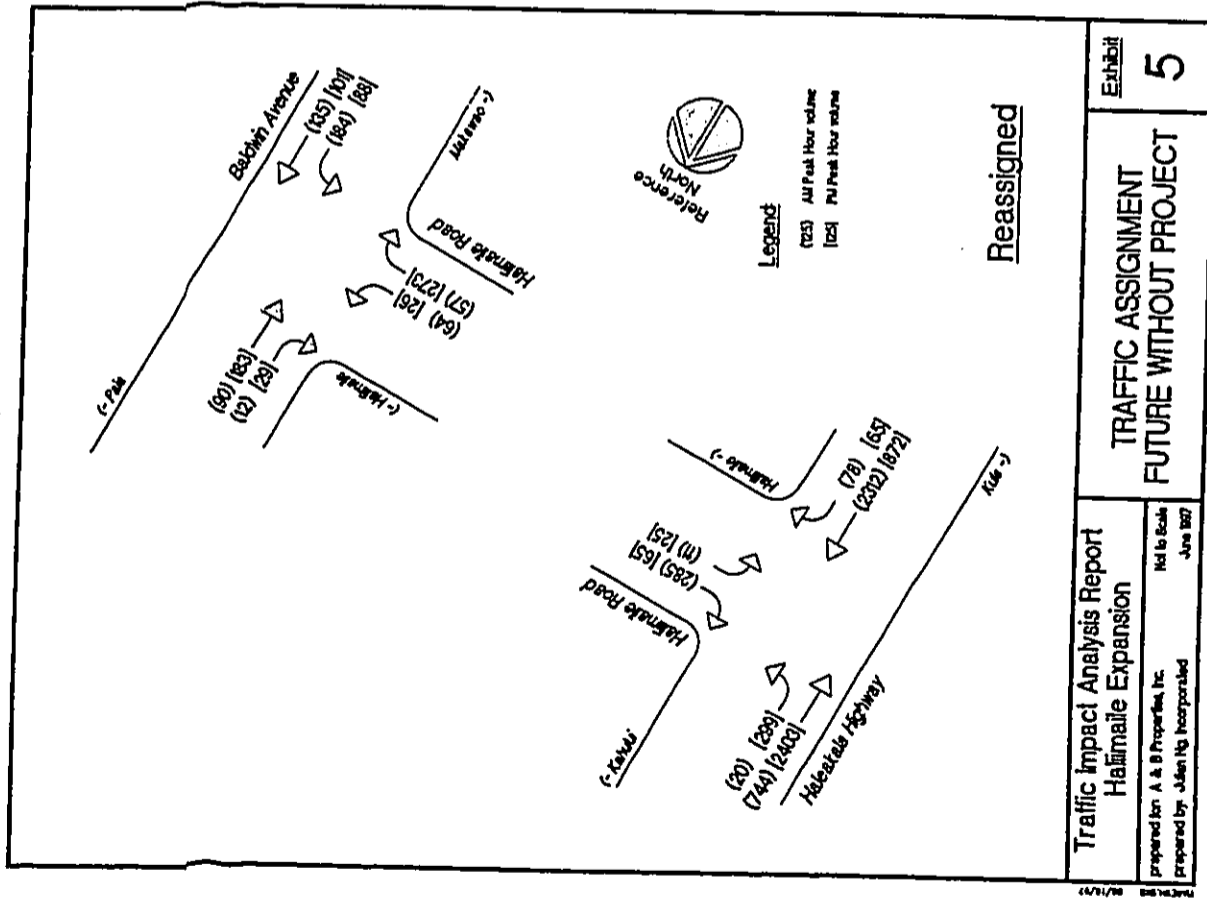
Traffic Impact Analysis Report
Halimatic Expansion

Exhibit **4**

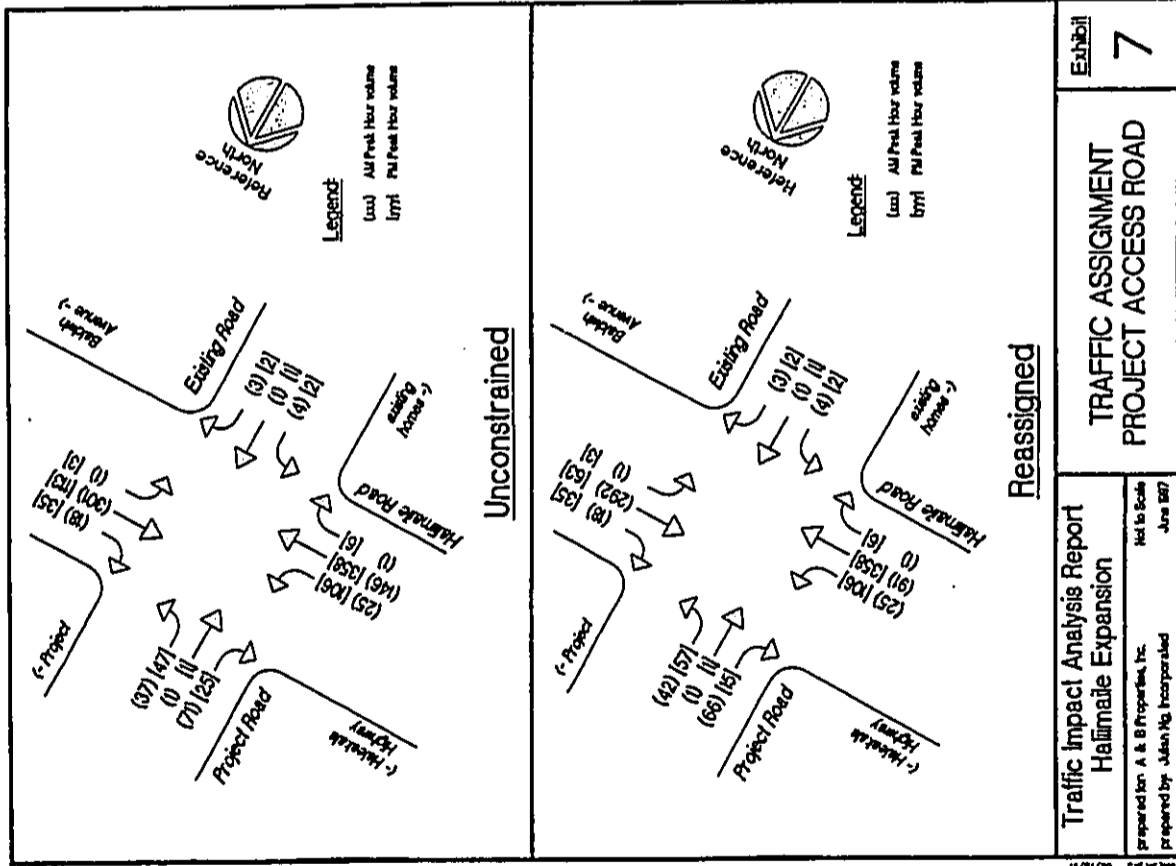
TRAFFIC ASSIGNMENT
FUTURE WITH PROJECT

Not to Scale
June 1997

Prepared for: A & B Properties, Inc.
Prepared by: Julian Ng Incorporated

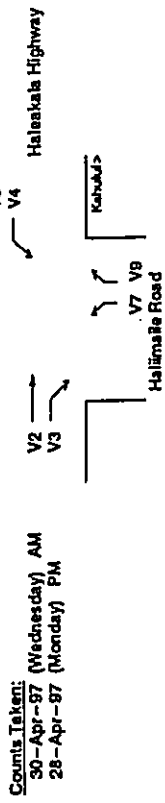


APPENDIX
FIELD TRAFFIC COUNT DATA



Traffic Impact Analysis Report Haltimate Expansion		Exhibit 7	
Prepared for: A & B Properties, Inc. Prepared by: Alan Ng, Incorporated		Not to Scale June 1997	

Traffic Count Summary (T-Intersection) - Haleakala Highway and Halimalie Road

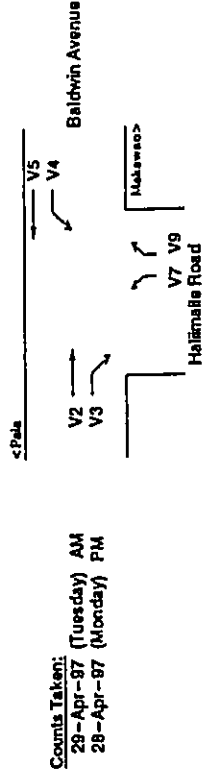


Counts Taken:
30-Apr-87 (Wednesday) AM
28-Apr-87 (Monday) PM

Total vehicles	Haleakala Highway		Halimalie Road		Total
	V2 ->	V3 -v	V4 -v	V5 ->	
06:30 AM - 06:45 AM	389	11	13	68	545
06:45 AM - 07:00 AM	401	13	17	82	572
07:00 AM - 07:15 AM	501	13	6	77	658
07:15 AM - 07:30 AM	599	12	8	82	782
07:30 AM - 07:45 AM	456	25	17	117	689
07:45 AM - 08:00 AM	430	13	16	113	640
08:00 AM - 08:15 AM	395	21	21	242	744
08:15 AM - 08:30 AM	189	6	7	58	293
Total counted	3,360	114	107	849	4,923
07:15 AM - 08:15 AM	1,880	71	62	564	2,593

Total vehicles	Haleakala Highway		Halimalie Road		Total
	V2 ->	V3 -v	V4 -v	V5 ->	
04:00 PM - 04:15 PM	158	13	46	278	512
04:15 PM - 04:30 PM	166	13	63	345	622
04:30 PM - 04:45 PM	158	12	51	318	566
04:45 PM - 05:00 PM	130	11	58	492	712
05:00 PM - 05:15 PM	126	15	52	342	658
05:15 PM - 05:30 PM	137	13	67	524	760
05:30 PM - 05:45 PM	128	12	55	390	660
05:45 PM - 06:00 PM	130	12	53	458	680
Total counted	1,133	101	445	3,147	5,016
04:45 PM - 05:45 PM	709	64	274	1,954	3,108

Traffic Count Summary (T-Intersection) - Baldwin Avenue and Halimalie Road



Counts Taken:
29-Apr-87 (Tuesday) AM
28-Apr-87 (Monday) PM

Total vehicles	Baldwin Avenue		Halimalie Road		Total
	V2 ->	V3 -v	V4 -v	V5 ->	
06:30 AM - 06:45 AM	10	1	36	12	76
06:45 AM - 07:00 AM	9	3	46	14	99
07:00 AM - 07:15 AM	4	3	45	23	98
07:15 AM - 07:30 AM	19	2	44	27	125
07:30 AM - 07:45 AM	19	1	40	32	138
07:45 AM - 08:00 AM	20	2	38	34	124
08:00 AM - 08:15 AM	15	6	36	17	112
08:15 AM - 08:30 AM	7	4	33	18	92
Total counted	103	22	318	177	665
07:15 AM - 08:15 AM	73	11	158	110	499

Total vehicles	Baldwin Avenue		Halimalie Road		Total
	V2 ->	V3 -v	V4 -v	V5 ->	
04:00 PM - 04:15 PM	29	5	14	21	113
04:15 PM - 04:30 PM	30	6	18	15	118
04:30 PM - 04:45 PM	28	9	13	8	101
04:45 PM - 05:00 PM	22	4	21	17	117
05:00 PM - 05:15 PM	33	8	19	17	132
05:15 PM - 05:30 PM	37	2	14	19	125
05:30 PM - 05:45 PM	21	4	21	5	109
05:45 PM - 06:00 PM	16	8	13	9	88
Total counted	216	45	133	111	903
04:45 PM - 05:45 PM	149	28	81	82	558

Appendix H

**BOTANICAL RESOURCES STUDY
HALI'IMAILE RESIDENTIAL EXPANSION PROJECT**

Hali'imaile Residential Project

**Final Environmental Assessment
April 1999**

BOTANICAL RESOURCES STUDY
HALI'IMAILE RESIDENTIAL EXPANSION PROJECT
MAKAWAO DISTRICT, ISLAND OF MAUI

BOTANICAL RESOURCES STUDY
HALI'IMAILE RESIDENTIAL EXPANSION PROJECT
MAKAWAO DISTRICT, ISLAND OF MAUI

INTRODUCTION

The 55-acre project site is located adjacent to and west of the existing Hali'imaile residential lots. The site is currently under active sugar cane cultivation by HC&S. Elevation along the lower boundary is roughly 915 ft., and about 1,085 ft. along the upper boundary by Hali'imaile Road. Soils on the site are mapped as "HhC", Hali'imaile silty clay, 7 to 15% slopes; and "HhB", Hali'imaile silty clay, 3 to 7% slopes, on the soil maps (Footnote et al. 1972). These dark reddish brown colored, well-drained soils are found on the uplands of Maui. Permeability is moderately rapid, runoff is slow to medium, and the erosion hazard is slight to moderate.

by

Winona P. Char

CHAR & ASSOCIATES
Botanical Consultants
Honolulu, Hawaii

The proposed residential expansion which will be developed by A&B Properties, Inc., will consist of 10 acres of park use and 45 acres of single family residential lots. An application for a State Land Use District Boundary Amendment and a County Zoning Application will be submitted by A&B Properties, Inc.

Field studies to assess the botanical resources found on the project site were conducted on 16 May by a team of two botanists. The primary objectives of the survey were to:

- 1) provide a general description of the vegetation on the site;
- 2) search for threatened and endangered species as well as species of concern; and
- 3) identify areas of potential environmental problems or concerns and propose appropriate mitigation measures.

Prepared for: TOMNSCAPE, INC.

May 1997

Topographic maps as well as soil maps were examined prior to the field studies to determine vegetation cover patterns, terrain characteristics, access roads, boundaries, and reference points. A walk-through survey method was used. Notes were made on plant associations and distribution, topography, disturbances, etc.

DESCRIPTION OF THE VEGETATION

The plant names used in the discussion below follow the most recent treatment of the Hawaiian flora by Wagner *et al.* (1990).

Sugar cane (Saccharum officinarum) fields and their associated network of cane haul roads and irrigation ditches are found on the project site. The cane fields themselves support few other species as the tall, dense stands of sugar cane plants tend to shade out and exclude the other smaller weedy plants.

The weedy species, consisting almost exclusively of a mixture of various grasses and herbaceous annual plants, are found along the margins of the fields, along the roadsides, and along the ditches. The most abundant plants in these weedy areas are Rhodes grass (Chloris gayana), Mexican poppy (Argemone mexicana), Spanish needle or ki (Bidens pilosa), and a crabgrass species (Digitaria sp.). Locally common along the cane haul roads are patches of wild bittermelon (Momordica charantia), feather fingergrass (Chloris virgata), fir-leaved celery (Ciclospernum leptophyllum), sow thistle or pualele (Sonchus oleraceus), and maile hohono (Ageratum conyzoides).

Where the property borders Hali'imaile Road, the vegetation

contains taller, more robust clumps of grasses and some woody components. These include Guinea grass (Panicum maximum), Napier or elephant grass (Pennisetum purpureum), balloon plant (Asclepias physocarpa), Crotalaria retusa, Glycine wightii, and a few small shrubs of Christmas berry (Schinus terebinthifolius) and koa haole (Leucaena leucocephala).

DISCUSSION AND RECOMMENDATIONS

The vegetation on the project site consists of actively cultivated sugar cane fields. A weedy assortment of species associated with agricultural lands is found along the margins of fields, and alongside the roads and irrigation ditches. Almost all of the plants found on the project site are introduced or alien species. Introduced species are all those plants which were brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact, that is, Cook's discovery of the islands in 1778. Sugar cane was originally of Polynesian introduction, but commercial varieties of sugar cane today are complex hybrids developed by the sugar industry.

Only three native species were observed on the project site during the field studies. These are two small shrubs: popolo (Solanum americanum) and 'uhaloa (Waltheria indica); and Pycreus polystachyos, a sedge. All three species are indigenous, that is, they are native to the Hawaiian Islands and also elsewhere.

None of the plants found during the field studies is a listed, proposed, or candidate threatened and endangered species; nor is any plant a species of concern (U.S. Fish and Wildlife Service 1992, 1997). There are no remnant native plant-dominated communities/vegetation types on the project site. This is not surprising after such a long period of cultivation.

Given the findings above, the proposed use of the site for residential expansion should not have a significant negative impact on the botanical resources. There are no botanical reasons to impose any restrictions, conditions, or impediments to the proposed development of the site. No recommendations/mitigation measures are proposed for the botanical resources.

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_____. 1997. U.S. Fish and Wildlife Service Species List - Plants. May 18, 1997. Pacific Islands Ecoregion Office, Honolulu.

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Appendix I

**FAUNAL (BIRDS AND MAMMALS) FIELD SURVEY OF THE
HALT'IMAILE RESIDENTIAL EXPANSION PROJECT**

FAUNAL (BIRDS AND MAMMALS) FIELD SURVEY OF THE
HALIIMALE RESIDENTIAL EXPANSION PROJECT, MAUI

INTRODUCTION

The purpose of this report is to present the findings of a two day (19-20 April 1997) faunal (bird and mammal) field survey of 55 acre parcel at Haliimale, Maui (Fig. 1). In addition, references to pertinent published and unpublished sources are included as a supplement to the field results.

The objectives of the field survey were:

- 1- Document the kinds of birds on or near the site.
- 2- Keep data on numbers of birds seen or heard to provide an estimate of relative abundance.
- 3- Note any feral mammals or signs of mammal activity.
- 4- Investigate all habitats on or near the site.

Prepared for
Townscape, Inc.

by

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Box 1775
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Lāhale, HI 96762

1 May 1997

GENERAL SITE DESCRIPTION

The 55 acre site is currently under sugarcane cultivation. Irrigation ditches traverse the property and nearby irrigation reservoirs are located to the east and southwest.

The topography slopes to the south. Habitats investigated included cane fields, roadsides, ditches and irrigation reservoirs with mud flats. The main irrigation ditches are lined and steep sided and thus were of limited value to wildlife.

METHODS

The 55 acre site was covered on foot and by car. All habitats were investigated, including nearby irrigation reservoirs.

Observations were made with binoculars and by listening for bird vocalizations. Mammals were noted visually or by the presence of their tracks and scats. No trapping of mammals was attempted in order to better determine their abundance. The nature and location of this site did not warrant such an involved effort.

Relative abundance estimates were obtained by counts made at several locations on and around the project site.

Weather during the field survey was clear and winds were light. Human disturbance was minimal. On 20 April a man and his six dogs were present at the irrigation reservoir number 20. The dogs displaced the shorebirds that were resting and foraging prior to their arrival. Scientific names used in this report follow those given in Pratt et al. 1987, Hawaii Audubon Society 1993 and Tomich 1986.

RESULTS AND DISCUSSION

Native Birds:

Two native species were Black-necked Stilt (Himantopus mexicanus knudseni) and Black-crowned Night Heron (Nycticorax nycticorax). The stilt is listed as endangered but the Black-crowned Night Heron is not considered threatened or endangered in Hawaii.

The reservoir SW of the site had two stilt on both the 19 and 20 April. They were foraging on the mud flats during the early morning and late afternoon. At dusk they departed to the west.

One Black-crowned Night Heron was seen at the same reservoir as the stilt on 19 April. This bird was actively foraging late in the day.

Migratory Birds:

Pacific Golden-Plover (Pluvialis fulva) and Wandering Tattler (Heteroscelus incanus) were the only migrants observed on the survey. These two species occur in Hawaii between August and early May.

A few will remain through the summer but the majority return to the arctic to breed. Pacific Golden-Plover have been the focus of a long term study here in Hawaii and also in Alaska (Johnson et al. 1989, 1993). Most Pacific Golden-Plover are territorial while in Hawaii. A total of 76 plover were tallied over the course of the survey. These birds were seen along roadsides and on the mud flats of the irrigation reservoirs.

Other shorebirds which potentially could occur in this area include Ruddy Turnstone (Arenaria interpres) and Sanderling (Calidris alba).

Introduced Birds:

A total of 14 species of introduced (non-native) birds were found on the survey. Table One documents these species and gives

data on relative abundance. No unexpected species were recorded. Bruner (1991, 1993, 1995) found a similar array of birds at other locations of comparable habitat on Maui. Other species may also occur in the area but were not detected because of their low numbers or the limited time available for the survey.

Feral Mammals:

Cats and the Small Indian Mongoose (Herpestes auro-punctatus) were the only mammals recorded. Rats and mice undoubtedly occur in the cane fields. The endangered native Hawaiian Hoary Bat (Lasiurus cinereus semotus) occurs on Maui but its distribution, abundance and ecology have not been well studied. In general this species roosts in trees and often forages over bays and forested habitat as well as urban environments. None were observed on an examination of the property at dusk on 19 April. Observations were undertaken at the reservoir on the early evening of the 19 April. Pacific Golden-Plover were aggregated on the mud flats but no bats were seen.

CONCLUSIONS

This property contains the typical mix of introduced species usually associated with disturbed habitats like cane fields and weed covered roadsides. The man-made reservoirs near the site offer foraging opportunities for shorebirds and waterbirds, but the reservoirs are not part of the proposed development. (The

only endangered species seen at the reservoir was the Black-necked Stilt. They utilize a wide variety of wetland habitats when foraging. Their occurrence at the reservoirs with mud flats was expected).

No unusual or special resources were noted. The conversion of cane fields to residential sites will alter the species composition and relative abundance of some birds but these local changes are unlikely to have any negative impact on bird or mammal activity in the region.

VICINITY MAP

Fig. 1. Location of faunal survey.

-6-

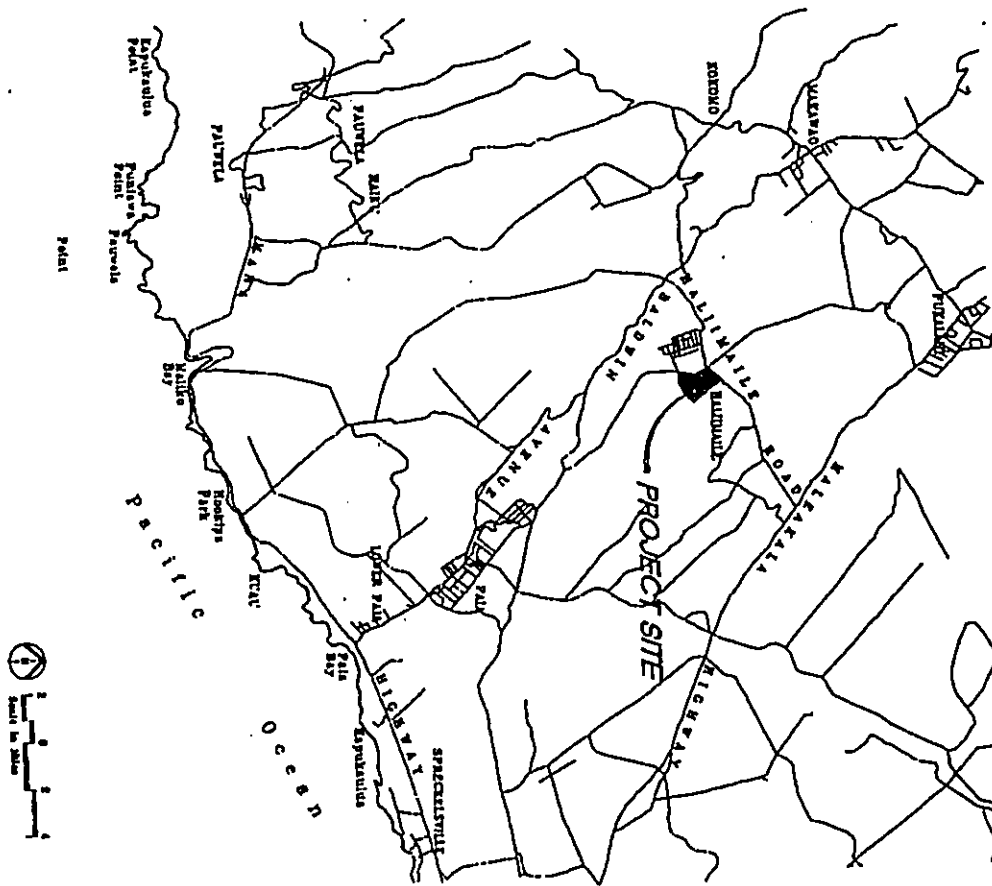


TABLE 1

Introduced species recorded at or near a 55 acre site of Haliimaile, Maui. Relative abundance gives the total seen or heard.

COMMON NAME	SCIENTIFIC NAME	RELATIVE ABUNDANCE
Cattle Egret	<u>Bubulcus ibis</u>	1
Black Francolin	<u>Francolinus francolinus</u>	8
Gray Francolin	<u>Francolinus pondicerianus</u>	12
Ring-necked Pheasant	<u>Phasianus colchicus</u>	2
Spotted Dove	<u>Streptopelia chinensis</u>	15
Zebra Dove	<u>Geopelia striata</u>	300+
Common Myna	<u>Acridotheres tristis</u>	37
Northern Cardinal	<u>Cardinalis cardinalis</u>	8
Red-crested Cardinal	<u>Paroaria coronata</u>	4
Eurasian Skylark	<u>Alauda arvensis</u>	3
Japanese White-eye	<u>Zosterops japonicus</u>	30
House Finch	<u>Carpodacus mexicanus</u>	42
House Sparrow	<u>Passer domesticus</u>	7
Nutmeg Mannikin	<u>Lonchura punctulata</u>	65

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Appendix J
ENGINEERING REPORT

Hali'imaile Residential Project

Final Environmental Assessment
April 1999

ENGINEERING REPORT

1. PROJECT SITE ANALYSIS

A. General Location:

This Hallimale Residential expansion is located in the town of Hallimale about 2.5 miles east of Haleakala Highway. See Figure 1 - Vicinity Map. This project is bordered on the south by Hallimale Road, to the north and west by sugar cane fields and an irrigation reservoir to the east. See Figure 2 - Project Site Plan.

On the mauka (south) side of Hallimale Road, Maui Pineapple Company (MPC) has an office building and sheds for their trucks and other harvesting equipment. The Hallimale Subdivision, a fifteen lot residential project developed by MPC, is also located on the mauka side of Hallimale Road.

Along the field road to the east, on property owned by MPC, there are buildings used for MPC's pineapple operations. North (makai) of these buildings, is a reservoir owned by Hawaiian Commercial & Sugar Company (HC&S) that is a part of its irrigation system.

HC&S has sugar cane growing on the project site and also on land to the north and west sides of this development.

B. Elevation:

Elevation varies within the project site from about 1,080 feet above sea level along Hallimale Road, to about 950 feet at the northerly area. The land generally slopes from the south to the north at about 5% to 6%.

C. Climate:

Hallimale experiences northeasterly trade winds during most of the year. The average annual rainfall during the past fifteen years has been about 39 inches, varying between 19 to over 65 inches per year. Annual temperatures vary between 65 degrees to 85 degrees.

D. Soil Survey:

The 1972 Soil Survey for the Islands of Hawaii, published by the United States Department of Agriculture, Soil Conservation Service, indicates that the soil type found on the project site is Hallimale silty clay (Hhb). According to the report, this soil is dark reddish brown and its permeability is moderately rapid. Runoff is slow and it is not prone to erosion.

Soil conditions will be able to support development of this site.

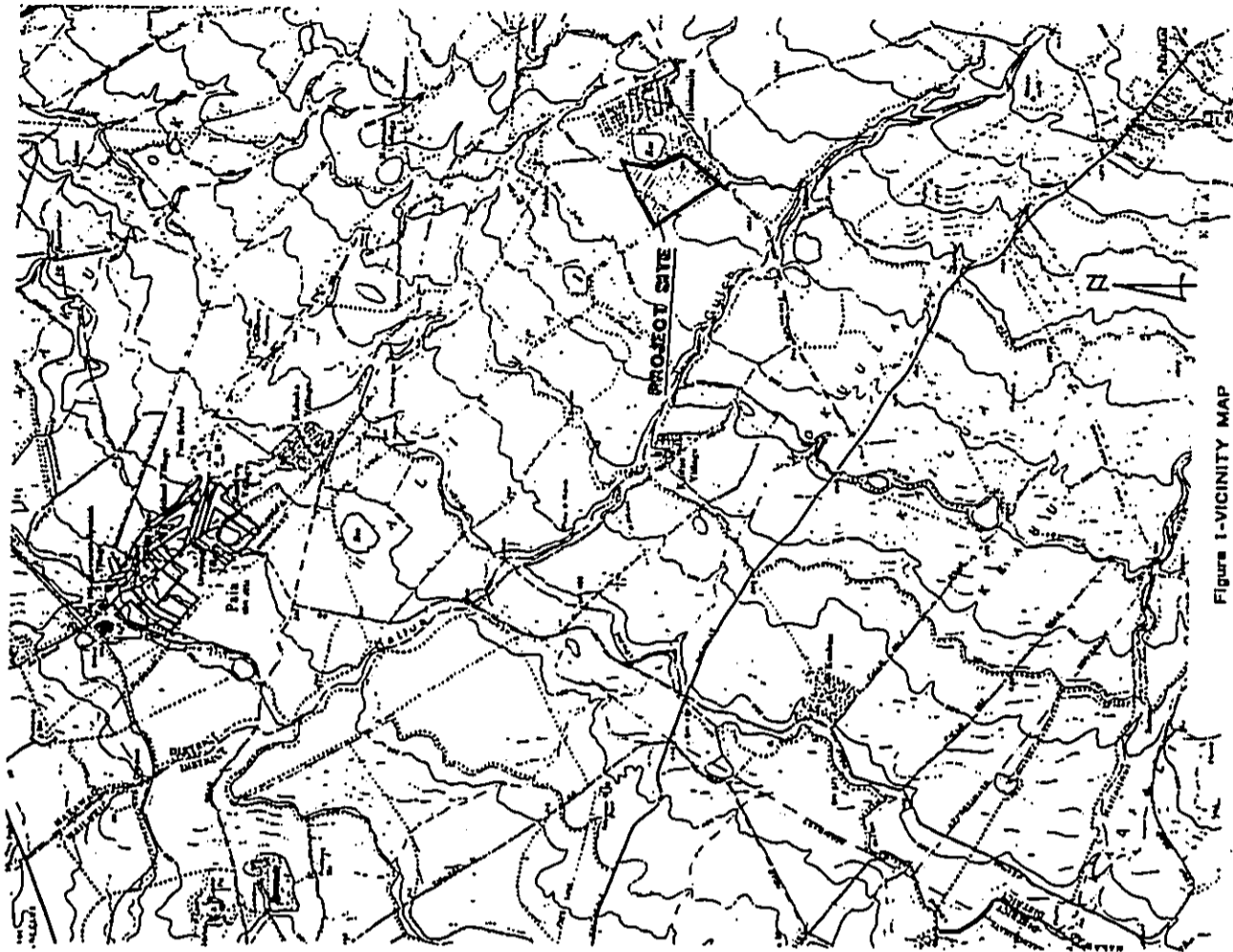


Figure 1 - VICINITY MAP

E. Flood Hazard:

According to the Federal Flood Insurance Rate Map, the project area is designated flood zone "C", which is defined as minimal flooding over the area. There are no designated floodways through this property. See Figure 3 - Flood Rate Insurance Map.

F. Special Management Area:

This development is located outside the limits of the County of Maui's Special Management Area.

II. EXISTING AND PROPOSED INFRASTRUCTURE

A. Water System:

1. Existing Water System:

Water for Halimale is provided by the Department of Water Supply, County of Maui, through an 8-inch transmission line that extends from Baldwin Avenue to the 6-inch waterlines that serve the residential area of this community. There is an 8-inch waterline from the residential area along Halimale Road that passes by the project site to the Halimale Subdivision.

The source for this water system is the Waiolea Ditch. This water is processed through the Kamole Water Treatment Plant, which is located east of the project site between Baldwin Avenue and Mailko Gulch, at about elevation 1,100 feet. This plant currently treats a maximum of 7 million gallons per day and provides water for the "upcountry" areas.

Water is pumped from the plant to storage tanks located in Makawao. There is also a 47,000 gallon steel tank located on Baldwin Avenue at about elevation 1,329 feet.

2. Proposed Water System:

a. Estimated Water Demand:

The estimated average daily consumption for this proposed 196-unit project is about 78,400 gallons per day. This is based on an interim daily consumption of 400 gallons per residential unit.

b. Source Requirement:

A new source will be required to be developed by the Department of Water Supply (DWS) or A&B to provide water for this project. This source will have to supply additional water to the "upcountry" system.

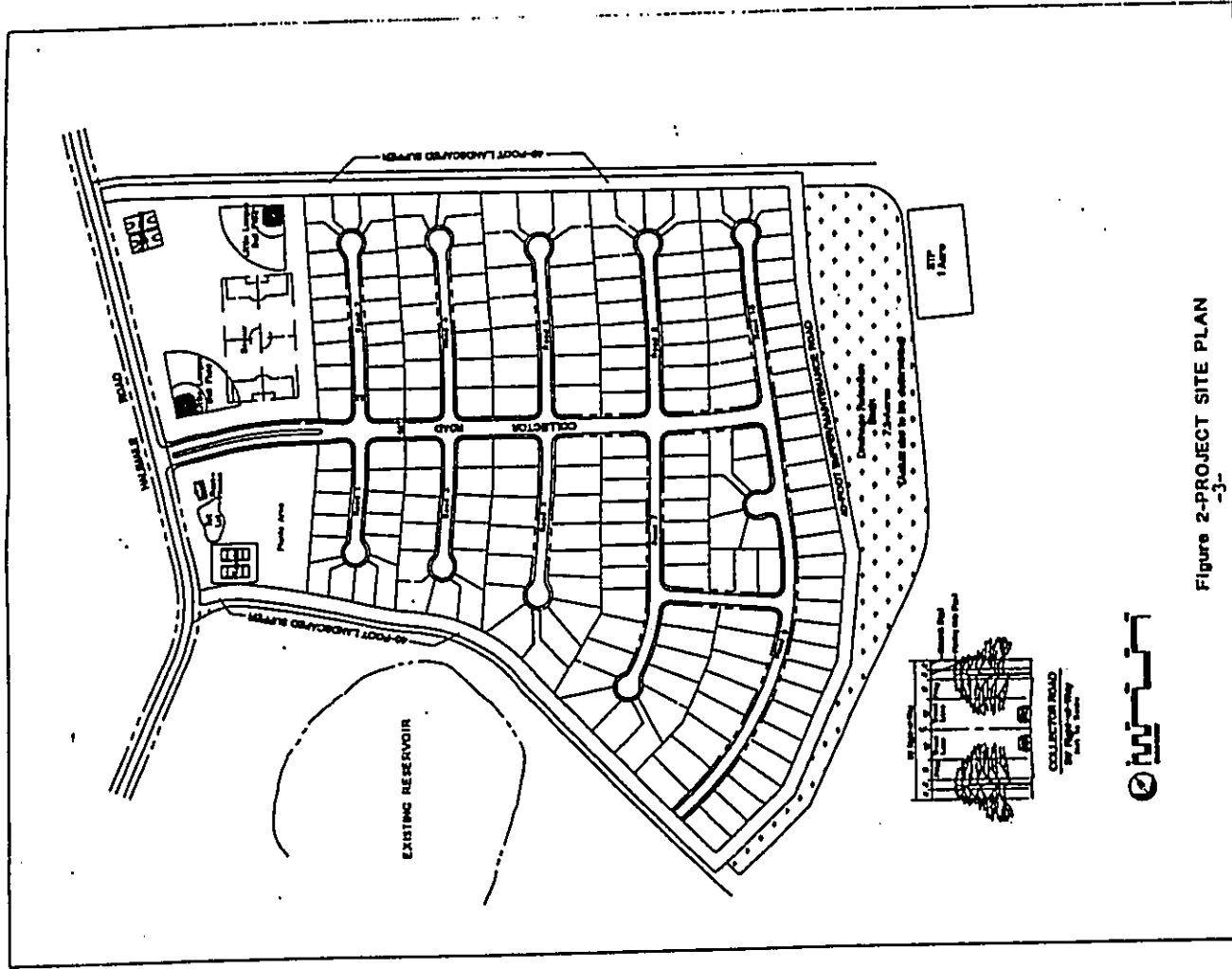


Figure 2-PROJECT SITE PLAN

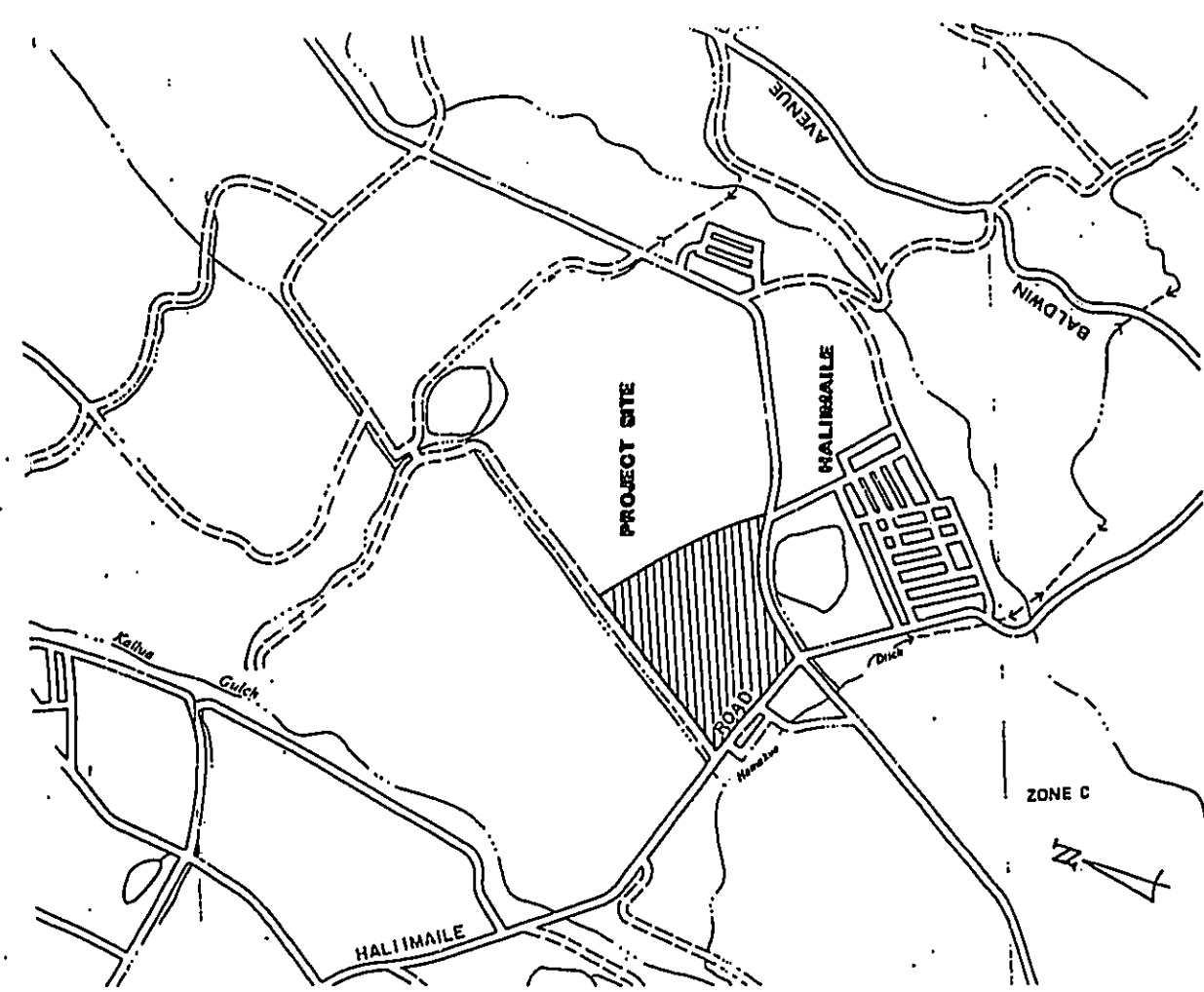


Figure 3-FLOOD RATE INSURANCE MAP
-5-
PORTION OF PANEL 18

- c. **Storage Requirement:**
The storage requirement for this project will be determined on the basis of fire flow plus maximum daily flow, or 1,000 gallons per unit, whichever one is the greater quantity. The estimated storage requirement will be about 200,000 gallons.
Existing storage capacity for this area will not meet the storage requirement. A new storage tank will have to be constructed at elevation 1,175 feet above sea level, or higher, in order to provide adequate water pressure to this development.
- d. **Water Transmission:**
A new water transmission line may have to be constructed from the new water storage tank to the project site. If one is required, it will be designed and constructed to DWS standards.
The onsite and onsite distribution water system will be designed and constructed to meet current DWS standards. The onsite and offsite water system improvements are intended to be dedicated to the Department of Water Supply upon completion.
- B. **Sanitary Sewer System**
 - 1. **Existing System:**
There is no existing sewage system to serve the project. Maui Pineapple Company, Ltd. operates a private system to serve the Halimaile residences, the company's offices and maintenance operations. Their wastewater treatment plant is located makai of the project site.
 - 2. **Proposed System:**
 - a. **Projected Sewerage Flow:**
The County's design standard for wastewater flows for single family lots is 400 gallons per house. Using this average daily flow, this development will generate an estimated 78,400 gallons per day.
 - b. **Sewage Collection and Transmission:**
Onsite sewage will be collected in gravity sewerlines and flow to a proposed offsite package treatment plant to be located north (makai) of the project site. This plant will be separated from the residences by a 40-foot maintenance road and the drainage retention basin.

c. **Wastewater Treatment Plant:**

A description and details of the proposed sewage treatment facilities, prepared by consultant Aqua Engineers, Inc., are included in Appendix G.

C. **Drainage:**

1. **Existing System:**

Storm water runoff sheet flows across the project site in a northwesterly direction, then continues onto adjacent undeveloped property. The runoff originates at Hallimale Road, located at the southeast end of the site and continues to the northwest boundary. The majority of storm water runoff is generated from the site itself. The balance is generated from Hallimale Road at the southeast boundary of the project.

2. **Proposed System:**

a. **Offsite Drainage System** - Due to the topography of the site and mauka lands, no significant amount of offsite storm water runoff will impact this project site. An offsite storm drainage retention basin will be constructed at the northwest end of the subdivision to collect the storm water discharge from the onsite drainage system (Figure 4 - Drainage Plan).

b. **Onsite Drainage System** - Storm runoff will be collected by a system of catch basins, drain inlets, and pipes. Generally, there will be two main storm drainlines sloping towards the northwest, following the direction of the existing ground profile. One collector drainline will run along the main roadway through the center of the site; the other, running almost parallel, will be within the landscaped buffer which runs along the southwest boundary of the project site.

Surface runoff will sheet flow from the subdivision lots onto the roadways. Storm drain catch basins will collect this surface flow, which will then be transported by storm drainline branches to the main collector drains. The main drainlines will ultimately deposit its storm water (approximately 65 cubic feet per second) into the proposed offsite drainage basin located northwest of the project site (see Figure 4 - Drainage Plan). This basin will retain the entire discharge from the onsite storm drainage system.

c. **Design Criteria:**

(1) **Hydrology:** The rational method will be used to determine storm runoff for the drainage facilities in accordance with the "Rules for the Design of Storm Drainage Facilities in the County of Maui", November

12, 1995. This design criteria indicates that the drainage system be designed to accommodate a storm having a recurrence interval of 10 years and one hour duration since the drainage area is less than 100 acres (see Appendix F-1).

(2) **Drainage Facilities:** Roadway drainage systems will be designed in accordance with Maui County's drainage standards.

D. **Electrical System**

Maui Electric Company, Limited provides power to Hallimale, which has the capacity to meet the demand for this development.

The onsite underground distribution system will be designed and constructed to Maui Electric Company's standards. The electrical system will be operated and maintained by MECO.

E. **Telephone and Cable Television Systems:**

Underground telephone and cable television systems will be designed and constructed to meet GTE Hawaiian Telephone Company's and TCI - Hawaii's standards. These systems will be operated and maintained by the respective companies.

F. **Solid Waste:**

Solid waste will be collected by the Maui County Department of Public Works and Waste Management and disposed of at the County owned and operated Central Maui Landfill located in Puunene.

G. **Groundwater Impact:**

This development should have no impact on any aquifer resources. Storm water will be retained in a drainage basin at about elevation 1,000 feet. There will be no injection wells to drain the water from this basin. The retained water will evaporate or infiltrate into the soil, and will be absorbed by the soil well before it reaches the groundwater, which is about 1,000 feet below this basin.

III. **ORDER OF MAGNITUDE COST ESTIMATE**

The estimated cost of constructing all required onsite and offsite improvements for this development is \$1.5-16 million, in 1997 dollars.

**APPENDIX F-1
HYDROLOGIC CALCULATIONS**

PURPOSE: Determine the onsite surface runoff volume generated by the development of the project site. The rational method will be used to determine the peak onsite surface runoff volume having a 10 year recurrence interval and a one hour rainfall of 2.3 inches.

- A Determine the runoff coefficient (C):**
- Residential Lawns**
Heavy Soil, flat, 2%
C = 0.17 (Table 2)
Area = 29 ac.
 - Roof Tops:**
C = 0.95 (Table 2)
Area 6.3 ac.
 - Driveway and Walks:**
C = 0.85 (Table 2)
Area 1.9 ac.
 - Park/Playground:**
C = 0.30 (Table 2)
Area 10.0 ac.
 - Paved Streets:**
C = 0.95 (Table 2)
Area 6.4 ac.
 - Landscape Strip:**
 - Infiltration (medium) = 0.07
 - Relief (flat) = 0.0
 - Vegetal Cover (high) = 0.0
 - Development Type (residential) = 0.40 (Table 1)
- Total Drainage Area = 59.9 acres**
- Weighted Coefficient (C):**
 $C = \frac{29 \times 0.17 + 6.3 \times 0.95 + 1.9 \times 0.85 + 10.0 \times 0.30 + 6.4 \times 0.95 + 6.3 \times 0.47}{59.9}$
C = 0.41

- B Determine the time of concentration (tc):**
tc = 48 minutes

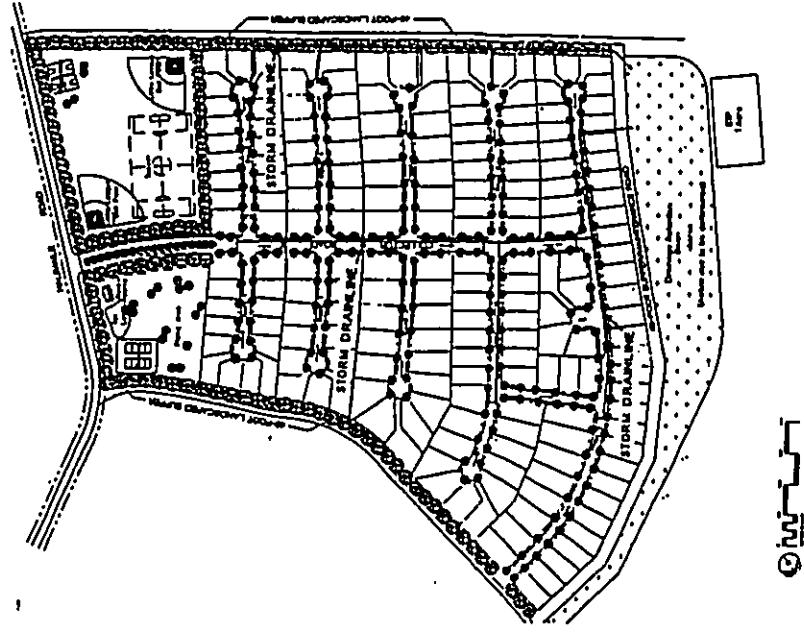


Figure 4-DRAINAGE PLAN

- C. Determine the rainfall intensity (I):
For one hour rainfall of 2.3 inches,
I = 2.65 inches/hr.
- D. Determine the drainage area (A):
A = 59.9 acres
- E. Determine the peak surface runoff volume (Q):
Q = CIA
Q = (0.41) (2.65 in./hr.) (59.9 ac.)
Q = 65 cfs

APPENDIX F-2
DESIGN CHARTS

Table 1

GUIDE FOR THE DETERMINATION OF RUNOFF COEFFICIENTS FOR BUILT-UP AREAS*

WATERSHED CHARACTERISTICS	EXTREME	HIGH	MODERATE	LOW
INFILTRATION	NEGLECTIBLE 0.20	SLOW 0.14	MEDIUM 0.07	HIGH 0.0
RELIEF	STEEP (>25%) 0.08	HILLY (15-25%) 0.06	ROLLING (5-15%) 0.03	FLAT (0-5%) 0.0
VEGETAL COVER	NONE 0.07	POOR (<10%) 0.05	GOOD (10-50%) 0.03	HIGH (50-90%) 0.0
DEVELOPMENT TYPE	INDUSTRIAL & BUSINESS 0.55	HOTEL - APARTMENT 0.45	RESIDENTIAL 0.40	AGRICULTURAL 0.15

*NOTE: The design coefficient "C" must result from a total of the values for all four watershed characteristics of the site.

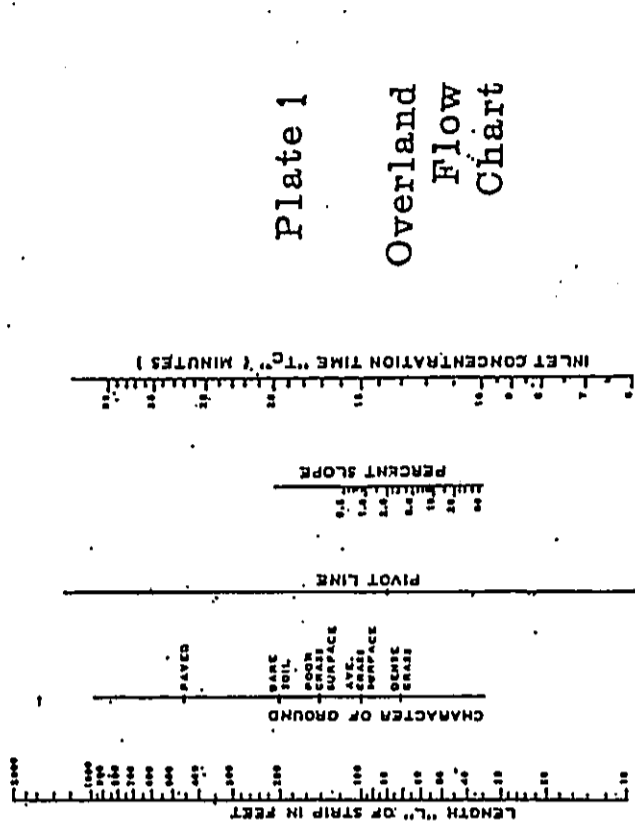


Plate 1
Overland
Flow
Chart

Table 2

Type of Drainage Area	Runoff Coefficient C
Parks, cemeteries	0.25
Playgrounds	0.35
Railroad yard areas	0.40
Unimproved areas	0.30
Streets:	
Asphaltic	0.95
Concrete	0.95
Brick	0.85
Driveway and walks	0.85
Roofs	0.95
Lawns:	
Sandy soil, flat, 2 $\frac{1}{2}$	0.10
Sandy soil, avg., 2-7 $\frac{1}{2}$	0.15
Sandy soil, steep, 7 $\frac{1}{2}$	0.20
Heavy soil, flat, 2 $\frac{1}{2}$	0.17
Heavy soil, avg., 2-7 $\frac{1}{2}$	0.22
Heavy soil, steep, 7 $\frac{1}{2}$	0.35

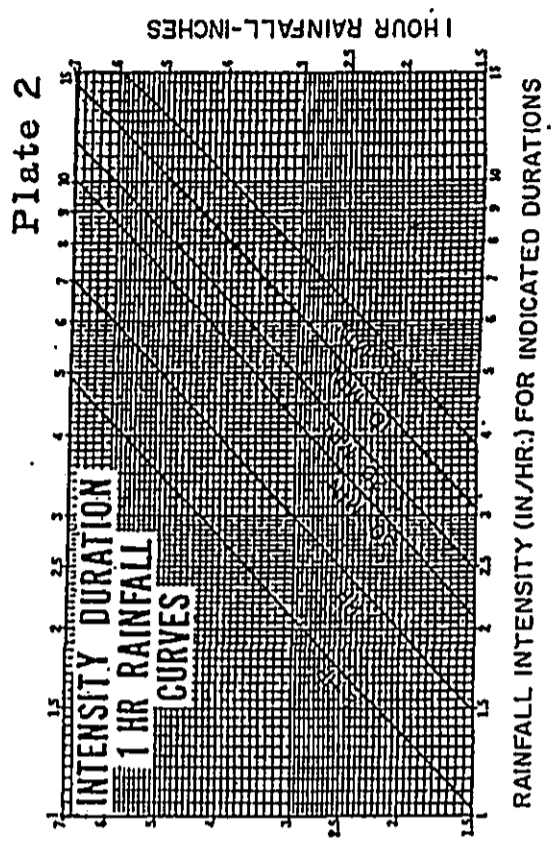
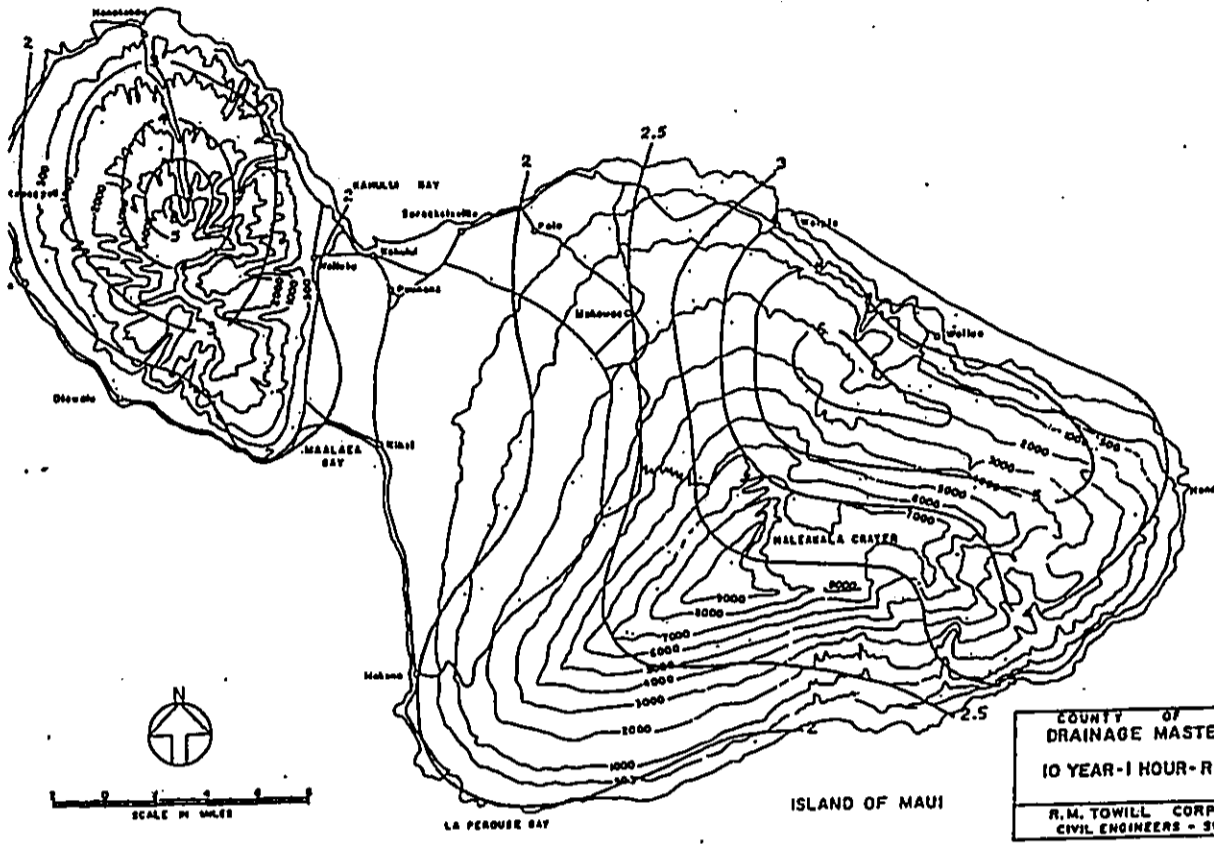


Plate 2
Intensity Duration
1 HR Rainfall
Curves
Rainfall Intensity (in/hr.) for indicated durations



COUNTY OF MAUI
 DRAINAGE MASTER PLAN
 10 YEAR-1 HOUR- RAINFALL
 R.M. TOWILL CORPORATION
 CIVIL ENGINEERS - SURVEYORS

ISLAND OF MAUI

PLATE 4

Appendix K

**POTENTIAL WATER SOURCE DEVELOPMENT FOR
A&B's 63-ACRE RESIDENTIAL PROJECT**

**Potential Water Source
 Development for
 A&B's 63-Acre Residential Project
 in Halimaille, Maui**

Prepared for:

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 Honolulu, Hawaii 96813

June 1998

Exhibit 15

Introduction

This brief report discusses the development of new potable water supply for the proposed residential development on TMK 2-5-03:Portion 10 in Halimaille, Maui. The 63-acre project will consist of 196 single-family residential units, 10 acres of park, and 9 acres of roads, some of which will include 40-foot wide landscape buffers. Approximate potable water requirements for the project, based on DWS standards, are as follows:

	Average Demand (GPD)	Maximum Demand (GPD)
Residential (196 Units @ 600 GPD/Unit)	117,600	176,400
Parks (10 Acres @ 1700 GPD/Acre)	17,000	25,500
Roadway Landscape Buffer (7 Acres @ 1700 GPD/Acre)	11,900	17,850
Total	146,500	219,750

The Maui County Department of Water Supply (DWS) system serving the Halimaille area is supplied by surface water pumped from the East Maui Irrigation (EMI) Company's Waioa Ditch. This surface water source is treated to drinking water quality at DWS' Kamole Water Treatment Plant. However, the amount of water extracted for potable use from Waioa Ditch is fully committed. New source development will be required to serve the proposed project. This source could either be a new well developed within the system's service area or a well located elsewhere which would deliver additional supply to Waioa Ditch.

Potential Well Development

A&B Properties is in the process of evaluating the development of a potable quality well above the community of Kaiula in East Maui. A small portion of its supply, less than 50,000 GPD, would be utilized in Kaiula to replace water now supplied from a shallow development tunnel above the Waioa Ditch. The balance of the well's supply, if delivered into Waioa Ditch, would be available for other A&B projects in the service area of the Kamole Water Treatment Plant, including the 63-acre project in Halimaille.

Well Sites Being Considered. The two sites shown on Figure 1 are being considered for well development. The lower site is at an elevation of 840 feet and is just makai of the forest reserve boundary. The upper site is at 920-foot elevation and is adjacent to the small tank which currently supplies Kaiula.

Hydrogeologic Circumstances at the Proposed Well Sites. Since no wells have previously been developed in the Kailua area, initial site selection was based on surficial geology, field reconnaissance, and general knowledge of the water bearing properties of these rocks. This information suggests the following:

- For about the first 100 to 150 feet, the borehole would be expected to penetrate the poorly permeable Kula lavas.
- The contact between younger Kula and older Honomanu lavas will be transitional rather than sharply distinct. These transitional lavas are of unknown thickness.
- Substantially above sea level, the borehole should penetrate the permeable rocks of the Honomanu volcanic series.
- High level groundwater perched on the transitional lavas between the two formations may be encountered. However, the yield of this perched source is likely to be quite small, probably not sufficient for Kailua and certainly not adequate for the larger quantities of water that would need to be delivered to Waikoa Ditch. As such, the well would be designed so that no water from this level would be utilized.
- At a short distance above sea level, a basal lens of potable quality water in the permeable Honomanu lavas will be encountered. This is the aquifer that the well would be designed to tap. This limit on the amount of water that can be safely extracted without compromising its potable quality is a function of the amount of natural groundwater flow in this location and the formation's permeability. This can only be determined by drilling and pump testing.

Geophysical Survey Results. To further evaluate hydrogeologic conditions prior to undertaking the relatively expensive process of actual drilling, time domain electromagnetic (TDEM) geophysical surveys were performed at the two possible well sites. The work was recently completed by Blackhawk Geometrics, a mainland firm based in Golden, Colorado. The TDEM process resolves the underlying strata into layers of similar electrical conductance. It is able, with the assistance of computer optimization techniques, to determine thicknesses of each of these layers which best fit the field measurements. This technique has proven particularly effective where the stratigraphy is uninterupted by intrusive structures (such as dikes) and groundwater occurs as a basal lens. Volcanics saturated with saline groundwater which lie below the fresh basal lens are highly conductive. The conductivity contrast is at least two but more often three orders of magnitude greater than unsaturated volcanics or volcanics saturated with fresh water. When the depth of saline groundwater below sea level is determined, it also establishes the thickness of the basal lens below sea level and, through the Ghyben-Herzberg principle, the height of the lens above sea level.

Blackhawk's final report on the TDEM survey results is not yet available, but its preliminary analysis of the data has been done and can be summarized as follows:

- The field data at both potential well sites best fit a three-layer model of the stratigraphy: an upper, moderately conductive layer, a highly conductive basement layer of saline groundwater

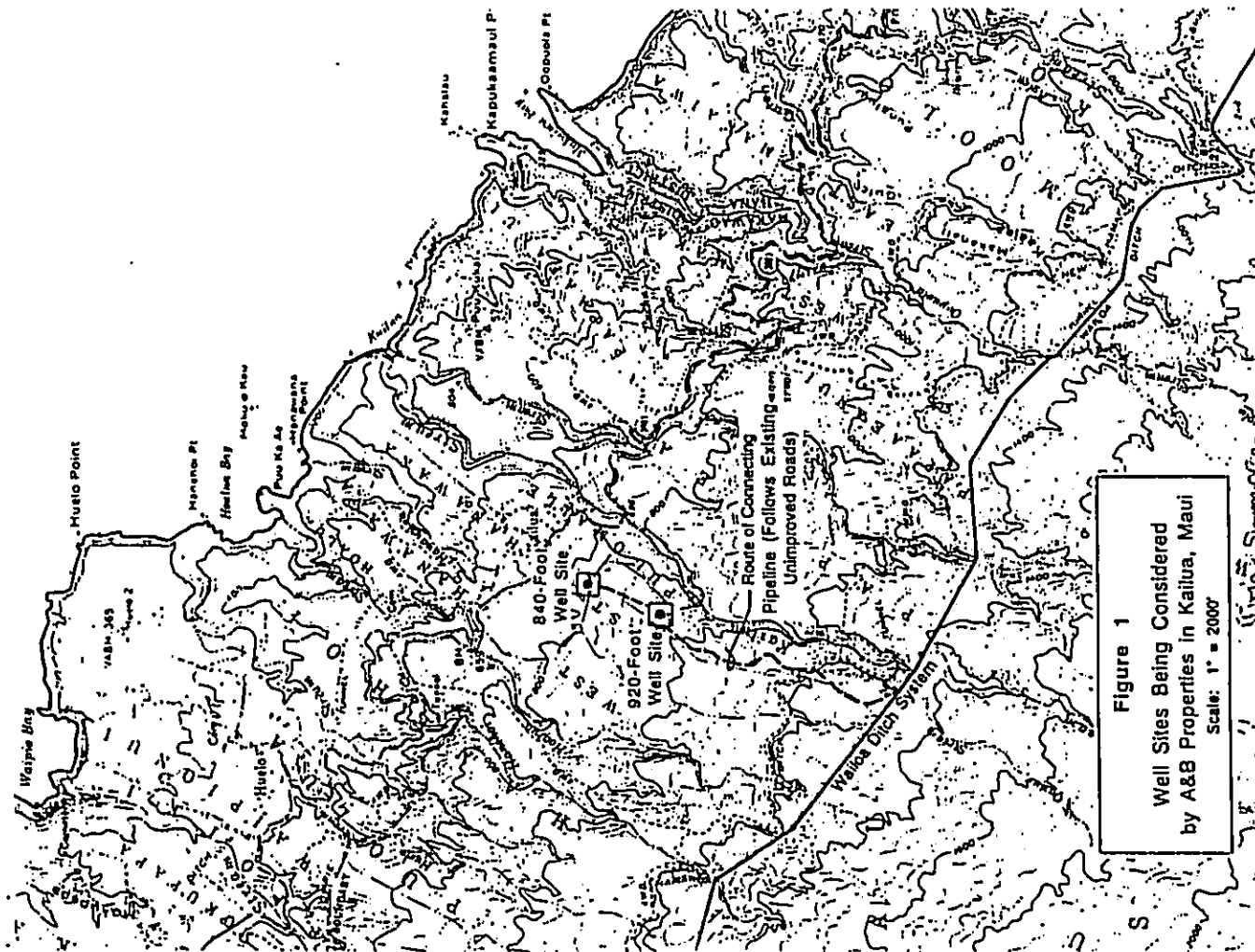


Figure 1
Well Sites Being Considered
by A&B Properties in Kailua, Maui
Scale: 1" = 2000'

below sea level; and a highly resistive intervening layer. No anomalies, such as would be created by the presence of intrusive structures, were found.

At both sites, the moderately conductive surface layer was determined to be about 150 feet thick. Although this is about the thickness expected for the younger Kula lavas, its electrical resistivity suggests that it is weathered volcanics (i.e. saprolite) rather than unweathered flow lavas.

At the 840-foot potential well site, the highly conductive layer, interpreted to be volcanics saturated with saline groundwater, was determined to begin 200 feet below sea level. Based on the Ghyben-Herzberg relationship, this suggests that the top of the lens is five feet above sea level in this location.

At the upper, 920-foot site, the top of saline groundwater was found to be 220 feet below sea level. This implies a basal head of 5.5 feet and is in accord with the expected increase in the thickness of the lens with distance inland. The lower site is 5600 feet from the shoreline whereas the upper site is 7000 feet.

Prospects for Successful Well Development

Since the lower permeability Kula lavas do not function as a caprock at the shoreline, basal groundwater discharges into coastal waters directly from the permeable Honomanu lavas. For this circumstance, thicknesses of the basal lens determined by the TDEM survey at locations just 1.1 and 1.3 miles from the shoreline can only be maintained by a substantial groundwater flux. Based on formation permeability in the range of 1000 to 2500 feet per day and the gradients suggested by the basal heads, flow rates of 5 to 12 MGD per coastal mile are calculated. Although this information does not directly translate to safe pumping rates, experience with similar circumstances elsewhere suggests that safe pumping rates of 0.7 to 1.0 MGD may be possible at the lower site and perhaps 1.0 to 1.4 MGD might be possible at the higher site. These rates are considerably greater than required to supply Kailua and the proposed 63-acre residential project in Hailuaila.

Well Development Costs

An estimate of the construction costs, based on the development of a 14-inch well at 920-foot elevation, installation of a 1000 GPM (1.4 MGD) pump, and construction of a 0.10 MG storage tank and 12-inch connecting pipeline to Wailoa Ditch, has been prepared and is summarized in the table below. Total project cost, including engineering and contingency, is estimated to be \$1,930,000.

	Dollars
Drill, Case, and Pump Test 14-inch Well	545,000
1000 GPM Line Shaft Pump and Appurtenances	320,000
0.10 MG Storage Tank and Related Site Work	290,000
Electrical	295,000
Connecting 12-inch HDPE Pipeline	230,000
Total for Construction	1,880,000
Engineering and Contingency	250,000
Project Total	1,930,000

Appendix L

**PRELIMINARY ENGINEERING REPORT
HALI'IMAILE RESIDENTIAL SUBDIVISION
WASTEWATER TREATMENT AND DISPOSAL OPTIONS**

Preliminary Engineering Report
July 1997

Haliimaile Residential Subdivision
Wastewater Treatment and Disposal Options

Introduction

A preliminary engineering study was performed to investigate the options available for the treatment and disposal of wastewater generated by the proposed 195-lot residential subdivision project at Haliimaile, Maui. Municipal facilities are not available in this area and current Department of Health (DOH) rules prohibit the use of on-site individual wastewater systems (IWS) for projects exceeding fifty lots in size or with individual lots less than 10,000 square feet in area. The purpose of this report is to review basic options for wastewater treatment and disposal, determine appropriate available technology and estimate construction costs for these options. The engineering and design of a specific system for the project is not covered by this report.

Estimated Wastewater Flows

Wastewater generated by the project will be from the 195 residences planned for the subdivision and the restroom facilities provided for the park area. The wastewater quantities have been estimated using Table I of the Department of Health's wastewater regulations, commonly known as Chapter 62.

Conservation measures to reduce water consumption may be desirable in the final subdivision design and covenants. Requirements for low flow fixtures can be used to reduce water use and the quantity of wastewater generated by the project. In addition, graywater systems could be considered for irrigation of the individual lots. This will

reduce the amount of water needing treatment and, at the same time, possibly provide a source of irrigation water for landscape planting for the individual residences.

Table I estimates flows from each residence based on 100 gallons per day (gpd) per person. For this report, a value of 400 gpd per dwelling unit has been used. In addition to the wastewater from the residential lots, the restroom facilities at the park will generate additional flows. Table I uses a rate of 5 gpd per user to estimate flows. With a total of 200 users per day, estimated flows from the park areas total 1,000 gpd. The total estimated plant flow for the purposes of this report is 80,000 gpd.

Collection System

The area for the proposed project is located in a gently sloping area below Haliimaile Road on the northeastern slopes of Haleakala. The natural slope of the terrain simplifies the design and construction of the collection system. Gravity sewers will collect and transport wastewater from the residences and park to the treatment facility located at the lower end of the project. The need for pump stations and force mains in the collection system is not anticipated and will reduce overall operation and maintenance requirements.

Infiltration and inflow (I&I) should not be a problem in the collection system and there is no need to allow for increased plant flows due to I&I. The roadway and drainage improvements, constant slope and small collection area of the project, will limit the amount of ponding or flooding and resulting inflow during storms conditions. Due to the high elevation of the project site and the relatively shallow sewer line depth, no groundwater infiltration problems are expected.

Treatment Options

The review of treatment options considered on-site and off-site treatment options. Many rural communities in Hawaii use on-site systems for wastewater treatment and disposal.

However, current Department of Health rules require all new subdivisions with more than fifty lots to provide a treatment works. The rules also prohibit the use of on-site individual wastewater systems on new lots smaller than 10,000 square feet in size.

As mentioned earlier in this report, there are no public facilities treatment within the immediate area. The Maui Pineapple Company owns and operates a treatment plant near the proposed project, above Haliimaile Road. It is a secondary treatment facility using a lagoon system and subsurface disposal through an absorption field under their pineapple fields. The facility is rated at 90,000 gallons a day and serves the nearby Maui Pine field offices and residential subdivision. Flows to the facility are currently at approximately 65% of the design capacity. The collection system for the area serviced by the plant is maintained by the County of Maui.

The close proximity of this plant to the proposed project makes a joint facility a good possibility. However, since this would involve extensive negotiations between the land owners, this scenario was not considered as part of this report. Even so, this should be pursued because of the possibility of a mutually beneficial solution.

A second treatment works in the vicinity is also privately owned and operated and serves the Pukalani Shopping Center, Golf Course and adjoining residential subdivision. The current design capacity of the Pukalani Sewage Treatment Plant is 500,000 gallons per day (mgd). All of the effluent from that facility is used to irrigate the golf course. The distance from the proposed project to this facility makes connection impractical.

A treatment works for a project the size of the Haliimaile subdivision is typically a packaged treatment plant using a biological process to treat the wastewater to secondary levels prior to disinfection and disposal. The characteristics of the wastewater generated by the residential projects should be relatively easy to treat. The organic and hydraulic loads are typical of most wastewater and peak loads and "spikes" are not anticipated. (Resort operations, in contrast, often experience widely varying flows due to changing

occupancy rates and grease and organic restaurant loads make the operation of smaller packaged plants more challenging.)

Treatment ponds or lagoon systems as used by the Maui Pine facility are sometimes used for wastewater treatment but are less common. The principal benefits offered by a treatment pond are lower energy requirements and simpler operations. However, they require larger land areas and typically produce a lower quality effluent. For the effluent reuse planned for this project, the higher quality effluent of a activated sludge treatment process would be an advantage. Effluent filtration and disinfection will be greatly simplified.

Package plants using some form of the activated sludge process are by far the most common method used to reach secondary treatment levels. There are many systems available that can be purchased as a complete packaged unit or a system can be engineered specifically for this application. The most common practice is to use a packaged plant as the basic treatment unit and to engineer the support systems for the particular project. For the purposes of this report, we have assumed the installation of a generic, activated sludge process using the extended aeration mode (lower loading) of operation as the basis of our facility sizing and cost estimations.

The ultimate reuse requirements for the effluent may require a higher level of treatment to be obtained. Present reuse rules call for tertiary treatment for effluent used for irrigation if it is applied by aerial spray within 500 feet of a residence. Treatment to this advanced level requires the addition of chemicals for flocculation prior to filtration and disinfection. Additional effluent monitoring and analysis are also required.

Disposal Options

Effluent disposal can be accomplished in several ways, but it would be prudent to consider beneficial reuse as an alternative to disposal if economically feasible.

The most common and practical method of reuse is for irrigation purposes. Effluent can reduce or completely eliminate the need to use potable water to irrigate the park areas as well as the roadways and landscaped buffer areas. Any surplus effluent can be used to irrigate the drainage retention basin adjacent to the treatment facilities. In order to avoid the requirement for advanced (R-1) levels of treatment, a subsurface irrigation system should be used in all areas.

If reuse is not deemed practical, acceptable methods of effluent disposal include surface and subsurface disposal. The most common methods of subsurface disposal are through the use of absorption fields (similar to the existing Haliimaile wastewater treatment plant), seepage pits or injection wells. The project area is located above the Underground Injection Control (UIC) line which the DOH has defined to protect the groundwater aquifer and drinking water sources and prohibits the use of injection wells in the area.

Disposal through an absorption field will require a large bed area due to the type of soils found in the Haliimaile area. Although no soil testing was performed, visual observations indicate the presence of clay soils and lower percolation rates. The possibility of clogging and reduced infiltration rates and the difficulty in correcting these problems, makes the construction of additional backup capacity important. For the daily flows expected from the facility, absorption fields are not considered practical but could serve as a backup system or alternative method of disposal for a portion of the effluent flow.

Infiltration basins or ponds are also used for surface effluent disposal. While also requiring a large land area to be dedicated for this purpose, it may provide the most practical method of effluent disposal in terms of construction costs and long term operation and maintenance.

Other Considerations

Protection of the Groundwater Aquifer

The effluent from the wastewater treatment plant will have no adverse impact on the groundwater aquifer in the area. There are currently no drinking water wells in the area. According to the Department of Health, there are plans for a future well, west of the project on the Pukalani side of Haleakala Highway. The well will be approximately 1000 feet deep and the project will be well outside the 1000 foot setback requirement.

The high quality secondary effluent produced by the facility will meet DOH standards for BOD₅ and suspended solids as well as the stricter reuse requirements. Disinfection will be provided to significantly reduce pathogens and routine testing will be performed for coliform bacteria. The planned subsurface drip irrigation system applies the effluent close to the ground surface and within the root zone of the vegetation. This allows the plant material to absorb any nutrients (nitrogen and phosphorus) available. The high elevation of the project also provides deep soil conditions to absorb and assimilate any remaining nutrients and other constituents filtering down through the soil matrix before entering the groundwater aquifer.

Solids Disposal

The production of excess biosolids results from the secondary treatment process. These solids must be removed from the liquid stream, stabilized and dewatered prior to disposal or reuse. The dewatered biosolids are normally transported off-site for disposal in an approved landfill. Maui County has the benefit of an on-going co-composting project that processes its green wastes and sewage sludge into a marketable product. The composting process removes pathogens and other organisms and allows for the beneficial reuse of the product for landscaping and agricultural projects.

Solids removed from the proposed wastewater treatment facility would be further stabilized in an aerobic digester to reduce the amount of organic matter subject to

decomposition. The digested solids would periodically be dewatered and hauled to the composting facility in Kahului for further processing and eventual beneficial reuse.

Emergency Power

Due to the critical nature of the treatment facility, emergency power will be provided to ensure continued operations in the event of a power failure in the electric utility's system. A standby generator will automatically start and the aeration blowers and effluent pumps will be transferred to the emergency power source and continue to operate.

Odor Control

The collection system for the project is small and the natural slope of the terrain should ensure short detention times. Sewage within the system should remain aerobic unless blockages occur. Routine system checks will ensure the system is flowing freely and prevent any anaerobic conditions and hydrogen sulfide odors.

Odor from a properly operated and maintained activated sludge treatment process should not pose a problem. Aerobic conditions, maintained throughout the process, prevent the generation of odors except for the slight musty, earthy odor associated with a properly running plant. The proposed drainage basin separates the treatment facility from the nearest residence and provides a buffer zone exceeding 300 feet. This distance is more than adequate to prevent odors from reaching the residences and resulting complaints.

Noise Control

The aeration equipment and emergency generator at the treatment facility will generate noise when operating, therefore all equipment must be installed in structures that are properly insulated to prevent noise complaints from the adjoining property owners. The separation distance will also reduce the transmission of noise from the plant to the residences.

Visual Impact

The lots are located on the side of a gradual slope. The treatment facility will be visible from some of the residences. The visual impact of the facility will be mitigated by constructing the majority of the treatment plant below grade, with the exception of the buildings housing the office and laboratory and the mechanical/electrical equipment building. Landscaping around the facility will be designed to screen the buildings from the nearby residences.

Required Permits and Approvals for the Treatment and Disposal Facilities

State Department of Health

The Department of Health must review and approve the construction plans for the treatment and disposal facilities. The DOH requirements are outlined in Chapter 11-62 of the Hawaii Administrative Rules and the Reuse Guidelines. After the facilities are constructed, the DOH must conduct a final inspection and issue a Permit to Operate before the plant can be placed in operation.

In addition, the State Board of Certification of Operating Personnel in Wastewater Treatment Facilities must rate the facility using criteria in Chapter 11-61 to determine the grade of the facility and the license required by the certified Direct Responsible Charge (DRC) operator.

State Land Use Commission

The State Land Use designation for the area is currently Agricultural. An application will be submitted for a change in the classification of the project area, including the treatment plant site, from Agricultural to Urban.

County of Maui - Department of Public Works

A building permit is required prior to construction of the facilities.

County of Maui - Department of Planning

The site of the proposed residential subdivision and treatment plant is located in an area with an "Interim Zone" zoning designation. Specific requirements for use permits or variances will be determined by the Planning Director when further details of the project become available. In discussions with the Department of Planning, however, it was noted that the use of package treatment plants have been approved on Maui, Lanai and Molokai for similar projects.

Estimated Costs

The costs for engineering and design, construction and operation and maintenance have been estimated and tabulated in Table I. The actual cost to construct the facility may vary greatly depending on choices made during the design phase of the project. An effort was made to include all necessary components of the facility, however no specific equipment was used as a basis for any of the estimated costs.

Summary

- The wastewater can be collected, treated and disposed of safely, efficiently and economically. Privately owned and operated facilities are used successfully for other residential projects in the area.
- The proposed site is suitable for a wastewater treatment facility. There are no environmental conditions that would prevent the construction and operation of a wastewater treatment facility for this project.
- All State Department of Health requirements can be met by a properly designed facility.
- The treated effluent may be used as a source of irrigation water for the proposed parks and buffer zones for this project, reducing the water supply requirements.

Hallimaile Wastewater Treatment Plant Cost Estimates

Engineering and Design	30,000
Construction	
Site work	30,000
Office/Laboratory Bldg.	50,000
Elec/Mech Equipment Bldg.	85,000
Treatment Tanks	150,000
Disinfection System	15,000
Solids Dewatering	25,000
Effluent Pond	80,000
Effluent Irrigation System	250,000
Subtotal	<u>685,000</u>
Operation and Maintenance	
Utilities	Monthly 4,000
Chemicals and Supplies	300
Solids disposal	700
Operation and Maintenance Administration	3,000
	1,000
Subtotal	<u>9,000</u>

Appendix M

**COMMENT LETTERS AND RESPONSES ON THE
DRAFT ENVIRONMENTAL ASSESSMENT**

PHONE (808) 534-1888



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

99 FEB -5 P 1 28

OFFICE OF PLANNING
COUNTY OF MAUI
RECEIVED

TOWNSCAPE, INC.
Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 524-4998
email address: townscape@panworld.net
New e-mail: townscape@tpa.net

February 22, 1999

John B. Min
Director of Planning
County of Maui
Department of Planning
250 So. High Street
Wailuku, Hawaii 96793
Attention: Ann T. Cua

EA 99-272

Re: Draft Environmental Assessment (980012), Halimaile Residential, L & B Properties, Inc.,
Halimaile, Maui, TMK: 2-5-03: Por 10

Dear Mr. Min:

Thank you for the opportunity to review the draft environmental assessment (DEA) for the Halimaile Residential project. The project is to include 196 single family residential dwelling units on 45 acres of land. It will also include a ten acre park. The project has already been included on the County's Makawao-Pukalani-Kala community Plan. However, since the adoption of the plan additional studies have resulted in a reconfiguration of this park. In addition, the designation of the drainage and sewage treatment facilities to a Public/quasi-Public have necessitated the preparation of the DEA.

It appears that no cultural or archeological remains have been found on this property. No current trails or remnant trails appear on the property. Therefore, at this time the Office of Hawaiian Affairs has no comments on DEA.

If you have any questions, or need to forward any additional information, please contact Lynn Lee, EIS Planner at 594-1936.

Sincerely

Colin Kippen
Deputy Administrator

Sebastian Aloot
Land and Natural Resources Division Officer

cc: Board of Trustees
Maui Community Affairs Office

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

Attention: Mr. Sebastian Aloot

Dear Mr. Kippen:

SUBJECT: Draft Environmental Assessment
Halimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 4, 1999 for the subject project. We appreciate your review of the document.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

JAMES "KOHU" APANA
MAYOR



CLAYTON T. ISEIDOMA
CHIEF
FRANK E. FERRAZZINI, JR.
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE CONTROL
200 DAIRY ROAD
KAHULUI, MAUI, HAWAII 96731
(808) 243-7581
DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

JUN 15 P2:54

January 14, 1999

Ms Ann T. Cua, Staff Planner
County of Maui, Department of Planning
250 South High Street
Wailuku, HI 96793

RE: Hallimale Residential; EA 980012; TMK: 2-5-03:por. 10

Dear Ms Cua,

Thank you for the opportunity to comment on the Hallimale Residential Subdivision draft environmental assessment.

The Department of Fire Control has no comment on the draft environmental assessment, however, we wish to reserve the right to comment when plans and specifications are submitted for the infrastructure installation.

If you have any questions, you may contact me at extension 7566.

Sincerely,

Leonard F Niemczyk
LEONARD F NIEMCZYK
Captain, Fire Prevention Bureau

cc: Inspector L. Montalvo

MTD-EA (01.99)

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 574-4998
email address: townscape@panworld.net
New e-mail: townscape@tsp.net

February 22, 1999

Captain Leonard F. Niemczyk
Fire Prevention Bureau
Department of Fire Control
County of Maui
200 Dairy Road
Kahului, Maui, Hawaii 96732

Dear Captain Niemczyk:

SUBJECT: Draft Environmental Assessment
Hallimale Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 14, 1999 for the subject project. We appreciate your review of the document.

When plans and specifications are submitted for the infrastructure installation, your office will have the opportunity to provide comments.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
STATE OF HAWAII
LAND USE COMMISSION

P.O. Box 2159
Honolulu, HI 96804-2159
Telephone: 808-597-3822
Fax: 808-597-3827

January 20, 1999

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

Dear Mr. Min:

Subject: Draft Environmental Assessment (DEA) for
Haliimaile Residential Project, Haliimaile,
Maui. THK 2-5-93; por. 10

We have reviewed the DEA for the subject project forwarded
by your transmittal dated January 4, 1999, and have the following
comments:

- 1) We confirm that the project site, as represented on Figure 2, is designated within the State Land Use Urban District. As indicated in the DEA, the Commission reclassified the project site from the Agricultural District to the Urban District under LUC Docket No. A98-723/A&B Properties, Inc., pursuant to Findings of Fact, Conclusions of Law, and Decision, and Order dated October 22, 1998.
- 2) We suggest that the Final EA include a map showing the project site in relation to the State land use districts.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject DEA.

Should you have any questions, please feel free to call me or Bert Saruwatari of our office at 597-3822.

Sincerely,

ESTHER UEDA
Executive Officer

EU:th

cc: OEQC
Townscape, Inc.

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 574-4998
email address: townscape@panworld.net
New e-mail: townscape@tsp.net

February 22, 1999

Ms. Esther Ueda
Executive Officer
Land Use Commission
State of Hawaii
P.O. Box 2159
Honolulu, Hawaii 96804-2159

Dear Ms. Ueda:

SUBJECT: Draft Environmental Assessment
Haliimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 20, 1999 for the subject project. We appreciate your review of the document.

The Final Environmental Assessment will include a map showing the project site in relation to the State land use districts.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 524-4998
email address: townscap@panworld.net
New e-mail: townscap@pps.net

TOWNSCAPE, INC.
Planned Communities, Master Plans, Land Use Permits



99 JUN 26 12:27

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

January 25, 1999
Mr. John E. Min
Planning Director
County of Maui
Maui Planning Department
280 So. High Street
Wailuku, HI 96793

Dear Mr. Min:

Subject: Halimaile Residential
EA 980012
TMK: 2-5-3:10 (Por.), Halimaile, 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 encourages that the project's consultant meet with us as soon as practical so that we may plan for the project's electrical requirements.

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

Sincerely,

Edward Reinhardt

Edward Reinhardt
Manager, Engineering

FO:lh

February 22, 1999

Mr. Edward Reinhardt
Manager, Engineering
Maui Electric Company, Ltd.
210 West Kamehameha Avenue
P.O. Box 398
Kahului, Maui, Hawaii 96733-6898

Dear Mr. Reinhardt:

SUBJECT: Draft Environmental Assessment
Halimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 25, 1999 for the subject project. We appreciate your review of the document.

When the layout of the subdivision is designed in more detail, we will meet with your office to determine the project's electrical requirements.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

630



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

210 Iani Kala St.
Suite 209
Waikuku, HI
96793-3100

Our People... Our Islands... In Harmony JUN 28 10 28 AM '99

DEPT. OF PLANNING
COUNTY OF MAUI
RECEIVED
DATE: JANUARY 26, 1999

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

Dear Mr. Min,

SUBJECT: Halimaille Residential
TMK: 2-4-003, por. 10
I.D. CPA 980004, CIZ 980030

Most of the land is classified as prime farmland. The remainder is classified as lands important to the State of Hawaii.

The proposed retention basin does not have an emergency spillway. If so, where will the over flow outlet? Who will be responsible for the operation and maintenance of the basin?

Thank you for the opportunity to comment.

Sincerely,

Neal S. Fujiwara
Neal S. Fujiwara
District Conservationist

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 574-4998
email address: townscape@panworld.net
New e-mail: townscape@taps.net

April 30, 1999

Mr. Neal S. Fujiwara
District Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
210 Iani Kala Street, Suite 209
Waikuku, Maui, Hawaii 96793-2100

Dear Mr. Fujiwara:

SUBJECT: Draft Environmental Assessment
Halimaille Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 26, 1999 for the subject project. We appreciate your review of the document.

As indicated in the DEA, the retention basin will be designed to hold a 50-year storm in accordance with State and County regulations. The homeowner's association will be responsible for the operation and maintenance of the basin.

Pursuant to discussions with your office regarding an over flow outlet, we contacted HC&S with respect to their recommendations. HC&S indicated that the over flow should be directed to one of their existing ditches (see attached inter-office correspondence dated April 29, 1999). The EA will be revised to reflect this change. The subdivision will be designed to minimize impacts to HC&S's operations.

As requested by the County, we would appreciate written confirmation that your concerns, as stated in this letter, have been addressed. Your response by May 14, 1999 would be appreciated.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

Enclosure

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

SENT BY: COUNTY MAUI PLANNING : 2-11-99 10:39AM : 8082437634-

18 5

LANOUE WELCH APANA
Mayor
FLOYD E. MUYAZONO
Director
ELIZABETH D. MOONOR
Deputy Director
(808) 243-7230
FAX (808) 243-7934



DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1190-C KAARUKAMU AVENUE WAILUKU, HAWAII 96793

79 FEB -1 P3 05

DEPT. OF PLANNING
COUNTY OF MAUI
RECEIVED

MEMORANDUM

January 28, 1999

HAWAIIAN COMMERCIAL & SUGAR COMPANY

Inter-Office Correspondence

April 29, 1999

TO: Hideo Kawahara
FROM: Randall C. Moore
SUBJECT: Halimaile Residential

The drainage retention basin appears to be sized for a storm that is greater than the 50-year, 1 one hour event that is required by the County of Maui. In the unlikely event the basin does overflow, the water should go to either (1) the existing Halimaile Chute Ditch, or (2) the new Reservoir 20 Chute Ditch and then to the Kautihoa Ditch. We will work with you as you proceed with your subdivision design to minimize impacts to HC&S' operations. Please contact me if you should have any further questions.

CC: JWH, KC

TO: John E. Min, Planning Director

FROM: *Floyd Miyazono*
Floyd Miyazono, Director

SUBJECT: Halimaile Residential Project
Zoning and Community Plan Amendment Application
Draft Environmental Assessment

We are not in support of the above subject actions, as submitted, for the following reasons:

1. Page 15 of the Zoning and Community Plan Amendment Application shows the park parcel in the "Existing Makawao - Pukalani - Kula Community Plan Map." The park parcel is contiguous and aligned lengthwise in a mostly North/South direction. The lay of the land appears to be more appropriate for park purposes than the "Proposed Makawao - Pukalani - Kula Community Plan Map" on page sixteen. We would request additional information, a detailed topographical map of both sites, to make a determination on the suitability of the proposed site.
2. Page 6 of the Draft Environmental Assessment lists more than thirty persons or agencies contacted for comment on the overall project. The County of Maui, Department of Parks & Recreation was not solicited for recommendations on this matter. The primary driving force behind the above actions is the relocation of the park parcel.
3. The Draft Environmental Assessment, Appendix J - Engineering Report - Page 3, Project Site Plan - shows the proposed, repositioned park development. The park parcel is bisected by the project entry road. This is not a suitable design criterion. Also, the plan does not address vehicle parking and access to the park parcels. Should the park be split into two sections, two parking lots would be necessary. This will have a major influence on the design of the project entry road.

SENT BY: COUNTY MAUI PLANNING : 2-11-99 10:40AM : 8042437834*

John E. Lida, Planning Director
Hali'imaile Residential Project

January 24, 1999
Page 2

6

TOWNSCAPE, INC.
Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 524-4998
email address: townscape@panworld.net
New e-mail: townscape@dps.net

4. The Draft Environmental Assessment, Appendix G Traffic Impact Analysis Report, Exhibits 3 & 4, states that the "Peak Hour" traffic will only increase by 106 vehicles, total. We do not agree with this projection. The addition of four hundred to five hundred resident vehicles in the subdivision will significantly increase traffic congestion. Intersection improvements at Baldwin Avenue and Haleakala Highway should be considered, especially with the planned widening of Haleakala Highway. A left turn from Hali'imaile Road onto Haleakala Highway would be impossible in "Peak Hour" traffic.

We would ask that if A&B Properties has a master plan or conceptual drawings of possible future development in the Hali'imaile area, that a copy of those documents be submitted for our planning purposes. This would also aid in reviewing the current applications.

Thank you for the opportunity to review this action. Should you need further comment, please call me or Patrick Matsui, Chief of Parks Planning & Development at extension 7387.

FSM:FTM:rb

c: Patrick Matsui, Chief of Parks Planning & Development
EA File

April 13, 1999

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

Dear Mr. Miyazono:

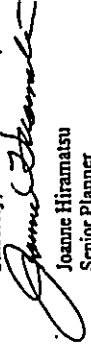
SUBJECT: Draft Environmental Assessment
Hali'imaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 28, 1999 for the subject project. We appreciate your review of the document.

Representatives of A&B Properties, Inc. met with you and your staff to discuss the issues raised in your letter. As a result of those meetings, we understand that your office will be issuing another comment letter for the project. We appreciate the time and effort taken to plan the park site.

Should you have any questions, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,



Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



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

150-C KAHAEMANU AVENUE WAILUKU, HAWAII 96793

JAMES "KIMO" APANA
Mayor
FLOYD S. MIYAZONO
Director
ELIZABETH D. MENDOZA
Deputy Director
(808) 244-7230
FAX (808) 244-7234

99 APR 22 P3:26

DEPT. OF PLANNING
COUNTY OF MAUI
RECEIVED

April 21, 1999

MauI County Planning Department
250 South High Street
Wailuku, Hawaii 96793
Attn: Ann Cui

Dear Ms. Cui:

SUBJECT: HAILI'MAILE RESIDENTIAL PROJECT

We have reviewed A&B Properties, Inc.'s Draft Environmental Assessment and application for a Zoning Amendment and Community Plan Amendment for the subject property. We have met and will continue to meet with the applicant to work out the details necessary to accept dedication of the park parcel. We therefore, do not have any objections to the Draft Environmental Assessment or to proceeding with the processing of the zoning and Community Plan Amendment applications at this time.

However, we would suggest that the following to be included as a condition of zoning:

That the applicant shall assist the Department of Parks and Recreation in the site planning for the park, i.e. fields, parking etc., and that the park site shall be graded, grassed, irrigated and roadside perimeter landscaped. Further, the terms of dedication to Maui County shall be to the mutual satisfaction of the applicant and the Department of Parks and Recreation.

Thank you for this opportunity to review and comment on this project.

Sincerely,

Floyd S. Miyazono
FLOYD S. MIYAZONO
Director

C: Patrick Matsuji, Chief of Planning and Development



JAMES "KIMO" APANA
MAYOR

OUR REFERENCE
YOUR REFERENCE

**POLICE DEPARTMENT
COUNTY OF MAUI**

85 MAHALANI STREET,
WAILUKU, HAWAII 96793
(808) 244-4400
FAX (808) 244-4411

THOMAS M. PHILLIPS
CHIEF OF POLICE

CHARLES H.P. WALL
DEPUTY CHIEF OF POLICE

99 FEB -1 A9:35

DEPT. OF PLANNING

COUNTY OF MAUI

RECEIVED

January 29, 1999

MEMORANDUM

TO : DIRECTOR, PLANNING DEPARTMENT
FROM : THOMAS M. PHILLIPS, CHIEF OF POLICE
SUBJECT : I.D.: EA 980012
TMK: 2-5-3:10 (Part)
Project Name: Haili'maile Residential
Applicant: A&B Properties, Inc., Mercer K. Vicens

No recommendation or special condition is necessary or desired.
Refer to attachment(s).

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

SENT BY: COUNTY MAUI PLANNING : 2-11-99 11:03AM :

8082437834

IS 3

Case of Phillips

TO : GERALD MATSUURA, CAPTAIN, WAILUKU PATROL DIVISION

VIA : CHANNELS

FROM : RANDALL BURGESS, P.O. III, COMMUNITY POLICING - FORECAST

SUBJECT : A & B PROPERTIES HAILIIMAILE RESIDENTIAL PROJECT

Sir, this To/From is being submitted as requested and in regards to police concerns/recommendations for the Hailiimaile Residential project located at 2-5-03: Portion 10 Hailiimaile, Hawaii.

The following are my recommendations related to roadways/traffic for the proposed project:

- 1) Suggest that the State Highways Division review possible improvements to the Haleakala Highway/Hailiimaile Rd. intersection. Past case history reveals that fatal, near fatal, and major collisions have occurred in the area of this intersection. Left turns from Hailiimaile Rd. onto Haleakala Highway are extremely hazardous.
- 2) In regards to the Hailiimaile Rd./Project Rd. intersection: Suggest the installation of a deceleration lane for vehicles travelling southwesterly on Hailiimaile Rd. and entering the project. Also, I concur with the separate left turn lane into the project for vehicles travelling northeasterly on Hailiimaile Rd.
- 3) Although the posted speed limit on Hailiimaile Rd. is 30 MPH; vehicles regularly exceed the posted limit. Suggest that the roadway shoulders fronting the project be widened and that the installation of possible traffic calming devices be studied for Hailiimaile Rd. area of the proposed project.

No further comments or recommendations at this time.

Noted/Concur. J. J. J. 01/27/99 15:41 MLC

Respectfully submitted,
Randall Burgess
RANDALL BURGESS #1663
012699 @ 1200 hours

*cancel forward.
Cpt JG
1/29/99*

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honoolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 574-4998
email address: townscape@panworld.net
New e-mail: townscape@tsp.net

February 22, 1999

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

Dear Chief Phillips:

SUBJECT: Draft Environmental Assessment
Hailiimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 29, 1999 for the subject project. We appreciate your review of the document.

As indicated in the DEA, the applicant has agreed to work with the County on improvements to the intersection of Haleakala Highway and Hailiimaile Road.

The Traffic Study prepared for the project did not indicate a need for a deceleration lane for vehicles travelling southwesterly on Hailiimaile Road and entering the project. The number of vehicles making a right turn into the project during the morning and afternoon peak hours (18 and 35 vehicles respectfully) is too small to warrant a deceleration lane.

A 15-foot wide strip of land has been reserved along Hailiimaile Road fronting the project for roadway widening improvements.

As requested by the County, we would appreciate written confirmation that your concerns, as stated in this letter, have been addressed. Your response by March 5, 1999 is requested, so that we can proceed with preparing the Final Environmental Assessment.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



JAMES "KIMO" APAHA
MAYOR

OUR REFERENCE
JSS:LYC
YOUR REFERENCE

**POLICE DEPARTMENT
COUNTY OF MAUI**

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-4400
FAX (808) 244-4411

March 9, 1999



THOMAS M. PHILLIPS
CHIEF OF POLICE

CHARLES H.P. HALL
DEPUTY CHIEF OF POLICE



STATE OF HAWAII
DEPARTMENT OF EDUCATION

P.O. BOX 1349
HONOLULU, HAWAII 96814

99 FEB -5 P1:25

DEPT OF EDUCATION
COUNTY OF MAUI
RECEIVED

WILLIAM J. GUTLAND
SECRETARY

OFFICE OF THE SUPERINTENDENT

January 29, 1999

Ms. Joanne Hiramatsu
Senior Planner
Townscape, Inc.
900 Fort Street Mall, Suite 800
Honolulu, Hawaii 96813

Dear Ms. Hiramatsu:

Re: Draft Environmental Assessment
Halimaile Residential Project

We received your facsimile outlining the measures that were taken to address our concerns regarding the Halimaile Residential Project. Upon review of the facsimile, we have no additional comments or recommendations to offer at this time.

If you have any further questions regarding this matter, please feel free to contact Lieutenant Jody K.M. Singbank at 244-6453.

Sincerely,

THOMAS M. PHILLIPS
Chief of Police

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

Dear Mr. Min:

Subject: Halimaile Residential
CPA 980004, CITZ 980030, EA 980012

The Department of Education notes that the applicant is subject to the following condition imposed by the State Land Use Commission:

Petitioner shall contribute its fair share to the development, funding, and/or construction of public school facilities as determined by and to the satisfaction of the State Department of Education (DOE). Petitioner and the DOE shall submit a written agreement on this matter prior to the Petitioner obtaining approval for County zoning.
(emphasis added)

The DOE will be initiating contact with the applicant to discuss the fair-share contribution. We have no other comment specific to the rezoning and community plan amendment application.

If you have any questions, please call Mr. Sanford Beppu at 733-4862.

Very truly yours,

Paul G. Mahien, Ph.D.
Superintendent of Education

PLM:dy

cc: OBS
P. Brown, MDO

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email address: townscape@panworld.net
New e-mail: townscape@hpa.net

February 22, 1999

Dr. Paul G. LeMahieu, Ph.D.
Superintendent of Education
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Dr. LeMahieu:

**SUBJECT: Draft Environmental Assessment
Hallimale Residential Project**

Thank you for your comments on the Draft Environmental Assessment (DEA) dated January 29, 1999 for the subject project. We appreciate your review of the document.

The applicant received and is currently reviewing a draft agreement from your office via a letter dated January 29, 1999 regarding a fair share contribution for school facilities. We acknowledge that under the condition imposed by the State Land Use Commission, a written agreement is required prior to receiving County zoning approval.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,


Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

SENT BY: COUNTY MAUI PLANNING : 2-11-99 : 10:41AM : 8082437634-

7/3

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
888 PURCHESBOWL STREET
HONOLULU, HAWAII 96813-5007

99 FEB -3 12:18

DEPT. OF PLANNING
COUNTY OF MAUI
RECEIVED

February 1, 1999

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

Dear Mr. Min:

Subject: Hallimale Residential
Draft Environmental Assessment, Community Plan Amendment, & Zone Change
TMA: 2-5-3: 10 (Por.)

Thank you for your transmittal requesting our comments on the subject applications.


Our comments are as follows:

1. The subject project is expected to have an impact at the intersection of Haleakala Highway and Hallimale Road. Haleakala Highway widening is under design and construction is expected to begin around 2001. The developer should be required to coordinate with our Highways Division and participate in the costs for intersection improvements for Haleakala Highway and Hallimale Road.

2. Plans for construction work within the State highway 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

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New e-mail: townscape@ps.net

February 22, 1999

Mr. Kazu Hayashida
Director of Transportation
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-3097

Dear Mr. Hayashida:

SUBJECT: Draft Environmental Assessment
Halimale Residential Project

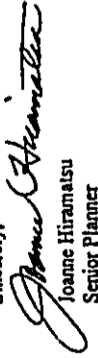
Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 1, 1999 for the subject project. We appreciate your review of the document.

As indicated in the DEA, the applicant is required to participate in the prorate funding and construction of local and regional transportation improvements as determined by the State Department of Transportation and County Department of Public Works.

Plans for construction work within the State highway right-of-way will be submitted to your office for review and approval.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-3126.

Sincerely,


Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



REGULATORY DIVISION
COUNTY OF MAUI

STATE OF HAWAII
DEPARTMENT OF PLANNING
COUNTY OF MAUI

STATE OF HAWAII '99 FEB -4 12:17
DEPARTMENT OF HAWAIIAN HOME LANDS

REGULATORY DIVISION
COUNTY OF MAUI
RECEIVED

February 2, 1999

The Honorable John E. Min
Director, Department of Planning
County of Maui
250 South High Street
Hailuku, Maui, Hawaii 96793

Attn: Ann Cua

Dear Mr. Min:

Subject: Halimale Residential, EA 980012, CPA 980004,
CIZ 980030, TMK 2-5-3:10 por., Halimale, Maui, Dated
December, 1998

Thank you for the opportunity to review the subject applications. As part of our review, we have noted the following:

1. In the Zoning and Community Plan Amendment Application, estimated water demand for the proposed project was 78,400 gallons per day based on an interim daily consumption of 400 gallons per residential unit. This is not consistent with the estimated water demand of 160,100 gallons per day presented in the Draft Environmental Assessment for the Halimale Residential Project. The later estimate is based on State of Hawaii Water System Standards that estimate an average daily demand of 600 gallons per unit on the island of Maui.
2. The existing Department of Water Supply system that services the area does not have the capacity to serve the proposed project.

The Honorable John E. Min
February 2, 1999
Page 2

3. In regards to potential water source development:

"...the limit on the amount of water that can be safely extracted without compromising its potable quality is a function of the amount of natural groundwater flow in this location and the formation's permeability. This can only be determined by drilling and pump testing."

Results of drilling and pump tests are not available at this time.

The Department of Hawaiian Home Lands (DHHL) has substantial property interests at Waiohuli, Keokea, Ulupalakua, Keanae and Wailua on east Maui. If no adverse impacts occur upon water sources that serve Hawaiian Home Lands, then DHHL does not object to the proposed project. The subject documents should include more information regarding proposed water source development to determine impacts upon Hawaiian Home Lands.

If you have any questions, please call Daniel Ornellas at 586-3836.

Aloha,

John C. Soon
RAYNARD C. SOON, Interim Chairman
Hawaiian Homes Commission

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April 13, 1999

Mr. Raynard C. Soon
Interim Chairman
Department of Hawaiian Home Lands
State of Hawaii
P.O. Box 1879
Honolulu, Hawaii 96805

Dear Mr. Soon:

SUBJECT: Draft Environmental Assessment
Haliimalie Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 2, 1999 for the subject project. We appreciate your review of the document.

For estimating purposes, 600 gallons per unit of potable water will be used to calculate the water demand from the project.

We are aware that the existing potable water system servicing the area does not have the capacity to service the project. Therefore, new water sources will have to be secured for the project. One of the sources being considered is a new well in the Kailua area, which, because of its location, should have no impact on water sources that serve Hawaiian Home Lands (Other sources will also be considered).

However, because a well site has not yet been selected, and drilling and pump tests will take a long time to be performed, information will not be available for incorporation into the DEA and Zoning and Community Plan Amendment documents. We would be happy to have information received on any drilling and pump tests sent to your office when it becomes available to confirm the well's impact on water sources.

As requested by the County, we would appreciate written confirmation that your concerns, as stated in this letter, have been addressed. Your response is requested, so that we can proceed with preparing the Final Environmental Assessment.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

BERNARD J. CANTLAND
Director



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

February 9, 1999

79 FEB 12 P2 59

DEPT. OF HEALTH
COUNTY OF MAUI
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email address: townscape@panworld.net
New e-mail: townscape@ps.net

April 13, 1999

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

Dear Mr. Mr. Matsubayashi:

**SUBJECT: Draft Environmental Assessment
Haliiimaile Residential Project**

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 9, 1999 for the subject project. We appreciate your review of the document.

Comments were received from the Honolulu Office of the Department of Health. A copy of our response to the comments is enclosed for your information.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning

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

Dear Mr. Min:

Subject: Haliiimaile Residential
TMK: (2) 2-5-03: por. of 10
EA 980012, CPA 980004, CIZ 980030

Thank you for the opportunity to comment on the land use applications. Comments from this office were transmitted to our Honolulu Office. A coordinated response is forthcoming.

Sincerely,

Art Bauckham

HERBERT S. MATSUBAYASHI
District Environmental Health Program Chief

cc: Art Bauckham

JAMES TOUHY APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 243-7345
Fax: (808) 243-7355



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96783

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COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96783

Department of Public Works and Waste Management
Land Use and Code Administration

Waterways Reclamation Division

LLOYD P. W. LEE, P.E.

Engineering Division

BRIAN HARRIS, P.E.

Stormwater Division

ANDREW M. HIRSH

Solid Waste Division

Mr. John E. Min
February 16, 1999
Page 2

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.

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

DG:co/mt
S:LUCAICZMA&B.WPD

MEMO TO: JOHN E. MIN, DIRECTOR OF PLANNING

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

SUBJECT: COMMUNITY PLAN AMENDMENT, CHANGE IN ZONING AND DRAFT ENVIRONMENTAL ASSESSMENT
HALIIMALLE RESIDENTIAL PROJECT (A&B PROPERTIES)
TMK: (2) 2-5-003:010
CPA 98/004, CIZ 98/030 AND EA 98/012

We reviewed the subject submittal and have the following comments.

1. All roads within the subdivision shall be improved to County standards to include, but not be limited to, pavement widening; construction of curb, gutter, and sidewalk; street lights; and relocation of utilities underground.
2. A separate left-turn storage lane shall be constructed on Haliimalle Road at its intersection with this project, as approved by the Department of Public Works and Waste Management, Engineering Division. A separate right-turn lane (acceleration lane) shall be constructed on Halaakala Highway with its interaction with Haliimalle Road, as discussed in the District Boundary Amendment.
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 prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff water. 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

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April 13, 1999

Mr. Charles Jencks, Director of Public Works
and Waste Management
Department of Public Works and
Waste Management
County of Maui
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Jencks:

SUBJECT: Draft Environmental Assessment
Halimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 16, 1999 for the subject project. We appreciate your review of the document.


All roads within the subdivision will be constructed to County standards. A variance will be requested in the event roads within the subdivision are constructed to be compatible with existing roadways in the area.

As stated in the Environmental Assessment, a left-turn storage lane will be constructed on Halimaile Road at its intersection with the project road, as approved by the Department of Public Works and Waste Management, Engineering Division. The applicant has agreed to work with the County in improving the right turn lane from Halimaile Road onto Haleakala Highway.

A detailed final drainage report and erosion control Best Management Practices (BMP) plan will be submitted to the County for review and approval prior to the issuance of a grading permit.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,


Joanne Hiratahau
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 2178
HONOLULU, HAWAII 96801

February 18, 1999

98-075A/epo

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

Dear Mr. Min:

Subject: CPA 980004, CIZ 980030, EA 90012
Halimaile Residential Project
A&B Properties
Maui, Hawaii
THK: 2-5-J: por. 10

Thank you for allowing us to review and comment on the subject permit applications and Draft Environmental Assessment (DEA). Besides the comments that we submitted on the Petition to Amend the State Land Use District Boundaries, dated June 2, 1998, we have the following additional comments to offer:

Polluted Runoff Control

We recommend that nonpoint source pollution control concerns be addressed and that there be no increase in polluted runoff from the project. The construction of the subject project will greatly increase the acreage of impervious area, thereby increasing storm water runoff volumes. The State has developed *Hawaii's Coastal Nonpoint Pollution Control Program Management Plan*. This management plan addresses proper planning, design, and use of Best Management Practices to substantially reduce polluted runoff (nonpoint source pollution) generated by different activities. Please refer to the management plan (pages III-101 to III-162) for urban management measures. The management plan can be obtained from the Coastal Zone Management Program (587-2877) in the Office of Planning, Department of Business and Economic Development and Tourism.

The following are suggested management measures to consider:

1. For New Development
Please refer to *Hawaii's Coastal Nonpoint Pollution Control Program Management Plan* (pages III-104 to III-108). The New Development Management Measure should be achieved by reducing total suspended solid loadings by 80% once the site is permanently stabilized.
2. For Site Development
 - a) Please refer to the management plan, pages III-112 to III-117;
 - b) Within the conceptual landscape plan, include open "green areas" that will slow down and retain stormwater runoff. For example, the lands set aside for parks could be constructed as sediment basins which would retain and prevent polluted runoff from entering coastal waters; and
 - c) Limit disturbance of natural drainage features and vegetation.
3. For Construction Site Erosion and Sediment Control
 - a) Please refer to the management plan, pages III-117 to III-123;
 - b) Conduct grubbing and grading activities during the low rainfall months (April-October);
 - c) Grub areas sequentially so that only a small portion of the site is bare at any time;
 - d) Use vegetation, mulch, gravel, and porous pavement wherever feasible to maximize the acreage of pervious areas; and
 - e) Replant or cover bare areas as soon as grading or construction is completed. New plantings will require soil amendments, fertilizers and temporary irrigation to become established. Use high planting and/or seeding rates to ensure rapid stand establishment.

4. Pollution Prevention

- a) We encourage the implementation of pollution prevention and education programs to reduce nonpoint source pollution. The City and State can be assisted in their efforts in environmental education by providing new homeowners educational packets that contain information on reducing nonpoint source pollution; proper storage, use, and disposal of household chemicals; and proper disposal of pet excrement; and
- b) We encourage large developments to imprint the message "Dump No Waste, Goes to Ocean" over storm drains to remind homeowners not to illegally dump materials in the storm drain system.

Any questions concerning these polluted runoff control comments should be directed to the Clean Water Branch, Polluted Runoff Control Program at 586-4309.

Safe Drinking Water

1. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, "Rules Relating to Potable Water Systems."
2. The draft EA indicates that the potable water systems may be expanded in the future. Section 11-20-30 requires that new or substantially modified distribution systems for public water systems be approved by the Director. However, if the water system is under the jurisdiction of the County of Maui, the Department of Water Supply will be responsible for the review and approval of the plans.
3. Section 11-20-29 requires that all new sources of potable water serving a public water system be approved by the Director of Health prior to its use. Such an approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.
4. Appendix J, Engineering Report, must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to

reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses, performed by a laboratory certified in the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional tests may be required by the Director upon his review of the information submitted.

In an effort to clarify what is needed in engineering reports and to minimize unnecessary delays in the review process, we are providing the following information:

- a. Safe Drinking Water Branch New Source Approval Process.
 - SDWB New Source Approval Flowchart
 - Declaration of Covenants (sample form)
 - Operation and Maintenance Certification (sample form)
- b. Guidelines for Preparation of Preliminary Engineering Reports for New Potable Water Sources.
 - List of Minimum Required Contaminants to be Sampled and Analyzed
 - Professional Engineer's Certification (sample form)
- c. Drinking Water Testing Laboratories Certified by the Hawaii Department of Health, State Laboratories Division.

Copies of the above guidelines are enclosed for your information.

5. In 1996, Congress amended the Safe Drinking Water Act and added several new programs. One of these new programs was the Source Water Assessment Program (SWAP). The objective of SWAP is to assess the susceptibility of a drinking water source to activities that have significant potential to release contaminants to the source. It is anticipated that Hawaii's SWAP will begin implementation in November 1999. Any new drinking water source for a public water system must then be required to submit the following information for review:

- a. Delineation of the assessment area around the drinking water source.
- b. Inventory of the assessment area to identify potential contaminating activities.
- c. Susceptibility of the drinking water source to become contaminated from the identified potential contaminating activities.

6. In addition, Hawaii Administrative Rules, Title 11, Chapter 20, "Rules Relating to Potable Water Systems" will be revised to require all new public water systems to demonstrate the technical, managerial, and financial capacity to consistently produce and deliver drinking water meeting all State and Federal drinking water regulations prior to commencing operations. These revisions should become effective no later than October 1, 1999.

- a. Technical capacity refers to the physical infrastructure of the water system, including but not limited to the adequacy of the source water, infrastructure (source, treatment, storage, and distribution), and the ability of system personnel to adequately operate and maintain the system and to otherwise implement technical knowledge.
- b. Managerial capacity refers to the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages to customers and regulatory agencies.
- c. Financial capacity refers to the financial resources of the water system, including but not limited to revenue sufficiency, credit worthiness, and fiscal controls.

If you should have any questions on this matter, please contact Ms. Queenie Komori of the Safe Drinking Water Branch, Engineering Section, at 596-4259.

Vector Control

The property may be harboring rodents which will be dispersed to the surrounding areas when the site is cleared. The applicant is required by Chapter 11-26, "Vector Control,"

Mr. John E. Min
February 18, 1999
Page 6

98-075A/epo

Hawaii Administrative Rules to eradicate any rodents prior to clearing the site and to notify the Department of Health by submitting Form VC-12 to the local Vector Control Branch when such action is taken.

The Vector Control Branch phone numbers are as follows:

Oahu: 831-6767

Kauai: 241-3306

Hawaii--Hilo: 974-4238, Kona: 322-7011

Maui (includes Molokai and Lanai): 873-3560

Sincerely,



GARY GILL
Deputy Director for
Environmental Health

Enclosures

C: Ms. Joanne Hiramatsu
CWB
SDWB

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New e-mail: townscap@epa.net

February 22, 1999

Mr. Gary Gill, Deputy Director for Environmental Health
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Gill:

SUBJECT: Draft Environmental Assessment
Halimiala Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 18, 1999 for the subject project. We appreciate your review of the document.

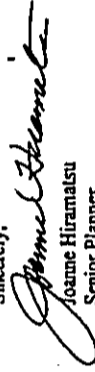
Your suggestions related to management measures for "Polluted Runoff Control" will be considered to mitigate potential pollutant runoff from the development. A copy of the "Hawaii's Coastal Nonpoint Pollution Control Program Management Plan" has been acquired.

The potable water system will be developed to comply with Hawaii Administrative Rules, Title 11, Chapter 20, "Rules Relating to Potable Water Systems." At the appropriate time, an Engineering Report will be prepared and submitted to your office for approval. The potable water system will be constructed in accordance with applicable rules and regulations that are in effect at the time of development.

Rodents will be eradicated in accordance with Chapter 11-26, "Vector Control."

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,



Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



STATE OF HAWAII 39 FEB 24 P1:06
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 LAND DIVISION
 HONOLULU, HAWAII 96813
 FEB 23 1999
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AGRICULTURE DEVELOPMENT
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 REPAIRS
 CONSTRUCTION SERVICES
 FORESTRY AND WILDLIFE
 MANAGEMENT
 LAND USE PLANNING
 LAND USE PERMITS
 WATER RESOURCES MANAGEMENT

Ref: PS:EH

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

Dear Mr. Min:

Subject: Kali'Maile Residential Project Zoning and Community Plan Amendment Application

We have reviewed the subject application and offer the following comments for your consideration.

We confirm the proposed project is located in Zone C, an area of minimal flooding according to FEMA maps. However, please indicate the size, and explain the rational in sizing the detention basin. Our Engineering Branch should be contacted regarding the filling of a Dam Permit, if the basin meets either one of the following conditions:

- a.) The basin impounds more than 50 acre-feet, or
- b.) The depth of the basin is greater than 25 feet.

Additionally, we advise you that the Commission on Water Resources Management should be contacted regarding a well construction permit for the proposed new well.

Thank you for the opportunity to comment on the proposed application. Should you have any questions, please contact staff planner, Ed Henry, at 587-0380.

Very truly yours,

Dean Uchida
 Dean Uchida,
 Administrator

c.c. Engineering Branch
 MDLO

TOWNSCAPE, INC.

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 Telephone (808) 536-6999 Facsimile (808) 524-4998
 email address: townscape@panworld.net
 New e-mail: townscape@bbs.net

April 13, 1999

Mr. Dean Uchida, Administrator
 Department of Land and Natural Resources
 Land Division
 State of Hawaii
 P.O. Box 621
 Honolulu, Hawaii 96809

Attention: Mr. Ed Henry

Dear Mr. Uchida:

SUBJECT: Draft Environmental Assessment
 Haliimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 23, 1999 for the subject project. We appreciate your review of the document.

The drainage basin is expected to be approximately 7 acres in size and a few feet deep to accommodate excess storm water runoff from a 50-year storm in accordance with County standards. A Dam Permit will be filed should the basin impound more than 50-acre-feet of storm water runoff.

The Commission on Water Resources Management will be contacted regarding a well construction permit for the proposed new well.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
 Joanne Hiramatsu
 Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 LAND DIVISION
 P.O. BOX 21
 HONOLULU, HAWAII 96822

FEB 25 12:42
 DEPT OF PLANNING
 COUNTY OF MAUI
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AGRICULTURE DEVELOPMENT
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 ADMINISTRATION
 CONSTRUCTION AND REPAIRS
 COMMUNITY DEVELOPMENT
 FORESTRY AND WILDLIFE
 LAND MANAGEMENT
 STATE PLANNING
 WATER RESOURCE MANAGEMENT

Ref: PS:EH

FEB 24 1999

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

Dear Mr Min:

Subject: Haili' Maile Residential Project Draft Environmental Assessment

We have reviewed the Change in Zone Application and the Community Plan Amendment for the subject project, and have no additional comments to offer.

Thank you for the opportunity to review this matter.

Very truly yours,

Joanne Hiramatsu
 Joanne Hiramatsu
 Senior Planner

c.c. Engineering Branch
 HDLO

TOWNSCAPE, INC.
 Planned Communities, Master Plans, Land Use Permits

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 Telephone (808) 536-6999 Facsimile (808) 574-4998
 email address: townscape@pan.world.net
 New e-mail: townscrip@pan.net

April 13, 1999

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

Attention: Engineering Branch

Dear Mr. Uchida:

SUBJECT: Draft Environmental Assessment
 Haliimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) dated February 24, 1999 for the subject project. We appreciate your review of the document.

Should you have any questions or additional comments, please feel free to contact the undersigned or Meteor "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
 Joanne Hiramatsu
 Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



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

OFFICE OF PLANNING 99 HAR -4 P12 33

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

Ref. No. P-7960

ROSAURIO A. CALEZANO
GOVERNOR
BRIAN J. BENTLEY
COMMISSIONER
DAVID W. BLANE
DEPUTY DIRECTOR
OFFICE OF PLANNING

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

March 2, 1999

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

Dear Mr. Min:

Subject: ID: CPA 980004
CIZ 980030
EA 980012
2-5-3; par. 10, 63 acres
Project Name: Halimale
Residential
Applicant: A & B Properties, Inc.

We have reviewed the Draft Environmental Assessment and Zoning Community Plan Amendment application for the above referenced project and note that on October 22, 1998, the State Land Use Commission (LUC) reclassified the subject 63 acres from the Agricultural to the Urban District for a 196-unit single family development with a 10-acre park.

The Office of Planning testified in support of this project before the LUC. Thank you for the opportunity to comment. If you have any questions of comments, please contact Lorena MAKI of our staff at (808) 587-2888.

Sincerely,

David W. Blane
Director
Office of Planning

cc: Ms. Esther Ueda, LUC

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mall, Suite 800, Honolulu, HI 96813
Telephone (808) 536-6999 Facsimile (808) 524-4998
email address: townscape@panwork.net
New e-mail: townscape@taps.net

April 13, 1999

Mr. David W. Blane, Director
Office of Planning
Department of Business, Economic Development & Tourism
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Blane:

SUBJECT: Draft Environmental Assessment
Halimale Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA), and the Zoning and Community Plan Amendment application dated March 2, 1999 for the subject project. We appreciate your review of the document.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning



DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

JAMES "NO" APANA
Mayor
AUCILLI LEI
Director
MISCELLA P. HIRAMATSU
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 243-7000 FAX (808) 243-7110

APR 19 1999
DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

TO: Mr. John Min
Director of Planning

FROM: Ms. Alice L. Lee
Director of Housing and Human Concerns

SUBJECT: Haliimaile Residential
Application For Amendment To Change In Zoning
Application For Community Plan Amendment
Environmental Assessment
I.D. No. CPA 980004, CIZ 980030, EA 980012
TKK: 2-5-3:10 (por.)

We have reviewed A & B Properties, Inc.'s Draft Environmental Assessment and applications for a Zoning Amendment and Community Plan Amendment for the subject property. At the present time, the Department is reviewing the County's Policy relating to affordable housing and we do not have any objection to the Draft Environmental Assessment or to the processing of the zoning and Community plan Amendment applications at this time. We will be meeting with the applicant to discuss these and other issues throughout the zoning process.

Please call Wayde Oshiro of our Housing Division at extension 7351 if you have any questions.

WTO:IVO

xc: Housing Administrator
Project File

TOWNSCAPE, INC.

Planned Communities, Master Plans, Land Use Permits

900 Fort Street Mail, Suite 800, Honolulu, HI 96813
Telephone (808) 516-6999 Facsimile (808) 524-4998
email address: townscape@panworld.net
New e-mail: townscape@panworld.net

April 19, 1999

Ms. Alice L. Lee
Director of Housing and Human Concerns
Department of Housing and Human Concerns
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Ms. Lee:

SUBJECT: Draft Environmental Assessment
Haliimaile Residential Project

Thank you for your comments on the Draft Environmental Assessment (DEA) and applications for a Zoning Amendment and Community Plan Amendment dated April 9, 1999 for the subject project. We appreciate your review of the documents.

The applicant will work with your office to discuss affordable housing and other issues that you may have during the zoning process of the project.

Should you have any questions or additional comments, please feel free to contact the undersigned or Mercer "Chubby" Vicens at the A&B Office on Maui at 877-5126.

Sincerely,

Joanne Hiramatsu
Senior Planner

cc: Ms. Ann T. Cua, Staff Planner, County of Maui, Department of Planning