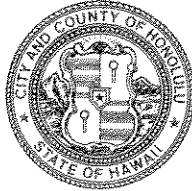


PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 8TH FLOOR • HONOLULU, HAWAII 96813-3017
PHONE: (808) 523-4711 • FAX: (808) 523-4950

JEREMY HARRIS
MAYOR



RECEIVED

PATRICK T. ONISHI
CHIEF PLANNING OFFICER

'97 JUN 25 A8:36

DONA L. HANAIKE
DEPUTY CHIEF PLANNING OFFICER

OFFICE OF THE CHIEF PLANNING OFFICER
QUALITY CONTROL

TH

June 25, 1997

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

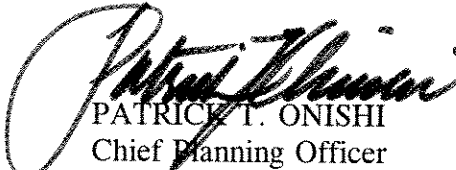
Dear Mr. Gill:

Acceptance Notice for the
Final Environmental Impact Statement (FEIS)
for the Proposed Aiea Sugar Mill Commercial Development
Aiea, Oahu, Hawaii, Tax Map Key: 9-9-05:10 and 25

We are notifying you of our acceptance of the subject FEIS for the proposed Aiea Sugar Mill Commercial Development project. Pursuant to Section 11-200-23(e), Title 11, Chapter 200 (Environmental Impact Statement Rules), of the Hawaii Administrative Rules, we respectfully request that this acceptance notice be published in the July 8, 1997 Environmental Notice.

We have attached our Acceptance Report and a copy of the subject FEIS for the proposed project. Should you have any questions, please contact Tim Hata of our staff at 527-6070.

Yours very truly,


PATRICK T. ONISHI
Chief Planning Officer

PTO:lh

Attachments

c: Crazy Shirts, Inc.
A. Joel Criz and Associates, Inc.
Gray Hong Bills and Associates, Inc.

1997-Oahu- FEIS-

FILE COPY

Aiea Sugar Mill

FINAL
ENVIRONMENTAL
IMPACT STATEMENT

FOR

**AIEA SUGAR MILL
COMMERCIAL DEVELOPMENT**

AIEA, OAHU



GRAY · HONG · BILLS & ASSOCIATES, INC.
CONSULTING ENGINEERS

119 Merchant Street, Suite 607, Honolulu, Hawaii 96813
Telephone: (808) 521-0306 Fax: (808) 531-8018

**AIEA SUGAR MILL
COMMERCIAL DEVELOPMENT
FINAL ENVIRONMENTAL IMPACT STATEMENT
AIEA, OAHU, HAWAII
TMK: 9-9-05: POR. 10 AND 25**

Prepared For

**CRAZY SHIRTS, INC.
99-969 Iwaena Street
Aiea, Hawaii 96701**

Prepared By

**GRAY, HONG, BILLS & ASSOCIATES, INC.
119 Merchant Street, Suite 607
Honolulu, Hawaii 9813
Phone 521-0306 / Fax 531-8018**



David B. Bills, Vice President

June 6, 1997

TABLE OF CONTENTS

	Page
I. INTRODUCTION AND SUMMARY	1
A. APPLICANT	1
B. BRIEF PROJECT SUMMARY	1
C. SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS	1
1. Beneficial Impacts	1
2. Adverse Impacts and Proposed Mitigation Measures	2
3. Alternatives Considered	3
4. Summary of Unresolved Issues	3
5. Compatibility with Land Use Plans and Policies	5
6. Necessary Approvals and Permits Required	5
II. STATEMENT OF PURPOSE AND NEED FOR ACTION	6
III. PROJECT DESCRIPTION	8
A. LOCATION	8
B. STATEMENT OF OBJECTIVES	8
C. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL AND ENVIRONMENTAL CHARACTERISTICS	8
1. Technical Characteristics	8
2. Economic Characteristics	10
3. Social Characteristics	11
D. DISCLOSURE OF THE USE OF PUBLIC FUNDS OR LANDS FOR THE PROPOSED ACTION	12
E. PHASING AND TIMING OF ACTION	12
F. HISTORICAL PERSPECTIVE	12
IV. DESCRIPTION OF ANY KNOWN ALTERNATIVES TO THE PROJECT	14
A. "NO ACTION" ALTERNATIVE (Preservation Alternative)	14
B. DEVELOPMENT OF AN INDUSTRIAL SUBDIVISION ALTERNATIVE ..	14
C. DEVELOPMENT OF A RESIDENTIAL SUBDIVISION ALTERNATIVE ..	15
D. DEVELOPMENT WITHOUT CONCRETE CHANNEL IMPROVEMENTS ..	15

	Page
V. DESCRIPTION OF THE ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION	16
A. PHYSICAL ENVIRONMENT	16
1. Geology and Soils	16
2. Topography	17
3. Climate	17
4. Water Resources	18
a. Groundwater	18
b. Drainage	19
c. Surface Water Runoff	22
5. Agricultural Resources	24
6. Air Quality	24
7. Noise	25
8. Biological Resources	27
a. Flora	27
b. Fauna	28
9. Cultural Resources	28
a. Historical Perspective	28
b. Socio-Economic Perspective	30
10. Population	31
11. Employment	31
12. Recreation	32
13. Environmental Clean-up Related to Sugar Mill Operations	32
B. MAN-MADE ENVIRONMENT	33
1. Housing	33
2. Commercial Areas	34
3. Industrial Areas	34
C. PUBLIC FACILITIES AND SERVICES	35
1. Education	35
2. Medical and Social Services	36
3. Transportation	36
a. Roadway System	36
4. Recreational and Community Facilities	39
5. Wastewater Management	39
6. Power Systems	40
7. Police and Fire Protection	41

	Page
VI. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS FOR THE AFFECTED AREA	42
A. FEDERAL	42
B. STATE	42
1. State Land Use	42
2. Hawaii State Plan	42
a. The Economy	42
3. Hawaii State Functional Plan	43
C. CITY & COUNTY	44
1. General Plan	44
a. Economic Activity	44
b. Physical Development and Urban Design	44
c. Culture and Recreation	45
2. Development Plan Common Provisions	46
a. Public Views	46
b. Vehicular/Pedestrian Routes	47
c. Social Impact Factors	47
3. Land Use and Public Facilities	48
4. County Zoning	49
D. LIST OF NECESSARY APPROVALS	50
VII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITIES' ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	51
A. SHORT-TERM	51
B. LONG-TERM	51
VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROJECT SHOULD IT BE IMPLEMENTED	52
IX. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED	53
A. UNAVOIDABLE EFFECTS	53
B. RATIONALE FOR PROCEEDING WITH THE ACTION	54
C. ACHIEVEMENT OF COUNTERVAILING BENEFITS THROUGH ALTERNATIVES WHICH AVOID ADVERSE EFFECTS	54

	Page
X. SUMMARY OF UNRESOLVED ISSUES	55
XI. DISCLOSURE OF CONSULTED PARTIES AND THOSE INVOLVED IN THE PREPARATION OF THE STATEMENT	56
BIBLIOGRAPHY	58
XII. COMMENTS AND RESPONSES DURING THE CONSULTATION PROCESS	59
XIII. COMMENTS AND RESPONSES DURING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT CIRCULATION	60

LIST OF TABLES

TABLE 1 COMMERCIAL DEVELOPMENT CONSTRUCTION COST PROJECTION	11
TABLE 2 PHASING AND TIMING	12
TABLE 3 LAND USE APPROVALS/GOVERNMENT AGENCIES	50
TABLE 4 CONSULTED PARTIES	56
TABLE 5 EIS PREPARATION	57
TABLE 6 DRAFT EIS COMMENT SUMMARY	60

LIST OF FIGURES

FIGURE 1 ISLAND MAP	8-1
FIGURE 2 AREA MAP	8-2
FIGURE 3 NEIGHBORHOOD MAP	8-3
FIGURE 4 TAX MAP	8-4
FIGURE 5 PRELIMINARY SITE PLAN	8-5
FIGURE 6 AERIAL PHOTO	8-6

	Page
FIGURE 7	SITE DEVELOPMENT PLAN 15-1
FIGURE 8	DEVELOPMENT PLAN ROADWAY SECTION AND FRONTAGE IMPROVEMENTS TYPICAL SECTION 37-1
FIGURE 9	DP ROADWAY IMPROVEMENTS 37-2
FIGURE 10	DP ROADWAY IMPROVEMENTS 38-1
FIGURE 11	STATE LAND USE MAP 42-1
FIGURE 12	DEVELOPMENT PLAN LAND USE MAP 48-1
FIGURE 13	DEVELOPMENT PLAN PUBLIC FACILITIES MAP 48-2
FIGURE 14	ZONING MAP 49-1

LIST OF APPENDICES

APPENDIX A	APPLICATION FOR DEVELOPMENT PLAN LAND USE MAP AMENDMENT AND ENVIRONMENTAL ASSESSMENT
APPENDIX B	MARKET ASSESSMENT OF THE PROPOSED SUGAR MILL SHOPPING CENTER
APPENDIX C	PRELIMINARY DRAINAGE REPORT, AIEA STREAM
APPENDIX D	FLORA AND FAUNA SURVEY FOR LOWER AIEA STREAM
APPENDIX E	TRAFFIC IMPACT ASSESSMENT REPORT FOR AIEA SUGAR MILL DEVELOPMENT PLAN AMENDMENT

AIEA SUGAR MILL COMMERCIAL DEVELOPMENT FINAL ENVIRONMENTAL IMPACT STATEMENT

I. INTRODUCTION AND SUMMARY

A. APPLICANT

Crazy Shirts, Inc. is the owner/applicant for the subject project. Its place of business and mailing address are:

Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, Hawaii 96701

B. BRIEF PROJECT SUMMARY

The existing Aiea Sugar Mill site contains 19.39 acres. Land uses on the site are the Aiea Sugar Mill and the Hawaiian Agricultural Research Center (HARC). The current commercial development proposal calls for ultimate demolition of the Aiea Sugar Mill facilities, allowing the creation of a main commercial area (13.5 acres), creation of an HARC site lot to retain the existing HARC Building (3.8 acres) and infrastructure improvements primarily in the form of a Master Plan Roadway and Aiea Stream Channel Improvements (2.1 acres). The proposed shopping center would contain 145,000 square feet of commercial real estate space and approximately 770 parking stalls. Of the 770 stalls, 480 are required and excess is being provided for employee parking and general excess parking.

C. SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

1. Beneficial Impacts

In its current configuration, the Aiea Sugar Mill site provides no benefit to the community as far as a potential source of employment. From an economic perspective, redevelopment of the property into a viable project will create economic benefits and income potential.

2. Adverse Impacts and Proposed Mitigation Measures

- a. The proposed commercial development will result in an historical and cultural loss for the Aiea community. The sugar mill has been in existence for almost 100 years and demolition of the sugar mill will eliminate one of the last remnants of how Aiea Town was originally formed. The owners are primarily trying to mitigate this loss by finding a prospective buyer who is interested in preserving the historic and cultural aspects. Other mitigation measures which are available include retaining some of the features of more significance on the site in the commercial development. In addition, salvage and relocation of suitable artifacts may be a viable option to preserve the mill's heritage. Regardless, photographic documentation has been completed and will be turned over for archive considerations.
- b. The proposed commercial development includes a concrete channel to create more usable area for commercial considerations on the property. The installation of a concrete channel has the ability to eliminate natural habitat and potentially cause downstream erosion due to velocity considerations. The habitat considerations will be mitigated by evaluating the habitat disruption to see if significant impacts will occur. The velocity/erosion impacts will be mitigated by converting the stream back to natural flow conditions before the stormwater runoff from Aiea Stream leaves the sugar mill property.
- c. The creation of a commercial development on the Aiea Sugar Mill property will create additional traffic entering and exiting the shopping center development. A Traffic Impact Analysis Report has been prepared and this report recommends that various traffic improvements be implemented to mitigate traffic concerns. These specific traffic improvements include installation of a Master Plan Roadway through the property. In addition, the intersection of Kulawea and the new Master Plan Roadway would become a 4-way intersection. In order to

create the proposed geometrics, Ulune Street would dead-end before entering this intersection. Another proposed roadway improvement would be the creation of a T-intersection at the intersection of Ulune/Aiea Heights Drive and the new Master Plan Roadway. The Traffic Impact Assessment Report indicates that traffic will be no worse than under existing conditions.

3. Alternatives Considered

Four alternatives are being considered for the subject project, and these include no-development, industrial subdivision development, residential subdivision development and development not including a preferred concrete channel stream improvement. No-development very clearly would keep the project in its unoccupied and unused state. Industrial subdivision development has the potential to create a commercial-like development with numerous discrete industrial lots. Industrial subdivision development does not require any land use planning changes if the current I-2 zoning is retained. Residential development has been identified as an alternative based on the characteristics of the neighborhood and development without the proposed Aiea Stream Channel Improvements and has been identified solely to recognize planning options.

4. Summary of Unresolved Issues

At the time that the Draft Environmental Impact Statement was circulated, there was only one unresolved issue which was identified. This issue was Item a. as described below related to historic and cultural losses. The Final Environmental Impact Statement section stating unresolved issues has been expanded to include recognition of the sensitivity of the proposed Aiea Stream channel improvements. In addition, the Department of Education's concern that commercial activities in proximity to educational facilities may not be compatible is also recognized. The Final

Environmental Impact Statement summary of unresolved issues is as follows:

- a. The historical/cultural loss of the Aiea Sugar Mill is considered an unresolved issue. There is no mitigation short of complete preservation or preservation in a park-like setting which is generally acceptable to the community. The preservation project disposition can only be achieved if economic and financial support becomes available to purchase or help purchase the property from the current landowner, Crazy Shirts, Inc. Crazy Shirts, Inc. is currently maintaining its corporate and factory commitments in Halawa Valley. There is no feasible reason to hold on to two pieces of property when only one is necessary. Based on economic conditions, the Halawa Valley site is the only practical site at this point in time.
- b. Aiea Stream channel alterations are proposed utilizing a concrete channel. It is the obligation of the project to technically demonstrate that the Aiea Stream channel modification will not cause adverse impacts with respect to the environment or health and safety. The proposed methodology to demonstrate "non-aggravation" are identified in this document, but since a substantial amount of approvals by technical agencies are required, the Aiea Stream channel improvements are identified as an unresolved issue.
- c. The City & County of Honolulu Planning Department has requested that the compatibility of commercial development in proximity to educational facilities (schools) be identified as an unresolved issue. For that reason, it is being identified. Through the planning process (Development Plan Amendment and subsequent Change of Zone Application), the issue of vested land rights and development opportunities must be recognized and or resolved.

5. Compatibility with Land Use Plans and Policies

The proposed commercial development is compatible with its State Use designation and therefore its policies. The current county designation (industrial) is not considered compatible with the surrounding neighborhood's residential character. However, the industrial use (a sugar mill) has been in existence much longer than the surrounding residential neighborhood. The proposed change to commercial land use is more compatible with existing neighboring land uses. However, from a planning perspective, the most desirable land use may be Residential or Open zoning (park). This planning option requires financial participation by additional parties (i.e., City, State or private entities) other than the current owner and none as yet have been identified.

6. Necessary Approvals and Permits Required

- a. City:**
 - Development Plan Amendment
 - Change of Zone
 - Subdivision Approval (roadway and HARC lots)
 - Construction Plan Approval
 - Public Works
 - Wastewater Management
 - Transportation Services
 - Board of Water Supply
 - Parks & Recreation
 - Building Department
- b. State:**
 - Stream Alteration Permit
 - 401 Water Quality Certificate
 - Coastal Zone Consistency Statement
 - NPDES Permit
- c. Federal:**
 - Department of the Army Permit
 - FEMA - Letter of Map Review (LOMR)

II. STATEMENT OF PURPOSE AND NEED FOR ACTION

Crazy Shirts, Inc. owns the Aiea Sugar Mill property which consists of 19.39 acres. The land is currently zoned I-2 (Intensive Industrial District). The I-2 (Industrial) designation was consistent with sugar mill operations which have been phased out. The owner wishes to change the use of the property from I-2 (Industrial) uses to that defined by commercial uses, as contained in the City & County of Honolulu Land Use Ordinance. To accomplish the proposed land use change, a development plan amendment must be processed with the City & County of Honolulu Planning Department. Subsequently, a change of zone application must be processed with the City & County of Honolulu Department of Land Utilization. The Development Plan Amendment and Zone Change Application are distinct but related processes requiring separate reviews, public hearings and City Council approval.

The purpose of the current action is to change the existing Development Plan Land Use Map for the primary urban center from an Industrial designation to a Commercial designation. A change of zone application will subsequently be processed with the City & County Department of Land Utilization to seek commercial zoning in lieu of the existing I-2 (Industrial) zoning.

The need for the action is as stated below:

1. The site has previously supported sugar cane refinery operations. Refining operations on the site ceased in 1996 when C&H Sugar stopped operating its liquid sugar refining. The income value of the property is nonexistent in its current configuration.
2. The owner has evaluated various land use plans for the Aiea Sugar Mill property. One of the options explored in detail was development of the sugar mill into the current owner's (Crazy Shirts, Inc.) corporate headquarters and factory by renovation of the mill structures. However, this option is not economically feasible. The preliminary cost estimate for redevelopment using upgraded existing structures is \$20± million. The most viable option based on need is the development of a commercial type property. The commercial

proposal discussed in this Environmental Impact Statement will create approximately 13.8 acres of commercial shopping center, with the remainder of the land utilized to install a development plan roadway through the site and to create a separate remainder lot (3.8 acres) for the existing HARC Building. The entire site (19.39 acres) is proposed for redesignation from Industrial to Commercial.

Hawaii Administrative Rules (HAR) Chapter 200 of Title 11, subchapter 6(b)(2)(a) specifically states that a Chapter 343 review is required for any Development Plan Amendment requiring the requested Industrial to Commercial redesignation.

III. PROJECT DESCRIPTION

A. LOCATION

An island map, area map and neighborhood map are shown on Figures 1, 2 and 3, respectively.¹ The tax map keys for the project are 9-9-05:10 (portion of) and 9-9-05:25. The tax map for the project is shown on Figure 4.

B. STATEMENT OF OBJECTIVES

The objective of Crazy Shirts, Inc. is to maintain economic viability on the Aiea Sugar Mill site. The current lessee, C&H Sugar, stopped all mill operations in 1996. New tenants must be found to continue to generate revenue from the property. The current plan based on marketing considerations is to redevelop the property in a commercial configuration. Should land use changes be successful, Crazy Shirts, Inc. will sell the property to a development entity which will provide the actual implementation.²

C. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL AND ENVIRONMENTAL CHARACTERISTICS

1. Technical Characteristics

The proposed project development is shown on Figure 5 (Preliminary Site Plan). An aerial photo is shown on Figure 6 to help relate the commercial proposal to the existing site. Development Plan redesignation will create the following land uses:

Main commercial area (Areas A & C)	461,210 sq. ft.	(10.6 acres)
Optional parking/commercial area (Area B)	127,790 sq. ft.	(2.9 acres)
Total Commercial Area	589,000 sq. ft.	(13.5 acres)
Creation of HARC site lot to retain existing HARC Building (Area D)	164,720 sq. ft.	(3.8 acres)
Creation of Development Plan roadway and channel improvements	91,500 sq. ft.	(2.1 acres)
Total Acreage		(19.4 acres)

AREA MAP

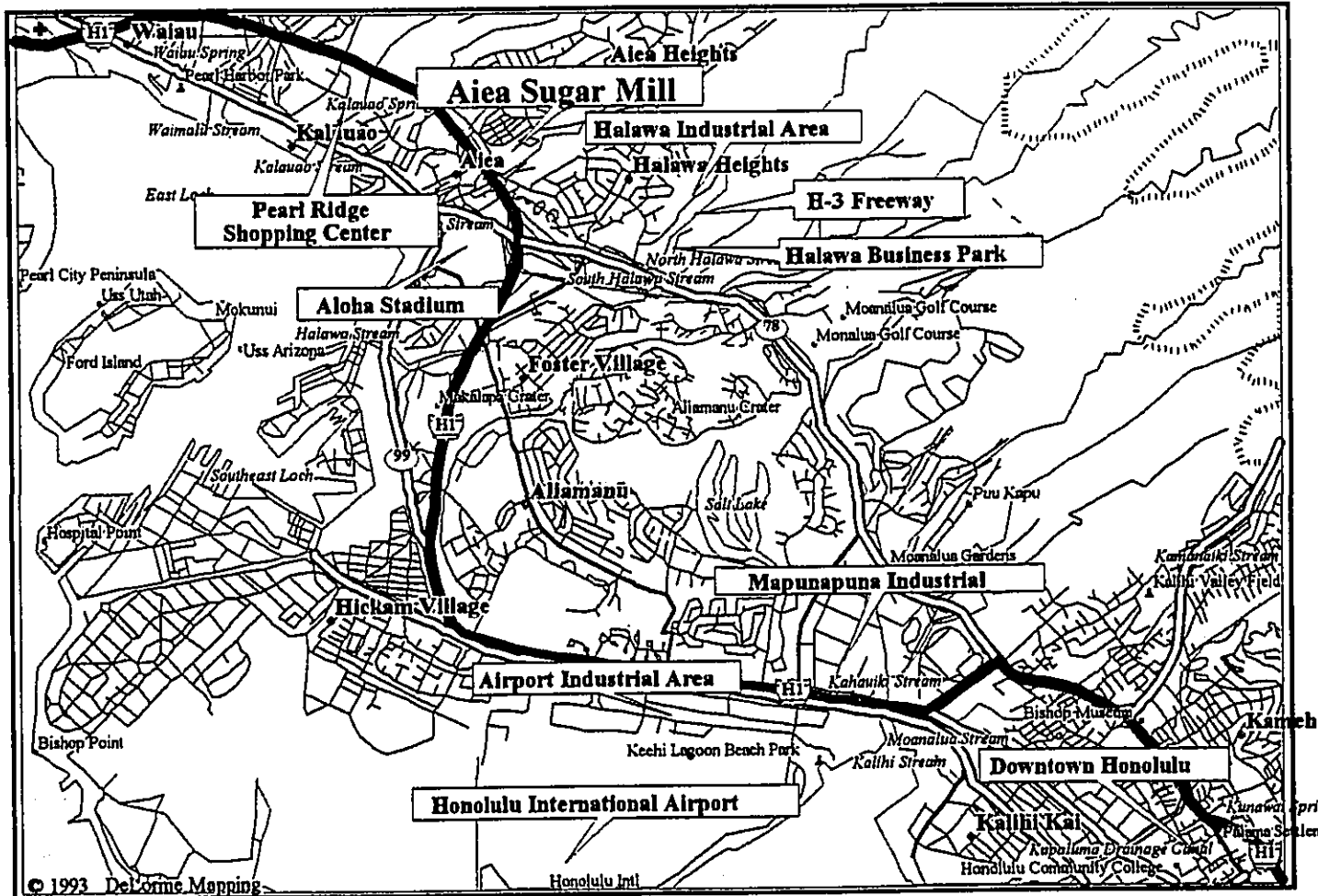


FIGURE 2

This summary has been presented solely to assist you in evaluating the property. The information contained herein has been obtained from sources believed to be reliable, however, there is no guaranty offered or implied as to its accuracy.

NEIGHBORHOOD MAP

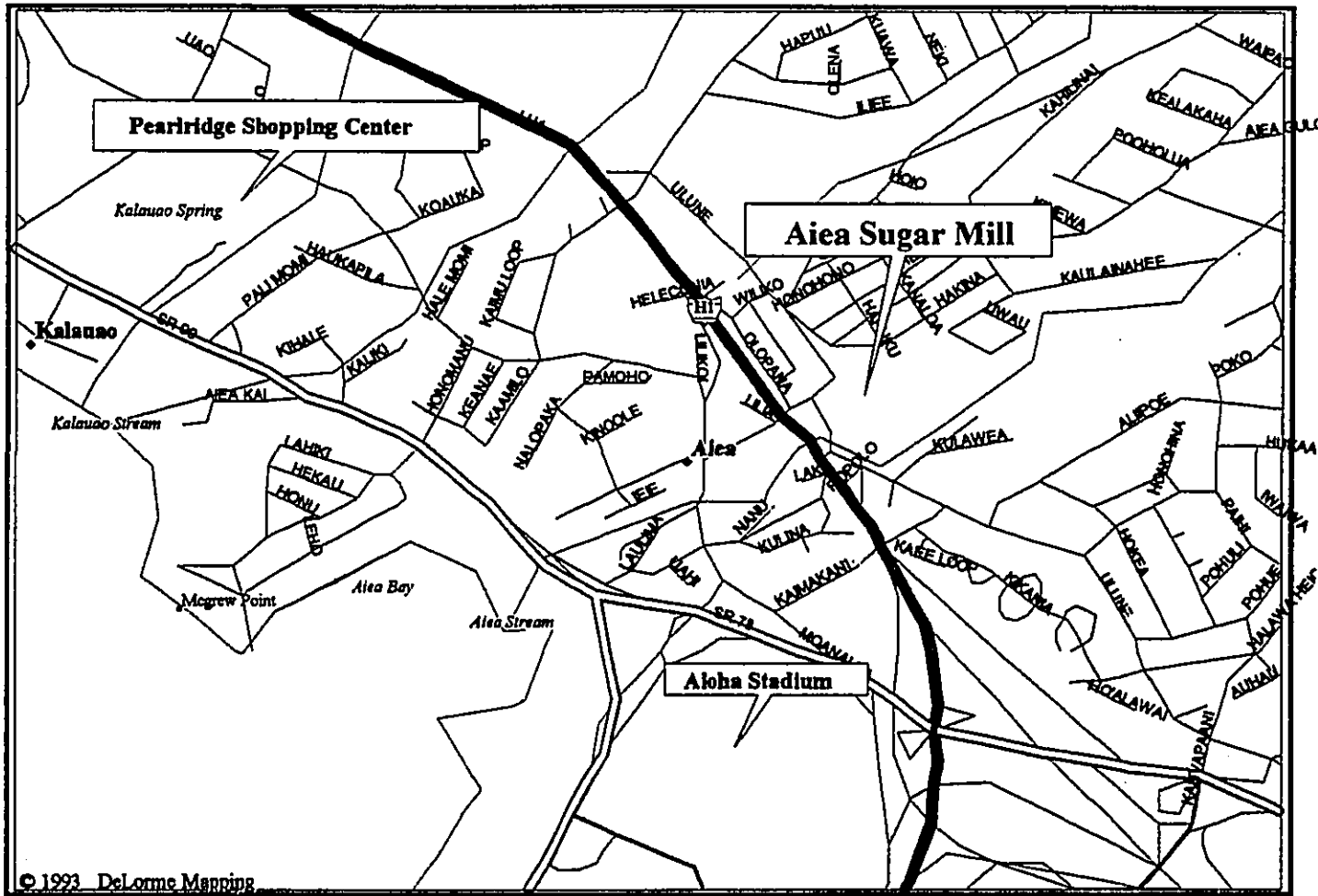
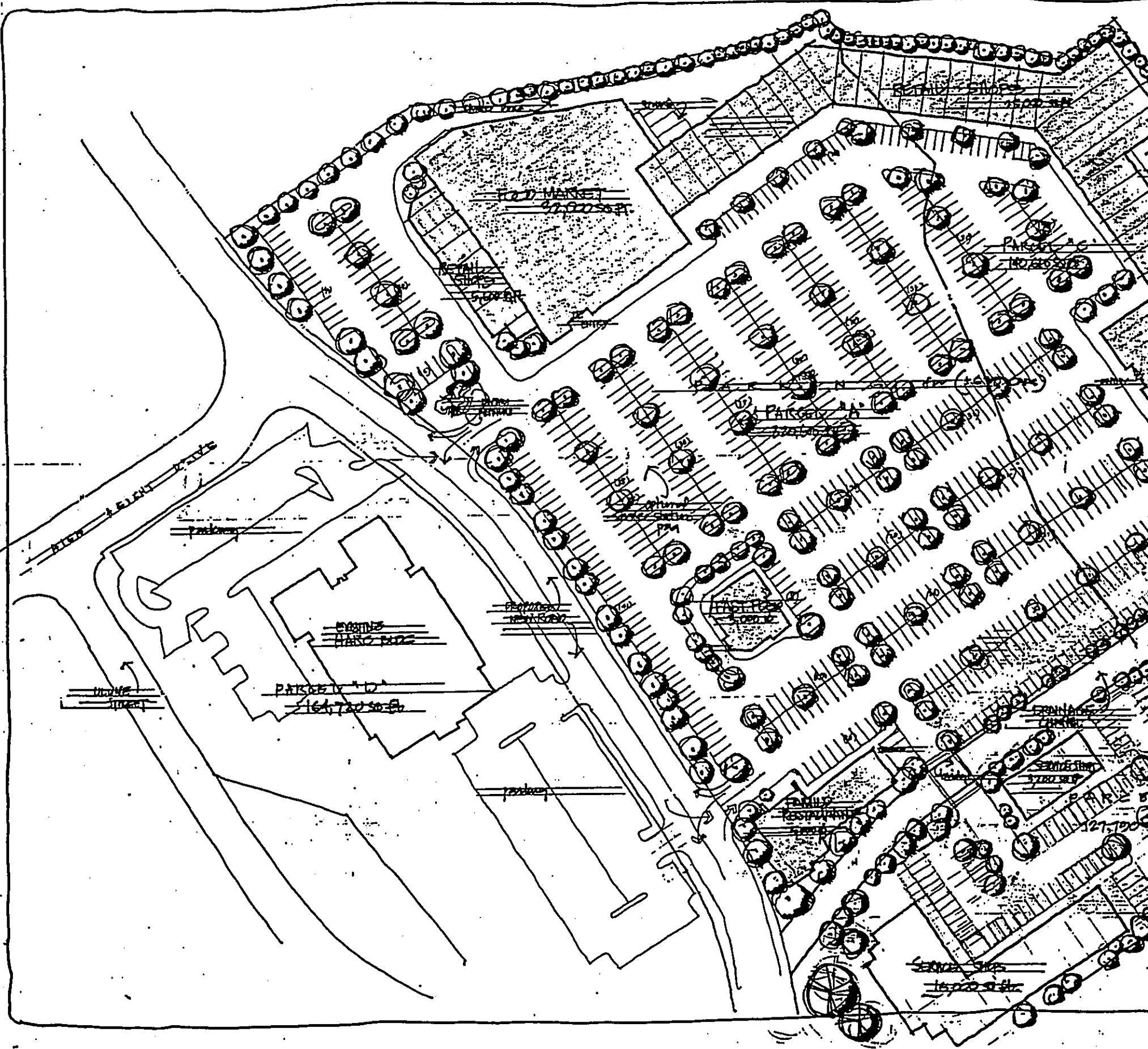


FIGURE 3

This summary has been presented solely to assist you in evaluating the property. The information contained herein has been obtained from sources believed to be reliable, however, there is no guaranty offered or implied as to its accuracy.



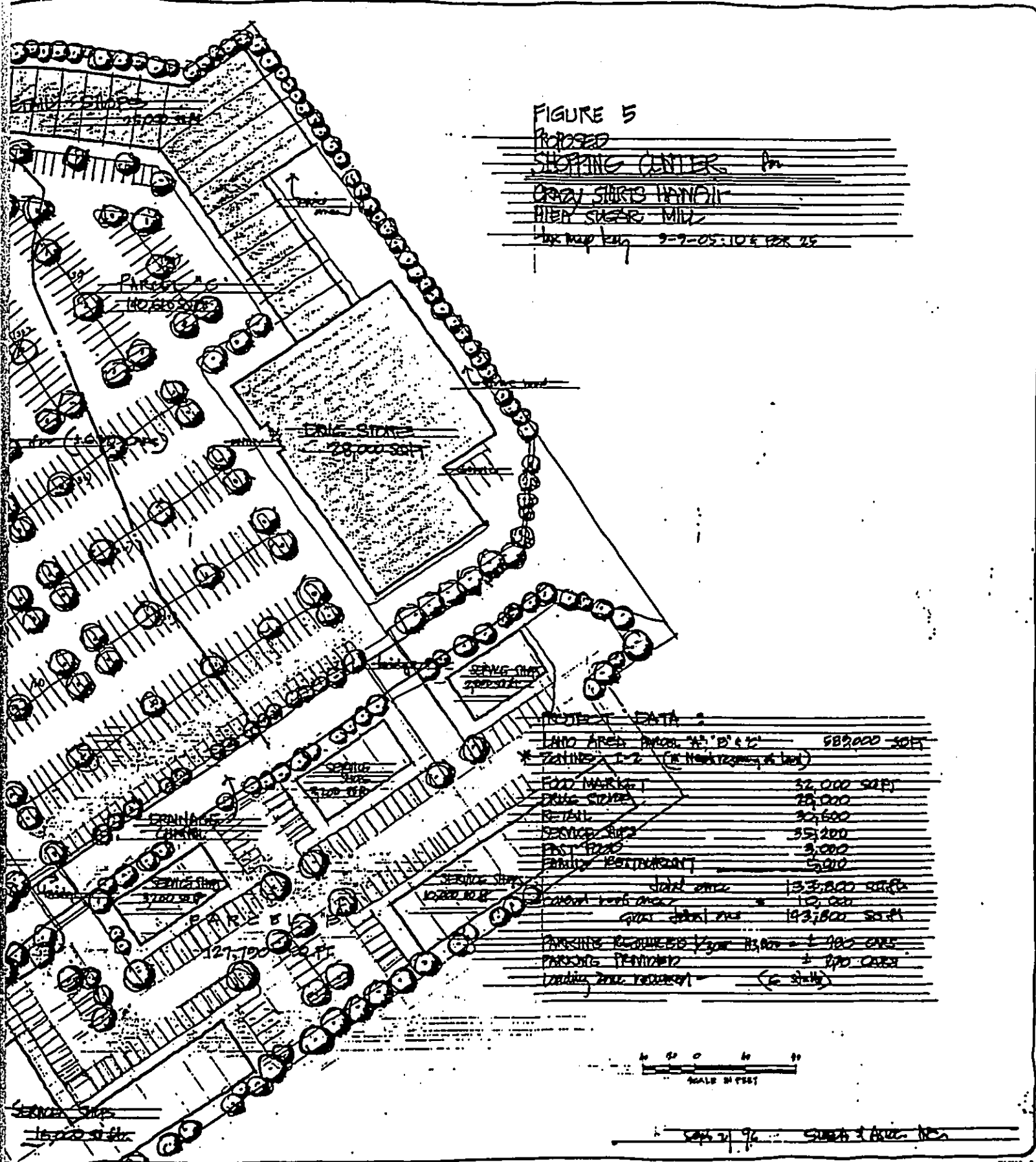
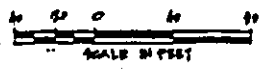


FIGURE 5
 PROPOSED
 SHOPPING CENTER In
 CRAZY SHIRTS HAWAII
 HILIP SUGAR MILLS
 9-9-05 10:45 AM

NOTES & DATA:

LAND AREA APPROX. "A" PLOT	58,000 SQFT
* ZONING T-2 (FOR NEIGHBORHOOD USE ONLY)	
FOOD MARKET	52,000 SQFT
DRUG STORE	28,000
RETAIL	27,500
SEWING SHOP	35,200
POST OFFICE	3,000
FAMILY RESTAURANT	5,000
SEWING SHOP	133,800 SQFT
SEWING SHOP	10,000
SEWING SHOP	193,800 SQFT
PARKING REQUIREMENTS FOR 13,000 VEHICLES	± 1,900 CARS
PARKING PROVIDED	± 1,700 CARS
ADDITIONAL PARKING	(± 200)



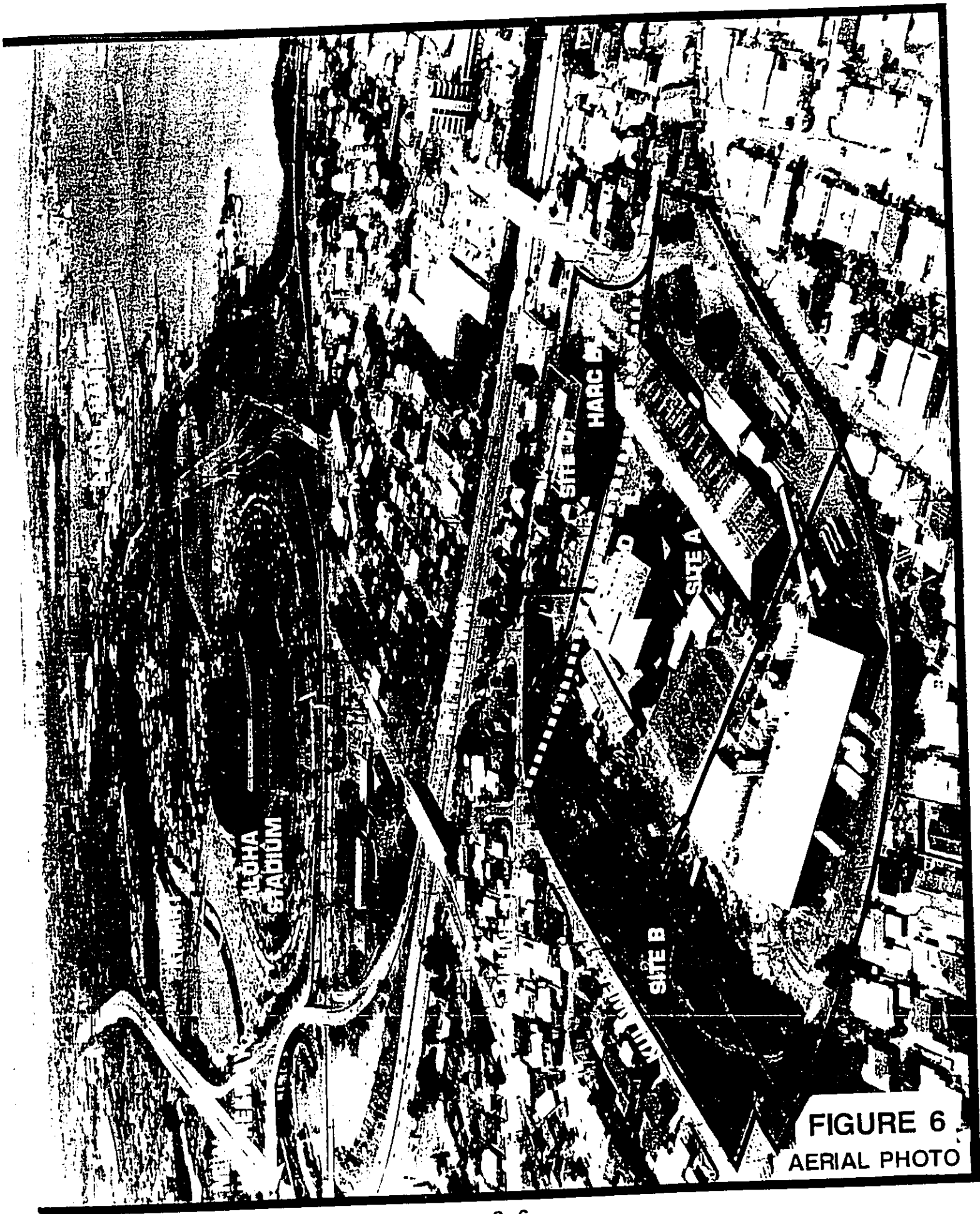


FIGURE 6
AERIAL PHOTO

Work which will be required for project development to achieve the proposed Preliminary Site Plan will include the following items:

- a. Demolition of all existing structures with the exception of the HARC Building.
- b. Creation of a Master Plan Roadway connecting Aiea Heights Drive with Ulune Street. (This will include intersection improvements at the junction of Kulawea Street and Ulune Street to provide a more regular 4-way intersection.) The Master Plan Roadway is a 60-foot right-of-way roadway with curb, gutter and sidewalk. The roadway will provide for two through-lanes in each direction with left-hand turning pockets for shopping center entrances. The general alignment is partially shown on the site plan (Figure 5) and again in the Transportation segment of this document (Figure 10).

The roadway includes a bridge across the Aiea Stream channel. This roadway bridge will be a simple span-reinforced concrete bridge deck 30 feet wide to span the channel.

- c. The Hawaii Agricultural Research Center (HARC) is a tenant on the Aiea Sugar Mill property. Should this tenant ever abandon its facilities, the existing structure is in excellent condition and could be converted to commercial use. Therefore, adjustment of a parking lot used by the HARC Building to maintain its existing parking stall count and meet future stall count requirements if the HARC Building receives Commercial zoning.
- d. Installation of drainage channel improvements along Aiea Stream to channelize the flow through the property and create an additional usable area for the new commercial project. The channel is proposed to be concrete, 20 feet wide, 8 feet deep and 800 feet in length.
- e. Frontage improvements along Aiea Heights Drive and Hakina Street to upgrade these rights-of-way to meet City & County standards.

- f. Building and parking lot improvements to create the proposed site plan, as shown on the Preliminary Site Plan. The types of uses which could be reasonably anticipated to occupy the center could include convenience stores, dance and music schools, day-care facilities, drive-through facilities, eating establishments, business schools, language schools, vocational schools and theaters. The foregoing uses are B-1 Neighborhood Business District designation are defined in the City & County Land Use Ordinance (LUO).

The B-1 Neighborhood Business District designation has a maximum height limitation of 40 feet and a floor area ratio (FAR) of 1.0.

The Development Plan application is making a commitment to square footage and parking. A conceptual profile has been requested for inclusion in the Final Environmental Impact Statement. However, that flexibility appears to be premature since Crazy Shirts, Inc. has specifically identified that they will not be the developer.

2. Economic Characteristics

Development of the project as shown on the Preliminary Site Plan will involve capital construction costs, as well as revenue generating income considerations. Table 1 on the following page provides a summary of the capital improvement costs.

The project is expected to be highly viable, due to continuing demand for retail areas from Oahu residents. A market study by SMS Research found evidence that households from near the project site and many more distant areas already shop near the project site. (See Appendix B.) With the opening of the H-3 highway, even more commuters from Windward Oahu will find Aiea convenient.

Based on demand for shopping in the area and the size of competing shopping centers, SMS Research found strong demand for the Aiea Sugar Mill Shopping Center, such that (a) the project could be rented out in full within a year of opening and (b) customers would spend about \$48 million (1996 dollars) at the project annually after it is built out. The project's retail area would then amount to less than 10% of the neighborhood commercial areas supported in and around Aiea by its customer base.

**TABLE 1
COMMERCIAL DEVELOPMENT
CONSTRUCTION COST PROJECTION**

Item	Projected Construction Cost
Mill Demolition (including hazardous material - see Section V.A.13)	\$85,000
Master Plan Roadway	\$850,000
Aiea Stream Channel	\$1,750,000
Frontage Improvements (Ulune St./Kulawea St.)	\$400,000
Parking and Lighting	\$2,500,000
Building (145,000 Sq. Ft.)	\$1,500,000
Sewer	\$100,000
Water	\$100,000

3. Social Characteristics

The Aiea Sugar Mill Site Redevelopment will transform the project site from an industrial/plantation use to that of a truly commercial shopping center area. The Sugar Mill Complex is further characterized as large industrial buildings with a relatively small work force. The area is observed by residents rather than actively used. Under the proposed commercial site plan, the project site will become a feature of the community and will be actively used by the neighboring residents.

D. DISCLOSURE OF THE USE OF PUBLIC FUNDS OR LANDS FOR THE PROPOSED ACTION

No direct use of public funds or lands is proposed for the action. The project development will be solely by private expenditures.

E. PHASING AND TIMING OF ACTION

The following table projects the phasing and timing of action items for the subject project:

**TABLE 2
PHASING AND TIMING**

Item	Year Completed
Development Plan Amendment	1998
Change in Zone	1999
Construction of Improvements	1999
Opening of Commercial Complex	2000

The Development Plan Amendment and Change of Zone Application must be fully processed, including City Council approval, before construction and implementation can proceed. The Development Plan Amendment and Change of Zone approvals are related, but represent two distinct applications and approvals.

F. HISTORICAL PERSPECTIVE ^{4,5}

The Aiea Sugar Mill was originally organized in 1898 as the Halawa Plantation Company. This company existed on 4,000 acres of sugar land extending from the coastal plain around Pearl Harbor up the hillsides to an elevation approximately 650 feet. In the following year, the name of the company was changed to "Honolulu Plantation Company." Operations expanded, including prosperous activity, for the plantation and the mill over the following years. The mill and plantation's prosperity also led to the growth of Aiea Town. About the end of World War I, the Honolulu Plantation Company installed equipment to produce its own refined sugar.

The beginning of the end of the Honolulu Plantation Company took place in 1935 when the government took 625 acres of prime cane land to build what is now known as "Hickam Field." During World War II, Honolulu Plantation Company lost more of its best lands to military operations, roads and commercial and housing developments. In 1947, plantation operations were discontinued.

In 1947, C&H took over the refining portion of the operation. These operations continued for 47 years until the refinery operation was discontinued in 1994. In 1994, C&H built a smaller liquid sugar refinery behind the old mill to meet the state's local demand. This facility ceased operations in 1996. The only operations still occurring on the site are clean-up operations to properly take all C&H equipment out of service in accordance with various State codes which apply to food processing and fuel boiler operations.

The Aiea Sugar Mill was placed on the National Register of Historic Places in January 1996. Prior to demolition or major renovation, the State has a 90-day period in which it has the right to investigate whether it desires to purchase the property or to use it for public or preservation purposes. Whereas the State has a right to examine such alternative uses, unless the State purchases the property, it would have no power to implement these uses.

Since the public announcement of the potential demolition of the Aiea Sugar Mill, there have been a series of community meetings on the issue. The overwhelming majority of community attendees have expressed a strong desire in preserving the mill for its historic and cultural value.

The current owners (Crazy Shirts, Inc.) are keenly aware of the community concerns and to that end support transfer of the property to an historic-oriented entity. The owners also are more than receptive to incorporation of notable artifacts into future development. However, the owners desire the commitment of the private and public sector to ensure a win-win situation.

IV. DESCRIPTION OF ANY KNOWN ALTERNATIVES TO THE PROJECT

A. "NO ACTION" ALTERNATIVE (Preservation Alternative)

A "no action" alternative would simply produce a site which would remain as it currently exists. There are no intentions of any more refining operations at the Aiea Sugar Mill after C&H stopped its liquid sugar refinery processing in 1996. This alternative provides no economic return to the owner since the existing facilities have no economic viability with the curtailment of sugar production and the curtailment of refining operations. The owner has rejected the "no action" alternative due to the fact no economic value exists under this alternative.

The "no action" alternative does preserve the option of development as an historical site. However, if no entity is willing to purchase the property for such use, there will be no power to implement this historical use.

B. DEVELOPMENT OF AN INDUSTRIAL SUBDIVISION ALTERNATIVE

The current zoning on the property is I-2 (Intensive Industrial District). Layouts have been created showing development in conformance with the development standards for this district. This alternative would allow development of the property without requiring a development plan amendment and/or change of zone. This alternative would eliminate two land use approvals required for commercial project development. The types of uses which could be developed under this category are defined in the City & County of Honolulu Land Use Ordinance and include a myriad of uses, including automobile service stations, broadcasting stations, car washing facilities, catering establishments, storage facilities, bars, nightclubs, taverns, food manufacturing and processing, eating establishments, home improvement centers, manufacturing, processing and packaging, as well as steel storage facilities.⁶ This is just a partial identification of permitted uses under the I-2 (Intensive Industrial District) zoning which may be viable for the project site.

Figure 7 shows a preliminary conceptual plan for an I-2 (Intensive Industrial District). Should the desired alternative (Commercial Development) be rejected, the I-2 Subdivision Alternative could be pursued.

The marketing study for the site (see Appendix B) indicates that commercial development is economically viable and, for that reason, the I-2 (Intensive Industrial District) development has been rejected by the Applicant at this time.

C. DEVELOPMENT OF A RESIDENTIAL SUBDIVISION ALTERNATIVE

The area surrounding Aiea Sugar Mill is primarily residential. Therefore, a residential alternative is being identified. The available buildable area is 13.5 acres (areas A & C - Figure 5). Assuming R-5 (5000 sq. ft.) lots and marking allowances for roadways, a R-5 residential development will provide 6 lots per acre. Therefore, approximately 75 R-5 zoning lots could be created.

The current owner has rejected this alternative since preliminary analysis indicates there is no economic viability to this alternative. In addition to the normal site development costs there is a Development Plan Facilities Plan for roadway improvements and potential drainage channel improvements. The roadway and channel costs are estimated at \$2.6 million. Spreading these costs across 75 lots will add \$12,000 (roadway only) or \$35,000 (roadway and drainage) to the normal site development costs.

D. DEVELOPMENT WITHOUT CONCRETE CHANNEL IMPROVEMENTS

Concrete channel improvements are a part of the preferred alternative. Should the concrete channel not be a part of the project, Parcel "B" (with frontage along Kulawea Street) would need to be eliminated from the project. This is due to the fact that commercial access will not be granted from Kulawea Street and access to Parcel "B."

Under the Residential Alternative, Parcel "B" could be developed by providing access to residential lots from Kulawea Street. However, the usable lot area would be decreased due to flood plain limitations created by maintaining the existing natural drainage way.

V. **DESCRIPTION OF THE ENVIRONMENTAL SETTING,
IMPACTS AND MITIGATION**

This section of the Environmental Impact Statement provides an individual description of the specific environmental settings, followed by identification of impacts, and subsequently followed by mitigation measures.

A. **PHYSICAL ENVIRONMENT**

1. **Geology and Soils**

The Aiea Sugar Mill site primarily contains two soil types. These are Waipahu silty clays (0 to 2% slope) and Hanalei silty clays (0 to 6% slope). The soils series identifications are contained in the U.S. Soils Conservation Service classification. Waipahu silty clays are well-drained soils which have been developed by old alluvium derived from basic igneous rock. The typical soil profile for the Waipahu silty clay is 12 inches of grayish-brown silt followed by about 60 inches of dark brown silty clay that has prismatic structure. This soil series is slightly acid and permeability is moderately slow. This soil series is primarily used for sugar cane irrigation or for building foundation material.

The Hanalei silty clay series has also been developed from basic igneous rock and is characterized as somewhat poorly drained soils, primarily appearing on stream bottoms and flood plains. Permeability from Hanalei silty clays is moderate and runoff is slow. Minimum erosion hazard is also identified. The Hanalei silty clay series is primarily used for irrigation for agricultural purposes.⁷

Impacts - The existing soils will be retained on the property; however, should the project be implemented, there will be grading on the property which will rearrange the location of the soils. Parcel B of the project is the primary location of the Aiea Stream Channel which is proposed for channel lining. Cut-and-fill operations will occur on Parcel B to create level and buildable area above the floodplain/floodway. Based on the

nature of the work, there are no direct impacts on geology and soils in the area. Associated impacts with respect to drainage and surface water gravity will be discussed in the appropriate sections of this document.

Mitigation - No mitigation measures proposed.

2. Topography

The Aiea Sugar Mill site is relatively level with topographic contours ranging between Elevations 100 and 120. The average cross slope of the main mill area is less than 2%. Aiea Stream flows through the project and the stream channel banks are approximately 7 to 15 feet high in vertical elevation above the channel invert. The topography of the site will remain essentially unchanged on the mill portion of the property. Stream channelization is proposed for Aiea Stream and the Parcel B portion of the property will be graded to provide a level surface equal to the top of the proposed channel.

Impacts - Grading operations for the site will be minimal except within the area of Aiea Stream. Installation of the channel will allow leveling of the Parcel B portion of the project. Earthwork operations will not cause a significant impact with respect to topography. Related issues with respect to water quality, erosion and sedimentation will be discussed in the appropriate section of this report.

Mitigation - No mitigation measures are proposed with respect to topography.

3. Climate

Weather on the Ewa Plain is generally constant and relatively dry. The average temperature range varies between 21 and 28 degrees Celsius. The average rainfall is approximately 20 inches to 35 inches per year, with most rainfall occurring between December and April. The prevailing northeasterly tradewinds blow at an average of approximately 9 knots and

are generally constant throughout the year.⁸

Impacts - There are no impacts to climate.

Mitigation - No mitigation measures are proposed.

4. Water Resources

a. Groundwater

Groundwater in the Waimalu Water Management Area is divided into two aquifers. The higher aquifer is referred to as a "cap rock coral aquifer" and receives its recharge from surface water drainage. This aquifer is not a potable drinking water source. The cap rock aquifer exists underneath the Aiea Sugar Mill property, however, this aquifer has no viability as a non-potable source in the project area.

The higher quality aquifer is a basaltic Koolau volcanic series. The Aiea Sugar Mill property currently maintains two wells (Water Commission ID Nos. 2255-35 and 2255-36) which provide water for non-potable uses on the property. These two basal water wells helped to meet C&H refinery production needs, as well as provide on-site fire protection. Typical pumpage under complete mill production was 1.5 MGD prior to 1994. Current usage is negligible. The on-site fire protection capability does not meet commercial and/or subdivision standards for future use.

Should the Aiea Sugar Mill property be redeveloped in a commercial configuration, there will be no need for water withdrawal from the two basal water wells on the property. The owner of the wells, Alexander & Baldwin (A&B), is considering transferring the water rights to another well location on the Ewa Plain. The transfer completion requires the fact that there is a need and that the use transfer receives Commission approval. The current permits for the two wells on the Aiea Sugar Mill property contain a requirement that if the wells remain dormant for a period of four years, they must be capped

and their allocations removed. If the current owner (A&B) determines that there is no feasibility with respect to allocation transfer or sales, the wells will be, in all probability, capped sooner than four years from the curtailment of refinery operations on the property. The Commission on Resource Management through the Draft comment period has further indicated that transfer of water rights will require a permit modification. They have also indicated that redesignation of land use may be grounds for permit revocation.

Impacts - With respect to groundwater resources, development of the Aiea Sugar Mill property will eliminate any potential requirement of withdrawal from the two existing wells on the property. This is considered a net overall benefit for water withdrawal from the basal aquifer within the Waimalu Aquifer.

The impact on possible water (BWS) demands will be reduced through commercial use as compared to sugar refining. With respect to potable water (BWS), the existing mill used approximately 30,000 gallons⁹ per day for domestic and food production needs. Based on BWS standards, the proposed shopping center will require approximately 20,000 gallons per day. A final (BWS) commitment is subject to several but standard conditions. These include construction plan approval verifying system adequacy and fire protection requirements and payment of water system facilities fees.

Mitigation - Since the proposed impacts of the action is beneficial to groundwater resources, no mitigation measures are proposed.

b. Drainage

Aiea Stream passes through the Aiea Sugar Mill property. The Aiea Stream drainage basin is 1.05 square miles and can generate a 100-year peak discharge of 2140 cfs based on the documentation contained in the Flood Insurance Study for the City & County of

Honolulu, as administered by the Federal Emergency Management Agency (FEMA).

The Aiea Stream channel is further defined as an "AE" zone where elevations of flooding have been determined based on hydrologic and topographic (aerial) studies. The remainder of the property which constitutes the mill site proper is identified as being in zone "X," an area not subject to a 500-year flood.

The City & County of Honolulu drainage standards predict a slightly higher peak discharge of 2500 cfs for the Aiea Stream channel passing through the property. For the purpose of evaluating drainage channels under improved conditions, the higher of the two preceding values is utilized. The existing drainage channel is a natural channel that contains man-made improvements through use over the last decade in conjunction with the sugar mill operations. Currently, concrete piers and piles exist in portions of the stream and there are stream crossings related to water transmission pipes from the existing water wells on the property.

It is proposed to line a portion of Aiea Stream from its northern boundary (adjacent to Aiea Intermediate School) through the downstream side of the proposed Development Plan Roadway Realignment. The runoff will subsequently be returned to the natural channel before leaving the Aiea Sugar Mill property. The channel will use energy dissipation devices to reduce the channel velocity to that matching existing stream conditions at the downstream terminus. Total length of proposed channel improvements is approximately 800 linear feet. A preliminary drainage study is contained in Appendix C.

Impacts - The proposed action will transform the natural drainage channel to a man-made concrete drainage channel through the first 800 feet of the project. There will be no negative impact on the ability

of the channel to convey stormwater, since the channel will be sized for peak flow conditions. Aesthetically, however, the first 800 feet of the property will undergo a transformation from natural stream channel to concrete channel. These channel improvements are necessary to support commercial development on Parcel B of the property.

To analyze the significance of the aesthetic impact, the Hawaii Stream Assessment prepared by the Commission on Water Resources Management in 1990 was reviewed.¹⁰ This document made an extensive, yet preliminary, review of all of Hawaii's streams for the purpose of identifying those which may be candidates for protection of aquatic, cultural and recreational resources. Aiea Stream was reviewed in conjunction with the Assessment and the stream was not considered a candidate for protection as a result of the review. Therefore, the aesthetic changes in the drainage channel from natural to man-made is considered an impact; however, for the purposes of the Environmental Impact Statement review, the impact is being projected as not significant based on the Hawaii Stream Assessment. In addition, a stream survey was authorized for this Environmental Impact Statement. The study reports no significant aquatic species reside in Aiea Stream. The full study is appended (see Appendix D).

Mitigation - The mitigation measures being proposed in conjunction with the concrete channel improvements are primarily aimed at ensuring proper hydraulic criteria is maintained throughout the channel. The concrete channel will increase the velocity of stormwater discharge through the property. It is, therefore, critical that proper energy dissipation structures be located at the downstream end to restore the natural stream velocity before discharge back into the natural stream channel. There will be a

transition area below the end of the Development Plan Roadway, which will consist of a riprap type lining to provide additional bank protection prior to restoration of natural stream velocity.

In addition to the proposed physical mitigation plan, regulatory confirmation for implementation must be received from the City & County of Honolulu (Drainage Report & Construction Plan approval), the State of Hawaii Commission on Water Resources (Stream Alteration Permit) and the U.S. Army Corps of Engineers (Department of the Army Permit).

One form of mitigation suggested by the community and numerous reviewers is the use of a 100-foot wide vegetated corridor (grass-lined channel). The criteria for vegetated corridors is a maximum velocity of 5 feet per second (fps). The existing velocity of a peak storm discharge in the Aiea Stream channel is approximately 15 fps, thus making this alternative infeasible.

c. Surface Water Runoff

All surface water runoff on the property generally flows to Aiea Stream, with the exception of Parcel B (2.9 acres). The property has extensive development in the form of AC pavement and roof area. Based on City & County of Honolulu Drainage Standards estimates of runoff generation for a 10-year and 50-year storm are 5.4 cfs/acre and 6.6 cfs/acre, respectively. The total volumes of runoff generated from the site for a 10-year and 50-year storm are 105 cfs and 130 cfs, respectively.

With the proposed shopping center configuration, the amount of pavement will increase and the factor for imperviousness of the ground has been assumed to change from 0.8 to 0.9. This generates runoff rates of 6.0 cfs/acre and 7.4 cfs for the 10-year and 50-year storms, respectively. The total runoff volume from the site for the 10-

year and 50-year storms will be 116 cfs and 143 cfs, respectively. The net increase in runoff will be 11 cfs and 13 cfs for the 10-year and 50-year storms, respectively.

Impacts - The net amount of additional runoff entering Aiea Stream is not significant. However, the general concern for sedimentation runoff during construction and surface runoff carrying residual oils and car emission related pollutants after construction is valid.

Mitigation - With respect to construction-related activities, the shopping center project must create an Erosion Control Plan for the City and obtain an NPDES Permit from the State. The primary purpose of both permits is to detail the special features that will be used to minimize erosion during construction and protect receiving waters after construction. These features are specifically defined as "best management practices" (BMP's). The features that are available for prevention of construction erosion are silt curtains, silt berms and sedimentation basins utilizing rock filters. These are all standard features. Permanent features available to trap oil residuals and car-related emission residuals are oil separator manholes and directing runoff through landscaped areas to trap emission particles.

Other features that can be used for permanent BMP's include on-site retention facilities (ponding and percolation areas) and drywells. However, drywells in clay soils such as that which exist at the site are subject to rapid failure due to poor percolation capacity.

One area of the project requiring special consideration is the stream channel installation. To minimize erosion effects, construction sequencing calls for initiation of work at the lower end and moving upstream. A critical feature of construction will be the creation of small coffer dams downstream and within the property boundaries to capture sediment and residuals of construction.

5. Agricultural Resources

The Aiea Sugar Mill property has acted as an agricultural resource solely in its support of sugar cane cultivation which took place on the Ewa Plain during the last 100 years. However, sugar cane cultivation/operations have ceased. To that end, the Aiea Sugar Mill property's actual value as an agricultural resource has ended. This is evident by the fact that any and all sugar cane refinery operations have ceased since December 1996.

Impacts - Transformation of the site from a dormant sugar cane mill to commercial shopping center will have no impact on its agricultural resource value. It could be argued that the Aiea Sugar Mill site could be transformed into agricultural use. However, this would diminish its underlying industrial zoning value and therefore would not be considered a prime use for the property. Agricultural use on the property would essentially result in a devaluation.

Mitigation - No mitigation is proposed with respect to agricultural resource value.

6. Air Quality

The Aiea Sugar Mill produced its own power on-site in the form of two boilers. These boilers were associated with the old refinery, as well as the more recently built (1994) liquid sugar refinery. Each boiler had a permit from the State of Hawaii Clean Air Branch governing emissions. Emissions which were monitored were NO_x, SO₂, CO, TSP, TOC, methane and MNTOC. The maximum potential emissions were based on the fact that the boilers would operate continuously over the year. The larger boiler could utilize 785,000 gallons of fuel oil per year while the smaller boiler could utilize 185,000 gallons of fuel oil per year. The permit contained a limitation that the sulfur content of fuel be less than 0.5 percent.¹¹

Ambient air modeling was included in each one of the Clean Air Permits which indicated that ambient levels of air pollutants were substantially below ambient air quality standards.

Under the current commercial development scenario, the only potentially significant source of air emissions from the site will be that associated with automobiles visiting the site. Due to the modest size of the shopping center, no detailed air quality monitoring has been performed in conjunction with this Environmental Impact Statement. Based on the air emissions which occurred under sugar mill operation, it is assumed that the air quality will be equal to or better than that which may have occurred under refinery operation.

The existing mill has been identified as containing asbestos in window glazing and lead paint on various surfaces. During demolition, these materials will be collected for disposal without significant scraping, sanding or brushing activities. Therefore, the ability to release these materials into the air will be negligible and nonexistent.

Impacts - There are no anticipated negative impacts associated with air pollution and the commercial shopping center.

Mitigation - No mitigation measures are proposed with respect to air quality other than normal construction watering requirements to control dust and properly licensed construction equipment to minimize exhaust emissions. However, there is always a potential that during construction fugitive dust and exhaust emissions can be generated.

7. Noise

The Aiea Sugar Mill property consists of an industrial operation in the midst of a primarily residential neighborhood. Mill operations no longer occur; however, during the recent operational periods, the sound levels were qualitatively described as generally quiet.

Noise events which were noticeable and which have been identified are as follows:¹²

- a. The two well pumps (on Parcel B) when on were audible.
- b. The old refinery boiler was noisy but the sound levels at the adjacent roadways were barely audible.
- c. When sugar was boiled, steam was vented. This process led to one known complaint to the Department of Health.
- d. Sugar trucks transporting raw sugar to the site were 29-ton, double trailer type, and these trucks produced road noise entering and exiting the plant.
- e. Liquid sugar tankers (4000 gal.) were hauled by tractors and these tractors also produced road noise.

No quantitative noise level measurements were available from the sugar mill operation.

Noise levels associated with the proposed action will be generally lower as compared to sugar mill noise levels. Commercial operations will have associated vehicle noise, as related to automobiles and delivery vehicles, as well as solid waste hauling.

Impacts - Development of the property under the proposed commercial scheme will result in a net decrease or comparable level of noise emanating from the property. For this reason, the impact of noise related to the project is not considered significant.

Short-term construction noise levels may be associated with demolition and construction-related activities. However, due to the site's previously developed condition as a mill and based on zoning restrictions, extraordinary noise impacts (i.e., pile driving) are not anticipated.

Mitigation - No mitigation is proposed with respect to noise other than those normally imposed on construction activities related to hours of operation. All development must comply with the State of Hawaii

Department of Health rules related to "community noise control" (Chapter 11-46, Hawaii Administrative Rules). Construction activities must also comply with the following:

- a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the maximum permissible sound levels of the regulations as stated in Section 11-46-6(a).
- b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b)(1)(A).
- c. The contractor must comply with the conditions issued with the permit as stated in Section 11-46-7(d)(4).

8. Biological Resources

a. Flora

For all practical purposes, the site has existed in a developed state for approximately the last century. A majority of the site has paving and/or structures. Under the proposed commercial development scheme, the same condition will exist to a larger extent, since Parcel B is also proposed for commercial development. There are no significant flora on the site and the same condition will exist after development.

Impacts - No impacts on flora anticipated. During the draft review process, the question regarding impacts to Pearl Harbor nearshore waters was raised. The author of the flora and fauna study has confirmed that the "not significant" impact conclusion with respect to Aiea Stream also extends to Pearl Harbor nearshore and offshore waters.

Mitigation - No mitigation measures are proposed. However, a low flow channel can be accommodated.

b. Fauna

As with flora, the site has resided in a developed state since the turn of the century. There is no known significant fauna on the site and the same condition will exist after development.

Impacts - No impacts on fauna anticipated. During the draft review process, the question regarding impacts to Pearl Harbor nearshore waters was raised. The author of the flora and fauna study has confirmed that the "not significant" impact conclusion with respect to Aiea Stream also extends to Pearl Harbor nearshore and offshore waters.

Mitigation - No mitigation measures are proposed. However, a low-flow channel could be added to the proposed channel. This is a one to two-foot depression which concentrates and passes low stream flows.

9. Cultural Resources

a. Historical Perspective^{4,5}

The Aiea Sugar Mill was originally organized in 1898 as the Halawa Plantation Company. This company existed on 4,000 acres of sugar land extending from the coastal plain around Pearl Harbor up the hillsides to an elevation approximately 650 feet. In the following year, the name of the company was changed to "Honolulu Plantation Company." Operations expanded, including prosperous activity, for the plantation and the mill over the following years. The mill and plantation's prosperity also led to the growth of Aiea Town. About the end of World War I, the Honolulu Plantation Company installed equipment to produce its own refined sugar.

The beginning of the end of the Honolulu Plantation Company took place in 1935 when the government took 625 acres of prime cane land to build what is now known as "Hickam Field." During World War II, Honolulu Plantation Company lost more of its best lands to military operations, roads and commercial and housing developments. In 1947, plantation operations were discontinued.

In 1947, C&H took over the refining portion of the operation. These operations continued for 47 years until the refinery operation was discontinued in 1994. In 1994, C&H built a smaller liquid sugar refinery behind the old mill to meet the state's local demand. This facility ceased operations in 1996. The only operations still occurring on the site are clean-up operations to properly take all C&H equipment out of service in accordance with various State codes which apply to food processing and fuel boiler operations.

Impacts - The proposed action will result in demolition of all existing structures on the Aiea Sugar Mill property. All physical remnants of any mill and refining operations at the Aiea site will subsequently only be available through written record and photographs.

Mitigation - No specific mitigation measures are proposed. The State has a 90-day period in which it has the right to investigate whether it desires to purchase the property or to use it for public or preservation purposes. The State has the right to examine such alternative uses; however, unless the State purchases the property, it would have no power to implement these uses. From an historical perspective, there is at least one sugar mill operation which has been maintained through historic preservation. This is the Kahuku Sugar Mill.

Crazy Shirts, Inc., the current owner, is actively pursuing a buyer of the property who may wish to preserve the historic nature. The

primary problem is the lack of funds to make the historic preservation option feasible.

Options which exist to mitigate loss of cultural and historic resources include incorporation of appropriate features into the proposed commercial development or salvage and relocation of appropriate features. However, implementation of these options are dependent on mutual participation by the owner, private, government and/or public sector entities.

As a separate mitigation matter, there is a remote possibility that construction activities may uncover artifacts. As with all projects, there is a standard requirement to stop work when artifacts are discovered and coordinate the disposition with the Historic Sites Section of the Department of Land and Natural Resources.

b. Socio-Economic Perspective

Aiea Sugar Mill operations can be characterized as industrial blue-collar operations. The total employee base working at the mill during its peak operations was between 60 and 80 people. The liquid sugar mill had an employment base of 15 people. With the termination of the liquid sugar refinery operations, there is essentially no employment base available from the site. One exception to this is the Hawaiian Agricultural Resource Center (HARC) Building operations. The facility is a research lab-type facility promoting projects to enhance sugar operations and diversified agriculture within the State of Hawaii.

Impacts - The impact of the proposed project will change the socio-economic complexion of the property from sugar mill operation to a commercial shopping center. There will be an employment base for workers in the shopping center to act as shop managers, small store owners, and an employee base for supermarket-type personnel and

drugstore-type personnel. The pay scale for the majority of the workers under the Commercial Use category will remain in the blue-collar type employment category. Under its current configuration, there is no employment possibility available on the site and the creation of jobs and income is considered a beneficial impact.

Mitigation - There are no proposed mitigation measures with respect to socio-economic characteristics of the site.

10. Population

The proposed commercial complex at the Aiea Sugar Mill site is intended to be used by the population which exists in the Aiea/Pearl City area. The development proposal does not include any effects on the existing population base within the community.

Impacts - There are no impacts anticipated on population as a result of commercial development.

Mitigation - No mitigation is proposed.

11. Employment

The Aiea Sugar Mill in its heyday supported an employment base of 60 to 80 people. These jobs were typically blue-collar wage-type jobs. Currently, due to the shutdown of the refinery operation and liquid sugar operations, the current employment base has shrunk to zero.

Impacts - The impact of commercial development on the project site will create additional jobs. It is anticipated that full development of the project site could provide as many as 400-600 jobs.³ Therefore, the impact on employment is considered beneficial under the commercial scheme.

Mitigation - No mitigation is proposed.

12. Recreation

There are no recreational experiences which currently exist on the Aiea Sugar Mill property. Under the proposed Commercial Development scheme, there will also be no recreational attractions.

Impacts - Due to the fact that there are no recreational experiences under the current setting and there will be no recreational experiences under the proposed setting, it is considered that there are no impacts on recreation.

Mitigation - No mitigation is proposed.

13. Environmental Clean-up Related to Sugar Mill Operations

The Aiea Sugar Mill site as shown on Figure 6 is divided into four areas for reference purposes. Site A is the location of the old mill and is owned by Crazy Shirts, Inc. Site C is the location of the liquid sugar refinery and C&H Sugar is in the process of closing its lease for return to the Lessor, Crazy Shirts, Inc. Site B is the portion of the property which is undeveloped and on the far side of Aiea Stream. The status of environmental work is as follows:

"Phase I Environmental Assessments were performed by Muranaka Environmental Consultants in February 1993, and by Harding Lawson Associates in November 1994. Regarding Site A, oil was observed on the floors and pipes in the old refinery building, as well as asbestos containing material in the air-conditioning ducts, insulation of boiler pipes, valve, tanks, equipment, and roof insulation. Lead paint was observed on all the older buildings. Site A has been cleaned except for the exterior lead paint, and asbestos containing material in the window glazing compound and under steel plates in the five char furnaces. Regarding Site C, oil was observed in ground near the above-ground fuel-oil tanks and on the concrete pad of the sludge and used oil open storage areas, and in an unlined drainage trench near the maintenance

shop. C & H Sugar, the Lessee of Site C, is required to provide evidence the site is clean upon termination of its lease. Regarding Site B, two UST's were removed, petroleum contaminated soil removed, and the soil replaced pursuant to a Soil Replacement Former Tank Site report prepared by Harding Lawson Associates dated June 14, 1995.¹

Impacts - The previously described clean-up work must be successfully completed to ensure no "leaks" into the general environment. If this work is not completed, small amounts of toxins will be available for potential human exposure and general environmental degradation.

Mitigation - The mitigation steps proposed or already completed include Phase I remediation work, UST removal and general clean-up. The appropriate parties have already committed to perform the required work. A large majority of the required work has already been successfully completed. With respect to the disposal of the identified asbestos and lead paint materials, the Nanakuli Landfill can accept these materials.

It is also the obligation of the owner/operator to report releases of hazardous substance to the State of Hawaii Hazard Evaluation and Emergency Response (HEER) Office. In addition, the project must file an Asbestos Renovation/Renovation Notification with the State Department of Health.

B. MAN-MADE ENVIRONMENT

1. Housing

The current Aiea Sugar Mill site supports no housing. Under the proposed Commercial configuration, there is also no housing proposed. There will be no change in housing as a result of the subject project.

Impacts - There are no impacts identified with housing.

Mitigation - No mitigation measures are proposed.

2. Commercial Areas

The proposed project is solely aimed at creating a commercial shopping complex. The proposal calls for the creation of approximately 145,000 square feet of gross leasable area. In addition, the existing HARC Building could be available as office space at some future date.

Impacts - A marketing study has been authorized in conjunction with the project's EIS preparation (see Appendix B). Simply stated, the marketing study concluded the viability of a commercial shopping center at the Aiea Sugar Mill property is attractive, and if the center is built, it will be actively used. This is considered a benefit.

Mitigation - No mitigation measures with respect to commercial area are proposed. Portions of the community have expressed concerns that potential tenants could produce a negative impact on school children in the area. Community discussions with the shopping center's owner can help to mitigate this concern.

3. Industrial Areas

The Aiea Sugar Mill site currently acts as an intensive industrial activity. With the demise of sugar cane cultivation, the physical need for the facility has become obsolete. Continued use of the site in another type of intensive industrial activity will probably not be considered compatible with the surrounding residential character of the area. Furthermore, there are sufficient areas available for heavy intensive activity which are more appropriately located. These industrial activity sites include Campbell Industrial Park, Halawa Valley, Bougainville, and Mapunapuna, as well as some of the waterfront area surrounding Honolulu Harbor.

While Planning Department studies as a part of the DP Review process indicate there is an island-wide surplus of lands designated for industrial use, these same studies also indicate too little land has been allocated

for industrial use in the Primary Urban Center. The Aiea Sugar Mill site is in the Primary Urban Center.

One of the alternative uses for the property not being pursued by the owner is the option of creating an industrial subdivision with approximately 20,000-square foot lots. This type of industrial subdivision would lend itself to less intensive industrial operation and the uses which would occur would be more in keeping with the commercial categories which are allowable under existing intensive zoning codes.

Impacts - The proposed action will eliminate a 19.39-acre intensive industrial site from the island's inventory. Due to the residential character of the neighborhood, the elimination of heavy industrial uses at the project site is considered beneficial. Only a long-term relationship between the Aiea Sugar Mill and the surrounding neighborhood allowed the mill use to be compatible over the years.

Mitigation - No mitigation measures are proposed with respect to industrial areas.

C. PUBLIC FACILITIES AND SERVICES

1. Education

The Aiea Sugar Mill site has not supported educational activities. The proposed commercial project could only support education in the form of small commercial educational facilities (i.e., learning centers). Schools in the area consist of Aiea Elementary School, Aiea Intermediate School and Aiea High School. Additional schools include Scott Elementary, Webling Elementary and Saint Elizabeth's School. All these schools, with the exception of Webling Elementary School, are shown on Figure 12.

Impacts - No impacts are identified with respect to education on the subject project.

Mitigation - There are no mitigation measures proposed with respect to education.

2. Medical and Social Services

Health care facilities located in the area include the Moanalua Kaiser Center, Kapiolani at Pali Momi Hospital, the Waipahu Clinic and the St. Francis Hospital. In addition, there is a myriad of small doctors' offices, dentists, chiropractic services and small health care providers all through the Aiea and Pearl City area.

Impacts - Transformation of the Aiea Sugar Mill site into a shopping complex is anticipated to have no impact on medical and social services in the area. There is a potential that small office-type health care providers could be tenants in the new shopping center configuration.

Mitigation - There are no mitigation measures proposed with respect to medical and social services.

3. Transportation

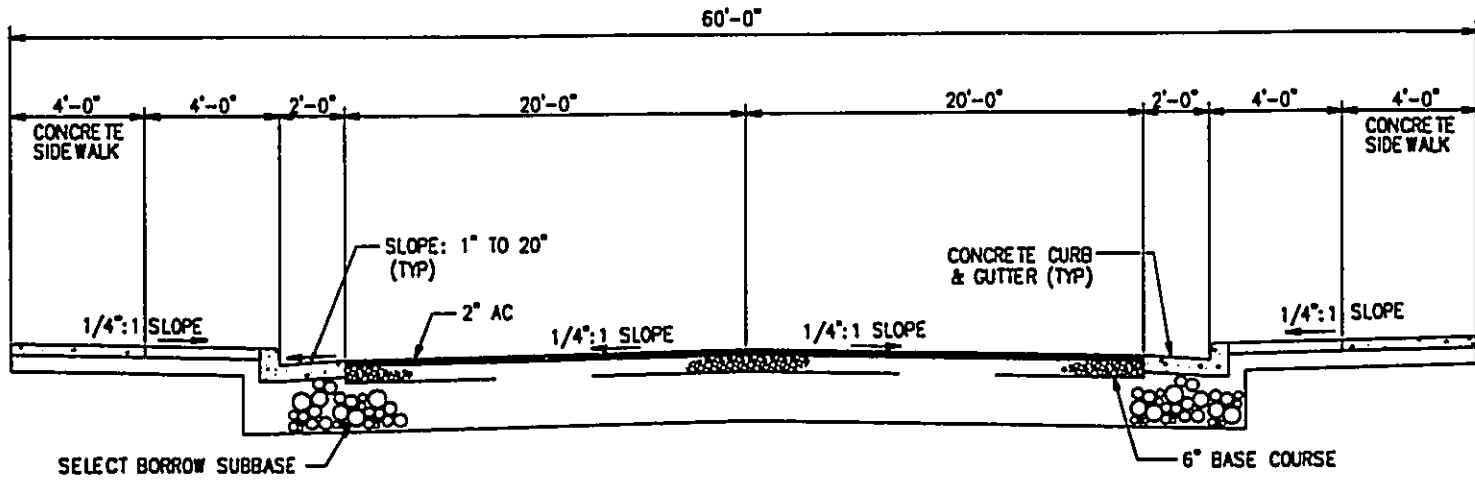
a. Roadway System

Of all the issues being considered in this Environmental Impact Statement, roadway systems and its related traffic issues are considered one of the more important topics. To that end, a traffic analysis has been prepared for the project as it relates to commercial traffic and as it relates current underlying zoning requirements that specifically identify development plan roadway improvements when the site is changed. As shown on the Commercial Development Proposal, there is a requirement to construct a Master Plan Roadway connecting Aiea Heights Drive with the intersection of Ulune Street and Kulaweia Street. This will effectively remove the sharp curve on Aiea Heights Drive, as it

fronts the southeast corner of the project site. Due to the potential significance of roadway and traffic issues, a complete Traffic Impact Assessment Report has been prepared and is appended to this document (see Appendix E). The purpose of this assessment was to document existing conditions, as well as proposed conditions, and to make recommendations with respect to roadway configurations to support the proposed Commercial Development. The primary methodology to evaluate existing and proposed conditions is to physically take traffic counts to measure existing traffic conditions. Future conditions are predicted based on trip generation rates of the proposed commercial complex which are subsequently added to the existing traffic counts.

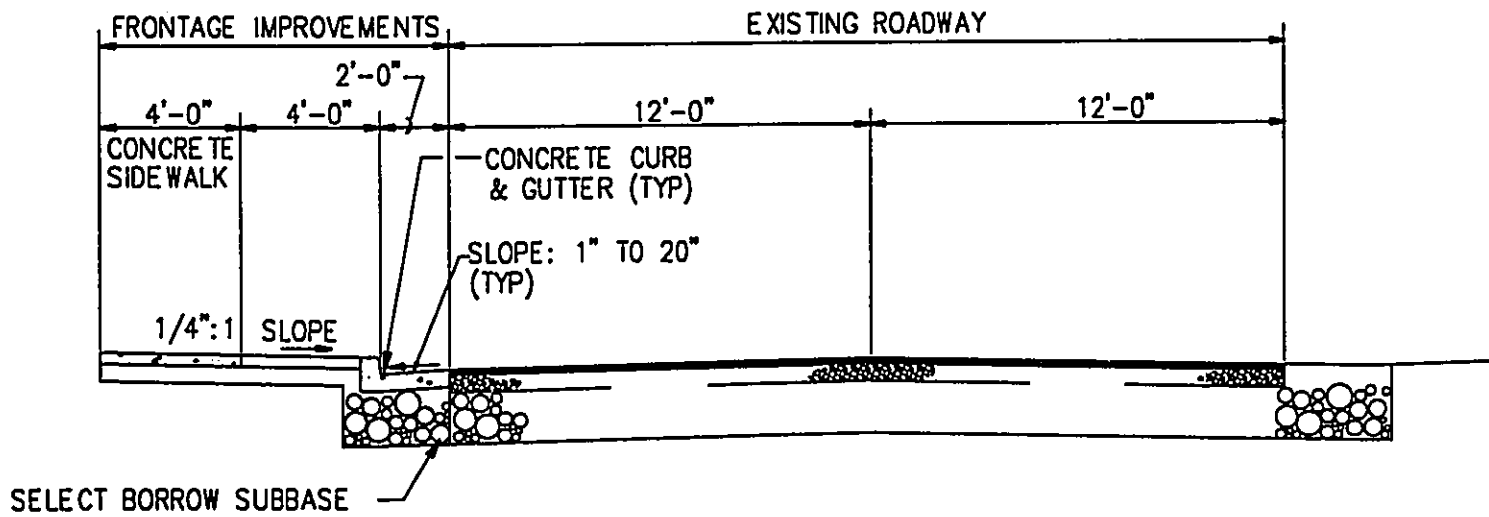
The specific recommendations of the traffic assessment are as follows:

- (1) Install Development Plan Roadway allowing connection from Aiea Heights Drive to Kulawea Street. The Development Plan Roadway is a 60-foot right-of-way. The typical right-of-way design is shown on Figure 8. The general alignment is shown on Figure 5 (Preliminary Site Plan), as well as on Figure 9. It should be noted that no private lands other than Aiea Sugar Mill property are required for implementation of the master-planned roadway.
- (2) Create a 4-way intersection at the proposed Development Plan Roadway intersection with Kulawea Street. To accomplish this, the west leg of Ulune Street would become a dead-end with a turnaround. The new intersection would consist of Kulawea Street, the Master Plan Roadway and the east leg of Ulune Street (see Figure 9).



TYPICAL SECTION - 60 FT. ROADWAY

NOT TO SCALE



FRONTAGE IMPROVEMENTS

FIGURE 8

**DEVELOPMENT PLAN ROADWAY SECTION
AND FRONTAGE IMPROVEMENTS TYPICAL SECTION**

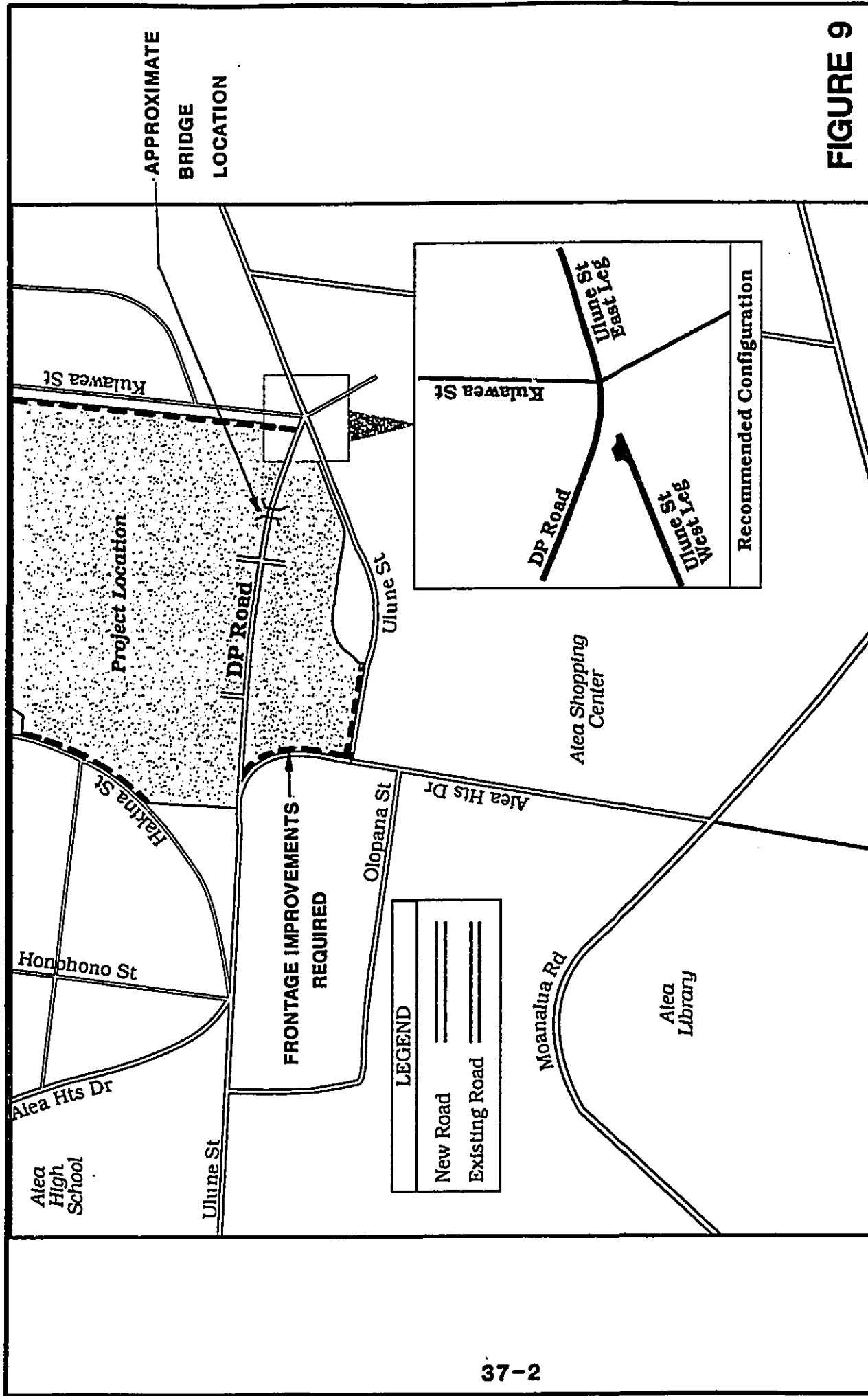


FIGURE 9

DP ROADWAY IMPROVEMENTS

AIEA SUGAR MILL

Aiea, Ewa, Oahu, Hawaii

Tax Map Key: 9-9-05:10

Date: 3-20-97

JOB NO. 2617-2

- (3) Create a T-intersection at the intersection of the Master Plan Roadway and Ulune Street/Aiea Heights Drive (see Figure 10).

In addition to the improvements identified in the Traffic Assessment to support commercial use, there is an existing unilateral condition running with the property requiring frontage improvements for any future industrial/commercial use. These frontage improvements are required along property frontage for Hakina Street, Aiea Heights Drive, Kulawea Street and Ulune Street. The frontage improvements include providing curb, gutter, sidewalk and street tree planting where none currently exist. This requirement only applies to property frontage for the existing Aiea Sugar Mill property (see Figures 9 and 10). All frontage improvements must further comply with the Americans with Disabilities Act (ADA) requirements. The typical frontage improvements are shown on Figure 8.

Impacts - The Traffic Assessment identifies that the level of service on the accompanying streets will be reduced unless the identified roadway system improvements are installed. The result of the lower level of service projections will be longer delays on the identified roadway systems.

In addition to the long-term impacts, there will be traffic disruption during construction. Delays will occur during the construction period due to loss of traveling lanes and coning to allow safe construction.

Mitigation - As stated in the Traffic Assessment, the proposed mitigation measures will consist of all the traffic improvements identified. In addition, the frontage improvements will be provided in conjunction with the project development. The Traffic Assessment identifies that the level of service after installation of

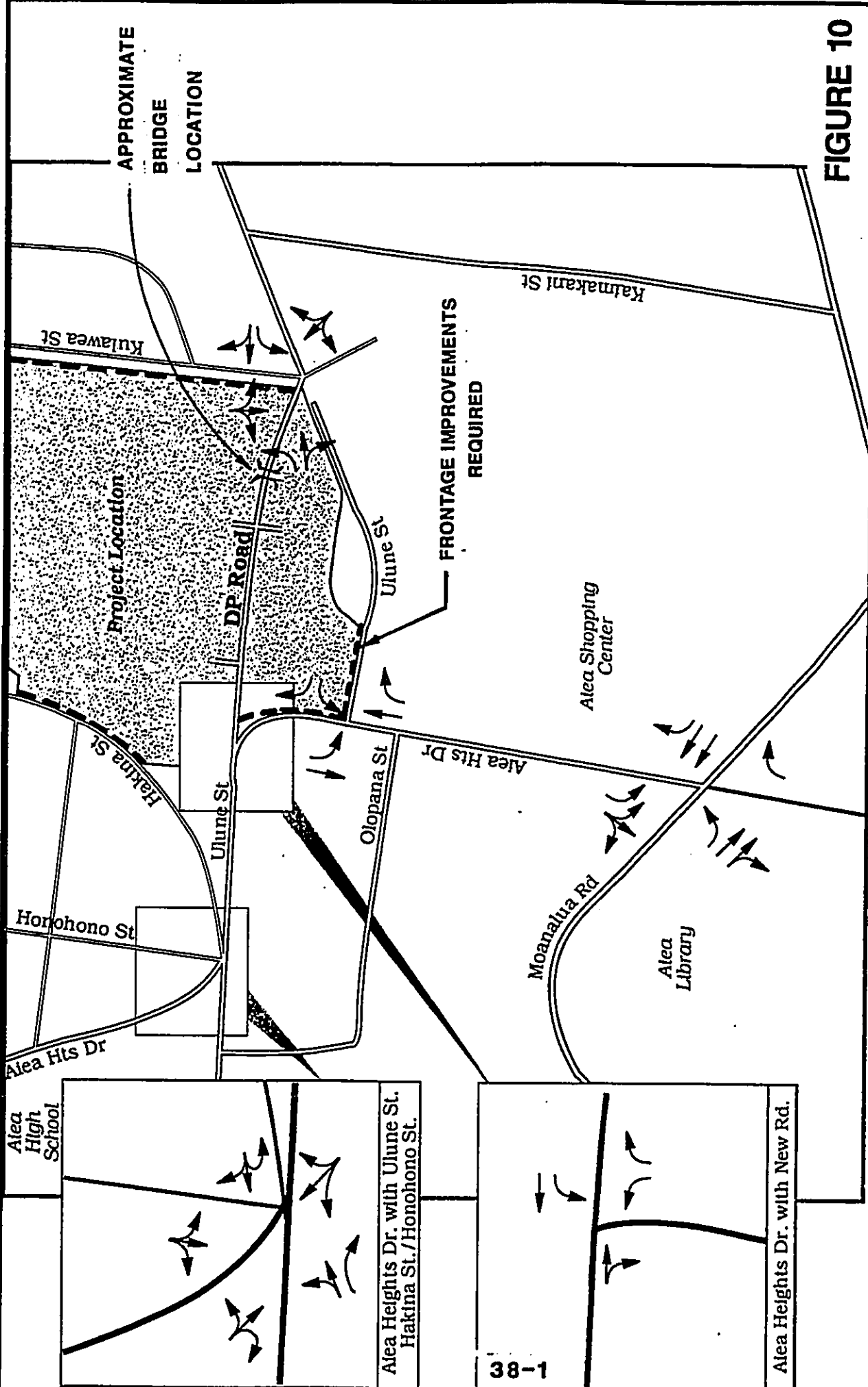
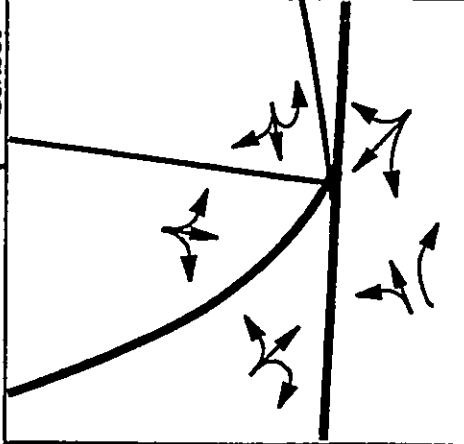


FIGURE 10

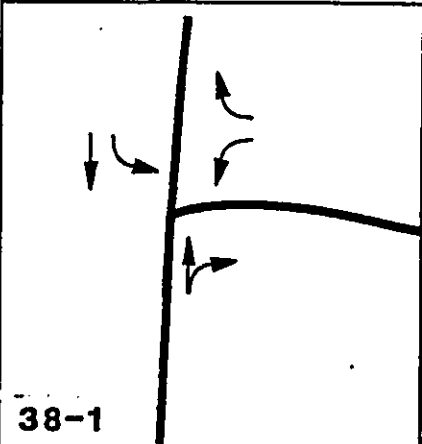
DP ROADWAY IMPROVEMENTS
AIEA SUGAR MILL
 Aiea, Ewa, Oahu, Hawaii
 Tax Map Key: 9-9-05: 10

Date: 3-20-97

Aiea High School



Aiea Heights Dr. with Ulune St.
 Hakina St./Honohono St.



Aiea Heights Dr. with New Rd.

38-1

LEGEND

--- Frontage Improvements

JOB NO. 2617-2

all required improvements will be equal to, or no worse than, those which currently occur.

During the roadway construction period, temporary impacts will be primarily mitigated by allowing roadway construction at off-peak hours. However, delays are still anticipated.

4. Recreational and Community Facilities

The Aiea Sugar Mill site currently does not provide any recreational or community facilities. The proposed commercial plan does not specifically propose any recreational or community facilities. However, certain types of community and recreational facilities are allowable under the proposed Commercial zoning. Typical commercial uses which are also recreational and community facilities include schools, art galleries and museums.

Impacts - There are no negative impacts identifiable on recreational and community facilities. There may be some positive community and recreational benefits depending on the tenants which may choose to occupy the proposed Commercial Center.

Mitigation - No mitigation measures are proposed with respect to community and recreational facilities.

5. Wastewater Management

The Aiea Sugar Mill facility currently has direct sewage connections to the City & County of Honolulu wastewater system. Under an agreement with the City & County of Honolulu, sewage discharge to the city's system was limited to 150,000 gallons per day.

The proposed commercial project will generate approximately 20,000 gallons of sewage per day which will also enter the City & County system.

Impacts - The net reduction of sewage entering the City & County system will be in excess of 100,000 gallons per day. This is considered a benefit.

Mitigation - No mitigation is proposed. However, the City & County Department of Wastewater Management, through the consultation process, has identified a need to relocate their sewer line adjacent to Aiea Stream. A portion of this sewer has been undermined due to stream erosion. The Department of Wastewater Management has asked for cooperation in identifying an appropriate stream channel/sewer corridor. Through the coordination process it may be determined that the previously identified Aiea Stream channelization may be inconsistent with the Department's remediation plans. The cost of reconstruction must be reconciled.

The application also understands that wastewater treatment plant capacity may be subject to the City & County's ability to receive wastewater for treatment. Therefore, as a standard requirement, the proposed project will submit a "sewer connection" application at the time of rezoning.

6. Power Systems

The existing Sugar Mill received multiple Hawaiian Electric services. In addition, the Sugar Mill may have produced some of its own power. The quantity and size of services could not be obtained from Hawaiian Electric. The new commercial shopping center usage is estimated to be 1-1.5 MVA.¹³

Impacts - There may be an increase in electrical usage at the site, but the increase is not anticipated to be significant.

Mitigation - No mitigation is proposed other than complying with Hawaiian Electric service requests.

7. Police and Fire Protection

The City & County of Honolulu Police Department provides police services for the area. Fire protection for the project area is provided by the Aiea and Waiau engine companies and ladder service is available from Waiau. During the consultation period, the Police and Fire Departments identified their services in the area as being adequate and no significant impacts on operations were expected.

Impacts - No impacts are identified.

Mitigation - No mitigation measures are proposed with respect to Police and Fire protection, with the exception that access for fire apparatus, water supply and building construction shall be in conformance with applicable codes.

**VI. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS,
POLICIES AND CONTROLS FOR THE AFFECTED AREA**

A. FEDERAL

There are no known Federal controls affecting development of the proposed project site.

B. STATE

1. State Land Use

The project site is within the State Urban District, as shown on Figure 11 (State Land Use Map). The proposed uses are allowed within the Urban District.

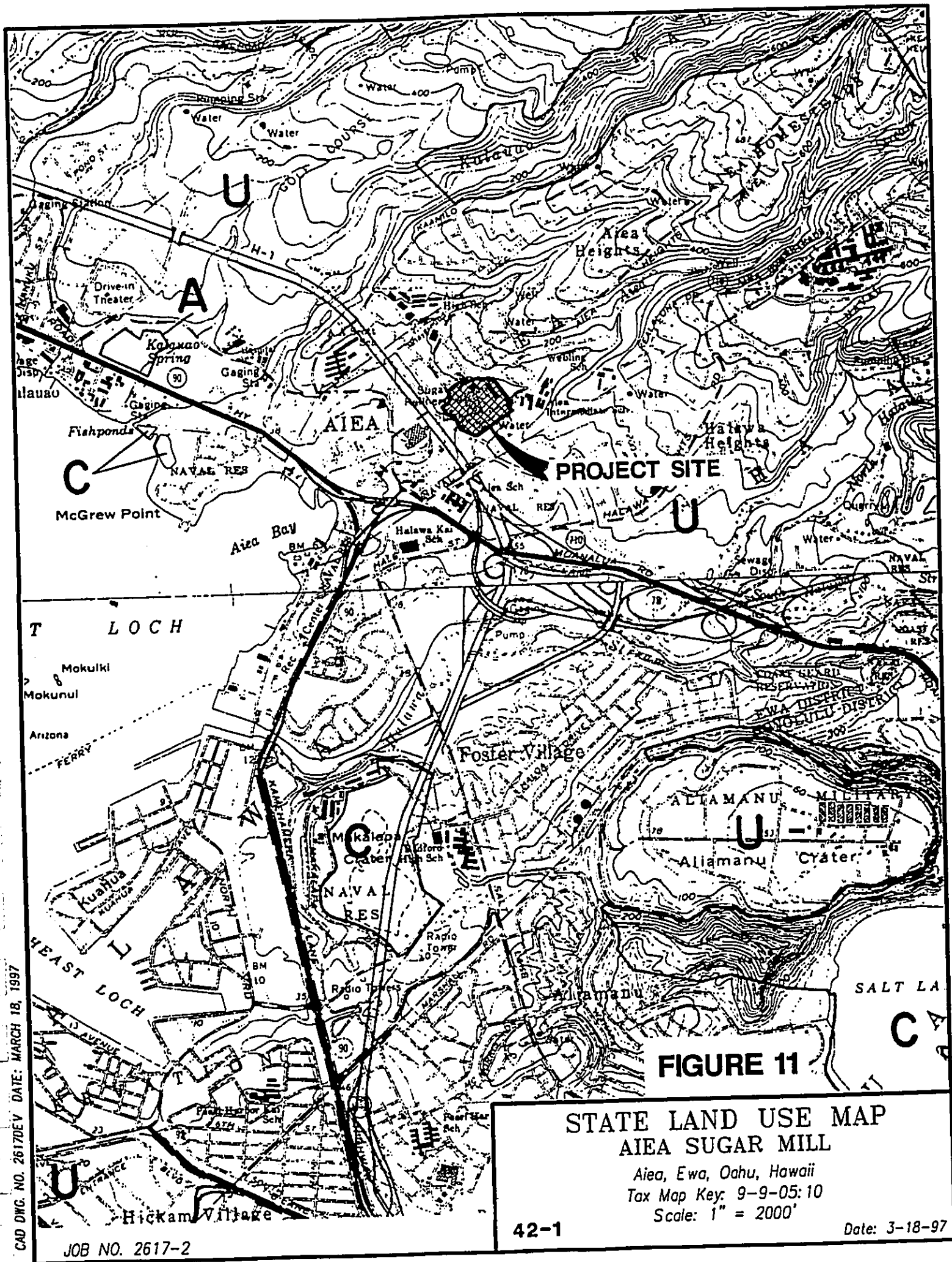
2. Hawaii State Plan

The Hawaii State Plan's long-range goals, objectives and policies are set forth in the Hawaii State Planning Act, Hawaii Revised Statutes (H.R.S. Chapter 226). The goal of this Plan is to achieve a strong, viable economy and viable physical environment that will promote the physical, social and economic well-being of the State's individuals, families and social communities (H.R.S. Section 226-1). Applicable sections of the Hawaii State Plan are as follows:

a. The Economy

H.R.S. Section 226-6 lists subsection objectives:

- (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice and improve living standards for Hawaii people.
- (2) A growing and diversified economic base is not overly dependent on a few industries.



Policy

- (a) Seek broader outlets for new and expanded Hawaii business investments.
- (b) Strive to achieve a sustained level of construction activity responsive to, and consistent with, State growth objectives.
- (c) Encourage labor-intensive activities that are economically satisfying.
- (d) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy.

3. Hawaii State Functional Plan

The Hawaii State Functional Plan supplements the Hawaii State Plan in the form of seven functional plans serving as guidelines for the State of Hawaii. The Hawaii Functional Plans are listed below:

- State Agricultural Plan
- State Conservation Lands Plan
- State Energy Plan
- Historic Preservation Plan
- Recreation Plan
- Tourism Plan
- Transportation Plan

Of the foregoing functional plans, only the Historic Preservation Plan has a relationship to the project. The Historic Preservation State Functional Plan clearly identifies the preservation of historic properties as one of its main themes. Additional issues addressed in the functional plan are the collection and preservation of historic records, artifacts and oral histories.

Implementation of the Aiea Sugar Mill Commercial Development will not be consistent with this functional plan since it will result in the removal of the Sugar Mill buildings and features. The State Functional Plan

looks to the County for protection of such features through its General Plan. The functional plan also identifies that funding of preservation projects is an ongoing problem.

The Aiea Sugar Mill Commercial Development will, however, be able to provide historic records and extensive pictorial histories as also outlined in the functional plan.

C. CITY & COUNTY

1. General Plan

The General Plan of the City & County of Honolulu provides a statement of long-range objectives for the Island of Oahu. The plan further provides a statement of policies which will allow implementation of these objectives. The General Plan provisions which are relevant to the proposed action include the following:

a. Economic Activity

The objectives and policies for economic activity are based upon providing employment opportunities. The proposed Aiea Sugar Mill Commercial Development will provide employment opportunities both through short-term construction-related activities, as well as long-term employment opportunities. The economic activities, objectives and policies also specifically call for orderly economic growth on Oahu and particularly identify Honolulu, Aiea and Pearl City as three of the prime areas for economic growth.

b. Physical Development and Urban Design

The objective of this section of the General Plan is to ensure that new developments are timely, well designed and appropriate for the areas in which they are located. To this end, the General Plan directs new construction in the primary urban center with adequate

infrastructure to serve the property that will not overburden the existing demands. This section also calls for infrastructure to be put in place at the cost of the project developer when it will directly serve the development.

The Aiea Sugar Mill Commercial Development is consistent with the policies of this section of the General Plan since it is located in the primary urban center and, based on consultation with appropriate agencies, there are adequate services and public safety facilities in the area to serve the project. Further, improvements related to the project with respect to roads and utility connections will be paid for solely by the project developer. The improvement charges also include facility charges to offset exhaustion of part of the system's capacity.

c. Culture and Recreation

This section of the General Plan specifically contains the objective to protect Oahu's cultural, historic, architectural, and archeological resources. Since the Aiea Sugar Mill site is on the Register of Historic Places and this project would allow its elimination, it is clear that the proposed project is not consistent with this objective of the General Plan. As stated earlier, the owner is not opposed to this objective being met and initially pursued development on the property with that intended purpose. However, economic viability of this concept did not exist. For the owner to maintain some kind of income level commensurate with the zoning under which the property was purchased, commercial use is desirable.

Section V.9.a (Environmental Setting, Impacts and Mitigation) also discussed the possibility of retaining some historical features which would offset inconsistency with this section of the General Plan.

2. Development Plan Common Provisions

The Aiea Sugar Mill is located within the Primary Urban Center which covers an area from Pearl City to Waialae-Kahala. The Primary Urban Center is one of the eight DP areas on Oahu and is the most densely populated and urbanized DP. The DP consists of four components: DP Common Provisions and DP Special Provisions (which are text documents), a DP Land Use Map, and a Public Facilities Map. The DP represents relatively detailed land use policies and development and urban design objectives for each DP area which are intended to meet the broader, longer range objectives of the General Plan.

The City is currently revising its planning system in accordance with the 1992 Charter amendments. The Planning Department recently completed the revised DP for Ewa which has passed Second Reading at the City Council. The revised DP for Central Oahu must still be reviewed by the Planning Commission before it is forwarded to the City Council. The revised DP's for the Primary Urban Center, East Honolulu and the North Shore were initiated in 1996. Revision of the Waianae, Koolauloa and Koolaupoko DP areas will be initiated after 1997. All existing DP's, including procedures for amending the land use and public facilities maps will remain in effect until new ones are adopted.

The Development Plan Common Provisions contain General Urban Design Principles and Controls. Relevant portions of the Common Provisions are as follows:

a. Public Views

This section of the Common Provisions seeks to enhance views. These views can be scenic in nature or enhancement of streetscapes. Implementation of the commercial development will provide an overall reduction in building heights as compared to that which currently exist on the site. The existing smokestack,

elevated water tank and mill buildings are all in excess of that generally allowed for commercial development, and reduction of these heights is consistent with improving public views. In addition, commercial development of the project will require frontage improvements. This includes installation of curb, gutter and sidewalks and also requires the installation of street trees for enhancement of streetscapes.

Nonetheless, it should also be recognized that a large segment of the community has become accustomed and fond of the views of the existing sugar mill. This loss should be considered significant to a portion of the community.

b. Vehicular/Pedestrian Routes

This section of the Common Provisions calls for landscaping along major vehicular arterial and collector streets as a means to increase the general attractiveness of the community. In addition, the establishment of pedestrian corridors is also identified for heavy traffic areas.

The proposed commercial development will be improving roadway frontages, as well as installing a master plan roadway. All of the roadway frontage improvements and roadway installations will be built to current County standards and sidewalks will be installed together with crosswalks to enhance pedestrian corridors.

c. Social Impact Factors

In evaluating proposed development, the general plan policies and objectives strive to evaluate social benefits versus negative social impacts. In doing so, demographics, economics, housing, public service and physical environment are examined. With respect to these factors, economics and physical environment are the

relevant issues. Commercial development will add temporary construction jobs as well as full-time employment. Currently under its existing conditions, there is no economic viability or employment availability at the site. Therefore, based on the guidelines contained in the social impact factors section of the Common Provisions, the project will create a social benefit.

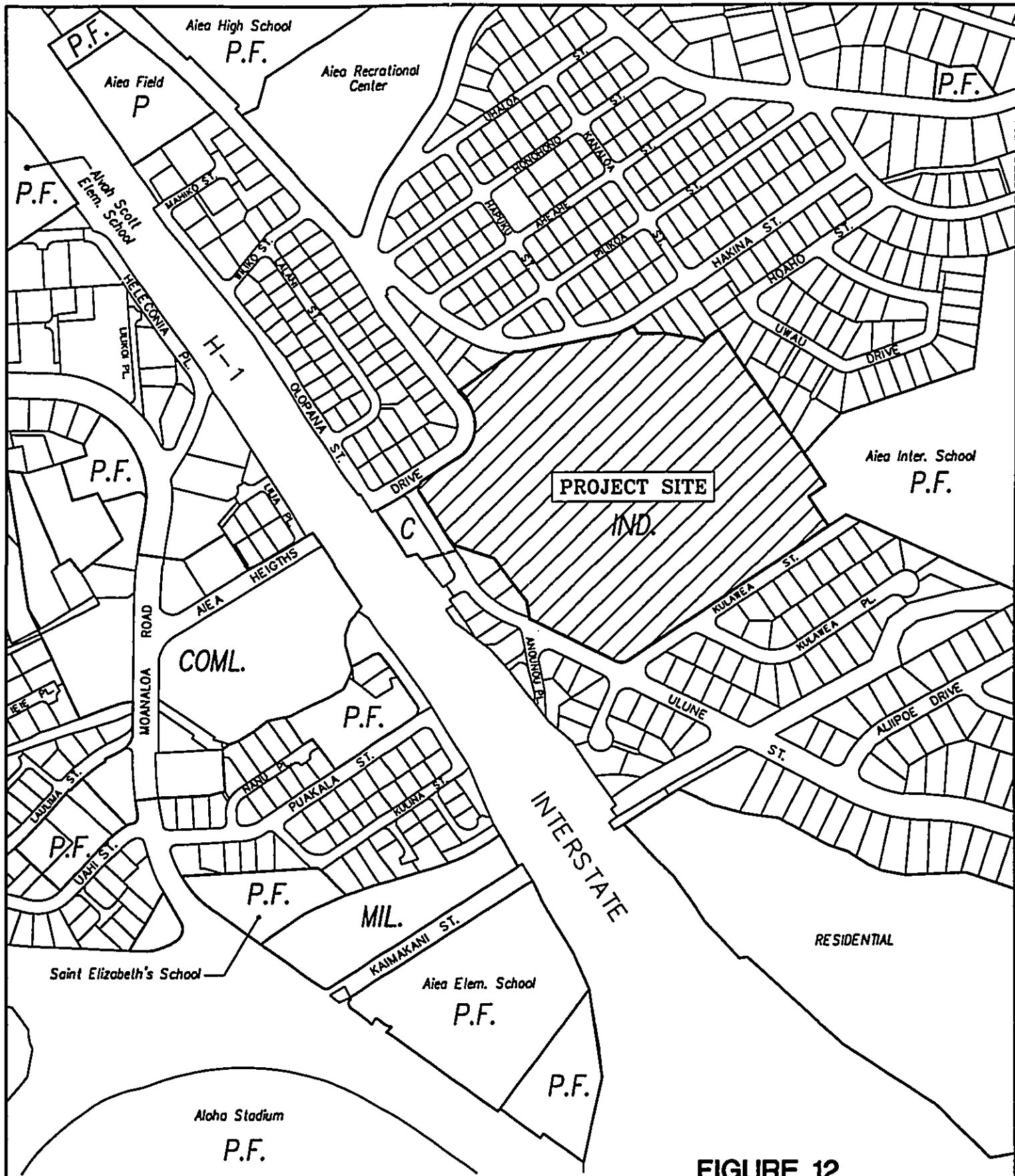
With respect to physical environment, one of the factors to be evaluated is the preservation of natural monuments and landmarks. The current proposal, therefore, is considered a negative social impact. The only mitigation being proposed by the owner is creation of archival files and pictures to document the site and the Aiea Sugar Mill facility. However, the owner is also actively pursuing a buyer who may wish to undertake Historic Preservation possibilities.

3. Land Use and Public Facilities

The Development Plan Land Use Map for the project area is shown on Figure 12. The current designation is industrial.

This Development Plan application seeks to change this designation to Commercial. A Commercial designation is the required designation to allow the creation of B-1 Neighborhood Business Shopping Center as defined in the Land Use Ordinance. The Commercial Development Plan redesignation must be in place before a Change of Zone application can be approved.

The Development Plan Land Use Maps are also supported by Public Facilities Maps and the map for the project area is shown on Figure 13. The Public Facilities Map shows areas where public facility improvements are required to maintain and enhance County infrastructure and roadway corridors. The Public Facilities Map for the



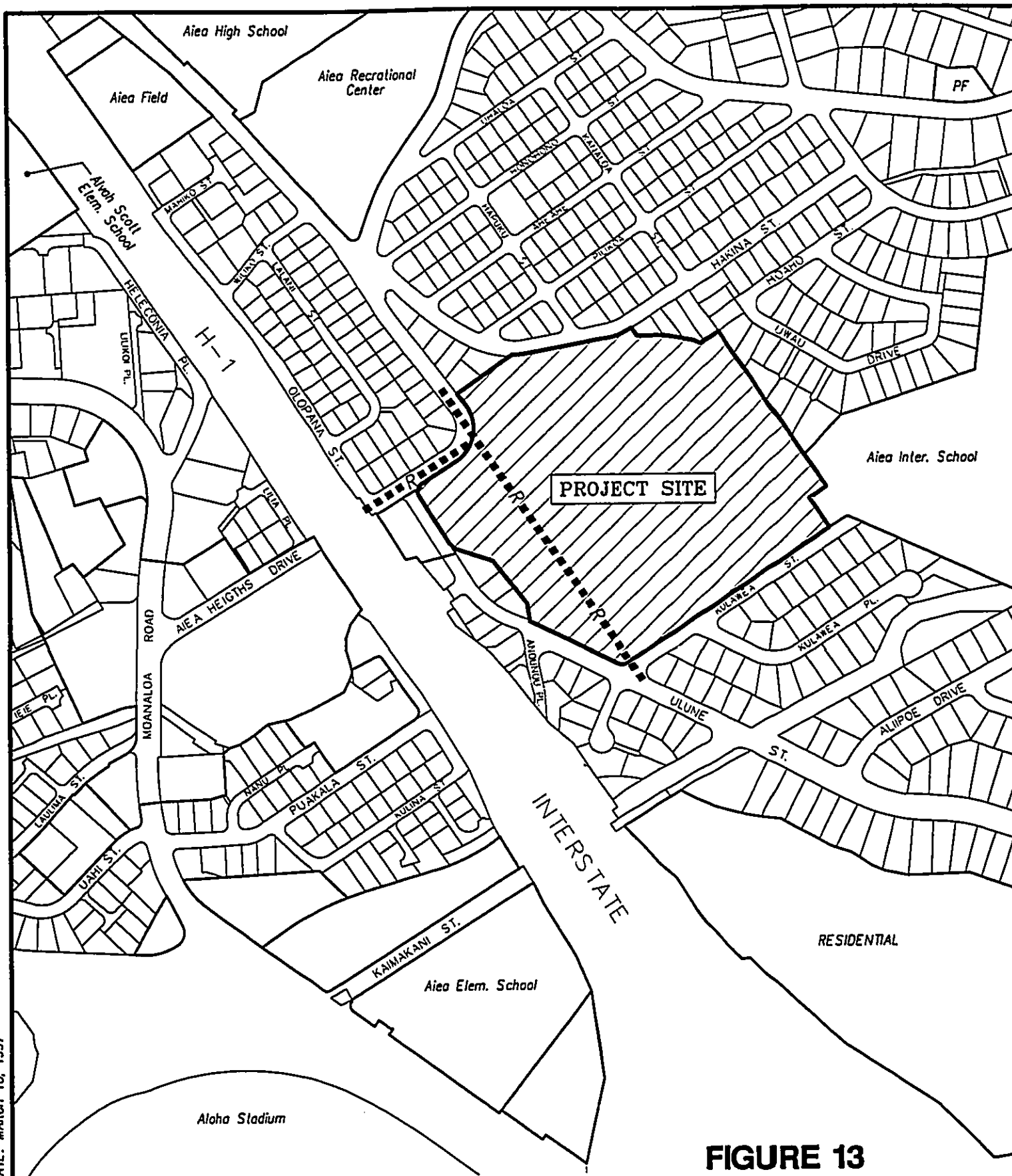
CAD DWG. NO. 2617DEV DATE: MARCH 18, 1997

JOB NO. 2617-2

FIGURE 12

DEVELOPMENT PLAN LAND USE MAP
AIEA SUGAR MILL
 Aiea, Ewa, Oahu, Hawaii
 Tax Map Key: 9-9-05:10
 Scale: 1" = 400'
 Date: 3-18-97

48-1



CAD DWG. NO. 2617DEV DATE: MARCH 18, 1997

LEGEND

■ ■ ■ R ■ ■ ■ Additional Right of Way and new streets

JOB NO. 2617-2

FIGURE 13

**DEVELOPMENT PLAN PUBLIC FACILITIES MAP
AIEA SUGAR MILL**

Aiea, Ewa, Oahu, Hawaii
Tax Map Key: 9-9-05:10
Scale: 1" = 400'

48-2

Date: 3-18-97

project area specifically calls for a master plan roadway connecting Aiea Heights Drive with Ulune Street. The current project proposal includes this feature.

4. County Zoning

The zoning map of the City & County of Honolulu (see Figure 14) specifically identifies detailed land uses which are allowed on properties. The current zoning is intensive industrial (I-2). The commercial development being considered would require a commercial designation for the project site. The specific zoning ultimately being sought is B-1 Neighborhood Business. The range of uses in a B-1 District is contained in Section 5.80 of the Land Use Ordinance is as follows:

Amusement & recreation facilities, indoor	Office buildings
Art galleries, museums	Personal services
Business services	Photography studios
Commercial parking lots & garages	Public uses and structures
Consulates	Repair establishments, minor
Convenience stores	Retail establishments
Dance or music schools	Schools, business
Day-care facilities	Schools, language
Drive-thru facilities	Schools: elementary, intermediate, high
Eating establishments	Schools, vocational
Financial institutions	Theaters
Laboratories, medical	Veterinary establishments in sound-attenuated bldgs.
Medical clinics	
Meeting facilities	

D. LIST OF NECESSARY APPROVALS

Table 3 contains a listing of necessary approvals, government agency and status of approval.

**TABLE 3
LAND USE APPROVALS/GOVERNMENT AGENCIES**

Approval Required	Government Agency	Status of Approval
Development Plan Approval	City & County of Honolulu, Planning Department	Not Obtained
Change of Zone	City & County of Honolulu, Department of Land Utilization	Not Obtained
Stream Channel Alteration Permit	State Commission on Water Resource Management	Not Obtained
Department of the Army Permit - Stream Channel	U.S. Army Corps of Engineers	Not Obtained
National Pollutant Discharge Elimination System (NPDES) Permits	State of Hawaii, Department of Health, Clean Water Branch	Not Obtained
CZM Consistency Certification	State of Hawaii, Office of State Planning	Not Obtained
401 Water Quality Certification	State of Hawaii, Department of Health, Clean Water Branch	Not Obtained
Subdivision (related to roadway & HARC lots, etc.)	City & County of Honolulu, Department of Land Utilization	Not obtained
Construction Plan Approvals	City & County of Honolulu, Department of Land Utilization City & County of Honolulu, Department of Public Works City & County of Honolulu, Department of Transportation Services City & County of Honolulu, Department of Parks & Recreation City & County of Honolulu, Department of Wastewater Management State of Hawaii, Department of Transportation State of Hawaii, Department of Health	Not Obtained Not Obtained Not Obtained Not Obtained Not Obtained Not Obtained Not Obtained

VII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITIES' ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed project consists of creating a commercial development on the Aiea Sugar Mill site. Short-term losses will primarily lead to physical degradation of the environment. Long-term productivity will be created through providing commercial development which will generate jobs as well as income. A discussion of short-term and long-term considerations is as follows:

A. SHORT-TERM

Construction-related activities will create dust, noise, air pollution, traffic circulation disruption and erosion. Mitigation measures have been proposed for each of the foregoing areas, however, nonetheless short-term losses will occur. Short-term considerations will also be positive. Specifically, all the work necessary to complete the project will be performed by the State's work force. This will generate income, as well as stimulate the exchange of money within the State.

B. LONG-TERM

The commercial development will create long-term losses due to the fact that all commitments on utilities and infrastructure will be permanent for the life of the project. In addition, services such as fire protection and police protection will be permanent. However, all of these services and infrastructure considerations have existed at the site due to the fact that the site has operated as Aiea Sugar Mill for the last 100± years. Long-term productivity will be enhanced since the commercial development will provide jobs, as well as retail trade for the general community. One long-term loss that will result as a consequence of development is that the Aiea Sugar Mill, an historic site, will only be available to the public through archival information. The physical remnants of the Sugar Mill will be lost in perpetuity.

VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROJECT SHOULD IT BE IMPLEMENTED

Unavoidable impacts to the proposed project include the following:

- A. Development of the property will represent an irretrievable loss of the Aiea Sugar Mill's historic site value.
- B. There will be physical disruption of the environment through construction-related activities, including grading operations. The construction-related activities will result in impacts to air quality, water quality, noise levels, and construction-related traffic congestion.
- C. Permanent commitments will be placed on non-renewable resources through increased demands on potable water consumption, wastewater disposal, and electrical power generation.

Development of a commercial center on the property is not likely to be subject to any "environmental accidents." However, there is "potential" for an environmental accident during grading operations where excess silt can get into Aiea Stream. Another "potential environmental accident" could be aggravated flooding during construction. A final "potential environmental accident" could occur during installation of traffic improvements when lane closures are in place. These "potential environmental accidents" are being identified due to the fact that they are theoretically possible. The chances of them actually occurring, however, are not significant. As long as the mitigation measures outlined in this document, as well as construction, are performed by responsible and licensed personnel, environmental accidents can be avoided.

IX. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

A. UNAVOIDABLE EFFECTS

Commercial development on the Aiea Sugar Mill site will result in the removal of the Aiea Sugar Mill. This is the unavoidable loss of a cultural and historic facility. In addition, construction-related activities will also cause a small amount of short-term environmental degradation. Finally, after project completion, the total traffic volume passing the site on a daily basis will increase. The project documentation calls for traffic improvements to offset the negative impacts of increased traffic, however, the total average daily traffic volume passing the commercial development will increase. Finally, the demands on infrastructure including water, sewer and electrical generation will be permanent for the life of the project. With the exception of the historical site issues, the adverse environmental effects identified can be mitigated. With the mitigation measures proposed, the commercial development can be an integral part of the Aiea community. With respect to historical and cultural issues, it appears that the only way the historical preservation aspect of the Aiea Sugar Mill can be retained is if an appropriate entity (state, city, private) actively becomes financially involved in the preservation concept. The owner, Crazy Shirts, Inc., originally purchased the property for business purposes. At the time of purchase, it was thought that the historical preservation as well as business principles could be achieved on the property. Unfortunately, the economics of achieving both business return and preservation enhancement do not exist. From a business perspective, there is no other choice than to proceed with the project. The owner, however, is still actively pursuing an entity which is willing to purchase the site for preservation reasons.

B. RATIONALE FOR PROCEEDING WITH THE ACTION

Based upon review of the environmental consequences and unavoidable effects, it appears that the only issue which cannot be completely or partially mitigated is retention of the site for historic preservation reasons. This is primarily due to the fact that there are no participants willing to absorb part of the financial burden for this option. Further, the marketing study prepared in conjunction with this Environmental Impact Statement clearly shows that conversion to commercial use is a viable option to retain economic income from the industrial parcel. Based on the foregoing information, there is no reason not to proceed with the proposed action.

C. ACHIEVEMENT OF COUNTERVAILING BENEFITS THROUGH ALTERNATIVES WHICH AVOID ADVERSE EFFECTS

The countervailing benefits of the proposed commercial development are providing jobs, employment, and income to the Aiea area. One alternative which has been presented is the creation of an industrial subdivision supporting light-industrial uses. However, this alternative would produce essentially the same adverse environmental effects, with the exception that traffic generation would be reduced in the area.

The "no action" alternative would provide none of the countervailing benefits but all the adverse environmental effects would be eliminated. The final alternative which could achieve the countervailing benefits with fewer environmental effects is a smaller scale commercial development. However, this would render the income potential for the remainder of the site to a level below that under which it was purchased.

X. SUMMARY OF UNRESOLVED ISSUES

At the time that the Draft Environmental Impact Statement was circulated, there was only one unresolved issue which was identified. This issue was Item a. as described below related to historic and cultural losses. The Final Environmental Impact Statement section stating unresolved issues has been expanded to include recognition of the sensitivity of the proposed Aiea Stream channel improvements. In addition, the Department of Education's concern that commercial activities in proximity to educational facilities may not be compatible is also recognized. The Final Environmental Impact Statement summary of unresolved issues is as follows:

- a. The historical/cultural loss of the Aiea Sugar Mill is considered an unresolved issue. There is no mitigation short of complete preservation or preservation in a park-like setting which is generally acceptable to the community. The preservation project disposition can only be achieved if economic and financial support becomes available to purchase or help purchase the property from the current landowner, Crazy Shirts, Inc. Crazy Shirts, Inc. is currently maintaining its corporate and factory commitments in Halawa Valley. There is no feasible reason to hold on to two pieces of property when only one is necessary. Based on economic conditions, the Halawa Valley site is the only practical site at this point in time.
- b. Aiea Stream channel alterations are proposed utilizing a concrete channel. It is the obligation of the project to technically demonstrate that the Aiea Stream channel modification will not cause adverse impacts with respect to the environment or health and safety. The proposed methodology to demonstrate "non-aggravation" are identified in this document, but since a substantial amount of approvals by technical agencies are required, the Aiea Stream channel improvements are identified as an unresolved issue.
- c. The City & County of Honolulu Planning Department has requested that the compatibility of commercial development in proximity to educational facilities (schools) be identified as an unresolved issue. For that reason, it is being identified. Through the planning process (Development Plan Amendment and subsequent Change of Zone Application), the issue of vested land rights and development opportunities must be recognized and resolved.

XI. DISCLOSURE OF CONSULTED PARTIES AND THOSE INVOLVED IN THE PREPARATION OF THE STATEMENT

Table 4 identifies all consulted parties in preparing this Draft Supplemental Environmental Impact Statement. Twenty-one (21) parties of 23 consulted provided substantive comments.

Table 5 identifies those parties preparing the statement.

This section also contains the Bibliography of all references, either publicized, nonpublicized or personal communications.

**TABLE 4
CONSULTED PARTIES**

ENTITY RECEIVING REQUEST FOR CONSULTATION COMMENTS	RESPONSE (SUBSTANTIVE COMMENTS)	RESPONSE (NO COMMENT)	NO RESPONSE
CITY & COUNTY AGENCIES			
1. Board of Water Supply	X		
2. Building Department		X	
3. City Council			X
4. Department of Housing & Community Development	X		
5. Department of Land Utilization			X
6. Department of Parks & Recreation	X		
7. Planning Department			X
8. Department of Public Works	X		
9. Department of Transportation Services	X		
10. Department of Wastewater Management	X		
11. Honolulu Fire Department	X		
12. Honolulu Police Department	X		
STATE AGENCIES			
13. Department of Accounting & General Services		X	
14. Department of Agriculture			X
15. Department of Business, Economic Development & Tourism and DBEDT-Energy Division			X
16. Department of Business, Economic Development & Tourism, Land Use Commission	X		
17. Department of Education	X		
18. Department of Land & Natural Resources, Commission on Water Resource Management			
19. Department of Land & Natural Resources, State Historic Preservation Division	X		
20. Department of Land & Natural Resources, Division of Water & Land Development	X		

ENTITY RECEIVING REQUEST FOR CONSULTATION COMMENTS	RESPONSE (SUBSTANTIVE COMMENTS)	RESPONSE (NO COMMENT)	NO RESPONSE
STATE AGENCIES (cont.)			
21. Department of Health			
22. Department of Health, Environmental Management Division			X
23. Department of Transportation	X		
24. Office of State Planning	X		
25. University of Hawaii, Environmental Center			X
26. Office of Hawaiian Affairs	X		
27. Office of Environmental Quality Control (OEQC)	X		
FEDERAL AGENCIES			
28. U.S. Department of Agriculture	X		
29. U.S. Army Corps of Engineers	X		
30. U.S. Department of the Interior, Fish & Wildlife Service			X
PRIVATE AGENCIES - Individual			
31. American Lung Association			X
32. Aiea Neighborhood Board No. 20			X
33. C&H Sugar			X
34. GTE Hawaiian Telephone			X
35. Hawaiian Electric Company			X
36. Oceanic Cable			X
37. Alexander & Baldwin, Inc.	X		
38. Hawaiian Agricultural Resource Center			X
39. Ms. Antoinette Konia Freitas	X		
40. Ms. Claire J. Tamamoto	X		
41. State Representative Tom Okamura	X		

**TABLE 5
EIS PREPARATION**

Name	Position/Company	Highest Position	Expertise
A. Joel Criz	A. Joel Criz & Associates, Inc.	CCIM	Realtor
David B. Bills	Vice President Gray, Hong, Bills & Associates, Inc.	M.S., Civil Engineering	Environmental Engineering
Beverly G. Ing	Project Engineer Gray, Hong, Bills & Associates, Inc.	B.S., Civil Engineering & M.B.A.	Drainage
Benson Chow	Senior Associate Pacific Planning & Engineering, Inc.	B.S., Civil Engineering	Traffic Study
John Kilpatrick	Vice President SMS Research, Inc.	Ph.D., Social Behavioral Sciences	Market Study
Eric B. Guinther	President, AECOS, Inc.	B.A., Biology	Aquatic Biology
Sheila S.L. Chong	Sheila S.L. Chong, Notary Public	Owner	Word Processing
Anthony Ramirez	Professional Image	Manager	Printing

BIBLIOGRAPHY

1. Aiea Sugar Mill - A Fee Simple Offering Marketing Study; A. Joel Criz & Associates, Inc. Ewert & Company, and CRS Investments, Inc.
2. Personal Communication; February 1997; Joel Criz, A. Joel Criz & Associates, Inc.
3. Personal Communication; John Kilpatrick; SMS Research, Inc.; March 17, 1997.
4. C & H Sugar Cubelot Press, Volume XVIII, No. 10; October 1978.
5. Ampersand; Alexander & Baldwin, Inc.; Fall 1993; "Liquid Assets," pg. 14.
6. City & County of Honolulu; Land Use Ordinance; April 1995; pg. 5-90.
7. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, U.S. Department of Agriculture Soil Conservation Service; August 1972.
8. The State of Hawaii Data Book; Department of Business, Economic Development & Tourism; 1995.
9. Personal Communication; Randy Tamaye; C & H Sugar Manager; March 1997.
10. Hawaii Stream Assessment. A Preliminary Appraisal of Hawaii Stream Resources, State of Hawaii, Commission on Water Resource Management and National Park Service; December 1990.
11. Air Quality Permits, State of Hawaii, Department of Health, Clean Air Branch.
12. Personal Communication; Randy Tamaye; C & H Sugar Manager; March 1997.
13. Personal Communication; Paul Uyeda, MK Engineers, Ltd., Consulting Electrical Engineers; March 6 & 7, 1997.

XII. COMMENTS AND RESPONSES DURING THE CONSULTATION PROCESS

The following pages provide comment letters and responses received during the Environmental Impact Statement Preparation Notice Period. The Preparation Notice Publication date in the *OEQC Bulletin* was February 8, 1997. The 30-day comment period ended on March 10, 1997.



United States
Department of
Agriculture
Natural
Resources
Conservation
Service
P.O. Box 50004
Honolulu, HI
96850

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

March 17, 1997

Mr. David Bills
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:


Subject: Environmental Impact Statement Preparation Notice (EISPN) -
Aiea Sugar Mill property, Aiea, Hawaii

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,

59-1


KENNETH M. KANESHIRO
State Conservationist



Gray & Bills & Associates, Inc.
CONSULTING ENGINEERS

March 19, 1997

Mr. Kenneth M. Kaneshiro
State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
P.O. Box 50004
Honolulu, HI 96850

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) -
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Kaneshiro:

We thank you for your consultation comment regarding the subject project. Your letter, as well as our response will be placed in the Draft Environmental Impact Statement to complete the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2

cc: Patrick Onishi
Dennis Taylor

The Natural Resources Conservation Service works hand-in-hand with the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

Bruce L. Gray PE
David S. C. King PE
David B. Bills PE
Raymond A. Lee PE
Shirley C. King PE
Mary D. Lee PE
MAYO D. Lee PE
MOLLYN HOPKINS PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0106
Fax: (808) 531-8018

BERNARD J. CAVITTIANO
CONSULTANT



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 118, HONOLULU, HAWAII 96818

BAR CALLED
COMPTROLLER
MARY PATRICKA BERTHOUD
DEPT COMPTROLLER

LETTER NO (P) 1185-7



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Aiea Sugar Mill Property
TMK 9-9-05:Por. 10 and 25
EIS Preparation Notice

Thank you for the opportunity to review the subject document. We have no comments to offer at this time.

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Sincerely,

Gordon Matsuoka
GORDON MATSUOKA
State Public Work Engineer

RY:jy

59-2

Mr. Gordon Matsuoka
State Public Works Engineer
Department of Accounting & General Services
State of Hawaii
P.O. Box 119
Honolulu, HI 96810

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Matsuoka:

We thank you for your consultation comments regarding the subject project. We will include your letter, as well as a response, to complete the Draft Environmental Impact Statement record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

Bruce L. Gray, P.E.
Dennis C. Hong, P.E.
David B. Bills, P.E.
Roy F. Taylor, P.E.
Brent D. Lusk, P.E.
Michael N. Abrams, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-9018



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

INDEPENDENT
ARCHITECT
JERRY M. MATSUDA
GUYUJI H. OKAMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU 11, HAWAII 96813-5097

Mr. Patrick T. Onishi
Acting Chief Planning Officer
Planning Department
City and County of Honolulu
630 South King Street
Honolulu, Hawaii 96813

February 18, 1997

March 19, 1997

Dear Mr. Onishi:

Subject: Aiea Sugar Mill Property
Environmental Impact Statement Preparation Notice
TMK: 9-9-03: 10 par. and 23

Thank you for your transmittal of February 7, 1997, requesting our review of the subject project.

The preparation notice acknowledges that there will be an impact on traffic and that the EIS should address this. The traffic report should include an assessment of the traffic impacts to the State facilities, particularly at the accesses to the freeway.

We will defer further comment until we have had the opportunity to review the draft EIS.

Very truly yours,

Kazu Hayashida
KAZU HAYASHIDA
Director of Transportation

Mr. Kazu Hayashida, Director
Department of Transportation
State of Hawaii
Aliiimoku Hale
869 Punchbowl Street, Suite 507
Honolulu, HI 96813-5097

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) -
Aiea Sugar Mill Property
TMK: 9-9-03: Par. 10 and 23

Dear Mr. Hayashida:

We thank you for your consultation letter dated February 18, 1997 regarding the subject project. Unfortunately, we did not receive a copy of your consultation letter until March 18, 1997 and we hope that the traffic study that has been prepared for the project addresses all your concerns. We specifically know that the traffic study addresses the impact on traffic in a local area. Whether the report in its current form properly assesses the traffic impacts to State facilities such as accesses to freeways, we will wait for your review.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:am
2617-2

cc: Patrick Onishi
Dennis Taylor

BENJAMIN J. CAVETANO
DIRECTOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

236 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 531-4118
FACSIMILE (808) 531-4118

GRAY GILL
DIRECTOR



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

March 10, 1997

Mr. Dennis Taylor, Crazy Shirts, Inc.
99-969 Iwawena Street
Aiea, Hawaii 96701

Dear Mr. Taylor:

We submit for your response (required by Section 11-200-15, Hawaii's Administrative Rules) the following comments on the final environmental assessment/environmental impact statement preparation notice (FEA/EISPN) prepared by Gray Hong Bills & Associates, Inc. for the Aiea Sugar Mill Development Plan Amendment, TMK 9-9-05:10 & 25. Initial notice of availability of the FEA/EISPN was published in the February 8, 1997, edition of the *Environmental Notice*. Please include the following in the draft environmental impact statement (DEIS) for the project:

1. A discussion of direct, indirect and cumulative impacts of implementation of the project on traffic, along with measures proposed to mitigate such impacts;
2. A discussion of direct, indirect and cumulative effects of increasing the impervious surface on site through grading and paving on surface water runoff and potential downgradient flooding, along with measures to mitigate such impacts;
3. A discussion of alternatives to the proposed action, including the no-action alternative (i.e., preserving the historic Aiea Mill complex), along with costs involved and benefits to be accrued for each alternative; and,
4. A discussion of the historic character of the Aiea mill and environs, which lead to its inclusion on the National Register of Historic Places.

Please include this letter and your response in the DEIS for this project. If there are any questions, please call me at 586-4185. Thank you for the opportunity to comment.

Sincerely,

Leslie Segundo

LESLIE SEGUNDO
Environmental Health Specialist

Enclosure

- c Hon. Patrick Onishi, Honolulu Dept. of Planning
- Mr. Tim Hala, Honolulu Dept. of Planning
- Mr. David Bills, Gray Hong Bills & Associates, Inc.
- Hon. Gary Gill, Director of Environmental Quality Control

March 12, 1997

Mr. Leslie Segundo
Environmental Health Specialist
Office of Environmental Quality Control
236 South Beretania Street, Suite 702
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TASK: 9-9-05, For 10 and 25

Dear Mr. Segundo:

We thank you for your consultation comments regarding the subject project. We are providing the following information in response to your comment letter.

1. A Traffic Impact Assessment Report is being prepared for the subject project. This report identifies existing traffic counts and superimposes anticipated traffic counts onto the roadway system. The impact of the increased traffic is then analyzed and appropriate recommendations will be made for roadway intersection improvements to mitigate the impacts.
2. A Drainage Report will be included in the Environmental Impact Statement. With respect to grading and paving operations, permanent and temporary erosion control measures will be identified. With respect to increased runoff and impacts downstream, the site in its current configuration is an industrial site and the proposed use is commercial. The amount of increased runoff is negligible and will be identified. With respect to channel improvements for stream channelization, the Drainage Report will specifically analyze this condition as well as identify mitigating measures. The stream channel flow will be put back into the natural channel before leaving the Aiea Sugar Mill property. There will be no increased aggravation for downstream flooding and this will be identified in the Drainage Report.

3. A discussion of alternatives, including the "no action" alternative, will be included in the report. The preservation option, as well as necessary participation to allow this option to exist, is identified.

Mr. Leslie Segundo
March 12, 1997
Page 2

4. The Draft Environmental Impact Statement, as well as Final Environmental Impact Statement, will provide narrative regarding the history of the mill leading to its inclusion on the National Register of Historic Places. The HARC Library has been visited for the purpose of obtaining the historical information.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor



STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION

P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

February 14, 1997

Mr. David B. Bills, P.E.
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Environmental Impact Statement Preparation Notice
(EISPN) for the Aiea Sugar Mill Property
THK: 9-9-05: por. 10 and 25

We have reviewed the subject Environmental Impact Statement Preparation Notice (EISPN) and confirm that the subject parcel, identified as THK: 9-9-05: por. 10 and 25, consisting of approximately 13.5 acres of land, is within the State Land Use Urban District.

We have no further comments to offer at this time.

Thank you for the opportunity to provide comments on the

EISPN.

If you have any questions in regards to this matter, please feel free to contact me or Leo Asuncion of my staff at 587-3822.

Sincerely,

ESTHER UEDA
Executive Officer

EU:th



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

ESTHER UEDA
Executive Officer

March 11, 1997

Ms. Esther Ueda
Executive Officer
Land Use Commission
State of Hawaii
P.O. Box 2359
Honolulu, HI 96804-2359

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
THK: 9-9-05: Por. 10 and 25

Dear Ms. Ueda:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will identify that the project is in the State Land Use Urban District.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:cc
2617-2

cc: Patrick Onishi
Dennis Taylor

L. Gray
Charles C. Hong, P.E.
David D. Bills, P.E.
Raymond P. Pe
Bryan D. Pe
Aly D. Lee, P.E.
Michael H. Hama, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 571-0306
Fax: (808) 531-8018

David B. Bills, P.E.
Raymond A. Adams, P.E.
Brent D. Lott, P.E.
Michael H. Norman, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

March 11, 1997



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809
FEB 28 1997

Mr. David B Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Environmental Impact Statement Preparation Notice (EISP/N)
for Aiea Sugar Mill Property, TMK 9-9-05: Por. 10 and 25

In reference to your letter of February 7, 1997, requesting comments on the subject EISP/N:

The proposed project site, according to FEMA Community Panel Map No. 150001 0080 A, is located in Zone D. This is an area in which flood hazards are undetermined.

Thank you for the opportunity to review the EISP/N. Should you have any questions, please contact Mr. Dennis Imada of the Project Planning Section at 587-0257.

Sincerely,
Andrew M. Monden
ANDREW M. MONDEN
Chief Engineer

DL:k

Mr. Andrew M. Monden, Chief Engineer
Land Division, Engineering Branch
Department of Land & Natural Resources
State of Hawaii
P.O. Box 373
Honolulu, HI 96809

SUBJECT: Environmental Impact Statement Preparation Notice (EISP/N)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Monden:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will identify that the project is within Zone X of the Flood Insurance Rate Map System (FIRM). However, Aiea Stream also passes through the project and separates two portions of the project. Therefore, the Draft Environmental Impact Statement will include the proper documentation showing the flood plain, floodway and FIRM flood elevations which apply to the project.

There are channel improvements proposed in conjunction with this project which were identified in the Preparation Notice. This information will also be coordinated with the City & County of Honolulu Flood Ordinance.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.
David B. Bills
David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

March 5, 1997

Mr. David B. Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, HI 96813-4499

Dear Mr. Bills:

SUBJECT: Environmental Impact Statement
Preparation Notice for the Alea Sugar Mill Property
TMK: 9-9-005: Por. 10 and 25, Alea, Oahu

Thank you for transmitting a copy of the EIS Preparation Notice for the proposed project. As you are aware, the Alea Sugar Mill and its accessory buildings are listed on the Hawaii and National Register of Historic Places. We were disappointed to learn that the Sugar Mill will not be utilized as the headquarters facilities of Crazy Shirts. However, we realize and understand the difficulties Crazy Shirts has encountered to make this project viable. Nevertheless, demolition of this significant structure and only sugar mill listed on the Hawaii Register of Historic Places will be an adverse effect. We would like to recommend the following items be considered to somewhat mitigate the adverse effect of demolition:

1. A portion or portions of the mill be kept and utilized within the shopping complex. We will be happy to work with the master planner to identify which portions offer the most significance and interpretation opportunities, yet will not adversely hinder the development.
2. Offer parts for salvage. There is a great interest from other historic sites for the corrugated metal alone, which is unavailable in the current market.
3. As previously offered in the intent to demolish letter from Crazy Shirts, photographic and historic documentation be submitted for archiving. We recommend these documents be submitted to Chieko Tschihata at the University of Hawaii, Hamilton Library, Hawaiian Collections.

Thank you for the opportunity to comment. Should you have any questions, please call Tonia Moy at 587-0005.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

TM:jk



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

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

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Alea Sugar Mill Property
TMK: 9-9-005: Por. 10 and 25

Dear Mr. Hibbard:

We thank you for your consultation comments regarding the subject project. The fact that Crazy Shirts, Inc. has had a difficult time in pursuing its original plan of incorporating historic preservation will be identified in the Draft Environmental Impact Statement. It is further understood that should the commercial development plan become realized, there will be a definite adverse effect on Hawaii historic places. To that end, the following information will be identified as mitigation measures with respect to historic preservation issues:

1. There is a potential to possibly incorporate various features of the Alea Sugar Mill within the commercial development which will also enhance the historic significance of the site.
2. Certain parts of the site, as appropriate, could be offered as salvage to various entities who may wish to incorporate the features into historic preservation displays.
3. Crazy Shirts, Inc. has already completed an extensive photographic display of the project. All of the photographic and historical documentation which Crazy Shirts, Inc. has compiled will be turned over to the appropriate entity. You have identified that the University of Hawaii Hamilton Library Hawaiian Collections may be this depository.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

BRUNNEN
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8016



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

BENJAMIN J. CAVETANO
GOVERNOR
SELMI F. MAYA
DIRECTOR
BRADLEY J. MOSESMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

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

**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

Ref. No. P-6557

March 10, 1997

Mr. David B. Bills
Gray, Hong, Bills and Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Bills:

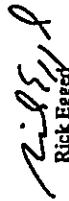
Subject: Environmental Impact Statement Preparation Notice (EISP/N) for the
Alca Sugar Mill Property

We have the following comment on the EISP/N for the subject project.

According to the EISP/N, the proposed Sugar Mill Shopping Center is situated adjacent to Alca Stream which flows into Alca Bay. Due to its close proximity to coastal waters, there are concerns about water quality degradation of the nearshore area from polluted urban runoff. A primary objective of the Coastal Zone Management (CZMA) law, Chapter 205A, is to protect coastal ecosystems and minimize adverse impacts to water quality. As such, the project's conformance with this and other objectives and policies of Chapter 205A should be addressed in the EIS.

Should you have any questions, please call Charles Carole of our CZM Program at 587-2804.

Sincerely,


Rick Egged
Director
Office of Planning

March 19, 1997

Mr. Rick Egged, Director
Office of Planning
Department of Business, Economic Development & Tourism
State of Hawaii
235 S. Beretania Street, 6th Floor
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISP/N) -
Alca Sugar Mill Property
TMK: 9-9-05, Pbr. 10 and 25

Dear Mr. Egged:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will include specific sections on surface water runoff identifying temporary, as well as permanent erosion control measures which would be utilized on the project. In addition, the project proposes a stream channel and this work will require a Department of the Army Permit from the Corps of Engineers. In conjunction with any Department of the Army Permit, as you are aware, a Coastal Zone Management Consistency Certification is required from your office. Therefore, you will be involved in the review process even after the Environmental Impact Statement Document is completed.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:am
2617-2

cc: Patrick Onishi
Dennis Taylor

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 528-3111

JEREMY HARRIS
MAYOR



MICHAEL S. MAKAMURA
CHIEF
WILLIAM B. CLARK
LEE DONOHUE
DEPUTY CHIEFS

Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS



119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

March 11, 1997

OUR REFERENCE BS-DL

February 13, 1997

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

This is in response to your letter of February 7, 1997, concerning the Environmental Impact Statement Preparation Notice and Environmental Assessment for the Alea Sugar Mill Property, TMK: 9-9-05: Por. 10 and 25.

This project should have no significant impact on the operations of the Honolulu Police Department.

Thank you for the opportunity to comment.

59-11

MICHAEL S. MAKAMURA
Chief of Police

By *Eugene Uemura*
EUGENE UEMURA, Assistant Chief
Administrative Bureau

Mr. Eugene Uemura, Assistant Chief
Administration Bureau
Police Department
City & County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Alea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Uemura:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will identify that your department sees no significant impact on the operations of the Honolulu Police Department.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

CITY AND COUNTY OF HONOLULU

FIRE DEPARTMENT

3375 KOAPAKA STREET, SUITE 4425
HONOLULU, HAWAII 96819-1008



JEREMY HARRIS
SAFETY

ANTHONY J. LOPEZ, JR.
FIRE CHIEF
ATRIUM E. LEONARD
FIRE DEPARTMENT



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: 808/521-0306
Fax: 808/531-8019

March 11, 1997

February 12, 1997

Mr. David B. Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Mr. Anthony J. Lopez, Jr.
Fire Chief
Fire Department
City & County of Honolulu
3375 Koapaka Street, Suite H425
Honolulu, HI 96819-1869

Dear Mr. Bills:

SUBJECT: Environmental Impact Statement Preparation Notice
(EISP) for the Alea Sugar Mill Property
TMK: 9-9-05- Por. 10 and 25

SUBJECT: Environmental Impact Statement Preparation Notice (EISP)
Alea Sugar Mill Property
TMK: 9-9-05- Por. 10 and 25

Dear Fire Chief Lopez:

We have reviewed the subject material provided and foresee no adverse impact in Fire Department facilities or services. Fire protection services provided from the Alea and Waiuu engine companies with ladder service from Waiuu are adequate.

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will identify that your department sees no adverse impact in the ability to fight fires. Fire protection services will also be provided as coming from the Aiea and Waiuu Engine Companies.

59-12

Access for fire apparatus, water supply and building construction shall be in conformance to existing codes and standards.

The Draft Environmental Impact Statement will note that access for fire apparatus, water supply and building construction will conform to existing codes and standards.

Should you have any questions, please call Acting Assistant Chief Arthur Ugalde of our Administrative Services Bureau at 831-7774.

Should you have any questions regarding this matter, please contact our office.

Sincerely,

ANTHONY J. LOPEZ, JR.
Fire Chief

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

AJUMPN:ny

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA
711 KAPOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813



CHERYL D. SOON
DIRECTOR
JOSEPH M. MAGALDI, JR.
DEPUTY DIRECTOR

March 5, 1997

TSP2/97-00623R

Mr. David Bills
Gray Hong Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Alca Sugar Mill Project

In response to your February 7, 1997 letter, the Environmental Impact Statement (EIS) Preparation Notice and the Application for Development Plan Land Use Map Amendment and Environmental Assessment prepared for the subject project were reviewed. The following comments are provided for your consideration as you prepare the EIS:

1. A traffic report should be prepared for the proposed development. The report should include proposed roadway and intersection geometrics at both ends of the project. Warrants for traffic signals should also be conducted.
2. Driveways fronting the roadway extension should be aligned directly across each other.
3. Roadway improvements along the project frontage should be clearly identified and coordinated with the various government agencies, affected residents and the neighborhood board.

In order to facilitate our review of the EIS, please provide us with two copies of the document. Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation System Planning Division at 527-6976.

Sincerely,

JOSEPH M. MAGALDI, JR.
Acting Director

cc: Mr. Dennis Taylor, Crazy Shirts, Inc.
Mr. Tim Hata, Planning Department
Office of Environmental Quality Control

Gray • Hong • Bills • & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: 508-234-6314
Fax: 508-234-6314



March 11, 1997

Ms. Cheryl Soon, Director
Department of Transportation Services
City & County of Honolulu
711 Kapiolani Blvd., Ste. 1200
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Alca Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Ms. Soon:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will take the following actions:

1. A Traffic Impact Assessment Report is being prepared for the subject project. This study is being prepared by an independent traffic consultant and we have had this traffic consultant meet with your department to determine the specifics of the study. The study will be included in the Draft Environmental Impact Statement, as well as submitted separately to your office.
2. The project will have opposite driveways fronting the roadway extension aligned directly across from each other. The preliminary project site plan shows a slightly offset alignment at the shopping center driveway and HARC Building driveway. This will be corrected as part of the actual drawing submissions to your agency.
3. The Draft Environmental Impact Statement will specifically show where frontage improvements are anticipated to be required. The Draft Environmental Impact Statement as well as Traffic Impact Assessment Report will clearly identify the improvements required.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

550 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
 PHONE: (808) 537-8653 • FAX: (808) 537-4979



KENNETH E. SPRAGUE, P.E.
 ACTING DIRECTOR

CHERYLE OJUMA SEPE, ETC.
 SENIORITY DIRECTOR

JEREMY HARRIS
 MAYOR

In reply refer to:
 WCC 97-28

February 25, 1997

Mr. David Bills
 Gray, Hong, Bills & Associates, Inc.
 119 Merchant Street, Suite 607
 Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
 (EISP) FOR THE AIEA SUGAR HILL PROPERTY
 TRK: 9-9-051POR. 10 AND 25

The municipal wastewater system is available and adequate to accommodate the proposed 118,600 square foot neighborhood shopping center. However, the total wastewater discharge from the property must not exceed a peak flow of 150,000 gallons per day.

A "Sewer Connection Application" form has been submitted for the subject property, but a new form will need to be submitted due to the changes in the proposed use. This project may also be liable for payment of a Wastewater System Facility Charge.

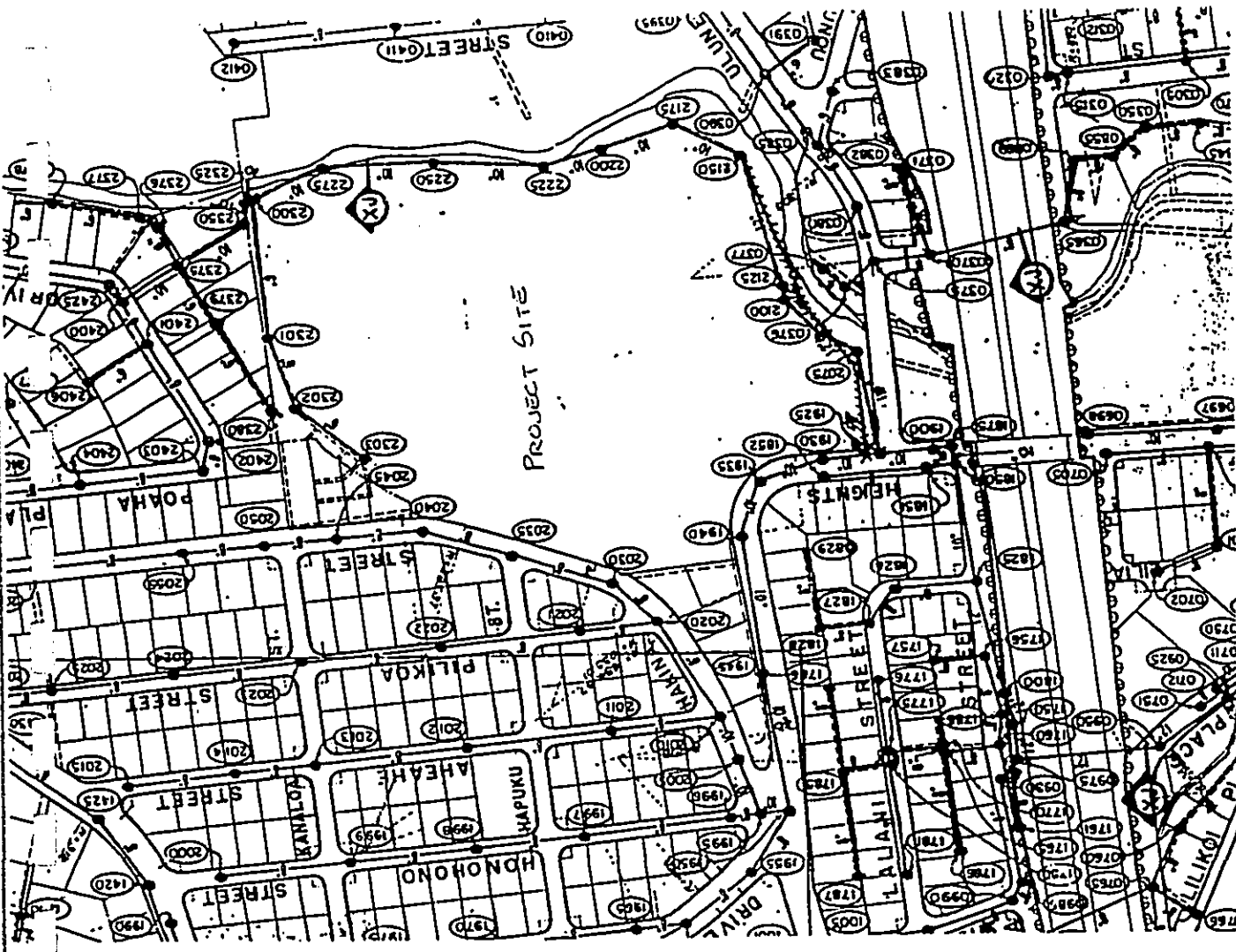
We are in the process of relocating a sewer line running along Aiea Stream. Please see the attached map. The developer should coordinate the site plan with the Department of Wastewater Management's Collection System Design Section to locate a feasible route through the property.

If you have any questions, please contact Mr. Scott Gushi of the Service Control Branch at 523-4886.

Very truly yours,

Kenneth E. Sprague
 KENNETH E. SPRAGUE
 Director

Attach.





Gray + Hong + Bills & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

119 Merchant Street, Suite 607
Honolulu, HI 96813-4499
Telephone: 808-521-0306
FAX: 808-531-8018

Mr. Kenneth E. Sprague, Director
Department of Wastewater Management
City & County of Honolulu
650 South King Street, 3rd Floor
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Sprague:

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will include the following information:

1. The anticipated design flow from the shopping center will be in the neighborhood of 20,000 GPD. The Draft Environmental Impact Statement will identify this item and will further identify that under the Aiea Sugar Mill configuration there was an agreement with the City to limit the flow to less than 150,000 GPD.
2. The project will ultimately be submitting a sewer connection application form. The appropriate time for submittal of this form will be at the time of the change in zoning application. Based on your consultation comments, it is obvious that the project will not exceed a peak flow of 150,000 GPD.
The Draft Environmental Impact Statement will also identify that the project may be liable for wastewater system facility charges.
3. The Draft Environmental Impact Statement will identify that channel improvements are proposed with respect to Aiea Stream. In conjunction with this, it would seem appropriate to have channel improvements and realignment of the sewer in the same corridor. The Draft Environmental Impact Statement will preliminarily show the proposed sewer realignment corridor that makes sense for the project. This information will also be separately submitted to your department.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

840 SOUTHERN STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
DIRECTOR

MG (RET.) JOHN R. D'ARAUJO, JR.
DIRECTOR

ALVIN C AU
DEPUTY DIRECTOR



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813 4-499
Telephone: (808) 521-0306
Fax: (808) 531-8018

February 24, 1997

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Environmental Impact Statement Preparation
Notice (EISPN) For The Alea Sugar Mill Project
Alea, Oahu, Hawaii
Tax Map Key 9-9-005:010 (Por.) & 025

We have reviewed the information for the above-described project and request that street tree planting plans be submitted for our review and approval.

Thank you for the opportunity to review the project.

Please have your staff contact Daniel Takamatsu of our Facilities Development Division at 527-6301 if you need further information.

59-16

Sincerely,

John R. D'Araujo, Jr.
MG (RET.) JOHN R. D'ARAUJO, JR.
DIRECTOR

JRD:ei

MG (Ret.) John R. D'Araujo, Jr.
Director
Department of Parks & Recreation
City & County of Honolulu
650 South King Street, 10th Floor
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Alea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear MG D'Araujo:

Thank you for your comments regarding the Draft Environmental Impact Statement Preparation Notice. You have indicated that the project will require a street tree planting plan and it should be submitted to your office for review and approval. This work will be done and the actual submittal will be a part of the final construction plans processed with all appropriate City and State agencies. This is a regularly required submittal for all projects having frontage on City streets and the list of necessary approvals will identify this item.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

David B. Bills
David B. Bills

CITY AND COUNTY OF HONOLULU
BUILDING DEPARTMENT
HONOLULU MUNICIPAL BUILDING
150 SOUTH KING STREET
HONOLULU, HAWAII 96813



Gray • Hong • Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813
Telephone: 808-538-1111
FAX: 808-538-1112



RANDALL K. FUJIKI
DIRECTOR AND BUILDING SUPERINTENDENT
HERO W. SAOULAS
DEPUTY DIRECTOR AND BUILDING SUPERINTENDENT

March 11, 1997

PB 97-102

February 14, 1997

Mr. Randall K. Fujiki, Director
and Building Superintendent
Building Department
City & County of Honolulu
650 South King Street, 2nd Floor
Honolulu, HI 96813

David Bills
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Environmental Impact Statement Preparation
Notice (EISP) for Aiea Sugar Mill Property
TMK: 9-9-05:POR. 10 and 25

We have reviewed the EISP for the subject project and have
no comments to offer.

SUBJECT: Environmental Impact Statement Preparation Notice (EISP)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

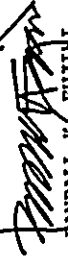
Dear Mr. Fujiki:

We thank you for your consultation comments regarding the subject project. We will
include your letter, as well as its response, to have a complete record.

Should you have any questions regarding this matter, please contact our office.

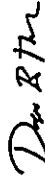
59-17

Very truly yours,


RANDALL K. FUJIKI
Acting Director and
Building Superintendent

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET, 5TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 531-4431 • FAX: (808) 527-5189



Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 1100
Honolulu, HI 96813
Telephone: (813) 333-6399
FAX: (813) 333-6391

JEREMY HARRIS
MAYOR

ROBERT AGRES, JR.
DIRECTOR
DARWIN J. HAMAMOTO
DEPUTY DIRECTOR

March 12, 1997

March 7, 1997

Mr. Robert Agres, Jr., Director
Department of Housing and
Community Development
City & County of Honolulu
650 South King Street, 5th Floor
Honolulu, HI 96813

Mr. David B. Bills
Gray, Hong, Bills and Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

SUBJECT: Environmental Impact Statement Preparation Notice (EISP)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Bills:

Dear Mr. Agres:

Subject: Environmental Impact Statement Preparation Notice (EISP)
for the Aiea Sugar Mill Property
Tax Map Key: 9-9-05: por. 10 and 25

This is in response to your letter dated February 7, 1997 regarding your request for comments for the EISP for the Aiea Sugar Mill property.

The EISP indicates that the proposed project does not involve the development of housing units; and that the project will impact the surrounding residential area. We recommend that the final environmental impact statement include any additional information on traffic control and noise impacts on the residents in the area.

Thank you for the opportunity to review and comment on this matter. Should you have any questions, please contact Rae Gee at 527-5088.

Sincerely,

ROBERT AGRES, JR.
Acting Director

cc: Planning Department

We thank you for your consultation comments regarding the subject project. The Draft Environmental Impact Statement will contain a Traffic Impact Analysis Report discussing traffic with and without the proposed project. With respect to noise, traffic associated with the project will be accessing the shopping center from a new Master Plan Roadway installed across the property. There will be no ingress or egress to the shopping center from existing residential streets such as Kulawea Street and Ulune Street. There will be discussion of noise; however, it will be of a general and subjective character.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
830 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 525-4241 • FAX: (808) 527-8857



JEREMY HARRIS
MAYOR

February 25, 1997

Mr. David B. Bills
Gray, Hong, Bills &
Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: Environmental Impact Statement Preparation
Notice (EISP) - Aiea Sugar Mill Property
TMK: 9-9-05: POR. 10 and 25

We have reviewed the subject EISP and have the following comments:

1. A stream study and a drainage report should be submitted to the Drainage Section, Division of Engineering, for review and approval.
2. Frontage improvements based on the highest land use should be in accordance with City standards and the Americans with Disabilities Act Accessibility Guidelines.
3. Adequate on-site parking should be provided.
4. The EISP should address best management practices (BMPs) during and at post construction to mitigate discharge of pollutants into the Aiea Stream. Specific concerns include demolition, removal of existing structures, sediment during construction, and measures (oil-water separators, water quality inlets, directing pavement runoff to planted areas, etc.) to reduce pollutants from parking lot area.

Should you have any questions, please contact Alex Ho at 523-4150.

Very truly yours,

J. Shimada
JONATHAN K. SHIMADA, PHD
Acting Director and Chief Engineer

Gray • Hong • Bills & Associates, Inc.



March 11, 1997

Jonathan K. Shimada, Ph.D.
Director and Chief Engineer
Department of Public Works
City & County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISP)
Aiea Sugar Mill Property
TMK: 9-9-05: POR. 10 and 25

Dear Dr. Shimada:

Thank you for your consultation comments regarding the subject project. The following information will be included in the Draft Environmental Impact Statement:

1. The Stream Study and Drainage Report will be included in the Draft Environmental Impact Statement. This information will also be separately submitted to your office for review and approval.
2. The Draft Environmental Impact Statement will identify where frontage improvements will be required for the subject project. These frontage improvements will be consistent with City standards and also consistent with the Americans with Disabilities Act Accessibility Guidelines.
3. The preliminary commercial plan shows all required parking being provided on site.
4. The Draft Environmental Impact Statement will include information regarding the project's proposed Best Management Practices (BMP). The project is in its initial planning stages and while the specific plans will not be available at this time, a general discussion of the methods available for sediment and pollution control will be identified.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843
PHONE (808) 527-6180
FAX (808) 533-2714



March 17, 1997

JEREMY HARRIS, Mayor
WALTER O. WATSON, JR., Chairman
MURKESH YAMASATO, Vice Chairman
KAZUHIYASHIDA
JESSICA V. LUM
FORREST C. MURPHY
JOYDANAK SHIMADA, PhD
BARBARA KALISTATION
RAYMOND H. SATO
Manager and Chief Engineer

Mr. David Bills
Gray, Hong, Bills and Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Bills:

Subject: Your Letter of January 28, 1997 Regarding the Environmental Impact Statement Preparation Notice for the Proposed Aiea Sugar Mill Project. TRK: 9-9-5: 10 and 25

Thank you for the opportunity to review and comment on the Environmental Impact Statement (EIS) Preparation Notice for the proposed Aiea Sugar Mill Project. We have no objections to the proposed project and offer the following comments:

1. There are two existing wells, state well numbers 2255-35 and 36, within the proposed project site with permitted uses of 0.906 and 0.788, respectively. The Draft EIS should address the future use and ownership of the wells. If there is no future use for the wells, they should be sealed.
2. The existing water system is presently adequate to accommodate the proposed commercial development. There are two existing water meters serving the site.
3. The availability of water will be confirmed when the building permits are submitted for our review and approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.
4. If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.
5. The on-site fire protection should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
6. The proposed project is subject to Board of Water Supply (BWS) cross-connection control requirements prior to the issuance of the building permit. BWS approved reduced pressure principle backflow prevention assemblies will be required after all domestic water meter(s) serving the project.

59-20

Pure Water... our greatest need - use it wisely

Mr. David Bills
Page 2
March 17, 1997



7. We recommend the use of drought tolerant/low water use plants and xeriscaping principles for all landscaping. We also recommend the installation of an efficient irrigation system, possibly using drip irrigation. The irrigation system should incorporate moisture sensors to avoid the operation of the system in the rain and if the ground has adequate moisture.
8. We reserve further comments on the proposed development until development plans are formalized.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,


RAYMOND H. SATO
Manager and Chief Engineer

Pure Water... man's greatest need - use it wisely



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0106
Fax: (808) 531-8018

Mr. Raymond H. Sato
Board of Water Supply
City & County of Honolulu
March 19, 1997
Page 2

March 19, 1997

Mr. Raymond H. Sato
Manager & Chief Engineer
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, HI 96843

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) -
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Mr. Sato:

We thank you for your consultation comments regarding the subject project. We are providing the following responses to your comments:

1. The Draft Environmental Impact Statement will contain information regarding the status of the existing wells on the site. The EIS will also identify that if the wells are no longer used, there is a need to have the wells sealed.
2. The Draft Environmental Impact Statement reports that the water system to serve the commercial area is adequate.
3. We understand that the availability of water will be determined when building permits are submitted for review and approval. This will probably be at least two years in the future. Your information will be included in the Draft Environmental Impact Statement.
4. It is premature to determine the meter sizes and the construction drawings prepared will include your information regarding meters.
5. Through the consultation process, we have already discussed fire protection with the Honolulu Fire Department. We will also be coordinating with the Fire Prevention Bureau. This will be an ongoing process.
6. Your information regarding cross-connection control requirements will be addressed at the time of building permits is applied for. Your requirements are standard requirements and will be met.

7. Irrigation systems will be utilized within the parking area and these plans will be developed at a future date. Your recommendations for drip systems and efficient irrigation systems will be appropriately conveyed to the landscape architect.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:am
2617-2

cc: Patrick Onishi
Dennis Taylor



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

119 Merchent Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: 808/521-0306
Fax: 808/521-8018

Mr. Paul Mizue, P.E., Acting Chief
Planning & Operations Division
Department of the Army
Pacific Ocean Division, Corps of Engineers
Fort Shafter, HI 96858-5440

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TMK: 9-9-05: Pbr. 10 and 25

Dear Mr. Mizue:

We thank you for your consultation comments regarding the subject project. The following information will be included in the Draft Environmental Impact Statement:

1. The requirement for the Department of the Army Permit with respect to Aiea Stream improvements will be identified. The actual submittal will be at a future date when it has been determined that the concept of commercial development of the property is acceptable.
2. The project is within Zone X of the Flood Insurance Rate Map (FIRM) system. However, the project also has Aiea Stream flowing through it. Channel improvements are being proposed to Aiea Stream which is in a Zone AE area and contains flood plain and floodway boundaries. This information will be included in the Draft Environmental Impact Statement.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

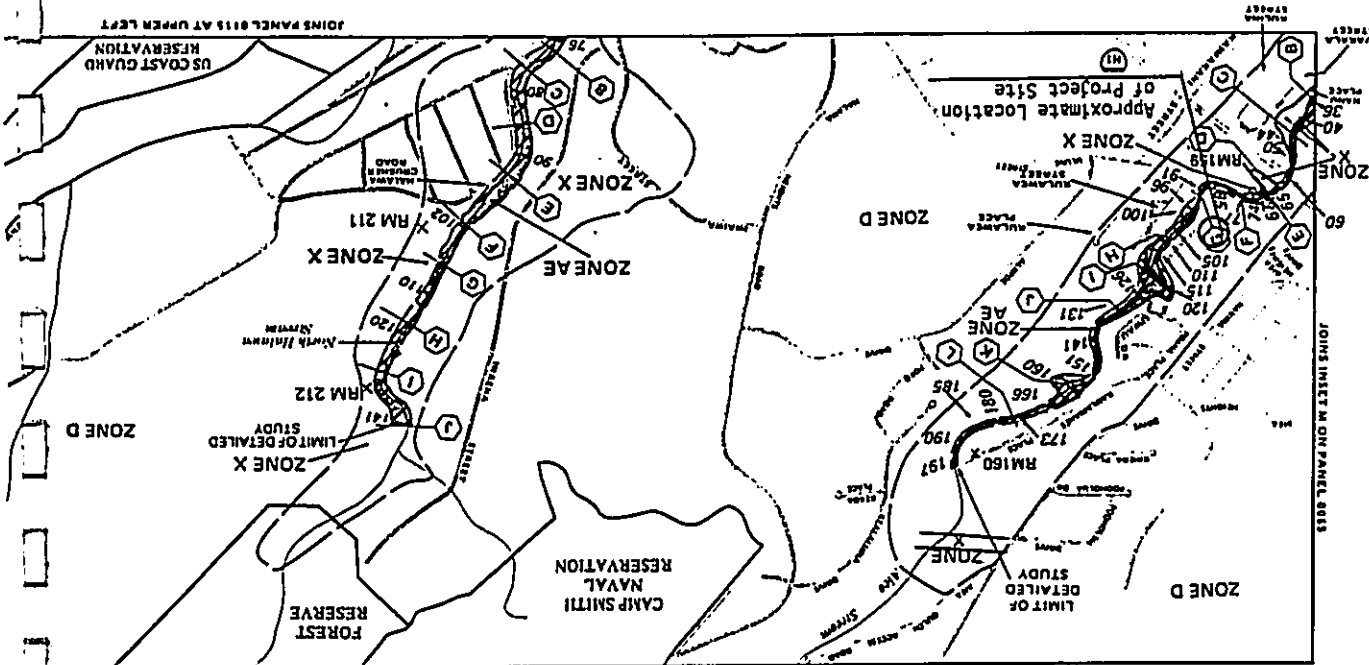
David B. Bills

David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

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February 24, 1997

A&B-HAWAII, INC.

Mr. David Bills
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Subject: Environmental Impact Statement Preparation Notice for
the Aiea Sugar Mill Property

Dear Mr. Bills:

We were provided a copy of the "Application for Development Plan Land Use Map Amendment and Environmental Assessment" sent to C&H Sugar Company by your letter of February 7, 1997. We have the following comments regarding the Application:

1. We would appreciate it if A&B-Hawaii, Inc. (ABHI) could be added as a consulting party in the EIS process. ABHI is the parent company of C&H, as well as the parent of A&B Properties, Inc., the company which sold the Aiea property to Crazy Shirts. A&B Properties retained certain rights in the property that could be affected by the development of the site.

The following address may be used for ABHI:

A&B-Hawaii, Inc.
822 Bishop Street
Honolulu, Hawaii 96813
Attn: R. K. Sasaki, Sr. Vice President

2. We also would appreciate if the Hawaii Agriculture Research Center (HARC) could be named as a consulting party in the EIS process. HARC's facilities are located on the same lot that is the subject of the Application, and HARC will be directly affected by the development of the site.

The following address may be used for HARC:

Hawaii Agriculture Research Center
99-193 Aiea Heights Drive
Aiea, Hawaii 96701
Attn: Stephanie A. Whalen, President

3. The "Hazards" section on the fifth page of the Application states that "California & Hawaiian Sugar Company will be responsible to deliver the site environmentally clean upon termination of their lease". ABHI and Crazy Shirts have reached agreement on the termination of C&H's lease, but the transaction has not yet been consummated, and the language used in the Application is inconsistent with the agreements reached with Crazy Shirts. We therefore request that you omit any description of private agreements between the parties concerning their respective environmental obligations.

Thank you for your consideration of these comments. Please contact the undersigned if you should have any questions.

Very truly yours,

Robert K. Sasaki
Senior Vice President

cc: Mr. Dennis Taylor
Ms. Stephanie Whalen



Gray • Hong • Bills & Associates, Inc.
CONSULTING SERVICES

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 531-0386
Fax: (808) 531-8018

Mr. Robert K. Sasaki
March 11, 1997
Page 2

March 11, 1997

Mr. Robert K. Sasaki
Senior Vice President
A&B-Hawaii, Inc.
P.O. Box 3440
Honolulu, HI 96801

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TMK: 9-9-05: For 10 and 25

Dear Mr. Sasaki:

We thank you for your consultation comments regarding the subject project. We are providing the following information, the appropriate portions of which will be included in the Draft Environmental Impact Statement:

1. By your response to the Environmental Impact Statement Preparation Notice, you are considered a consulting party in the EIS process. To that end, any comments you make will be addressed and included in the Draft Environmental Impact Statement.
2. The Hawaii Agricultural Research Center (HARC) has also been forwarded a copy of the Environmental Impact Statement Preparation Notice. We look forward to receiving their comments regarding this Notice. Any of their concerns and/or comments will be included in the Draft Environmental Impact Statement.
3. Your consultation comment letter indicates there are some concerns between the three entities involved in the property (ABHI, Crazy Shirts, Inc. and C&H Sugar) regarding the status and commitments for environmental clean-up on the site. We appreciate your concern for complying with contractual agreements between the various parties. However, the Draft Environmental Impact Statement is a disclosure process. We request that we be provided an appropriate statement which discloses general clean-up responsibilities and who the responsible parties may be. We would also appreciate a general description of the proposed clean-up plan. We would like to be able to include this information in the Draft Environmental Impact Statement.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:co
2617-2
cc: Patrick Onishi
Dennis Taylor

Antoinette Konia Freitas
99-1040 Pu'umakani Street
Aiea, HI 96701

March 11, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwacana Street
Aiea, HI 96701

Dear Mr. Taylor:

Please pardon the tardiness of these comments regarding your EIS preparation notice as I have just received my OEQC notice today. My family and I have lived in Aiea since the late 1950's and are strongly against the demolition of the sugar mill (in particular) and the idea of a shopping complex.

The Aiea sugar mill represents a quickly fading part of our communities history. The Aiea sugar mill has been deemed so significant that it has been placed on the National Historic Registry. To demolish the mill would be equivalent to ripping a page out of our communities history book. We are strongly opposed to this prospect.

It is also our concern that a shopping complex will further tax an already overburdened Aiea community. I and my family have become painfully aware of the adverse impacts associated with the current uncontrolled rate and magnitude of change our community has experienced in the past 10 years. Unfortunately, your project will contribute to this undesired state of affairs. The current Aiea Shopping center is perfectly suited to serve the needs of our community, we don't need another shopping complex. Furthermore, the current shopping center is located in an area which has just received a tremendous amount of infrastructure up grade which has meant among other things that the Aiea community has been inconvenienced for the past two or three years waiting for this construction to be completed. Your project by suggesting further infrastructure construction will tax an already taxed community. Finally, we simply don't feel right about siting a 188,600 square foot shopping complex next to a residential area or a high school.

We are also concerned about the possibility of channeling any portion of Aiea Stream. It is our understanding that your company proclaims to be an environmentally sensitive company so to ascertain the possibility of channeling Aiea stream seems out of line with what you say. Furthermore, channelization has been known to function as conduits which move siltation quicker to coastal waters and increased velocity of channeled water may effect erosion down stream.

While we feel that another shopping center seems excessive, we would still like to suggest that if your request for zoning change is approved that the Aiea sugar mill be preserved and integrated into your designs in order that my community will be able to recall its past and transmit this information to the future residents of Aiea.

I hope that you will kindly receive these comments despite their tardiness. Thank you for the opportunity to comment.

Sincerely,

Antoinette Konia Freitas
Antoinette Konia Freitas

cc: City and County of Honolulu, Planning Department



Gray-Hong & Associates, Inc.
CONSULTING ENGINEERS

March 11, 1997

Ms. Antoinette Konia Freitas
99-1040 Pu'umakani Street
Aiea, HI 96701

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
IMK: 9-9-05; Por. 10 and 25

Dear Ms. Freitas:

We thank you for your consultation comments regarding the subject project. We are providing the following information in a Draft Environmental Impact Statement. Hopefully, inclusion of the following information will identify community concerns regarding the proposed shopping center:

1. The Draft Environmental Impact Statement will provide a historic perspective of the Aiea Sugar Mill and its relationship to the Aiea area.
2. In conjunction with preparation of the Draft Environmental Impact Statement, it is our responsibility to provide technical data to agencies responsible for monitoring infrastructure. The information obtained from these agencies will be included in the Draft Environmental Impact Statement. It is clear that you have a concern for infrastructure. The most logical way to determine if this concern is substantiated is to provide technical information to various agencies and receive their comments.
3. The Draft Environmental Impact Statement will contain a marketing study and one of the purposes for providing this study is to see if there is a need for such a center. There are other shopping centers in the area which are also available. The purpose of the marketing study is to determine future needs, as well as current needs.
4. The commercial development proposal includes a proposal to channelize a portion of Aiea Stream passing through the project. The Draft Environmental Impact Statement will specifically address sedimentation, velocity and general aesthetic aspects of the project. It is our responsibility in preparing the report to identify any positive and negative qualities regarding the proposed channel realignment.

Ms. Antoinette Konla Freitas
March 11, 1997
Page 2

5. The Draft Environmental Impact Statement will include information identifying community concerns. One community concern is a general underlying wish to keep the property intact and maintain the sugar mill in conformance with historic preservation or park considerations. In fact, the owners of the property (Crazy Shirts, Inc.) would love nothing more than to see this occur. However, for this to occur, Crazy Shirts, Inc. needs some help. Crazy Shirts, Inc. originally bought the property with the intention of maintaining the integrity of the historic preservation issues. However, it is economically not possible to do so. Somebody else, whether it be the City & County of Honolulu, whether it be the State of Hawaii or whether it be a private preservation group, needs to be able to step forward and also absorb some of the financial burden for maintaining the historic preservation value. As of this date, no such entity has stepped forward.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

TOM OKAMURA
MAJORITY LEADER

HOUSE OF REPRESENTATIVES

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813



March 7, 1997

Mr. Tim Hain
City and County of Honolulu
Planning Department
650 South King Street
Honolulu, HI 96813

Dear Mr. Hain:

RE: Environmental Impact Statement Preparation Notice

In response to the EIS Preparation notice for the demolition and development of the Aiea Sugar Mill, I would like to become a consulted party. In addition, I would like to raise the following concerns which should be thoroughly studied and addressed in the Environmental Impact Statement:

1. Traffic Congestion. The streets and roads surrounding and providing access to the site are old, narrow, winding and in some cases border on substandard. Any type of major attraction at this site would significantly increase traffic and further compound the congestion which already plagues this area. Accordingly, a complete and thorough analysis of the impacts on traffic flow, both in the immediate vicinity and the surrounding community must be undertaken. In addition, requisite roadway improvements and their associated costs should be identified.
2. Quality of life for residents of adjacent properties - traffic coming in and out of the center could have a significant impact on the level of noise, sense of privacy, quality of air, potential increase in crime rate, etc.
3. Demolition of a historical landmark - the sugar mill has been a part of Aiea's heritage for many generations. Full consideration to the restoration and retention of the existing structure should be undertaken.
4. Public Infrastructure - the existing infrastructure in this area is older and more stressed and any new and modern construction could have a significant impact on the water and sewer lines.
5. Potential effect on property value - due to the potential negative impact on the environment such as noise, traffic, crime etc., these factors may adversely impact the marketability of the properties around the mill site.
6. Business Competition - the community has patronized and enjoyed

many established small businesses for a good number of years and another commercial center at such close proximity to these existing establishments could be detrimental to their business. In the past several months, as a matter of fact, there have been businesses in the nearby shopping centers which have had to close due to the sagging economy.

It is our hope that these issues can be addressed and resolved in a mutually beneficial manner.

Please feel free to call me at 586-6340 if there are any questions or concerns.

Sincerely,

Handwritten signature of Tom Okamura in black ink.

Tom Okamura
State Representative

cc: Neighborhood Board Chair Mike Miura
Claire Tamamoto



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

GRAY, HONG, BILLS & ASSOCIATES, INC.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

Representative Tom Okamura
March 12, 1997
Page 2

March 12, 1997

Representative Tom Okamura
State House of Representatives
State Capitol, Room 439
415 South Beretania Street
Honolulu, HI 96813

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
Aiea Sugar Mill Property
TMK: 9-9-05: Por. 10 and 25

Dear Representative Okamura:

We have received your consultation comments regarding the subject project. We would like to provide the following information and background regarding information which will be included in the Environmental Impact Statement as a result of your comments:

1. A complete Traffic Impact Assessment Report is being prepared for the project. The report will identify existing traffic levels and additional traffic generated from a commercial development. In addition, recommendations with respect to roadway modifications will be included on how to mitigate the impacts of any traffic. All of the costs for these improvements will be paid for by the developer and we hope to have preliminary budgets for these items.
2. As in Item 1 above, the Traffic Impact Assessment Report will identify increased levels of traffic as well as improvements required to mitigate the impacts. We will also include discussions regarding privacy, air quality and potential increase in crime rate. However, the character of some of these discussions may be qualitative in nature since definitive information may not be available or predictable.
3. The Environmental Impact Statement provides historical perspectives of the sugar mill, as well as considerable recognition of the value of the sugar mill to the area. Options to save the sugar mill will also be outlined in the Draft Environmental Impact Statement. Please be aware that options to save the sugar mill also require participation by other entities, including City, State or other private preservation groups. To this date, many people have expressed their desire to see the landmark retained, but as far as active participation (funding), there has been no such effort.

4. The Draft Environmental Impact Statement will evaluate infrastructure in the area and coordinate the infrastructure requirements with proper government agencies. For your information, there will be no impact on water and sewer lines and since the required amount of water for the project will be less than under sugar mill operations, there may even be a beneficial impact to these utility entities.
5. You have expressed concern that property value for surrounding properties may be devalued as a result of commercial development. While we do not think this is a valid conclusion based on the infrastructure improvements, roadway improvements and frontage improvements required for the project, we will ask the marketing consultant to address this issue.
6. The sole purpose of the marketing study is to determine if there is a reasonable absorption rate of new businesses occupying commercial space as it becomes available. If the absorption rate is fast, then there is obviously room for expansion of commercial services. If the absorption rate is projected to be slow, then the need for commercial space will be diminished.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

March 7, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, Hawaii 96701

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Taylor, Mr. Onishi and Mr. Bills

The following paragraphs express many of our major concerns about the current application to change the designation of 13.45 acres of the Aiea Mill site from Industrial to Commercial for the express purpose of constructing a shopping center of some 118,600+ square feet along with 395+ parking stalls. We understand that the application made is a formal request for an actual change. We ask that the planning process and Environmental Impact Statement take our concerns into consideration.

As will be seen from the discussion, many of the following concerns are interrelated. We expect that a fair and meaningful review process will consider the effect of the individual concerns separately as well as together since many have the potential to magnify each other and amplify its effect on the community.

Proper Notification of Affected Owners

The Aiea Mill site is located at a key access bottleneck for some 1,000± acres of residential neighborhood. In recent years, the Aiea Heights neighborhood has even expanded into the small valley to the east and is still being developed near the top with a new residential cluster development. In addition to the residences, the neighborhood also contains Aiea High School, Aiea Intermediate School, Gus Webling Elementary, Aiea Elementary, Scott Elementary, Napuanani Park, Aiea District Park, Aiea Field Annex, Aiea Recreation Center, and Keaiwa Heiau State Recreation Area. Most of these facilities represent district uses that go well beyond the immediate neighborhood. All of the burden of neighborhood access is carried by Aiea Heights Drive and Kaamilo Street.

As far as is currently known, some, but not all, of the abutting owners have received direct mail notification, from the Planning Department, of the application to effect an actual zoning change. While such minimal notification can be reasonable in other situations, due to the large number of people directly affected, reasonable notification of this zoning change application should include clear and direct notification to:

- All residents of Aiea Heights and Enchanted Hills who use Aiea Heights Dr. or Kaamilo St. to get home.
- All residents of the Newtown lower Waimalu, Penitridge residential areas who use the Halawa freeway exit, cross Aiea Town at Ulune Street to get home
- Persons directly affected by any proposed new road or road widening who could have the odds increased that all or part of their homes could be lost to condemnation for new roads or existing road improvements.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page two
March 7, 1997

- Users of the district facilities noted above including Aiea High and Intermediate Schools, sports teams, scouts, etc. Banners should also be posted for the users of the parks, rec. centers, etc., and others who's identities are not known.

Within any notice, the message should be clear that an actual formal request is in process to change the zoning to commercial for the express purpose of building a shopping center. Most of the news articles, to date, seem to take great pains to point out that a shopping center is just one of many options. While this may be the case, the request to change zoning is real and a change will be real if approved.

Address Full Potential of Zoning Change

While it is very important to look at the potential effect of all concerns individually and in total, since many may amplify each other, it is also crucial to look at the full potential of the change in zoning. For example, if the shopping center is built, will the new zoning permit expansion or an extension of use to a more intense use? Rather than a shopping center area of 118,600 square feet as noted in the EIS request, could a 500,000 square foot shopping center or a shopping center and office building actually be built or added to later? The site plan presented at the March 5th meeting in Aiea already showed an increase in the parking to 680 stalls including the existing research building. Is this the site for a big box retailer? The full potential of the zoning change should also be analyzed. Proper community input should also be sought to address the maximum development potential that can result from commercial zoning. Can another commercial use actually be built in place of the proposed shopping center? In other words, the zoning review and EIS process is erroneous at best when a small development is proposed in the analysis and a larger project with higher volume and more impact is actually built.

Good Overall Planning

Given the close proximity and the limited over loaded roads, as well as the location of schools, it seems poor planning for an industrial use to be in such a location. At the same time, it is quite understandable why the current odd mix of zoning and use exists given the history and evolution of sugar in the community. However, to change the present mismatched industrial use to another greater mismatched commercial use zoning is highly questionable planning. Equal consideration should be given to down zoning the site to lessen the pressure to widen existing or add new roads at the loss of peoples homes to the road. At the least, changing the zoning to I-1 from I-2 should be considered since the original purpose of the I-2 designation was to accommodate the mill which is proposed to be demolished. We view this change as a pressing public need to lessen the impact to neighboring residences and the Aiea community.

Demand and Relationship to Commercial Tenant and Customer Mix

Demand for commercial space is clearly a concern. Within reasonable distance are an abundance of commercial complexes that already require customers from outside areas to become economically viable. Any realistic study should consider the extent of actual commercial competition, vacancy rates, business failures, and where current customer live. It may be that new commercial space can financially exist only by major draws of customers from neighborhoods outside of Aiea, further compounding the existing traffic problems.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page three
March 7, 1997

Consideration should also be given to commercial tenant mix if the proposed project turns out to be marginal (which seems likely on the surface). Will the financial need to fill space result in game rooms, video arcades, adult entertainment, etc., and other uses that clearly will detract from Aiea Intermediate and Aiea High Schools' purpose? Will crime in the area increase?

Proper Community Notification and Actual Status of Rezoning Application

There is serious concern that communication to date may have been highly misleading. First, the public needs to be clearly told that an actual and very real formal application has been made to change the zoning. All of the news articles to date have not noted the formal application or characterized it as merely one possibility. It must be made clear, that if the zoning is changed, the zoning is actually changed, and many more commercial uses become possible.

Second, the misconception exists that the construction of a shopping center is an act that will save Aiea from a highly polluting industrial use. We hope to get issue this publicly clarified.

Influence on Aiea Intermediate and High Schools Study of Effects at Other Locations

One clear priority that must be fully studied is the potential for adverse effects on Aiea Intermediate and Aiea High Schools. These two schools are the only area schools available to five feeder public elementary schools. To be meaningful, such a study should look at actual situations at other schools in the context of the full range of uses permitted under commercial zoning. Some of the area teachers have already expressed concern that attendance will drop as it has in other similar situations. Any surveys should be broad based and address realistic solutions and consequences rather than theory and "should be's".

Traffic/Employer Parking Concerns

As noted above, traffic studies should also address where the mill site's proposed customers come from. Also, what other developments in Aiea Heights are in process or possible? Many projects have employees who park off of the project site in the surrounding neighborhood. In other words, the full impact of the proposed change should be addressed.

Contrast to actual experience in other, supposedly more planned areas such as Waikole, should be made. How does actual experience and theory match, if at all. The yardstick that measures the proposed change should be based on reality and actual experience.

The EIS should also address the extensive pedestrian traffic, especially before and after school hours.

The proposed road connecting the lower and upper Ulune Streets across the Aiea Sugar Mill property will not alleviate traffic congestion, rather just move the bottle neck to an even more dangerous location further up Aiea Heights Drive where there are four intersecting streets around a district park, recreation center, and high school.

Meaningful EIS Should Seek Input Publicly and Address Concerns Fully

Because the change in zoning of the mill site has the potential to affect such a broad cross section of people, Environmental Impact Statement (EIS) notification through the OEQC Bulletin is a clear mismatch to the public communication purpose of the EIS. If the parties requesting the zoning change really have the communities interests at heart, then EIS input should be more publicly and clearly sought. It is expected that the EIS will fully address the impact of the proposed change.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page four
March 7, 1997

Recognition of the cultural background of many of the Aiea residents should be considered and a sincere effort be made to go out and seek input. Residents must be told that their written input is needed, not only their verbal input. Documentation of all verbal interactions/responses should be done and included in the EIS and planning recommendations. A survey like interaction form might be more conducive to getting greater participation.

Effect on Aiea Stream/Paving effect on runoff

The proposed shopping center could have serious impact on the properties also along Aiea Stream. It is expected that a proper study will consider the cumulative effect of up-stream changes in Aiea Gulch, including the paving of large areas upstream and on the mill site. It seems logical that paving promotes quick runoff and diminishes absorption. Should the developer of the mill site concrete channel the stream to the harbor in all fairness to the down stream owners, who may otherwise be more likely to be flooded?

Adequate Facilities to Service Scheduled Utility Service Connections and Planned Changes.

Besides road capacity, overall effect on area utility capacity should be addressed in the context of future needs. Will rezoning and development of the mill site use capacity potential of other properties with actual current zoning?

The Depth of History

The Aiea Sugar Mill is the only white sugar refinery on this island. It was used as an example to mainland refineries and planners of refineries of sugar mills in Hawaii. If the definition of the environment includes what affects the well being of those who live in it, a serious look should be made at what the destruction of the Aiea Sugar Mill means to this community. The Aiea Sugar Mill is not on the National Historic Registry by chance or age.

The mill represents the heart, soul, and heritage of the Aiea Community. There are many who are willing to work toward finding a practical way to combine utility to the owner, practical economics, cultural preservation, and economic sustaining strength for the future of the property. The can be strength to support flexibility and variances as may be practical. We hope the opportunity is not lost to the rush to sell at a highest and best purely economic use at the expense of Aiea. We appeal to Crazy Shirts to open the dialog without the premise of "for sale".

We hope that this letter will assist the full public airing of the proposed zoning change, help bring out accurate information, and will serve to make the final EIS useful to all and the zoning change review process meaningful. We also hope that the opportunity to open meaningful dialog will become reality. Additionally, we hope that the Planning Office and the EIS will make recommendations as to what they feel would be a good community match taking into consideration their findings of the above concerns.

Sincerely,

Claire J. Taniamoto

Claire J. Taniamoto
Member of Aiea Mill Task Force, as an individual

cc: Hannemann
OEQC



City • Hong • Billis & Associates, Inc.
 119 Merchant Street, Suite 607
 Honolulu, Hawaii 96813-4499
 Telephone: (808) 521-0305
 Fax: (808) 531-8013

Ms. Claire J. Tamamoto
 March 12, 1997
 Page 2

March 12, 1997

Ms. Claire J. Tamamoto
 92-210 Hailimanu Place
 Aiea, HI 96701

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN)
 Aiea Sugar Mill Property
 TMK: 9-9-05: Por. 10 and 25

Dear Ms. Tamamoto:

We thank you for your consultation comments regarding the subject project. We are providing the following responses and information regarding the points discussed in your letter:

Proper Notification to Affected Owners

The Development Plan Amendment process requires that the Applicant notify all abutting landowners that the Amendment application has been filed to change the Development Plan land use designation. This has been done and there are approximately 70 abutting property owners. In addition, the City & County of Honolulu Planning Department also provides notification to adjacent owners. It is our understanding that the Planning Department has forwarded a notification with background information to approximately 130 abutting owners, as well as owners in close proximity to the project. The other entity which is informed of the Development Plan Amendment is the local neighborhood board (Aiea Neighborhood Board No. 20). The reason the neighborhood board is notified is due to the fact that they are one of the critical groups in community involvement and community representation.

In addition to the notifications identified above, there have already been presentations to the Neighborhood Board and at least one community meeting was held with approximately 80 persons in attendance. This meeting was conducted by your councilman, Mr. Mufi Hannemann.

We believe the following public notification is reasonable and is more than consistent with Planning Department policy regarding Development Plan Amendment applications. Projects much larger than this Development Plan application have been handled in a similar fashion.

Address Full Potential of Zoning Change

The Development Plan Amendment application for the Aiea Sugar Mill commercial development will describe a shopping center of approximately 140,000 square feet of gross commercial area with approximately 770 parking stalls. The application will also identify stream channelization improvements and new roadway improvements. Should the scope of the project exceed that shown at the initial planning approval stage, it would be the obligation of the applicant to revisit various approval processes for additional review. We do not concur with your statement that the EIS process is erroneous and a much larger development will be allowed based on a smaller scale presentation.

Good Overall Planning

Crazy Shirts, Inc. originally purchased the Aiea Sugar Mill property for the purpose of developing its corporate and factory headquarters on the site and retaining the historic value. This option is not economically viable. Since it is not viable, it is the Applicant's desire to explore uses on the site which maintain the economic viability of the land similar to that at which it was purchased.

As you indicated in your consultation letter, the odd mix of zoning came about as a result of the industrial use (Aiea Sugar Mill) being there first and the residential uses encroaching in around the sugar mill. Therefore, a current review of the City's development plan appears to show a misplaced industrial land use totally within residential areas.

Your suggested Industrial classification is a possibility for the site and, in reality, a residential designation is also possible for the site. The Draft Environmental Impact Statement will identify as an alternative an industrial subdivision which is not being considered at the present time. Residential use is not being proposed by the Applicant since this use will create a property value less than that at which it was purchased. The City & County of Honolulu has at its access the ability to redesignate the parcel from Industrial to Residential; however, the City is also obligated to compensate the landowner for the lower property value from Industrial to Residential. Since the City & County have already indicated that due to project constraints they are not interested in pursuing this option, it is not being considered by the Applicant.

It is the Applicant's obligation to present supporting information such as traffic studies and other studies which identify the impacts of the proposed commercial development and this information will be used in the approval process.

Demand and Relationship to Commercial Tenant and Customer Mix

A market viability study will be prepared in conjunction with preparation of the Environmental Impact Statement. The study will identify all the items which you have generally described in your consultation letter. These items include competition, vacancy rates, business failures and where current customers live. The term that market studies generally use to describe the viability of business is "absorption rate." This is the rate in which tenants will occupy available commercial space. If the commercial space can be absorbed within a period of months, the viability is generally considered high. If the absorption rate is in years, then the viability of commercial development is reduced or nonexistent.

We expect the owner and developer and manager of any commercial shopping development in the community to be responsive to community needs. To that end, letting a commercial center with entities that will detract from the neighborhood and Aiea Intermediate and High Schools assumes that the commercial development manager has no interest in the support of the community. Due to the fact that this is inherently a bad business decision, we see no reason to assume that this will occur at this time.

Propose Community Notification and Actual Status of Rezoning Application

The Development Plan Amendment is the first step in transferring a site from Industrial Use to Commercial Development. All abutting residences and neighboring residents are notified by the Planning Department, and the Aiea Neighborhood Board has been clearly informed of this. The next step would be to process a Change of Zone with the City & County of Honolulu Department of Land Utilization. These two facts are true and that is what is known at this time. The Environmental Impact Statement will identify that commercial development of the site could occur in the Year 2000. This, of course, is subject to receiving Development Plan Amendment approval, as well as Change of Zone. In addition, Crazy Shirts, Inc. does not intend to develop the site and is actively pursuing development entities who specialize in this business.

The Owners, Planning Department and persons acting on behalf of the Owners have no control over what is printed in the paper. Public records identify the information above and if this information is not properly represented in the media, we have no control over that matter.

The Draft Environmental Impact Statement as well as Final Environmental Impact Statement will provide discussion and analysis of existing use characteristics (Aiea Sugar Mill) and proposed commercial development. Neither the Draft or Final document will represent the Aiea Sugar Mill as a highly polluting industrial use.

Influence on Aiea Intermediate and High Schools/Study of Effects at Other Locations

You have asked that the Draft Environmental Impact Statement contain a study identifying the adverse effects of having schools located next to shopping centers. We are not aware of any study which has been done to determine any potential adverse impacts and we are not aware of any planning or zoning principles which require such separations. There are numerous situations around the island where schools and commercial areas are within a reasonable proximity.

With respect to the subject project, Kulawea Street is used for access to Aiea Intermediate School. However, the street will not provide vehicular access to the shopping center, and all access will be from the new master-planned roadway. We are not proposing to provide the study you have requested regarding the adverse impacts on commercial areas being located next to schools. Should it become obvious that our conclusions are in error, we may have to identify this issue as an unresolved issue for the Environmental Impact Statement process.

Traffic/Employees Parking Concerns

The Aiea Sugar Mill commercial development has a requirement to provide 480 parking stalls. The actual amount of parking stalls which will be provided under the current proposal is 770. The additional stalls are partially being provided due to the fact there is no parking available to accommodate employee type parking.

A traffic impact assessment report is being prepared which identifies improvements to the Ulune Street/Kulawea Street intersection. This intersection will become a four-way intersection and all roadway improvements will include curb, gutter and sidewalk which will enhance pedestrian movements. This situation does not currently exist. In addition, Kulawea Street will not have any vehicular access into the new shopping center. This will also mitigate pedestrian congestion along a thoroughfare walked by school children.

Meaningful EIS Should Seek Input Publicly and Address Concerns Fully

Once again, as previously identified, in excess of 130 immediate neighbors have been informed that the application has been filed and a Draft Environmental Impact Statement is being prepared. The actual date the Draft Environmental Impact Statement will be available for review is April 8, 1997. Various state, local and government agencies will receive a copy of the Draft Environmental Impact Statement directly. In addition, entities such as the Aiea Neighborhood Board No. 20 will receive a copy of the Draft Environmental Impact Statement. Finally, multiple copies of the document will be provided to the local library in

Ms. Claire J. Tamamoto
March 12, 1997
Page 5

the Aiea area. This procedure is routinely followed on every Development Plan amendment. It is well understood that the Aiea community wants to participate in the process. However, projects much larger than the Aiea Sugar Mill proposal have successfully completed the review process as required and outlined by the City & County of Honolulu Planning Department. It is also our desire to obtain as much public input as possible, but we are not in a position to reinvent the wheel.

Effect on Aiea Stream/Paving Effect on Runoff

The Aiea Sugar Mill site is already an industrial site. There are large areas of impervious surfaces, or areas with reduced ability to percolate rainwater into the soil. Redevelopment of the property into a commercial configuration with parking lot areas and rooftop areas will provide a slight increase in runoff entering Aiea Stream; however, it will not be significant. The exact information will be presented in the Environmental Impact Statement. The Draft Environmental Impact Statement will also include a drainage study evaluating the impact of channelizing a portion of Aiea Stream. The channelization covers approximately 700 linear feet of Aiea Stream and all stream flow will be returned to natural stream flow conditions before leaving the Aiea Sugar Mill property. The drainage study will show that future runoff leaving the Aiea Sugar Mill property will be essentially identical to that which exists under the existing condition. There will be no technical reason to predict a greater chance of flooding in downstream locations.

Adequate Facilities to Service Scheduled Utility Service Connections and Planned Changes

The Draft Environmental Impact Statement has the obligation to assess all utility service connections, as well as assess roadway impacts. The Draft Environmental Impact Statement will clearly identify if utility connections or roadway improvements will create an impact, and if they do, mitigation measures will be proposed. This factual information will be available for decision making purposes regarding the Development Plan Amendment. We are in the process of preparing the Draft Environmental Impact Statement, but at this point in time have not identified any utility service connections which will be overextended under the commercial use.

Depth of History

The Draft Environmental Impact Statement has a discussion on the history of the mill. In addition, the Draft Environmental Impact Statement will clearly state the community's desire to maintain to the maximum extent possible the Aiea Sugar Mill as it currently exists, or upgraded for public/park considerations. To this end, it is already anticipated that one of the unresolved issues in both the Draft and Final Environmental Impact Statements will

Ms. Claire J. Tamamoto
March 12, 1997
Page 6

be the community concern for its potential destruction. It will also be clearly stated in the Draft and Final Environmental Impact Statements that Crazy Shirts, Inc. is actively seeking prospective buyers who are interested in creating a development that allows this community concern to be solved.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:co
2617-2

cc: Patrick Onishi
Dennis Taylor

XIII. COMMENTS AND RESPONSES DURING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT CIRCULATION

Table 6 summarizes all Draft Environmental Impact Statement (DEIS) letters received regarding the subject project. The following pages provide the actual comment letters and responses. The DEIS publication date in the *OEQC Bulletin* was April 8, 1997. The 45-day comment period ended on May 23, 1997.

**TABLE 6
DRAFT EIS COMMENT SUMMARY**

ENTITY RECEIVING REQUEST FOR CONSULTATION COMMENTS	RESPONSE (SUBSTANTIVE COMMENTS)	RESPONSE (NO COMMENT)	NO RESPONSE
CITY & COUNTY AGENCIES			
1. Board of Water Supply	X		
2. Building Department		X	
3. City Council			X
4. Department of Housing & Community Development	X		
5. Department of Land Utilization	X		
6. Department of Parks & Recreation			X
7. Planning Department	X		
8. Department of Public Works		X	
9. Department of Transportation Services	X		
10. Department of Wastewater Management	X		
11. Honolulu Fire Department	X		
12. Honolulu Police Department			X
13. Municipal Reference and Records Center			X
STATE AGENCIES			
14. Department of Accounting & General Services		X	
15. Department of Accounting & General Services, Archives Division			X
16. Department of Agriculture			X
17. Department of Budget & Finance, Housing & Development Corporation			X
18. Department of Business, Economic Development & Tourism, Energy, Resources & Technology Division		X	
19. Department of Business, Economic Development & Tourism, Land Use Commission		X	
20. Department of Business, Economic Development & Tourism, Library			X
21. Department of Business, Economic Development & Tourism, Office of Planning		X	
22. Department of Defense		X	

ENTITY RECEIVING REQUEST FOR CONSULTATION COMMENTS	RESPONSE (SUBSTANTIVE COMMENTS)	RESPONSE (NO COMMENT)	NO RESPONSE
STATE AGENCIES (cont.)			
23. Department of Education	X		
24. Office of Environmental Quality Control (OEQC)	X		
25. Office of Hawaiian Affairs	X		
26. Department of Health, Noise, Radiation & Indoor Air Quality Branch	X		
27. Department of Health, Environmental Health Administration, Hazard Evaluation & Emergency Response Office	X		
28. Department of Land & Natural Resources, Commission on Water Resource Management	X		
29. Department of Land & Natural Resources, State Historic Preservation Division	X		
30. Department of Land & Natural Resources, Division of Water & Land Development			X
31. Department of Transportation			X
32. University of Hawaii, Environmental Center	X		
FEDERAL AGENCIES			
33. U.S. Department of Agriculture			X
34. U.S. Army Corps of Engineers	X		
35. U.S. Army Support Command Hawaii, Environmental Management Office			X
36. U.S. Coast Guard			X
37. U.S. Environmental Protection Agency, Regional Division			X
38. U.S. Department of the Interior, Fish & Wildlife Service			X
39. U.S. Department of the Interior, U.S. Geological Survey		X	X
40. U.S. Department of the Interior, Water Resources Division		X	
41. Naval Base Pearl Harbor		X	
42. Soil Conservation Service			X
PRIVATE AGENCIES - Individual			
43. A & B - Hawaii, Inc.	X		
44. Aiea Neighborhood Board No. 20	X		
45. American Lung Association			X
46. Ms. Bonnie Arakawa	X		
47. C&H Sugar			X
48. Ms. Laurie Chang	X		
49. Mr. Ted Fisher, Principal, Aiea Intermediate School	X		
50. Ms. Antoinette Konia Freitas	X		
51. GTE Hawaiian Telephone			X
52. Hawaiian Agricultural Resource Center			X
53. Hawaiian Electric Company			X
54. Honolulu Advertiser			X
55. Honolulu Star-Bulletin			X
56. Hung Heong Lum	X		
57. Ms. Kehaulani Lum	X		

ENTITY RECEIVING REQUEST FOR CONSULTATION COMMENTS	RESPONSE (SUBSTANTIVE COMMENTS)	RESPONSE (NO COMMENT)	NO RESPONSE
<i>PRIVATE AGENCIES (cont.)</i>			
58. Ms. Mary Ann Akana Lum	X		
59. Mr. Wesley Lum	X		
60. Ms. Patsy H. Nanbu	X		
61. O'ahu Group Sierra Club, Hawaii Chapter	X		
62. Oceanic Cable			X
63. State Representative Tom Okamura			X
64. Ms. Claire J. Tamamoto	X		
65. Ms. Carol Wilcox	X		



O'AHU GROUP

SIERRA CLUB, HAWAII CHAPTER

P.O. Box 2577, Honolulu, Hawaii 96803

Phone: (808) 219-6616

Mr. Dennis Taylor Crazy Shirts, Inc.

99-969 Iwaena St

Aiea, HI 96701

April 14, 1997



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

DAVID BILLS PE
DANIEL GRAY PE
DANIEL HONG PE
DAVID BILLS PE
ROY T. ABRAHAM PE
BEVERLY G. HONG PE
ALYDIA LEE PE
ALAN WATSON PE
ALAN WATSON PE

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0305
Fax: (808) 531-8018

Mr. Patrick Onishi
Chief Planning Officer
City and County of Honolulu
650 S. King St.
Honolulu, HI 96813

Mr. David Bills
Gray, Hong, Bills & Associates
119 Merchant St #607
Honolulu, HI 96813

Dear Mr. s Taylor, Onishi and Bills,

RE: AIEA SUGAR MILL PROPERTY

The Sierra Club wishes to comment on just one aspect of the plan for the Aiea Mill site at this time.

The Sierra Club is opposed to the channelization of Hawaii's streams. Channelization of streams increases nonpoint source water pollution in our coastal waters. By increasing the velocity that water travels, more sediments are carried into our coastal waters. Channelization also destroys habitat for fish, reduces recreational opportunities and may reduce ground water recharge. A better way to control floods is to require vegetated buffers near streams. Equally important, all runoff generated by development on the specific site should be contained on-site; run-off into Aiea Stream should not be allowed to be increased. Relatively cheap, aesthetically pleasing techniques have been used across the country to ensure that run-off is contained on-site.

Although the July 3, 1995 Central O'ahu Development Plan Public Review Draft may not be directly applicable, it is instructive. It declares: "Streams shall not be channelized, and existing flood plains shall be left intact except where absolutely necessary to protect existing urban development from flooding." (p. 39)

Sincerely,
Philip Bogetto
Philip Bogetto
Chair

Mr. Philip Bogetto, Chair
O'ahu Group
Sierra Club, Hawai'i Chapter
P.O. Box 2577
Honolulu, HI 96803

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Bogetto:

Thank you for your comment letter dated April 14, 1997. Your comment letter expresses opposition to channelization of Hawaii streams. Your letter cites increased velocity will carry more sediment to the coastal waters. Your letter further cites that channelization destroys habitat for fish and reduces recreational opportunities as well as may have the potential to reduce groundwater recharge. Your letter further goes on to state that runoff generated on the property should be contained on site and that it is relatively cheap and aesthetically pleasing to accommodate this fact.

While we appreciate your qualitative comments, the specific site characteristics do not bear out your assumptions. The proposal is to line approximately 800 linear feet of channel. The current proposal is also to restore the stream velocity to existing conditions after passing through the channel. Therefore, it is proposed to restore stream flow characteristics before leaving the property. By simple mass balance analysis, the amount of sediments entering the proposed channel will be equal to the amount of sediments leaving the proposed channel. Further, the site is already industrial and the amount of increased runoff entering the stream as a result of the project development is negligible and quantitatively described in the Draft Environmental Impact Statement. Finally, should the stream channel be modified at all, design standards of the Department of Public Works mandate that some type of lined channel be utilized. The velocity of the stream would have to be under 5-foot per second to use some natural channel section. Due to the slope of the stream, this condition does not and cannot exist.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:sc
2617-2

May 23, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwacana Street
Aiea, Hawaii 96701

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Taylor, Mr. Onishi and Mr. Bills:

The following paragraphs express many of our major concerns about the current application to change the designation of 13.45 acres of the Aiea Mill site from Industrial to Commercial for the express purpose of constructing a shopping center of some 118,600+ square feet along with 395+ parking stalls. We understand that the application made is a formal request for an actual change and not simply a study of potential.

In a letter dated March 7, 1997, many major concerns were expressed with focus on the draft Environmental Impact Statement. It was hoped that the Statement would be a realistic and objective study of the proposed change. Upon reading the draft and your EIS letter response (by Bills) dated March 12, 1997, great concern has developed that a reader of the final report will see a report whose focus is a study supporting the proposed change. If such advocacy is actually an objective of the report, please clarify.

Operating under the assumption that the EIS has a duty to be objective, it is asked that the planning process and final EIS address the following concerns.

As noted previously, many of the following concerns are interrelated. We expect that a fair and meaningful review process will consider the effect of the individual concerns separately as well as together since many have the potential to magnify each other and amplify its effect on the community. As far as could be seen, cumulative or total effects were not meaningfully addressed.

Proper Notification of Affected Owners

As previously noted, the Aiea Mill site is located at a key access bottleneck for some 1,000± acres of residential neighborhood. In recent years, the Aiea Heights neighborhood has even expanded into the small valley to the east and is still being developed near the top with a new residential cluster development. In addition to the residences, the neighborhood also contains Aiea High School, Aiea Intermediate School, Gus Webling Elementary, Aiea

Mr. Taylor, Mr. Onishi and Mr. Bills
Page two
May 23, 1997

Elementary, Scott Elementary, Napuanani Park, Aiea District Park, Aiea Field Annex, Aiea Recreation Center, and Keiwa Ieiau State Recreation Area. Most of these facilities represent district uses that go well beyond the immediate neighborhood. All of the burden of neighborhood access is carried by Aiea Heights Drive and Kaamilo Street.

As far noted in your EIS response, many of the abutting owners have received direct mail notification, from the Planning Department, of the application to effect an actual zoning change. While such minimal notification is specified for other situations, due to the large number of people directly affected, reasonable notification of this zoning change application should include clear and direct notification to:

- All residents of Aiea Heights and Enchanted Hills who use Aiea Heights Dr. or Kaamilo St. to get home.
- All residents of the Newtown lower Waimalu, Pearlridge residential areas who use the Halaia freeway exit, cross Aiea Town at Ulune Street to get home
- Persons directly affected by any proposed new road or road widening who could have the odds increased that all or part of their homes could be lost to condemnation for new roads or existing road improvements.
- Users of the district facilities noted above including Aiea High and Intermediate Schools, sports teams, scouts, etc. Banners should also be posted for the users of the parks, rec. centers, etc., and others who's identities are not known.

Within any notice, the message should be clear that an actual formal request is in process to change the zoning to commercial for the express purpose of building a shopping center. Most of the news articles seem to take great pains to point out that a shopping center is just one of many options. While this may be the case, the request to change zoning is real and a change will be real if approved.

Your EIS response indicated simple referred to minimum notification requirements for abutting owners and the neighborhood board. The response raises a question of your objectivity to many. It is hoped that the report will be objective. If a proposal to close one side of the Wilson tunnels was under study, would notification to the abutting owners be meaningful? The draft report notes that traffic from Aiea town to the residential community, including the parks, community center, and schools will be seriously and adversely affected to the extent of the worse traffic service rating. It is hoped that the final report will make this clear. Such effect on traffic flow speaks strongly for notification as discussed above.

Address Full Potential of Zoning Change

As previously expressed, it is also crucial to look at the full potential of the change in zoning. For example, if the shopping center is built, will the new zoning permit expansion or an extension of use to a more intense use? Rather than a shopping center area of 140,000 square feet as noted in your response, could a 500,000 square foot shopping center or a shopping center and office building actually be built or added to later? The EIS draft itself notes that the HARC building could be used as an office building at a later date! The site plan presented at the March 5th meeting in Aiea already showed an increase. Is this the site for a big box retailer? The full potential of the zoning change should also be analyzed.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page four
May 23, 1997

Consideration should also be given to commercial tenant mix if the proposed project turns out to be marginal (which seems likely on the surface). Will the financial need to fill space result in game rooms, video arcades, adult entertainment, etc., and other uses that clearly will detract from Aiea Intermediate and Aiea High Schools' purpose? Will crime in the area increase?

Your EIS response noted that actual use depends on the good faith of the business management of the shopping center. At the same time, it is standard for certain uses to be kept apart within zoning regulations. The public benefit of good planning is already recognized. To make the naive assumption of business goodwill, does not support an appearance of objectivity. It was a surprise, which raises additional concerns of objectivity, that no sincere effort will be made to address the concerns of the affected schools within the context of potential uses. Please see a copy of a letter from the principal of Aiea Intermediate. Are the concerns expressed just the tip of the iceberg of issues being ignored?

Proper Community Notification and Actual Status of Rezoning Application

It was previously expressed that there is serious concern that communication to date may have been highly misleading. First, the public needs to be clearly told that an actual and very real formal application has been made to change the zoning. All of the news articles to date have not noted the formal application or characterized it as merely one possibility. It must be made clear, that if the zoning is changed, the zoning is actually changed, and many more commercial uses become possible.

Second, the misconception exists that the construction of a shopping center is an act that will save Aiea from a highly polluting future industrial use. We hope to get issue this publicly clarified.

Again, perhaps, the last letter was not clear. Your EIS response noted that none of the parties to the proposed change have control of the media. This is as it should be. At the same time, advocates of the change have full control of their presentation and statements. We have enough faith in the media that a clarification of mis-reporting would be positively accepted. This is important since no attempt, to date, is being made to notify the Aiea community directly, except for the relatively few immediately abutting owners.

Secondly, potential future use has been portrayed, in some meetings, as a possibility for the site, in support of the change. Clarification is this issue in the community and report is crucial to objective decisions.

Influence on Aiea Intermediate and High Schools Study of Effects at Other Locations

The last letter noted that one clear priority that must be fully studied is the potential for adverse effects on Aiea Intermediate and Aiea High Schools. These two schools are the only area schools available to five feeder public elementary schools. To be meaningful, such a study should look at actual situations at other schools in the context of the full range of uses permitted under commercial zoning. Some of the area teachers have already expressed

Mr. Taylor, Mr. Onishi and Mr. Bills
Page three
May 23, 1997

Proper community input should also be sought to address the maximum development potential that can result from a change to commercial zoning. Can another commercial use actually be built in place of the proposed shopping center? Can the proposed center be expanded after it is built? In other words, the zoning review and EIS process is erroneous at best when a small development is proposed in the analysis and a larger project with higher volume and more impact is actually built or built at a later date based upon the change in zoning.

Your EIS response indicated that, perhaps, the issue was not made clear in the last letter. We are under the presumption that the EIS is a study of the proposed zoning change and the construction of a shopping center. Should not a study of the effects of the zoning change address the full potential of the property under the proposed zoning? Will Aiea find itself in a position like it is now where industrial zoning was granted just a few years ago, based on what we have been told, based on a use that will not continue as proposed, but is now being used as a stepping stone for an increasingly mismatched use?

Good Overall Planning

As previously expressed, given the close proximity and the limited over loaded roads, as well as the location of schools, it seems poor planning for an industrial use to be in such a location. At the same time, it is quite understandable why the current odd mix of use exists given the history and evolution of sugar in the community. However, to change the present mismatched industrial zoning to another greater mismatched commercial zoning is highly questionable planning. Equal consideration should be given to down zoning the site to lessen the pressure to widen existing or add new roads at the loss of peoples homes to the road. We view this change as a pressing public need to lessen the impact to neighboring residences and the Aiea community.

Your EIS response noted that a change to residential is also a possibility. The fact is highly ironic. We have been told that the change to industrial occurred just a few years ago, some time just to the last sale, and that the previous zoning, with the operating mill, was residential! From a good planning perspective, and in good faith to the Aiea and the readers of the EIS, the recent change in zoning from residential to industrial also needs to be discussed.

Demand and Relationship to Commercial Tenant and Customer Mix

As previously noted, demand for commercial space is clearly a concern. Within reasonable distance are an abundance of commercial complexes that already require customers from outside areas to become economically viable. Any realistic study should consider the extent of actual commercial competition, vacancy rates, business failures, and where current customer live. It may be that new commercial space can financially exist only by major draws of customers from neighborhoods outside of Aiea, further compounding the existing traffic problems.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page five
May 23, 1997

concern that attendance will drop as it has in other similar situations. Any surveys should be broad based and address realistic solutions and consequences rather than theory and "should be's".

Your EIS letter noted that you are not proposing to address the issue and may identify the effect on the schools as an unresolved issue. Perhaps, the more accurate term is unstudied issue with respect to the EIS. While the letter from the principal of Aiea Intermediate has been discussed above, we hope some effort will be made to look in to the effect on schools issue to support the appearance of objectivity and avoid rejection of the report as incomplete. The draft EIS notes that the mill does not provide education, therefore, the proposed change results in no impact on education. The folly of this conclusion speaks for itself. It is hoped that the final EIS will read differently.

Traffic/Employee Parking Concerns

As noted previously, traffic studies should also address where the mill site's proposed customers come from. Also, what other developments in Aiea Heights are in process or possible? Many projects have employees who park off of the project site in the surrounding neighborhood. In other words, the full impact of the proposed change should be addressed.

Contrast to actual experience in other, supposedly more planned areas such as Waikale, should be made. How does actual experience and theory match, if at all. The yardstick that measures the proposed change should be based on reality and actual experience.

The EIS should also address the extensive pedestrian traffic, especially before and after school hours.

The proposed road connecting the lower and upper Ulune Streets across the Aiea Sugar Mill property will not alleviate traffic congestion, rather just move the bottle neck to an even more dangerous location further up Aiea Heights Drive where there are four intersecting streets around a district park, recreation center, and high school.

The EIS draft conclusion does not address the above comments from a meaningful perspective. For example, the traffic report in the appendix noted that the traffic service returning home from Aiea town will be very significantly affected to the extent of a worse class of service level. Yet the draft conclusion contains no discussion. In case it is not obvious, the return home, from Aiea town mauka, is of great interest to many in Aiea! Please take another look at the issues as objectively and professionally as possible.

Meaningful EIS Should Seek Input Publicly and Address Concerns Fully

The previous letter noted that because the change in zoning of the mill site has the potential to affect such a broad cross section of people, Environmental Impact Statement (EIS) notification through the OEQC Bulletin is a clear mismatch to the public communication purpose of the EIS. If the parties requesting the zoning change really have the communities interests at heart, then EIS input should be more publicly and clearly sought. It is expected that the EIS will fully address the impact of the proposed change.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page six
May 23, 1997

Recognition of the cultural background of many of the Aiea residents should be considered and a sincere effort be made to go out and seek input. Residents must be told that their written input is needed, not only their verbal input. Documentation of all verbal interactions/responses should be done and included in the EIS and planning recommendations. A survey like interaction form might be more conducive to getting greater participation.

Again, perhaps, additional clarification is needed. The suggestion made was not to communicate with as many as possible, but to make an attempt to sincerely understand the real effects on the community. Your EIS letter seems to state ("we are not in a position to reinvent the wheel") that the final EIS will only attempt to meet minimum traditional requirements of an EIS regardless of the specifics. If this is not the case, please clarify. If it is, please so state. To make it perfectly clear, the effect on the schools in the immediate neighborhood is seen a minimal requirement. Its exclusion, as proposed, leaves major gaps in the analysis.

The goal of this letter is to encourage the full public airing of the proposed zoning change, help bring out accurate information, and will serve to make the final EIS useful to all and the zoning change review process meaningful. We also hope that the opportunity to open meaningful dialog will become reality. Additionally, we hope that the Planning Office and the EIS will make recommendations as to what they feel would be a good community match taking into consideration their findings of the above concerns.

Sincerely,

Claire J. Tamamoto

Claire J. Tamamoto
Member of Aiea Mill Task Force, as an individual

Attachment

cc: Hannemann
OEQC



Gray + Hong + Billie & Associates, Inc.
CONSULTING ENGINEERS

Ms. Claire J. Tamamoto
Member of Aiea Mill Task Force
92-210 Hailimau Place
Aiea, HI 96701

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Tamamoto:

Thank you for your comment letter dated May 23, 1997 regarding the subject project. Your comment letter seems to categorically restate the same comments provided during the consultation period and included in the Draft Environmental Impact Statement, as identified in your March 7, 1997 letter. Our office provided a March 12, 1997 response to provide a discussion of your concerns. It appears that our responses, while factual, are generally unacceptable. The following are specific responses to your review comments.

1. Proper Notification of Affected Owners

The review process for Environmental Impact Statements related to Development Plan Amendments has been established by the City & County of Honolulu Planning Department. We are complying with all provisions of their processing requirements and we understand the Planning Department has further extended the boundaries of notification to their Development Plan Amendment Process. The City & County of Honolulu Planning Department implements this review process for all projects whether they be large or small. The Planning Department has developed this procedure to obtain adequate public input. We believe the project is making every effort to comply with the Planning Department's considerations for public input.

Your comment letter specifically identifies that project development will provide adverse effects to traffic in the area. This statement is correct. However, the Draft and Final Environmental Impact Statements propose additional roadways and traffic improvements to mitigate these adverse effects. The overall proposal is to create revised traffic conditions which will ensure that traffic in the neighborhood after project completion and full implementation is no worse than that which currently occurs. In addition, there will be definite benefits with respect to additions of sidewalks, traffic signalization and pedestrian/vehicle interface resulting from the proposed improvements.

Bruce L. Gray, P.E.
Daniel S. C. Hong, P.E.
David B. Billie, P.E.
Roy T. Aoki, P.E.
Beverly G. Pui, P.E.
Mary D. Loo, P.E.
Michael R. Aguma, P.E.
119 Merchants Street, Suite 607
Honolulu, Hawaii 96813-4489
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

Ms. Claire J. Tamamoto
June 4, 1997
Page 2

2. Address Full Potential of Zoning Change

The Final Environmental Impact Statement identifies a shopping complex with approximately 144,000 square feet of retail space and 770 parking stalls. The Final Environmental Impact Statement identifies that the existing HARC Building, while currently used by the Hawaii Agriculture Resource Center, may at some time in the future become a commercial building if the existing users' needs disappear. These are the only options available for the project. A larger-scaled project would require revisitation, including revisitation with respect to public input.

3. Good Overall Planning

The Final Environmental Impact Statement clearly identifies that there are other uses which may be more compatible with the neighborhood. The Final Environmental Impact Statement has been expanded to include in its Alternative Section, a section on residential development. A section on development without the concrete channel has also been included in the Alternative Section.

The current planning process must also recognize that there is an existing use and zoning on the property which is industrial. The property was bought for implementation of such a use, or a use which is much more similar to commercial than other uses which you are suggesting. Proper planning must also recognize the loss of use on its existing zoning should a lesser zoning use and Development Plan designation be assigned to the property. This planning aspect requires that there be some viable entity, private, government and/or public to participate in the process to offset the devaluation of the property. Should there be no existing planning designation or zoning, then selection of a New Use designation would not be encumbered by loss of value considerations.

4. Demand and Relationship to Commercial Tenant and Customer Mix

Our response to your Environmental Impact Statement Preparation Notice clearly identified that a Market Study was a significant portion of the commercial project proposal and consideration. The Market Study contained in the Draft and Final Environmental Impact Statement show that commercial development is viable. That was the sole purpose of the Market Study. The amount of traffic associated with a new shopping center was also estimated based on traffic being generated from the existing neighborhood as well as outside areas.

Ms. Claire J. Tamamoto
June 4, 1997
Page 3

We suggested in our consultation comment response letter that the shopping center would generally have some considerations for being a Good Neighbor with the community. While we believe this is still a good business practice, market considerations could allow a variety of uses. We are not suggesting that good faith be totally relied on, even though it appears to be a common sense factor. Your input appears to be suggesting that commercial development can be bad and therefore no consideration should be given to commercial development even though it is legally acceptable. To this end, we clearly believe other uses are really the major thrust of your comment letter and the Draft and Final Environmental Impact Statement go to great lengths to identify the routes in which these other uses (open space, community facilities and public facilities) could be implemented. There is a need for private, government and/or public participation in this implementation.

5. Proper Community Notification and Actual Status of Rezoning Application

The Development Plan Application Process, including Environmental Impact Statement, as well as Change of Zone Application Process, require separate yet distinct approvals from the City & County of Honolulu. The project will be complying with all aspects of these approval processes with respect to community notification. Community as well as the project have no control over the media and we only hope that proper and bias reporting is always implemented.

6. Influence on Aiea Intermediate and High Schools/Study of Effects at Other Locations

The Department of Education had identified a concern that commercial areas adjacent to schools are a direct contributor to tardiness and other detrimental factors affecting the school life. It appears to be a sad state of affairs and reflection on society when a commercial complex can be blamed for inappropriate behavior. Nonetheless, this comment will be recognized in the Final Environmental Impact Statement and noted in the Unresolved Issues. As a sidelight, the City & County of Honolulu Land Use Ordinance identifies schools (elementary, intermediate and high schools) as permitted uses in the B-1 Neighborhood Business District.

7. Traffic/Employee Parking Concerns

As we previously identified in your consultation comment response letter, the project is providing in excess parking to accommodate employee parking. There are approximately 300 additional stalls to partially recognize that there is a limitation of off-site parking.

Ms. Claire J. Tamamoto
June 4, 1997
Page 4

The Traffic Study was commissioned to identify existing traffic levels and proposed traffic levels. The study was further commissioned to identify the level of traffic improvements which would be necessary to allow successful completion of the project. This work has been done and recommendations are included in the Draft and Final Environmental Impact Statement. We do not know of any other way to be objective regarding this matter.

8. Meaningful EIS Should Seek Input Publicly and Address Concerns Fully

Your letter indicates you are disappointed with the level of public participation in the project through notification in the OEQC Bulletin. Please be advised that this is only one of the various steps which has occurred for public input. Your Councilman, the Honorable Mufi Hamann, has already had numerous meetings in the area and you are also a member of the Aiea Mill Task Force. The Department of Planning will be holding public hearings on the issue and the City Council will also be holding public hearings. Based on the amount of input received to this date, there is a significant amount of interest by the community and a large portion of the community is more than aware of the project. We request that you have more faith in the public hearing/input process.

Your comment letter will be included in the Final Environmental Impact Statement. Our response to your letter will also be included for completion of the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

April 29, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwacna Street
Aiea, Hawaii 96701

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Taylor, Mr. Onishi and Mr. Bills,

The following is a statement that I presented at the Aiea Sugar Mill Task Force meeting on April 29, 1997.

Good evening Councilman Mufi Hanneman, distinguished guests, ladies and gentlemen. My name is Ted Fisher and I am principal of Aiea Intermediate.

I believe that all of you have heard the phrase, "it takes a village to raise a child." Some of our village is here this evening. One of the issues that should be considered this evening is what type of environment we want to raise our children in.

"Dodge City" is a term for the Pearridge Shopping Center. Dodge City in its hay days stood for lawlessness and a fast easy town. The Seven-Eleven (7-11) store, just down the street from the intermediate and the high school, requires students to leave their backpacks outside because the store is concerned with stolen goods. The graffiti all along the outside walls of the store indicates the difficult time the store has controlling student traffic.

Since the Seven-Eleven (7-11) store opened, there has been an increase in students tardy to school.

Schools and organizations have what is called a mission statement. The mission of our village should be to make decisions that will be most beneficial to our children. Think about that. If we made decisions that were in the best interest of our children, those decisions would be good for all of us.


All of us need to leave a positive heritage for our children. The Aiea Sugar Mill should pay respects to the present, future and former members of this community. All our children should be able to learn about themselves, their ancestors and others through meaningful activities.

Mr. Taylor, Mr. Onishi and Mr. Bills
Page two
April 29, 1997

For your consideration, I suggest:

1. Allow the Aiea Sugar Mill to become a cultural park. Student of the Aiea schools can develop the park, gaining an understanding of their community.
2. Provide for a learning/daycare center that the students of the high school and the intermediate school can help run and earn credit for and provide a service to their neighbors and community. The businesses in the Aiea area can contribute funds and training to make a daycare/learning center for their employees. The high and intermediate students can learn about caring for the young, tapping into everyone's nurturing instincts.
3. Combine the cultural park and the daycare/learning center ideas. As a village we need to grow and expand. The question, as I see it, is will our growth have a positive effect on the children of Aiea?

Sincerely,



Ted Fisher
Principal, Aiea Intermediate School

cc: Hannemann
OEQC



Gray + Hong + Bills & Associates, Inc.
CONSULTING ENGINEERS

Mr. Ted Fisher, Principal
Aiea Intermediate School
99-600 Kulawea Street
Aiea, HI 96701

June 4, 1997

Bruce L. Gray, PE
David S. C. Hong, PE
Dennis B. Barr, PE
Roy T. Aoki, PE
Beverly G. Ing, PE
Way D. Loo, PE
Alexander H. Nagata, PE
119 Merchant Street, Suite 507
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Fisher:

Thank you for your comment letter dated April 29, 1997 regarding the subject project. Your letter states a concern for commercial development at the Aiea Intermediate School site since you believe that such a development will have a potential negative influence on schooling with relationship to an increase in tardiness and potential vandalism. You have gone on to further support this conclusion based on occurrences related to the neighborhood 7-Eleven Store. While your concern is recognized, there seems to be an implied statement that bad behavior and unacceptable behavior is an appropriate basis to not implement commercial development. This is an unfortunate statement as it relates to our society.

Your comment letter further goes on to identify various options which could be implemented at the Aiea Sugar Mill site. These include implementation of a cultural park and/or implementation with learning day-care centers or centers which can provide a service to the neighbors in the community. The use for public facilities and/or space has been identified in the Draft Environmental Impact Statement and will continue to be identified in the Final Environmental Impact Statement. In addition, the Alternative Section has been expanded to show other types of development which may be more compatible with the neighborhood, including residential development. The "No Action" alternative identified in the Alternative Section seems to be most compatible with your suggested considerations.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included in the Final Environmental Impact Statement complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

The proposed development would take Aiea further from its traditional base. The proposed development would take the "heart" out of Aiea.

Sincerely,


Bonnie Arakawa

cc: OEQC
Crazy Shirts, Inc.
Gray, Hong, Billik & Associates, Inc.
State Dept. of Land and Natural Resources
Councilmember Mufi Hannemann
Senator Norman Mineta
Representative Tom Okiura

23 May 1997

Mr. Tim Hata
Planning Department
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

Dear Mr. Hata:

Subject: Response to Draft Environmental Impact Statement
Aiea Sugar Mill Commercial Development
Tax Map Key: 9-9-5; portion of 10 and 25

Aiea town's history is saturated with plantation culture and traditional villages, as is evidenced by its registration on the National and Hawaii Register of Historic Places. The U.S. Department of the Interior registration application describes the mill as the "very heart of the town of Aiea" and "a very visible landmark from all directions." Being "one of the last remaining mills that is intact" makes this mill unique and "Saving this one sugar mill will preserve perhaps the most important...piece of Aiea's history and a piece of Hawaii's history as well."

Furthermore in October of 1986, Spencer Mason Partnership conducted a Historic Building Survey of the neighboring "unique plantation village" and concluded that these homes were also potentially eligible for the National Register.

In an increasing awareness and sensitivity toward traditional town planning and neighborhood design, the proposal for yet another commercial development is inappropriate in this traditional town. A commercial development would create an increase in traffic and do nothing to promote pedestrian travel. The town's core should be reserved for civic or public structures and uses, open spaces for public gatherings, and other elements that contribute to improving the heart of the town.

Understanding this may not be directly related to the EIS, it appears obviously contradictory to allow the demolition of the town's landmark. The landmark building should be preserved and converted into a community benefit, such as an expanded public library (which the community has long been requesting). Non-significant structures could be removed to allow for public open spaces which would support community recreational needs, since new large-scale parks cannot be expected in Aiea.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Shun L. Gray, PE
Dwain S. C. Hong, PE
David B. Bills, PE
Benny G. Lee, PE
Amy D. Lee, PE
Michael H. Abrams, PE

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

Ms. Bonnie Arakawa, Architect
99-1252-A Aiea Heights Drive
Aiea, HI 96701

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Arakawa:

Thank you for your consultation letter dated May 23, 1997 regarding the subject project. Your comment letter identifies the historic and cultural value of the sugar mill as it relates to Aiea Town. Your letter further expresses an opinion that commercial development is inappropriate for the traditional town and the space should be reserved for civic or public structures.

The Draft Environmental Impact Statement also identifies the historic value of the sugar mill to Aiea Town. The Draft and Final Environmental Impact Statement also states that there may be other uses such as residential and/or open space which would be more compatible with the neighborhood. However, Crazy Shirts originally purchased the property based on business interests. At that time it was a welcomed consideration that Crazy Shirts, Inc.'s business concerns also coincided with the community's in that Crazy Shirts, Inc. was going to develop a corporate headquarters/factory and utilize the existing mill. However, this is no longer feasible.

The Draft and Final Environmental Impact Statement identifies that Crazy Shirts, Inc., the current owner, is more than willing to consider and take action on the community's desire, provided there is private, government or public input to allow there to be some resolution of Crazy Shirts' business-oriented participation in the project. Crazy Shirts, Inc. has also indicated their desire to provide assistance (financial) into retention of historical and cultural considerations. Crazy Shirts, Inc. input must also be matched by some other entity from the public, private or government sector.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included for completion of the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2



AIEA NEIGHBORHOOD BOARD NO. 20

479 AIEA LIBRARY • 99-148 MANALUA ROAD • AIEA, HAWAII 96101

APRIL 15, 1997

PLANNING DEPARTMENT
CITY & COUNTY OF HONOLULU
630 S. KING STREET, 8TH FLOOR
HONOLULU, HI 96813-3017

ATTENTION: TIM HATA, PLANNER

SUBJECT: AIEA SUGAR HILL COMMERCIAL DEVELOPMENT

REFERENCE: (A) DRAFT EIS, THE ENVIRONMENTAL NOTICE, APRIL 8, 1997

(B) DEVELOPMENT PLANS ANNUAL AMENDMENT REVIEW, FEB. 1997

In response to Ref. (A) and (B) above, the Aiea Neighborhood Board wishes to provide our comments on the Aiea Sugar Hill project.

The following represent the position and comments approved by the Board at its regular meeting on April 14, 1997:

1. The Board has always supported the preservation of the Aiea Sugar Hill for its social, cultural and historic values especially for the residents of Aiea.
2. Even before Crazy Shirts, Inc. purchased the property, we were opposed to the future selling and development of a ten to 12 unit industrial subdivision adjacent to the plantation residential subdivision.
3. Having been listed on the National Historic Registry, we encourage private, public and governmental agencies to consider taking over the site and use the incentives offered by the listing to preserve the Aiea Sugar Hill.
4. We would also appreciate any governmental assistance to offer more incentives either by administrative rules or legislative action to encourage utilization and development with preservation.
5. We encourage Crazy Shirts Inc to consider demolition as the last resort in their attempts to recover their investments in the sugar mill site.
6. If the property is sold by Crazy Shirts, we support the re-alignment of Ulune Street through the project site to improve the safety and traffic flow of Aiea Heights Drive as well as Ulune Street.



Oahu's Neighborhood Board System established 1973

APRIL 15, 1997
Aiea Sugar Hill
Page 2

We appreciate the efforts by Crazy Shirts Inc. to work with the Aiea Neighborhood Board as well as the Aiea community during the clean up of the site. Mr. Robert Herlinger, corporate architect for Crazy Shirts, was instrumental in coordinating their planning and site development efforts and at the same time developing historical data and providing site visitations for the Aiea school children. We hope that more private enterprises would initiate similar efforts to work jointly with the community in their business establishment goals.

For clarification on the information above, please call me at phone number 486-6003.

MIKE MIURA, Chairperson
Aiea Neighborhood Board No. 20

cc: Office of Environmental Quality Control
Joel Critz, Developmental Consultant, Crazy Shirts
Gray, Hong, Bills & Associates, Inc. ✓



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Mr. Mike Miura, Chairman
Aiea Neighborhood Board No. 20
c/o Aiea Library
99-143 Moanalua Road
Aiea, HI 96701

June 4, 1997

Brian Long, PE
Dennis C. Hong, PE
Dung B. Bai, PE
Roy T. Aoki, PE
Beverly G. Pao, PE
Amy D. Loo, PE
Michael H. Appala, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0308
Fax: (808) 531-8018

Mr. Mike Miura, Chairman
June 4, 1997
Page 2

6. We appreciate your comment that the realignment of Ulune Street will provide additional project safety and smoother traffic flow to the Aiea Heights Drive as well as Ulune Street roadway systems.

Your comment letter will be included in the Final Environmental Impact Statement. A copy of our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

Dear Mr. Miura:

Thank you for your comment letter dated April 15, 1997 regarding the subject project. We are providing the following information regarding your comments:

1. The Draft and Final Environmental Impact Statement will continue to state the community's as well as the Aiea Neighborhood Board's support to maintain the Aiea Sugar Mill for its social, cultural and historic values. The Draft and Final documents have spent considerable time restating this position.
2. Through the Draft Environmental Impact Statement comment record, the Neighborhood Board's position opposing a previous industrial subdivision will be identified.
3. Crazy Shirts, Inc. is also in favor of encouraging private, public and governmental agencies to consider taking over the site. As indicated in the Draft Environmental Impact Statement, Crazy Shirts is even willing to do its own share with respect to this consideration. However, Crazy Shirts cannot be the only participants in this process. As of this date, even after considerable encouragement by the owner, no known entity has come forward wishing to participate in the project to help allow the successful consideration of the historic preservation alternative.
4. Crazy Shirts, Inc. also concurs with your appreciation for any government assistance to offer some reasonable means or incentives to encourage development with preservation. Once again, as of this date, there have been no overtures to this effect.
5. Crazy Shirts, Inc. has already gone on record indicating it is not their desire to eliminate development as a preservation site. However, if there is no participation by any other entity, including private, government or public agencies, Crazy Shirts will have to consider demolition and commercial development.

Patsy H. Nanbu
99-017 Iwaiwa Way
Aiea, Hawaii 96701

May 15, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, Hawaii 96701

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Gentlemen:

Re: 19 Acre Sugar Mill Property in Aiea

I have lived in Aiea nearly all of my life, and have been informed by people in the community that the development of a commercial shopping center is seriously being considered for the old Sugar Mill property.

The property is situated very close to existing homes, including residences of senior citizens and is surrounded by schools. The property is located in an already congested traffic area. In my opinion, the development of a commercial shopping center would create additional traffic and would adversely affect the safety of the surrounding community. In addition, the area already has several commercial shopping complexes (i.e. Aiea Shopping Center, Aiea Shopping Plaza, Aiea Commercial Building, etc.) with many vacant spaces.

I believe the property should be developed more for use by the community, such as a community center or an educational/recreational facility. I understand a study is being conducted to relocate the Aiea State Public Library to the Sugar Mill property. Such an exchange/land swap would be a win-win situation for both the community and for the current owners of the property. I would strongly recommend that such an option be pursued.

Thank you for the opportunity to provide my comments.

Sincerely,

Patsy H. Nanbu

c: Honorable Mufi Hanemann
Honolulu City Council
530 South King Street
Honolulu Hawaii 96813

OEQC
235 S. Beretania Street
State Office Tower, Suite 702
Honolulu, Hawaii 96813



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ms. Patsy H. Nanbu
99-017 Iwaiwa Way
Aiea, HI 96701

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

June 4, 1997

Barry D. Gray PE
David S. C. Hong PE
David B. Bills PE
Patsy H. Nanbu PE
Aiea, Hawaii 96701

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

Dear Ms. Nanbu:

Thank you for your comment letter regarding the subject project, dated May 15, 1997. Your letter identifies that you have been an Aiea resident all your life and that you have concerns regarding development of the old sugar mill property. Your specific concerns are with regard to the proximity of a commercial shopping center to existing homes and also that there is already traffic congestion in the area. You further have identified that there are more than sufficient commercial shopping complexes in the area.

We would like to request that you get a chance to review the Final Environmental Impact Statement since it goes into detail to discuss the compatibility of the proposed commercial venture with respect to existing residential neighborhood and the schools. The Final document also identifies that there is a community concern due to the close proximity of the commercial, residential and school uses. The Draft as well as Final Environmental Impact Statement contain a traffic study and market study to determine the potential impacts of increased traffic congestion as well as any market viability to a commercial complex. The Traffic Study identified that traffic levels would increase, however, these would be mitigated by roadway improvements. The Market Study identified that if a commercial complex is built, the commercial complex would in fact become occupied in a relatively short amount of time, demonstrating its marketability.

Finally, you have expressed a desire to see the site retained for some use such as a community center and/or educational/recreational facility. The Draft Environmental Impact Statement as well as Final Environmental Impact Statement have gone through great lengths to identify the community's concern. The current owner, Crazy Shirts, Inc., is also receptive to such a development proposal. However, this development proposal would require participation of private, government or public entities. As of this date, all entities have expressed desires to see community uses but no entity has expressed any ability to make this a financial realization.

Your comment letter will be included in the Final Environmental Impact Statement, along with this response, to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:sc
2617-2

Konia Freitas
99-1040 Pu'umakani Street
'Aiea, HI 96701

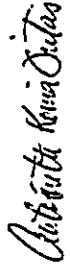
Planning Department
City & County of Honolulu
650 S. King Street, 8th Floor
Honolulu, HI 96813-3017
Attn: Tim Hata

Dear Mr. Hata,

Thank you for the opportunity to comment on the proposed 'Aiea Sugar Mill Commercial Development draft Environmental Impact Statement (DEIS). Attached are my comments.

Should there be any questions regarding this matter please call me at 488-5808.

Sincerely,


Antoinette Konia Freitas

cc
Crazy Shirts, Inc.
Gray, Hong, Bills & Associates, Inc.
OEQC

Comments Relating to the Draft Environmental Impact Statement for the 'Aiea Sugar Mill Commercial Development.

The purpose of the current action is to change the existing Development Plan Land Use Map for the primary urban center from Industrial designation (I-2) to a Commercial designation. The current plan based on marketing considerations is to redevelop the property in a commercial configuration. In the event that land use changes are successful, Crazy Shirts, Inc. will sell the property to a development entity which will provide the actual development implementation. Capital construction cost estimates are projected at \$7,200,000. Projected annual retail sales of a fully occupied shopping center are estimated at \$48,000,000. The property owner has rejected a "no action" alternative because no economic value exists under this alternative. The I-2 Intensive Industrial District alternative may be pursued in the event that a commercial district designation fails. The DEIS identified beneficial impacts of the development to be employment, economic benefit, and income potential. The adverse impacts identified in the DEIS are potential loss of 'Aiea sugar mill; channelization of 'Aiea stream and increase traffic entering and exiting the shopping complex.

1. Loss of 'Aiea sugar mill
The 'Aiea Sugar Mill dates back to 1898 and is one of the last vestiges of 'Aiea's plantation history. The proposed action will result in the demolition of the sugar mill. Funding for preservation does not seem feasible at this time. The property owner proposes the following mitigation measures: 1) find a buyer who is interested in preserving the mill; 2) archaeological data recovery. I would like to propose that the 'Aiea Mill Task Force investigate the feasibility of using the "Community Reinvestment Act" (CRA) as a potential financial strategy. While CRA initiatives are usually directed toward low or moderate income neighborhoods, an effort should be made to investigate every opportunity that may exist to preserve the 'Aiea Sugar Mill even though it seems like a long shot. I also support the recommendation of the State Historic Preservation Office (SHPO) director that a portion, or portions of the mill be kept and utilized within the shopping complex. SHPO has offered to work with the master planner to identify which portions offer the most significance and interpretation opportunities.

2. Channelization of 'Aiea stream.
The proposed development will transform the natural drainage channel to a man-made channel through the first 700 feet of the project. I support the recommendation made by Guinther (Appendix D) to design the culvert bottom to accommodate a natural stream bed. The recommendation of planting large trees to shade the culvert is also supported.

3. Creation of additional traffic to support the development.
The proposed development will create additional traffic entering and exiting the shopping complex. Based upon the Traffic Impact Analysis Report various traffic recommendations have been made to mitigate these effects. A new road configuration would consist of:

- a) a Development Plan Roadway (DPR) allowing the connection of 'Aiea Heights Drive to Kulawea Street.

Bruce L. Gray, P.E.
David S. C. Hong, P.E.
Cory B. Bost, P.E.
Robert J. Adams, P.E.
Beverly G. Fox, P.E.
Mary D. Cook, P.E.
Alexander H. Reynolds, P.E.



Gray • Hong • Bost & Associates, Inc.
CONSULTING ENGINEERS

June 6, 1997

Ms. Antoinette Konia Freitas
99-1040 Pu'umakani Street
Aiea, HI 96701

**SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement**

Dear Ms. Freitas:

We thank you for your comment letter regarding the subject project. Your comment letter began by summarizing the proposed development and we concur with your general description as well as identification of significant impacts. With respect to your specific comments, we are providing the following responses:

1. **Loss of Aiea Sugar Mill**

Your comment letter identifies that the Aiea Sugar Mill is an asset with respect to historical and cultural value. The Draft Environmental Impact Statement also recognizes this fact. The Draft Environmental Impact Statement also clearly identifies that if there is a private, government agency and/or public entity who is interested in helping pursuit of the historical and cultural values, this option would be seriously considered. Through incorporation of your comment letter into the Final Environmental Impact Statement, it will be identified that the "Community Reinvestment Act" may be one potential entity.

2. **Channelization of Aiea Stream**

We are revising the fauna section of the Final Environmental Impact Statement to identify that a low flow channel may be a consideration for the bottom of Aiea Stream. This is a 1 to 2-foot wide depression in the bottom of the channel to collect and pass low stream flows. We are not aware of any design method which would allow a natural stream bottom in conjunction with a modified channel. This is primarily due to the fact that even under existing conditions, the velocity is in excess of that generally recognized for altered channels.

3. **Creation of Additional Traffic to Support the Development**

Your comment letter identifies the proposed traffic improvements as contained in the Draft Environmental Impact Statement. The Final Environmental Impact Statement has been revised to expand and provide typical sections as well as identify the frontage

b) the creation of a 4-way intersection at the DPR intersection with Kulawea Street (with the west leg of Ulune street to be converted to a dead-end with turnaround).

c) the creation of a T-intersection at the intersection of the master plan roadway and Ulune Street/Aiea Heights Drive.

The DEIS indicates that peak traffic periods in the vicinity occur from 6:00am - 8:00am in the morning and 3:45pm to 5:45pm in the afternoon. Furthermore, at the intersection of Aiea Heights Drive and Ulune Street/Hakina Street/Honohono Street it has been observed that motorists frequently travel in excess of posted speed limits. The concern being raised here is whether or not a continuous route through the commercial development will encourage speeding. The DPR is being planned in an area that already has high vehicular and pedestrian traffic (from schools), this coupled with a continuous route may need further planning.

There is also no discussion regarding the impact of the new road alignment relative to private property. Will private property owners lose land to this master road development?

4. **Socio-Economic Perspective**

Currently, the mill property provides no economic benefit for the property owner and no employment generation for the state. The proposed development may create between 400-600 jobs. The DEIS market assessment projects that a fully occupied shopping center will generate in excess of \$48,000,000 in annual retail sales. There is no doubt that the Aiea community will change as a result of this proposal. Frankly, there are more than enough shopping complexes in Aiea and the neighboring vicinities. Aiea town doesn't need another shopping complex! Should these type of commercial development trends continue, Aiea will be nothing more than a commercial hub for passing commuter traffic. The trade-off for economic and employment benefits do not favor Aiea town or its people. There is a potential economic threat to the smaller scaled, more appropriate, and personal mom and pop stores that already exist. There will be a long period of construction activity that the towns people will have to endure. As a matter of fact, a historic entity may be lost as a result of this development proposal. There is no guaranty that any of these jobs will go to the members of Aiea town or its youth. There is no guaranty that any of the potential income will stay in Aiea town. Personally, I support the community position stated in the DEIS, "complete preservation or preservation in a park-like setting." However, if a commercial designation is approved for this property the development plan should consider an appropriately scaled development which serves to meet the needs and desires of the Aiea community. Second, a commercial development plan should provide for ample open-space and greenery in order to minimize large impervious surface areas. The commercial development plan should promote pedestrian use. Lastly, the commercial plan should, to the greatest extent feasible, integrate part or in its entirety the Aiea sugar mill into the plan.

Ms. Antoinette Konia Freitas
June 6, 1997
Page 2

improvements which are proposed. The new master plan roadway totally exists within the Aiea Sugar Mill property and there will be no impact to private property. Therefore, no discussion with respect to the private property owners was included in the Draft Environmental Impact Statement or Final Environmental Impact Statement.

4. Socio-Economic Perspective

Your comment letter summarizes the socio-economic information contained in the Draft Environmental Impact Statement. Your letter further states that you do not believe that this is in the best interest of Aiea Town and that it may just turn Aiea Town into a shopping hub for passage commuter traffic. To this end, the Draft Environmental Impact Statement and Final Environmental Impact Statement will continue to identify alternatives which exist for the property. These alternatives consist of historic preservation, residential development and/or open space. Obviously a smaller scale commercial development is another option.

As reported in the Draft and Final Environmental Impact Statements, the current owner, Crazy Shirts, Inc., is more than willing to entertain development options which appear to be more agreeable to the neighborhood. However, Crazy Shirts entered into the purchase of the property based on a business venture. Crazy Shirts is solely pursuing development of the property also based on business interest considerations. Should entities from the private sector, government, and/or public sector step forward and seriously want to help implement other alternatives, Crazy Shirts has already indicated their commitment to work with such parties. However, to date, there have been no overtures for any type of joint participation to allow another form of development which also recognizes Crazy Shirts' vested interest.

Your comment letter will be included in the Final Environmental Impact Statement. Our response to your comment letter will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2

Carol Wilcox

P.O. Box 19558 Honolulu, Hawaii 96816

Planning Department
C&C Honolulu
650 S. King St
Honolulu, HI 96813

✓ Gray, Hong, Bills & Associates, Inc
119 Merchant Street, Ste 607
Honolulu, HI 96813

April 21 1997

RE: AIEA SUGAR MILL PROJECT

Dear Sir,

I would like to address the part of this project that proposes to channelize 700 feet of the Aiea stream. Yesterday I took a quick look at the site and it appears that there is no reason to channelize the stream. The streambed is etched well below the site and the existing mill and HSPA grounds provide for a riparian corridor.

It appears that the request to channelize here is to maximize developable land and to facilitate the quick delivery of runoff to the stream. This is not justification for channelization.

Channelization is strongly discouraged by the state in policy and reports in ALL cases, not just for our "best" waterways. (See Hawaii Stream Assessment, Stream Protection and Management, LUC Conservation Boundary Review, Hawaii Coastal Non Point Source Pollution Plan, and the recent report prepared by Bay & Bay Consultants for DWRM on stream protection and management). It is strongly discouraged in the City's own draft plan for Central Oahu. The principles here are the same.

The goals of all these and other documents is to mitigate stream erosion and to protect water quality in the stream and in the nearshore waters. It is undisputed that the single best way to accomplish these goals is by protecting all streams in their natural banks and by providing vegetated riparian corridors (in this case of at least 100 feet). It is undisputed that the single greatest threat to instream and nearshore water quality is stream channelization. This direct relationship cannot be emphasized strongly enough.

Increasingly, as this relationship becomes acknowledged and recognized, the state policy is to limit channelization to those cases when property and/or life is directly threatened when channelization is not undertaken, and when there is no other alternative. This has not always been the case, and in fact it has been true that the state and counties have taken the lead in channelization in the past. We are in a time of increased awareness of the impacts of these actions, and are in transition to a policy which protects streams.

I would like to recommend that the Planning Department require the developer to provide several detailed alternatives to channelization in the final EIS. One of these alternatives should be a 100 foot vegetated corridor along the riparian way. (This could be a major visual asset to the shopping center. This section of the Aiea stream is very pretty.) The Final EIS should be very specific as to how it proposes to dispose of storm and parking lot runoff, including costs of these improvements. In the channelization alternative, it should describe the potential for negative impact both up and down stream from the proposed project, including increasing sedimentation in Pearl Harbor, and how the developer proposes to mitigate those impacts. It is most likely that the cost of leaving a natural corridor will be much less, as will the impact to the stream and surrounding resources.

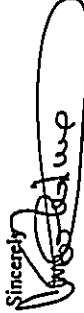
I also recommend that the Department of Health be very clear and complete in the Final EIS as to what they will be requiring of the applicant in all cases regarding disposal of runoff from the project.

And finally, I encourage the Planning Department to establish a clearly articulated policy that discourages channelization of all streams unless the developer can demonstrate that there are no alternatives to the proposed channelization, by presenting a thorough exploration of all alternatives in the EIS. The Planning Department would be doing the developer a favor by making this policy clear at the onset of any project, so that the developer understands early in the consulting process that he proceeds down the channelization path with a great risk of being denied.

The developer enjoys great good fortune. A stream running through the property is an enormous asset. Wouldn't we all prefer walking along the mall or sitting down to eat and looking out over a little stream rather than a cement channel? I think the incorporation of a natural stream with a landscaped corridor would enhance the project, provide a selling point, and help protect the natural resources.

Thank you for the opportunity to comment.

Sincerely,



Carol Wilcox



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ms. Carol Wilcox
P.O. Box 19558
Honolulu, HI 96816

June 6, 1997

Bruce L. Gray, P.E.
Daniel S. C. Hoop, P.E.
Dwight B. Bae, P.E.
Roy T. Aoki, P.E.
Benjamin G. Ing, P.E.
Lily D. Lou, P.E.
Michael H. Noyes, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Wilcox:

Thank you for your comment letter dated April 21, 1997 regarding the subject project. Your comments primarily address the proposed concrete stream channel and essentially state why there should be no consideration for such a channel. You have further referenced the City's Draft Plan for Central Oahu which discourages the use of concrete channels. In addition, you have made reference to the fact that concrete channels may be detrimental to water quality in the stream as well as near-shore waters. You have also recommended that the Planning Department require the developer to analyze detailed alternatives to channelization in the Final Environmental Impact Statement.

The primary reason for the proposed concrete channel is to provide reasonable access to Parcel B of the existing industrial lot. The Final Environmental Impact Statement indicates, which may be unclear in the Draft Environmental Impact Statement, that no commercial access will be allowed to the project from Kulawea Street. This only leaves access to Parcel B from the main commercial portion of the property (Parcels A and C). Due to the access limitations from Kulawea Street, crossing the stream channel by implementation of a concrete channel section is the only reasonably sound method to provide this access.

One of the commitments of the stream channel as described in the Draft Environmental Impact Statement is to transform the stream back to a natural stream flow within the Aiea Sugar Mill property. As long as this commitment is made, there will be no detrimental effect on additional sedimentation transport to downstream areas, including near-shore waters. The sediment load entering the project from its upstream reaches will be identical to the sediment load leaving the property after the channel flow is transformed back to a natural stream channel.

The Final Environmental Impact Statement has been modified to include under its Alternative Section the implications of project development without use of the concrete channel. With respect to commercial development and due to the limitation of access from Kulawea Street, any commercial development on Parcel B would essentially be eliminated. With respect to residential development since access could be provided from Kulawea Street, residential development is an alternative even though it is not the preferred alternative by the developer. This information has been added to the Final Environmental Impact Statement as a factual statement of record.

Ms. Carol Wilcox
June 6, 1997
Page 2

Once the Aiea Stream Channel is touched, current drainage standards of the City & County of Honolulu require certain treatment to protect against velocity-created erosion. The preferred alternative suggests a concrete channel due to the fact that it is the most efficient transmission section which would also work hand in hand with the energy dissipation device required to restore natural stream velocity.

You have suggested the creation of a 100-foot wide vegetated corridor. Modification of the existing corridor requires compliance with applicable drainage standards. Since the velocity of the existing stream under peak flow conditions is 15 feet per second (fps), this is far in excess of the maximum velocity for vegetation. The maximum velocity for vegetated banks is 5 fps.

The Final Environmental Impact Statement will identify as an unresolved issue the status of the suitability of a concrete channel for project development. While it is believed that the project commitments will not have an impact on sediment transport and near-shore coastal water quality, we realize there is an aesthetic concern being generally stated by the community.

Your comment letter will be included in the Final Environmental Impact Statement. This response will also be included in the final document to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

May 15, 1997

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, HI 96701

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, HI 96813

Re: Aiea Sugar Mill site

Dear Sirs:

I am a resident of the Aiea community. I highly oppose the proposal of commercial development at the Aiea Sugar Mill site for the following reasons: The intersection fronting the sugar mill is very busy. The creation of a commercial development will only increase traffic. Even with an additional roadway through the sugar mill property, it would not alleviate the single lane traffic on Ulune Street and Aiea Heights Drive.

In addition, elementary, intermediate and high schools surround the property, thus increasing tardiness and delinquencies among students. As the vice-principal of Aiea Intermediate has already mentioned, there has been an increase in tardiness among students since the opening of 7-Eleven.

As a resident of Aiea, and due to the location of the property, I would like to see some kind of community activity center, park, educational center or elderly care home, something that would not create too much additional traffic.

Very truly yours,

Shelley M. K. ...

Everett Carter

Everett Carter

Sherril L. Meyer

Hildred Nomura

Mavis K. Niino

Mavis K. Niino

Laurie H. Chang

Loren K.S. Chang

cc: Councilmember Muff Hanneman

OEQC



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ms. Laurie H. Chang
99-317-A Uwau Drive
Aiea, HI 96701

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Chang:

Thank you for your comment letter regarding the subject project. Your letter expresses concern with respect to additional traffic as a result of the proposed commercial development. The Draft Environmental Impact Statement clearly recognizes that the commercial development would provide increased traffic counts. The Draft Environmental Impact Statement further proposes traffic improvements to mitigate the additional traffic. For your clarification, the Draft Environmental Impact Statement showed the new Master Plan Roadway connecting Ulune Street with Aiea Heights Drive. The existing Ulune Street would become a dead-end street before it reaches the intersection of Kalaweia Place. The Final Environmental Impact Statement will further clarify that the proposed Master Plan Roadway will be capable of ultimately handling two-way traffic in each direction through the commercial development.

Your letter further expresses a concern that tardiness and delinquencies could potentially increase as a result of commercial development in reasonably close proximity to the various Aiea schools. We appreciate and share your concern, however, potential tardiness and potential delinquencies should not be the overriding consideration. There are many locations within the island environment where commercial developments are in reasonably close proximity to school sites. Students, as a part of their educational process, should also be learning how to be responsible future citizens.

Finally, your letter suggests alternatives for the Aiea Sugar Mill site. As expressed often in the Draft Environmental Impact Statement, the owners are more than receptive to other uses on the property. However, the ultimate creation of some of your suggested alternative uses will require public and/or private financial participation. The owners bought the property with an expectation of an economic return based on its zoning. All of the uses you have suggested would result in a substantial loss and to allow this to occur, other entities must also participate in the project.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:sc
2617-2

Basil Gray PE
David S. C. Hong PE
Darryl Bills PE
Sherril L. Meyer PE
Mavis K. Niino PE
Myo D. Lee PE
Michael H. Nomura PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 531-0306
Fax: (808) 531-8018

June 4, 1997

May 17, 1997

Planning Department
City and County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hi. 96813
Mr. Tim Hata

Dear Mr. Hata,

I read the Draft Environmental Impact Report prepared for the Aiea Sugar Mill Commercial Development and I disagree with the report. I feel that a commercial development in this area conflicts with the residential development in that area now. I feel that it also conflicts with other commercial developments near this area such as Aiea Shopping Center, Aiea Shopping Plaza, Aiea Westridge Shopping Center, Aiea Pearl Kai Shopping Center, Aiea Harbor Center Business Park, Waimalu Shopping Center, Stadium Mall, Stadium Marketplace, Pearlridge Center, Times Square Shopping Center, Pearl City Plaza, Pearl Highlands Shopping Center, Costco Shopping Center, and all other commercial developments near this area. I've been in all of these commercial developments and what I see is traffic, parking problems in the development and outside around the development, increased water usage, no residential developments around it, and sometimes lots of unruly children.

A 188,000 square foot commercial development will use more water than a 7,500 square foot Aiea ohana residential development. I feel that if Aiea residential ohana is declined, then Aiea commercial development should also be declined because of

water consumption. These investors should go to Kapiolani or Waianae.

As an Aiea resident, I decline a commercial development at the Aiea Sugar Mill. Its a historical Mill and it should remain historical. This development if approved will ruin this historical site, it will take business away from other commercial businesses in the Aiea area, it will ruin the residential nature of that area, it will cause more traffic and traffic accidents, it will require more traffic lights which will be paid by taxpayers, it will require more police presence which will be paid by taxpayers. it will require a reconstruction of the Aiea stream, it will cause more pollution, it will use more water, tourists will flood this area just like Waikole, it will be noisy, it will be ugly, it will bring more jobs to outside non Aiea residents, and it will bring more money and profits to outside non Aiea people. If they hire only Aiea residents, if Aiea can tax it so we can save our library system, and if residential ohana can be approved then I might reconsider my opinion. But right now I oppose the Draft Environmental Impact Report because it only benefits money hungry investors. Right now the Aiea Sugar Mill benefits me because of its industrial zoning and I like it to remain that way.

Sincerely,

W. Lum

Wesley Lum
99-047 Nalopaka Place
Aiea, Hi. 96701
483-7406



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Mr. Wesley Lum
99-047 Nalopaka Place
Aiea, HI 96701

June 3, 1997

DAVID B. BILLS, P.E.
DANIEL S. C. HONG, P.E.
DAVID B. BILLS, P.E.
ROY T. AUST, P.E.
BRENDA G. JOY, P.E.
JOY D. LUM, P.E.
MICHAEL R. HIGDON, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4889
Telephone: (808) 521-0308
Fax: (808) 531-8018

Mr. Wesley Lum
June 3, 1997
Page 2

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Lum:

Thank you for your comment letter dated May 17, 1997 regarding the subject project. Your comment letter identifies the numerous shopping centers in the area and concludes that all these commercial developments have led to congested traffic, parking problems, and sometimes lots of unruly children. Your letter further speculates that the 145,000 sq. ft. shopping center will use more water than in an ohana residential development. Your letter finally states that the property should be retained for the historical mill and that investor driven property acquisition should occur in other areas.

As a premise to our response, we would like to reiterate that Crazy Shirts, Inc. bought the Aiea Sugar Mill property for a business venture. At the time of purchase it was thought that corporate/factory development could be achieved utilizing the good majority of the Aiea Sugar Mill buildings. As reported in the Draft Environmental Impact Statement, this is no longer feasible possible and since the property was bought for business reasons, other business options are being explored. Crazy Shirts, Inc. also recognizes the community's concern for retention of the Aiea Sugar Mill and has been actively pursuing someone to take over the property to allow historic preservation. However, this implementation requires the input of public, private and/or government entities. As of this point in time, no entity has made any commitment to allow this option to occur. Should no other forms of participation come forth, Crazy Shirts, Inc. intends to pursue development which is compatible with the original purchase considerations.

The Draft and Final Environmental Impact Statements recognize that a shopping center will increase traffic. To that end, a traffic analysis has been prepared to identify impacts as well as mitigation measures. This information has been included to provide a factual analysis with respect to traffic.

Your conclusions with respect to water usage are not correct. A 7,500 sq. ft. ohana residential development would allow for approximately 75 ohana lots. The ohana lot will allow two units per lot and an average water consumption of approximately 600 gallons per lot. Based on these figures, the ohana option would provide an average water demand of 4,500 gallons per day.

Earl C. ... PE
Dwight S. ... PE
Craig B. ... PE
Roy T. ... PE
Beverly G. ... PE
Mary D. ... PE
Alonah H. ... PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018



Gray + Hoag + Bills & Associates, Inc.
CONSULTING ENGINEERS

May 22, 1997

Mr. Tim Hala
Planning Department
City & County of Honolulu
650 S. King Street 8th Floor

Dear Mr. Hala:

I adamantly disagree with the reports conclusion that "the proposed change to commercial land use is more compatible with existing neighboring land uses." In fact the existing neighbors are more residential than commercial; it is bordered on 4 sides by residential.

I agree that from a planning perspective the most desirable land use should be residential or open zoning (park). I encourage the Planning Dept. to move cautiously in responding to this proposal. A commercial development is surely not in the best interest of the community.

Sincerely,

Mary Ann Akana Lum

Mrs. Mary Ann Akana Lum
99-045 Nalopaka Place
Aiea, HI 96701

June 3, 1997

Mrs. Mary Ann Akana Lum
99-045 Nalopaka Place
Aiea, HI 96701

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mrs. Lum:

We thank you for your comment letter dated May 22, 1997 regarding the subject project. We believe there is a misinterpretation on your part with respect to the presentation of compatible uses. The Draft as well as Final Impact Statement only state that a commercial complex appears to be more compatible with the neighborhood as compared to an industrial complex. The Draft as well as Final Environmental Impact Statement will continue to identify that residential or open zoning (park) are probably the most compatible uses for the neighborhood. The Draft and Final Environmental Impact Statement will also continue to identify that if such a reduced designation and down zoning is enforced on the property, this essentially represents a taking of land and appropriate compensation should be provided. The current owner Crazy Shirts, Inc. have stated that it is not opposed to uses of lower intensity provided the private sector, government, and public agencies recognize the compensation responsibilities.

Your comment letter as well as our response letter will be included in the Final Environmental Impact Statement to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:am
2617-2

Scott, Cory PE
Cavali, C. PE
Cassidy, B. PE
Chang, B. PE
Chu, T. PE
Beverly, D. PE
Amy, D. PE
Alcheam, J. PE



Gray + Hong + Bills & Associates, Inc.
CONSULTING ENGINEERS

May 22, 1997

Mr. Tim Hata
Planning Department
City & County of Honolulu
650 S. King Street 8th Floor

Dear Mr. Hata:

I'm writing to express my opposition to this proposed development. Based on the fact that the creation of a commercial development on the Alea Sugar Mill property will create additional traffic entering and exiting the shopping center development. This corridor linking Alea Heights with lower Alea is already overburdened and inadequate to support the current traffic flow and volume.

Remedies proposed by the current owner are insufficient. They claim that "the traffic impact assessment report indicates that traffic will be no worse than under existing conditions." Well, existing conditions are tolerated but not in the least bit sufficient.

Sincerely, *Mr. Hung Heong Lum*

Mr. Hung Heong Lum
99-045 Nalopaka Place
Alea, HI 96701

June 3, 1997

Mr. Hung Heong Lum
99-045 Nalopaka Place
Alea, HI 96701

SUBJECT: Alea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Lum:

We thank you for your consultation comments regarding the subject project. We will be incorporating your comment letter into the Final Environmental Impact Statement as a comment letter to the Draft Environmental Impact Statement. The Draft as well as the Final Impact Statement currently include a traffic impact analysis which identifies existing traffic level as well as proposed traffic levels. This is the best information available based on traffic counts as well as projection of future traffic. Roadway improvements as detailed in the Draft and Final Impact Statement are the proposed methods to mitigate traffic impacts.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:am
2617-2

Page Two

May 23 1997 '97 MAY 27 10:11

RECEIVED

COMMUNITY

Planning Department
City and County of Honolulu
650 S. King Street 8th Floor
Honolulu Hawaii 96813-3017

Attn: Tim Hara
Re: Aiea Sugar Commercial Development

Dear Mr. Hara:

I have read the draft EIS relating to the Aiea Sugar Mill Development and am deeply concerned about its potential adverse effects upon the surrounding community.

As a descendant of an Aiea family which has lived on the same land for seven generations, I am troubled by a development which the EIS itself confirms may not be the most desirable land use.

The statement of need -- as a commercial type property -- appears to be motivated less by the needs of the community, than on the need of the owner/applicant to recoup acquisition and planning losses. This is not only inappropriate, but directly contradictory to the execution of the original purchase, namely, to preserve the historic and cultural aspects of an area landmark.

By its own admission, the EIS identifies the most desirable land use, from a planning perspective, to be residential or open zoning (park); not a commercial development. It also acknowledges that the development will be permanently disadvantageous to the community, resulting in long-term losses due to commitments on non-renewable utilities and infrastructure. Furthermore, it contends that the volume of traffic passing the site on a daily basis will increase. (Within close proximity, it should be noted, to a highly pedestrian-trafficked school zone.)

This, in addition to a marketing analysis which is clearly too speculative, inadequate environmental clean-up guarantees (i.e. A+B), and, most importantly, a proposed development which will not be developed by the present owner (hence, not guaranteed in its anticipated returns or compatibility with the surrounding residential and educational community), signals a plan which is short-term oriented and which lacks commitment to the serious concerns of the community.

Given the need for open space in the Aiea area, and especially, for a park which is not sub-standard (the current "District" park), I believe it is premature to entertain such a speculation-oriented proposal without allowing the community, which will be most impacted to fully exhaust all opportunities to secure (renew?) a rare site into the fabric of the local landscape.

I appreciate the opportunity to express my concerns on this matter and call upon the Planning Department to measure and analyze this issue not by purely speculative economic reasoning, but by the long-term needs and quality of life factors of an important Hawaii community. Unlike the applicant, we live here. And we will have to pay for its losses.

Kehaulani Lum

C: Casey Shirts, Inc.
C: Gray, Hong, Bills & Associates, Inc.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ms. Kehaulani Lum
99-045 Nalopaka Place
Aiea, HI 96701

June 3, 1997

Brent Gray PE
David S. C. Hong PE
David B. Bills PE
Roy T. Aoki PE
Brent F. Gray PE
Michael D. Lum PE
Alison H. Nye PE
119 Merchants Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Lum:

We thank you for your comment letter dated May 23, 1997 regarding the subject project. Crazy Shirts, Inc. entered into the purchase of the Aiea Sugar Mill property for business reasons. These business reasons included moving and converting the Aiea Sugar Mill into a corporate headquarters and factory. As it turns out, the feasibility of completing the project as originally conceived is not existent. Therefore, Crazy Shirts, Inc. is now making another business decision on how to keep their property viable. Since the use is industrial, the current request to redesignate the property to commercial is consistent with business considerations.

Crazy Shirts, Inc. have further indicated that other uses are viable on the property which involve a lesser use standard. However, to diminish the value of the property by down zoning or redesignation at a lower land use standard represents taking of land. Crazy Shirts is not opposed to this as long as the private sector, governmental agencies, and public recognize this diminished value and participate in the overall reduction of property value. Crazy Shirts, Inc. has further indicated that they are willing to also be an active participant in this process.

The traffic study was completed for the subject property to show the impacts of commercial development. There will be larger amounts of traffic and, therefore, subsequent traffic improvements are required which have been detailed in the Draft and Final Environmental Impact Statement. Based on the work of the traffic engineering consultant, the proposed improvements will mitigate the increased levels of traffic.

A marketing study was prepared to determine the absorption rate of tenants into the shopping center. Based on the relatively short term absorption, the feasibility of commercial use has been established. With respect to environmental cleanups, large portions of the cleanup work has already been completed and site analyses have identified where hazardous materials are located. A commitment has already been made to properly dispose of any hazardous material.

With respect to your concern regarding development by other people, any entity which enters into purchase of the property must use the development plan amendment and rezoning approvals as their basis for future development.

Ms. Kehaulani Lum
June 3, 1997
Page 2

In conclusion, we are reiterating the fact that Crazy Shirts, Inc. is more than receptive to implementation of community concerns with respect to lower intensity land use. It would appear appropriate for the community to also enlist the proper support of government and/or public entities which can allow this activity to occur. Crazy Shirts, Inc. has been soliciting this type of cooperation since the point in time it was determined that development of the Aiea Sugar Mill into a corporate headquarters/factory was not economically viable.

Your comment letter will be included in the Final Environmental Impact Statement. This response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:am
2617-2

May 15, 1997
Page 2

Thank you again for this opportunity to comment. Please contact the undersigned if you have any questions.

Sincerely,



Robert K. Sasaki
Senior Vice President

RKSjs

cc: Crazy Shirt, Inc.
Gray, Hong, Bills & Associates, Inc. ✓
Meredith J. Chung

ABHI

A&B-HAWAII, INC.

May 15, 1997

Planning Department
City & County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hawaii 96813-3017
Attention: Mr. Tim Hata

Gentlemen:

Thank you for this opportunity to comment on the Draft Environmental Impact Statement for the Proposed Alea Sugar Mill Project.

As owner of the two wells located on the property, we offer the following comments to the discussion provided in Section 4.a, Water Resources-Groundwater.

The third paragraph of this section incorrectly leaves the impression that there is a low (or no) probability that the wells will be used in the future. Contrary to what is stated, A&B has been in discussions with an outside party regarding the potential transfer of the wells themselves and their associated water use permits. Such a transfer (of title) could be viable and would not require the approval of the State Commission on Water Resource Management (CWRM). Furthermore, other options for utilizing the wells other than for the subject property itself do exist. Whereas these options may require regulatory approvals, it is premature in our opinion to label the likelihood of receiving these approvals as being "remote". Lastly, the statement made that if the wells are not used for a period of two years, then they must be capped and their allocations removed is incorrect. Under the State Water Code, the CWRM may suspend or revoke a water use permit after a period of four years of partial or total non-use — however, revocation is not automatic, nor is capping of the wells specifically required.

Accordingly, in the discussion of the impacts in the fourth paragraph, it is incorrect to conclude that the development of the subject property will eliminate any potential requirement of withdrawal from the two existing wells in the property. Again, off-site use of the well water could take place with the proper approvals, or the wells could be transferred to a third party, as is.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 3, 1997

Mr. Robert K. Sasaki
Senior Vice President
A&B-Hawaii, Inc.
822 Bishop Street
Honolulu, HI 96801

Bruce G. Gray, PE
David S. Hong, PE
Robert K. Sasaki, PE
A. B. Hawaii, Inc.
822 Bishop Street
Honolulu, HI 96801
Telephone: (808) 521-0308
Fax: (808) 531-8018

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Sasaki:

We thank you for your comment letter dated May 15, 1997 regarding the subject project. We are providing the following responses to your comments.

We have made revisions to the Water Resources section of the final document to delete the subjective comment that the ability to transfer water rights appears to be remote. We have in turn revised the document to state that the transfer completion requires the fact that there is a need and that the use of transfer is approved by the Water Commission. In addition, we have also revised the final document to state your confirmation of a 4-year non-use period before the wells must be capped.

Your comment letter also express concerns that under commercial development, existing wells will provide no value to the property. This statement has been made in the context of the commercial facility proposed for the Aiea Sugar Mill site. Should A&B-Hawaii, Inc. be able to obtain an offsite commitment, this is totally independent of the commercial shopping center complex.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2



DEPARTMENT OF THE NAVY
 COMMANDER
 NAVAL BASE PEARL HARBOR
 BOX 110
 PEARL HARBOR, HAWAII 96860-5020

5090P.1
 Ser 14(23)/4367
 20 May 97



Gray, Hong, Bills & Associates, Inc.
 CONSULTING ENGINEERS

Brent Gray, P.E.
 David C. Hong, P.E.
 David B. Bills, P.E.
 Ray J. Aoki, P.E.
 Brian D. Yuen, P.E.
 My D. Lee, P.E.
 Michael H. Hagan, P.E.
 119 Merchant Street, Suite 607
 Honolulu, Hawaii 96813-4499
 Telephone: (808) 521-0306
 Fax: (808) 531-8018

June 4, 1997

Mr. Tim Hata
 Planning Department
 City and County of Honolulu
 650 South King Street, Eighth Floor
 Honolulu, HI 96813-3017

Mr. Stanford B. Yuen, P.E.
 Department of the Navy
 Naval Base Pearl Harbor
 Box 110
 Pearl Harbor, HI 96860-5020

Dear Mr. Hata:

Subj: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR AIEA SUGAR
 HILL COMMERCIAL DEVELOPMENT

Thank you for the opportunity to review the DEIS for the Aiea
 Sugar Hill Sugar Hill Commercial Development of March 21, 1997.

The Navy has no comments to offer at this time and appreciates
 the opportunity to participate in your review process.

The Navy's point of contact is Mr. Stanford Yuen at 474-0439.

Sincerely,

Stanford B. Yuen
 STANFORD B. YUEN, P.E.
 By direction

Copy to:
 Mr. Joel Criz
 Crazy Shirts, Inc.
 99-969 Iwaena Street
 Aiea, HI 96701

Mr. David Bills
 Gray, Hong, Bills and Associates, Inc.
 119 Merchant Street, Suite 607
 Honolulu, HI 96813-4422

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Yuen:

Thank you for your comment letter dated May 20, 1997 regarding the subject project.
 Your comment letter as well as our response will be included in the Final Environmental Impact
 Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
 David B. Bills

DB:sc
 2617-2



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

WATER RESOURCES DIVISION
677 Ala Moana Boulevard, Suite 415
Honolulu, Hawaii 96813



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ruben L. Gray, P.E.
David S. C. Hong, P.E.
David B. Bills, P.E.
Roy T. Aoki, P.E.
Beverly G. Ing, P.E.
Amy D. Loo, P.E.
Althea H. Nopma, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

April 11, 1997

June 4, 1997

Mr. Tim Hata
City and County of Honolulu
Planning Department
650 South King St., 8th Floor
Honolulu, Hawaii 96813-3017

Dear Mr. Hata:

Subject: Draft Environmental Impact Statement (DEIS)
Aiea Sugar Mill Commercial Development
Aiea, Oahu

The staff of the U.S. Geological Survey, Water Resources Division, Hawaii District, has reviewed the Draft Environmental Impact Statement, and we have no comments to offer at this time.

We are returning the DEIS for your future use. Thank you for allowing us to review it.

Sincerely,

William Meyer
District Chief

Enc.

cc: Office of Environmental Quality Control
Joel Criz, Crazy Shirts, Inc.
David Bills, Gray, Hong, Bills and Associates, Inc.

Mr. William Meyer
District Chief
United States Department of the Interior
U.S. Geological Survey
Water Resources Division
677 Ala Moana Boulevard, Suite 415
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Meyer:

Thank you for your comment letter dated April 11, 1997 regarding the subject project. Your comment letter as well as this response will be placed in the Final Environmental Impact Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2



DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

MEMPHIS
ATTENDANCE

April 23, 1997

Planning and Operations Division

Mr. Tim Hata
City and County of Honolulu
Planning Department
650 South King Street, 8th Floor
Honolulu, Hawaii 96813-3017

Dear Mr. Hata:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the Aiea Sugar Mill Commercial Development Project, Oahu (TMK 9-9-05: por. 10 and 25). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. As previously stated in review of the EIS preparation notice, the proposed project may include modification and channelization of Aiea Stream which is a jurisdictional water of the U.S. Any discharge of dredged or fill material to waters of the U.S. will require a DA permit. Please contact Mr. Alan Everson of our Regulatory Section at 438-9258 for further consultation and refer to file number 970000114.

b. The flood hazard information provided on page 17 of the DEIS is correct.

Sincerely,

Paul Mizue, P.E.
Acting Chief, Planning
and Operations Division



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

Mr. Paul Mizue, P.E., Acting Chief
Planning and Operations Division
Department of the Army
Pacific Ocean Division, Corps of Engineers
Fort Shafter, HI 96858-5440

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Mizue:

Thank you for your comment letter dated April 23, 1997 regarding the subject project. We have revised the Final Environmental Impact Statement (drainage section) to specifically state that any channel alteration will be subject to the U.S. Army Corps of Engineers and the Department of the Army Permit Process.

Your comment letter as well as this response will be included in the Final Environmental Impact Statement to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

DAVID B. BILLS, P.E.
DAVID C. HONG, P.E.
DAVID R. BILLS, P.E.
ROBERT A. BILLS, P.E.
BEVERLY D. HONG, P.E.
LLOYD D. LEE, P.E.
ALAN H. HONG, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

DEPARTMENT OF PLANNING
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET, 8TH FLOOR • HONOLULU, HAWAII 96813-3017
PHONE 18081223-4711 • FAX 18081223-4830



JEREMY HARRIS
MAYOR

PATRICK T. OWEN
CHIEF PLANNING OFFICER
DONALD L. HARRIS
DEPUTY CHIEF PLANNING OFFICER

TH 4/97-0798

May 12, 1997

Mr. David B. Bills, Vice President
Gray, Hong, Bills and Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4422

Dear Mr. Bills:

Draft Environmental Impact Statement (EIS) for the
Aiea Sugar Mill Commercial Development, Aiea, Oahu, Hawaii
Tax Map Key: 9-9-05: 10 and 25

We have reviewed the subject draft EIS and offer the following comments. The draft EIS generally contains the necessary information required under Section 11-200-17 Hawaii Administrative Rules (HAR), Environmental Impact Statement Rules. However, the applicant's responses to many of the comment letters received for the EIS Preparation Notice which are both contained in Section XII. of the draft EIS are not sufficiently addressed in the body of the draft EIS. Therefore, the final EIS needs to be revised by providing more detailed information in the following areas.

1. General Plan

- a. Section VI.C.1.c. of the draft EIS acknowledges that development of a shopping center is inconsistent with Objective B of the General Plan which is intended to protect Oahu's cultural, historic, architectural, and archaeological resources. Due to the age of certain structures, such as the mill building, demolition may be warranted, however, conformance to Policy B of the General Plan and other objectives and policies are achievable through the retention of selected structures such as the mill's smoke stack. Therefore, the final EIS should address the feasibility of retaining certain structures on the property to meet this important objective.

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 2

2. Relationship Between the Development Plan and Zoning Processes

- a. The draft EIS does not clearly explain the relationship between the Development Plan (DP) and zoning processes within the context of the proposed project. Section II. of the final EIS should mention that although rezoning the project site to a business district is the end result, the DP Land Use Map amendment, 97/PUC-1, (Appendix A) must first be approved by the Honolulu City Council and adopted by Ordinance. Both the DP Land Use Map and zone change applications are distinct but related processes requiring separate reviews, public hearings and City Council approval.
- b. Section III.E. of the final EIS should be revised to briefly explain the actions listed in Table 2. The final EIS should explain that the Primary Urban Center DP Land Use Map amendment and zone change request must first be approved by the City Council in order to facilitate the development and eventual opening of the shopping center complex.
- c. Section VI.C.2. of the draft EIS which begins a discussion about the DP Common Provisions should be revised to clarify the relationship between the General Plan and the DP. At a minimum, this section should explain that the Aiea Sugar Mill is located within the Primary Urban Center which covers an area from Pearl City to Waialae-Kahala. The Primary Urban Center is one of eight DP areas on Oahu and is the most densely populated and urbanized DP. The DP consist of four components: DP Common and Special Provisions which are text documents; and a DP Land Use Map and a Public Facilities Map. The DP represents relatively detailed land use policies and development and urban design objectives for each DP area which are intended to meet the broader, longer range objectives of the General Plan.

This section of the final EIS should also explain that the City is currently revising its planning system in accordance with the 1992 Charter amendments. The Planning Department recently completed the revised DP for Ewa which has passed Second Reading at the City Council. The revised DP for Central Oahu must still be reviewed by the Planning Commission before it is forwarded to the City Council. The revised DPs for the Primary Urban Center, East Honolulu and the North Shore were initiated in 1996. Revision of the Waianae, Koolauloa and Koolauopoko DP areas will be initiated after 1997. All existing DPs, including procedures for amending the land use and public facilities maps will remain in effect until new ones are adopted.
- d. Section VI.C.3. and 4. of the final EIS needs to explain the relationship between the proposed Commercial land use designation sought through the DP

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 3

land use amendment and the appropriate zoning district (i.e., B-1 Neighborhood Business District) which would accommodate the shopping center alternative. This explanation should also include relevant information from Section 5.80 of the Land Use Ordinance (LUO) in order to describe development standards and the full range of commercial uses permitted by the LUO.

3. Brief Project Summary

- a. Section I.B. (p. 1) of the draft EIS states the proposed shopping center "... would contain 145,000 square feet of commercial real estate space and approximately 770 parking stalls." However, Appendices A, B and E state that the proposed shopping center would contain approximately 118,600 square feet of space and 395 parking stalls. The final EIS needs to be revised accordingly to disclose the correct information relating to the potential size of the shopping center alternative and the estimated number of parking stalls to be provided.

4. Project Description

- a. Section III. of the draft EIS does not adequately describe the shopping center proposal (the preferred alternative). First, the final EIS needs to provide an expanded discussion describing the types of commercial/retail activities envisioned for the proposed project as well as parking, building height and density requirements permitted under the B-1 zoning district. Second, more information is needed describing the physical dimensions of the proposed drainage channel (and stilling basin/energy dissipator structure); the master plan road, including its length, width and associated landscaping and frontage improvements. Third, the final EIS should discuss the implications of the Hawaii Agriculture Research Center (HARC) as a tenant on the property and how it may impact the future of the project site. Fourth, the final EIS should address the feasibility of integrating some of the sugar mill's structures in the shopping center's design. Finally, a discussion of the findings of the Market Assessment (Appendix B) should be included to justify the shopping center alternative.
- b. Section III.C.1. (p. 7) of the draft EIS provides a breakdown of land uses by square feet and acres. The last category, "Creation of Development Plan roadway and channel improvements" will utilize approximately 78,400 square feet or 2.1 acres of land within the project site. Our calculations indicate that 78,400 square feet is equivalent to approximately 1.8 acres rather than 2.1 acres. These figures need to be corrected in the final EIS.

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 4

5. Demolition of the Aiea Sugar Mill

- a. Section III.C.1.a. of the draft EIS (p. 8) mentions that the proposed project includes demolition of all existing structures with the exception of the HARC Building. Table 1 (p. 9) provides a breakdown of estimated construction costs totalling \$7,200,000. However, Table 1 does not list the estimated costs of cleaning up hazardous materials prior to demolition, actual demolition and site preparation. Therefore, Table 1 of the final EIS should be revised to include these additional costs as well as the total projected cost for commercial development.
- b. The community has expressed a strong desire in preserving the sugar mill for its historic and cultural value. As such, Section III.F. of the final EIS should disclose the community's feelings about preserving the sugar mill.
- c. The State Department of Land and Natural Resources' (DLNR) Historic Preservation Division, in their letter of March 5, 1997, offered suggestions to mitigate the adverse impacts of demolishing the sugar mill. The DLNR's suggestions included integrating portions of the sugar mill into the design of the shopping center, salvaging material from the sugar mill for reuse, and documenting the sugar mill's history through photographs. Due to their age, some of the buildings on the project site, may not be structurally sound or safe to occupy. As such, Sections I, III, and IV of the final EIS should provide a balanced discussion by addressing the DLNR's suggestions and justifying the need for demolition.

6. Alternatives Considered

- a. Section IV. of the draft EIS describes only two alternatives for the proposed project: "No Action" and "development of an industrial subdivision." Given that the project site is surrounded by a well established residential community and the amount of community interest in preserving the sugar mill for its historic and cultural value, additional alternatives need to be included in the final EIS. Therefore, Section IV. of the final EIS should also evaluate the following alternatives: the shopping center concept (preferred alternative), a residential subdivision, and preservation of the Aiea Sugar Mill.

7. Potable Water Requirements

- a. The Board of Water Supply (BWS), in its letter dated March 17, 1997, indicated that although water is presently available to serve the proposed project, the applicant must still meet several requirements relating to water

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 5

use. As such, Section V.A.4.a. of the final EIS should be revised by disclosing the various requirements and approvals which must be met, such as the payment of Water System Facilities fees, fire protection requirements, and timing for the submission of various plans. Additionally, the final EIS should also discuss the use of drought tolerant/low water use plants and xeriscaping principles for all landscaping.

b. Section V.A.4. of the final EIS should be revised to address comments submitted by the DLNR's Commission on Water Resource Management contained in their letter dated April 21, 1997.

8. Drainage and Surface Water Runoff

a. The Preliminary Drainage Report (Appendix C) contained in the draft EIS indicates that most of the project site is within Zone X of the Flood Insurance Rate Map administered by the Federal Emergency Management Act. Furthermore, the report indicates that the portion of Aiea Stream which flows through the property is identified as "Zone AE" and contains flood plain and floodway boundaries. As such, this information should be included in Section V.A.4.b. of the final EIS.

b. Page 1 of the Preliminary Drainage Report describes the proposed drainage channel as a 20-foot wide by 8-foot deep reinforced concrete channel which will be 800 feet long. The proposed drainage channel will also straighten the stream's alignment and consist of a stilling basin/energy dissipator structure. However, Section V.A.4.b. of the draft EIS states that the proposed drainage channel will be 700 feet in length instead of 800 feet. The correct length and dimensions of the proposed drainage channel needs to be disclosed in the body of the final EIS.

c. Construction of the drainage channel will require the applicant to obtain several major permits and approvals from the federal and state governments. Thus, Section V.A.4.b. and c. of the final EIS should disclose the need for each permit or approval as it relates to the proposed drainage improvement.

d. The community has stated strong concerns that the proposed channelization of this portion of Aiea Stream may increase stream erosion and pollution of nearshore waters. As such, Section V.A.4.b. the final EIS should include alternatives to stream channelization to mitigate potential stream erosion and

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 6

pollution to nearshore waters. Alternatives should include "no action," "channelization" (the preferred alternative), and developing a "100 foot long vegetated corridor."

e. The Department of Public Works (DPW), in their letter of February 25, 1997, requested that a stream study and drainage report be submitted to their office for review and approval. However, only a Preliminary Drainage Report has been included in the draft EIS. We recommend that the stream study be included as an appendix in the final EIS. Furthermore, the final EIS should also address the DPW's comments by describing how the necessary fromage improvements, accessibility requirements consistent with the Americans with Disabilities Act, and the use of "Best Management Practices" will be met.

9. Air Quality

a. Section V.A.6. of the draft EIS does not disclose any potential short-term air quality impacts normally associated with site preparation and construction activities. The project site is surrounded by residential homes and will be directly impacted by fugitive dust and exhaust emissions from construction equipment during demolition, clearing, grading and construction operations. As such the final EIS needs to disclose these impacts and discuss how these impacts will be mitigated.

b. The draft EIS states that material containing asbestos is present in the window glazing compound. As such, the final EIS needs to disclose whether this material will pose a risk to air quality, and if so, explain the necessary mitigation measures required to remove this material.

10. Noise Impacts

a. Section V.A.7. of the draft EIS does not disclose any potential short-term noise impacts normally associated with site preparation and construction activities. The project site is surrounded by residential homes and will be directly impacted by noise such as demolition, pile driving, construction equipment and general construction activity. As such, the final EIS needs to disclose these impacts and discuss how these impacts will be mitigated.

11. Archaeological Resources

a. Section V.A.9. of the draft EIS does not disclose any potential impacts to archaeological resources as a result of the proposed project. Although the project site has been in a developed state for decades, the final EIS should

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 7

address whether archaeological resources may be present and describe appropriate mitigation measures to be employed should any be found during construction.

12. Industrial Areas

a. Preliminary studies conducted by the Planning Department as part of the DP Revision Program for the Primary Urban Center seem to indicate an island-wide surplus of land designated for industrial use. These studies also indicate that too little land has been allocated for industrial use in the Primary Urban Center. As such, Section V.B.3. of the final EIS should be revised to address this issue.

b. Section V.B.3. of the draft EIS implies that elimination of Aiea Sugar Mill as an industrial site will still leave sufficient areas on Oahu to accommodate intensive industrial activities such as Campbell Industrial Park and some areas of the Honolulu waterfront. This section of the final EIS should also refer to Halawa Valley, and the Bouganville and Mapunapuna industrial areas which are currently designated and zoned for industrial use.

13. Educational Facilities

a. Although the Aiea Sugar Mill currently does not support any educational facilities, there are several public and private schools nearby. Therefore, Section V.C.1. of the final EIS needs to disclose the presence of Aiea Elementary, Intermediate and High Schools, Alwah Scott and Webling Elementary Schools and Saint Elizabeth's School.

b. In terms of impacts and mitigation, the final EIS should also acknowledge potential short-term environmental impacts such as noise, fugitive dust and temporary traffic congestion due to construction activities. Additionally, community concerns regarding potential impacts to nearby schools or school children are very difficult to determine but this concern should be included as an unresolved issue in Section X. of the final EIS.

14. Medical Facilities

a. Section V.C.2. of the final EIS should be revised to include Kapiolani at Pali Momi Hospital which is within one mile of the project site.

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 8

15. Frontage Improvements

a. The Department of Parks and Recreation (DPR), in their letter dated February 24, 1997, requested the applicant submit street tree planting plans for their review and approval. The applicant, in their written response to the DPR dated March 11, 1997, stated that the tree planting plans will be submitted as part of the final construction plans. However, this information should be included in the discussion relating to frontage improvements in Section V.C.3.a. of the final EIS.

16. Transportation

a. Section V.C.3.a. of the draft EIS does not provide a clear discussion about existing conditions of roadway facilities and traffic conditions and their relationship to the proposed improvements. Therefore, the final EIS needs to provide a clearer discussion of the existing and likely future traffic conditions with and without the proposed improvements. This discussion should also explain the Traffic Impact Assessment Report (Appendix E) including its methodology, conclusions and recommendations. The final EIS should also provide more information about the master planned roadway's design including its alignment, estimated length, width and construction of a bridge across Aiea Stream to accommodate the proposed road.

b. Section V.C.3.a. of the draft EIS does not disclose potential short-term traffic impacts such as temporary lane closures and traffic delays due to the movement of construction vehicles on and off the project site which are normally associated with construction activities. Therefore, the final EIS needs to disclose the potential short-term traffic impacts residents and businesses are likely to experience and appropriate mitigation measures to deal with them.

c. Although the applicant has prepared a Traffic Impact Assessment Report, the project site's future has not been settled. As such, the final EIS should mention that traffic and circulation should be continually monitored and appropriate mitigation measures implemented to ensure the safety of pedestrians and motorists.

17. Wastewater Management

a. The Department of Wastewater Management (WWM), in their letter dated February 25, 1997, indicated that the proposed project will require the submission of a new "Sewer Connection Application." Although the applicant

Mr. David B. Bills, Vice President
Gary, Hong, Bills and Associates, Inc.
May 12, 1997
Page 9

has indicated that this application will be submitted at the time of rezoning, this information should also be disclosed in Section V.C.5. of the final EIS.

18. Environmental Clean Up

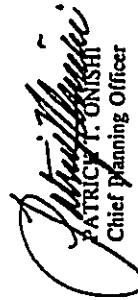
- a. Section V.A.13. of the draft EIS states that Environmental Assessments were completed in 1993 and 1994, and some of hazardous material and substances were cleaned up. The final EIS should be revised to disclose what forms of hazardous material remain on the project site, how this material will be cleaned up, and when clean up operations will be conducted.
- b. Based on the comments submitted by A&B-Hawaii, Inc. (ABHI) contained in their letter dated February 24, 1997, Section V.A.13. of the final EIS and page 5 of Appendix A should be revised to clarify the agreement reached by ABHI and Crazy Shirts, Inc. regarding any environmental clean up activities and obligations between both parties.

19. Unresolved Issues

- a. Section X. of the draft EIS discusses only one unresolved issue which is the potential loss of the Aiea Sugar Mill as a historic and cultural asset to the community and the state in general. However, the proposed project has also concerned some residents because of the close proximity of the proposed shopping center to area schools. Although it is very difficult to determine whether the proposed project will have a negative impact to area schools and students, this concern should be included in the final EIS as another unresolved issue.

Should you have any questions, please contact Tim Hala of our staff at 527-6070.

Yours very truly,



PATRICK T. ONISHI
Chief Planning Officer

PTO:js

c: Plans Evaluation & Revision Branch
A. Joel Criz & Associates
Crazy Shirts, Inc.



Gary • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Brian L. Gray PE
David S. C. Hong PE
Chun B. Hsu PE
Raymond J. Lee PE
Benjamin D. MacLean PE
MAY D. Loo PE
MICHAEL H. Nagata PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8010

June 6, 1997

Mr. Patrick T. Onishi
Chief Planning Officer
Planning Department
City & County of Honolulu
650 S. King Street, 8th Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Onishi:

Thank you for your comment letter dated May 12, 1997 regarding the subject project. As an overall general comment, you expressed the concern that while all consultation comments were properly addressed, you would have preferred to have seen the consultation comments more actively interwoven into the body of the Draft Environmental Impact Statement. To that end, we have made a substantial number of revisions to the Draft Environmental Impact Statement and have incorporated these into the Final Environmental Impact Statement. A summary of the revisions and your comments is as follows:

1. General Plan

Section VI.C.1.c clearly identifies that demolition of the mill site is in conflict with the General Plan objectives with respect to archaeological resources which is the purpose of this section of the Environmental Impact Statement. We will cross reference Section V.9.a to address your concern for addressing the retention of certain historic and cultural features.

2. Relationship Between Development Plan and Zoning Process

- a. We have revised the text within Section II of the Final Environmental Impact Statement to identify the two-step process related to the Development Plan Land Use Amendment and the Zoning Change Application. We have identified that this is a two-step process and are distinct but related approvals.
- b. We have revised Section III.E of the Final Environmental Impact Statement to define the separate but distinct approval processes related to the Development Plan Amendment and Change of Zone Application.
- c. We have revised the Final Environmental Impact Statement to add your suggested description related to the DP Common Provisions, General Plan and Development Plan.

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 2

- d. We have revised Section VI.C.3 of the Final Environmental Impact Statement to identify that the ultimate Change of Zone requirement would be to a B-1 Neighborhood Business District which would accommodate the shopping center alternative. We have further revised the Project Description section of the Final Environmental Impact Statement (Section III) to expand the description of commercial facilities which could be accommodated as permitted by the Land Use Ordinance.

3. Brief Project Summary

During the preparation of the Draft Environmental Impact Statement, the square footage for commercial shopping center increased from 118,600 square feet and 395 parking stalls to 145,000 square feet of commercial development and 770 parking stalls. The correct number that is being proposed is 145,000 square feet of commercial space and 770 parking stalls--and this has been incorporated in the Final Environmental Impact Statement.

4. Project Description

- a. We have revised the Project Description section of the Final Environmental Impact Statement to provide expanded descriptions of all the six specifically-identified areas of work for the proposed project. This includes an expanded description of the Master Plan Roadway, discussion of potential conversion of HARC Building to commercial space, expanded discussion of the Drainage Channel Improvements and an expanded discussion of all the proposed B-1 business opportunities which may be available within the commercial area.

- b. We have revised Section III.C.1 to identify that the square footage which will be necessary for the Development Plan Roadway and Channel Improvements is 91,500 square feet (2.1 acres).

5. Demolition of Alca Sugar Mill

- a. Table 1 of the Environmental Impact Statement cost breakdown has been revised to add a line item for clean-up of hazardous materials as well as demolition. This cost as obtained from estimates of the owner is \$85,000. We have further expanded Section V.A.13 to identify that the asbestos and lead paint containing materials can be disposed of at the Nanakuli Landfill.
- b. Section III.F of the Final Environmental Impact Statement has been revised to clearly identify the community's strong desire to preserve the Sugar Mill for historic and cultural values.

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 3

- c. The Final Environmental Impact Statement has revised Sections I and III to identify our suggestion that portions of the Sugar Mill be integrated into the design of the shopping center. However, there is no specific proposal for this integration since planning has not commenced to that level.

6. Alternatives Considered

The "Alternatives" section of the Final Environmental Impact Statement has been revised to include an alternative consisting of residential subdivision. We have not revised the Final Environmental Impact Statement to identify preservation of the Alca Sugar Mill since, in essence, this is identified in the "No Action" alternative. The "No Action" alternative allows some other entity to enter into a preservation proposal.

7. Potable Water Requirements

- a. We have revised Section V.A.4 of the Final Environmental Impact Statement to identify the various requirements of the Board of Water Supply, including Water System Facilities fee payment and compliance with Fire Department requirements.

You have also suggested that the Final Environmental Impact Statement discuss the use of drought tolerant/low water use plants and xeriscaping principles for all landscaping. We do not believe that landscaping is a significant issue with respect to commercial development and prefer to identify your xeriscaping principles comments as a part of the Final Environmental Impact Statement through the Comment Letter Section.

- b. We have reviewed the Commission on Water Resources Management letter dated April 21, 1997. Their letter recommends that the project be coordinated through the County government through Water Use and Development Plan processes. The purpose of the Environmental Impact Statement Review Process, Comment, Development Plan Amendment Process and ultimately the Change of Zone Application process is to facilitate this coordination. We consider this comment a general comment and have not included it anywhere in the Final Environmental Impact Statement.

The Commission on Water Resources Management has clearly identified that transfer of permit conditions from one site to another will require a permit modification. This information has been included in the Final Environmental Impact Statement. The Final Environmental Impact Statement further has been revised to state that change in land use may be the grounds for permit revocation.

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 5

disposed of without using sanding, brushing or major scraping activities. As long as these collection methods are observed, the possibility of hazardous substances being released into the atmosphere is negligible or nonexistent.

10. Noise Impacts

The Noise Section of the Final Environmental Impact Statement has been revised to identify short-term noise levels which may be associated with demolition and construction. This section has further been revised to describe limitations based on the potential zoning restrictions and to identify that certain activities (pile driving) are not anticipated.

11. Archaeological Resources

The Historic and Cultural Resource Section of the Final Environmental Impact Statement has been revised to identify the coordination activities required should subsurface artifacts be discovered during construction. The specific requirement is to stop work and coordinate this activity with the Historic Site Section of the Department of Land and Natural Resources. The chance of discovering subsurface remnants has been identified as remote due to the developed characteristics of the Alca Sugar Mill Site.

12. Industrial Areas

We have revised Section V.B.3 to identify your Department's studies regarding industrially-designated land island-wide, as well as in the Primary Urban Center. We have also added to the Final Environmental Impact Statement the identification of other industrially-zoned lands in the area including Mapunapuna and Bougainville.

13. Educational Facilities

a. The Final Environmental Impact Statement has been revised to identify schools in the area. The DP Facilities Map has also been cross referenced to show the location of these schools.

b. Sections V.A.6 and V.A.7 of the Final Environmental Impact Statement have been revised to address construction impacts and mitigation with respect to dust and noise. Section V.C.3.a has been revised to identify traffic congestion due to construction and mitigation.

As a separate matter, Section X has been revised to identify community concerns/Planning Department concerns regarding commercial use adjacent to schools as an unresolved issue.

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 4

8. Drainage and Surface Water Runoff

a. The Final Environmental Impact Statement has been revised to state that the project is within Zone "X" and Zone "AE" of the Flood Insurance Rate Map System, as administered by the Federal Emergency Management Act. The zones have further been defined by definition.

b. The Final Environmental Impact Statement has been revised to identify that the concrete channel be 800 feet long. This is now consistent with the Preliminary Drainage Report as contained in the Environmental Impact Statement.

c. Sections V.A.4.b and V.A.4.c of the Final Environmental Impact Statement have been revised to specifically identify the various approvals which were required for implementation of the concrete channel.

d. We have revised the Alternative Section of the Final Environmental Impact Statement to include a section entitled "Development Without Concrete Channel Improvements." This section identifies that under Commercial scenarios development would be eliminated from Site B. This section further identifies that under the Residential alternative house lots could be created through access via Kulawea Street. There is no feasibility in creating a 100-foot long vegetated corridor (grass lined). The primary reason for no feasibility is that the stream velocity far exceeds that necessary to allow natural vegetation. This is explained in the Final Environmental Impact Statement (Section V.A.4.b).

e. Your office has suggested that we include the Stream Study and Drainage Report in the Final Environmental Impact Statement. However, these are one and the same document and we are clarifying this issue for your office.

We have revised the Final Environmental Impact Statement to identify that frontage improvements must be consistent with the Americans with Disabilities Act and that the project must use Best Management Practices for grading and erosion control.

9. Air Quality

a. The Air Quality Section of the Final Environmental Impact Statement has been revised to identify that construction can generate fugitive dust and that exhaust emissions can be generated from construction equipment. This section has further been revised to identify the means of controlling these two pollutants. The primary means are watering and use of properly licensed construction equipment to minimize exhaust emissions.

b. The Air Quality Section has been revised to identify that during demolition asbestos identified in window glazing and lead paint on various surfaces will be collected and

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 6

14. Medical Facilities

Section V.C.2 of the Final Environmental Impact Statement has been revised to further identify Kapiolani at Pali Momi Hospital as one of the area's medical facilities.

15. Frontage Improvements

The Final Environmental Impact Statement has been revised to identify that a street tree planting plan will be submitted to the Department of Public Works in conjunction with the final construction plans.

16. Transportation

a. The Transportation Section of the Final Environmental Impact Statement has been expanded to explain the methodology to determine existing and future traffic conditions. The Final Environmental Impact Statement (Section III) has further been revised to more clearly describe the exact improvements for the Development Plan Roadway. To this end, specific figures have been added to show the proposed 60-foot right-of-way as well as frontage improvements including the proposed bridge structure.

b. The Final Environmental Impact Statement will also be revised to identify the temporary lane closures and delays which will occur during roadway construction. It will further be identified that the primary mitigation measure to address temporary roadway construction is allowing construction at off-peak hours. It has also been noted that this will not alleviate the fact that there will be traffic delays.

17. Wastewater Management

The Final Environmental Impact Statement has been revised to identify that a sewer connection application must be processed with the Department of Wastewater Management.

18. Environmental Clean-Up

a. The Draft Environmental Impact Statement already identified that the site contains asbestos in window glazing and lead paint. The Final Environmental Impact Statement will identify that this material will be removed from the site during demolition operations and that these hazardous materials will be transported to the Nanakuli Landfill.

b. The Draft Environmental Impact Statement contains the status of environmental clean up as related to information provided by C&H Sugar, which has been the operator on the site. A&B Hawaii, Inc. has indicated that there is an agreement between the parties

Mr. Patrick T. Onishi
Planning Department
June 6, 1997
Page 7

on the termination of C&H's lease, but the transaction has not been consummated. We have included their comment letter for the Environmental Impact Statement Preparation Notice, as well as this informational response to your revision request, and ask that the revisions not be made at this time. You may wish to deem this issue as an unresolved matter. To that end, we have opted not to revise the text of the Final Environmental Impact Statement; however, we believe through consultation comment and draft review comments, the subject has been adequately addressed.

19. Unresolved Issues

We will add to the Unresolved Issues of the Final Environmental Impact Statement the concern for a shopping center area adjacent to area schools. However, we concur with your conjecture that it is very difficult to determine whether the proposed project will have a negative impact to area schools or students. This issue is being primarily included as an unresolved issue from a conservative point of view.

Once again, we thank you for your comment letter regarding the Draft Environmental Impact Statement. Your comment letter as well as our response will be included in the Final Environmental Impact Statement to complete the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

BUNLOAN PE
DUNG C HONG PE
CHAI B BAI PE
RUY TAO PE
EVELYN DING PE
LARRY DING PE
ALEXANDER NG PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

Mr. Raymond H. Sato
Manager and Chief Engineer
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, HI 96843

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Sato:

Thank you for your comment letter dated April 24, 1997 regarding the subject project. We will be revising the Final Environmental Impact Statement to identify that the two wells on the property are located within the Waimalu Water Management Area and not the Ewa Plain.

Your comment letter as well as this response will be included in the Final Environmental Impact Statement to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2



April 24, 1997

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843
PHONE (808) 527-6180
FAX (808) 533-2714

JEREMY HARRIS, Mayor
WALTERO WALSON, Jr., Chairman
LAURENCE H. YAMASATO, Vice Chairman
KAZUO HAYASHIDA
MELISSA Y. IMAI
FOREST C. MURPHY
JOHN HANK SHIMADA, PRO
BARBARA KAI STANTON
RAYMOND H. SATO
Manager and Chief Engineer

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813

Dear Mr. Bills:

Subject: Your Transmittal of April 7, 1997 Regarding the Draft Environmental Impact Statement for the Proposed Aiea Sugar Mill Project, TMK: 2-9-005: 010 and 025

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement Sugar Mill Project.

Page 16, Section 4, Water Resources: The two wells on the property are located in the Waimalu water management area and not the Ewa Plain.

Our previous comments of March 17, 1997 have been addressed and are included in Section 12 of the document.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,

FOR RAYMOND H. SATO
Manager and Chief Engineer

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

April 15, 1997

MEMO TO: PATRICK T. ONISHI, DIRECTOR
PLANNING DEPARTMENT

FROM: RANDALL K. FUJIKI
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR
AIEA SUGAR MILL PROPERTY
TMK: 9-9-05: POR. 10 AND 25

We have reviewed the DEIS for the subject project and have no comments to offer.

Should there be any questions, please have your staff contact Douglas Collinson at ext. 6375.

Randall K. Fujiki

RANDALL K. FUJIKI
Director and Building Superintendent

MDC:ln
cc: Crazy Shirts, Inc.
Gray, Hong, Bills & Assoc., Inc. ✓
Off. of Env. Quality Control



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

DAVID B. BILLS PE
DAVID C. HONG PE
DAVID B. BILLS PE
DAVID C. HONG PE
DAVID B. BILLS PE
DAVID C. HONG PE
DAVID B. BILLS PE
DAVID C. HONG PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

Mr. Randall K. Fujiki
Director and Building Superintendent
Building Department
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Fujiki:

Thank you for your comment letter dated April 15, 1997 regarding the subject project. Your comment letter as well as our response will be included in the Final Environmental Impact Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills
David B. Bills

DB:sc
2617-2

PB 97-227

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 531-4114 • FAX: (808) 537-4733



JEREMY HARRIS
MAYOR

JAN MAOE SULLIVAN
DIRECTOR

LORETTA C. CHIE
CHIEF PLANNING OFFICER

97-02110(DT)
'97 EA Comments Zone 9

May 22, 1997

PATRICK T. ONISHI, CHIEF PLANNING OFFICER
Page 2
May 22, 1997

6. Is another shopping center necessary as Alea Shopping Center serves the surrounding area? Appendix B (Market Assessment) does not answer this question. What types of stores will occupy the site?
 7. The project site is within Flood Zones AE, XS, and X. A Flood Zone Section should be included in the EIS. A Flood Zone Map showing the proposed structures and flood zone boundaries should also be included in this section. Flood Zone AE must comply with the requirements of Section 7.10 of the Land Use Ordinance.
 8. Page 4 of the EIS under "Necessary Approvals and Permits Required", and page 41 (Table 3) fails to mention that a Subdivision Approval to create the roadway and Hawaiian Agricultural Research Center lots are required.
 9. The final EIS should disclose additional information regarding the traffic and associated impacts on the adjacent residential properties.
 10. What type(s) of energy dissipation and silt catchment devices to reduce the flow velocity will be implemented? Will some type of filtering device to catch the sediment from running off into the stream be constructed? If yes, a written description and plans should be included in the Final EIS.
- Thank you for the opportunity to comment. If you have any questions regarding this letter, please contact Ms. Dana Taramoto of our staff at 523-4648.

JAN MAOE SULLIVAN
Director of Land Utilization

JMS:am

cc: Crazy Shirts, Inc.
v Gray, Hong, Bills & Associates, Inc.

slrae111.djt

MEMORANDUM

TO: PATRICK T. ONISHI, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

FROM: JAN MAOE SULLIVAN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

SUBJECT: COMMENTS TO DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)
ALEA SUGAR MILL COMMERCIAL DEVELOPMENT
TAX MAP KEYS: 9-9-051, 25 AND POR, 10

We have reviewed the above-mentioned Draft EIS and offer the following comments:

1. Conceptual profiles and elevation drawings showing the proposal as seen from the roadway should be provided in the Final EIS. A topographic map showing proposed ground elevations and proposed building elevations and dimensions should also be included in the Final EIS.
2. Different types of Best Management Practices (BMPs) were mentioned in the Draft EIS. Which of these BMPs will be implemented prior to grading? The BMPs should be shown on a separate Site Plan along with detail drawings of the BMPs.
3. The Final EIS should indicate the amount of grading and filling that will be performed on the site.
4. The EIS mentions that a zone change application will be submitted to our department to request rezoning from I-2 Intensive Industrial District to commercial zoning. The type of commercial zoning should be indicated in the Final EIS.
5. Other rezoning alternatives should be discussed in the "Description of Any Known Alternatives To The Project". This should include R-3.5 Residential District or A-1 Low Density Apartment.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Brian L. Gray, PE
Daniel S. C. Hong, PE
Duncan P. Bills, PE
Raymond B. Wong, PE
Benjamin B. Wong, PE
Anthony D. Loeb, PE
Richard H. Fogarty, PE
119 Merchants Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-9018

June 6, 1997

Ms. Jan N. Sullivan, Director
Department of Land Utilization
City & County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill
Draft Environmental Impact Statement
TMK: 9-9-05; Por. 10 & 25

Dear Ms. Sullivan:

We thank you for your consultation letter dated May 22, 1997 regarding the subject project. We are providing the following responses to your comments:

1. The actual description of the commercial development includes a substantially more detailed description of building setbacks as well as height restrictions. The preliminary site plan specifically calls out various types of buildings including food market and drug store, and with very little imagination, we believe the street views can be envisioned. In addition, Crazy Shirts, Inc. is developing a concept to be implemented by others and therefore cannot make a firm commitment to the elevation and street views. However, commitments regarding square footage and parking are being made.
2. The Draft and Final Environmental Impact Statement detailed the Best Management Practices Plan which would be used during project development. All of these Best Management Practices Plans are typically implemented during the grading portion of the project. It is extremely premature to show these features on a grading plan. We refer you to the Department of Public Works as well as the Department of Health's comments identifying that these features be identified in the Draft and Final Environmental Impact Statements and not detailed on plans. Since the agencies which have jurisdiction have not requested the detailed drawings, we therefore are deferring to their comments.
3. The exact amount or estimated amount of earthwork have not been included in the Draft and Final Environmental Impact Statement. However, the sections covering grading in the Draft and Final Environmental Impact Statements clearly state that the site is currently developed and is relatively level. The amount of earthwork needed to complete the project will be minor. Once again, since the agencies having jurisdiction over grading (Department of Public Works and Department of Health) have not identified earthwork quantities as a significant concern, we are deferring to their expertise.

Ms. Jan N. Sullivan, Director
Department of Land Utilization
City & County of Honolulu
June 6, 1997
Page 2

4. The Final Environmental Impact Statement has been revised to identify that B-1 Neighborhood Business zoning will be the requested zoning.
5. The Final Environmental Impact Statement has been revised to include a residential subdivision alternative in the project alternative section. The Final Environmental Impact Statement will not include an A-1 Low Density Apartment alternative due to the close similarity to the R-5 Residential alternative which has been added.
6. The purpose of the market study was not to determine whether another shopping center was necessary. The purpose of the market study was to determine whether if a shopping center was developed, there would actually be a need. The critical factor in the market study which allows determination is the absorption rate. The market study shows that the absorption rate of uses for the proposed commercial shopping center is relatively short, therefore, showing the viability of the proposed project. The Final Environmental Impact Statement contains a list of the numerous potential types of facilities which could exist in a B-1 Neighborhood Business District.
7. The drainage report in the Draft and Final Environmental Impact Statements very clearly shows the flood plain and floodway passing through the property. Should the channel concept be approved and actually completed, a complete new drainage study including preparation of letter of map revision (LOMR) must be prepared and submitted through the City & County as well as FEMA for adoption. This will change all the flood elevations as they pertain to the property and all flow will be maintained within the proposed channel. Therefore, the flood zones as currently existing on the FIRM map will be altered significantly through channel installation.
8. The Final Environmental Impact Statement has been revised to include subdivision approval as one of the necessary approvals in Table 3. A clarification has been entered under subdivision to show that this relates to roadway lots, the HARC lot, and similar lots, etc.
9. The Final Environmental Impact Statement has been expanded to describe in more detail the traffic and associated impacts on the adjacent residential properties. One of the more significant items which has been included in the text of the Final Environmental Impact Statement is an identification of impacts associated with actual construction of roadway improvements. However, with respect to the overall final traffic conditions as a result of full project development, it has been reported that traffic levels are anticipated to be

Ms. Jan N. Sullivan, Director
Department of Land Utilization
City & County of Honolulu
June 6, 1997
Page 3

no worse than current levels. This projection is based solely on traveling conditions in the adjacent neighborhood including residential properties.

10. As reported in the drainage study in the Draft Environmental Impact Statement, the project will use an energy dissipation structure at the downstream end of the channel improvements. This structure will be an impact type structure solely designed to reduce the velocity. The only types of filtering devices and/or silted devices which will be utilized to minimize stream sedimentation are those identified in the Best Management Practices which will be implemented during the construction period. Since this information is already contained in the Draft and Final Environmental Impact Statements, no additional information has been included.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.



David B. Bills

DB:am
2617-2

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
PACIFIC PAPER PLATE • 711 KIPUNANI BOULEVARD SUITE 1200 • HONOLULU HAWAII 96813
PHONE (808) 521-3589 • FAX (808) 522-4730



JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR
JOSEPH M. MAGALON, JR.
DEPUTY DIRECTOR

May 21, 1997

TSP4/97-01656R

Patrick T. Onishi
Page 2
May 21, 1997

5. The location of driveways, in relation to street intersections, should be specified. Driveways should be far enough away so as not to interfere with the operation of intersections.

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation System Planning Division at Local 6976.

Cheryl D. Soon
CHERYL D. SOON

MEMORANDUM

TO: PATRICK T. ONISHI, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

VIA: TIM HATA, PLANNER

FROM: CHERYL D. SOON, DIRECTOR
Cheryl D. Soon

SUBJECT: AIEA SUGAR MILL COMMERCIAL DEVELOPMENT

We reviewed the Draft Environmental Impact Statement (DEIS) prepared for the subject project and have the following comments:

1. There are inconsistencies regarding the square footage of the proposed commercial space and the proposed number of parking stalls described in the main text of DEIS and the traffic study appended. These inconsistencies should be corrected. If the main text cites the correct amount, then the figures in the traffic study should be changed to account for the increase in square footage of commercial space.
2. Roadway improvements around the site should be specified in detail. Schematic drawings should be provided to reflect the proposed improvements along the frontage of the property and at all surrounding street intersections.
3. A phasing plan and time schedule for the project, in relation to the planned roadway improvements, should be provided to determine when these improvements would be constructed.
4. At this point in the planning phase, residents in the vicinity of the project should be apprised of the proposed modifications to the roadway system.

cc: Office of Environmental Quality Control
Mr. Joel Criz - Crazy Shirts, Inc.
Mr. David Bills - Gray, Hong, Bills & Associates, Inc.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

Burt Gar PE
David C. Hong PE
David B. Bills PE
Raymond A. Bills PE
Bryan G. Bills PE
M. D. Loo PE
Alcubir H. Nana PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

Ms. Cheryl D. Soon, Director
Department of Transportation Services
City & County of Honolulu
Pacific Park Plaza
711 Kapiolani Boulevard, Suite 1200
Honolulu, HI 96813

SUBJECT: Alea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Soon:

Thank you for your review comments dated May 21, 1997 regarding the subject project. We are providing the following information respect to your comments:

1. We have corrected the inconsistencies within the text and the appendix of the Draft Environmental Impact Statement to reflect the correct commercial space as well as the number of proposed parking stalls (145,000 sq. Ft. commercial & 770 stalls).
2. We have expanded the discussion of roadway improvements within the Final Environmental Impact Statement. Section II contains expanded description of the Development Plan right-of-way roadway and we have also added typical roadway sections as well as typical frontage improvements for the affected streets.
3. The Traffic Study identifies that phasing will be necessary for the ultimate development of roadway and signalization improvements. At the present time the phasing is strictly speculation. There will be more than enough time to adopt and create a phasing plan when and if development actually occurs.
4. Through the Environmental Impact Statement Process and through the Development Plan Amendment Notification Process, all affected landowners of the project have been identified. This specifically pertains to all persons living on property frontage affected by the project.
5. As indicated in the Department of Transportation's consultation comments, we have already revised the Preliminary Site Plan to show driveways directly across from each other in conformance with your standards.

We will include your comments as a part of the Final Environmental Impact Statement. We will also include this response to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU

610 SOUTH KING STREET, 5TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 521-4499 • FAX: (808) 521-4498



JEREMY HARRIS
WALTON

ROBERT AGRES, JR.
DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT



Gray • Hong • Bills • & Associates, Inc.
CONSULTING ENGINEERS

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0106
Fax: (808) 531-8018

June 4, 1997

May 27, 1997

MEMORANDUM

TO: Patrick T. Onishi, Director
Planning Department

ATTENTION: Tim Hala, Planner

FROM: Robert Agres, Jr., Director

SUBJECT: Draft Environmental Impact Statement
for the Aiea Sugar Mill Property
Tax Map Key: 9-9-05; par. 10 and 25

Mr. Robert Agres, Jr.
Director, Department of Housing
and Community Development
City & County of Honolulu
630 South King Street, 5th Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Agres:

This is in response to the Office of Environmental Quality Control request for comments of the Draft Environmental Impact Statement (DEIS) for the Aiea Sugar Mill Commercial Development.

The DEIS indicates that the proposed project does not involve the development of housing units; and that the project will impact the surrounding residential area. Upon initial review of the Environmental Impact Statement Preparation Notice (EISPN), we recommended that the final environmental impact statement include any additional information on traffic control and noise impacts on the residents in the area.

The proposed neighborhood shopping center is anticipated to consist of a food market, drug store, retail space, service shops, fast food restaurant and a family restaurant. The "Traffic Impact Assessment Report Prepared for Crazy Shirts, Inc." prepared by Pacific Planning and Engineering, Inc., in February 1997 indicates that the proposed project in the year 2000 will have some traffic impacts. The report provides recommendations to mitigate the impacts of the project which will be implemented by the developer for these areas. The report also indicates that the project will not have an increase in noise for the surrounding community.

Thank you for the opportunity to review and comment on this matter. Should you have any questions, please contact Rae Gee at X3088.

ROBERT AGRES, JR.
Director

cc: Joel Critz, Crazy Shirts, Inc.
David Bills, Gray, Hong and Bills Associates, Inc.

Thank you for your comment letter dated May 27, 1997 regarding the subject project. Your letter reiterates your consultation comments in that you were looking for information regarding traffic control and noise impacts on the residents in the Draft Environmental Impact Statement. Your letter further goes on to identify that the Traffic Impact Assessment was included in the Draft and that the traffic impacts were identified. Further, you have also confirmed that the Draft Environmental Impact Statement did address the issue of noise for the surrounding community.

Your comment letter will be included in the Final Environmental Impact Statement along with this response to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

DAVID B. BILLS, PE
DANIEL C. HONG, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
DAVID B. BILLS, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

ENV 97-079

April 28, 1997

MEMORANDUM

TO: PATRICK T. ONISHI, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

FROM: JONATHAN K. SHIMADA, PhD
DIRECTOR AND CHIEF ENGINEER

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT
AIEA SUGAR MILL COMMERCIAL DEVELOPMENT
TRK: 9-9-05: 10 (POR.) AND 25

We have reviewed the subject DEIS and have no additional comments to offer at this time.

Should you have any questions, please contact Alex Ho, at Local 4150.

cc: OEQC
CRAZY SHIRTS, INC. (JOEL CRIZ)
GRAY, HONG, BILLS & ASSOCIATES, INC. (DAVID BILLS)

Jonathan K. Shimada, Ph.D.
Director and Chief Engineer
Department of Public Works
City & County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Dr. Shimada:

Thank you for your letter comment dated April 28, 1997 regarding the subject project. We will include your comment letter as well as this response in the Final Environmental Impact Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU
 510 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
 PHONE (808) 537-6883 • FAX (808) 537-6875



JEREMY HARRIS
 W-100

KENNETH E. SPRAGUE, P.E.
 DIRECTOR

CHERYL K. OKUMA-SAGE, SEC.
 DEPUTY DIRECTOR

In reply refer to:
 WCC 97-132

May 14, 1997

MEMORANDUM

TO: MR. PATRICK T. ONISHI, CHIEF PLANNING OFFICER
 PLANNING DEPARTMENT

FROM: KENNETH E. SPRAGUE, DIRECTOR
 DEPARTMENT OF WASTEWATER MANAGEMENT
 CHERYL K. OKUMA-SAGE

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE
 AIEA SUGAR MILL COMMERCIAL DEVELOPMENT, AIEA, OAHU
 TMS: 99-05POR-10 AND 25

The municipal wastewater system is available and adequate to accommodate the proposed 143,800 square foot neighborhood shopping center. However, the total wastewater discharge from the property must not exceed a peak flow of 150,000 gallons per day.

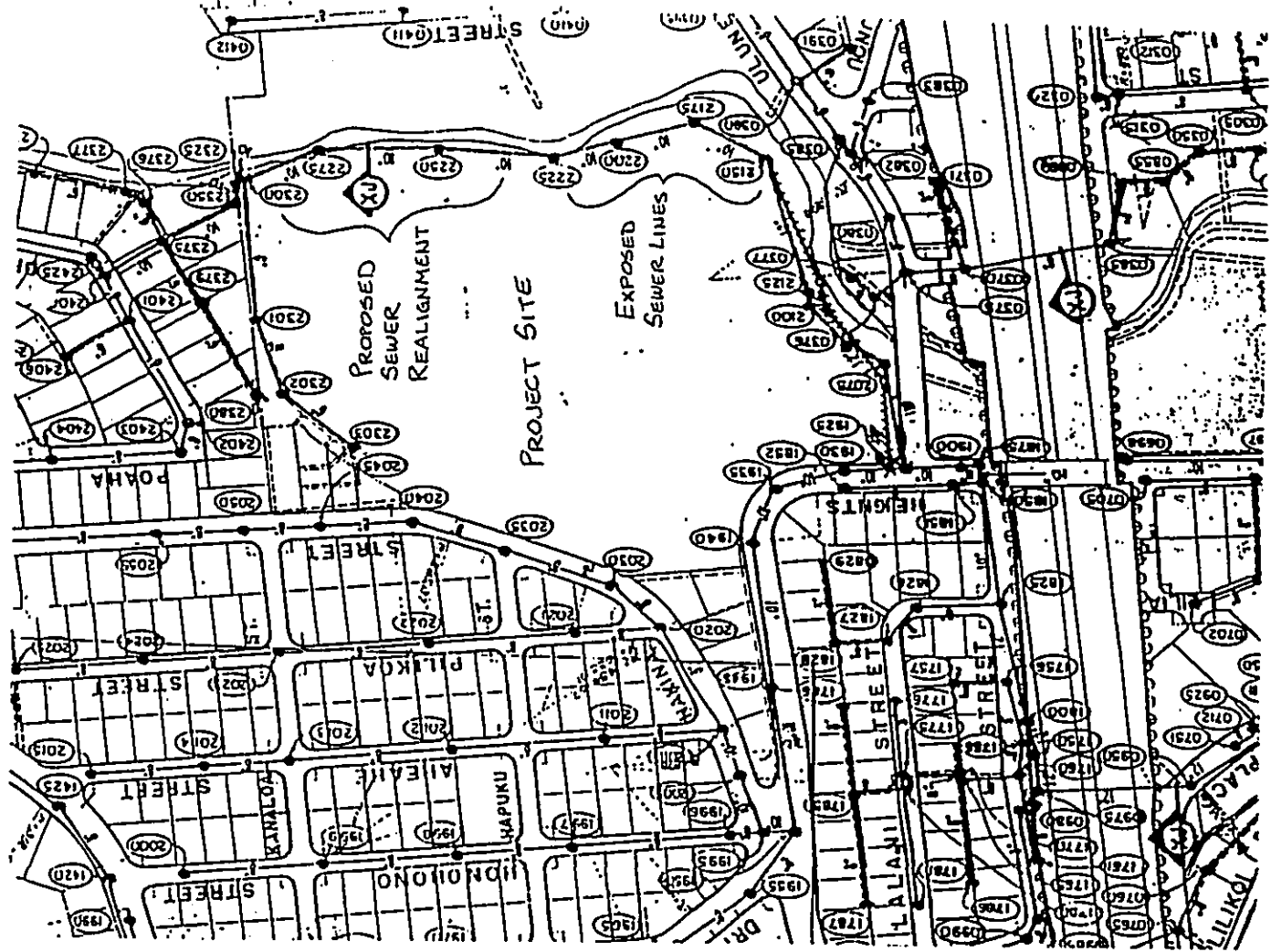
We will be replacing part of the municipal sewer system exposed by the Aiea Stream. But the portion of the municipal sewer proposed to be relocated, as shown in the Preliminary Drainage Report, does not coincide with our repairs. Please see the attached map. Therefore, the developer will be responsible for the costs of the proposed new alignment. Please submit design plans for our review and approval.

A "Sever Connection Application" form has been submitted for the subject property, but a new form will need to be submitted due to the changes in the proposed use. This project may also be liable for payment of a Wastewater System Facility Charge.

If you have any questions, please contact Mr. Scott Gushi of the Service Control Branch at 523-4886.

Attach.

cc: State Office of Environmental Quality Control
 Mr. David Billis-Gray, Hong, Bills & Associates, Inc.
 Mr. Joel Criz, Crazy Shirts, Inc.





Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

Mr. Kenneth E. Sprague, Director
Department of Wastewater Management
City & County of Honolulu
650 South King Street, 3rd Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Sprague:

Thank you for your comment letter dated May 14, 1997 regarding the subject project. Your comment letter identifies that the wastewater system is available and adequate to accommodate the proposed 144,000 square foot neighborhood shopping center. Your letter further identifies that the maximum peak flow discharge from the property should not exceed 150,000 gallons per day. The Draft and Final Environmental Impact Statement will continue to identify that the anticipated average sewage generation from the site will be approximately 20,000 gallons per day.

Should the proposed commercial development be allowed to install a concrete channel, the appropriate corridor will be identified and coordinated with your office. We have already included in the preliminary construction cost budgets construction amounts related to sewer improvements. However, there may be a chance that any concrete channel line work will not be allowed and in that event there would be no need to coordinate with the Wastewater Management Department with respect to a stream channel sewer corridor. We will continue to identify the coordination need within the Final Environmental Impact Statement.

We have identified in the Final Environmental Impact Statement that a Sewer Connection Application must be submitted for the property. We have currently indicated that a new connection application will be submitted at the time of rezoning.

Your comment letter will be included as a part of the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

SHUN L. CHOI PE
DAVID S. C. HONG PE
DAVID B. BILLS PE
ROY T. AOH PE
BEVERLY G. PIG PE
LUY D. LEE PE
ALAN W. HAYMA PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE 4425
HONOLULU, HAWAII 96819-1869



ANTHONY J. LOPEZ, JR.
FIRE CHIEF
ATILIO K. LEONARDI
FIRE DEPUTY CHIEF

April 17, 1997

TO: PATRICK T. ONISHI, CHIEF PLANNING OFFICER
PLANNING DEPARTMENT

ATTN: TIM HATA

FROM: ANTHONY J. LOPEZ, JR., FIRE CHIEF

SUBJECT: AIEA SUGAR MILL COMMERCIAL DEVELOPMENT
TMK: 9-9-05: 10.(POR.) AND 25

We have reviewed the application for the above subject. Fire protection services provided from Aiea and Waiolu engine companies with ladder service from Waiolu are adequate. We have no objections to the proposed project.

Access for fire apparatus, water supply and building construction shall be in conformance to existing codes and standards.

Thank you for the opportunity to comment on the project.

Should you have any questions, please call Acting Assistant Chief Arthur Ugaide of our Administrative Services Bureau at 831-7774.

ANTHONY J. LOPEZ, JR.
Fire Chief

AJL/AP:ay

cc: Crazy Shirts, Inc. (Joel Critz)
Gray, Hong, Bills & Associates, Inc. (David Bills)
OEQC w/DEIS report



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 6, 1997

Mr. Anthony J. Lopez, Jr.
Fire Chief
Fire Department
City & County of Honolulu
3375 Koapaka Street, Suite H425
Honolulu, HI 96819-1869

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Fire Chief Lopez:

Thank you for your comment letter dated April 17, 1997 regarding the subject project. The Draft Environmental Impact Statement identified where fire protection service and ladder service would come from to serve the subject project. The Final Environmental Impact Statement will further identify that all access, water supply and building construction will conform to existing codes and standards.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

Bruce L. Gray, PE
David S. C. Hong, PE
David B. Bills, PE
Ray F. Ash, PE
Beverly B. Fogel, PE
John D. Jones, PE
Michael H. Moore, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018



University of Hawaii at Mānoa

Environmental Center
A Unit of Water Resources Research Center
2550 Campus Road • Crawford 317 • Honolulu, Hawaii 96822
Telephone: (808) 958-7361 • Facsimile: (808) 956-3980

Mr. Dennis Taylor
Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, Hawaii 96701

Dear Mr. Taylor:

Draft Environmental Impact Statement (EIS)
Aiea Sugar Mill Commercial Development
Aiea, Oahu

The applicant, Crazy Shirts, Inc., is seeking an amendment to the City and County of Honolulu's Development Plan Land Use Map for the Primary Urban Center for the proposed Aiea Sugar Mill project. The amendment request proposes to redesignate approximately 13.45 acres of land from industrial to commercial. The proposed site is located in Aiea and is bounded by Aiea Heights Drive, Hakina Street and residential homes to the west, and Kulawea Street to the east. The site consists of two parcels occupied by the vacant Aiea Sugar Mill, existing Hawaii Agricultural Research Center laboratory and office, and the C&H liquid sugar refinery. The applicant proposes to develop a neighborhood shopping center of approximately 118,600 square feet, including 395 parking stalls. Construction is proposed to begin in the first quarter of 1999, with an opening date in the fourth quarter of 1999.

This review was completed with the assistance of Peter Rappa, Sea Grant; Karl Kim, Urban and Regional Planning; and Tom Hawley, Environmental Center.

Mr. Dennis Taylor
May 23, 1997
Page 2

General Comments

This draft EIS is generally well organized and clearly discloses information relevant to the proposed project. However, there are some important areas that warrant improvement. To start with, the document contains footnote numbers in various pages (e.g. page 28), that do not appear to lead to any actual footnotes. We wonder whether additional information intended for the draft EIS was inadvertently omitted. Secondly, we find that the document occasionally contains wording that confers a positive judgement upon elements of the proposed project. For example, the draft EIS states, "the marketing study concluded the viability of a commercial shopping center at the Aiea Sugar Mill property is attractive, and if the center is built, it will be actively used. This is considered a benefit" (p. 29). We note that from the standpoint of environmental management, prediction of speculative benefits is unwarranted. The environmental impact statement process is designed to disclose all relevant information regarding a proposed project, identify potential secondary and cumulative impacts, and then formulate appropriate mitigation measures. As a result, suggestions that incline the draft EIS in favor of a given project are inappropriate.

Market Assessment

Our reviewers suggest that current market conditions may not be able to sustain the kind of commercial development proposed for the Aiea Sugar Mill site. The site is in close proximity to other commercial developments of a similar type, and sugar mill conversions such as that proposed in the draft EIS have not been univarsally successful. We question why, for example, explicit discussion of the Dole Cannery or the failed Kahuku Sugar Mill was not included in the draft EIS as an additional means of assessing demand for the type of project proposed at the Aiea Sugar Mill. Our reviewers further suggest that the market study appears to be designed to give good news rather than a realistic market assessment. We remind the applicant that Department of Health regulations in Chapter 11-200-14 specifically state that an EIS "shall not be merely a self-serving recitation of benefits and a rationalization of the proposed action." We fear that if data presented in the market study do not adequately

May 23, 1997
RE:0661

Mr. Dennis Taylor
May 23, 1997
Page 3

profile demand in the Aiea area, the public will be left with not only the loss of an historic site, but a poorly conceived project as well. We strongly urge the applicant to rigorously study the economic viability of the proposed project in order to ensure successful use of the Aiea Sugar Mill site.

A further issue raised by our reviewers concerns public support for the proposed project and the extent to which their concerns have been considered during the draft EIS process. Several members of the community have voiced opposition to the loss of an historic feature due to construction of the proposed project, and to the entry of yet another commercial development in the Aiea area. While we realize the applicant has pursued many avenues in the attempt to preserve the historic features of the Aiea Sugar Mill, we are concerned that such efforts have revolved primarily around the economic needs of the owners at the expense of the wishes of the public. Certainly economic needs are important, but involvement of the community in developing a project the community wants, needs, and supports is crucial to its sustainability. We therefore urge the applicant to place high priority on the input and wishes of the public in planning future uses for the Aiea Sugar Mill.

Proximity to Aiea Stream

We are concerned about the proximity of the proposed project to Aiea Stream. While we realize that the removal of an industrial use from the site is quite possibly beneficial in this regard, there are nevertheless significant features of the proposed project that could have impacts on the stream. First, the proposed project will lead to an increase in impervious surfaces at the site, which will in turn increase the quantity of surface runoff. While the document acknowledges this circumstance and proposes mitigation (p. 20), insufficient attention is given to the quality of this runoff water. The document states "permanent features available to trap oil residuals and car-related emission residuals are oil separator manholes and directing runoff through landscaped areas to trap emission particles." While these may be adequate mitigation measures, it is not clearly stated in the draft EIS whether

Mr. Dennis Taylor
May 23, 1997
Page 4

project planners actually intend to implement them. We highly recommend using all of these measures as appropriate.

Stream Channel Alteration

A second area of concern relates to the plan to channelize Aiea Stream. Have alternatives to channelization been considered? Would it be feasible in the long term to leave the stream unchannelized, while providing for increased maintenance? Any significant stream channel alteration must be undertaken carefully in order to minimize the risk of downstream flooding. The document acknowledges that alterations to the stream profile will create impacts that must be mitigated. However, insufficient detail is provided regarding proposed mitigation measures. According to the draft EIS, "The channel will use energy dissipation devices to reduce the channel velocity to that matching existing stream conditions at the downstream terminus" (p. 18). Again this may be an appropriate mitigation measure, but the document lacks specific information about how such devices will be constructed, what they will look like, or precisely how effective they are expected to be. No specific information on the energy dissipators is given in the main text of the draft EIS, and Appendix C (Preliminary Drainage Report) fails to provide additional detail. Drawings in the appendix do not depict the size and functioning of the proposed energy dissipators. We remind the applicant that Department of Health rules governing EIS content specifically require that "the statement remain an essentially self-contained document, capable of being understood by the reader without the need for undue cross-reference" (11-200-19). Further elaboration of proposed mitigation measures pursuant to the channelization of Aiea Stream must be provided in the final EIS.

Clean-up of Existing Site

Our reviewers expressed concern about whether adequate clean-up of the site will occur prior to implementation of the proposed project. An exchange of letters between A&B Hawaii, Inc. (ABHI), and the preparers of the draft EIS, Gray, Hong, Bills and Associates, Inc. (p. 50-24/25), seems to indicate some confusion as to who is ultimately responsible for clean-up of the

Mr. Dennis Taylor
May 23, 1997
Page 5

site. While we applaud the preparers for refusing ABHI's request to "omit any description of private agreements between the parties concerning their respective environmental obligations," we note that the draft EIS nevertheless lacks adequate information regarding the extent of environmental contamination at the site. The draft EIS states that clean-up work "must be successfully completed to ensure no 'leaks' into the general environment. If this work is not completed, small amounts of toxins will be available for potential human exposure and general environmental degradation" (p. 28). Given the extensive human-related usages proposed for the project site, we respectfully suggest that no quantity of toxin should be considered acceptable. While the document states that "a large majority of the work has already been successfully completed" (p. 28), we further suggest that an updated status report describing site clean-up be included in the final EIS.

Clearly, it is the public who will suffer most should they visit a contaminated site as a result of this confusion. Given that the EIS is a public disclosure document, this is a serious omission indeed. We strongly urge the applicant to specifically and thoroughly document the extent of contamination at the site and the measures intended to clean the site. This report should specify who will be responsible for cleaning the site and establish a timetable for remediation work. A follow-up document should then be prepared that reports on the condition of the site prior to commencing construction on the proposed project. Only this level of disclosure will provide the public with sufficient environmental information as mandated by Chapter 343, HRS.

Summary

Our reviewers have expressed concerns related to the credibility of the market assessment for this project and to the lack of community support. In addition, we note issues related to stream channelization and to potential residual contamination at the site. We question the realism of predicted viability of the project, and we are concerned that the opportunity costs of a development of such questionable potential for commercial success are sufficient to warrant a hard look at other alternatives more

Mr. Dennis Taylor
May 23, 1997
Page 6

in line with wishes of the surrounding community.

Thank you for the opportunity to comment.

Sincerely,



John T. Harrison
Environmental Coordinator

cc: OEQC
Roger Fujioka
Tim Hata
David Bills
Karl Kim
Peter Rappa
Tom Hawley



Guy + Hong + Bills & Associates, Inc.
CONSULTING ENGINEERS

Mr. John T. Harrison
Environmental Coordinator
Environmental Center
University of Hawaii at Manoa
2550 Campus Road, Crawford 317
Honolulu, HI 96822

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Harrison:

We thank you for your comment letter dated May 23, 1997 regarding the subject project. We are providing the following responses to your comments.

General Comments

We thank you for your general comments regarding the organization and preparation of the Draft Environmental Impact Statement. Your comment letter, however, questions the confirmation of positive judgement comments within the document. While we appreciate your comment, we believe this is more an interpretation of the reviewer. The Draft and Final Environmental Impact Statement have made a conscious effort to determine benefits or impacts solely within the section they are discussed. With respect to your specific discussion regarding commercial areas, the market study clearly shows that the absorption rate predicts a successful future for the commercial shopping center. From solely a commercial area discussion within the manmade environment, this is positive. Other areas of the document including the impacts on the environment clearly state that there are definite impacts resulting from commercial development. Therefore, we request that you review the document with respect to the specific section being discussed and refrain from making overall interpretations out of context.

We will make a thorough check of all footnotes to ensure that they are properly cross-referenced to the bibliography.

Market Assessment

The market assessment was commissioned for the property solely to determine by standard analytical procedures whether there was any viability to a commercial complex at the Aiea Sugar Mill site. As identified in the Environmental Impact Statement preparation notice, this was one of the key elements to allow continued pursuit of the proposed action. We believe that

Ruan I. Gray PE
David S. C. Hono. PE
David B. Bax. PE
Roy T. Aoki PE
Beverly G. Ing. PE
Amy D. Loo. PE
Alicia H. Ngema PE
119 Merchant Street, Suite 607
Honolulu, HI 96813-4189
Telephone: (808) 521-0206
Fax: (808) 531-8018

June 3, 1997

Mr. John T. Harrison
Environmental Center
University of Hawaii at Manoa
June 3, 1997
Page 2

your inference that the market study could be a self-serving recitation of the benefits and a rationalization for the proposed action may be out of line and not properly supported by your reviewers. The Environmental Impact Statement does not state that a commercial complex has to be built on Aiea Sugar Mill site. The Environmental Impact Statement solely states that if a commercial shopping center was built on the property that it would achieve economic viability through the relatively fast-paced absorption into the market.

Crazy Shirts, Inc. originally purchased the property with its industrial zoning for the purpose of developing a corporate complex as well as warehouse. As it turns out, the economic viability of such an undertaking does not exist. Crazy Shirts, Inc. entered into the purchase of the property for solely business considerations. They would now like to continue business operations on the property. We do not see any contradiction in continuing a business oriented approach to the property development, purchase and/or sale. Crazy Shirts, Inc. has gone on record as recognizing the community's need to retain the Aiea Sugar Mill for historic and cultural reasons. Crazy Shirts, Inc. has further been receptive to any overtures regarding other types of development. However, Crazy Shirts, Inc. also wants private sectors, government agencies and/or public sectors to participate in the lowering of the property value for other uses. To that end, Crazy Shirts has also entertained the consideration for providing financial assistance (reduced sales price) to allow another option to occur. As of this date, no one from the private sector, government and/or public sector has provided any reciprocation in allowing one of the other development options to occur.

Proximity to Aiea Stream

The Draft and Final Environmental Impact Statement clearly states that Best Management Practices will be utilized to contain sedimentation during construction. The Best Management Practices also contain permanent erosion control features which in essence are grassing strips to collect sediment crossing the pavement. The Draft Environmental Impact Statement also clearly identifies that the increased runoff from the property after commercial development is only slightly increased to that which currently occurs under its industrial use. All Best Management Practices will be incorporated into the project, but based on the quantitative calculations of runoff, the amount of additional sediment to the stream will be negligible.

Stream Channel Alteration

The Draft Environmental Impact Statement and Final Environmental Impact Statement will continue to propose a concrete channel combined with energy dissipation structure to be incorporated into the project. This will provide a transformation from natural stream flow to channel flow for the first 800 feet of the project. The impact structure is being incorporated

Mr. John T. Harrison
Environmental Center
University of Hawaii at Manoa
June 3, 1997
Page 3

into the project solely to allow transformation of the stream flow back to natural channel before leaving the property. This requires that the velocity be reestablished identical to that which would have been in the existing stream. If this commitment is not achieved, then the concrete channel cannot be considered. The Final Environmental Impact Statement includes under its alternative section an option for project development without the installation of a concrete channel. In addition to the foregoing, the preliminary drainage study included in the Final Environmental Impact Statement will contain more detail on the impact structure utilized to restore the original stream velocity in the channel prior to leaving the property.

Cleanup of Existing Site

The Draft Environmental Impact Statement identifies that C&H Sugar Company has already completed cleanup work on the mill portion of the property (Parcel A). The remaining identified contaminated materials on the site are asbestos glazing in window panes as well as lead paint. The Final Environmental Impact Statement identifies that this information will be properly disposed of at a Nanakuli landfill. Since these are the only known remaining hazardous items on the property, a plan has been developed and identified for their proper disposal. Should unforeseen conditions exist, this information must be reported to the Department of Health as identified in the Final Environmental Impact Statement.

Your comment letter will be included in the Final Environmental Impact Statement. Our response to your comment letter and revisions as identified above will be included for completion of the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2

EDUARDO J. CASTILLO
DIRECTOR OF HEALTH



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3178
HONOLULU, HAWAII 96801

LAWRENCE W. HALE
DIRECTOR OF HEALTH

By: [Signature]

Mr. David B. Bills
March 20, 1997
Page 2
93-005A/epo

March 20, 1997
93-005A/epo

- a. planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. providing an adequate water source at the site prior to startup of construction activities;
- c. landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. controlling of dust from shoulders, project entrances, and access roads;
- e. providing adequate dust control measures during weekends, after hours, and prior to daily startup of construction activities; and
- f. controlling of dust from vehicles hauling debris away from project site.

If you have any questions regarding fugitive dust, please contact Ms. Crystal Peltier of the Clean Air Branch at 586-4200.

Hazard Evaluation & Emergency Response Office:

In general, sites which are proposed for redevelopment should be aware of the following requirements throughout the implementation of the proposed project.

- 1) If the facility and/or land is known to have had or possibly could have had releases of hazardous substances (including oil) at the site, then the Hawaii Environmental Response Law Chapter 128D, Hawaii Revised Statutes places the liability for clean-up of that property on, among others, the owner and/or operator. The owner and/or operator is required to notify the Department of Health's (DOH) Hazard Evaluation and Emergency Response (HEER) Office when a release of a hazardous substance into the environment has been found.
- 2) Additionally, if contamination is found during the course of construction, then the owner/operator (not the contractor) of the property/facility may be required to notify the HEER Office if the quantity exceeds the reportable quantity as defined in HAR, Chapter 11-451, "State Contingency Plan."

Mr. David B. Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499

Dear Mr. Bills:

Subject: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISP)
Project: Aiea Sugar Mill Project
Location: Aiea, Oahu, Hawaii
THK: 9-9-05: Por. 10, 25

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

Control of Fugitive Dust:

The proposed Aiea Sugar Mill Project includes some construction activities where potential dust problems may arise during clearing and removal of debris, grading, excavation, and construction activities for this project. In addition to the soil characteristics and dry, hot climate of the area, construction activities for the parking lots, shopping center, and improvement of the roadways and drainage need to be considered for fugitive dust impacts. Implementation of adequate dust control measures during all phases of construction is warranted. Construction activities must comply with provisions of Hawaii Administrative Rules (HAR), Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33 on Fugitive Dust.

The contractor should provide adequate means to control dust from road areas and during the various phases of construction activities. These means include, but are not limited to:

Mr. David B. Bills
March 20, 1997
Page 3

93-005A/epo

If you have any questions regarding these comments, please contact Mr. Steven Armann, Acting Manager of the Hazard Evaluation and Emergency Response Office at 586-4249.

Sincerely,



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

c: CAB
HEER



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Burt Gray, PE
David B. Hong, PE
David Bills, PE
Roy F. Armann, PE
Beverly G. Price, PE
Amy D. Loo, PE
LICHUN H. NGUYEN, PE

119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

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

SUBJECT: Alea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Anderson:

Thank you for your comments regarding the subject project, dated March 20, 1997. These comments were intended to address the Environmental Impact Statement Preparation Notice, but were received too late for inclusion in the Draft Environmental Impact Statement. We are now including your letter as a draft review comment. We understand these comments have been received from your Clean Air Branch and your Hazard Evaluation and Emergency Response (HEER) Office. Your Clean Air Branch has primarily identified that there is a possibility of fugitive dust resulting from the project. He Clean Air Branch has further identified seven general methods in which fugitive dust can be controlled.

Due to the previous-developed characteristics of the Alea Sugar Mill site, the grading operations are not anticipated to be significant on the project. Further, the Draft Environmental Impact Statement already identifies the current primary means to controlling fugitive dust. This will be by watering. The remainder of the seven items identified by the Clean Air Branch will be contained in the Final Environmental Impact Statement in the form of the comment letter.

The Hazard Evaluation and Emergency Response Office has identified that there is the potential for release of hazardous substance from the property due to its previous operations. The necessity to report releases of hazardous substances is also identified as a primary health requirement. It has further been identified that the HEER Office must be notified if during construction quantities of hazardous substances exceed certain quantities. The Final Environmental Impact Statement will include this reporting requirement under the "environmental clean-up related to sugar mill operations" section of the document.

Your comment letter as well as this response will be included in the Final Environmental Impact Statement for completion of the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

LEONARD J. EASTLAND
DIRECTOR OF HEALTH



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

LAWRENCE W. MOSE
DIRECTOR OF HEALTH

In reply, please refer to

Mr. Patrick Onishi
May 27, 1997
Page 2
93-0058/epo

May 27, 1997

Mr. Patrick Onishi
Chief Planning Officer
Planning Department
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Attention: Mr. Tim Hata

Dear Mr. Onishi:

Subject: Draft Environmental Impact Statement (DEIS)
Aiea Sugar Mill Commercial Development
Aiea, Oahu, Hawaii
TRK: 9-9-05: 10 (por.) & 25

Thank you for allowing us to review and comment on the subject project. Our letter dated March 20, 1997 (attached) addressing the EIS Preparation Notice was received too late to be included in the DEIS. We are including that letter as part of these present comments.

Noise Radiation & Indoor Air Quality

Noise

There are concerns regarding the proposed project due to potential adverse noise impacts resulting from the integration of commercial and residential uses. Although it is stated that the noise levels from commercial operations will be generally lower than the previous sugar mill noise levels, mitigative measures should be implemented anyway.

Negative impacts on the surrounding residential community can be anticipated due to the following noise sources associated with the proposed commercial complex:

- a. Noise associated with service activities, such as deliveries, refuse collection, vehicular back-up alarms, etc.

- b. Noise due to increased vehicular traffic from customers.

Mitigative measures toward minimizing these impacts must be implemented within any mixed use community.

Through facility design, noise levels emanating from stationary equipment in the proposed commercial complex, such as air conditioners and exhaust fans must be attenuated to comply with the provisions of Chapter 11-46, Hawaii Administrative Rules, "Community Noise Control."

Construction activities must comply with the provisions of Chapter 11-46, Hawaii Administrative Rules, "Community Noise Control."

- a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the maximum permissible sound levels of the regulations as stated in Section 11-46-6(a).
- b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers as stated in Section 11-46-6(b)(1)(A).
- c. The contractor must comply with the conditions issued with the permit as stated in Section 11-46-7(d)(4).

Asbestos

As a project that will entail demolition and renovation activities, the Federal Register, 40 CFR Part 61, National Emission Standard for Hazardous Air Pollutants, Asbestos NESHAP Revision, Final rule, November 20, 1990, requires inspection of all affected areas to determine whether asbestos is present.

Under the NESHAP regulation, the project would be required to file an Asbestos Demolition/Renovation notification ten working days prior to demolition of each building or the disturbance of regulated asbestos-contaminating materials. All regulated quantities and types of asbestos-contaminating materials would be subject to emission control, proper collection, containerizing, and disposal at a permitted landfill.

Specific questions concerning noise and asbestos requirements should be directed to Mr. Daryn A. Yamada at 586-4700 and Mr. Robert H. Lopes at 586-5800, respectively. Should there be additional concerns, please contact Mr. Jerry Haruno,

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



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

93-005B/epo

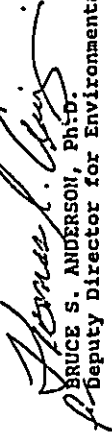
Mr. Patrick Onishi
May 27, 1997
Page 3

Environmental Health Program Manager, Noise, Radiation and Indoor
Air Quality Branch at 586-4701.

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

SUBJECT: Ala Sugar Mill Commercial Development
Draft Environmental Impact Statement

Sincerely,


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

c: NREIAQB
CAB
HEER
CRAZY SHIRTS
GRAY, HONG, BILLS & ASSOCIATES ✓

Dear Dr. Anderson:

Thank you for your comment letter dated May 27, 1997. This letter was prepared by your Noise Radiation and Indoor Air Quality Branch. We are providing the following responses to your comments.

Noise Radiation & Indoor Air Quality

Your comment letter identifies that there are general concerns relating from the integration of commercial and residential uses. These associated noises are related to general traffic volumes, refuse collection and vehicular backup alarms, etc. The Draft Environmental Impact Statement has already identified these noise concerns. However, we have revised the Final Environmental Impact Statement to identify your Department's requirement that the project comply with the Community Noise Control rules and regulations. We have further revised the Final Environmental Impact Statement to identify the specific construction requirements to allow compliance with the community noise control regulations.

With respect to your comments related to asbestos, a reconnaissance has already occurred to determine that there is asbestos in the window glazing of the mill complex. The Final Environmental Impact Statement has been revised to specifically identify that an asbestos demolition/renovation notification must be filed with your department.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included to the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

BENJAMIN J. CAVETANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

234 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

May 23, 1997

GARY GILL
DIRECTOR

Mr. Dennis Taylor, Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, Hawaii 96701

Dear Mr. Taylor:

The Office of Environmental Quality Control submits the following comments on the March 21, 1997, Draft Environmental Impact Statement entitled "Aiea Sugar Mill Commercial Development" prepared by Gray Hong Billis & Associates, Inc.

1. BIOLOGICAL RECONNAISSANCE SURVEY

The biological reconnaissance survey in Appendix D of the DEIS discusses only the lower reaches of Aiea Stream and does not discuss the receiving body, Pearl Harbor. As a result of this, the DEIS fails to discuss indirect and cumulative effects of the project on Pearl Harbor's nearshore and offshore flora and fauna. Please include Pearl Harbor in your discussion of environmental setting, impacts and mitigative measures.

2. INDIRECT AND CUMULATIVE EFFECTS OF CHANNELIZATION ON THE ABIOTIC CHARACTERS OF THE AIEA STREAM AND THE RECEIVING WATER BODY, PEARL HARBOR

Abiotic characteristics are classified as substrate/structural attributes and physico-chemical attributes. Structural characteristics include depth, width, stream bed surface area, total length, channel configuration and bed form, sinuosity, substrate, flood recurrence intervals supported by available stream dimensions, water table elevation, watershed soil and bedrock type, stream gradient, discharge, velocity and cover. Physico-chemical attributes include, but are not limited to total suspended solids, light, temperature, dissolved gases, oxygen demand, dissolved solids, pH, nutrients and toxic substances. Altering any one or more of these traits will produce a change in the biological personality of a stream or river system. Please discuss the indirect and cumulative effects of the project on the abiotic characteristics of the Aiea Stream and Pearl Harbor.

¹ Simpson, P. W., J. R. Newman, M. A. Keim, R. M. Matter, and P. A. Quibrie. 1982. *Manual of Stream Channelization Impacts on Fish and Wildlife*. U. S. Fish and Wildlife Service, Office of Biological Services, No. 82-24. Cited from "Stream Channelization" at <http://www.wittenberg.edu/academics/geol/programs/geol220/mcgarvey/summary.html>.

² Ritter, D. F., R. C. Koehler, and J. R. Miller. 1995. *Process Geomorphology*. William C. Brown Publishers, Dubuque, Iowa. Cited from "Stream Channelization" at <http://www.wittenberg.edu/academics/geol/programs/geol220/mcgarvey/summary.html>.

Mr. Dennis Taylor, Crazy Shirts Inc.
Aiea Sugar Mill Commercial Development DEIS Comments
May 23, 1997
Page 2 of 2

Channelization increases the likelihood of coarse material deposition in the lower reaches of stream channels at Pearl Harbor. Such deposition can increase both the magnitude and the frequency of floods. Please discuss what kind of sediment yield may result from the channelization and what cumulative impacts of stream channelization and their corresponding mitigative measures the City/State/Federal government may be required to undertake (stream cleaning, debris basins, etc.) to prevent flooding.

3. ALTERNATIVES TO STREAM CHANNELIZATION IN THE FINAL DRAINAGE STUDY IN THE FINAL EIS

The Office is generally opposed to concrete stream channelization. As more land is covered with impervious surfaces like asphalt and concrete, less rainwater filters into the ground. Thus, even a minor storm can send torrents of water into what was previously a small stream, eroding streambanks and filling stream channels with silt and sediments.

Please discuss the following alternatives in the Final EIS: on-site drainage retention; drywells; and natural grass-lined channels. Native Hawaiian plants (endemic/indigenous/polynesian introduced) can be used as vegetation for such a project. Please include a copy of the final drainage study which discusses the above alternative in the Final Environmental Impact Statement.

If there are any questions, please call Mr. Leslie Segundo, Environmental Health Specialist at 586-4185. Thank you for the opportunity to comment.

Sincerely,

GARY GILL
Director of Environmental Quality Control

Attachment

The Honorable Patrick Onishi, Chief Planning Officer, City & County of Honolulu
Mr. David Billis, Gray, Hong, Billis & Associates

³ David Salvesen, "Restoring Streambanks Naturally" *Urban Land*, March 1995, p. 40.

SOLUTION FIBER

Restoring Streambanks, Naturally

Through bioengineering, plants and plant materials can revegetate eroded streambanks and create a living, self-sustaining barrier against further erosion.

Streams in urban and suburban areas endure considerable punishment. Oil, grease, and other pollutants washed off parking lots and streets by rainwater foul nearby streams. As more land is covered with impervious surfaces like asphalt and concrete, less rainwater filters into the ground. Thus, even a minor storm can send torrents of water raging into what was pre-



After the Little Patuxent River streambank is excavated, fiber branches from willow and dogwood trees are installed so that their legs extend over the stream. The branches are anchored in place with stakes and covered with soil. (The temporary diversion wall was installed to prevent erosion during construction.)



By early spring, the branches have begun to sprout from the bank. Stakes placed along the top of the bank provide added protection against erosion.

viously a small stream, eroding streambanks and filling stream channels with silt and sediments. In many areas, 100-year storm flows now occur every year.

The traditional engineering response to eroding streambanks calls for placing stone or concrete revetments, such as riprap, along the affected bank to shield it against floodwaters. While generally effective against erosion, such an approach is unattractive and provides little in the way of wildlife habitat.

A more natural erosion control technique, known as bioengineering, is gaining credence in the United States, having been used for centuries in Europe. Bioengineering refers to the use of plant material, often in conjunction with traditional engineering methods, to provide ecologically sound solutions to engineering problems. Thus, plants and plant materials can be used to create a living, self-sustaining barrier against erosion and to revegetate eroded streambanks, typically at half to two-thirds the cost of stone or concrete barriers.

Certain plants, like willow, will sprout readily from cuttings and prosper in wet soils. Thus, a dense mat of willow tree cuttings or stems anchored along an eroded streambank will help deflect and slow the flow of water

during storms and also will revegetate the streambank. As the willows grow, their roots cling to the soil, providing added strength and protection. In addition, the trees supply wildlife habitat along the banks and in the stream.

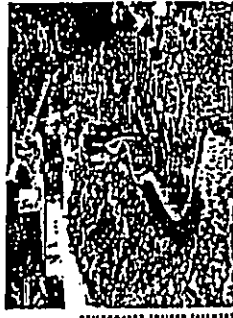
Although many bioengineering techniques have been developed, two are featured here, from projects in Maryland and Pennsylvania. Little Patuxent River, Columbia, Maryland. The Little Patuxent River winds through central Maryland and passes the new town of Columbia before joining the Patuxent River, a tributary of the Chesapeake Bay. Route 29, a busy commuter road along the Washington-Baltimore corridor, crosses over the Little Patuxent near Columbia.

In 1989, the Maryland State Highway Authority decided to upgrade Route 29 and build a new bridge over the river. As part of the road and bridge construction, the highway authority wanted to install a protective embankment along the river to stabilize the bank and prevent erosion.

Rather than rely on traditional engineering methods, the highway authority consulted, at the behest of the Maryland Department of Natural Resources, environmentally sensitive alternatives such as bioengineering. It retained Biohabitats, Inc., of Towson,



Floodwaters severely eroded the bank of Little Cedar Creek in Allentown, Pennsylvania.



After grading the streambank, construction crews laid fiber branches along the top of the bank to arrest erosion. Fiber tentacles (not shown) are placed along the eroded creek bank.

After grading the streambank, construction crews laid fiber branches along the top of the bank to arrest erosion. Fiber tentacles (not shown) are placed along the eroded creek bank.

Like most new technologies, bioengineering suffers from a lack of standardized procedures; there are no agreed-upon design and construction specifications or standards, no guidelines to gauge the likely effectiveness of different bioengineering techniques. Nonetheless, after consultation with Biohabitats, the highway authority took "a great leap of faith," according to Keith Bowers, president of the firm, and selected two measures: branch piling and root walls.

Branch Piling. The bank of the Little Patuxent River was excavated to create steps leading from the water to the top of the bank. Mats of interwoven live and dead branches of native willow and dogwood trees then were placed on the steps, anchored with pegs made of live willow branches, and covered with soil. (The dead branches were added for structural support.) As the live branches grow into trees, they will form a dense mat of trunks and stems to guard against erosion. Native limestone was installed along the toe of the stream, where the water meets the bank, for added protection.

Root Walls. In areas prone to severe erosion, such as along the inside curve of the



One year later, the creek bank supports a thick growth of native wild flowers and grasses.

is a thick mat of coconut fibers that can be rolled out, the soil, and tacked down over eroded areas. The tangle is tough enough to protect against erosion yet porous enough for plants to grow through. Each product will biodegrade after about five years, at which time plants will have grown sufficiently to keep the streambank intact.

At Little Cedar Creek, the eroded streambank was graded to a more gentle slope, and fiber schemes, anchored with wooden stakes, were placed along the toe of the bank to prevent further undercutting. Fiber tentacles were rolled along the bare soil of the creek bank and tacked. Quick-growing native grass and wild flower seedlings were planted throughout the mat.

Like the bioengineering system installed at the Little Patuxent River, Creative Habitat's coconut-based system has withstood all storms, including a 100-year storm that occurred immediately after the project was completed in 1991. ♦

This scheme was submitted by David Salzman, an environmental writer and consultant based in Kensington, Maryland.

What's your solution?
Readers are invited to offer solutions to common land use and environmental problems for publication in this department. Topic suggestions should be addressed to Julie Stone, Associate Editor, Urban Land, 1111 Indiana Avenue, N.W., Suite 400, Washington, D.C. 20004-1210.



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 6, 1997

Bruce L. Clark, P.E.
Dennis C. Hong, P.E.
David B. Bills, P.E.
Roy T. Aoki, P.E.
Brenda D. Fogel, P.E.
Michael J. Higgins, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 521-8018

Mr. Gary Gill
Office of Environmental Quality Control
State of Hawaii
June 6, 1997
Page 2

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

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Gill:

We thank you for your comment letter dated May 23, 1997 regarding the subject project. We are providing the following responses to your comments.

1. Biological Reconnaissance Survey

The Draft Environmental Impact Statement contains a biological reconnaissance survey which identifies that the lower portion of Aiea Stream is highly modified and that Aiea Stream has minimum aquatic resource value. The Draft Environmental Impact Statement and its drainage section further identifies that the stream flow passing through the property will be essentially identical to that from before and after the project. The surface water drainage section of the Draft Environmental Impact Statement identifies that the increase in storm runoff from the project will also be negligible based on its existing industrial characteristics as compared to commercial characteristics which are proposed. Based on the foregoing information, the Draft Environmental Impact Statement within its physical environment sections (drainage, flora and fauna) concludes that there will be no impact. This also specifically extrapolates to Pearl Harbor nearshore and offshore reaches.

2. Indirect and Cumulative Effects of Channelization on the Abiotic Characters of the Aiea Stream and the Receiving Water Body, Pearl Harbor

For the same reasons discussed under your comment 1, the Draft Environmental Impact Statement has concluded there will be no impact. We do not propose to make any changes to the Final Environmental Impact Statement. From a mass balance perspective, the stream flow passing through the property will be essentially identical with respect to solids content, dissolved oxygen gases, oxygen demand, dissolved solids, plant nutrients and toxic substances. Please refer to our response to your first comment for our substantiation.

3. Alternatives to Stream Channelization in the Aiea Drainage Study and the Final EIS

We have revised the Final Environmental Impact Statement to identify on-site retention and drywells as methods to diminish runoff from the site. We have also noted that drywells in clayey material such as that which exists on the site fail rapidly.

With respect to concrete channel alternatives, the Final Environmental Impact Statement contains an alternative for no channelization. Natural grass-lined channels are also discussed but considered infeasible due to non-compliance with velocity criteria. The maximum velocity for grass-lined channels is 5 feet per second (fps). Peak stream flows are 15± fps.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:am
2617-2



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

ENERGY, RESOURCES, AND TECHNOLOGY DIVISION
235 South Beretania St., 5th Fl., Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

April 10, 1997

1997-DR-4
BERNARDI L. CAVALANO
STATE ENGINEER
INDUSTRIAL
QUALITY INSPECTION
REGISTRATION

Tel: (808) 507-3007
Fax: (808) 586-2536



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Bruce L. Gray, PE
David C. Hong, PE
David B. Bills, PE
Roy T. Aoki, PE
Beverly G. King, PE
Kiyoko Loo, PE
Elizabeth Asama, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4489
Telephone: (808) 521-0308
Fax: (808) 521-8018

June 4, 1997

MEMORANDUM

TO: Planning Department
City & County of Honolulu
Attn: Tim Hata

FROM: Maurice H. Kaya

SUBJECT: Aiea Sugar Mill Commercial Development

Thank you for the draft environmental impact statement for the Aiea Sugar Mill Commercial Development.

The Energy, Resources, and Technology Division does not have any comments to offer.

Mr. Maurice H. Kaya
Energy Resources, and Technology Division
Department of Business, Economic Development
& Tourism
State of Hawaii
235 South Beretania Street, 5th Floor
Honolulu, HI 96813

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Kaya:

Thank you for your comment letter dated April 10, 1997 regarding the subject project. Your comment letter as well as our response will be included in the Final Environmental Impact Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

RECEIVED
MAY 12 1997
HONOLULU, HI



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 6, 1997

Daniel Gray, PE
Daniel S. C. Hong, PE
David B. Bills, PE
Roy T. Aoki, PE
Brendly G. Ang, PE
My D. Loos, PE
Kathleen J. Appala, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

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

SUBJECT: Alea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Hibbard:

Thank you for your comment letter dated April 24, 1997 regarding the subject project. We are providing the following information regarding your comments:

1. While not contained in the Draft Environmental Impact Statement, the owner has obtained preliminary estimates to bring the current Mill structure up to code requirements and the costs are in excess of \$20 million. We have added this fact to the Final Environmental Impact Statement. As identified in the Draft Environmental Impact Statement, the total commercial development costs as identified in Table 1 are approximately \$7.2 million. Besides this issue, Crazy Shirts, Inc. currently owns a warehouse and corporate headquarters in Halawa Valley which they intended to sell to relocate to the Alea Sugar Mill property. This sales transaction has not been feasible, further making retained ownership of the Alea Sugar Mill property impossible.
2. The Final Environmental Impact Statement has been revised to include the possibility of retention of Mill features into the ultimate commercial development. This information has been included in Section V, Description of the Environmental Setting Impacts and Mitigation, under item 9, Cultural Resources.
3. We have revised Table 1 to include demolition costs for the Alea Sugar Mill property.
4. The Kahuku Sugar Mill has been referenced in the Draft Environmental Impact Statement as an example of a sugar mill operation that has been maintained through historic preservation. Regardless of the fact whether it is on the Historic Register or not, this information has been provided as a point of reference to demonstrate the fact that historic preservation has occurred and demonstrate that the original basis for Crazy Shirts, Inc.'s purchase of the property cannot be satisfied by historic preservation. To this end, participation by private, government and/or public entities is a necessity.
5. The Final Environmental Impact Statement has been revised to specifically state that certain features of the Mill can possibly be incorporated into commercial development. This option needs to be further explored as more definitive plans are developed.

Mr. Don Hibbard, Administrator
June 6, 1997
Page 2

6. We have revised the Public View section of the Final Environmental Impact Statement to identify that a large part of the community has become accustomed and fond of the view of the existing sugar mill.

7. The purpose of the market study was to determine if the Alea Sugar Mill site was converted to a commercial complex would there be any viability to such a development. The market study has concluded that there would be economic viability. The same statement is true for any vacancies in existing spaces regarding existing shopping centers. Therefore, the terminology "effectively built-out" assumes that the vacant space is not substantial enough to affect the projections for the Alea Sugar Mill commercial development.

8. The Final Environmental Impact Statement has been revised to include your Department's standard condition that should archaeological sites be uncovered during construction, work will stop in order to properly identify and provide proper disposition of any archaeological features. You have generally indicated that there could be remains of archaeological features in the stream channel. We would like to point out that there has been significant work in the stream channel, including installation of a City and County sewer along its continuous stream border. To the best of our knowledge, there was no archaeological information identified as a part of the previous work within the stream channel and it is not anticipated due to the amount of disturbance in this channel that other features would be uncovered. However, your standard requirement will definitely become a part of the Final Environmental Impact Statement record.

This comment also pertains to your reference with respect to the Federal Army Corps of Engineers Permit system. At the present time, it is undetermined whether any type of stream channel alteration will even be allowed.

Your comment letter will be included as a part of the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPITOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

Letter to Mr. Bills
Page two

May 21, 1997

Mr. David Bills
Gray, Hong, Bills & Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, HI 96813-4422

Subject: Environmental Impact Statement (EIS) for the Aiea Sugar Mill Property,
Island of Oahu.

Dear Mr. Bills:

Thank you for the opportunity to review the Environmental Impact Statement (EIS) for the Aiea Sugar Mill Property, Island of Oahu. The applicant, Crazy Shirts Inc., proposes to demolish the existing mill and develop a neighborhood shopping center.

The Office of Hawaiian Affairs (OHA) has no objections at this time to the proposed development. The development apparently bears no significant long-term air quality or noise impacts on nearby urban areas nor increases current water use and wastewater disposal. The development, however, will (i) result in an irreversible loss of a historic landmark, and (ii) create additional traffic. In recognition to the last issue, a road improvement plan is envisioned in the EIS to mitigate traffic concerns.

As stated in a previous letter addressed to the preparers, OHA's major concern to the proposed development is potential hazards stemming from decades of using and releasing chemicals into nearby streams and adjacent areas as well as in-situ contamination. After reviewing the EIS, OHA concurs with steps taken by the preparers to address environmental clean-up and in-situ contamination. But OHA is concerned with the proposed measure to convert a portion of the Aiea stream from a natural stream to a concrete channel. OHA views the role of streams essential in sustaining local flora and fauna and providing with a balanced growth between natural settings and man-made developments. Therefore, OHA urges the preparers to seek an assessment from the Commission on Water Resource Management on the wisdom to convert a portion of the Aiea stream into a concrete channel.

Please contact Lynn Lee, Acting Officer of the Land and Natural Resources Division, or Luis Manrique, should you have any questions on this matter.

Sincerely yours,

Martha Ross
Deputy Administrator, Programs

LM:hm
cc Trustee Aiona
Trustee Akana
Trustee Apoliona
Trustee Beamer
Trustee DeSoto
Trustee Hee
Trustee Keale
Trustee Machado
Trustee Springer
Administrator Colburn



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Ms. Martha Ross
Deputy Administrator, Programs
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

June 4, 1997

Brian L. Gray, PE
Dunwoody S. C. Hong, PE
David B. Bills, PE
Roy T. Aoki, PE
Beverly G. Ng, PE
Mary D. Lee, PE
A. Chubbett, PE
119 Merchants Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0308
Fax: (808) 531-8018

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Ross:

Thank you for your comment letter dated May 21, 1997 regarding the subject project. By inclusion of your letter in the Final Environmental Impact Statement, your "no objections" to the development at this point in time will be identified. Your comments regarding the irreversible loss of an historic landmark and traffic concerns, including mitigation measures, will also be identified as part of the record.

Your comment letter further goes on to identify that your major concern was potential hazards relating to environmental clean-up and after your review, you concur that the appropriate steps will be taken for this clean-up.

Your final area of comment related to transformation of natural stream to concrete channel as proposed in the Draft Environmental Impact Statement. Your letter further suggested that the Commission on Water Resource Management be contacted to determine the wisdom of such an action. This contact with the Commission on Water Resource Management is a definite commitment and requirement for completion of the concrete channel. To this end, Table 3 of the Draft and Final Environmental Impact Statement identified that one of the necessary approvals is a Commission on Water Resource Approval in the form of a Stream Alteration Permit. It is the obligation of the project to demonstrate that a concrete channel can be completed without significant impact. If this cannot be demonstrated, the Commission on Water Resource Management has no option but to disallow the permit.

Your comment letter will be included in the Final Environmental Impact Statement. Our response will also be included to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

EDUARDO J. CAVETTANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 531
HONOLULU, HAWAII 96809

MICHAEL D. WILSON
CHAIRPERSON
ROBERT G. ORLANDO
DAVID A. KOBAYASHI
LAWRENCE H. HASE
MICHAEL H. COLE
HENRY M. MOORE, JR.
ASST. CHAIRPERSON
P. O. BOX 531
HONOLULU, HAWAII 96809

APR 21 1997

Mr. Tim Hata
Planning Department
City & County of Honolulu
650 S. King St., 8th Floor
Honolulu, HI 96813

Dear Mr. Hata:

Draft Environmental Impact Statement for Aiea Sugar Mill Commercial Development

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas which are important for the maintenance of streams and the replenishment of aquifers.

- We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.
- We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- A Well Construction Permit and a Pump Installation Permit from the CWRM would be required before ground water is developed as a source of supply for the project.
- The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the CWRM would be required prior to use of this source.
- Groundwater withdrawals from this project may affect streamflows. This may require an instream flow standard amendment.
- We recommend that no development take place affecting highly erodible slopes which drain into streams within or adjacent to the project.
- If the proposed project diverts additional water from streams or if new or modified stream diversions are planned, the project may need to obtain a stream diversion works permit and petition to amend the interim instream flow standard for the affected stream(s).
- Based on the information provided, it appears that a Stream Channel Alteration Permit pursuant to Section 13-169-50, HAR will be required before the project can be implemented.

Mr. Tim Hata
Page 2

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- Based on the information provided, it does not appear that a Stream Channel Alteration Permit pursuant to Section 13-169-50, HAR will be required before the project can be implemented.
- An amendment to the instream flow standard from the CWRM would be required before any streamwater is diverted.
- Any new development that is permitted along a stream that is not yet channelized should be based on the express condition that no streams will be channelized to prevent flooding of the development. Development in the open floodplain should not be allowed; other economic uses of the floodplain should be encouraged.

OTHER:

The report discusses the possible transfer of the water allocation to another well location on the Ewa Plain (pg. 16). However, §13-171-25 HAR provides for the transfer of a water use permit only if "...the conditions of use of the permit including, but not limited to place, quantity, and purpose of the use remain the same". Therefore, the water allocation cannot be transferred to any other well. The permittee may seek to modify the water use permit, pursuant to §13-171-23 HAR, to accommodate a change in use or a change in source of use location.

With regard to the revocation of allocations, §13-171-24 HAR provides for the revocation of a water use permit after a hearing for "...partial or total nonuse, for reasons other than conservation, of the water allowed by the permit for a period of four consecutive years or more". Additionally, should the property be redeveloped in a commercial configuration, and the county land use designation is changed from industrial to commercial, then the permit would no longer be consistent with the industrial use of the water that is allowed by the permit, and this may constitute a ground for revocation.

If there are any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

RAE M. LOUI
Deputy Director

LN:ss

c: Joel Criz, Crazy Shirts, Inc.
David Bills, Gray, Hong, Bills & Associates, Inc.

Bruce L. Gray, PE
David S. C. Hong, PE
David B. Bills, PE
Roy T. Aoki, PE
Dewey G. Ho, PE
M. J. Loo, PE
Elizabeth M. Hagan, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Rae M. Loui, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Loui:

Thank you for your consultation letter dated April 21, 1997 regarding the subject project. Your comment letter identifies that coordination is necessary with the County government to incorporate the project into the County's Water Use and Development Plan. The purpose of the Environmental Impact Statement Process, followed by Development Plan Amendment Process, followed by Change of Zone is solely to assure that these coordination processes are achieved. This is the initial step in the coordination process.

Based on your comments, we have revised the Final Environmental Impact Statement to indicate that the water allocation cannot be transferred from the existing wells unless the existing permits are modified. We have further revised the Final Environmental Impact Statement to identify that the change in configuration (Industrial-Sugar Mill to Shopping Center) may constitute the grounds for permit revocation.

We will include your comment letter as well as a response as a part of the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.


David B. Bills

DB:sc
2617-2

BENJAMIN A. CASTILANO
GOVERNOR
MAJOR GENERAL EDWARD S. MCKENLSON
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
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

May 21, 1997



PHONE 808 733-4495
FAX 808 733-4497



Gray • Hong • Bills • Associates, Inc.
CONSULTING ENGINEERS

David B. Bills, PE
Cynthia C. Wong, PE
Derek B. Bills, PE
Roy C. Price, PE
Brenda D. Wong, PE
Alycia D. Lee, PE
MICHAEL H. Iiyama, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

TO: Mr. Tim Hata
Planning Department
City and County of Honolulu

FROM: Roy C. Price, Sr.
Vice Director of Civil Defense

SUBJECT: AIEA SUGAR MILL COMMERCIAL DEVELOPMENT,
DRAFT ENVIRONMENTAL IMPACT STATEMENT

We appreciate this opportunity to comment on the Draft Environmental Impact Statement for the Aiea Sugar Mill Commercial Development, Aiea, Oahu, Hawaii, TMK 9-9-05: 10 (POR.) and 25.

State Civil Defense has no comments for this development at this time.

If there are any further questions, please have your staff call Mr. Norman Ogasawara of my staff at 733-4300.

c: Mr. Joel Criz
Crazy Shirts, Inc.
99-969 Iwaena Street
Aiea, HI 96701
✓ Mr. David Bills
Gary, Hong, Bills and
Associates, Inc.
119 Merchant Street, Suite 607
Honolulu, HI 96813-4422

Office of the Director of Civil Defense
State of Hawaii Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816-4495

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Gentlemen:

Thank you for your comment letter dated May 21, 1997 regarding the subject project. Your comment letter as well as our response will be included in the Final Environmental Impact Statement for completion of the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P.O. BOX 119
HONOLULU, HAWAII 96810



Gray, Hong, Bills & Associates, Inc.
CONSULTING ENGINEERS

(P) 1298.7

June 4, 1997

Burt L. Gray PE
Dwain S. C. Perry PE
Bryan J. Bost PE
Randy G. Hill PE
Brenda G. Hill PE
Amy D. Loo PE
LICHUAN H. NGOMA, PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

Planning Department
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

Attention: Mr. Tim Hata
Gentlemen:

Subject: Aiea Sugar Mill Commercial Development
TMK 9-9-05:Por. 10 and 25
Draft EIS

Thank you for the opportunity to review the subject document.
We have no comments to offer.

If there are any questions, please have your staff contact
Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Sincerely,

GORDON MATSUOKA
State Public Works Engineer

RY:jk
c: Crazy Shirts, Inc.
Gray, Hong, Bills & Associates, Inc.
OEQC

Mr. Gordon Matsuoka, Engineer
Division of Public Works
Department of Accounting and
General Services
State of Hawaii
P.O. Box 119
Honolulu, HI 96810

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Matsuoka:

Thank you for your comment letter dated April 21, 1997 regarding the subject project.
Your comment letter as well as this will be included in the Final Environmental Impact Statement
to complete the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2



**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

BENJAMIN J. CAYETANO
GOVERNOR
HELENE M. MAYA
DIRECTOR
BRADLEY J. ANDERSON
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

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

Ref. No. P-6693

May 20, 1997

Mr. Patrick T. Onishi
Chief Planning Officer
Planning Department
City and County of Honolulu
650 S. King Street, 8th floor
Honolulu, Hawaii 96813-3017

Attention: Tim Hata

Dear Mr. Onishi:

Subject: Draft Environmental Impact Statement (DEIS), Aiea Sugar Mill
Commercial Development, Aiea, Oahu, TMK 9-9-05:10 (por.) and 25

We reviewed the DEIS for the subject project and do not have any comments to offer.

If you have any questions, please contact Charles Carole of our Coastal Zone Management Program at 587-2804.

Sincerely,

Rick Egged
Director
Office of Planning

cc: Crazy Shirts, Inc.
Joel Criz
✓ Gray, Hong, Bills & Associates, Inc.
David Bills
OEQC



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

Bruce L. Gray, P.E.
David S. C. Hong, P.E.
David B. Bills, P.E.
Roy T. Aoki, P.E.
Beverly G. Ing, P.E.
Miy D. Lee, P.E.
Michael H. Agnew, P.E.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 521-0306
Fax: (808) 531-8018

June 4, 1997

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

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Mr. Egged:

Thank you for your comment letter dated May 20, 1997 regarding the subject project. Your comment letter as well as our response will be included in the Final Environmental Impact Statement to complete the record.

Should you have any questions regarding this matter, please contact our office.

Very truly yours,

GRAY, HONG, BILLS & ASSOCIATES, INC.

DB:sc
2617-2

Brent Gay, PE
Charles C. B. B. PE
David B. B. PE
Robert A. B. PE
Beverly G. B. PE
MAY D. L. PE
ALAN H. B. PE
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813-4499
Telephone: (808) 531-0306
Fax: (808) 531-8018



Gray • Hong • Bills & Associates, Inc.
CONSULTING ENGINEERS

June 4, 1997

Ms. Esther Ueda, Executive Officer
State of Hawaii
Department of Business, Economic Development
and Tourism
Land Use Commission
P.O. Box 2359
Honolulu, HI 96804-2359

SUBJECT: Aiea Sugar Mill Commercial Development
Draft Environmental Impact Statement

Dear Ms. Ueda:

Thank you for your comment letter dated April 8, 1997 regarding the subject project. The Draft and Final Environmental Impact Statement will continue to identify that the project is within the State Land Use Urban District.

Your comment letter as well as this response will be included in the Final Environmental Impact Statement to complete the record. Should you have any questions regarding this matter, please contact our office.

Very truly yours,
GRAY, HONG, BILLS & ASSOCIATES, INC.

David B. Bills

DB:sc
2617-2

ESTHER UEDA
EXECUTIVE OFFICER



STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION

P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

April 8, 1997

Mr. Tim Hata
Planning Department
City and County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hawaii 96813-3017

Dear Mr. Hata:

Subject: Draft Environmental Impact Statement (DEIS) for
the Aiea Sugar Mill Commercial Development, Aiea,
Oahu. TMK 9-9-05: POL 10 and 25

We have reviewed the subject DEIS and confirm that the project site, as represented on Figure 10 of the DEIS, is located within the State Land Use Urban District.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject DEIS.

Should you have any questions, please feel free to call me or Bert Saruwatari of our office at 587-3822.

Sincerely,

ESTHER UEDA
Executive Officer

EU:th

cc: Joel Criz
David Bills
OEQC

APPENDIX A

**APPLICATION FOR
DEVELOPMENT PLAN LAND USE MAP AMENDMENT
AND ENVIRONMENTAL ASSESSMENT**

**AIEA SUGAR MILL
DEVELOPMENT PLAN AMENDMENT**

TMK: 9-9-05: 10 & 25

Prepared By

**GRAY, HONG, BILLS & ASSOCIATES, INC.
119 Merchant Street, Suite 607
Honolulu, Hawaii 96813**

January 15, 1997

**APPLICATION FOR DEVELOPMENT PLAN LAND USE MAP AMENDMENT
AND ENVIRONMENTAL ASSESSMENT**

SECTION I. BACKGROUND INFORMATION

Project Name	Sugar Mill Shopping Center
Agent	Gray, Hong, Bills & Associates, Inc. Attn: David Bills 119 Merchant Street, Suite 607 Honolulu, HI 96813 Phone: 521-0306 Fax: 531-8018
Applicant	Crazy Shirts, Inc., Owner in Fee Simple 99-969 Iwaena Street Aiea, HI 96701
Landowner	Crazy Shirts, Inc. 99-969 Iwaena Street Aiea, HI 96701
Location	Aiea Sugar Mill, located on Aiea Heights Drive DP - Primary Urban Center
Address	99-193 Aiea Heights Drive (adjacent to) Aiea, HI 96701
TMK	1 st Div. 9-9-05: 10 (portion of) and Parcel 9-9-05:25
Area	Approximately 461,210 Sq. Ft. (TMK 9-9-05:10) and approximately 128,066 (TMK 9-9-05:25) for additional parking or structures, for a potential total of 589,276 Sq. Ft. In addition the existing HARC Building and Roadway/ Stream Improvements are in the project for a total of 19.4 acres.
Required Maps	Project Location Map, Tax Map Key (see Drawing Exhibits)

SECTION II. LAND USE INFORMATION

State Land Use	Urban
DPLU Map	Industrial

DPPF Map	Master-planned roadway improvements within project
Zoning	I-2, Intensive Industrial District
Request	Commercial
Required Maps	State Land Use District, DP Land Use (see Drawing Exhibits)

SECTION III. DESCRIPTION OF PROPERTY

Existing Use	Existing vacant Aiea Sugar Mill, and existing C&H liquid sugar refinery (to cease operation shortly)
Surrounding Uses	Existing Hawaiian Agricultural Research Center lab/office building on adjacent portion of Parcel 10, and existing adjacent residential neighborhood with some commercial use.
Topography	Level and gentle slope (less than 10%)
Soils	Imported alluvial fill
Slope	Slight, except along western boundary and along Aiea stream (less than 10%)
Boundaries	The property is bounded to the west by Aiea Heights Drive and Hakina Street, to the north by residential homes, to the east by Aiea Stream, and to the south by the portion of Parcel 10 on which the HARC building is located. The proposed additional Parcel 25 is bounded to the west by Aiea Stream, to the north by the Aiea Intermediate School parking lot, to the east by Kulawea Street, and to the South by Ulune Street.
Required Maps	Topographical survey (see Drawing Exhibits)

SECTION IV. DEVELOPMENT PROPOSAL

Proposed Use	A neighborhood shopping center of approximately 118,600 square feet, including approximately 395 parking stalls.
Timetable	Start construction: 1st quarter 1999 Operation: 4th quarter 1999

Project Cost	Site costs approximately \$4.5 million. Building costs approximately \$12 million.
Project Need	Preliminary market studies indicate commercial space is viable to serve growing population. The EIS, which will be prepared for the project, will address market viability.
Required Maps	Preliminary Site Plan (see Drawing Exhibits)

SECTION V. CONFORMANCE TO FEDERAL, STATE AND CITY PLANS AND PROGRAMS

Approvals Needed

Federal	Department of the Army Permit
State	Stream Channel Alteration Permit: Dept. of Land and Natural Resources 401 Water Quality Certification: Dept. of Health Coastal Zone Consistency Certification: Dept. of Business, Economic Development and Tourism
City	DP amendment: City Dept. of Planning. Change of Zone: City Dept. of Land Utilization Construction permits Building permits
Required Maps	N/A

ENVIRONMENTAL ASSESSMENTS ITEMS

SECTION VI. SOCIO-ECONOMIC IMPACTS

Demographic	Use of the property will be changed from that of a vacant sugar mill and liquid sugar refinery to an active commercial property; therefore, no demographic impact is anticipated.
Economic	Previous economic viability resulted from an operating sugar mill and refinery. Since it is no longer in operation, there is no current economic viability. The shopping center will generate income, employment, and tax revenue which will be discussed in the Environmental Impact Statement.

Housing	No housing is proposed; therefore, no housing impact is anticipated.
Public Facilities	The project as proposed will have impact on traffic, and will require road, sidewalk, water, and drainage improvements, including possible channelization of a portion of Aiea Stream. The project will also generate solid waste which will be collected by private or City refuse trucks. Police and fire protection services will be provided by the City. Electricity, cable, and television will be provided by private publicly regulated utilities. The EIS will discuss and provide details on all public facility issues.
Required Maps	Existing Site Condition Map, Proposed Condition Map (see Drawing Exhibits)

SECTION VII. ENVIRONMENTAL IMPACTS

Noise	The sugar mill and refinery were noisy operations with large trucks and heavy equipment in constant use. The proposed shopping center is not considered to have a substantive impact on noise, however, the impact will be addressed in the EIS.
Air Quality	The sugar mill discharged smoke from its smoke stack. The proposed shopping center should have no impact on air quality with the exception of exhaust fumes from vehicles, the impact of which will be addressed in the EIS.
Visual	The structures comprising the proposed shopping center will be of a lower profile than the existing sugar mill buildings, and will be designed in such a manner so as to complement the surrounding residential and commercial areas. The visual impact of the proposed shopping center will be addressed in the EIS.
Historic	The sugar mill has been entered into the National Historic Registry. The 90-day notice of intent to demolish the sugar mill will be issued to the Department of Land and Natural Resources (DLNR) by the owner. DLNR has indicated there are no funds available for purchase of the property by DLNR or related agencies. The owner is currently offering the property for purchase to other sections of the State, however, preliminary feedback is there are no funds available for purchase.

Archaeological	There are no known archaeological concerns with the property.
Natural Features	The property has been completely disturbed by the sugar mill and refinery operations, therefore, there are no existing natural features to be affected by the proposed project.
Hazards	There are no known hazards, with the exception of Aiea Stream, the impact of which will be addressed upon the completion of stream studies in the EIS process. All toxic materials have been removed from the sugar mill site, with the exception of small amounts of asbestos in the glazing caulk, pipe insulation, and parts of the furnaces. California & Hawaiian Sugar Company will be responsible to deliver the site environmentally clean upon termination of their lease.
Required Maps	See Drawing Exhibits

SECTION VIII. ALTERNATIVES CONSIDERED

Neighborhood shopping center, light industrial subdivision, big box retailer (e.g., Costco, etc.)

SECTION IX. PROPOSED MITIGATION MEASURES

Proposed mitigation measures for all the above concerns will be addressed in the EIS.

SECTION X. LIST OF AGENCIES CONSULTED (see attached listing)

SECTION XI. SUMMARY SHEET (see attached form)

LIST OF AGENCIES TO BE CONSULTED

CITY & COUNTY AGENCIES

1. Board of Water Supply
2. Building Department
3. City Council
4. Department of Housing & Community Development
5. Department of Land Utilization
6. Department of Parks & Recreation
7. Planning Department
8. Department of Public Works
9. Department of Transportation Services
10. Department of Wastewater Management
11. Honolulu Fire Department
12. Honolulu Police Department

STATE AGENCIES

13. Department of Accounting & General Services
14. Department of Agriculture
15. Department of Business, Economic Development & Tourism (DBEDT) and
DBEDT - Energy Division
16. Department of Business, Economic Development & Tourism, Land Use Commission
17. Department of Education
18. Department of Land & Natural Resources, Commission on Water Resource Mgmt.
19. Department of Land & Natural Resources, State Historic Preservation Division
20. Department of Land & Natural Resources, Division of Water & Land Development
21. Department of Health
22. Department of Health, Environmental Management Division
23. Department of Transportation
24. Office of State Planning
25. University of Hawaii, Environmental Center

FEDERAL AGENCIES

26. U.S. Department of Agriculture
27. U.S. Army Corps of Engineers
28. U.S. Department of the Interior, Fish & Wildlife Service

PRIVATE AGENCIES

29. American Lung Association
30. Aiea Neighborhood Board No. 20
31. C & H Sugar
32. GTE Hawaiian Tel
33. Hawaiian Electric Company
34. Oceanic Cable

DGP REF. NO.:
MAP REF. NO.: 27
NB AREA: Aiea (Board No. 20)
AREA: 586,000 Sq. Ft.
TMK: 9-9-05: Por. 10 & 25

(DP AREA)
DEVELOPMENT PLAN LAND USE AMENDMENTS
BEING CONSIDERED

Amendment/Project Information

Amendment Request: I-2 to Commercial/Commercial Mixed Use

Location: Aiea, Oahu, Hawaii

Address(es) of Subject Area--Where Applicable: 99-193 Aiea Heights Drive
Aiea, HI 96701

Owner/Developer: Crazy Shirts, Inc.

Basis of Request: Market studies indicate there is a need for commercial development
in the area.

Type of Project: Commercial Shopping Center

Impact on Provision of Housing: N/A

Existing Conditions

Present Plan/Zoning Designations

Land Use: Sugar Refinery

State Land Use: Urban

Structures: Industrial-type, including
smokestack

DP Public Facilities Map: Master-planned
roadway on property

Number: 7 major structures

DP Special Provisions: N/A

Type: Warehouse/mill

Zoning: I-2

Height: 30'-60' with smokestack
in excess of 100'

ALISH: N/A

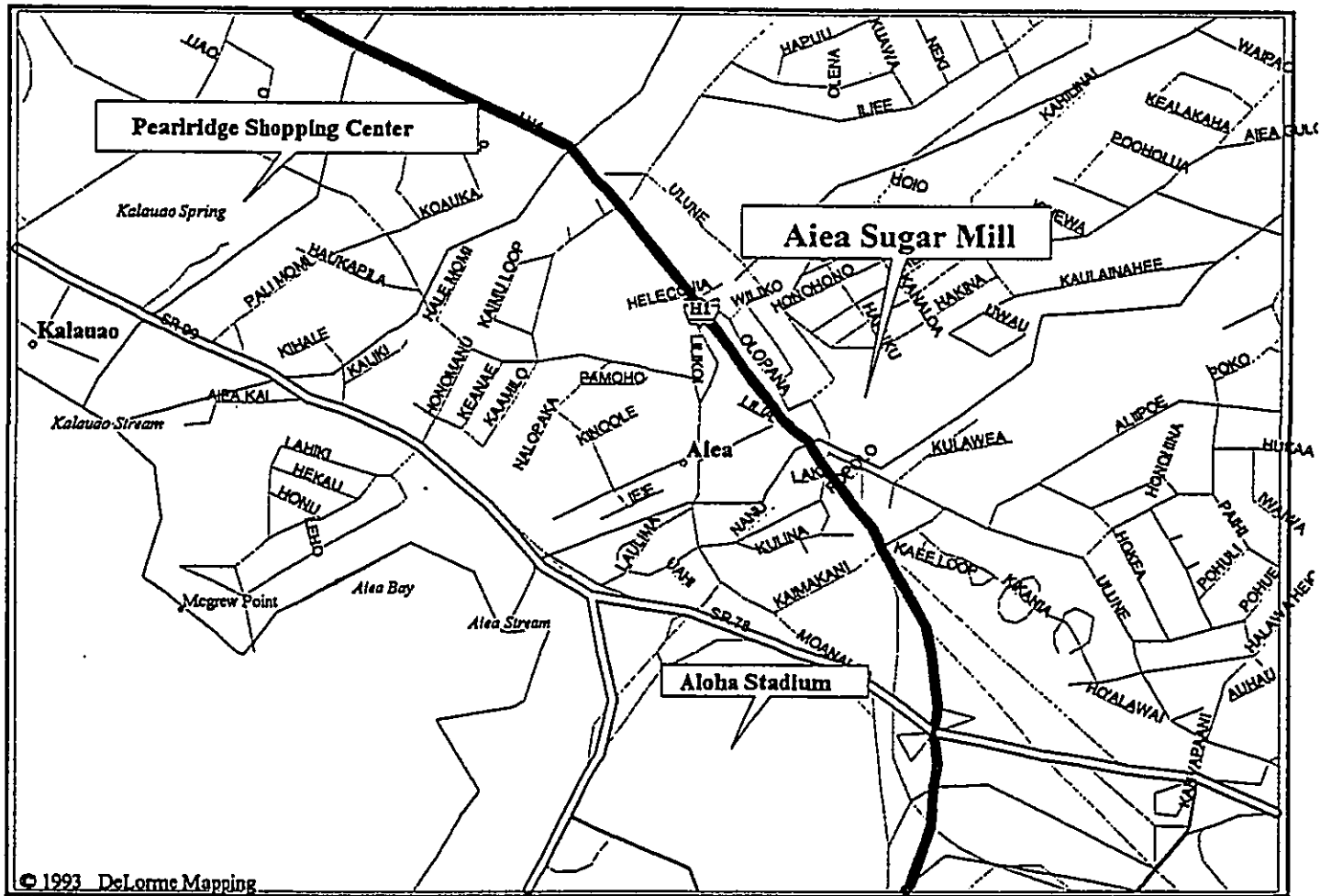
Soil Features: Imported alluvial fill

Possible Constraints: Drainage improvements to Aiea Stream
Traffic improvements/congestion

DRAWING EXHIBITS

1. ISLAND MAP
2. AREA MAP
3. NEIGHBORHOOD MAP
4. TAX MAP
5. STATE LAND USE MAP
6. DEVELOPMENT PLAN LAND USE MAP
7. DEVELOPMENT PLAN PUBLIC FACILITIES MAP
8. ZONING MAP
9. EXISTING SITE PLAN
10. TOPOGRAPHIC SURVEY MAP
11. PRELIMINARY SITE PLAN

NEIGHBORHOOD MAP



This summary has been presented solely to assist you in evaluating the property. The information contained herein has been obtained from sources believed to be reliable, however, there is no guaranty offered or implied as to its accuracy.

STATE LAND USE MAP

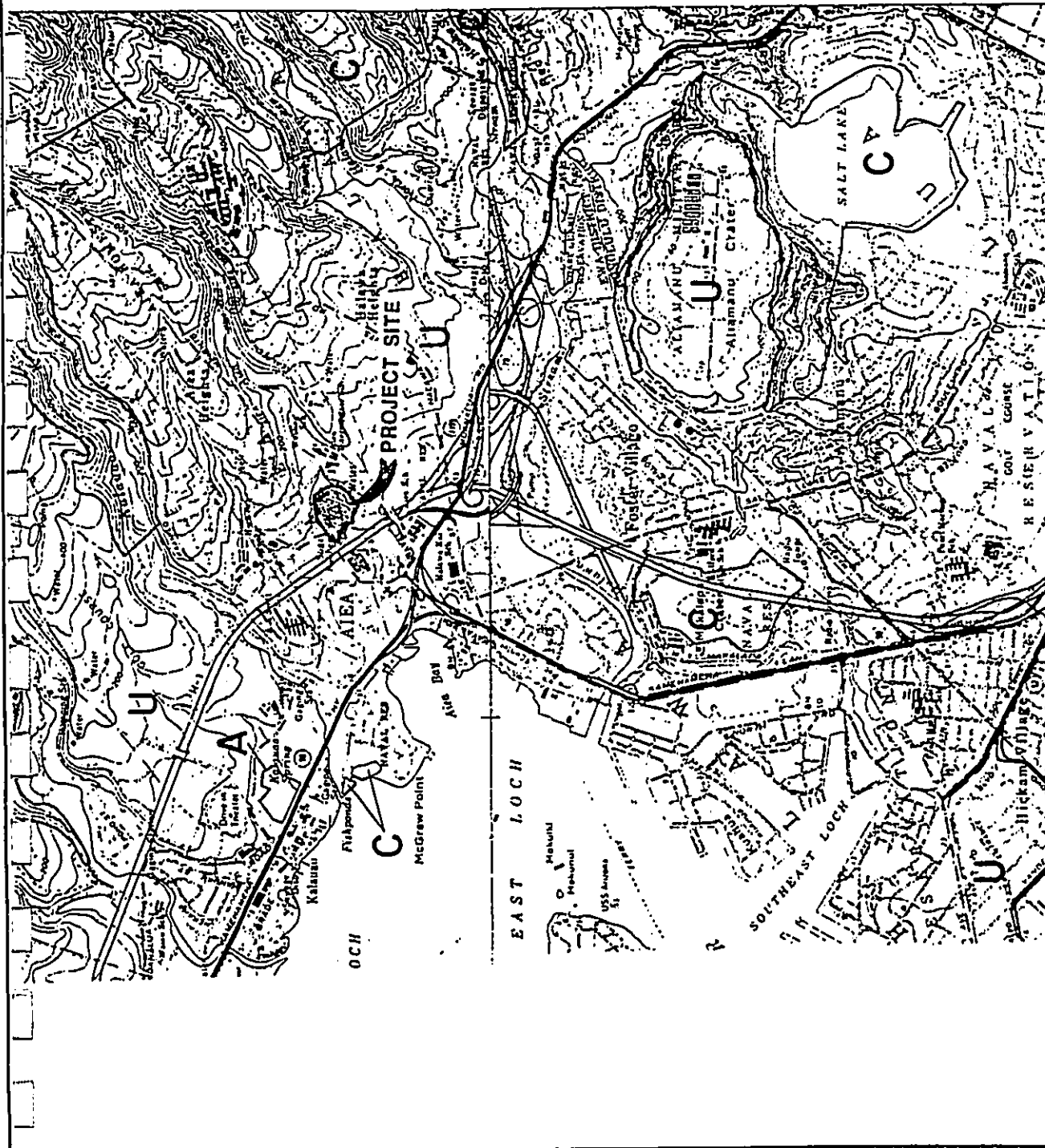
AIEA SUGAR MILL

Aiea, Ewa, Oahu, Hawaii

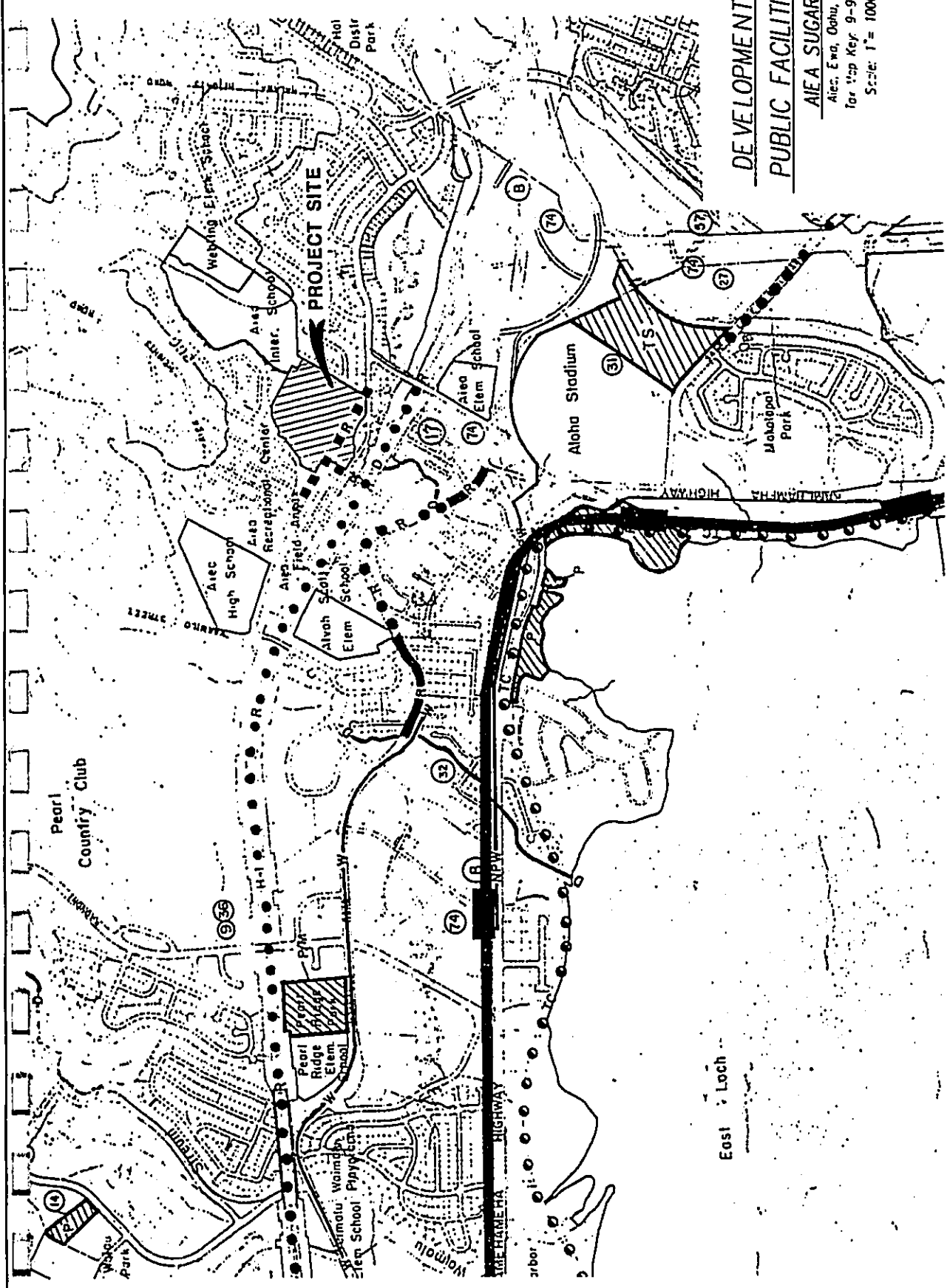
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Scale: 1" = 2000'

Jan. 14, 1997



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**DEVELOPMENT PLAN
PUBLIC FACILITIES MAP**

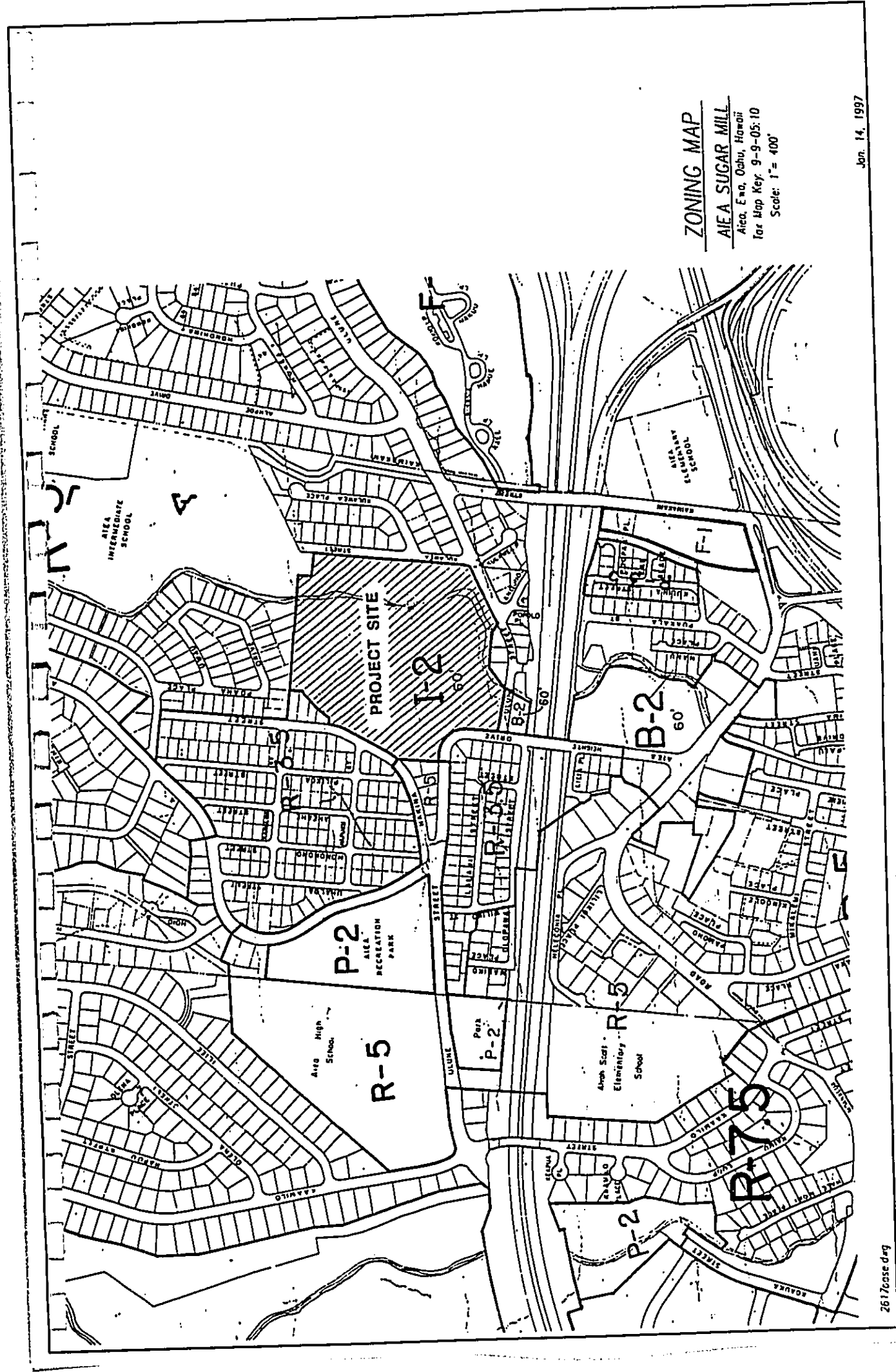
AIEA SUGAR MILL
Aiea, Ewa, Oahu, Hawaii
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Scale: 1" = 1000'

Jan. 14, 1997

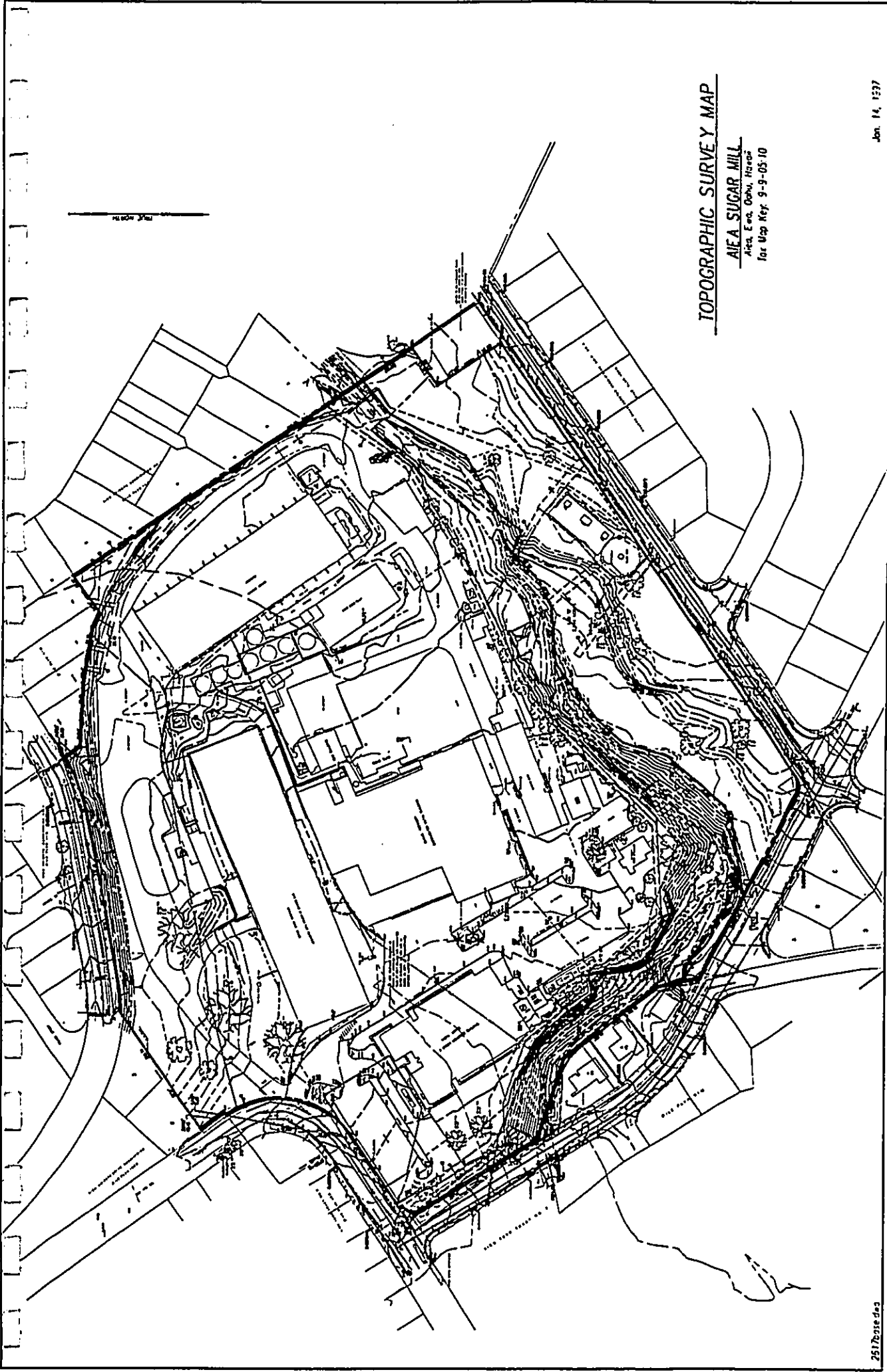
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ZONING MAP
AIEA SUGAR MILL
Aiea, Ewa, Oahu, Hawaii
For Map Key: 9-9-05:10
Scale: 1" = 400'

Jan. 14, 1997



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TOPOGRAPHIC SURVEY MAP

AIEA SUGAR MILL
Aiea, Ewa, Oahu, Hawaii
for Map Ref. 9-9-05-10

Jan. 14, 1937

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APPENDIX B

**MARKET ASSESSMENT OF THE PROPOSED
SUGAR MILL SHOPPING CENTER**

**MARKET ASSESSMENT
OF THE PROPOSED
SUGAR MILL SHOPPING CENTER,
AIEA, CITY AND COUNTY OF HONOLULU, HAWAII**

Revised, May 1997

Prepared for:
Crazy Shirts, Inc.

CONTENTS

1.0	INTRODUCTION	1
1.1	The Aiea Sugar Mill Shopping Center Project.....	1
1.2	Purpose and Scope of this Report.....	2
1.3	Summary of Findings.....	2
2.0	ECONOMIC AND SOCIAL TRENDS.....	4
2.1	Islandwide Trends.....	4
2.2	Regional Trends.....	9
2.3	Trade Area.....	12
3.0	THE RETAIL MARKET	21
3.1	Supply.....	21
3.2	Demand	26
4.0	ABSORPTION AND VOLUME OF SALES	29

EXHIBITS

1-1	Island Map	1
1-2	Major Findings Concerning Market Potential of the Proposed Aiea Sugar Mill Shopping Center.....	3
2-1	Demographic And Economic Trends, City and County of Honolulu	4
2-2	Total Jobcount, Honolulu, 1980 - 1995.....	5
2-3	Projected Population Growth, State of Hawaii and City and County of Honolulu	6
2-4	Projected Oahu Share Of Hawaii State Population, to 2020	6
2-5	Projected Gross State Product and Personal Income, State of Hawaii and City and County Of Honolulu	7
2-6	Asia/Pacific and Hawaii Visitor Arrival Projections.....	8
2-7	Projected Distribution of Jobs by Industry, City and County of Honolulu.....	9
2-8	Projected Growth in Population, by Development Plan Area, to 2020.....	10
2-9	Projected Growth in Jobs, by Development Plan Area, to 2020.....	11
2-10	Trade Areas.....	13
2-11	Demographic and Income Characteristics, Primary and Secondary Trade Areas.....	17
2-12	Demographic Characteristics of Trade Area Communities	18
2-13	Income Characteristics of Primary and Secondary Trade Areas	20
3-1	Shopping Centers In Hawaii, 1986 - 1994	21
3-2	Retail Sales in Selected Oahu Places, 1992	22
3-3	Shopping Centers Near the Project Site.....	23
3-4	Leasable Area, Market Area and City and County of Honolulu Retail Outlets	24
3-5	Demand Indicators.....	27
3-6	Net Demand for Community Shopping Centers in the Aiea Area	28
4-1	Retail Establishments and Sales, by Segment, 1992	29

1.2 PURPOSE AND SCOPE OF THIS REPORT

The landowner has considered alternative uses of the site. Neighborhood commercial development was identified as an economically viable use on the basis of preliminary studies. SMS Research and Marketing Services was contracted to perform an independent market assessment of the project for inclusion in the Environmental Impact Statement being prepared by Gray, Hong, Bills & Associates, Inc. This report provides a basis for estimating the project's likely viability and the speed at which the project can be rented out.

1.3 SUMMARY OF FINDINGS

The project is expected to be highly viable, due to continuing demand for retail areas from Oahu residents. SMS Research projects that approximately 75% of the major phase of the project (110,000 square feet of Gross Leasable Area, or GLA) could be occupied in 1999, and the remainder in the year 2000.

The project is located near the center of the urban complex stretching along the H-1 and H-2 highways. It is easily accessible to high growth areas to the west. With the opening of the H-3 highway, commuters from Windward Oahu will also find Aiea convenient.

Oahu saw relatively rapid construction of shopping centers early in this decade. After (a) growth of discount centers and (b) a period of economic stagnation, few retail areas are planned that would compete with the project for the resident market.

For this market study, data on consumers who visit Aiea area shopping centers were used to identify Primary and Secondary Trade Areas from which the future customers of the Aiea Sugar Mill project are expected to come. These areas are likely to provide a customer base of at least 275,000 persons, as shown in Exhibit 1-2, and to spend about \$48 million (1996 dollars) at the project annually after it is built out.

The project's proposed GLA is less than 10% of the area estimated as available for support in the Aiea area by consumers from the combined trade areas.

**Exhibit 1-2: MAJOR FINDINGS CONCERNING MARKET POTENTIAL OF THE
PROPOSED AIEA SUGAR MILL SHOPPING CENTER**

	Primary	Secondary	Combined	
TRADE AREAS				
Population, 1995	140,707	111,620	252,327	
Population, 2000	156,623	122,719	279,342	
Average Household Size, 1995	3.62	3.42	3.53	
Median Household Income, 1995	\$ 59,227	\$ 52,082	\$ 56,054	
Total Retail Spending, 1995	\$ 1,337.4	\$ 1,039.3	\$ 2,376.7	million \$\$
Retail Support Potential, 1995	5,248	4,078	9,326	1,000 sf.
COMPETITION				
Existing	3,363.5	1,840.7	5,204.2	
Projected	100.0	100.0	200.0	
Total Retail Area	3,463.5	1,940.7	5,404.2	
NEW POTENTIAL				
Total	1,784.5	2,137.3	3,921.8	1,000 sf.
Share Available for Aiea Centers (1)	1,427.6	427.5	1,855.1	1,000 sf.
RETAIL SUPPORT PER SF GLA (2)			\$ 330	per sf
ESTIMATED VOLUME OF RETAIL SALES AT AIEA PROJECT			\$ 47.85	million \$\$

NOTES: See body of report for further details and explanation.

- (1) Based on assumption that 80% of Primary Trade Area residents' spending, and 20% of Secondary Trade Area residents' spending is in competing stores.
- (2) Based on SMS Research studies of Hawaii community shopping centers.

2.0 ECONOMIC AND SOCIAL TRENDS

The proposed Sugar Mill Shopping Center is located near the center of Oahu's urban complex, within the Primary Urban Center but near high growth areas to the west. It is near the H-1 highway and the Moanalua Freeway, commonly used as a shorter route between Honolulu and the Pearl City/Waipahu area than the H-1 highway. The proposed shopping center would be convenient to residents. While it would be near routes taken by many visitors, no visitor attraction in the area is likely to bring more than a few tourists to the site.

In this assessment, the proposed shopping center is viewed as targeting the resident market. The major question is whether island residents can support a shopping center at the site, in addition to the retail area already available in the environs.

2.1 ISLANDWIDE TRENDS

Oahu is the demographic, commercial and industrial center of Hawaii, and the area around the proposed shopping center is in turn at the center of the island's economic growth. The island population and economy grew steadily since the 1960s until recently (as shown in Exhibit 2-1).

Exhibit 2-1: DEMOGRAPHIC AND ECONOMIC TRENDS, CITY AND COUNTY OF HONOLULU

	Resident Population	Total Personal Income	Per Capita Income
1970	630,528	\$ 3,011	\$ 4,674
1975	714,300	\$ 4,800	\$ 6,612
1980	762,565	\$ 8,293	\$ 10,854
1985	804,300	\$ 11,816	\$ 14,772
1990	836,231	\$ 17,881	\$ 21,307
1995	870,900	\$ 24,286 (1)	\$ 27,886

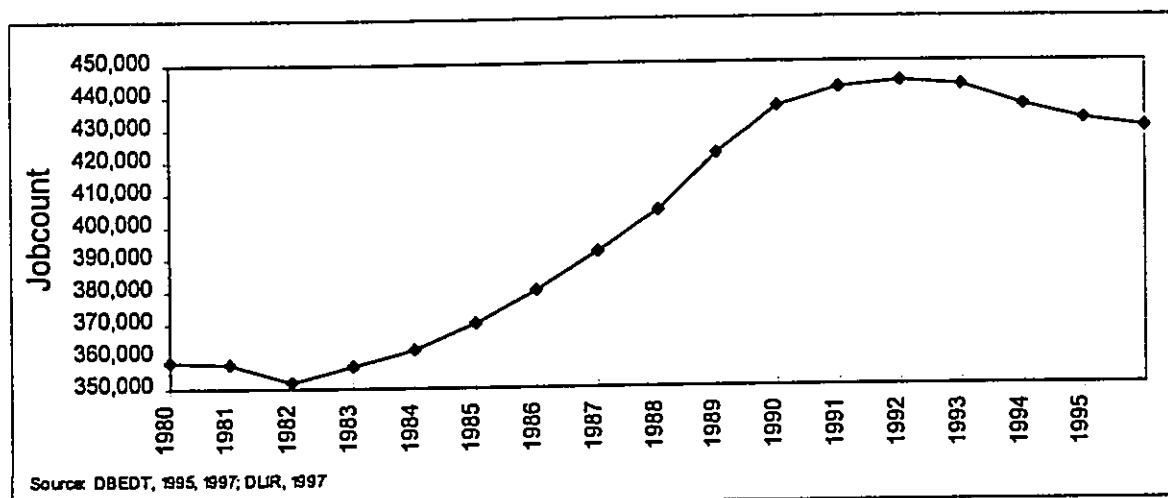
(1) Estimated; see Exhibit 2-5 (stated here in current dollars, not the 1987 constant dollars of Exhibit 2-5)

Source: DBEDT, 1996a, 1996c

During the 1990s, Hawaii's population and gross state product have continued to grow slightly but the number of jobs has actually declined. (See Exhibit 2-2 for City and County jobcounts.) After extremely high growth from the mid-1980s

through 1991, the current situation has seemed bleak. A full-scale recovery has been expected for years. In its place came only, by early 1997, an end to the loss of jobs.

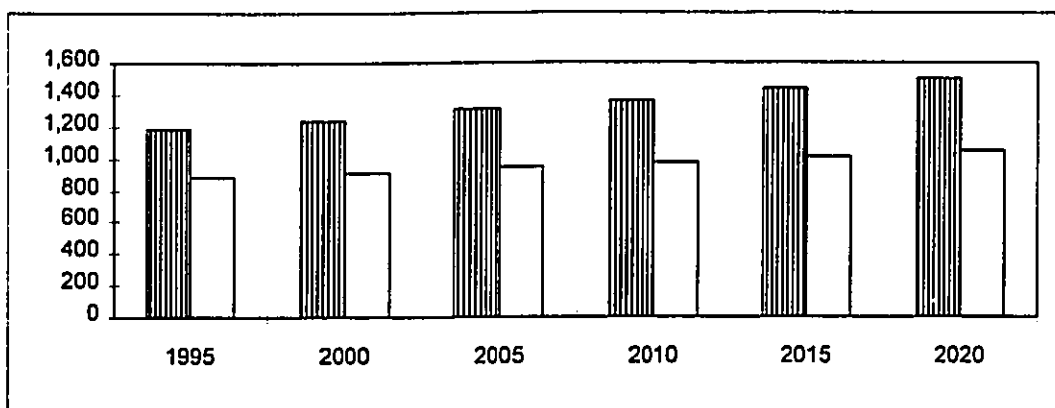
Exhibit 2-2: TOTAL JOBCOUNT, HONOLULU, 1980 - 1995



Local experts agree on two major points (Bank of Hawaii, 1996; DBEDT, 1996c, 1997; First Hawaiian Bank, 1997):

- Economic recovery during the late 1990s is likely to be slow, with Gross State Product growing by about two percent annually, and employment stabilizing after its period of contraction; and
- Over the long term, Hawaii's economy will likely see steady, but slow, growth. As Exhibits 2-3 through 2-5 indicate, the best available long-term projections indicate that growth will be sustained, but at levels lower than experienced in the 1980s:
 1. Continuing population growth is expected (Exhibit 2-3);
 2. Oahu's share of the State population will decline, by about 5 percent; and
 3. In constant dollars, gross state product and personal income will increase. Personal income of City and County of Honolulu residents will also increase. Exhibit 2-5 draws on the population growth forecast for Oahu to estimate future per capita incomes. Residents of the City and County of Honolulu will see their real incomes increase at rates of about one percent annually.

Exhibit 2-3: PROJECTED POPULATION GROWTH, STATE OF HAWAII AND CITY AND COUNTY OF HONOLULU



	Resident Population		Average Annual % Change (1)	
	State	City & County of Honolulu	State	Honolulu
1995	1,179.2	881.5	1.2%	1.1%
2000	1,238.5	908.3	1.0%	0.6%
2005	1,304.0	943.4	1.0%	0.8%
2010	1,366.8	973.3	0.9%	0.6%
2015	1,430.5	1,004.1	0.9%	0.6%
2020	1,494.1	1,046.3	0.9%	0.8%

NOTES: Population is in thousands of persons. Total includes both civilian and military personnel.

(1) Average annual rate for five-year period ending in the year shown.

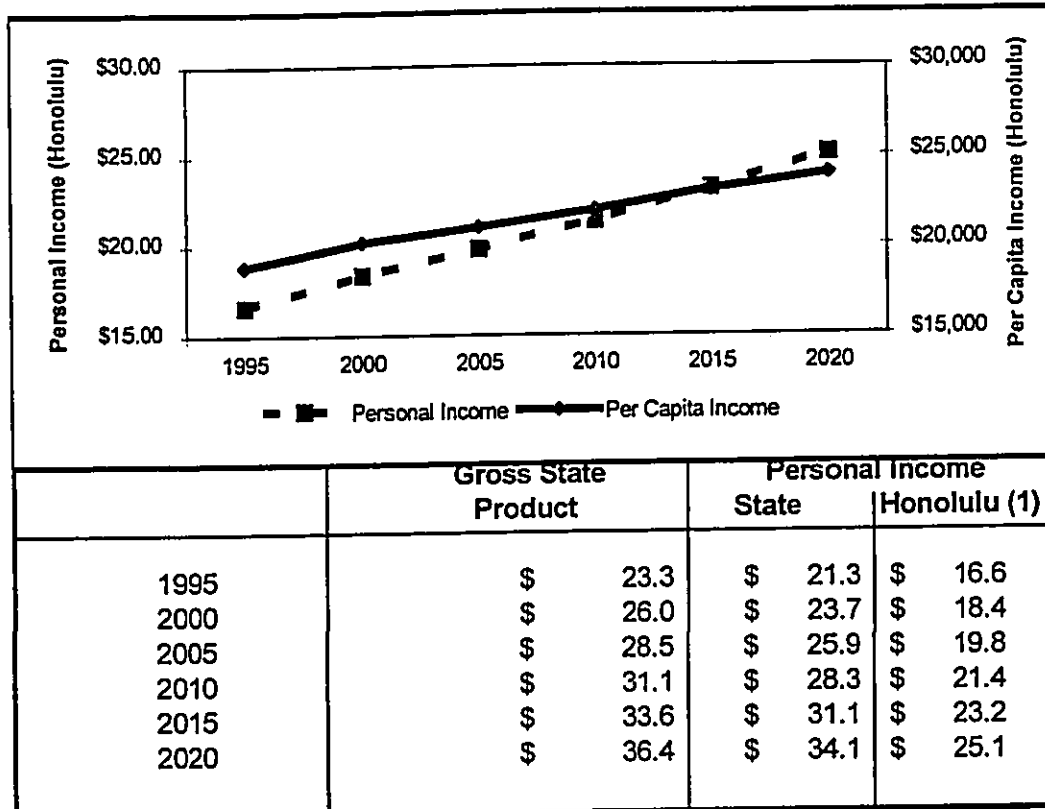
SOURCE: Hawaii State Department of Business, Economic Development and Tourism, 1996c.

Exhibit 2-4: PROJECTED OAHU SHARE OF HAWAII STATE POPULATION, TO 2020



SOURCE: Hawaii State Department of Business, Economic Development and Tourism, 1996c.

Exhibit 2-5: PROJECTED GROSS STATE PRODUCT AND PERSONAL INCOME, STATE OF HAWAII AND CITY AND COUNTY OF HONOLULU



	Gross State Product		Personal Income	
	State	Honolulu (1)	State	Honolulu (1)
1995	\$ 23.3	\$ 21.3	\$ 16.6	
2000	\$ 26.0	\$ 23.7	\$ 18.4	
2005	\$ 28.5	\$ 25.9	\$ 19.8	
2010	\$ 31.1	\$ 28.3	\$ 21.4	
2015	\$ 33.6	\$ 31.1	\$ 23.2	
2020	\$ 36.4	\$ 34.1	\$ 25.1	

NOTES: All estimates are in billions of constant 1987 dollars.
 (1) City and County of Honolulu data interpolated by SMS.
 Revised preliminary projections, published in June 1996, adjusted in proportion with ratio between June and later estimates of total personal income for State.

SOURCES: DBEDT (1996b, 1996c).

The forecast is based on expectations that Hawaii's tourism industry will continue to sustain a mild expansion. In the current economy, some people doubt that Hawaii's tourism will continue to expand. They misread the projections discussed here when they see the projections as optimistic. Actually, the State projections call for Hawaii to capture only a small share of a rapidly growing travel market. As Exhibit 2-6 shows, the level of growth in tourism anticipated by the State of Hawaii is very modest in relation to recent and expected growth in travel in the Asia/Pacific region.

Exhibit 2-6: ASIA/PACIFIC AND HAWAII VISITOR ARRIVAL PROJECTIONS

A. IATA Forecast for Region		1991	Average Annual Growth		
Destination	(million travelers)	1992-1996	1997-2000	2001-2005	2006-2010
Japan	3,448	7.1%	7.1%	6.9%	6.9%
Hong Kong	4,779	8.1%	7.7%	6.7%	6.2%
Malaysia	2,615	9.4%	9.1%	8.5%	8.2%
Australia	2,370	9.1%	9.1%	8.5%	7.9%
Indonesia	2,570	10.6%	10.6%	8.8%	8.5%
Total Asia/Pacific (1)	43,559	7.1%	7.1%	6.4%	6.2%

B. DBEDT Forecast for Hawaii		Average Annual Growth		
Visitor Arrivals	1995	1996-2000	2001-2005	2006-2010
All Visitors	6,629	3.5%	3.0%	2.5%
Westbound	3,933	3.0%	2.3%	1.8%
Eastbound	2,696	4.2%	4.0%	3.4%

Note: (1) Total Asia/Pacific figure does not include air arrivals to China
Source: Coopers & Lybrand, 1994
DBEDT, 1998

In light of the rapidly increasing travel expected in the Asia/Pacific region, those planning for Hawaii's future must recognize that tourism demand could be much greater than forecast in the coming decades.

Oahu has been the center of Hawaii's tourism industry. It will continue as a major destination, but tourism is expected to spread increasingly throughout the islands. Oahu will remain the commercial and industrial center of activity, with sustained economic and population growth. It is expected to retain the bulk of Hawaii's finance and government jobs. Also, the service and hotel sectors are anticipated to grow as parts of the island economy:

**Exhibit 2-7: PROJECTED DISTRIBUTION OF JOBS BY INDUSTRY,
CITY AND COUNTY OF HONOLULU**

	1995		2020	
	Jobs	Share	Jobs	Share
Total Civilian Jobs (1) Employed in Selected Industries (2)	431,900		546,800	
Agriculture		0.5%		0.4%
Construction		5.0%		5.3%
Transport/Utilities		8.1%		8.7%
Eating and Drinking		8.5%		10.6%
Trade		16.2%		15.9%
Finance, Insurance and Real Estate		7.4%		7.3%
Hotels		4.4%		4.8%
Services (exc. Hotels)		24.9%		25.7%
Government		21.8%		18.5%

- NOTES:**
- (1) Total jobcount from DBEDT 1996c.
 - (2) Industry shares from DBEDT 1996b. These are calculated for wage and salary workers (excluding self-employed workers. Total does not add up to 100%.

2.2 REGIONAL TRENDS

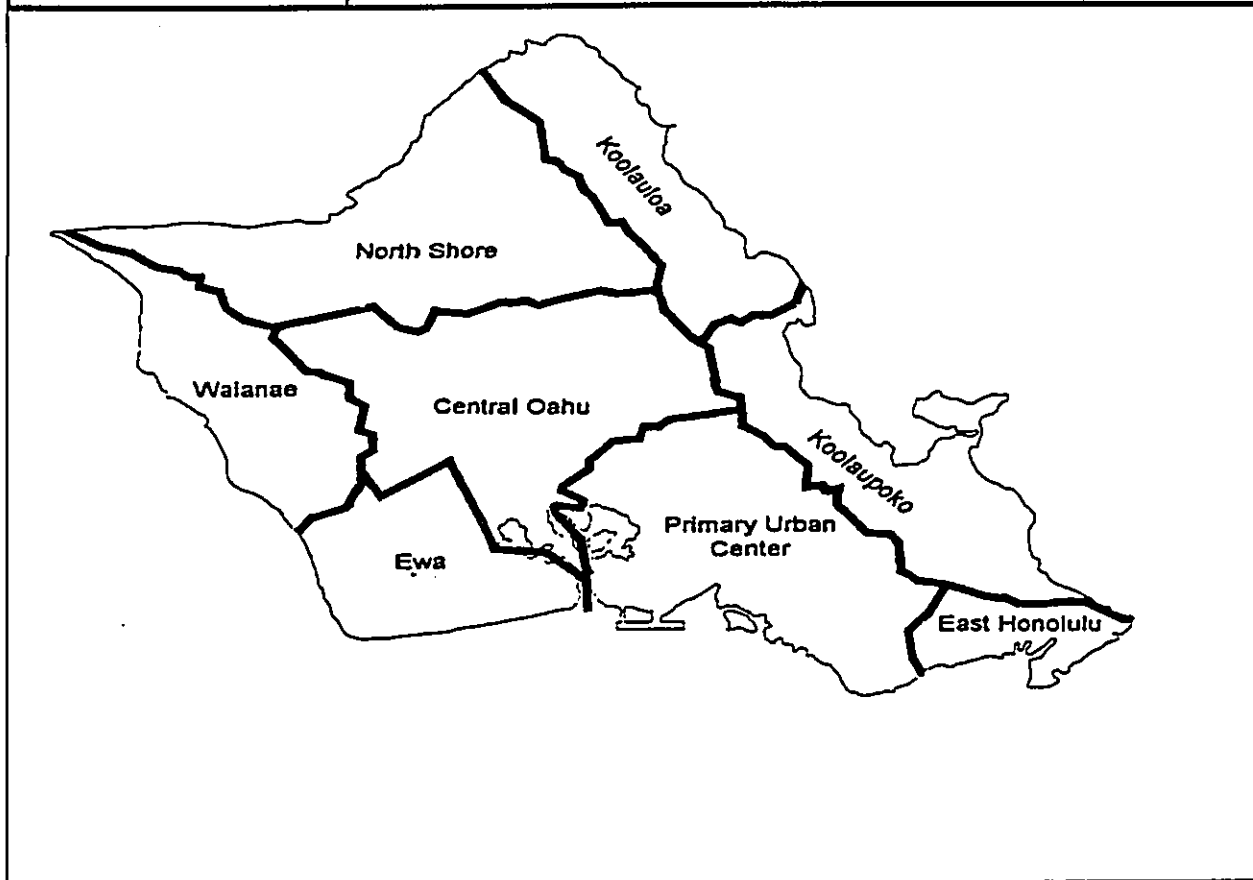
The Primary Urban Center, at the western edge of which the project is located, is the largest Development Plan area. Its population is expected to continue to grow, but to form a decreasing share of Oahu's total population. The major growth areas -- Central Oahu and Ewa Development Plan areas, lie to the west.

Exhibit 2-8 shows the overall population growth trends by Development Plan area, while Exhibit 2-9 shows patterns of job growth. Together they show (a) continuing growth in the area around the project and (b) continuing concentration of jobs in the urban center -- and hence increased commuting past the project site.

(The projections cited here are from an earlier version of the State forecasts to 2020, allocated by region on Oahu by the City and County Planning Department. The totals are not quite the same as the more recent forecast shown in Exhibit 2-3, but the difference is not of substance in this analysis.)

**Exhibit 2-8: PROJECTED GROWTH IN POPULATION,
BY DEVELOPMENT PLAN AREA, TO 2020**

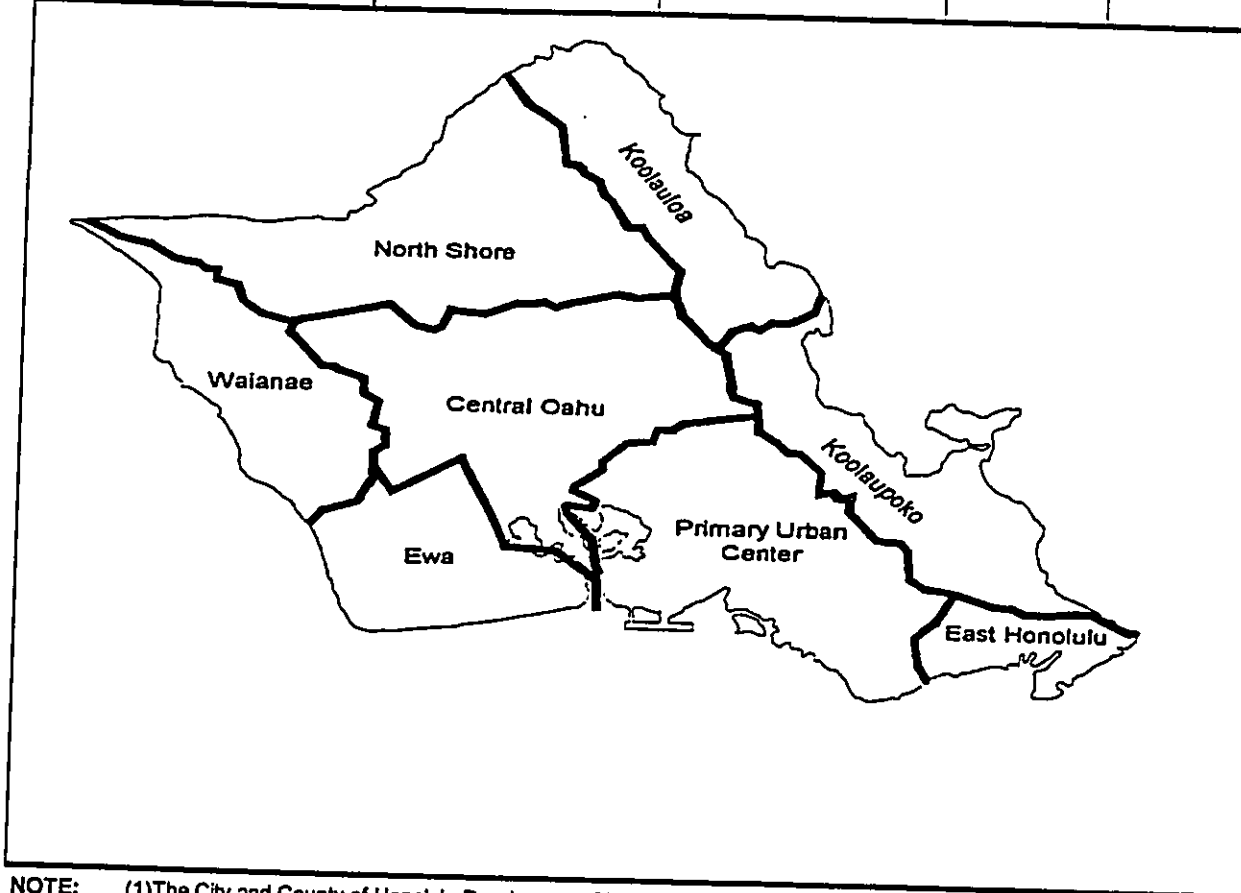
Development Plan Area (1)	Population 1990	% of Total	Population 2020	% of Total	Total Change	Annual Avg. % Change
Oahu Total	836,231	100%	1,071,216	100%	234,985	0.8%
Primary Urban Center DP	432,023	51.7%	507,763	47.4%	75,740	0.5%
Ewa	42,931	5.1%	125,325	11.7%	82,394	3.6%
Central Oahu	130,526	15.6%	177,739	16.6%	47,213	1.0%
East Honolulu	45,654	5.5%	50,551	4.7%	4,897	0.3%
Koolaupoko	117,694	14.1%	121,543	11.3%	3,849	0.1%
Koolauloa	14,263	1.7%	15,705	1.5%	1,442	0.3%
North Shore	15,729	1.9%	20,300	1.9%	4,571	0.9%
Waianae	37,411	4.5%	52,290	4.9%	14,879	1.1%



NOTE: (1) The City and County of Honolulu Development Plan area.
SOURCE: City and County of Honolulu Planning Department, June 1994; in Kaku Associates, Inc., 1995.

**Exhibit 2-9: PROJECTED GROWTH IN JOBS,
BY DEVELOPMENT PLAN AREA, TO 2020**

Development Plan Area (1)	Employment 1990	% of Total	Employment 2020	% of Total	Total Change	Annual Avg. % Change
OahuTotal	505,453	100%	691,666	100%	186,213	1.1%
Primary Urban Center DP	387,688	77%	474,241	69%	86,553	0.7%
Ewa	12,446	2%	67,058	10%	54,612	5.8%
Central Oahu	47,024	9%	74,110	11%	27,086	1.5%
East Honolulu	6,382	1%	8,146	1%	1,764	0.8%
Koolaupoko	32,695	6%	34,351	5%	1,656	0.2%
Koolauloa	6,252	1%	11,315	2%	5,063	2.0%
North Shore	4,728	1%	6,790	1%	2,062	1.2%
Waianae	8,238	2%	15,655	2%	7,417	2.2%



NOTE: (1)The City and County of Honolulu Development Plan area.
SOURCE: City and County of Honolulu Planning Department, June 1994; in Kaku Associates, Inc., 1995.

The Planning Department (1996) has further estimated that the "likely" population distribution in the year 2010 would include a larger share for Central Oahu than General Plan guidelines indicate (16.7% of the island population, rather than in

the range from 14.9% to 16.5%) and a Primary Urban Center population (48.5%) near the top of the prescribed range for that area (45.1% to 49.8%).

Emerging trends that may not be fully reflected in the projections displayed in Exhibits 2-8 and 2-9 deserve note:

- **H-3 Opening:** With the opening of the H-3 route between the Windward side of Oahu and the urban center, the number of residents traveling near the Aiea project site could increase appreciably.
- **Military Realignment:** US Defense Department downsizing has had only limited impact on Oahu to date. On Oahu, Naval Air Station Barbers Point is scheduled for closure in 1999, but no other installation is likely to close. In fact, the impact on Hawaii of base realignment throughout the Pacific may be to increase the number of military personnel on the island. Marine units active in Okinawa are based at Marine Corps Base Hawaii, Kaneohe Bay. Some of the units now based at Barbers Point will be relocated to Kaneohe Bay. Finally, the Navy is now considering Pearl Harbor as a potential base for an aircraft carrier. Should the decision be taken to locate one at Pearl Harbor, the military population on-island would increase by at least 12%. The military family population and civilian defense jobs would in turn also increase.

(State and local planners have assumed, for lack of better data, that the military presence on Oahu would remain stable for decades.)

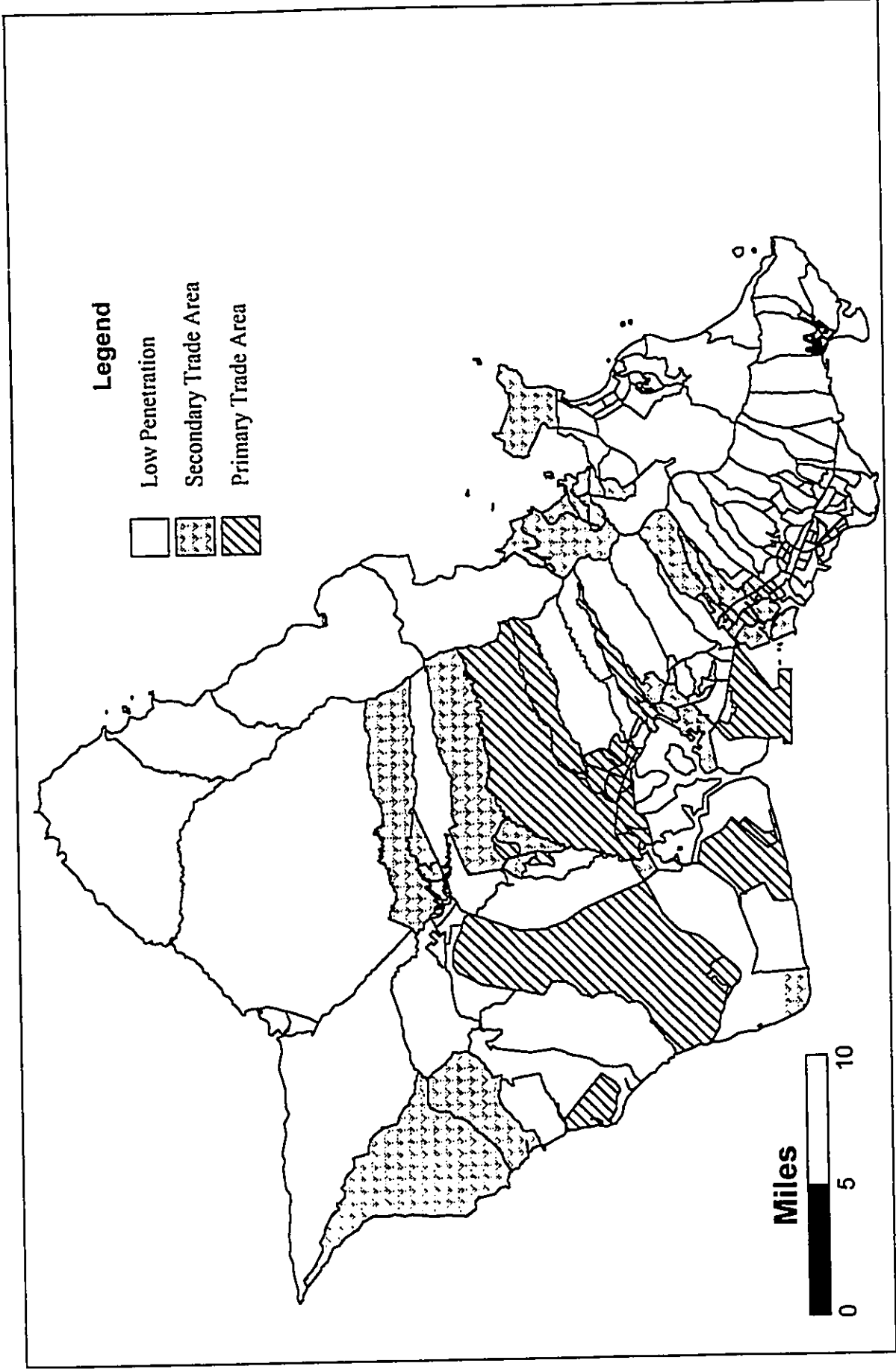
More traffic through Aiea and, possibly, many more residents in the area around Pearl Harbor should appreciably increase retail activity in the area including the project site.

2.3 TRADE AREA

Definition of Trade Area

For the purpose of this study, both the Choices Database System, based on the Simmons/SMS Study of Media & Markets, and the MarketQuest System were used to identify markets and market potential. The former draws on annual survey data on shopping patterns to identify customers for particular shopping centers. The latter allows highly specific definition of the market area when used with Choices data, and provides detailed estimates of spending and support for retail areas in the trade area.

Exhibit 2-10: TRADE AREAS



The Trade area was defined in terms of households visiting shopping centers near the project site. Four centers were chosen as comparable to the potential project:

- Aiea Shopping Center;
- Pearl Kai Shopping Center;
- Stadium Mall; and
- Stadium Marketplace.

The Simmons/SMS survey indicated that members of some 60,000 households -- about 21% of the island's households -- had visited these centers within a month's time. While many came from the immediate vicinity, people from Honolulu, the Waianae Coast and Kaneohe were regular shoppers as well. Moreover, customers from more distant areas often spent more, on average, than those living near the shopping centers. Two factors may be invoked to explain the very broad appeal of the Aiea-area shopping centers:

1. Commuting: The area is convenient for commuters, and may even be attractive as a place to shop while avoiding rush hour traffic.

2. Attraction by Larger Centers: The Aiea-area shopping centers are very near to Pearlridge Center (also in the Aiea zip code area), with large stores, and a movie theater complex. Again, Costco Center is about two miles from the centers. These serve the entire Oahu market. The centers used as a point of reference likely find customers who come to the area to visit a major center but go to smaller ones as well to complete their purchases.

Accordingly, Primary and Secondary Trade Areas were defined largely on the basis of the share of households in a Census Tract area visiting the Aiea comparable shopping centers, as shown in Exhibit 2-10. The Primary Trade Area is not a single contiguous block, but contains outlying areas with high rates of shopping in the comparable centers. The Secondary Trade Area similarly consists of Census Tracts with high, but not quite as high, patterns of shopping in the Aiea centers. (Some outlying tracts in Honolulu, Kailua and Koolaupoko were removed from consideration, even though residents do visit the Aiea centers in appreciable numbers. The Trade Areas do not define the total market for the project.)

Demographic and Income Characteristics: Trade Areas

Exhibit 2-11 provides demographic and economic information about the residents of the primary and secondary trade areas. The projected population for both areas is increasing at approximately 2.0% per annum, a rate double that expected

for the island as a whole (DBEDT, 1996c). Household sizes are large relative to the island average. In the Primary Trade Area, the median household income is above that of the City and County of Honolulu as a whole. While just over half of the households in the secondary trade area have incomes of \$50,000, or more, 60 percent of households in the primary area have similar incomes.

The trade areas have large numbers of young adults. Also, over a quarter of the residents are under age 18. Most adults have graduated from high school and have some college education. In both areas over half are employed in white collar jobs.

Since the trade areas are dispersed over the island, it is useful to provide more detailed data concerning the communities in them. Demographically, as shown in Exhibit 2-12, the Aiea/Pearl City region has:

- About 10% of the island population.
- A population growing in numbers much faster than the County population as a whole
- A middle-aged population, with the median age near the island median, but with slightly smaller shares of both children and senior citizens than the island average.
- Fairly high labor force participation. Managerial and administrative occupations are well represented in the area's resident workforce. Aiea has a very high proportion of executive and managerial employees, while the precision crafts and administrative support jobs are especially well represented in Pearl City.
- Very high rates of home ownership compared to island averages.

Households in Aiea are, on average, the same size as in the rest of the island. Pearl City households tend to be larger.

Exhibit 2-12 also deals with some of the outlying areas with significant market participation.. The various communities with areas in the Primary and Secondary Trade Areas differ in many ways but tend to have:

- Young populations, with many children in the area;
- Large household sizes;
- Higher proportions of blue-collar occupations than in Aiea.

- Most workers traveling a half-hour or more to get to work. (While commuting times are lower among residents of the Kapolei area, military families are a significant part of that district. Until 1999, many of those families have employment nearby, at Barbers Point Naval Air Station. When the station closes, military families will remain, but they will be commuting to Pearl Harbor and Kaneohe Bay.)

Incomes

Exhibit 2-13 shows that average household incomes in selected trade area communities are high. However, only Aiea residents have per capita incomes well above the average.

In terms of the distribution of incomes, Aiea, Pearl City and Kaneohe have large shares of upper income households. In the other areas under study, the share of households earning \$75,000 or more in 1994 was near the island average.

**Exhibit 2-11: DEMOGRAPHIC AND INCOME CHARACTERISTICS,
PRIMARY AND SECONDARY TRADE AREAS**

	Primary Trade Area	Secondary Trade Area
Population		
1990	128,421	103,189
1995	140,707	111,620
2000	156,623	122,719
Age, 1995		
Median age	32.9	30.0
% under 18	26.0%	28.4%
% 65+	9.8%	8.5%
Households, 1995		
	35,123	28,297
Average Household size, 1995		
	3.62	3.42
Median Household Income, 1995		
	\$59,227	\$52,082
% Household Income, 1995		
\$ 50,000 - \$74,999	27.9%	24.7%
\$ 75,000 - \$99,999	16.9%	15.1%
\$ 100,000 +	15.8%	12.6%
Education, 1990		
High School Graduate/Some College	61.2%	60.6%
Bachelor's/Graduate Degree	17.6%	21.7%
Workers		
% Blue Collar	25.2%	23.0%
% White Collar	56.7%	58.3%

Source: Atlas MarketQuest, 1995

Exhibit 2-12: DEMOGRAPHIC CHARACTERISTICS OF TRADE AREA COMMUNITIES

	Oahu	Trade Area Near Project Site		Selected Distant Trade Areas					
		Aiea 96701	Peart City 96782	Kaneohe 96744	Waipahu 96797	Ewa Beach 96706	Makiki/ Kapolei 96707	Waianae 96792	
Population									
1990	836,231	40,652	39,148	55,236	51,992	26,016	15,798	37,518	
1994 (estimated)	878,761	44,579	42,166	56,725	55,786	30,097	16,592	38,170	
1999 (projection)	920,631	48,877	45,057	57,964	59,924	34,209	17,372	38,834	
Change, 1990-1994	5.1%	9.7%	7.7%	2.7%	7.3%	15.7%	5.0%	1.7%	
Age, 1990									
Median age	32.2	33.5	32.4	33.1	29.6	27.8	27.2	26.3	
% under 18	24.4%	21.9%	24.7%	26.1%	29.5%	32.7%	27.6%	36.4%	
% 65+	11.0%	9.6%	8.1%	9.7%	7.5%	6.3%	2.5%	6.8%	
Education									
No High School Diploma	18.8%	15.5%	15.9%	15.0%	24.5%	25.5%	10.5%	31.3%	
High School Graduate	28.4%	27.5%	35.2%	29.0%	29.9%	34.0%	31.1%	38.4%	
Some College	28.2%	28.7%	31.1%	29.5%	29.6%	27.6%	38.7%	21.3%	
Bachelor's, Graduate or Professional Degree	24.6%	28.3%	17.7%	26.5%	16.0%	12.9%	19.8%	8.9%	
Employment, 1990									
% of Adults									
In Armed Forces	8.2%	7.2%	6.7%	2.7%	5.1%	10.7%	27.4%	2.4%	
In Civilian Labor Force	60.7%	64.6%	67.4%	70.4%	69.1%	61.7%	53.8%	60.5%	
Not In Labor Force	28.9%	28.2%	25.8%	26.9%	25.8%	27.6%	18.8%	37.1%	

Exhibit 2-12: DEMOGRAPHIC CHARACTERISTICS OF TRADE AREA COMMUNITIES (Cont'd)

	Oahu	Trade Area Near Project Site		Selected Distant Trade Areas				
		Aiea 96701	Pearl City 96782	Kaneohe 96744	Waipahu 96797	Ewa Beach 96706	Makakilo/Kapolei 96707	Waianae 96792
Occupation, Civilian Labor Force								
Executive & Managerial	13.5%	17.3%	12.4%	14.0%	10.8%	7.8%	11.8%	7.2%
Professional	14.2%	14.4%	10.5%	15.1%	9.6%	6.3%	11.0%	9.7%
Technical	3.9%	5.3%	4.3%	4.3%	3.2%	3.1%	4.2%	3.0%
Sales	12.5%	10.4%	12.2%	13.1%	11.3%	11.3%	12.2%	9.0%
Administrative	18.2%	18.8%	22.2%	18.2%	19.3%	20.1%	19.9%	15.0%
Service	16.9%	12.9%	15.8%	13.8%	19.1%	19.7%	15.2%	17.7%
Farming, Forestry & Fishing	1.5%	1.2%	1.1%	1.9%	1.9%	2.0%	1.3%	3.9%
Precision Crafts	16.0%	16.3%	18.2%	16.2%	19.8%	24.5%	20.9%	26.8%
Laborers	3.3%	3.4%	3.3%	3.5%	5.0%	5.2%	3.5%	7.5%
Working Mothers (share of all mothers with children under 18)	72.3%	78.5%	77.7%	79.5%	77.8%	67.0%	73.0%	57.2%
Average Household size, 1990	3.02	3.02	3.42	3.29	3.70	3.96	3.22	3.92
Housing, 1990								
% Vacant	5.8%	2.3%	1.5%	2.3%	2.8%	2.5%	2.0%	11.8%
% Occupied	94.2%	97.7%	98.5%	97.7%	97.2%	97.5%	98.0%	88.2%
Owner occupied	52.0%	64.1%	68.7%	52.3%	61.9%	54.0%	52.3%	51.7%
Renter occupied	48.0%	35.9%	31.3%	47.7%	38.1%	46.0%	47.7%	48.3%
Travel Time to Work, 1990								
% of Work Force traveling:								
0-14 Minutes	25.3%	20.2%	14.2%	15.3%	12.9%	13.4%	32.6%	20.5%
15-29 Minutes	35.8%	40.9%	39.5%	25.7%	34.9%	33.1%	28.3%	18.9%
30+ Minutes	38.9%	38.9%	38.0%	58.8%	52.2%	53.5%	39.2%	60.6%

Note: See Exhibit 2-10 for Primary and Secondary Market Areas. Selection of data by zip code is intended as illustrative, since the market areas are not isomorphic with zip code areas.

Source: Strategic Mapping, Inc., 1995

Exhibit 2-13: INCOME CHARACTERISTICS OF TRADE AREA COMMUNITIES

Income Characteristics	Oahu	Trade Areas Near Project Site		Selected Distant Trade Areas					
		Aiea 96701	Pearl City 96782	Kaneohe 96744	Waipahu 96797	Ewa Beach 96706	Makakilo/ Kapolei 96707	Waianae 96792	
Per Capita Income									
1990	\$ 16,540	\$ 19,392	\$ 15,963	\$ 17,531	\$ 13,441	\$ 11,008	\$ 14,496	\$ 9,786	
1994 (estimated)	\$ 19,822	\$ 23,459	\$ 18,975	\$ 20,753	\$ 16,006	\$ 13,671	\$ 17,439	\$ 11,759	
1999 (projection.)	\$ 23,765	\$ 28,698	\$ 22,275	\$ 24,524	\$ 19,040	\$ 16,771	\$ 21,002	\$ 14,221	
Median Household Income									
1990	\$ 40,581	\$ 50,884	\$ 51,407	\$ 51,344	\$ 46,309	\$ 40,101	\$ 41,938	\$ 32,396	
1994 (estimated)	\$ 47,835	\$ 60,733	\$ 58,036	\$ 59,377	\$ 53,894	\$ 47,551	\$ 48,828	\$ 38,472	
1999 (projection.)	\$ 56,875	\$ 73,586	\$ 66,382	\$ 69,289	\$ 63,725	\$ 56,596	\$ 57,296	\$ 46,025	
% Household Income, 1994									
\$ 50,000 - \$74,999	21.9%	25.4%	26.5%	27.2%	28.8%	26.3%	25.9%	19.9%	
\$ 75,000 - \$99,999	12.3%	16.9%	16.5%	16.4%	15.0%	12.3%	13.1%	9.3%	
\$ 100,000 +	12.1%	19.0%	15.3%	17.0%	11.8%	7.7%	9.3%	6.8%	

Note: See Exhibit 2-10 for Primary and Secondary Market Areas. Selection of data by zip code is intended as illustrative, since the market areas are not isomorphic with zip code areas.

Source: Strategic Mapping, Inc., 1995

3.0 THE RETAIL MARKET

3.1 SUPPLY

Hawaii has seen growth in the number of retail areas over the last decade. Growth in the total area of shopping centers has been especially marked (as shown in Exhibit 3-1).

Exhibit 3-1: SHOPPING CENTERS IN HAWAII, 1986 - 1994

Year	Number of Centers	GLA (Mill. sf.)	Sales (Billion \$s)
1986	117	12	\$ 2.0
1987	123	13	\$ 2.2
1988	129	13	\$ 2.3
1989	141	14	\$ 2.4
1990	148	14	\$ 2.6
1991	152	14	\$ 2.6
1992	153	15	\$ 2.7
1993	160	16	\$ 2.9
1994	165	17	\$ 3.1

SOURCES: DBEDT, 1996a and earlier Data Books.

Oahu and the rest of Hawaii saw major changes in retailing in the 1990s:

- So-called "Big Box" retailers and major discount stores entered the marketplace;
- A factory outlet center was developed at Waikele;
- The largest shopping centers -- notably Ala Moana -- made renovations to maximize their attraction for international visitors.

The change was sudden and swift. The first of the new retailers to open -- Costco, near the project site, and major stores in Waikele Center -- were highly successful, proving that the Hawaii market could support additional retailers. Island residents have patronized the whole range of new stores. Visitors have been drawn to Waikele as well as to shopping centers in and near Waikiki.

The introduction of discount stores and mass merchandisers has tended to limit price increases in Hawaii. These have been located in key areas attracting a high volume of traffic. Near the project site, Costco Center has become a major destination for residents, while the new Stadium Marketplace, with K-Mart and Sack 'N' Save outlets, which opened in 1995, has also been successful.

Current Supply in the Market Area

Historically, retailing was concentrated in central Honolulu. While Ala Moana Center displaced downtown Honolulu as the island's major shopping area, suburban malls were not built as regional centers until the 1970s. Data from the 1992 Census of Retail Trade show that Honolulu (defined as stretching from Hawaii Kai to Halawa) still has the large majority of retail establishments and sales. However, the establishments just outside the Honolulu area tended, even before the advent of the Big Box retailers, to have larger sales volumes than Honolulu stores.

Exhibit 3-2: RETAIL SALES IN SELECTED OAHU PLACES, 1992

	Establishments	Sales	Sales/Est.
Aiea	328	\$473.2	\$1.44
Ewa Beach	24	\$31.2	\$1.30
Kailua	189	\$244.1	\$1.29
Kaneohe	223	\$362.0	\$1.62
Millilani	68	\$104.6	\$1.54
Nanakuli	6	\$6.0	\$1.00
Pearl City	85	\$144.2	\$1.70
Wahiawa	104	\$102.0	\$0.98
Waianae	61	\$99.4	\$1.63
Waimalu	14	\$216.4	\$15.46
Waipahu	178	\$349.5	\$1.96
Honolulu CDP	3,693	\$5,983.0	\$1.62
City and County of Honolulu	5,181	\$8,341.6	\$1.61

NOTES: Named areas are "Census Designated Places" (CDPs). All sales are in millions of 1992 dollars.

SOURCE: US Bureau of the Census, 1994.

Currently, the area around the project site has a complex mix of retail outlets (as shown in Exhibit 3-3). The total leasable area in the Primary and Secondary Market Areas is estimated in Exhibit 3-4 as about 5.2 million square feet in

shopping centers (including regional and super-regional centers). An additional 1.0 million square feet is estimated as occupied by other retail sites.

The Aiea/Pearl City area contains some 1.6 million square feet of shopping center space, about an eighth of the island total.

Exhibit 3-3: SHOPPING CENTERS NEAR THE PROJECT SITE

	Opened	GLA	Stores	Parking Stalls
Community Shopping Centers				
Aiea -- 96701				
Aiea Shopping Center	1967	105,000	35	380
Aiea Shopping Plaza	1992	45,000	30	191
Pearl Kai Shopping Center	1988	45,000	30	191
Stadium Mall	1982	9,000	33	475
Waimalu Shopping Center	1965	20,000	39	250
Westridge Shopping Center	1984	60,000	22	262
Pearl City -- 96782				
Pearl City Plaza	1980	38,000	29	101
Pearl City Shopping Center	1967	252,000	34	864
Times Square Shopping Center	1979	56,000	25	425
Honolulu (Salt Lake) -- 96818				
Salt Lake Shopping Center	1973	75,000	18	360
Moanalua Shopping Center	1952	250,000	50	500
Regional, Specialty, and Discount Centers				
Aiea -- 96701				
Pearlridge Center	1972	1,400,000	170	6,273
Pearl City -- 96782				
Pearl Highlands Shopping Center	1993	410,000	NA	1,956
Honolulu (Salt Lake) -- 96818				
Costco Center	1988	205,000	15	730
Stadium Marketplace	1993	220,000	4	1,010

SOURCES: International Council of Shopping Centers; DBEDT, 1996a.

Exhibit 3-4: LEASABLE AREA, MARKET AREA AND CITY AND COUNTY OF HONOLULU RETAIL OUTLETS

	GLA (in 1,000s of square feet)		
	Shopping Centers	Other Retail	Total
Primary Market Area	3,364	673	4,036
Secondary Market Area	1,841	368	2,209
City and County of Honolulu	12,516	2,503	15,019

NOTE: Other retail estimated as 20% of shopping center space.

SOURCES: International Council of Shopping Centers, calls to management.

Vacancy Rates

The years 1995 and 1996 saw bankruptcies and foreclosures in Hawaii reach new heights. Some vacancies are to be expected in the normal course of shopping center operations. Recently, older discount stores -- GEM and Coronet -- have closed Oahu operations. Vacancy rates also increased slightly for smaller lease spaces in some community shopping centers. This trend is a short-term consequence of the ongoing economic situation. With slowly improving conditions, vacancy rates will decline again.

Expected Additions to Supply

With the completion of the wave of new retail construction by 1995, new retail projects largely fall into three categories:

- Major new projects in Honolulu, aimed at the visitor market (e.g., Niketown in Waikiki, and the proposed Ward Estate shopping center);
- New commercial areas proposed near planned communities, which could build out in step with those residential areas (e.g., sites in the Waipio Gentry project area and Ewa sites that the James Campbell Estate has reserved, adjoining proposed subdivisions); and
- Renovations of existing shopping centers.

The first two of these have little or no bearing on the Aiea Sugar Mill Shopping Center Project. The Honolulu projects aim at a different market. The sites in planned communities will be developed after the early increments of the nearby residential areas have been built. Accordingly, they would be developed well after the Aiea Sugar Mill Shopping Center site, given the project's 1999 timetable.

Renovation and expansion of shopping centers could occur at several sites on Oahu. In the area near the project, Pearl Highlands Shopping Center has discussed plans for an entertainment area in addition to its discount retail outlets. Many of the existing nearby shopping areas are effectively built out, with further construction severely limited by land availability.

Several projects that have been named as possible development sites deserve discussion:

Waipahu Mill Redevelopment: Developer proposals call for a mix of commercial uses and community facilities. The commercial uses are not defined in detail, but could occupy a total area of about 13.7 acres. With an emphasis on Waipahu's past as a mill town, the redevelopment could take the form of a business park, rather than a retail area. Even if commercial space is maximized, it is likely to emphasize eating and drinking and specialty shops, rather than the mix of stores likely in a community shopping center.

Based on the project's EIS Notice of Preparation, it is possible that little or none of the commercial buildings would be built out before the Aiea Sugar Mill project.

Waiawa Gentry Commercial Areas: The developer has repeatedly applied to the City and County of Honolulu for land use changes urbanizing the entire area of the proposed project. The 1996 application, for example, would give the developer permits for land on which some 13,255 housing units could be built, instead of the 2,675 units now permitted. The acreage designated as Commercial would increase, on this plan, from 5 to 38 acres. To date, (a) the developer has not brought any part of the proposed community on-line, and (b) both the Planning Department and members of the City Council have expressed strong reservations about granting further permits until substantial progress is made.

Kamehameha Drive-In: This site, across from Pearlridge, has been mentioned as a future retail area (PKF Hawaii, 1996). No definite plans for redevelopment are currently known.

Mapunapuna sites: The same report mentioned possible development of Paradise Beverage lands. Other sites in this industrial area have been mentioned as available for retail redevelopment. However, no definite plans are available.

Pearl City Junction and Manana Development: The City and County of Honolulu is proposing a mixed use development on lands acquired from the Navy. At Pearl City Junction, makai of Kamehameha Highway in Pearl City., some 13.8 acres are proposed for commercial use. On the Manana property, a wide range of uses is proposed, including a 14-acre "Family Entertainment Center." Proposals for development of the Pearl City Junction site are now being solicited.

Based on current proposals and historical trends, SMS Research estimates the following new retail space could be built by the year 2000:

Primary Market Area	100,000 square feet
Secondary Market Area	100,000 square feet
City and County of Honolulu as a whole	800,000 square feet

This estimate is well above the sum of projects with clear near-term timetables, but below the level that would be projected by extending historical rates of growth (shown for Hawaii in Exhibit 3-1).

Based on Exhibit 3-4 and the above estimate, the total retail area on Oahu is expected to total some 16 million square feet by the end of 1999, including the proposed Aiea project.

3.2 DEMAND

Demand for shopping centers is a function of both the size of the population and their disposable income. As noted earlier, the Trade Areas include a large part of the island population. Their household incomes tend to be near or somewhat above the island average.

Exhibit 3-5 uses calculations developed by Strategic Mapping, Inc. to estimate the demand for shopping center retail items from the Primary and Secondary Trade Areas. For 1995, retail spending is estimated as \$2.4 billion from both trade areas. This amount of spending can support a total of 9.3 million square feet of GLA in shopping centers.

Exhibit 3-5: DEMAND INDICATORS

	Trade Areas		
	Primary	Secondary	Combined
BASELINE DEMAND			
Population, 1995	140,707	111,620	252,327
Households, 1995	38,543	30,782	69,325
Average Household Size, 1995	3.62	3.42	3.53
Median Household Income, 1995	\$ 59,227	\$ 52,082	
Total Retail Spending, 1995 (in millions \$s)	\$ 1,337.4	\$ 1,039.3	\$ 2,376.7
Retail Support Potential, 1995 (in thousands of sq. ft.)	5,248	4,078	9,326
GROWTH FORECAST			
Population, 2000	156,621	122,719	279,340
Households, 2000	42,966	34,034	77,000
Median Household Income, 2000	\$ 70,984	\$ 62,907	

SOURCE: Strategic Mapping, Inc., 1995

As discussed in the last section, population growth and income growth are both expected on Oahu, especially in Central and West Oahu. The trade areas will likely see appreciable growth by the year 2000, leading to increased demand for retail facilities.

To estimate whether there is demand sufficient to support a new retail area at the Aiea Mill site, it is necessary to calculate both new potential (in addition to demand met by existing shopping centers) and the share of that new potential that might be captured by community shopping centers in the area surrounding the project site. Exhibit 3-6 shows these steps.

**Exhibit 3-6: NET DEMAND FOR COMMUNITY SHOPPING CENTERS IN THE
AIEA AREA**

	Trade Areas		
	Primary	Secondary	Combined
DEMAND (1)			
Retail Support Potential, 1995	5,248	4,078	9,326
COMPETITION (2)			
Existing	3,364	1,841	5,204
Projected	100	100	200
Total Retail Area	3,464	1,941	5,404
NEW POTENTIAL			
Total	1,785	2,137	3,922
Share Available for Aiea Centers (3)	1,428	427	1,855
Project as Share of Net New Potential			144 7.8%

NOTES: Demand, competition and potential are all measured here in thousands of square feet.

(1) From Exhibit 3-5.

(2) From Exhibit 3-4 and estimates in text.

(3) Based on assumption that 80% of Primary Trade Area residents' spending, and 20% of Secondary Trade Area residents' spending is in competing stores.

4.0 ABSORPTION AND VOLUME OF SALES

The preceding analysis of demand and supply indicates that the Trade Areas can support some 3.9 million square feet of GLA in the next few years, in addition to existing and known proposed shopping areas. Of that new potential, an estimated 1.9 million square feet are available for Aiea area shopping centers and the like. The project can be fully supported if it only captures 8% of that new potential for community shopping centers in its area.

Given the project's favorable site, it seems extremely likely that the project can capture at least 10% to 15% of new potential, with an appropriate mix of stores. Exhibit 4-1 shows 1992 data, indicating that Aiea and Pearl City had relatively low shares of food and general merchandise stores. Similarly, the share of eating and drinking places located near the project site is low. The data suggest, then, that likely tenants of a community shopping center could well succeed in this area.

Exhibit 4-1: RETAIL ESTABLISHMENTS AND SALES, BY SEGMENT, 1992

Segment	Aiea		Pearl City		Oahu		Share of Oahu Sales	
	Ests.	Sales	Ests.	Sales	Ests.	Sales	Aiea	Pearl City
Apparel and Accessory Stores	64	\$ 67,879	7	\$ 5,812	669	\$ 753,852	9.0%	0.8%
Eating & Drinking Places	96	\$ 61,253	35	\$ 24,226	1,865	\$ 1,388,471	4.4%	1.7%
Food Stores	21	\$ 24,657	9	\$ 15,197	586	\$ 1,301,908	1.9%	1.2%
Furniture and Home Furnishings Stores	30	\$ 55,981	9	\$ 8,031	298	\$ 339,680	16.5%	2.4%
Gas Stations	9	\$ 18,152	7	\$ 12,679	212	\$ 355,066	5.1%	3.6%
General Merchandise Stores	4	\$ 50,411	1	N/A(1)	73	\$ 1,661,328	3.0%	N/A
Miscellaneous Retail Stores	84	\$ 85,527	8	\$ 4,068	1,144	\$ 767,310	11.1%	0.5%
Other	18	\$ 109,370	9	\$ 74,230	334	\$ 1,774,007	6.2%	4.2%
TOTAL	326	\$473,230	85	\$144,243	5,181	\$8,341,630	5.7%	1.7%

NOTES: Retail sales are in thousands of dollars.

(1) Sales figures withheld when only a few firms are included.

SOURCE US Bureau of the Census, 1994.

Absorption

The project's 144,000 square feet of GLA are expected to be quickly absorbed by demand from Oahu consumers. SMS Research projects that approximately 75% of the major phases of the project (110,000 square feet of Gross Leasable Area, or GLA) could be occupied in 1999, and the remainder in the year 2000.

Sales Volume

After reviewing the market potential for the area, SMS Research estimates that the sales per square foot of Gross Leasable Area in the proposed project would soon reach an average of \$330 (1996 dollars) per square foot of leased space. This conclusion is based on analysis of islandwide retail supply and of particular comparable stores.

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APPENDIX C

PRELIMINARY DRAINAGE REPORT

AIEA STREAM

TMK: 9-9-05:10

AIEA, OAHU, HAWAII

**PRELIMINARY
DRAINAGE REPORT**

AIEA STREAM

TMK: 9-9-05:10

AIEA, OAHU, HAWAII

PREPARED BY

**GRAY, HONG, BILLS & ASSOCIATES, INC.
119 MERCHANT STREET, SUITE 607
HONOLULU, HAWAII 96813
TELEPHONE: 521-0306/ FAX: 531-8018**

JUNE 4, 1997

TABLE OF CONTENTS

	<u>PAGE NO.</u>
I. INTRODUCTION	1
II. PROJECT DESCRIPTION	1
III. EXISTING CONDITIONS	1
IV. HYDROLOGIC DATA	2
V. HYDRAULIC ANALYSIS	2
VI. CONCLUSION & RECOMMENDATIONS	3

LIST OF EXHIBITS

- A. SITE PLAN
- B. CHANNEL PROFILE AND SECTION

I. INTRODUCTION

The project site is located in Aiea, Oahu, (TMK: 9-9-05:10) in the Aiea Stream drainage basin. The purpose of this report is to discuss the stream improvements proposed in conjunction with the future commercial development.

II. PROJECT DESCRIPTION

The property consists of 19.4 acres and is located in Aiea, Oahu. The property is bordered by Aiea Heights Drive, Ulune Street, Kulawea Street and a residential subdivision. Aiea Stream runs through the property, segregating approximately 3 acres of the site along Kulawea Street. (See Exhibit A)

The property is located in the Aiea Stream watershed, encompassing an area of approximately 1.05 square miles (City & County of Honolulu, September 30, 1995 Flood Insurance Study-- "Near Aiea Heights"). Aiea Stream runs from the Koolaus and empties into Pearl Harbor.

Based on the City & County of Honolulu Flood Insurance Rate Map dated September 28, 1990, a portion of the project is located in the flood plain, Zone AE (base flood elevations determined). Base flood elevations range from 121.3 feet Mean Sea Level (MSL) at its upstream property line to 66.8 feet MSL at Ulune Street. Stream cross-section stations, base flood elevations and floodway and flood boundaries are shown on Exhibit A.

Proposed improvements include construction of a 20-foot wide by 8-foot deep reinforced concrete channel, straightening the alignment of the stream. The concrete channel will extend approximately 800 feet from its mauka boundary towards Ulune Street. The channel improvements will terminate just downstream of the proposed realigned Ulune Street (Road "A") at an energy dissipator structure.

The channel will be built within a drainage and utility corridor to be dedicated to the City & County of Honolulu (see Exhibit B). An existing sewer line runs along the Aiea Stream bank. A 10-foot wide corridor will be reserved for realignment of the sewer line by the City & County of Honolulu.

III. EXISTING CONDITIONS

The existing site is occupied by the abandoned Aiea Sugar Mill and the HARC Building (formerly HSPA Building). Aiea Stream meanders along its southern boundary and makes a dog-leg right turn towards Ulune Street. The stream enters a double-barrel concrete box culvert under the Ulune Street concrete bridge.

The majority of the stream is unlined except along a 300-foot reach (approximately 100 feet upstream of the Ulune Street bridge), where rip-rap has been placed along its banks.

A water tank is located near Kulawea Street. A concrete foot-bridge and a concrete vehicle bridge cross the stream to provide access from the main site to the tank.

IV. HYDROLOGIC DATA

The Aiea Stream drainage basin is 1.05 square miles and can generate a 100-year peak discharge of 2,140 cubic feet per second (cfs) based on the documentation contained in the City & County of Honolulu Flood Insurance Study, as administered by the Federal Emergency Management Agency (FEMA).

The City & County of Honolulu Drainage Standards predict a slightly higher peak discharge of 2,500 cfs for the same drainage basin.

For the purpose of evaluating drainage channels under improved conditions, the higher of the two preceding values has been utilized.

V. HYDRAULIC ANALYSIS

A topographic map based on a ground survey was utilized to develop a channel profile. The existing stream has a slope between two- and three-percent (ft/ft). Using slope-area method, the existing water surface elevation at the upper property line is about 114.4 feet MSL (7.5 feet depth) with a velocity of 15 feet per second (fps).

The Flood Insurance Study lists a regulatory flood elevation of 121.3 feet at cross-section "I" at the upper property line, with a velocity of 3.4 fps (see Exhibit A). The difference in water surface elevations (121.3 versus 114.4) can be attributed to the use of aerial topographic information in the Flood Insurance Study.

The proposed channel will have a slope approximating the natural channel. Using a roughness coefficient of 0.015 (concrete) and a 20-foot width, the depth of flow will be under 4-feet, with a velocity approaching 33 fps. An 8-foot channel depth will accommodate the required 3-foot freeboard.

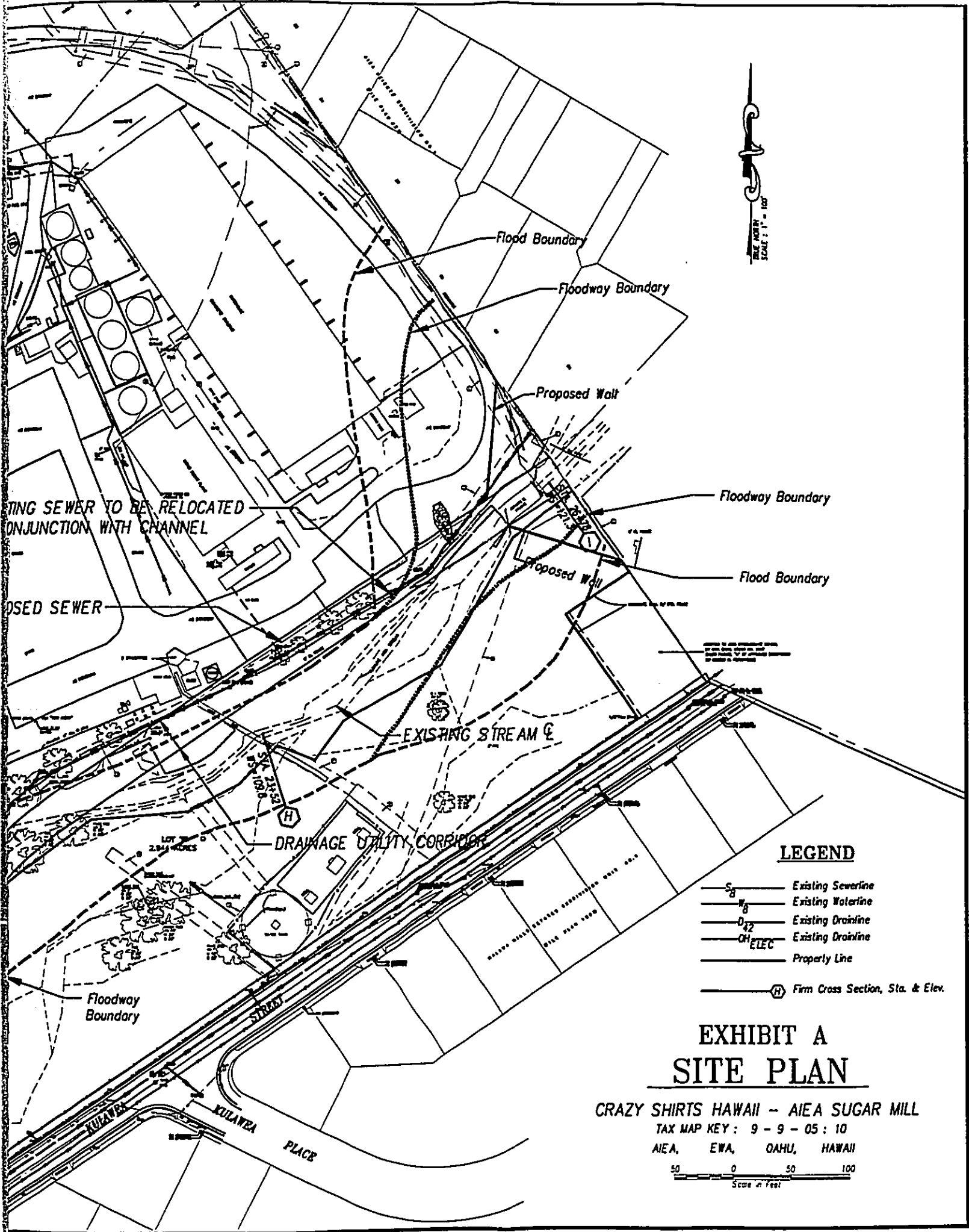
Based on the proposed channel profile, the proposed water surface will match the existing water surface. Based on the Flood Insurance Study, cross-section "G", at the proposed Road "A" crossing, has a flood elevation of 91.3 feet and a velocity of 12.7 fps. An energy dissipator will be constructed at the proposed bridge to reduce the velocity to match the existing conditions. The preliminary design of the energy dissipator is based on methodology included in the U.S. Department of Transportation, Federal Highway Administration "Hydraulic Design of Energy Dissipators for Culverts and Channels", Hydraulic Engineering Circular No. 14, dated September 1983. (See Exhibit A)

VI. CONCLUSION & RECOMMENDATIONS

1. The proposed concrete channel will have a 20-foot width and 8-foot depth with a capacity of 2,500 cfs and required freeboard.
2. The channel will be designed in accordance with City & County of Honolulu Drainage Standards and is proposed to be dedicated to the City.
3. An energy dissipator will be constructed at the proposed Road "A" crossing to reduce the velocity to match the existing stream conditions.



DATE: MARCH 19, 1997



LEGEND

- S₈ — Existing Sewerline
- W₈ — Existing Waterline
- D₂₂ — Existing Drainline
- CH ELEC — Existing Drainline
- — Property Line
- (H) — Firm Cross Section, Sta. & Elev.

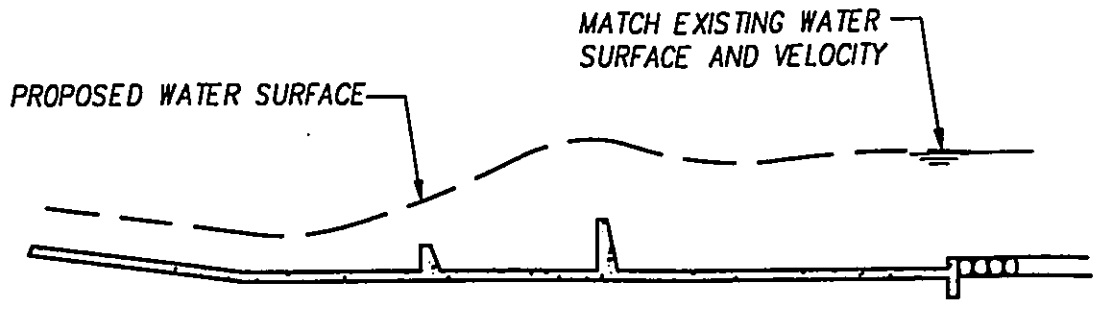
**EXHIBIT A
SITE PLAN**

CRAZY SHIRTS HAWAII - AIEA SUGAR MILL

TAX MAP KEY: 9 - 9 - 05 : 10

AIEA, EWA, OAHU, HAWAII





ENERGY DISSIPATOR

SCALE: 1" = 20'

0+00

120

EXISTING GROUND

110

100

BEGIN CHANNEL IMPROVEMENTS

120

CONCRETE BRIDGE

REGULATORY BASE FLOOD ELEV (FIRM)*

H

110

PROPOSED WATER SURFACE

G

PROPOSED ROAD "A"

100

EXISTING INVERT @ STREAM C

END OF CHANNEL IMPROVEMENTS

90

PROPOSED CHANNEL INVERT

80

AIEA STREAM PROFILE

SCALE: 1" = 100' (HORIZ)
SCALE: 1" = 10' (VERT)

0+00

1+00

2+00

3+00

4+00

5+00

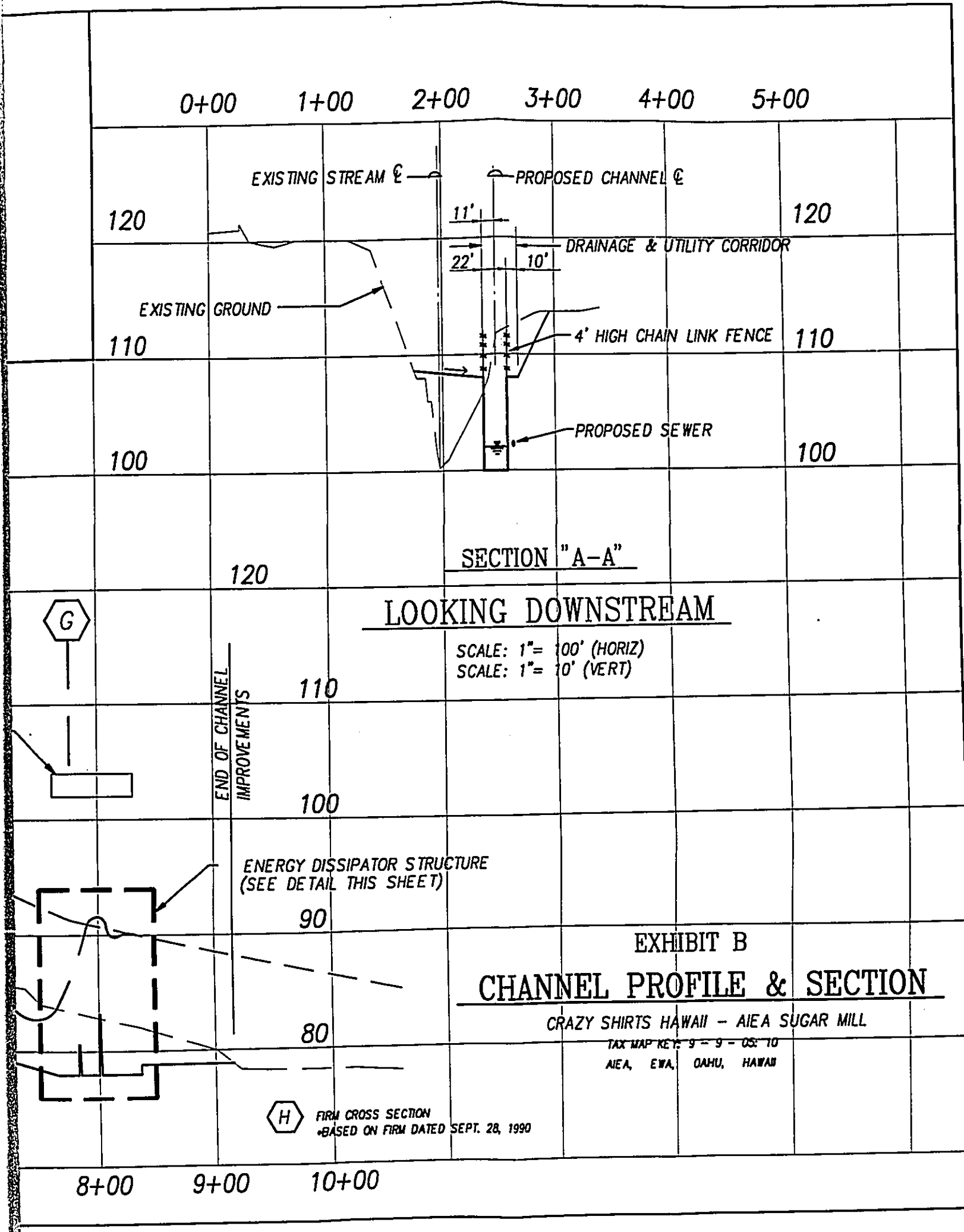
6+00

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CAD DWG. NO. 2617SECT
DATE: JUNE 3, 1997



APPENDIX D

**FLORA AND FAUNA SURVEY FOR
LOWER AIEA STREAM
AT THE AIEA SUGAR MILL**

Flora and Fauna Survey for lower Aiea Stream, at the Aiea Sugar Mill, Island of O'ahu, Hawai'i

March 19, 1997

Eric B. Guinther
AECOS, Inc. 970 N. Kalaheo Ave., Suite C311
Kailua, Hawai'i 96734
Phone: (808) 254-5884 Fax: (808) 254-3029 Email: aecos@pixi.com

Introduction

This report has been prepared to address proposed modifications to the channel of Aiea Stream for the Sugar Mill Shopping Center on Aiea Sugar Mill property in Aiea. In this area, the stream is presently confined within a modified channel. It is proposed, for the shopping center development, to realign an approximately 700 ft (210 m) section of the stream in order to reduce the channel area. The new channel would be concrete lined, presumably with vertical or near-vertical side walls.

On March 17, 1997, a reconnaissance survey of Aiea Stream adjacent to the old Aiea Sugar Mill and was conducted to assess the natural resources value of the stream segment between Aiea Intermediate School and Ulune Street. Unfortunately, heavy rainfall and a flash flood (freshet) during the morning hours of March 17 made observations of stream life nearly impossible. Consequently, the stream was revisited late in the day on March 18. Flow had receded considerably, although the water remained turbid.

Stream Description

Aiea Stream arises from several branches in the Ko'olau Range behind Honolulu (Aiea) elevations under 1400 ft (425 m) on Pu'u Uau. This is the watershed partly bounded by the Aiea Loop Trail in Keaiwa Heiau State Park. The stream flows southwest to a small cove called Aiea Bay in East Loch of Pearl Harbor, passing Aiea Sugar Mill on the right bank. Aiea Stream drains a water shed between the larger Kalauao and Halawa Streams, whose drainage basins extend to the Ko'olau crest. These perennial streams drain the higher elevations mauka (inland) of Aiea Stream watersheds.

In the project area the stream is confined to a channel some 9 to 15 ft (3 to 5 m) wide. Typical water depths on the 18th were 4 to 10 in (10 to 25 cm) in pools and runs. The

channel bottom is natural, consisting of a mixture of rounded boulders and coarse gravel, with bars of silt and red soil. The water flows over and between large basalt boulders. There is a substantial amount of man-made debris in the stream; mostly garbage originating from houses upstream: garden hose, paint brushes, chunks of glass, pieces of metal furniture, clothing, construction debris, etc.

The stream banks and steep slopes of the ravine appear natural, although are covered so densely with grasses and vines that rock-work revetments may be much more extensive than is evident. The right bank rises very steeply some 20 to 30 ft (6 - 10 m) to the old sugar mill and the Hawaii Sugar Planters Association (HSPA) facility and must be extensively revetted. In places, rock work of carefully set, large stones can be seen. The left bank rises only 5 to 10 ft (2 - 3 m) above the stream to a graded area which varies considerably in width from 30 to perhaps 100 ft (10 - 30 m), then rises again to street level (Kulawea St.). Upstream of the mill property, the channel is modified (realigned) but otherwise not structurally confined except through the Aiea Park Place subdivision, where there is a mixture of high CRM walls and concrete, box culverts above and below Auamo Street.

Immediately downstream of the Aiea Sugar Mill and the box culvert under Ulune Street, the channel is rough concrete with CRM side walls. Water then flows over an escarpment into two very large box culvert structures under H-1 freeway. Below the freeway, segments of concrete culvert alternate with CRM walls and a stream bed of rounded boulders. Channelization of one sort or another extends from a debris basin above Auamo Street all the way to below Kamehameha Highway not far from the stream mouth.

Review of Previous Aiea Area Stream Surveys

Aiea Stream was included in the study of stream channelization by Timbol and Maciolek (1978). However, no biological survey was made, only a mapping of channel modifications. It was noted that 25% of the channel length was altered, essentially all of the stream downstream of the confluence of the first right tributary. Although the percentage of stream length in altered channel has not increased much since 1978, the nature of the channel modifications has, with more concrete culverts replacing realigned channel or revetted banks. Maps prepared for their study indicate that the three stream tributaries are perennial in their middle reaches, above about the 500 ft (150 m), and intermittent higher up. The stream is shown as perennial below 300 ft (90 m). Thus, Aiea Stream is an interrupted stream, channelized through the urban/residential development of Aiea. This stream was further classified as of low environmental and biological value (class IV: "construct - alter"), with one upstream diversion, and crossed 6 times by roadways. Auamo Street culverts have been added more recently.

Aiea Stream is coded No. 3-4-03 in the Hawaii Stream Assessment (Hawaii Cooperative Park Service Unit, 1990). This stream is stated to be interrupted and without separately listed tributaries in the State's stream data base. The stream is listed under "special areas" as including a natural area reserve or sanctuary, special marine or estuarine reach, or wetlands. What this might refer to is unknown. The "aquatic resources" rank is not determined. No part of the stream includes native forest. Recreational resources list fishing (presumably at the mouth) and park use (the upper tributaries are within a State park), with a ranking of "moderate". Under cultural resources it is noted that there is an absence of studies and presence of one site (presumably Keaiwa heiau).

No aquatic surveys in Aiea Stream were uncovered in a review of the literature. The State Department of Natural Resources (DLNR), Aquatic Resources Division retains data on nearby Halawa Stream (State ID No. 3-4-02) and Waiawa Stream (3-4-06) to the west. These are much larger streams than Aiea, yet are ranked low or "limited" and "moderate," respectively (Hawaii Cooperative Park Service Unit, 1990). AECOS (1994a) prepared an environmental reconnaissance report of Waiawa Stream for a channel reconstruction project. This stream is located some 2.2 mi (3.6 km) to the west, also draining to Pearl Harbor at East Loch. Waiawa Stream is intermittent (interrupted) above Kamehameha Highway. AECOS has also conducted surveys and/or made water quality measurements on lower Waiawa (AECOS, 1991) and Halawa streams (AECOS, 1994b) in the Pearl City to Moanalua area.

Field Survey

Field work conducted for this report consisted of AECOS biologists visiting the stream channel adjacent to the Aiea Sugar Mill property (about the 100 ft or 30 m elevation), at Auamo Street, and at the 730 ft (220 m) elevation on Aiea Heights Drive, March 17 and 18, 1997.

The stream at Aiea Heights Drive is confined to pipe culverts under the roadway and a steep ravine covered in white shrimp plant (*Justicia betonica*). An open forest of albizia (*Paraserianthus falcataria*), mango (*Mangifera indica*), kukui (*Aleurites moluccana*), Formosan koa (*Acacia confusa*), silk oak (*Grevillea robusta*), and other species characterizes this area. Above the roadway, the stream bed is only about 6 ft. (2m) lower than the road, but on the downslope side, the stream bed is over 30 ft (10 m) down, indicating that the culvert under the road must be placed at a steep angle. The stream below the road is overgrown with California grass (*Brachiaria mutica*) and white shrimp plant to such an extent that the channel could not be seen from above.

The stream at Auamo Street is confined within high CRM rock walls or concrete culvert structures. Where the bed is mostly natural material, a dense growth of grasses and sedges (*Cyperus alternifolius*) fill the channel. The subdivision lacks trees.

The stream at the sugar mill flows within a small ravine between the mill and a mostly empty lot. A large steel water tank is present on the lot. A listing of the vegetation observed on the lot and along the stream is given as Table 1 below. Trees along the stream in this area are scattered and do not form a closed canopy except upstream of the mill property beside Aiea Intermediate School where koa-haole (*Leucaena leucocephala*) dominates the riparian vegetation. On the mill property, Guinea grass (*Panicum maximum*) dominates the riparian vegetation and most of the adjacent lot. California grass is prominent in local areas. Within the stream bed or close to the stream, umbrella sedge and primrose willow (*Ludwegia octivalvis*) are locally abundant. Where shade from trees discourages tall grass, dayflower (*Commelina diffusa*) and coral berry (*Rivina humilis*) occur.

Several vines mix with the grasses to cover the banks and ravine margins: Mexican creeper (*Antigonon leptopus*), scarlet-fruited gourd (*Coccinea grandis*), and wood rose (*Merremia tuberosa*) are all common to abundant in this setting. Java plum (*Syzigium cumini*) is the most common tree close to the stream. Monkeypod or rain trees (*Samanea saman*) and 'opiuma trees (*Pithecellobium dulce*) are conspicuous throughout the area. Most of the other species listed in Table 1 may be found near the stream, but are associated with the adjacent lot and ruderal areas.

Table 1. Vegetation list for the empty lot and Aiea Stream riparian zone adjacent to the Aiea Sugar Mill (March 17, 1997).

Species	Common name	Status	ID	QA	Abundance
FLOWERING PLANTS					
DICOTYLEDONES					
ACANTHACEAE					
<i>Asystasia gangetica</i>	Chinese violet	nat.	10		Abundant
<i>Justicia betonica</i> L.	white shrimp plant	nat.	10		Abundant
ANACARDIACEAE					
<i>Schinus terebinthifolius</i> Raddi	Christmas berry	nat.	10		Common
AMARANTHACEAE					
<i>Amaranthus spinosus</i> L.	spiny amaranth	nat.	10		Occasional
ASTERACEAE (COMPOSITAE)					
<i>Ageratum conyzoides</i> L.	<i>maile hohono</i>	nat.	10		Common
<i>Bidens alba</i> (L.) DC.	beggar's tick	nat.	10		Occasional
<i>Bidens pilosa</i> L.	beggar's tick	nat.	10		Common
<i>Calyptracarpus vialis</i> Less.		nat.	10		Rare
<i>Emilia fosbergi</i> Nicolson	Flora's paintbrush	nat.	10		Occasional
<i>Pluchea symphytifolia</i> (Mill.) Gillis	sourbush	nat.	10		Rare
<i>Sonchus oleraceus</i> L.	sow thistle	nat.	10		Occasional
<i>Wedelia trilobata</i> (L.) Hitchc.	wedelia	nat.	10		Common

Table 1 (continues).

Species	Common name	Status	ID QA	Abundance
CONVOLVULACEAE				
<i>Ipomoea indica</i> Blume		ind.	10	Uncommon
<i>Ipomoea obscura</i> (L.) Ker-Gawl.		nat.	10	Occasional
<i>Merremia aegyptia</i> (L.) Urb.	hairy merremia	nat.	10	Rare
<i>Merremia tuberosa</i> (L.) Rendle	wood rose	nat.	10	Common
CUCURBITACEAE				
<i>Momordica charantia</i> L.	balsam pear	nat.	10	Uncommon
<i>Coccinia grandis</i> (L.) Voigt	scarlet-fruited gourd	nat.	10	Common
<i>Cucumis</i> sp.	cucumber	orn.	10	Rare
EUPHORBIACEAE				
<i>Aleurites moluccana</i> (L.) Willd.	<i>kukui</i>	pol.		Uncommon
<i>Chamaesyce hirta</i> (L.) Millsp.	garden spurge	nat.	10	Common
<i>Chamaesyce hypericifolia</i> (L.) Millsp.	graceful spurge	nat.	10	Occasional
<i>Ricinus communis</i> L.	castor bean	nat.	10	Occasional
FABACEAE				
<i>Chamaecrista nictitans</i> (L.) Moench	partridge pea, <i>lauki</i>	nat.	10	Rare
<i>Crotalaria pallida</i> Aiton	smooth rattlepod	nat.	10	Uncommon
<i>Desmanthus virgatus</i> (L.) Willd.	virgate mimosa	nat.	10	Rare
<i>Indigofera suffruticosa</i> Mill.	indigo	nat.	10	Common
<i>Leucaena leucocephala</i> (Lam.) deWit	<i>koa haole</i>	nat.	10	Occasional
<i>Medicago cf. minima</i>	little bur clover	nat.	11	Uncommon
<i>Pithecellobium dulce</i> (Roxb.) Benth.	<i>'opiuma</i>	nat.	10	Occasional
<i>Prosopis pallida</i> (Humb. & Bonmpl.) Kunth	<i>kiawe</i>	nat.	10	Occasional
<i>Samanea saman</i> (Jacq.) Merr.	monkeypod, rain tree	nat.	10	Common
LAMIACEAE				
<i>Leonotis nepetifolia</i> (L.) R. Br.	Lion's ear	nat.	10	Occasional
MALVACEAE				
<i>Abutilon grandifolium</i> (Willd.) Sweet	hairy abutilon	nat.	10	Rare
<i>Hibiscus rosa-sinensis</i> L.	red hibiscus	orn.	10	Uncommon
<i>Malvastrum coromandelianum</i> (L.) Garcke	false mallow	nat.	10	Common
<i>Sida rhombifolia</i> L.	Cuba jute	nat.	10	Occasional
<i>Sida spinosa</i> L.	prickly sida	nat.	10	Occasional
MORACEAE				
<i>Ficus microcarpa</i> L. fil.	Chinese banyan	nat.	10	Rare
NYCTAGINACEAE				
<i>Boerhavia coccinea</i> Mill.		nat.	10	Uncommon
MYRTACEAE				
<i>Eucalyptus</i> sp.	gum	nat.	10	Occasional
<i>Melaleuca quinquenervia</i> (Cav.) S. Blake	paperbark	nat.	10	Occasional

Table 1 (continues).

Species	Common name	Status	ID	OA	Abundance
MYRTACEA (cont.)					
<i>Syzygium cumini</i> (L.) Skeels	Java plum	nat.	10		Common
ONAGRACEAE					
<i>Ludwigia octovalvis</i> (Jasq.) Raven	primrose willow	nat.	10		Occasional
PHYTOLACCACEAE					
<i>Rivina humilis</i> L.	coral berry	nat.	10		Rare
POLYGONACEAE					
<i>Antigonon leptopus</i> Hook. & Arnott	Mexican creeper	nat.	10		Common
PROTEACEAE					
<i>Grevillea robusta</i> A. Cunn. ex R. Br.	silk oak (seedlings)	nat.	10		Occasional
RUBIACEAE					
<i>Paederia scandens</i> (Lour.) Merr.	maile pilau	nat.	10		Occasional
RUTACEAE					
<i>Murraya paniculata</i> (L.) Jack.	mock orange	orn.	10		Uncommon
SOLONACEAE					
<i>Capsicum frutescens</i> L.	bird pepper, <i>nioi</i>	nat.	10		Rare
<i>Solanum americanum</i> Mill.	<i>popolo</i>	nat.	10		Rare
STERCULIACEAE					
<i>Waltheria indica</i> L.	' <i>uhaloa</i>	nat.	10		Occasional
MONOCOTYLEDONES					
ARACEAE					
<i>Alocasia macrorrhiza</i> (L.) Schott	' <i>ape</i> , elephant ear	pol.	10		Uncommon
ARACACEAE					
<i>Cocos nucifera</i>	coconut	pol.	10		Uncommon
COMMELINACEAE					
<i>Commelina diffusa</i> N. L. Burm.	<i>honohono</i> , dayflower	nat.	10		Uncommon
CYPERACEAE					
<i>Cyperus alternifolius</i> L.	umbrella sedge	nat.	10		Occasional
<i>Cyperus gracilis</i> R. Br.	McCoy grass	nat.	10		Uncommon
POACEAE (GRAMINEAE)					
<i>Bothriochloa pertusa</i> (L.) A. Camus	pitted beardgrass	nat.	10		Rare
<i>Brachiaria mutica</i> (Forssk.) Stapf.	California grass	nat.	10		Abundant
<i>Chloris barbata</i> (L.) Sw.	radiate fingergrass	nat.	10		Common
<i>Digitaria insularis</i> (L.) Mez ex Ekman	sourgrass	nat.	10		Uncommon
<i>Eleusine indica</i> (L.) Gartn.	wiregrass	nat.	10		Occasional
<i>Eragrostis</i> sp.	lovegrass	nat.	10		Uncommon
<i>Panicum maximum</i> Jacq.	Guinea grass	nat.	10		Abundant
<i>Paspalum fimbriatum</i> Kunth	fimbriate paspalum	nat.	10		Rare

[KEY FOLLOWS]

Table 1 (continues).

STATUS ABBREVIATIONS:

- end. -- endemic; native plant or animal found only in the Hawaiian Islands.
 ind. - indigenous; native plant or animal found in Hawai'i and elsewhere (not unique to these islands).
 nat. -- an introduced species which has escaped and become naturalized. Introduced after Cook Expedition in 1778.
 orn. - a garden or ornamental plant not naturalized at this location.
 pol. -- a species very probably introduced into Hawai'i by the Polynesians migrating across the Pacific. Introduced before Cook Expedition in 1778.

ID QA ABBREVIATION:

- 10 - Identified (recognized) in the field.
 11 - Identified from collected material.

ABUNDANCE:

- Abundant - a dominant species in the survey area; numerous individuals seen.
 Common - a species considered an important part of the assemblage and observed numerous times.
 Occasional - as species observed no more than ten times during survey.
 Uncommon - Fewer than five specimens seen during survey.
 Rare - Only one specimen seen.
 Ukw. - Abundance unknown.

Although conditions during and following the freshet on March 17 limited the opportunity to catalogue aquatic biota, a number of typical lowland, exotic species were observed (see Table 2). These were the guppy (*Poecilia reticulata*), adults and tadpoles of the neotropical toad (*Bufo marinus*), crayfish (*Procambarus clarki*), and a pond snail (*Lymnaea* sp.). A male bullfrog (*Rana catesbeiana*) was heard vocalizing in the culvert under Auamo Street. A single dragonfly was observed at a distance near the stream by the mill.

TABLE 2. Checklist of Animals Observed In and Along
 Aiea Stream, March 17-18, 1997.

Species	Common name	Status	ID QA	Abundance
INVERTEBRATES				
ARTHROPODA, INSECTA				
ODONATA - LIBELLULIDAE				
uniden.	adult dragonfly	nat.	10	Rare
DIPTERA - CULICIDAE				
<i>Aedes albopictus</i> (Skuse)	forest day mosquito	nat.	10	Common
ARTHROPODA, CRUSTACEA				
DECAPODA - CAMBARIDAE				
<i>Procambarus clarki</i> (Girard)	Amer. swamp crayfish	nat.	10	Uncommon
MOLLUSCA				
PULMONATA - LYMNAEIDAE				
uniden., sinistral	pond snail	nat.	11	Occasional

Table 2 (Continues).

Species	Common name	Status	ID QA	Abundance
VERTEBRATES				
FISHES - POECILIIDAE				
<i>Poecilia reticulata</i> (Peters)	guppy	nat.	10	Common
AMPHIBIANS - BUFONIDAE				
<i>Bufo marinus</i> L.	giant neotropical toad	nat.	10	Common
AMPHIBIANS - RANIDAE				
<i>Rana catesbeiana</i> Shaw	American bullfrog	nat.	10s	Unk.
AVIANS - CHARADRIIDAE				
<i>Pluvialis dominica fulva</i>	Pacific golden plover	ind.	10	Uncommon
AVIANS - COLUMBIDAE				
<i>Geopelia striata striata</i>	barred dove	nat.	10	Abundant
<i>Streptopelia chinensis chinensis</i>	lace-necked dove	nat.	10	Common
AVIANS - PYCNONOTIDAE				
<i>Pycnonotus cafer</i>	red-vented bulbul	nat.	10	Occasional
<i>Pycnonotus jocosus</i>	red-whiskered bulbul	nat.	10	Uncommon
AVIANS - CARDULINAE				
<i>Carpodacus mexicanus</i>	House finch	nat.	10	Common
AVIANS - STURNIDAE				
<i>Acridotheres tristis tristis</i>	common mynah	nat.	10	Abundant
ESTRILIDAE				
<i>Amandava amandava</i>	strawberry finch	nat.	10	Occasional
<i>Padda oryzivora</i>	Java sparrow	nat.	10	Uncommon
FRINGILLIDAE				
<i>Richmondia cardinalis</i>	Kentucky cardinal	nat.	10	Uncommon
MAMMALS - FELIDAE				
<i>Felis sylvestris catus</i>	feral (domestic) cat	nat.	10s	Unk.

NOTES: See Table 1.

ID QA ABBREVIATION:

10s - Identified in the field by sign or call.

Assessment

Aiea Stream is highly modified in the lower reach where it passes through the Honolulu urban corridor along the north shore of Pearl Harbor. The proposed stream modification is located in this area. The upper watershed extends only to around the 1400 ft. (430 m) elevation and the stream is an interrupted one (the stream dries in some segments during periods of sparse rainfall). Portions of this stream above Aiea Park Place subdivision are well away from the extensively developed ridges (Aiea Heights and Halawa Heights), may be continuous flowing, and may include aquatic habitat of some value, although this could be determined only by survey within the forested parts of the

watershed during the drier months of the year. Only diadromous populations of native species in these remote areas could be adversely impacted by the proposed channel modifications. More than likely, because of urban development on much of the watershed, extensive existing channelization of the lowest reach, and the relatively short length of the stream, aquatic habitat even in remote areas harbors only exotic (introduced) species of fishes and macroinvertebrates.

Within the project area, Aiea Stream has minimal aquatic resource value. The plants observed close to the stream (riparian zone) and those in the empty lot adjacent to the stream are dominated by introduced species. Of 65 recorded species, only one is native (indigenous to Hawai'i). Many are ruderal weeds; that is, plants characteristic of disturbed areas. Animals observed in the stream are all common, lowland, introduced species. Species abundances are low, although this may be due to conditions at the time of the survey. The limited resource value of the stream could be preserved by designing the culvert bottom to accommodate a natural stream bed. Preserving or planting large trees to shade the culvert would also mitigate some of the adverse impacts (e.g., increased temperature) concrete culverts can have on water quality.

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APPENDIX E

**TRAFFIC IMPACT ASSESSMENT REPORT
FOR
AIEA SUGAR MILL
DEVELOPMENT PLAN AMENDMENT**

TRAFFIC IMPACT ASSESSMENT REPORT

FOR

**AIEA SUGAR MILL
DEVELOPMENT PLAN AMENDMENT**

May 1997

Aiea, Oahu, Hawaii

Prepared for:

CRAZY SHIRTS, INC.

Prepared By:

**Pacific Planning & Engineering, Inc.
1221 Kapiolani Boulevard, Suite PH 60
Honolulu, Hawaii 96814**

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
 Project Description 1
 Methodology 2
 Conclusions and Recommendations 6

PROJECT DESCRIPTION 10

EXISTING CONDITIONS 12
 Land Uses 12
 Roadway Facilities 12
 Traffic Conditions 15

FUTURE CONDITIONS 19
 Land Uses 19
 Roadway Facilities 19

PROJECTED TRAFFIC CONDITIONS 20
 Future Traffic Without Project 20
 Future Traffic With Project 23

TRAFFIC ANALYSIS 31
 Analysis Methods 31
 Analysis Results 32

SIGNAL WARRANTS 36

CONCLUSIONS AND RECOMMENDATIONS 42

LIST OF TABLES

Table 1. Trip Generation for Other Developments 23

Table 2 - Trip Generation for Neighborhood Shopping Center 24

Table 3 - Aiea Heights Drive with Ulune/Hakina Street/Honohono Street 40

Table 4 - Aiea Heights Drive with DP Road 41

LIST OF FIGURES

Figure ES-1. Moanalua Road with Aiea Heights Drive (looking south) . . . 3

Figure ES-2. Aiea Heights Drive with Ulune Street (looking west) 3

Figure ES-3. Aiea Heights Drive with Ulune Street/Hakina Street/
Honohono Street (looking southeast) 4

Figure ES-4. Ulune Street with Kulawea Street (looking northwest) 4

Figure ES-5. Aiea Heights Dr. with Existing Project Driveway (looking
east) 5

Figure 1. Project Location Map 11

Figure 2. Existing Laneage 14

Figure 3. Existing Weekday Morning Peak Hour Traffic Volumes 17

Figure 4. Existing Weekday Afternoon Peak Hour Traffic Volumes 18

Figure 5. Year 2000 Weekday Morning Peak Hour Traffic Volumes Without
Project 21

Figure 6. Year 2000 Weekday Afternoon Peak Hour Traffic Volumes
Without Project 22

Figure 7. Year 2000 With Project and DP Road 27

Figure 8. Year 2000 Laneage With Project 28

Figure 9. Year 2000 Weekday Morning Peak Hour Traffic Volumes with Project 29

Figure 10. Year 2000 Weekday Afternoon Peak Hour Traffic Volumes with Project 30

Figure 11. Aiea Heights Drive/Ulune Street/Hakina Street/Honohono Street Peak Hour Volume Warrant (Warrant 11) 38

Figure 12. DP Road/Aiea Heights Drive Peak Hour Volume Warrant (Warrant 11) 39

APPENDICES

- Appendix A. Manual Traffic Count Data
- Appendix B. Definitions of Level-of-Service for Signalized Intersections
- Appendix C. Intersection Analysis Results

FOREWORD

The traffic forecasts shown within this report's figures and tables are the direct result of Pacific Planning & Engineering, Inc.'s proprietary analytical tools. For report editing and review purposes, some or all of the forecast values have been rounded to the nearest five vehicles from our mathematical results, although we do not imply this level of accuracy can exist in any forecast method. The rounded values, however, reasonably quantify the forecasted traffic volumes for the purposes of this study.

Analytical methods are based on the 1994 edition of the Highway Capacity Manual.

EXECUTIVE SUMMARY

Pacific Planning & Engineering, Inc. (PP&E) was engaged to identify and assess potential future traffic impacts that would be caused by a proposed neighborhood shopping center at the site of the existing Aiea Sugar Mill, in Aiea, Oahu.

Project Description

Crazy Shirts, Inc. is proposing a neighborhood shopping center at the existing vacant Aiea Sugar Mill, and existing C&H liquid sugar refinery (to cease operation shortly) located in Aiea, Oahu, Hawaii. Figure 1 shows the general project location.

The proposed neighborhood shopping center is anticipated to consist of a food market, drug store, retail space, service shops, fast food restaurant and a family restaurant. The gross total area would be approximately 144,00 square feet, including about 770 parking stalls.

The project is located above Ulune Street and bounded by Aiea Heights Drive and Kulawea Street in Aiea, Oahu. Access to the project site is made via an existing driveway on Aiea Heights Drive and an internal road network with a future connection to the intersection of Kulawea Street with Ulune Street.

This connection consists of a new road (DP Road) which would provide a continuous route between Ulune Street and Aiea Heights Drive. The west leg of the road would intersect Aiea Heights Drive and the opposite leg would intersect Kulawea Street. The DP Road is also shown in Figure 1.

Methodology

Traffic analysis was conducted for the following five intersections, shown in Figures ES-1 through ES-5, to determine the impact of the proposed project on the adjacent roadways:

- Moanalua Road with Aiea Heights Drive,
- Aiea Heights Drive with Ulune Street,
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street,
- Ulune Street with Kulawea Street and
- Aiea Heights Drive with the future DP Road.

Future traffic at the study intersections were forecasted by adding the following:

- existing traffic volumes at the study intersections,
- traffic generated by other potential developments in the area,
- the increase in through traffic and
- traffic generated by the project.

The forecasts included changes in traffic patterns due to ongoing roadway improvements in the area. The effect of constructing the DP Road was also factored in the forecasts.

This study assesses the impact on the study intersections by determining the level-of-service (LOS) for:

- existing traffic volumes
- Year 2000 forecast without project and year 2000 forecast with project scenarios,



Figure ES-1. Moanalua Road with Aiea Heights Drive (looking south)



Figure ES-2. Aiea Heights Drive with Ulune Street (looking west)



Figure ES-3. Aiea Heights Drive with Ulune Street/Hakina Street/
Honohono Street (looking southeast)



Figure ES-4. Ulune Street with Kulawea Street (looking northwest)



Figure ES-5. Aiea Heights Dr. with Existing Project Driveway (looking east)

The periods analyzed were the morning and afternoon peak hours for the study roadways. These periods were selected to identify project traffic impacts, since the project traffic would have the greatest impact on the study intersections during these times.

Conclusions and Recommendations

The proposed neighborhood shopping center will have some impact on traffic flow at several of the study intersections when completed in the year 2000. However with the construction of the DP Road, the traffic circulation in the area will be improved.

Without the Project

The following two intersections would continue to operate at essentially the same levels-of-service as the existing conditions:

- Moanalua Road with Aiea Heights Drive
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street

The intersection of Aiea Heights Drive with Ulune Street is currently under construction which includes signalization and re-striping to allow left-turns from Ulune Street. With the allowance of left-turns, there would be an increase in traffic volumes at this intersection. As a signalized intersection, it would operate at an overall LOS B condition during both peak hours.

The intersection of Ulune Street with Kulawea Street is also currently being signalized. The intersection would operate at an overall LOS C during the morning peak hour and LOS B during the afternoon peak hour.

With the Project

The following two intersections would continue to operate at essentially the same levels-of-service as the without project conditions:

- Moanalua Road with Aiea Heights Drive
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street

As part of the project, a DP Road would be constructed which would traverse through the site and provide a continuous east-west route between Ulune Street and Aiea Heights Drive. Large vehicles would no longer have to use the intersection of Ulune Street with Aiea Heights Drive thus avoiding the small turning radiuses at this intersection.

The east leg would connect to the existing intersection of Ulune Street with Kulawea Street forming a 5-leg intersection. This is generally considered an undesirable situation based on guidance contained in A Policy on Geometric Design of Highways and Streets. Additionally, signaling multileg intersections would require additional costs and result in reduced overall capacity and increased delays.

As a result, we recommend the west end of Ulune Street from Aiea Heights Drive to Kulawea Street be converted to a local street with a cul-de-sac constructed at its existing intersection with Kulawea Street. The four legs of the new intersection would consist of the north and south legs of Kulawea Street, the east leg of Ulune Street and the DP Road.

This intersection of the DP Road with Ulune Street and Kulawea Street would operate at essentially the same LOS as the without project scenario of Ulune Street and Kulawea Street.

The west leg of the DP Road would intersect Aiea Heights Drive forming a new T-intersection. As an unsignalized intersection, motorists heading mauka on Aiea Heights Drive would experience LOS F conditions turning left during the morning and afternoon peak hours.

Signal Warrant

A preliminary check of Warrant 11 from the Manual on Uniform Traffic Control Devices (MUTCD) was performed on the following intersections to determine if they warrant signalization:

- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street
- Aiea Heights Drive with DP Road

The check indicates that the existing intersection of Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street may warrant traffic signals even without the project. The check also indicates that the future intersection of Aiea Heights Drive with the DP Road may warrant traffic signals when the project is built. However, as stated in the MUTCD, the satisfaction of a warrant or warrants is not in itself justification for a signal. Further study should be performed to determine if signalization is warranted.

At the intersection of Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street, we recommend that if signalized, the south end of Honohono Street leg be converted into a dead end street. This would result in a 4-leg intersection consisting of Aiea Heights Drive, Ulune Street and Hakina

Street. As stated previously, multileg intersections are undesirable and should be avoided wherever possible. Residents along Honohono Street could use alternate routes which are available.

If signalized, the intersections would operate at an overall LOS D or better during the morning and afternoon peak hours.

When the DP Road is constructed, through traffic traveling along Ulune Street from Kulawea Street to Aiea Heights Drive would be diverted to the DP Road. With the reduction in traffic volumes at the intersection of Ulune Street with Aiea Heights Drive, the criteria for Warrant 11 will no longer be met. Again, further study will be needed to determine if signalization is still warranted.

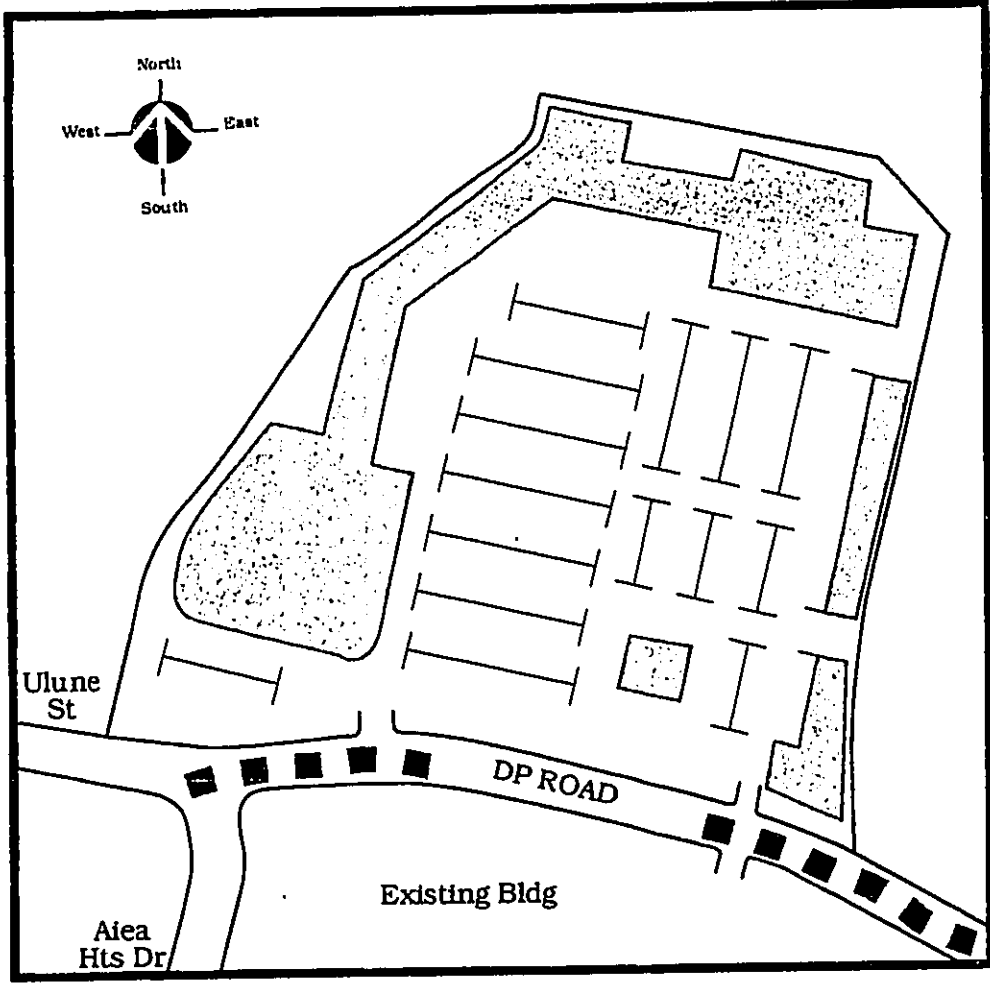
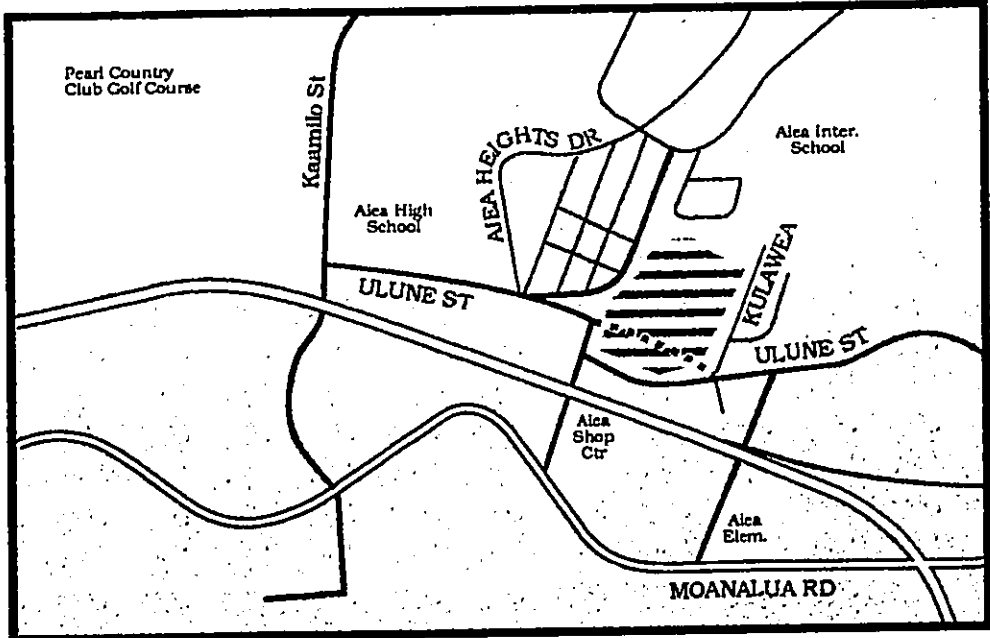
PROJECT DESCRIPTION

Crazy Shirts, Inc. is proposing a neighborhood shopping center at the existing vacant Aiea Sugar Mill, and existing C&H liquid sugar refinery (to cease operation shortly) located in Aiea, Oahu, Hawaii. Figure 1 shows the general project location.

The project site is currently zoned I-2, Intensive Industrial District and is identified by Tax Map Keys: 9-9-05:10 (portion of) and Parcel 9-9-05:25. The proposed neighborhood shopping center is anticipated to consist of a food market, drug store, retail space, service shops, fast food restaurant and a family restaurant. The gross total area would be approximately 144,000 square feet, including about 770 parking stalls.

The project is located above Ulune Street and bounded by Aiea Heights Drive and Kulawea Street in Aiea, Oahu. Access to the project site is made via an existing driveway on Aiea Heights Drive and an internal road network with a future connection to the intersection of Kulawea Street with Ulune Street.

This connection consists of a new road (DP Road) which would provide a continuous route between Ulune Street and Aiea Heights Drive. The west leg of the road would intersect Aiea Heights Drive and the opposite leg would intersect Kulawea Street. The DP Road is also shown in Figure 1.



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Project Location & Site Map

Figure 1

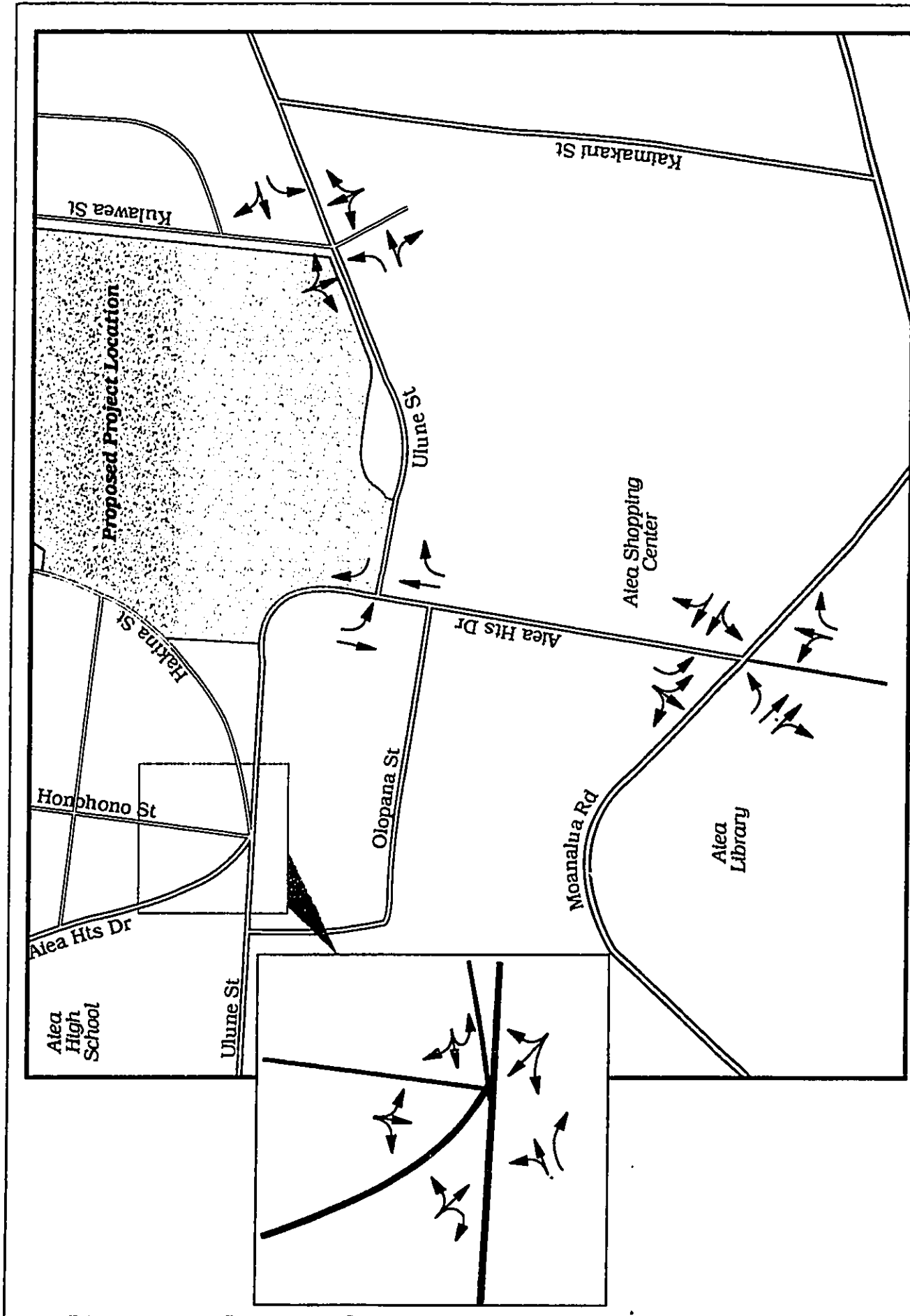


Figure 2

Existing Laneage

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Traffic Conditions

State Department of Transportation 24-hour count data indicates that the peak traffic periods in the vicinity occur from 6:00 to 8:00 a.m. in the morning and 3:45 to 5:45 p.m. in the afternoon. Manual traffic counts were taken at the study intersections. Counts were initially taken on Wednesday, May 15, 1996 and Thursday, May 16, 1996 during the peak periods. Additional traffic counts and verification of counts taken in 1996 were done on Tuesday, February 4, 1997 and Wednesday, February 5, 1997. These counts were used as the baseline condition upon which estimated future traffic volumes were added.

Manual counts were taken of passenger cars, trucks and buses by turning movements and approaches. During the morning and afternoon study periods, the weather was clear, and the roadway pavement was dry. Figures 3 and 4 show the present traffic volumes at the study intersections. Manual traffic count data for the study periods is summarized in Appendix A.

The following observations were made at the time of the survey:

- Because of the left-turn ban from Ulune Street onto Aiea Heights Drive, several motorists use the existing project driveways and make u-turns to travel towards Moanalua Road. Several motorists also use the 7-11 driveways to turn left onto Aiea Heights Drive.
- Large vehicles such as buses and large trucks encroach onto other traffic lanes when making right turns from Ulune Street onto Aiea Heights Drive.
- At the intersection of Ulune Street with Kulawea Street, traffic flow becomes congested just before the start of school because of the

numerous turning movements. During the afternoon peak hour, traffic flowed smoothly.

- At the intersection of Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Streets, motorists on Aiea Heights Drive frequently travel in excess of the posted speed limits. Also, no vehicles were observed using the Honohono Street leg of this intersection during the study period.

During the morning peak hour, traffic heading towards Aiea High School backed up close to the intersection of Ulune Street with Aiea Heights Drive a few times.

- At the intersection of Moanalua Road with Aiea Heights Drive, traffic flowed smoothly along Moanalua Road during both study peak hours. Side street traffic experienced long delays due to the long cycle lengths.

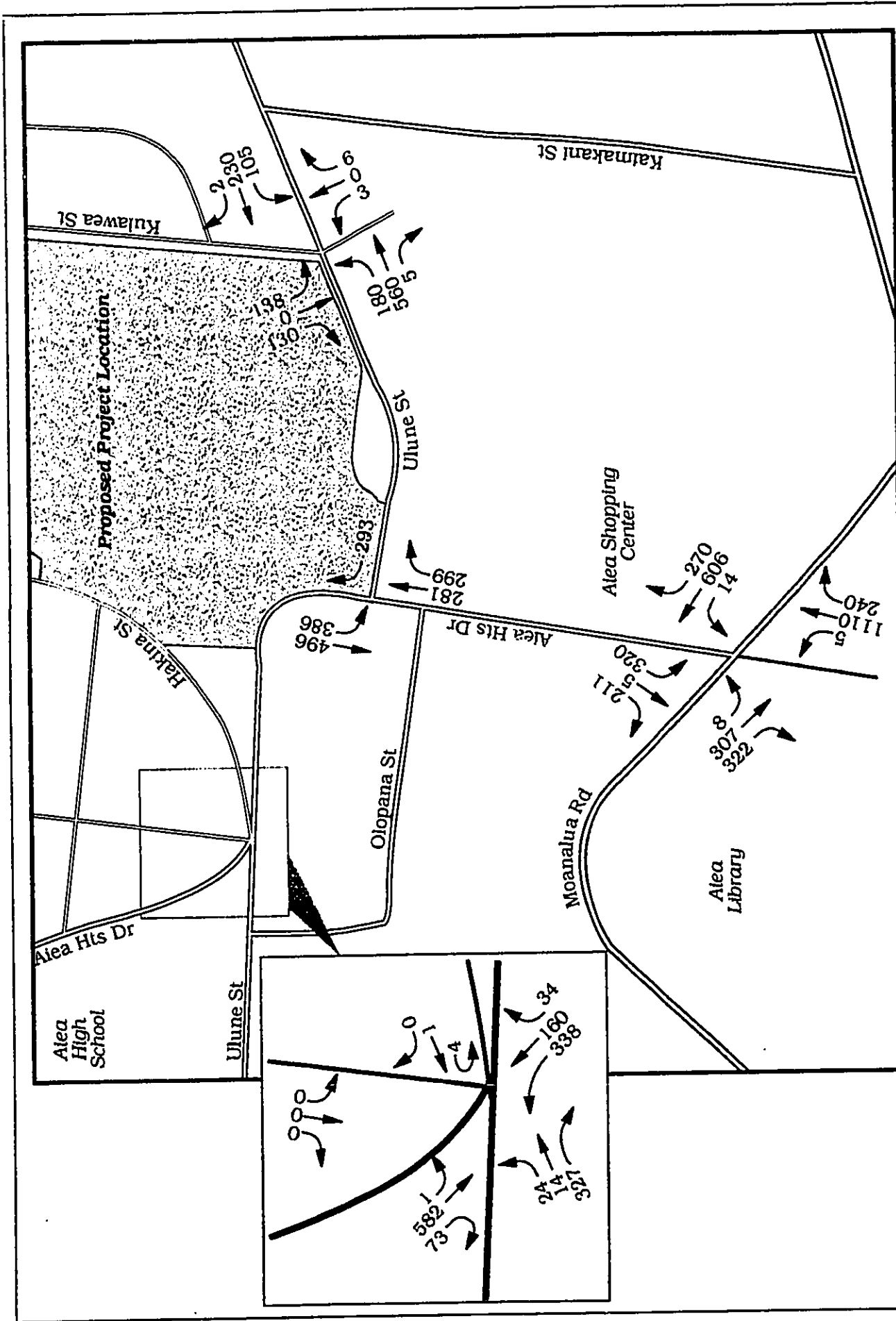


Figure 3

Existing Weekday Morning Peak Hour Traffic Volumes

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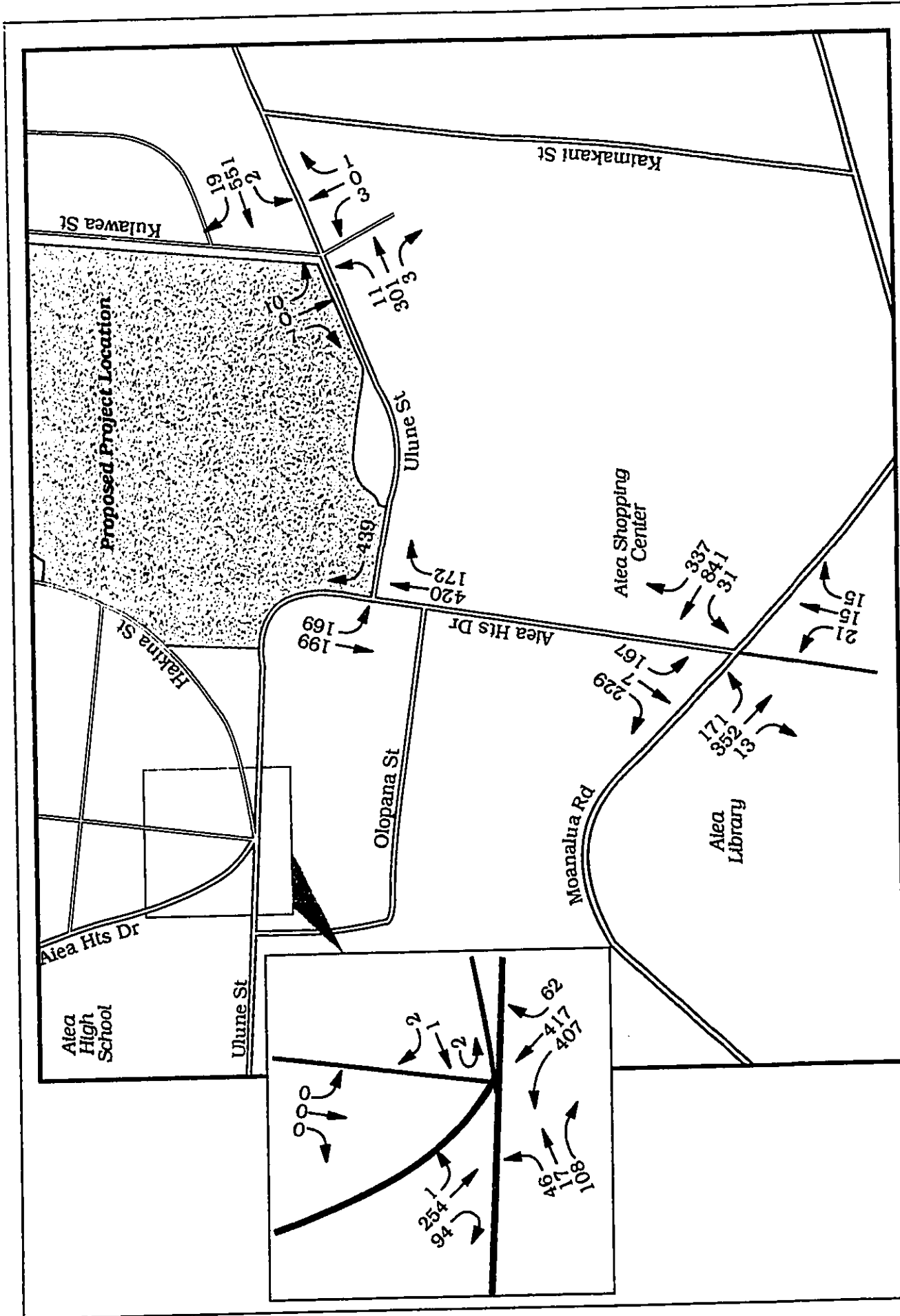


Figure 4

Existing Weekday Afternoon Peak Hour Traffic Volumes

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FUTURE CONDITIONS

A survey was conducted for approved planned developments in the immediate area for inclusion in the total future traffic conditions at the study intersections.

Land Uses

Aiea Park Place and Lapaolu are ongoing residential developments located mauka of the project on Aiea Heights Drive.

Roadway Facilities

Moanalua Road is currently under construction. The Moanalua Road Project, "Pali Momi St. To Aiea Interchange" is in the last of a three phase project to widen the road from 2 to 4 through lanes from Pali Momi Street to the Aiea Interchange. The last phase, Unit IIB, consists of the portion of Moanalua Road between Aiea Heights Drive to Aiea Interchange and is expected to be completed by fall of 1997. Upon completion of Unit IIB, Moanalua Road in the ewa bound direction east of Aiea Heights Drive will have 2 through lanes and an exclusive right turn lane. Left turns into the Aiea Commercial Center would be prohibited and only right turns would be allowed out of the Aiea Commercial Center driveway.

Realignment modifications are also being proposed for the intersection of Moanalua Road with Aiea Heights Drive, however, there are no definite plans at this time.

The intersection of Ulune Street with Kulawea Street is scheduled to be signalized in the near future. Signalization is also scheduled for the intersection of Ulune Street with Aiea Heights Drive. When signalized, left-turns from Ulune Street onto Aiea Heights Drive will be allowed.

PROJECTED TRAFFIC CONDITIONS

Future traffic was forecasted for the year 2000 for traffic conditions without and with the neighborhood shopping center project.

Future Traffic Without Project

Future traffic without the Project were forecasted by evaluating and adding the following: (1) existing morning and afternoon peak hour traffic volumes, (2) the increase in through-traffic along Moanalua Road, and (3) traffic generated by nearby proposed developments.

Through-Traffic Growth

Through-traffic is defined as traffic that travels without a specific origin or destination near the project site. The growth in through-traffic was estimated using historical data obtained from various DOT traffic count stations at points along the study roadways as well as information from other studies. The existing through traffic was increased by 3% (1% x 3 years) on Moanalua Road and Ulune Street for the morning and afternoon peak hours. The growth rate accounts for future conditions such as other developments outside of the project study area.

Traffic From Other Developments

The three-step procedure of trip generation, trip distribution, and traffic assignment was used to forecast traffic from other developments. The peak hour traffic volume forecasts without the project, in the year 2000, are shown in Figure 5 and 6.

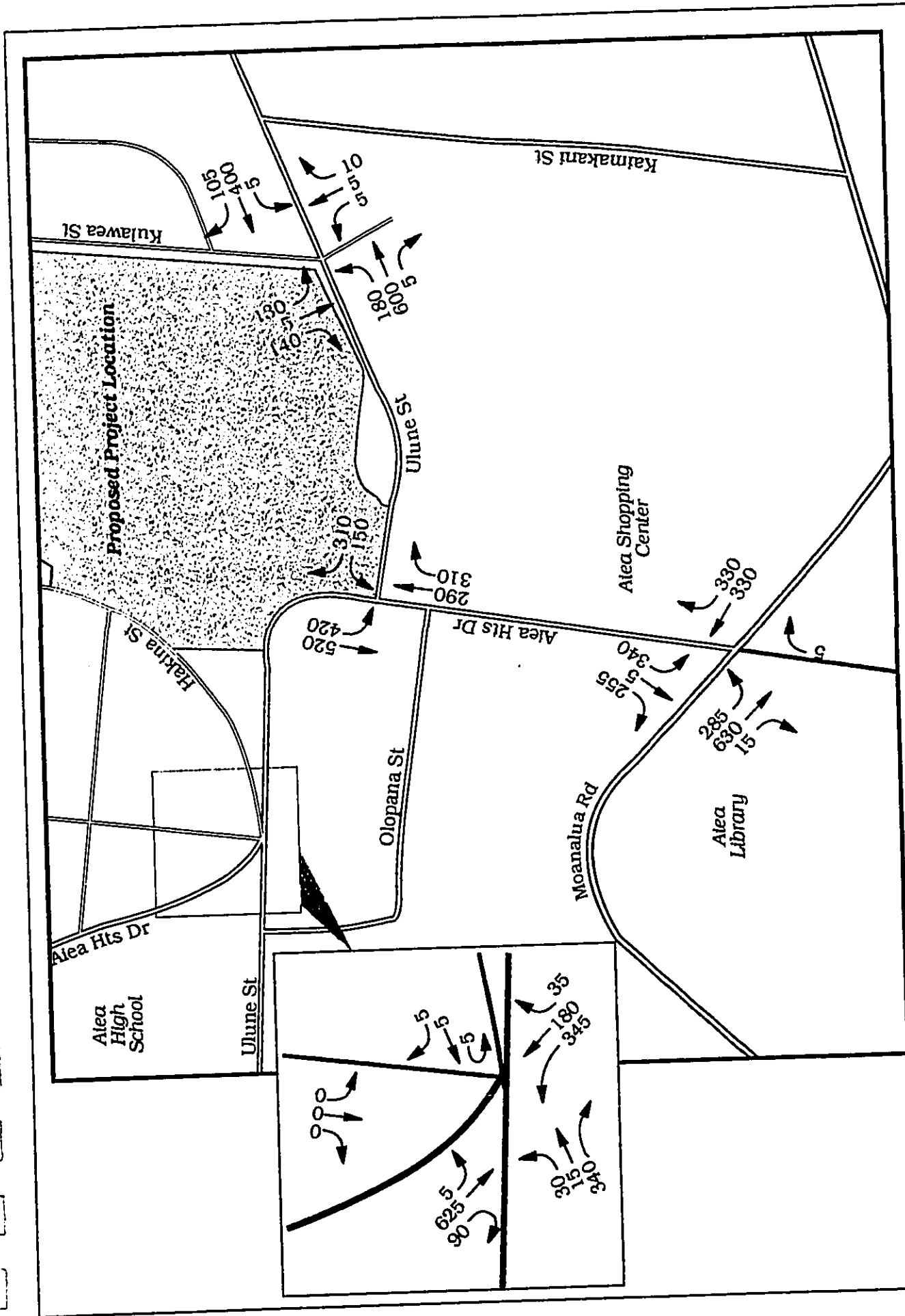


Figure 5

Year 2000 Weekday Morning Peak Hour Traffic Volumes Without Project

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The trip generation step estimates the number of trips that would be generated by the other developments in the area during the weekday morning and afternoon peak hours. Trip generation was based on rates from the ITE Trip Generation Report¹. Table 1 shows the estimated trips generated by each development.

Table 1. Trip Generation for Other Developments				
Land Use	Morning		Afternoon	
	Enter	Exit	Enter	Exit
Lapaolu (50 units)	10	28	33	18
Aiea Park Place (51 units)	10	28	33	18

The trip distribution step estimates the distribution of vehicle trips to their predicted destinations and origins. Trips were distributed based on projections of population and employment on Oahu.

Future traffic from these developments was assigned to a specific route for each origin and destination based on available traffic studies and estimated shortest distance or travel time. Traffic from each development was assigned first to Aiea Heights Drive and then to other adjacent roadways.

Future Traffic With Project

Future traffic with the project was forecasted by adding traffic generated by the project to the forecasted traffic without the project. Future traffic with the project traffic was forecasted for the year 2000 weekday morning and afternoon peak hours.

¹ Trip Generation Report, by the Institute of Transportation Engineers, Fifth Edition, 1991.

The standard three step procedure of trip generation, trip distribution, and traffic assignment was used to estimate peak hour traffic from the proposed project.

Trips generated by the neighborhood shopping center were estimated using the project land uses and trip rates from the ITE Trip Generation Report. Table 2 shows the number of generated trips.

Table 2 - Trip Generation for Neighborhood Shopping Center					
Land Use	Parameter	Morning Peak Hour		Afternoon Peak Hour	
		Enter	Exit	Enter	Exit
Shopping Center	144,000 sf	127	74	414	414

In the case of shopping centers, trips are attracted from the passing traffic on adjacent streets or traffic that is already "passing- by" the site. A portion of the trips that enter and exit the project site will be "Pass-by" trips and do not add additional trips to the roadway. The effect of "Pass-by" trips is to increase the number of turning movements into and out of the project site. The amount of "Pass-by" trips for the project was estimated based on data from the Trip Generation Report. For this case, a Pass-by percentage of 40% was used for the afternoon peak hour. No Pass-by trips were included for the morning peak hour.

The trip distribution step estimates the distribution of vehicle trips to their predicted destinations and origins. Trips were distributed based on projections of population and employment on Oahu.

The traffic assignment step assigns vehicle trips to specific routes on the roadway network that will take the driver from origin to destination. Traffic was assigned to the new DP Road described below and to adjacent roadways such as Aiea Heights Drive and Ulune Street.

DP Road

A proposed road (DP Road) will be constructed through the project site as shown in Figure 7. This road would provide a continuous route between Ulune Street and Aiea Heights Drive. The west leg of the road would intersect Aiea Heights Drive and the opposite leg would intersect Kulawea Street.

Construction of the DP Road would result in a diversion of traffic heading westbound towards Aiea Heights Drive from Ulune Street. A majority of trips were diverted from the existing path to the DP Road due to the recommended closure of a section of Ulune Street as described in the following section.

Multileg Intersections

The east leg of the DP Road would intersect the current 4-leg intersection of Ulune Street with Kulawea Street creating a 5-leg intersection. This is considered an undesirable situation based on A Policy on Geometric Design of Highways and Streets² which states:

"Multileg intersections are those with five or more intersection legs. They should be avoided wherever possible. Where volumes are light and stop control is used, it may be satisfactory to have all intersection legs intersect at a common, all-paved area. At other than minor intersections, safety and efficiency are improved by rearrangements that remove some conflicting movements from the major intersection. "

² A Policy on Geometric Design of Highways and Streets, by the American Association of State Highway and Transportation Officials, 1994.

This intersection carries significant traffic volume, especially on Ulune Street and therefore cannot be considered a minor intersection. The reference also states that regardless of intersection type, intersecting roads should generally meet at or nearly at right angles. A multileg intersection of this type would create roads intersecting at acute angles.

As a result, we recommend the west end of Ulune Street from Aiea Heights Drive to Kulawea Street be converted to a local street with a cul-de-sac constructed at its existing intersection with Kulawea Street. The four legs of the new intersection would consist of the north and south legs of Kulawea Street, the east leg of Ulune Street and the east leg of DP Road. This configuration is shown in Figure 7.

The future laneage for the year 2000 including the laneage for the DP Road is shown in Figure 8. The resulting year 2000 morning and afternoon peak hour traffic volumes with the roadway modifications described above are shown in Figures 9 and 10.

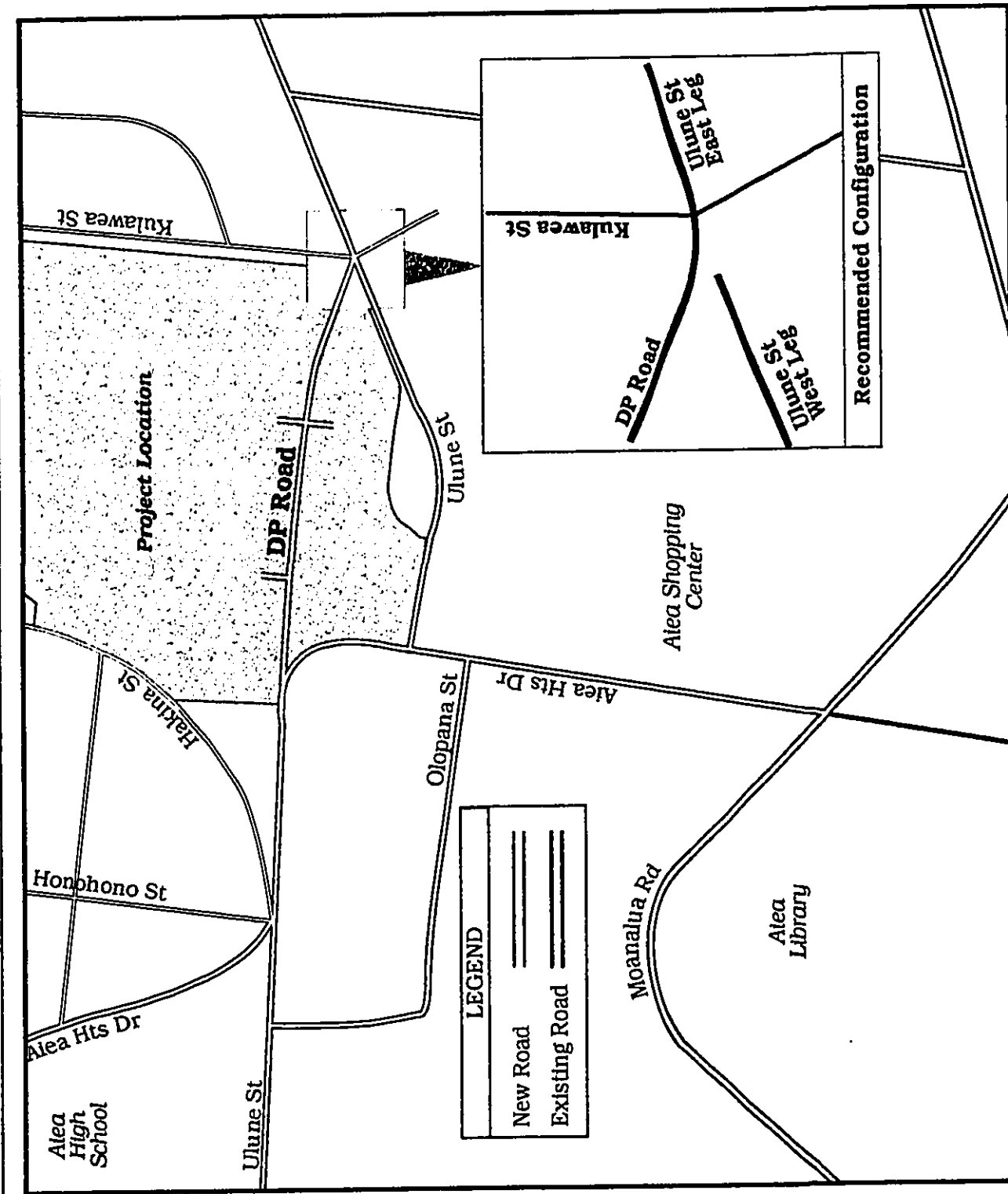


Figure 7

Year 2000 With Project & Future Road

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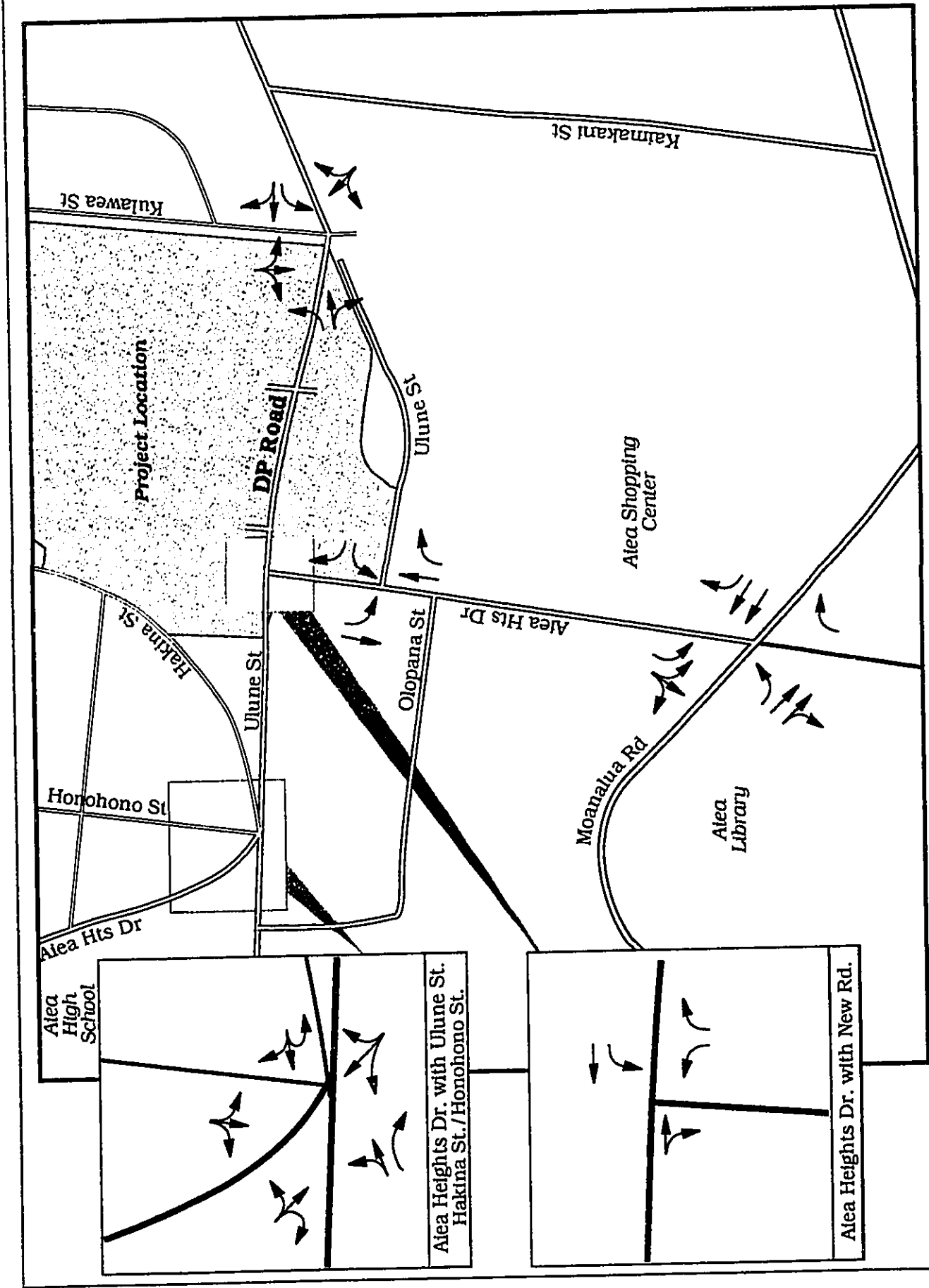
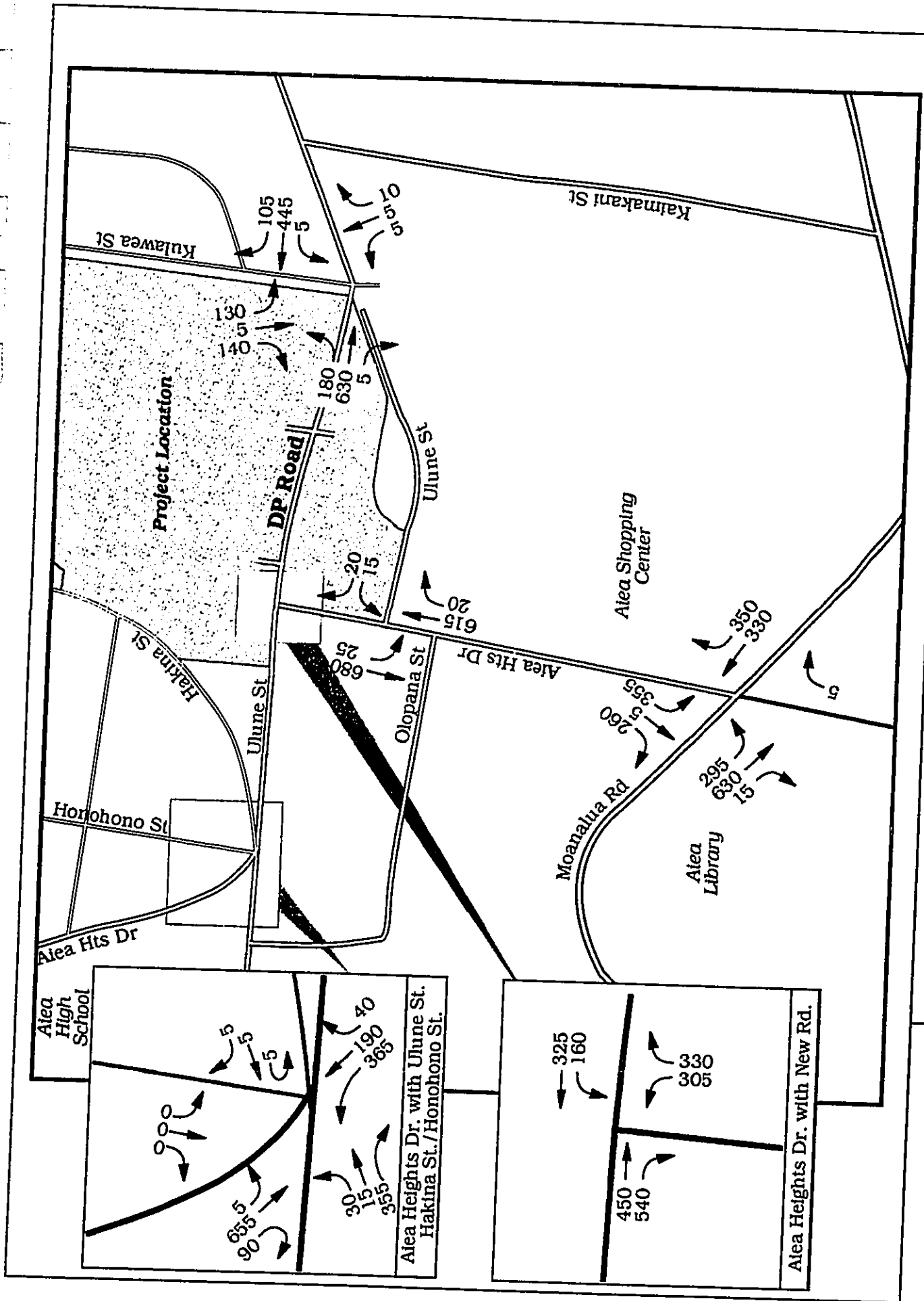


Figure 8

Year 2000 Laneage With Project

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Year 2000 Weekday Morning Peak Hour Traffic Volumes with Project

Figure 9

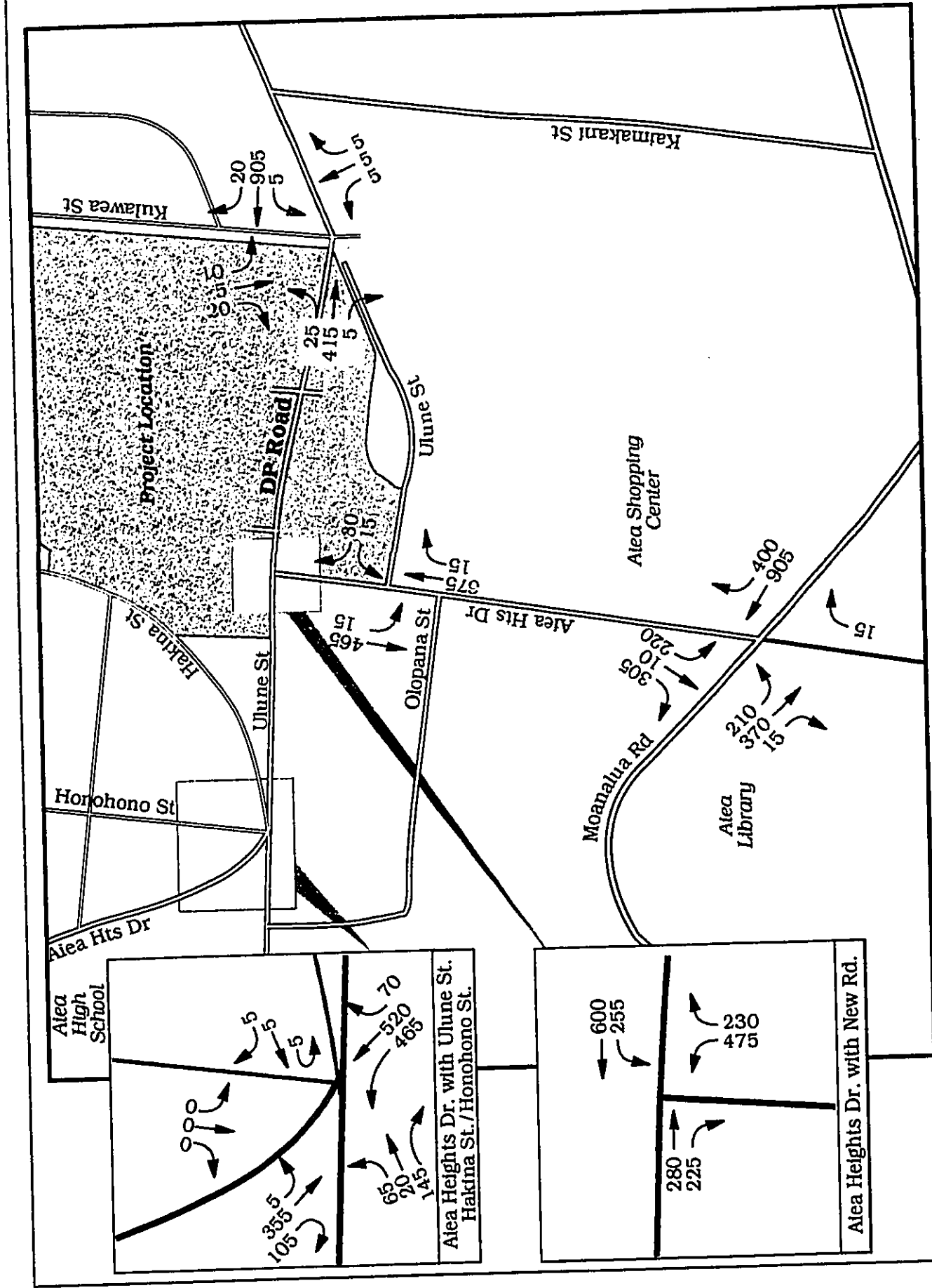


Figure 10

Year 2000 Weekday Afternoon Peak Hour Traffic Volumes with Project

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TRAFFIC ANALYSIS

Analyses were conducted on the following study intersections to determine the relative impact of the proposed neighborhood shopping center on the local roadway system and to determine improvements to mitigate the impact of the project, if necessary:

- Moanalua Road with Aiea Heights Drive,
- Aiea Heights Drive with Ulune Street,
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street,
- Ulune Street/Kulawea Street with DP Road and
- Aiea Heights Drive with DP Road

Analysis Methods

The study intersections were analyzed using methods outlined in the Highway Capacity Manual (HCM), Special Report 209, 1994. Appendix B provides detailed definitions of the "level-of-service" (LOS) used in this study.

Signalized intersections were analyzed using the HCM's operational analysis for signalized intersections. This analysis is based on average stopped delay per vehicle to measure traffic operating conditions. The methodology for operational analysis measures traffic operations using the LOS rating, which ranges from A to F. The LOS for the traffic movements at a signalized intersection is classified into six categories ranging from less than 5 seconds of average delay per vehicle (LOS A) to over 60 seconds of average delay per vehicle (LOS F).

Unsignalized intersections were analyzed using the HCM's analysis for unsignalized intersections. The "level-of-service" (LOS) for unsignalized intersections is determined by total delay which is defined as the total elapsed

time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue position. LOS for unsignalized intersections is also classified into six categories ranging from less than 5 seconds of average total delay per vehicle (LOS A) to over 45 seconds of average total delay per vehicle (LOS F).

Analysis Results

The results of the analysis for the study intersections are shown in Tabular form in Appendix C and described below.

Moanalua Road with Aiea Heights Drive (Signalized) - Table C-1

- Presently, the through movements on Moanalua Road operate at LOS B or better during both peak hours. Side street movements operate at poorer levels-of-service due to the long cycle lengths and the significant amounts of green time given to traffic on Moanalua Road.
- Without the project, the intersection would operate at the same overall LOS. However, delays are reduced due to the improvements being made along Moanalua Road.
- With the project, the intersection will continue to operate at the same level-of-service as the without project case.

Aiea Heights Drive with Ulune Street (Existing - Unsignalized, Future - Signalized) - Tables C-2 and C-3

- Presently, the right-turn movement from Ulune Street onto Aiea Heights Drive operates at LOS C or better during the study peak hours. The southbound left-turn movement from Aiea Heights Drive onto Ulune Street operate at LOS B conditions during the peak hour.

- Without the project, this intersection will be signalized and left turns will be allowed. When signalized, this intersection will operate at an overall LOS B.
- With the project, the majority of traffic volumes entering and exiting Ulune Street will be substantially smaller than the without project scenario. The reduction is due to the recommended conversion of this segment of Ulune Street to a local street. As a result, the intersection would operate at LOS A during both study peak hours.

Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street
(Unsignalized) - Table C-4

There were no observed traffic volumes on Honohono Street during the study peak hours. Therefore, this intersection was analyzed as a four leg intersection

- Presently, motorists making left-turns from Aiea Heights Drive onto Ulune Street or Hakina Street experience LOS B or better conditions during the study peak hours.

Motorists making left-turn or through movements from Ulune Street experience very long delays LOS E or F.

The analysis shows that the Hakina Street approach operates at better LOS due to the very low traffic volumes on this leg. This is because of the low volumes (0 left turns during the morning peak hour, 2 left-turns during the afternoon peak hour). By adding 3 vehicles to the left-turn movement, the analysis will show a LOS F conditions.

- Without the project, motorists making left-turns from Aiea Heights Drive onto Ulune Street or Hakina Street experience the same LOS conditions as the existing case.

Motorists making left-turn or through movements from Ulune Street experience LOS F conditions. On the Hakina Street approach, motorists will experience LOS E and F conditions.

- With the project, motorists making left-turns from Aiea Heights Drive onto Ulune Street or Hakina Street will experience essentially the same LOS conditions as the without project case.

Motorists making left-turn or through movements from Ulune Street experience LOS F conditions. On the Hakina Street approach, motorists will experience LOS F conditions.

Ulune Street with Kulawea Street (Existing-Unsignalized, Future-Signalized) - Tables C-5 and C-6

- Presently, the left-turn movement from Ulune Street onto Kulawea Street operates at LOS A during both study peak hours. The southbound approach on Kulawea Street from the school operates at LOS F during the morning peak hour and LOS B during the afternoon peak hour.
- Without the project, this intersection will be signalized. When signalized, this intersection will operate at an overall LOS C during the morning peak hour and LOS B during the afternoon peak hour.
- With the project, the traffic volumes which were once on the west leg of Ulune Street would now be on the DP Road. This intersection would continue to operate at the same overall LOS as the without project scenario intersection.

DP Road with Aiea Heights Drive - Table C-7

- With the project, as an unsignalized intersection, left-turns from Aiea Heights Drive would experience LOS F conditions during both study peak hours. The left-turn movement from the DP Road onto Aiea Heights Drive would operate at LOS C or better during both study peak hours.

SIGNAL WARRANTS

Due to the heavy volume of traffic along Aiea Heights Drive, a preliminary check was made to see if traffic conditions warrant the installation of traffic signals at the following intersections:

- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street
- Aiea Heights Drive with DP Road

The warrant check was conducted according to procedures in the Manual on Uniform Traffic Control Devices (MUTCD)³ and available data. The MUTCD contains 11 Warrants which are used to determine whether traffic control signals are warranted. It should be noted that the MUTCD states the following:

"The satisfaction of a warrant or warrants is not in itself justification for a signal. Information should be obtained by means of engineering studies and compared with the requirements set forth in the warrants."

Warrant 11, based on peak hour volume, was used to provide a preliminary indication of the need for traffic signal control. Warrant 11 is intended for application when traffic conditions are such that for one hour of the day, minor street traffic suffers undue traffic delay in entering or crossing the major street.

The peak hour volume warrant is satisfied when a plotted point representing the vehicles per hour on the major street (total of both approaches) and the

³ Manual on Uniform Traffic Control Devices by the Federal Highways Administration, U.S. Department of Transportation, 1988.

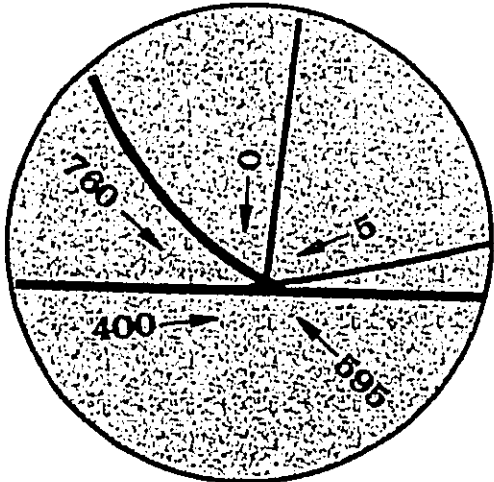
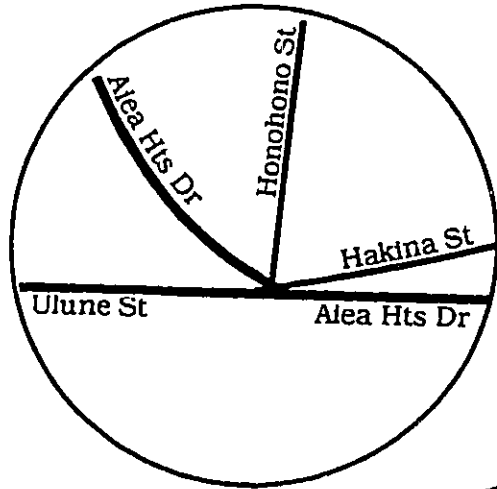
corresponding vehicle per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve shown in Figure 4-5 of the MUTCD for the existing combination of approach lanes.

Figures 11 and 12 graphically show the results of the peak hour volume warrant. The results indicate that the two intersections meet the criteria set forth in Warrant 11. A warrant study should be performed on these intersections to determine if signalization is warranted.

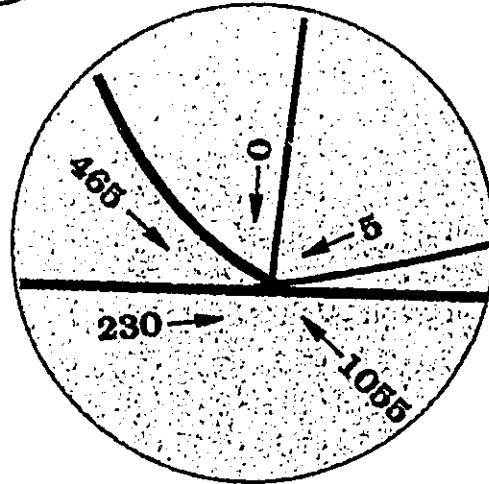
Analysis

The study intersections were analyzed to determine their operation if signalized. The HCM operational analysis for signalized intersections was used to estimate the LOS.

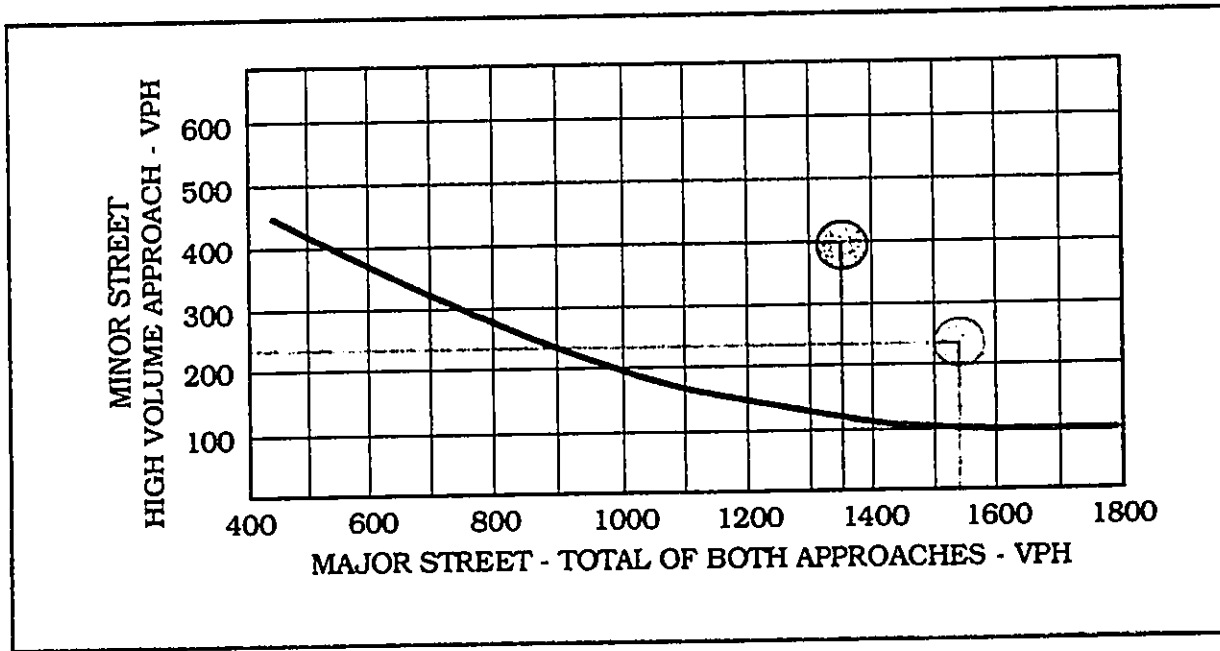
The intersection of Aiea Heights Drive with Ulune Street, Hakina Street and Honohono Street form a 5-leg intersection. As mentioned before, 5-leg intersections are not desirable. In addition to the reasons stated previously and the fact that there were no observed traffic volumes on Honohono Street during the study peak hours, this intersection was analyzed as a 4-leg intersection. Table 3 shows the results of the analysis.



Weekday Morning Peak Hour Volumes



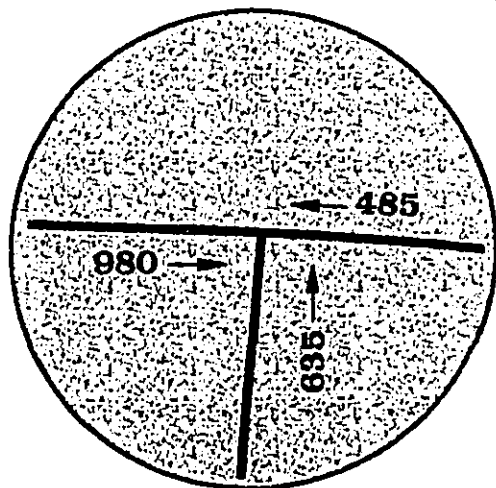
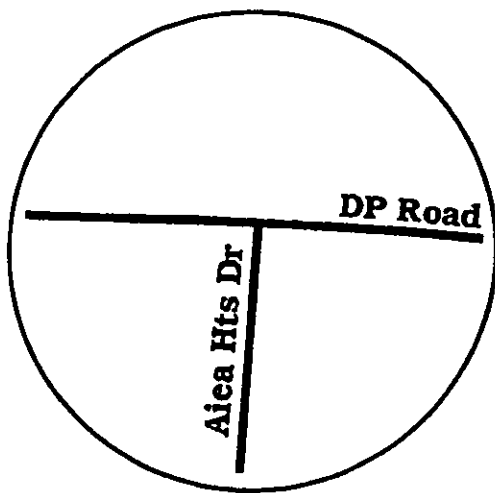
Weekday Afternoon Peak Hour Volumes



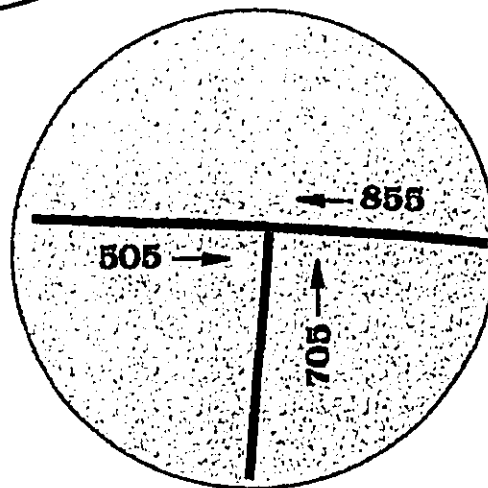
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Alea Heights Drive/Ulune Street/Hakina Street/
Honohono Street
Peak Hour Volume Warrant (Warrant 11)

Figure 11



Weekday Morning Peak Hour Volumes



Weekday Afternoon Peak Hour Volumes

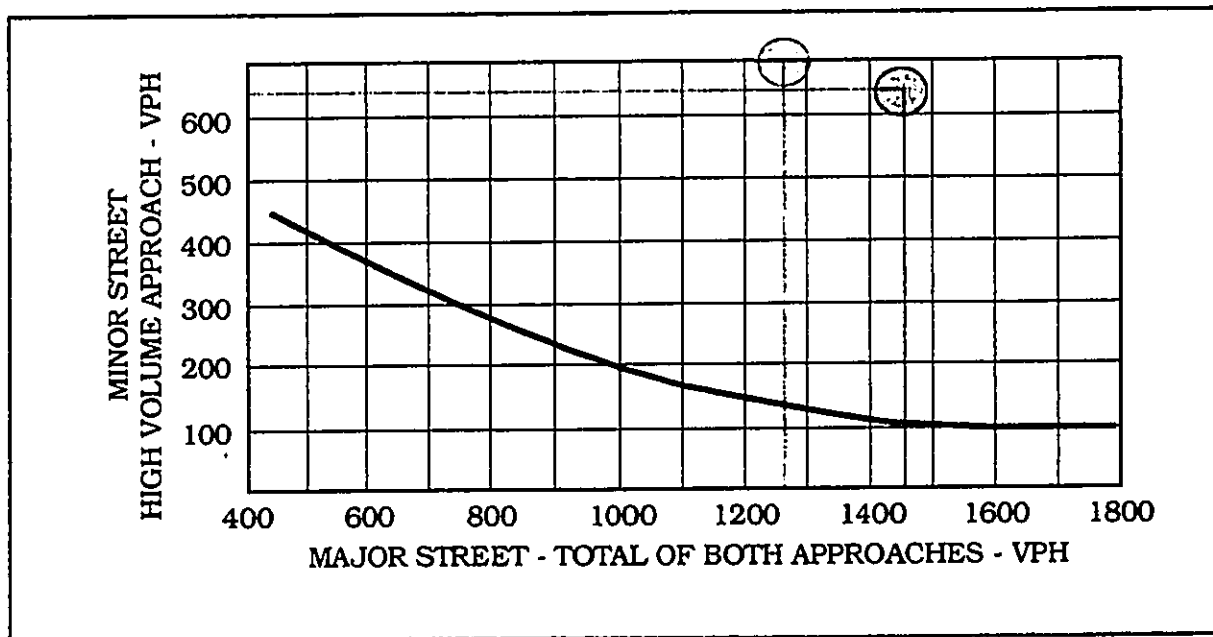


Table 3 - Aiea Heights Drive with Ulune/Hakina Street/Honohono Street		
Movement	Level-of-Service	
	2000 Without Project	2000 With Project
Morning Peak Hour		
Northbound LT/TH/RT on Aiea Heights Dr	D	D
Southbound LT/TH/RT on Aiea Heights Dr	D	D
Eastbound LT/TH on Ulune St	C	D
Eastbound RT on Ulune St	D	D
Westbound LT/TH/RT on Hakina St	C	C
Overall Intersection	D	D
Afternoon Peak Hour		
Northbound LT/TH/RT on Aiea Heights Dr	D	D
Southbound LT/TH/RT on Aiea Heights Dr	C	D
Eastbound LT/TH on Ulune St	D	D
Eastbound RT on Ulune St	C	D
Westbound LT/TH/RT on Hakina St	C	D
Overall Intersection	C	D

If signalized, this intersection would operate at an overall LOS D during the morning peak hour without or with the project. During the afternoon peak hour, the LOS would drop from LOS C to D.

Table 4 shows the results of the analysis on the intersection of Aiea Heights Drive with the DP Road.

Table 4 - Aiea Heights Drive with DP Road	
Movement	Level-of-Service
	2000 With Project
Morning Peak Hour	
Northbound LT on Aiea Heights Dr	D
Northbound RT on Aiea Heights Dr	D
Eastbound TH/RT on Ulune St	D
Westbound LT on DP Road	B
Westbound TH on DP Road	A
Overall Intersection	D
Afternoon Peak Hour	
Northbound LT on Aiea Heights Dr	C
Northbound RT on Aiea Heights Dr	C
Eastbound TH/RT on Ulune St	C
Westbound LT on DP Road	B
Westbound TH on DP Road	B
Overall Intersection	C

If signalized, this intersection would operate at an overall LOS D during the morning peak hour and LOS C during the afternoon peak hour.

CONCLUSIONS AND RECOMMENDATIONS

The proposed neighborhood shopping center will have some impact on traffic flow at several of the study intersections when completed in the year 2000. However with the construction of the DP Road, the traffic circulation in the area will be improved.

Without the Project

The following two intersections would continue to operate at essentially the same levels-of-service as the existing conditions:

- Moanalua Road with Aiea Heights Drive
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street

The intersection of Aiea Heights Drive with Ulune Street is currently under construction which includes signalization and re-striping to allow left-turns from Ulune Street. With the allowance of left-turns, there would be an increase in traffic volumes at this intersection. As a signalized intersection, it would operate at an overall LOS B condition during both peak hours.

The intersection of Ulune Street with Kulawea Street is also currently being signalized. The intersection would operate at an overall LOS C during the morning peak hour and LOS B during the afternoon peak hour.

With the Project

The following two intersections would continue to operate at essentially the same levels-of-service as the without project conditions:

- Moanalua Road with Aiea Heights Drive
- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street

As part of the project, a DP Road would be constructed which would traverse through the site and provide a continuous east-west route between Ulune Street and Aiea Heights Drive. Large vehicles would no longer have to use the intersection of Ulune Street with Aiea Heights Drive thus avoiding the small turning radiuses at this intersection.

The east leg would connect to the existing intersection of Ulune Street with Kulawea Street forming a 5-leg intersection. This is generally considered an undesirable situation based on guidance contained in A Policy on Geometric Design of Highways and Streets. Additionally, signaling multileg intersections would require additional costs and result in reduced overall capacity and increased delays.

As a result, we recommend the west end of Ulune Street from Aiea Heights Drive to Kulawea Street be converted to a local street with a cul-de-sac constructed at its existing intersection with Kulawea Street. The four legs of the intersection would consist of the north and south legs of Kulawea Street, the east leg of Ulune Street and the DP Road.

This intersection of the DP Road with Ulune Street and Kulawea Street would operate at essentially the same LOS as the without project scenario of Ulune Street and Kulawea Street.

The west leg of the DP Road would intersect Aiea Heights Drive forming a new T-intersection. As an unsignalized intersection, motorists heading mauka

on Aiea Heights Drive would experience LOS F conditions turning left during the morning and afternoon peak hours.

Signal Warrant

A preliminary check of Warrant 11 from the Manual on Uniform Traffic Control Devices (MUTCD) was performed on the following intersections to determine if they warrant signalization:

- Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street
- Aiea Heights Drive with DP Road

The check indicates that the existing intersection of Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street may warrant traffic signals even without the project. The check also indicates that the future intersection of Aiea Heights Drive with the DP Road may warrant traffic signals when the project is built. However, as stated in the MUTCD, the satisfaction of a warrant or warrants is not in itself justification for a signal. Further study should be performed to determine if signalization is warranted.

At the intersection of Aiea Heights Drive with Ulune Street/Hakina Street/Honohono Street, we recommend that if signalized, the south end of Honohono Street leg be converted into a dead end street. This would result in a 4-leg intersection consisting of Aiea Heights Drive, Ulune Street and Hakina Street. As stated previously, multileg intersections are undesirable and should be avoided wherever possible. Residents along Honohono Street could use alternate routes which are available.

If signalized, the intersections would operate at an overall LOS D or better during the morning and afternoon peak hours.

When the DP Road is constructed, through traffic traveling along Ulune Street from Kulawea Street to Aiea Heights Drive would be diverted to the DP Road. With the reduction in traffic volumes at the intersection of Ulune Street with Aiea Heights Drive, the criteria for Warrant 11 will no longer be met. Again, further study will be needed to determine if signalization is still warranted.

APPENDIX A

TRAFFIC COUNT DATA

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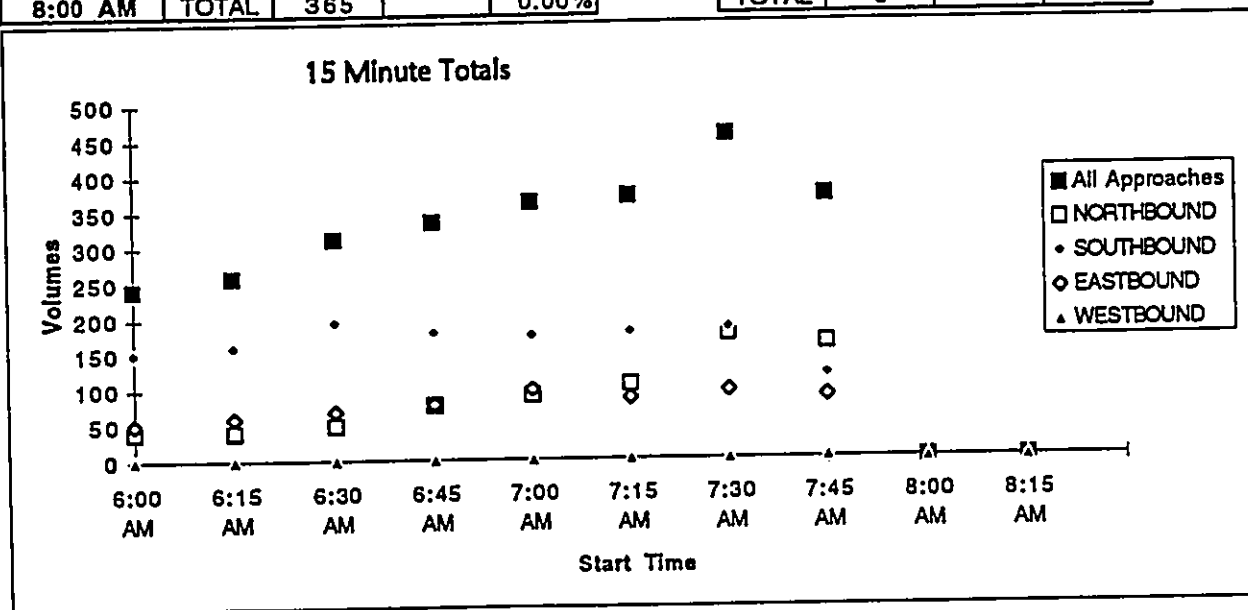
Project : 66.0 ASM
Date: 5/15/96

Start Time	Direction NORTHBOUND				North-South Road Alea Hts Drive	Direction SOUTHBOUND			
	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
6:00 AM	14	24	2	0		0	133	18	0
6:15 AM	17	19	4	0		0	149	11	0
6:30 AM	19	28	2	0		0	174	21	0
6:45 AM	42	32	3	0		0	166	14	0
7:00 AM	55	27	8	0		0	166	9	0
7:15 AM	68	35	2	0		1	157	21	0
7:30 AM	118	40	17	0		0	154	30	0
7:45 AM	97	58	7	0		0	105	13	0

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B	
7:00 AM	338	160	34	0	0	1	582	73	0	0
8:00 AM	TOTAL	532		0.00%		TOTAL	656		0.00%	

Start Time	Direction EASTBOUND				East-West Road Ulune/Hakina	Direction WESTBOUND			
	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
6:00 AM	6	2	42	0		1	0	0	0
6:15 AM	2	2	55	0		0	0	0	0
6:30 AM	4	0	64	0		0	0	0	0
6:45 AM	1	0	77	0		0	0	0	0
7:00 AM	9	1	88	0		0	0	0	0
7:15 AM	8	1	76	0		1	0	0	0
7:30 AM	3	7	85	0		0	1	0	0
7:45 AM	4	5	78	0		3	0	0	0

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B	
7:00 AM	24	14	327	0	0	4	1	0	0	0
8:00 AM	TOTAL	365		0.00%		TOTAL	5		0.00%	



Project : 66.0 ASM
Date: 5/15/96

Direction NORTHBOUND North-South Road Alea Hts Drive-Ulune Direction SOUTHBOUND

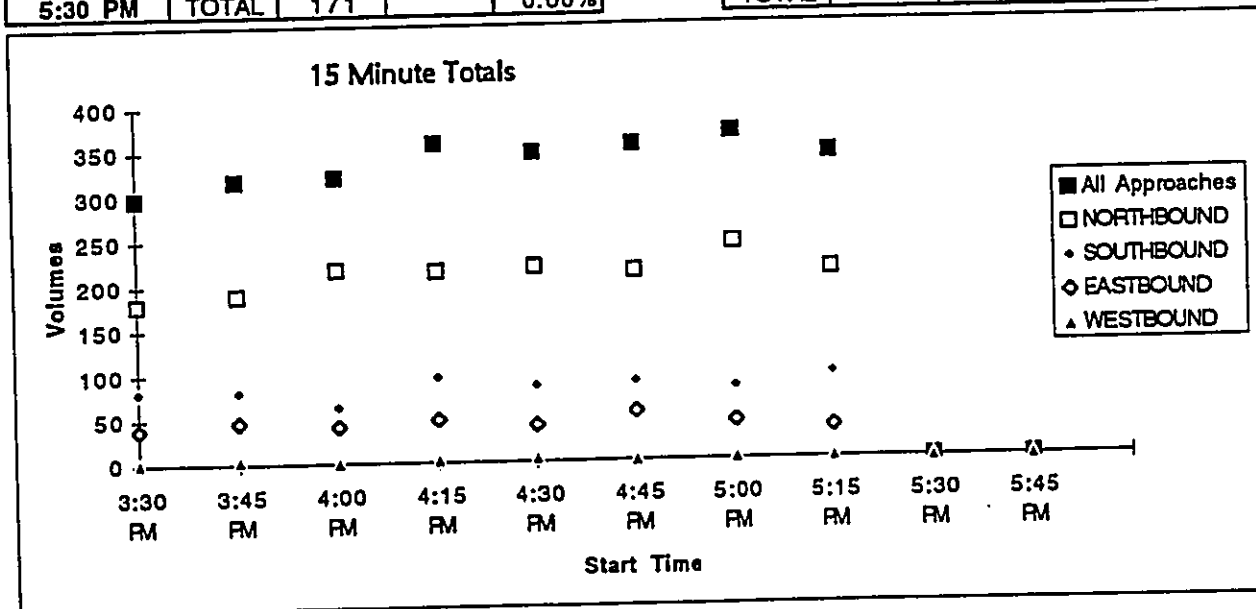
Start Time	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
3:30 PM	80	88	11	0		0	55	25	0
3:45 PM	82	93	14	0		0	59	21	0
4:00 PM	98	114	5	0		0	43	20	0
4:15 PM	96	105	13	0		0	66	29	0
4:30 PM	95	110	14	0		0	62	23	0
4:45 PM	97	100	15	0		1	53	27	0
5:00 PM	113	111	19	0		0	76	19	0
5:15 PM	102	96	14	0		0			

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
4:30 PM	407	417	62	0	0	1	254	94	0
5:30 PM	TOTAL	886		0.00%		TOTAL	349		0.00%

Direction EASTBOUND East-West Road Ulune/Hakina Direction WESTBOUND

Start Time	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
3:30 PM	8	1	29	0		0	0	1	0
3:45 PM	13	2	31	0		1	2	0	0
4:00 PM	10	2	29	0		0	0	0	0
4:15 PM	9	5	33	0		1	1	0	0
4:30 PM	9	2	29	0		1	1	1	0
4:45 PM	20	5	29	0		0	0	0	0
5:00 PM	9	5	28	0		1	0	0	0
5:15 PM	8	5	22	0		0	0	1	0

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
4:30 PM	46	17	108	0	0	2	1	2	0
5:30 PM	TOTAL	171		0.00%		TOTAL	5		0.00%



Project : 66.0 ASM
Date: 5/15/96

Direction North-South Road Direction
NORTHBOUND Aiea Hts Drive SOUTHBOUND

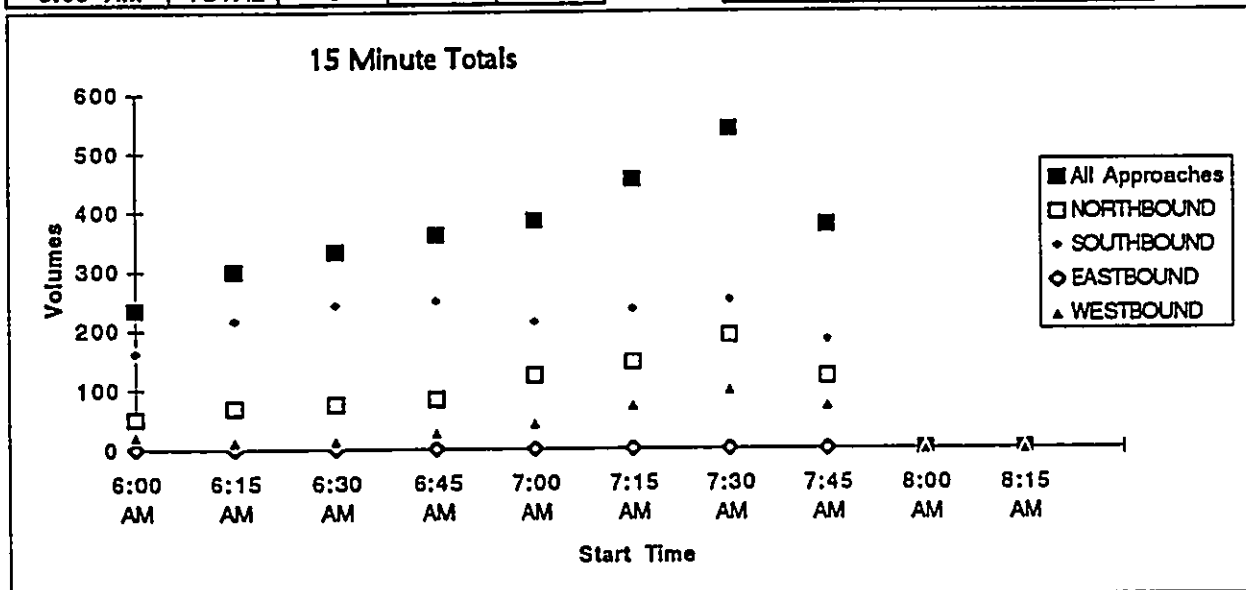
Start Time	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
6:00 AM	0	28	23	0		87	74	0	0
6:15 AM	0	31	38	0		109	108	0	0
6:30 AM	0	28	47	0		123	120	0	0
6:45 AM	0	37	47	0		147	102	0	0
7:00 AM	0	53	71	0		105	110	0	0
7:15 AM	0	66	79	0		93	142	0	0
7:30 AM	0	102	88	0		107	143	0	0
7:45 AM	0	60	61	0		81	101	0	0

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
7:00 AM	0	281	299	0	0	386	496	0	0
8:00 AM	TOTAL	580		0.00%		TOTAL	882		0.00%

Direction East-West Road Direction
EASTBOUND Ulune WESTBOUND

Start Time	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
6:00 AM	0	0	0	0		0	0	22	0
6:15 AM	0	0	0	0		0	0	14	0
6:30 AM	0	0	0	0		0	0	15	0
6:45 AM	0	0	0	0		0	0	28	0
7:00 AM	0	0	0	0		0	0	45	0
7:15 AM	0	0	0	0		0	0	74	0
7:30 AM	0	0	0	0		0	0	100	0
7:45 AM	0	0	0	0		0	0	74	0

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
7:00 AM	0	0	0	0	0	0	0	293	0
8:00 AM	TOTAL	0		#DIV/0!		TOTAL	293		0.00%



Project : 66.0 ASM
Date: 5/15/96

Direction NORTHBOUND North-South Road Alea Hts Drive Direction SOUTHBOUND

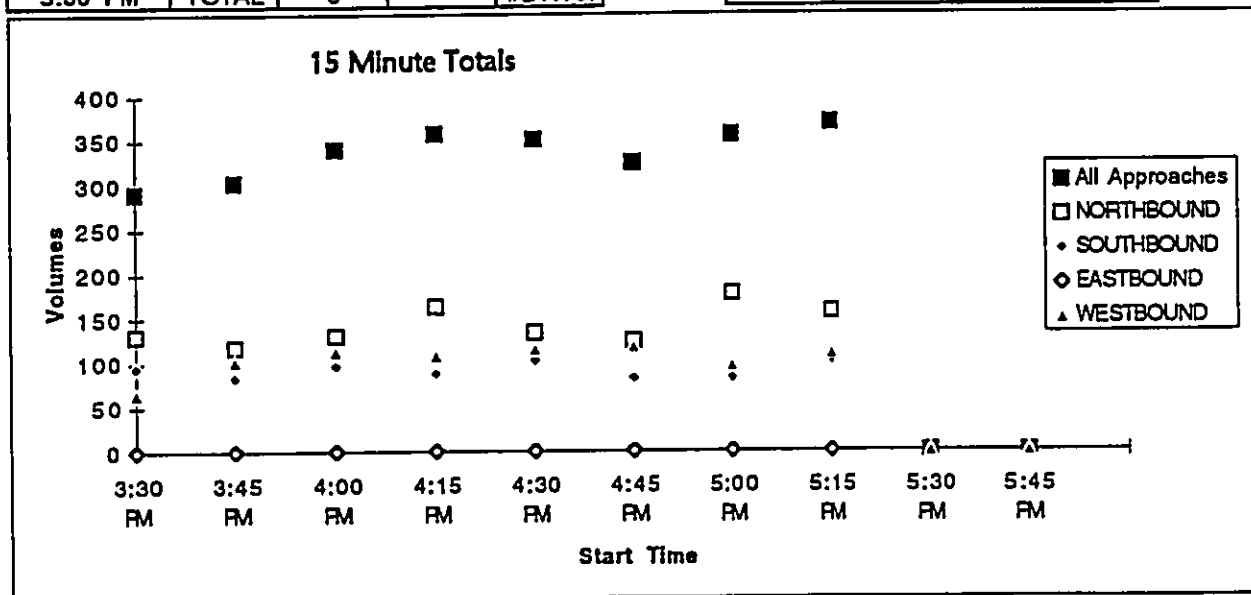
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3:30 PM	0	95	36	0		44	50	0	0
3:45 PM	0	80	38	0		37	46	0	0
4:00 PM	0	94	37	0		48	48	0	0
4:15 PM	0	108	55	0		47	40	0	0
4:30 PM	0	81	53	0		47	55	0	0
4:45 PM	0	92	32	0		32	50	0	0
5:00 PM	0	131	46	0		36	46	0	0
5:15 PM	0	116	41	0		54	48	0	0

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
4:30 PM	0	420	172	0	0	169	199	0	0
5:30 PM	TOTAL	592		0.00%		TOTAL	368		0.00%

Direction EASTBOUND East-West Road Ulune Direction WESTBOUND

Start Time	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
3:30 PM	0	0	0	0		0	0	65	0
3:45 PM	0	0	0	0		0	0	102	0
4:00 PM	0	0	0	0		0	0	113	0
4:15 PM	0	0	0	0		0	0	108	0
4:30 PM	0	0	0	0		0	0	115	0
4:45 PM	0	0	0	0		0	0	118	0
5:00 PM	0	0	0	0		0	0	96	0
5:15 PM	0	0	0	0		0	0	110	0

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
4:30 PM	0	0	0	0	0	0	0	439	0
5:30 PM	TOTAL	0		#DIV/0!		TOTAL	439		0.00%



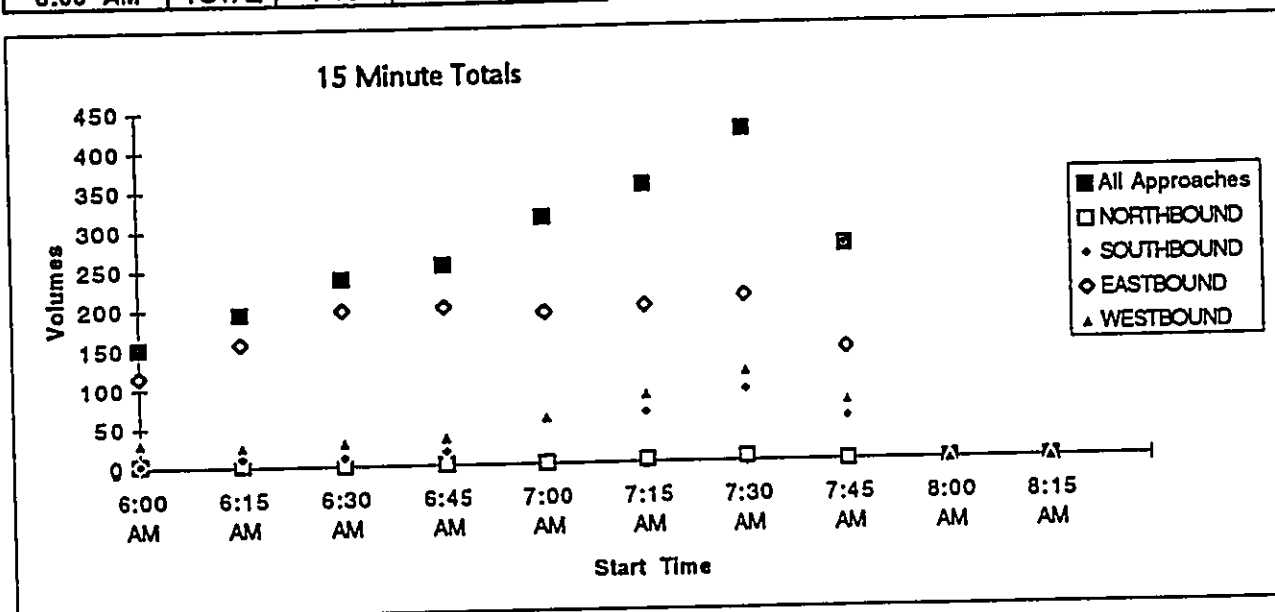
Project : 66.0 ASM
Date: 5/15/96

Start Time	Direction NORTHBOUND				North-South Road Kulawea St.	Direction SOUTHBOUND			
	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
6:00 AM	1	0	2			3	0	0	
6:15 AM	1	0	1			9	0	1	
6:30 AM	0	0	0			9	0	5	
6:45 AM	0	0	1			12	0	30	
7:00 AM	0	0	1			30	0	35	
7:15 AM	1	0	2			28	0	50	
7:30 AM	2	0	3			41	0	23	
7:45 AM	0	0	0			31	0		

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B	
7:00 AM	3	0	6	0	0	130	0	138	0	0
8:00 AM	TOTAL	9		0.00%		TOTAL	268		0.00%	

Start Time	Direction EASTBOUND				East-West Road Ulune	Direction WESTBOUND			
	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
6:00 AM	3	112	0			0	29	2	
6:15 AM	5	151	1			0	23	3	
6:30 AM	12	186	0			0	25	7	
6:45 AM	17	184	0			0	28	22	
7:00 AM	45	148	0			1	36	28	
7:15 AM	49	148	2			1	58	36	
7:30 AM	60	147	3			0	57	19	
7:45 AM	26	117	0			0			

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B	
7:00 AM	180	560	5	0	0	2	230	105	0	0
8:00 AM	TOTAL	745		0.00%		TOTAL	337		0.00%	



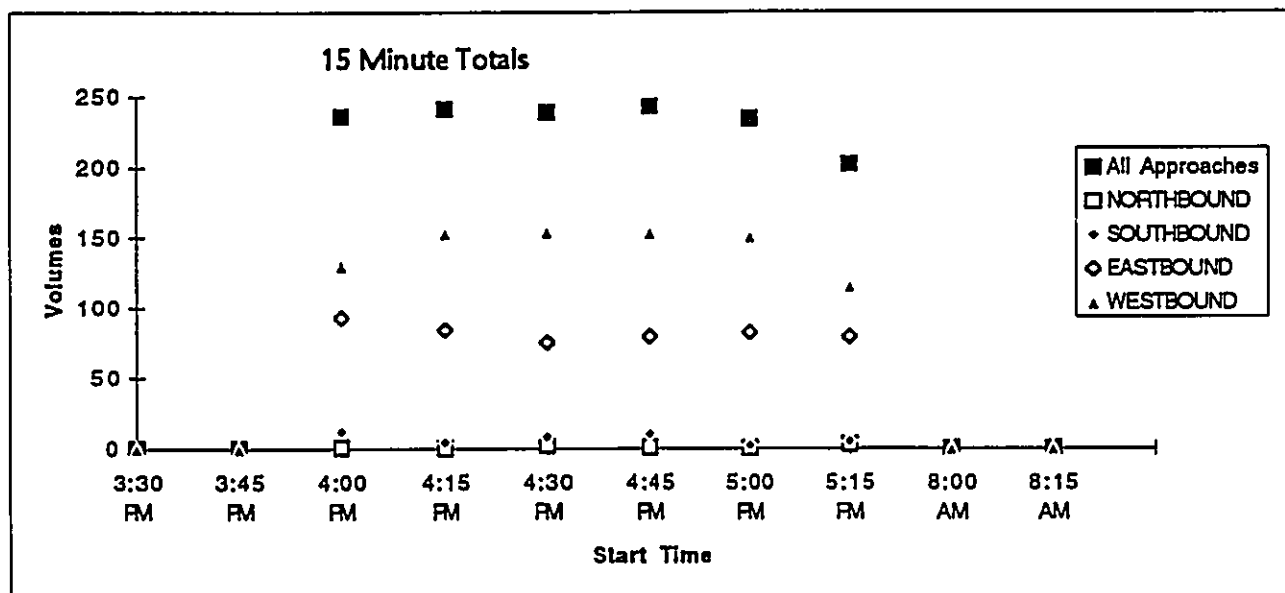
Project : 66.0 ASM
Date: 2/4/97

Start Time	Direction NORTHBOUND				North-South Road Kulawea St.	Direction SOUTHBOUND				
	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B	
3:30 PM										
3:45 PM										
4:00 PM	1	0	0			8	0	4		
4:15 PM	0	0	0			1	0	3		
4:30 PM	1	0	1			4	0	4		
4:45 PM	0	0	1			4	0	6		
5:00 PM	0	0	0			0	0	2		
5:15 PM	3	0	0			3	0	2		

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B	
4:15 PM	3	0	1	0	0	7	0	10	0	0
5:15 PM	TOTAL	4		0.00%		TOTAL	17		0.00%	

Start Time	Direction EASTBOUND				East-West Road Ulune	Direction WESTBOUND				
	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B	
3:30 PM										
3:45 PM										
4:00 PM	2	91	0			1	123	6		
4:15 PM	10	73	1			0	149	4		
4:30 PM	1	73	1			1	148	5		
4:45 PM	3	75	1			1	148	4		
5:00 PM	3	79	0			0	145	5		
5:15 PM	4	74	1			0	110	5		

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B	
4:15 PM	11	301	3	0	0	2	551	19	0	0
5:15 PM	TOTAL	315		0.00%		TOTAL	572		0.00%	



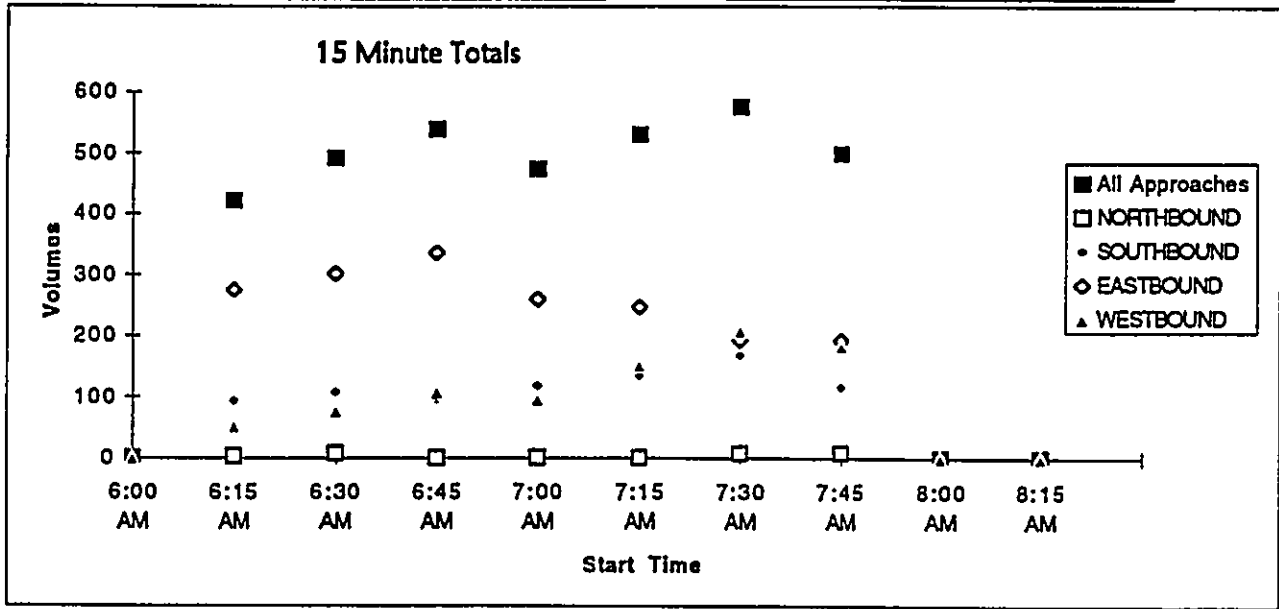
Project : 66.0 ASM
Date: 2/5/97

Start Time	Direction NORTHBOUND				North-South Road Aiea Heights Drive	Direction SOUTHBOUND			
	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B
6:00 AM									
6:15 AM	1	1	1			84	1	8	
6:30 AM	0	6	2			91	3	13	
6:45 AM	0	0	0			85	0	12	
7:00 AM	0	1	0			89	1	28	
7:15 AM	0	0	0			93	1	40	
7:30 AM	3	5	0			73	0	95	
7:45 AM	0	8	1			65	3	48	

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B		SB-LT	SB-TH	SB-RT	T/B	
7:00 AM	3	14	1	0	0	320	5	211	0	0
8:00 AM	TOTAL	18		0.00%		TOTAL	536		0.00%	

Start Time	Direction EASTBOUND				East-West Road Moanalua Road	Direction WESTBOUND			
	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B
6:00 AM									
6:15 AM	29	245	1			2	20	29	
6:30 AM	39	261	1			0	24	52	
6:45 AM	49	287	0			1	44	61	
7:00 AM	54	205	1			0	37	58	
7:15 AM	70	175	1			0	69	82	
7:30 AM	75	113	4			4	98	106	
7:45 AM	71	113	8			4	103	76	

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B		WB-LT	WB-TH	WB-RT	T/B	
7:00 AM	270	606	14	0	0	8	307	322	0	0
8:00 AM	TOTAL	890		0.00%		TOTAL	637		0.00%	



Project : 66.0 ASM
Date: 2/4/97

Direction NORTHBOUND North-South Road Alea Heights Drive Direction SOUTHBOUND

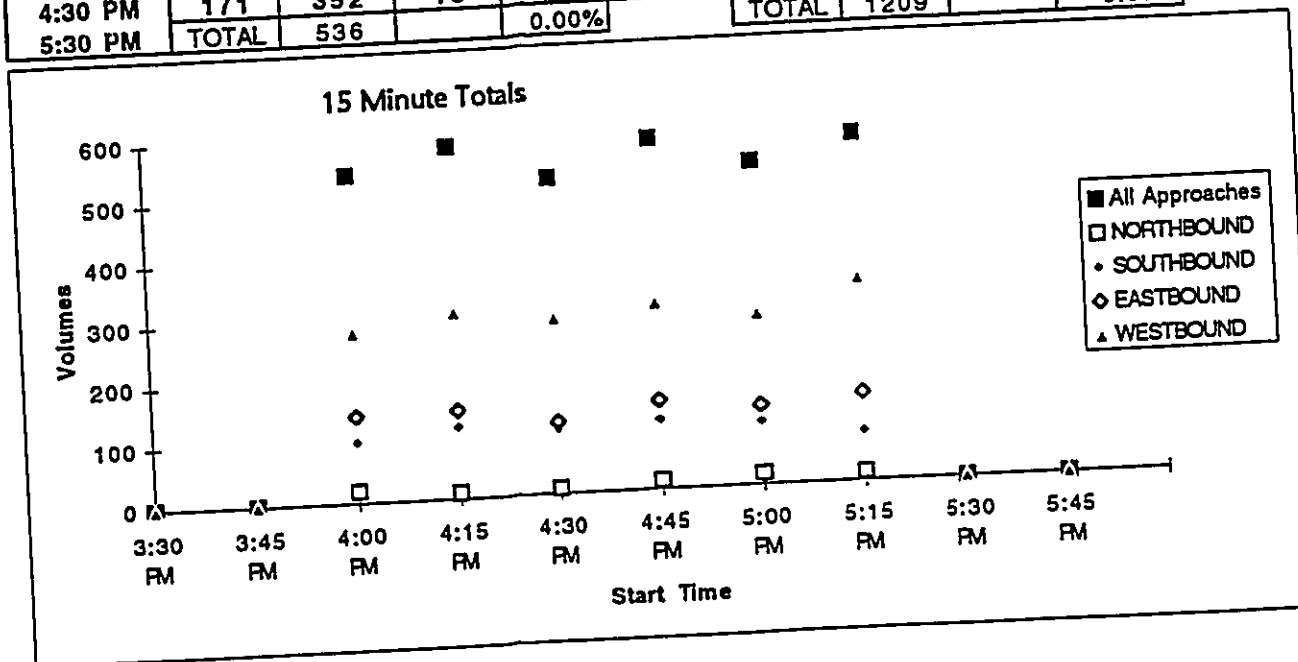
Start Time	NB-LT	NB-TH	NB-RT	T/B	SB-LT	SB-TH	SB-RT	T/B
3:30 PM								
3:45 PM					48	0	51	
4:00 PM	7	6	6		40	1	77	
4:15 PM	6	2	2		43	4	59	
4:30 PM	4	2	2		52	1	60	
4:45 PM	7	3	3		39	1	63	
5:00 PM	7	5	5		33	1	47	
5:15 PM	3	5	5					

PEAK HOUR	NB-LT	NB-TH	NB-RT	T/B	SB-LT	SB-TH	SB-RT	T/B
4:30 PM	21	15	15	0	167	7	229	0
5:30 PM	TOTAL	51		0.00%	TOTAL	403		0.00%

Direction EASTBOUND East-West Road Moanalua Road Direction WESTBOUND

Start Time	EB-LT	EB-TH	EB-RT	T/B	WB-LT	WB-TH	WB-RT	T/B
3:30 PM								
3:45 PM					6	192	82	
4:00 PM	47	94	1		11	215	81	
4:15 PM	50	88	7		12	197	80	
4:30 PM	39	76	2		7	234	65	
4:45 PM	42	102	1		7	187	87	
5:00 PM	42	83	5		5	223	105	
5:15 PM	48	91	5					

PEAK HOUR	EB-LT	EB-TH	EB-RT	T/B	WB-LT	WB-TH	WB-RT	T/B
4:30 PM	171	352	13	0	31	841	337	0
5:30 PM	TOTAL	536		0.00%	TOTAL	1209		0.00%



APPENDIX B

LEVEL-OF-SERVICE DEFINITIONS

FOR

SIGNALIZED AND UNSIGNALIZED INTERSECTIONS¹

REFERENCE: Highway Capacity Manual (Special Report 209, 1994)

LEVEL-OF-SERVICE FOR SIGNALIZED INTERSECTIONS

Level-of-service for signalized intersections is defined in terms of *delay*. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period. The table to the right gives the Level-of-Service criteria.

Level of Service	Stopped Delay Per Vehicle (sec/veh)
A	≤ 5
B	> 5 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 40
E	<40 and ≤ 60
F	>60

Level-of-service A describes operations with very low delay up to 5.0 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level-of-service B describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths or both. More vehicles stop than for LOS A, causing higher levels of average delay.

Level-of-service C describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level-of-service D describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or a high v/c ratios (volume of cars to capacity of intersection). Individual cycle failures are noticeable.

Level-of-service E describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level-of-service F describes operations with delay in excess of 60.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed

the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL-OF-SERVICE FOR UNSIGNALIZED INTERSECTIONS

The level of service criteria are given in the table to the right. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position.

Level of Service	Average Total Delay (sec/veh)
A	≤ 5
B	> 5 and ≤ 10
C	> 10 and ≤ 20
D	> 20 and ≤ 30
E	<30 and ≤ 45
F	>45

The proposed level of service criteria are somewhat different from the criteria for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersections than for a signalized intersection.

APPENDIX C

TRAFFIC ANALYSIS RESULTS

Table C-1 - Moanalua Road with Aiea Heights Drive			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Eastbound Left-Turn from Moanalua Rd	F	E	E
Eastbound Through on Moanalua Rd	B	A	A
Westbound Approach on Moanalua Rd	B	B	B
Northbound Approach on Aiea Heights Dr	E	n/a	n/a
Southbound Approach on Aiea Heights Dr	F	F	F
Overall Intersection	D	D	D
Afternoon Peak Hour			
Eastbound Left-Turn from Moanalua Rd	D	D	D
Eastbound Through on Moanalua Rd	B	A	A
Westbound Through on Moanalua Rd	C	B	B
Northbound Approach on Aiea Heights Dr	E	n/a	n/a
Southbound Approach on Aiea Heights Dr	E	D	D
Overall Intersection	C	C	C

Table C-2 - Aiea Heights Drive with Ulune Street (Unsignalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Southbound Left-Turn from Aiea Hts Dr	B	n/a	n/a
Westbound Right-Turn from Ulune Street	B	n/a	n/a
Afternoon Peak Hour			
Southbound Left-Turn from Aiea Hts Dr	B	n/a	n/a
Westbound Right-Turn from Ulune Street	C	n/a	n/a

Table C-3 - Aiea Heights Drive with Ulune Street (Signalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Northbound Through on Aiea Hts Dr	n/a	A	A
Northbound Right-turn from Aiea Hts Dr	n/a	A	A
Southbound Left-Turn from Aiea Hts Dr	n/a	C	A
Southbound Through on Aiea Hts Dr	n/a	B	A
Westbound Left-Turn from Ulune Street	n/a	B	B
Westbound Right-Turn from Ulune Street	n/a	B	B
Overall Intersection	n/a	B	A
Afternoon Peak Hour			
Northbound Through on Aiea Hts Dr	n/a	B	A
Northbound Right-turn from Aiea Hts Dr	n/a	B	A
Southbound Left-Turn from Aiea Hts Dr	n/a	C	A
Southbound Through on Aiea Hts Dr	n/a	B	A
Westbound Left-Turn from Ulune Street	n/a	B	B
Westbound Right-Turn from Ulune Street	n/a	B	B
Overall Intersection	n/a	B	A

Table C-4 - Aiea Heights Drive with Ulune St./Hakina St. (Unsignalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Northbound Left-Turn from Aiea Hts Dr	B	B	B
Southbound Left-Turn from Aiea Hts Dr	A	A	A
Eastbound Left-Turn/Through on Ulune Street	E	F	F
Eastbound Right-Turn on Ulune Street	B	C	C
Westbound Approach on Hakina Street	B	F	F
Afternoon Peak Hour			
Northbound Left-Turn from Aiea Hts Dr	A	A	B
Southbound Left-Turn from Aiea Hts Dr	A	A	A
Eastbound Left-Turn/Through on Ulune Street	E	F	F
Eastbound Right-Turn on Ulune Street	A	A	A
Westbound Approach on Hakina Street	D	E	F

Table C-5 Ulune Street with Kulawea Street (Unsignalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Eastbound Left-Turn from Ulune Street	A	n/a	n/a
Westbound Left-Turn from Ulune Street	A	n/a	n/a
Northbound Approach on Kulawea Street	C	n/a	n/a
Southbound Approach on Kulawea Street	F	n/a	n/a
Afternoon Peak Hour			
Eastbound Left-Turn from Ulune Street	A	n/a	n/a
Westbound Left-Turn from Ulune Street	A	n/a	n/a
Northbound Approach on Kulawea Street	B	n/a	n/a
Southbound Approach on Kulawea Street	B	n/a	n/a

Table C-6 - Ulune Street with Kulawea Street (Signalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Eastbound Left-turn from Ulune Street	n/a	C	C
Eastbound TH/RT from Ulune Street	n/a	B	B
Westbound TH/RT from Ulune Street	n/a	C	C
Southbound Approach from Kulawea Street	n/a	C	C
Overall Intersection	n/a	C	C
Afternoon Peak Hour			
Eastbound Left-turn from Ulune Street	n/a	C	C
Eastbound TH/RT from Ulune Street	n/a	A	A
Westbound TH/RT from Ulune Street	n/a	B	C
Southbound Approach from Kulawea Street	n/a	C	C
Overall Intersection	n/a	B	B

Table C-7 - DP Road with Aiea Heights Drive (Unsignalized)			
Movement	LOS (delay-seconds/vehicle)		
	Existing	2000 Without Project	2000 With Project
Morning Peak Hour			
Westbound Left-Turn from Future DP Road	n/a	n/a	C
Northbound Left-Turn from Aiea Hts Dr	n/a	n/a	F
Southbound Right-Turn from Aiea Hts Dr	n/a	n/a	F
Afternoon Peak Hour			
Westbound Left-Turn from Future DP Road	n/a	n/a	B
Northbound Left-Turn from Aiea Hts Dr	n/a	n/a	F
Southbound Right-Turn from Aiea Hts Dr	n/a	n/a	B