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ADDENDUM

WAIIEHU PLANNED DEVELOPMENT

Waiehu, Maui

MA

138

WATANABE, ING & KAWASHIMA
Attorneys At Law
Hawaii Building
745 Fort Street, 5th Floor
Honolulu, Hawaii 96813
Telephone (808) 544-8300

HAND DELIVERED
TO: Office of Environmental Quality Control
Central Pacific Plaza, 4th Flr. RE: Waiehu Planned Development
220 S. King Street
Honolulu, Hawaii 96813
DATE: August 8, 1991

THE FOLLOWING:


COPIES	DATE	DESCRIPTION
		Revised Environmental Impact Statement Addendum

IS/ARE TRANSMITTED HEREWITH:

FOR YOUR INFORMATION
 FOR YOUR SIGNATURE AND RETURN
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 FOR YOUR REVIEW AND COMMENT
 PER OUR CONVERSATION
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 SEE "REMARKS" BELOW
 FOR NECESSARY ACTION

REMARKS: Returning the above to your office. Thank you.

By


BENJAMIN A. KUDO

Woolsey,
Miyabara &
Associates, inc.

July 18, 1984

Hawaii Housing Authority
1002 North School Street
Honolulu, HI 96817

ATTN: Ken Harada

SUBJ: Waiehu Planned Development - EIS

Gentlemen:

Enclosed is a traffic study prepared as an addendum to the Waiehu Planned Development E.I.S., which was previously submitted to the OEQC for acceptance. The study addresses in detail the concerns expressed by certain E.I.S. reviewers, primarily with regard to the project's impact on existing traffic levels at peak hours.

The information contained in the report reflects actual and projected traffic impacts superseding Section 4 Anticipated Environmental Impacts and Mitigative Measures to Minimize Adverse Impacts, II. Primary Impacts, C. Infrastructure, 12. Access and Traffic, paragraphs 2 and 3.

In summary, the study concludes that traffic volumes along Kahekili Highways and Waiehu Beach Road will increase, although not in excess of respective roadway capacities. Levels of service will remain for the most part unchanged except for brief periods of lowered levels of service experienced by relatively few motorists.

Mitigative measures as recommended within the report should be complied with and incorporated in the final design plans.

Another traffic concern expressed is the relationship of the proposed project roads to the existing roads from adjacent subdivisions. No connections are proposed due to the desire of the adjacent residents to not have direct access to the project. In addition, the State Department of Transportation, Highway Division, has since reviewed the plans and concur that connection of the internal roadways to existing roads are not necessary. Also, in certain conditions, the existing topography

prevents making a connection to existing roads. Although no direct connection is planned at this time to Kuhio Place (Piihana Road Extension), a connection can be made at some future time when it is mutually desired by residents of the project and adjacent residents.

We hope the additional information contained herein and in the traffic study fulfills your requirements for acceptance of the Waiehu Planned E.I.S.

Please do not hesitate to contact me if you have any questions or need further clarification.

Thank you.

Sincerely,

WOOLSEY, MIYABARA & ASSOCIATES, INC.



Michael T. Miyabara, ASLA

MTM/sm

Encl.

TRAFFIC IMPACT STUDY
WAIIEHU PLANNED DEVELOPMENT
WAIIEHU, HAWAII

PREPARED FOR:
WOOSLEY, MIYABARA &
ASSOCIATES, INC.

JUNE 1984

SUBMITTED BY:
PARSONS BRINCKERHOFF
QUADE & DOUGLAS, INC.

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WAIEHU PLANNED DEVELOPMENT
TRAFFIC IMPACT STUDY

INTRODUCTION

The Hawaii Housing Authority has proposed to develop approximately 133.5 acres in Waiehu, Maui for low to moderate income and gap group housing needs. The proposed development includes 680 detached single-family dwelling units, 60 attached, one-story elderly dwelling units and 60 rental apartments in one- and two-story buildings.

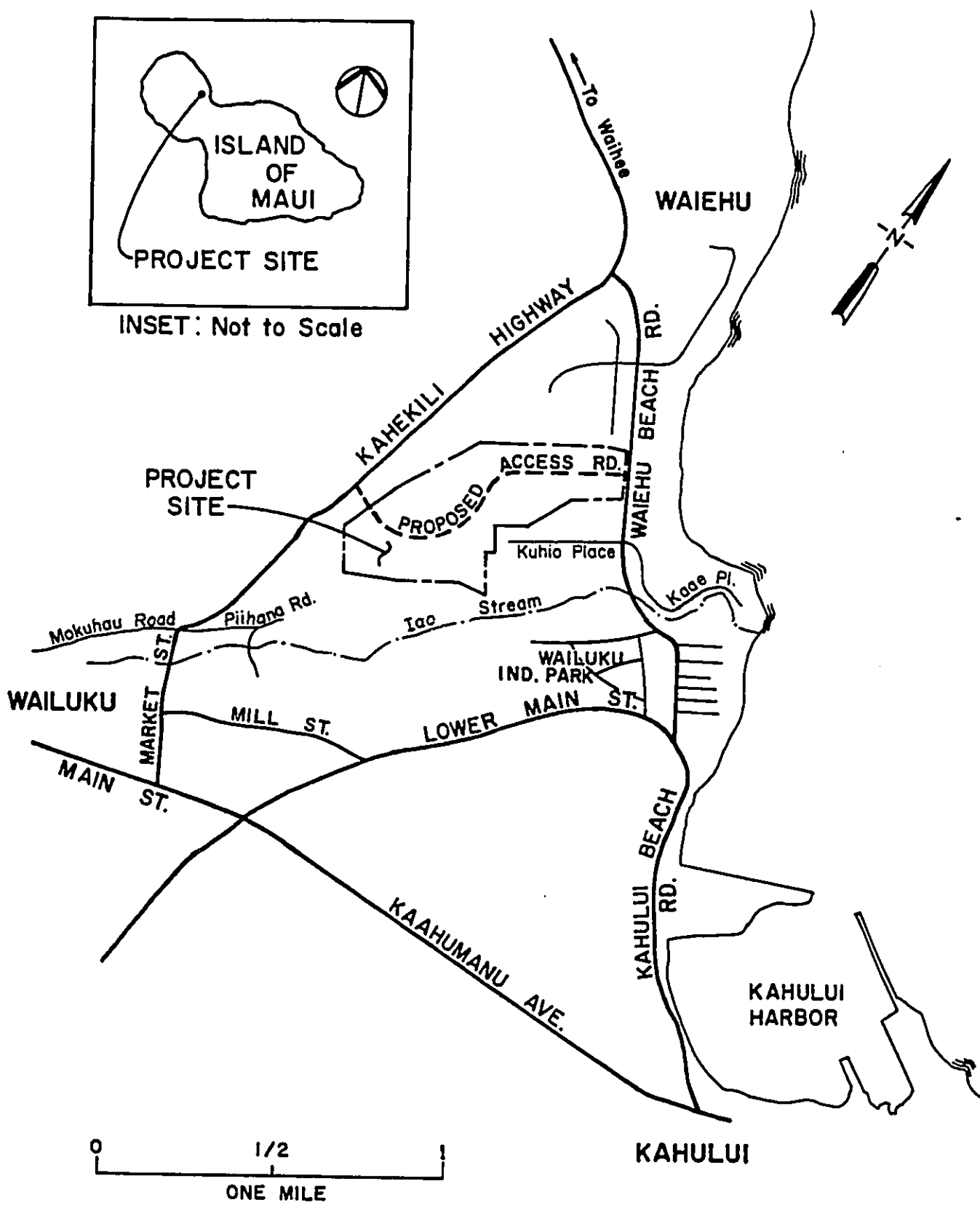
This study will report on the potential traffic impacts of the proposed project. This report includes a description of the existing traffic conditions, future traffic conditions without and with the proposed project and any mitigative measures, if necessary. Existing traffic peaks occur in the morning or AM (7:00 - 8:00 a.m.) and afternoon or PM (3:45 - 4:45 p.m.); the project's peak hours for traffic generation are assumed to coincide with these periods.

EXISTING CONDITION

The project site is vacant and overgrown with kiawe and koa haole trees. The land is presently used for pasture. There is no existing public access to the project site. A location map is shown in Figure 1.

Roadway System

The project site is bordered by two rural, two-lane highways, Kahekili Highway and Waiehu Beach Road. Kahekili Highway originates at its intersection with Market Street, Mokuhau Road and



LOCATION MAP

FIGURE 1

Piihana Road in Wailuku. Waiehu Beach Road begins at its intersection with Lower Main Street and Kahului Beach Road near the Wailuku Industrial Park. Both of these highways extend in a general northerly direction and meet in a T-intersection in Waiehu, about two miles north of Wailuku. Kahekili Highway continues northward into Waihee, where the highway narrows and becomes generally unimproved.

Traffic Conditions

The description of existing traffic conditions is based on field observations and traffic counts taken in mid-May 1984. The field data was used to supplement and update the counts taken by the State Highways Division in 1979 and 1981.¹ This study assumed five percent of the traffic is trucks.

Kahekili Highway carries two-way volumes of 170 vehicles per hour in the AM peak hour and 220 vehicles per hour in the PM peak hour. Analysis using Highway Capacity Manual² procedures showed that Kahekili Highway operates at highway service level C during both peak hours. Levels of service are defined in the appendix.

Waiehu Beach Road handles two-way volumes of 430 and 460 vehicles per hour during the AM and PM peak hours, respectively. Waiehu Beach Road operates at highway level D during both peak hours. Highway service levels A and B are not obtainable on either Kahekili Highway or Waiehu Beach Road due to the highway geometrics and physical condition of these highways. The existing traffic volumes are shown in Figure 2.

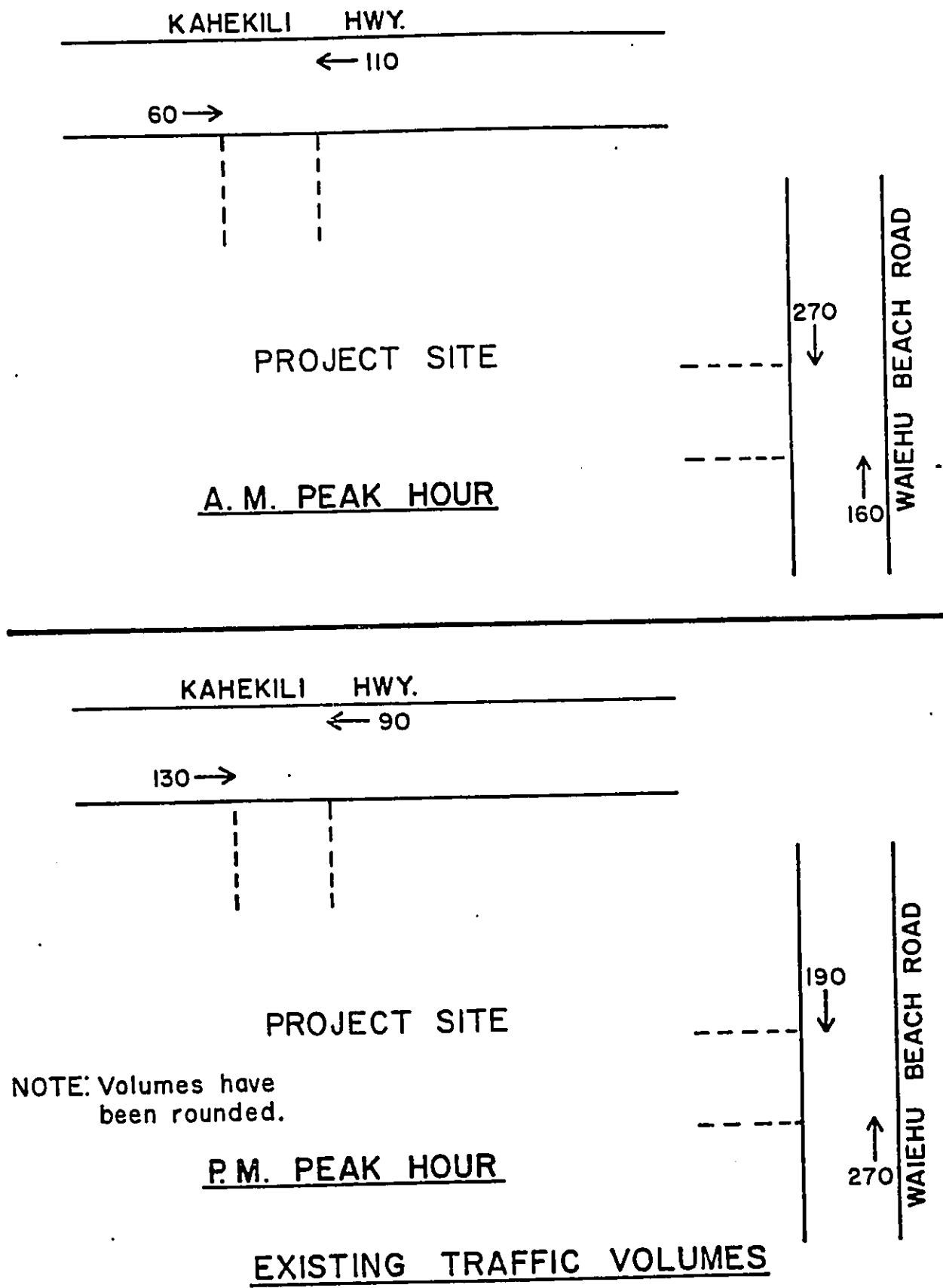


FIGURE 2

FUTURE TRAFFIC CONDITIONS WITHOUT PROJECT

The completion of existing or planned developments in the vicinity of the proposed project is expected to increase traffic volumes on Kahekili Highway and Waiehu Beach Road. The traffic generated by the proposed Piihana Project District (300 dwelling units), existing and proposed Waiehu Heights Subdivision (total 398 dwelling units), and the Hawaiian Home Lands' Paukukalo project (total 184 units) is assumed to have generation rates similar to the proposed project and similar travel characteristics to the existing traffic. Future traffic volumes, shown in Figure 3, assume completion of these projects and are used to assess future conditions without the proposed project.

Traffic volumes would increase, but the service levels on Kahekili Highway would remain at level C during both peak hours. Levels of service on Waiehu Beach Road would remain at level D during the AM peak hour, but drops to level E during the PM peak hour. This reduction in service level represents a reduction in speed and passing opportunities. Traffic would still be able to flow, since volumes are under capacity.

TRIP GENERATION

The traffic impact of the proposed project is quantified in trip generation which estimates the number of vehicles added to the roadway system by the proposed project. Points of origin and destinations are determined in trip distribution and travel routes are designated in traffic assignment.

GEORGE R. ARIYOSHI
GOVERNOR



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EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
HAWAII HOUSING AUTHORITY
P. O. BOX 17907
HONOLULU, HAWAII 96817

IN REPLY REFER

TO:

August 31, 1984

MEMORANDUM

TO: Letitia N. Uyehara, Director
Office of Environmental Quality Control

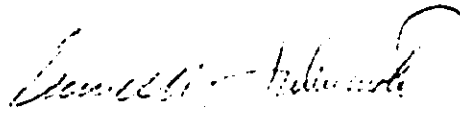
FROM: Russell Fukumoto
Acting Executive Director

SUBJECT: Waiehu Planned Development
Addendum to Environmental Impact Statement

Transmitted herewith please find one (1) original and 25 copies of the Traffic Impact Study with all comments and required responses to be incorporated as an addendum to the subject Environmental Impact Statement (EIS).

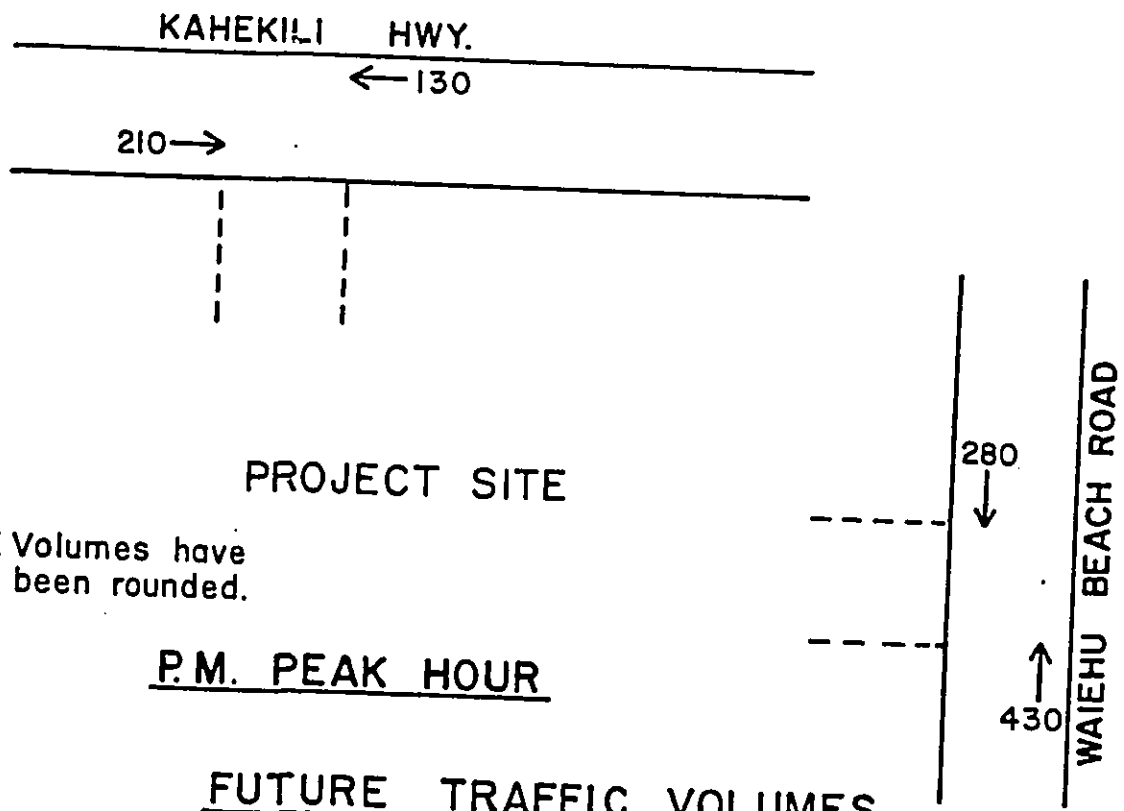
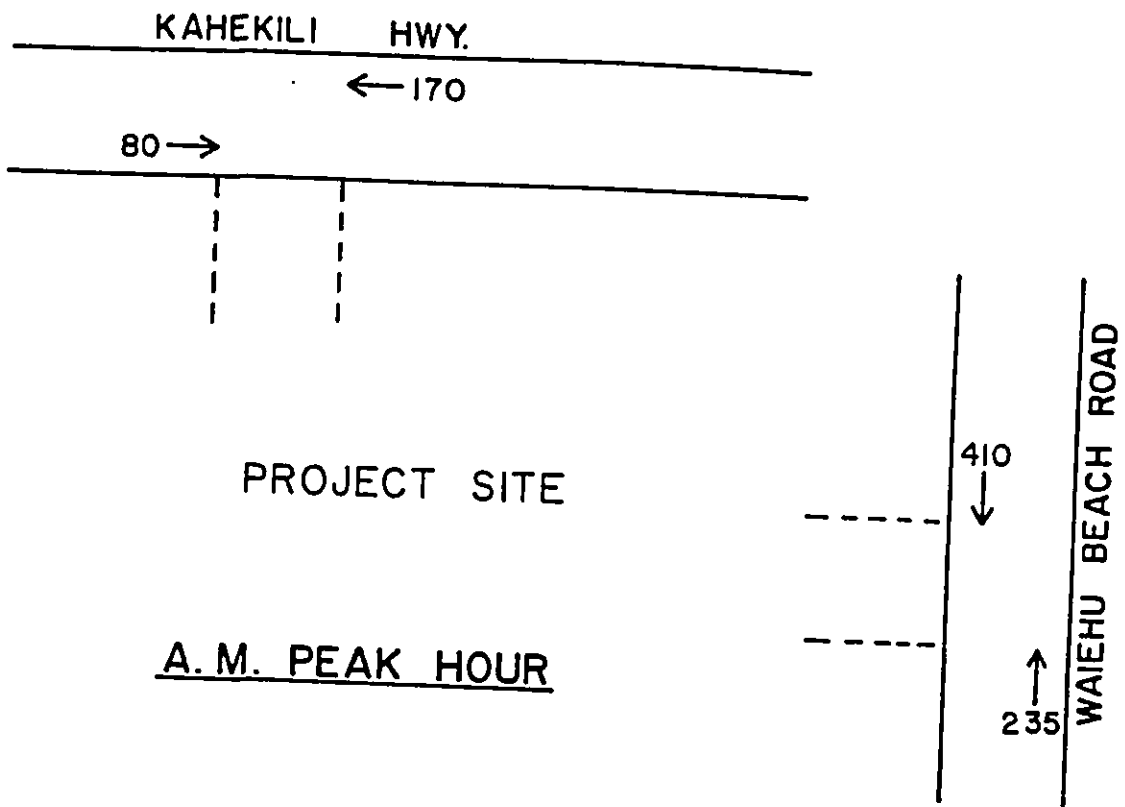
Should you have any questions, please contact Kathy Whang Inouye, Assistant Project Coordinator, at 848-3252 immediately.

Your cooperation in expediting approval of this EIS would be greatly appreciated.



RUSSELL N. FUKUMOTO
Acting Executive Director

Attachments



NOTE: Volumes have been rounded.

FUTURE TRAFFIC VOLUMES
(WITHOUT PROJECT)

FIGURE 3

Trip Generation Rates

Rates compiled by the Institute of Transportation Engineers were used in this study. Table 1 shows the trip generation rates used for various types of dwelling units.

Table 1

TRIP GENERATION RATES

	AM		PM	
	<u>Enter</u>	<u>Exit</u>	<u>Enter</u>	<u>Exit</u>
Single-Family Dwelling Unit	0.3	0.6	0.7	0.4
Apartment (Low-Rise)	0.1	0.4	0.4	0.2
Elderly	0.2	0.2	0.2	0.2

Internal trips, or trips between homes within the project site account for a small percentage of the total trips. Internal trips were subtracted from the total number of trips and the resulting net trips were assigned onto the roadway system. The total and net trip generation is shown in Table 2.

Table 2

TOTAL AND NET TRIP GENERATION

	<u>Total Trip Generation</u>	<u>Net Trip Generation</u>
AM Peak Hour		
Enter	222	212
Exit	444	434
PM Peak Hour		
Enter	512	500
Exit	296	284

Trip Distribution

Origins and destinations of the generated trips are determined in trip distribution. The trip distribution indicators for this study are estimated future employment and population distributions on the island of Maui. A small amount of traffic would travel northward to Waihee; however, most of the traffic would travel southwest to Wailuku/Lahaina or southeast to Lower Wailuku/Kahului/East Maui. The indicators and trip distribution factors are shown in Table 3.

Table 3
TRIP DISTRIBUTION

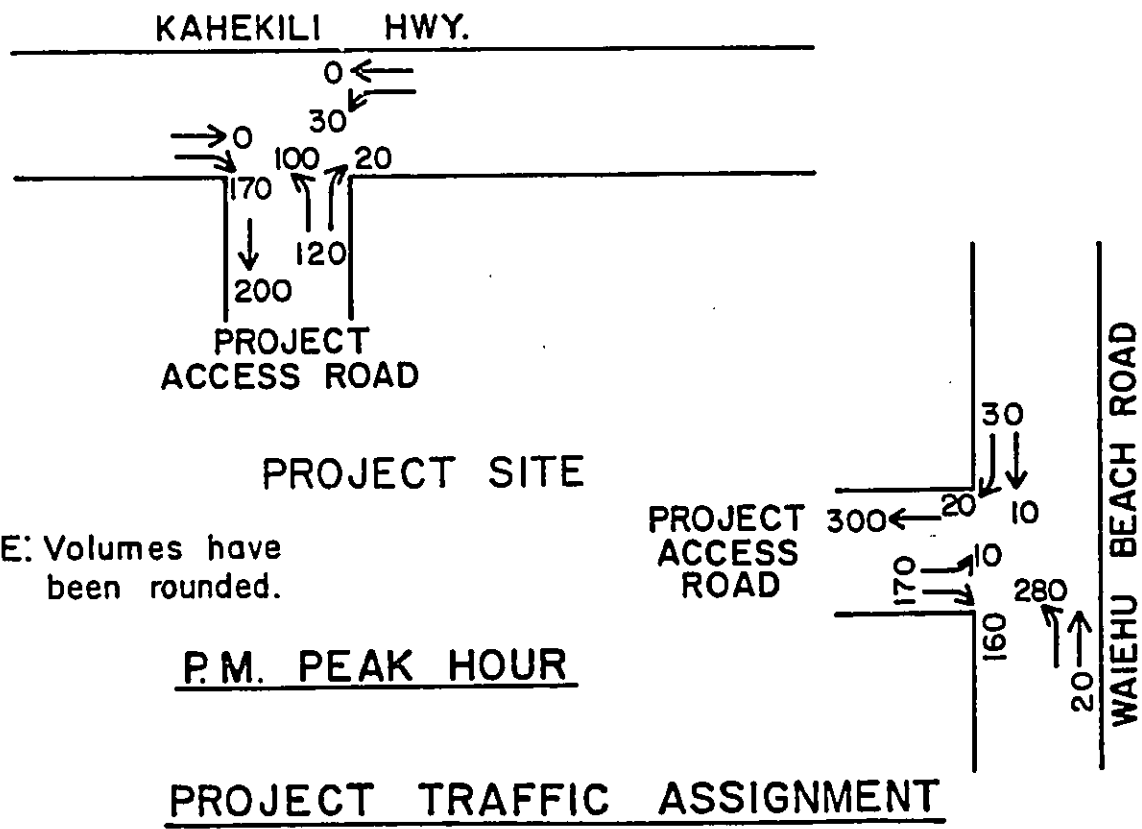
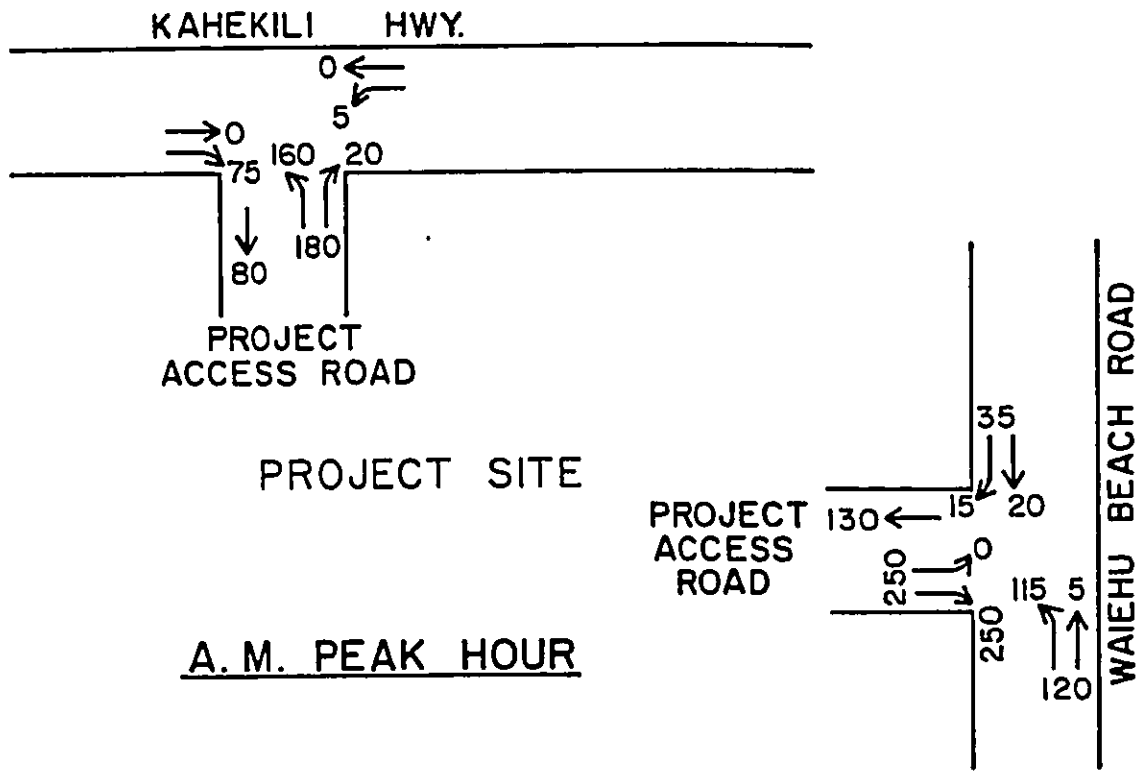
Indicators	<u>North</u>	<u>Southwest</u>	<u>Southeast</u>
Population	7%	37%	56%
Employment	0%	42%	58%
Trip Distribution Factors			
AM Peak Hour			
Enter	0.07	0.37	0.56
Exit	0.00	0.42	0.58
PM Peak Hour			
Enter	0.05	0.38	0.57
Exit	0.05	0.38	0.57

Traffic Assignment

The travel routes the generated traffic is expected to utilize are designated in traffic assignment. The proposed project has two access points, one on Kahekili Highway and the other on Waiehu Beach Road. In general, the access point selection would be dependent on the trip origin and/or destination. Trips to and from Lahaina and the Wailuku civic center would tend to use the Kahekili Highway access, while trips to and from Lower Wailuku, Kahului and East Maui would most likely use the Waiehu Beach Road access. Trips towards Waihee could utilize either access with the majority using the Waiehu Beach Road access. A small amount of traffic headed towards Lower Wailuku, Kahului or East Maui may elect to by-pass the Waiehu Beach Road access to use the Kahekili Highway access because of their close proximity to the Kahekili Highway access. Figure 4 shows the project traffic assignment; Figure 5 shows the future traffic volumes with the project traffic.

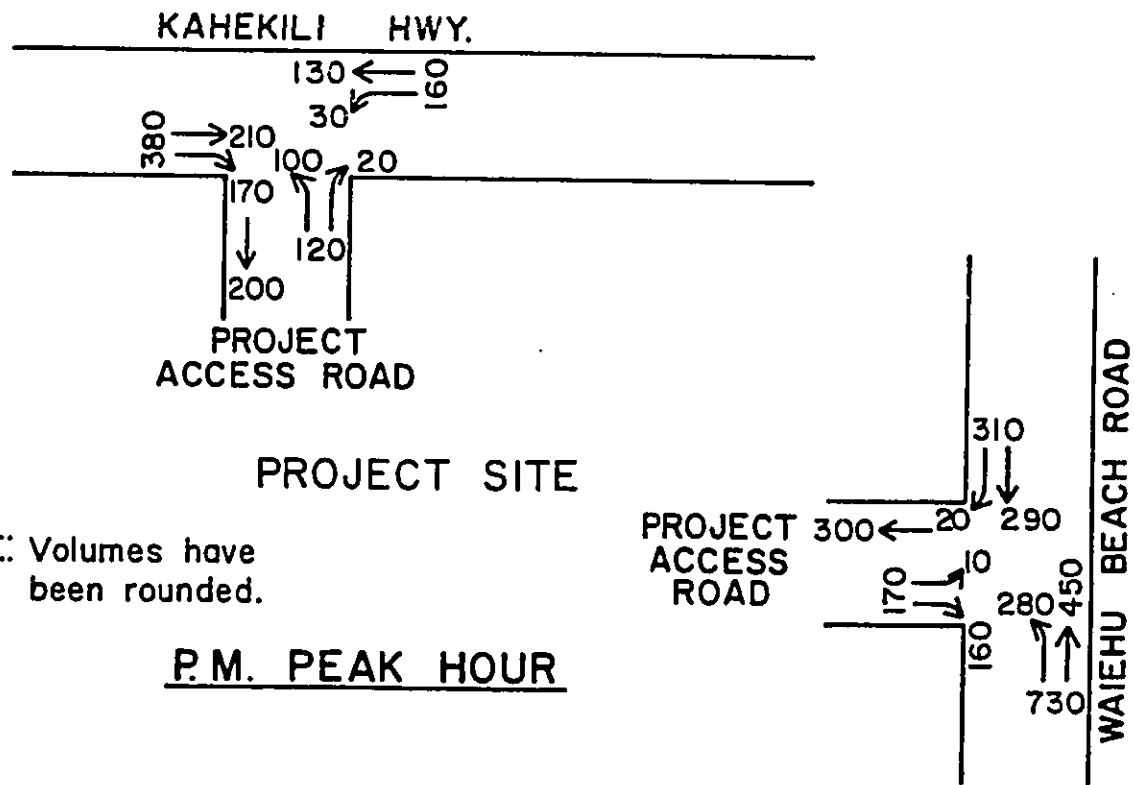
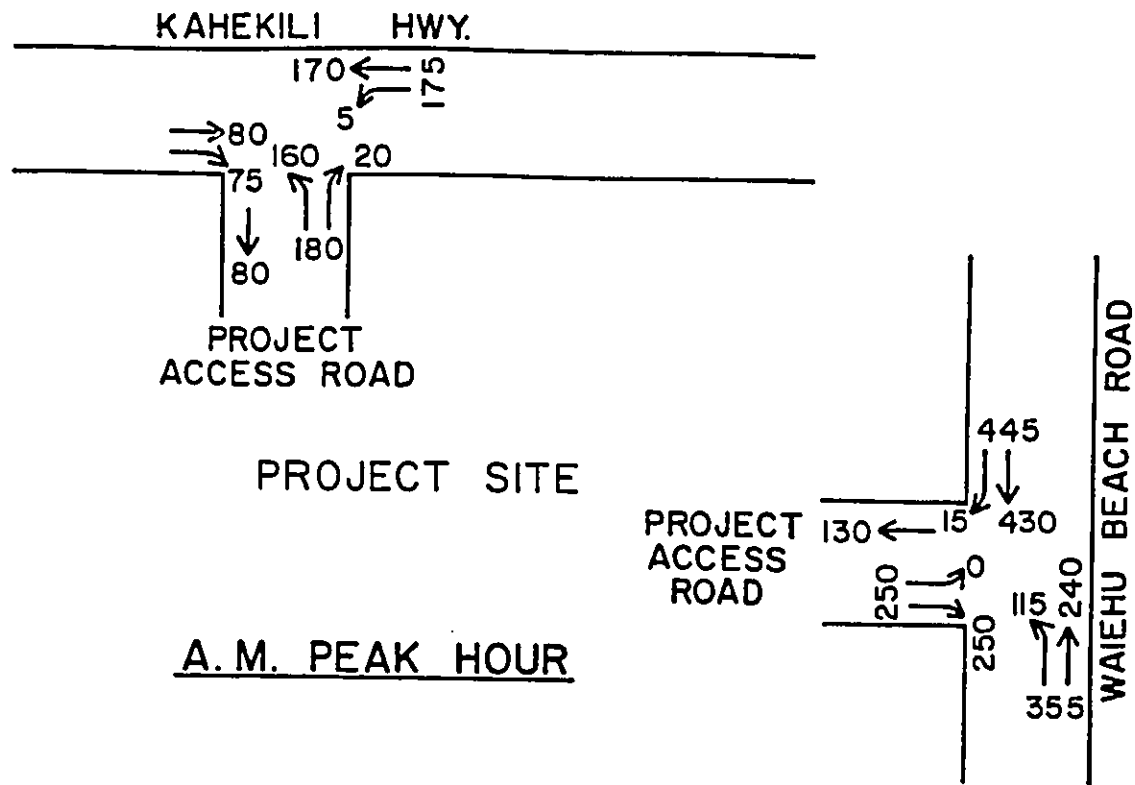
PROJECT TRAFFIC IMPACTS

The proposed project is expected to increase traffic volumes on Kahekili Highway and Waiehu Beach Road. Kahekili Highway levels of service would remain at level C during the AM peak hour and drop to level D in the PM peak hour. Waiehu Beach Road would experience highway level of service E during the AM and PM peak hours; however, capacity would not be reached. The lowered highway levels of service represent a reduction in operating speed and opportunity to pass. Traffic would still flow since volumes are below capacity. Levels of service and volume-to-capacity ratios are summarized in Table 4.



NOTE: Volumes have been rounded.

FIGURE 4



NOTE: Volumes have been rounded.

**FUTURE TRAFFIC VOLUMES
(WITH PROJECT)**

FIGURE 5

Table 4
LEVELS OF SERVICE

	<u>Existing</u>		<u>Future</u>		<u>Future</u>	
	<u>AM</u>	<u>PM</u>	<u>W/out Project</u>	<u>Project</u>	<u>With Project</u>	<u>Project</u>
	<u>AM</u>	<u>PM</u>	<u>AM</u>	<u>PM</u>	<u>AM</u>	<u>PM</u>
Highway Levels of Service						
Kahekili Highway	C	C	C	C	C	D
Waiehu Beach Road	D	D	D	E	E	E
Volume-to-Capacity Ratio						
Kahekili Highway	0.12	0.15	0.18	0.24	0.34	0.43
Waiehu Beach Road	0.28	0.30	0.42	0.46	0.67	0.77
Intersection Levels of Service						
Kahekili Highway	--	--	--	--	A	A
Access Road-Shared Lane	--	--	--	--	C	C
Access Road						
Separate Right Lane	--	--	--	--	A	A
Separate Left Lane	--	--	--	--	C	C
Waiehu Beach Road	--	--	--	--	A	A
Access Road-Shared Lane	--	--	--	--	C	C
Access Road						
Separate Right Lane	--	--	--	--	C	A
Separate Left Lane	--	--	--	--	D*	E*

*These levels are experienced by a very small number of vehicles.

Two new T-intersections would be created where the project access roads connect to Kahekili Highway and Waiehu Beach Road. The project access road approaches should be stop-controlled at both intersections. These intersections were analyzed by the Critical Movement Analysis procedures for unsignalized intersections.⁴

Kahekili Highway traffic is expected to experience little or no delay at the new intersection. If the project access road approach has only one shared lane for left and right turns, this approach would operate at level C during both the AM and PM peak hours. If separate right and left turn lanes were provided at the project access road approach, the approach would continue to operate at level C during both peak hours.

Traffic on Waiehu Beach Road would also experience little or no delays at the new intersection with the project access road. The project access road approach is expected to operate at level C during both peak hours if only one lane for turns out of the project site is provided. However, if separate turn lanes are provided, then the PM peak hour right turn lane is expected to improve to service level A operating conditions. The AM peak hour right turn lane would remain at level C conditions. The separate left turn lane is expected to operate at service levels D and E during the AM and PM peak hours, respectively. Levels D and E are unacceptable for unsignalized intersections, however, less than one percent of the vehicles entering this intersection would be affected. Therefore, the lowered service

levels for the left turn lane are considered to be not significant. Also a separate left turn lane would serve to decrease delays for the large number of right turning vehicles, especially during the PM peak hour.

Although left turn traffic off the highways to the project access road will experience little or no delays, through traffic flow in the same direction could be interrupted. An analysis⁵ of turn and through volumes indicates that a storage lane of 150 feet should be provided for the left turn from Waiehu Beach Road into the project access road. Provision of the turn lane, while not necessary to increase capacity or to maintain good levels of service, would serve to reduce the potential impact of the new intersection on Waiehu Beach Road. The lower volumes do not warrant a left turn lane on Kahekili Highway.

CONCLUSIONS AND RECOMMENDATIONS

Traffic volumes on both Kahekili Highway and Waiehu Beach Road are expected to increase. Traffic increases due to other projects as well as the proposed 800-unit residential project were identified; roadway capacities would not be exceeded.

This study also analyzed the new intersections formed by the project access road with the two highways. Based on this analysis, the following are recommended:

- o Traffic on the project's access road approaching each highway intersection shall be stopped. Stop signs and pavement markings (stop bar) shall be provided.
- o The project's access road approach to these intersections should be striped for separate left and right turn lanes to minimize delays.
- o A left turn storage lane should be provided on Waiehu Beach Road to minimize interruptions to northbound traffic flow.

REFERENCES

1. State of Hawaii, Department of Transportation, Highways Division, Planning Branch. Count Station 3, Main Street at Waiehu Beach Road and Kahului Beach Road, 1983. Count Station 3-E, Kahekili Highway at Waiehu Beach Road, 1979.
2. National Academy of Sciences, National Research Council, Highway Research Board, Special Report 87, Highway Capacity Manual, Washington, D. C., 1965.
3. Institute of Transportation Engineers, Trip Generation, Arlington, Virginia, 1979.
4. Transportation Research Board, National Academy of Sciences, Transportation Research Circular 212, Interim Materials on Highway Capacity, Washington, D. C., 1980.
5. M. D. Harmelink, "Volume Warrants for Left-Turn Storage Lanes at Unsignalized Grade Intersections," Highway Research Record Number 211, Highway Research Board, Washington, D. C., 1967.

APPENDIX

Although the Highway Capacity Manual and the Critical Movement Analysis require different calculations in the determination of service levels, the service level definitions in both methods are similar. Six levels of service, labelled A through F, from the best to worst conditions are defined. Characteristics of each level of service for highways and unsignalized intersections are described below. Level of Service C is typically used for highway design and Level of Service D is considered adequate for urban arterials; corresponding Level of Service for rural highways are B and C.

Highways

Level of Service A: A free flow situation with low volumes and high speeds. There is a high level of maneuverability with speeds controlled by driver discretion, speed limits, and physical constraints.

Level of Service B: A condition of stable flow, drivers may experience a slight reduction in operating speeds, but still have a reasonable amount of maneuverability.

Level of Service C: Stable flow continues although drivers may start to feel restricted as speeds and maneuverability become controlled by higher volumes. A satisfactory speed is still obtainable in this service level.

Level of Service D: Changes in operating conditions approach unstable flow. Volume fluctuations and temporary restrictions reduce operating speeds and maneuverability. Low comfort and convenience can be tolerated for short durations.

Level of Service E: Volumes are near or at capacity of the highway. Operating speeds are less than 30 mph and momentary stoppages may occur in this unstable flow.

Level of Service F: Capacity of highway section exceeded; conditions deteriorate. Forced flow situation with low speeds and unpredictable volumes dropping below capacity. Downstream congestion may cause delays of varying duration. The possibility exists that both speed and volume may drop to zero.

Unsignalized Intersections (stop or yield control)

- Level of Service A: Little or no delay
- Level of Service B: Short traffic delays
- Level of Service C: Average traffic delays
- Level of Service D: Long traffic delays
- Level of Service E: Very long traffic delays at extreme congestion-failure
- Level of Service F: Intersection blocked by external causes.

State of Hawaii
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT-GENERAL
3749 Diamond Head Road
Honolulu, Hawaii 96818

AUG 11 11 13 AM '84

HINDO

Ms. Letitia M. Uyehara, Director
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Maiehu Planned Development
Maiehu, Maui, Hawaii

Thank you for providing us the opportunity to review the addendum (enclosed).

We have completed our review and have no comments to offer at this time.
Yours truly,

Signed

JERRY M. MATSUDA
Major, HAWG
Contr & Engr Officer

cc: Mr. Kenneth Harada (DSSH)

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July 30, 1984

Ms. Letitia M. Uyehara, Director
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

We have reviewed the traffic study prepared as an addendum to the environmental impact statement for the Maiehu planned development.

The study recommends adding a stop sign and bar, providing for turning lanes at intersections providing exit for the project, and a left turn storage lane on Maiehu Beach Road to prevent blocking northbound traffic.

Apart from noting the soundness of these recommendations, we have no additional comments to offer.

Sincerely,

Susumu Ono
SUSUMU ONO
Chairperson

cc: Mr. Kenneth Harada
DSSH, HHA

DEVELOPMENT COPY



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P. O. BOX 1109
MAILING, MAUI, HAWAII 96793

AUG 7 11 48 AM '84



HEADQUARTERS
NAVAL BASE PEARL HARBOR
PEARL HARBOR, HAWAII 96319

AUG 3 11 16 AM '84

IN REPLY REFER TO:
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1 AUG 1984

July 30, 1984

Ms. Letitia M. Uyehara, Director
Office of Environmental Quality Control
550 Halekaunila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Re: Maiehu Planned Development

We have no comments on the "Traffic Impact Study" for the subject project.
Thank you for giving us the opportunity to review the report.

Sincerely,

William S. Haines
William S. Haines
Director

cc: Mr. Kenneth Harada
File # SD 84-11

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"By Water All Things End At"

Ms. Letitia M. Uyehara, Director
Office of Environmental Quality Control
550 Halekaunila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Addendum to the Environmental Impact Statement
Maiehu Planned Development

The addendum to the EIS for the Maiehu Planned Development has been reviewed and the Navy has no comments to offer. As this command has no further use for the addendum, the addendum is being returned to the Office of Environmental Quality Control, by copy of this letter.

Thank you for the opportunity to review the addendum.

Sincerely,

Enclosure
Copy to:
Mr. Kenneth Harada, Project Coordinator
Department of Social Services and Housing
Hawaii Housing Authority
P. O. Box 17907
Honolulu, Hawaii 96817
Office of Environmental Quality Control

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HAWAII HOUSING
AUTHORITY

University of Hawaii at Manoa

Water Resources Research Center
Holmes Hall 253 - 2540 Dole Street
Honolulu, Hawaii 96822

AUG 5 11 19 AM '84

File	Info	Coord	Act	Unit
2	DEV	KC		WTR
84 DEV 5597A				

1 August 1984

Ms. Letitia N. Uyehara, Director
Office of Environmental Quality Control
550 Halekaunila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

SUBJECT: Traffic Impact Study, Waiehu Planned Development,
Waiehu, Maui, Hawaii, June 1984

We have reviewed the subject study and have no comment to offer. Thank you for the opportunity to comment. This material was reviewed by WRRC personnel.

Sincerely,

Edwin T. Kurabayashi

Edwin T. Kurabayashi
EIS Coordinator

ETM:jm

cc: Kenneth Harada

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AN EQUAL OPPORTUNITY EMPLOYER



RECEIVED
HAWAII HOUSING
AUTHORITY

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P. O. BOX 2008
HONOLULU, HAWAII 96820

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August 2, 1984

File	Info	Coord	Act	Unit
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2	DEV	KC		WTR
84 DEV 5597A				

Ms. Letitia N. Uyehara, Director
Office of Environmental Quality Control
550 Halekaunila Street, Room 301
Honolulu, HI 96813

Dear Ms. Uyehara:

SUBJECT: Addendum to EIS
Waiehu Planned Development

The Department of Education has no comment to offer at this time on the Traffic Impact Study Addendum for the subject EIS.

Thank you for the opportunity to review the Addendum.

Sincerely,

Francis M. Hatanaka

Francis M. Hatanaka
Acting Superintendent

FHH:J1 (HL)

cc: V. Honda
Maui District
Kenneth Harada, HHA

DEVELOPMENT COPY
AN EQUAL OPPORTUNITY EMPLOYER



REPLY TO
ATTN: DEEV

DEEV (Mr Fujimoto, 449-1831)

subject: Environmental Impact Statement Addendum for the Maiehu Planned Development,
Maiehu, Maui

to: Ms Letitia M. Uyehara, Director
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, HI 96813

Aug 17 10 28 AM '84
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Ref. No. P-171

August 20, 1984

1. This office has reviewed the subject EIS addendum and has no comment relative to the proposed project.
2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your project and thank you for the opportunity to review the document. The EIS addendum is returned for your file.

Robert M. Onizaki
ROBERT M. ONIZAKI
Chief, Engrg & Envtl Png Div
Directorate of Civil Engineering

1 Atch
EIS Addendum

cc: Department of Social Services
and Housing w/o Atch
Hawaii Housing Authority
ATTN: Mr Kenneth Harada
P. O. Box 17907
Honolulu, Hawaii 96817

Response

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	ENG			
	ENV			
FILE			84: DEV/ISARE	

Ms. Letitia M. Uyehara
Director
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: Addendum to the Maiehu Planned Development, HIS, Maui

We have reviewed the subject addendum and have no comments.

Very truly yours,

Kent M. Keith
cc: Mr. Kenneth Harada, Project Coordinator
Hawaii Housing Authority

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bc

AUG 20 2 55 PM '84

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84: DEV/60884
DEVELOPMENT COPY

GEORGE R. ABIYOSHI
GOVERNOR



JACK K. SUNA
CHAIRMAN, BOARD OF AGRICULTURE
SUZANNE D. PETERSON
DEPUTY TO THE CHAIRMAN

(P)1402.4

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 So. King Street
Honolulu, Hawaii 96814

Mailing Address:
P.O. Box 22159
Honolulu, Hawaii 96822

AUG 24 1984

Ms. Leticia M. Uyehara
Director
Office of Environmental
Quality Control
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: Environmental Impact Statement for the
Waiehu Planned Development

We have reviewed the subject document and have no comments

Very truly yours,

S. Tomiaga
TEUANE TOMIAGA
Acting State Public
Works Engineer

RY:ike
cc: Mr. Kenneth Harada ✓

August 22, 1984

MEMORANDUM

To: Ms. Leticia M. Uyehara, Director
Office of Environmental Quality Control

Subject: Addendum to Environmental Impact Statement (EIS)
for Waiehu Planned Development
Hawaii Housing Authority
TAK: 3-3-01: 10 and 92 Waiehu, Maui
Acres: 133.5

The Department of Agriculture has reviewed the subject addendum
and does not have any comments to offer.

Thank you for the opportunity to comment.

Jack K. Suna

JACK K. SUNA
Chairman, Board of Agriculture

Stamp: HAWAIIAN HOUSING AUTHORITY
Stamp: AUG 24 1984
Stamp: 84: 100/1600

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 110
HONOLULU, HAWAII 96810

DEVELOPMENT COPY

"Support Hawaiian Agricultural Products"

P. O. Box 17907
Honolulu, Hawaii 96817



POLICE DEPARTMENT

COUNTY OF MAUI
P. O. BOX 1029
MAILUKE, HAWAII 96793
AREA CODE (208) 244-7811

OUR REFERENCE
CK: BK
YOUR REFERENCE

August 3, 1984

Miss Leticia N. Uyebara, Director
Office of Environmental Quality Control
550 Waiekaewala Street, Room 301
Honolulu, Hawaii 96813

Dear Miss Uyebara:

After review of the initial document and addendum to the Waiehu Planned Development Environmental Impact Statement, we submit the following concerns:

1. Although the studies of present and proposed traffic levels on both Kahukili Highway and Waiehu Beach Road indicate that traffic volume will not increase in excess of respective roadway capabilities, traffic volume in areas of Market Street in Happy Valley, as well as in the area of the traffic control device at the Waiehu Beach Road and Kahului Beach Road intersection is a concern. Although these areas are some distance from the project, they will be adversely affected by the increase in traffic generated by the proposed development.
2. Traffic flow of vehicles exiting onto Waiehu Beach Road from the Mailuku Industrial Area via Eha Street may be markedly and adversely affected during peak traffic hours. It is recommended, based on these concerns, that the impact of development on these "feeder" areas be further monitored.

Very truly yours,

Joseph Cravalho
JOSEPH CRAVALHO
Chief of Police

cc: Kenneth Harada, Project Coordinator
Department of Social Services & Housing
Hawaii Housing Authority

DEVELOPMENT COPY



STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
HAWAII HOUSING AUTHORITY

P. O. BOX 1787
HONOLULU, HAWAII 96817
August 31, 1984

BY REPLY RETURN

TO: 84:DEV:5077

Mr. Joseph Cravalho
Chief of Police
Police Department
County of Maui
P. O. Box 1029
Mailuku, Maui, Hawaii 96793

Dear Mr. Cravalho:

SUBJECT: Waiehu Planned Development
Environmental Impact Statement Addendum

Thank you for your continued interest in the project and your review of the Waiehu Planned Development Environmental Impact Statement (EIS) and Addendum. In response to your comments, we offer the following:

Comment:

"It is recommended, based on these concerns (increased traffic volumes at Market Street, Waiehu Beach Road/Kahului Beach Road intersection, and Eha Street/Waiehu Beach Road intersection) that the impact of development on these 'feeder' areas be further monitored."

Response:

Although the traffic study (addendum to the EIS) concerned itself primarily with the immediate impacts of the development on the existing roads, your concern that the increased traffic may adversely affect these secondary areas is a valid one. We also concur that as this and other developments occur, further monitoring of the changing conditions should continue.

Again, we appreciate your review of the documents. Your letter will be incorporated into the amended EIS and a copy will be sent to you.

Sincerely,

ORIGINAL SIGNED BY
KENNETH HARADA
Project Coordinator



University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7381



STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
HAWAII HOUSING AUTHORITY

P. O. BOX 17887
HONOLULU, HAWAII 96817

84:DEV:5078

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August 22, 1984

(RE:0389)

84:DEV/6077

Ms. Letitia N. Uyebara, Director
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Ms. Uyebara:

Addendum to the Environmental Impact Statement for the
Waiehu Planned Development
Waiehu, Maui, Hawaii

In response to your letter of July 23, 1984 regarding the addendum to the EIS for the Waiehu Planned Development on Maui, Hawaii, we have reviewed the addendum with the assistance of George Curtis, Joint Institute for Marine and Atmospheric Research; and Jacquelin Miller and Antonio De Oleyza, Environmental Center.

In general the traffic study provided in the addendum adequately addresses the concerns and questions raised by OEQC and others with regard to potential traffic impacts and levels of service that can be expected should the proposed development take place. We do suggest, however, that consideration be given to installing signals at the cited intersections. A discussion of what traffic and safety criteria would warrant signals and the expectable levels of service if the intersections were signaled should be included in the addendum.

We appreciate the opportunity to comment.

Yours truly,

Doak C. Cox
Doak C. Cox
Director

cc: George Curtis
Kenneth Harada,
Department of Social Services and Housing
Jacquelin Miller
Antonio De Oleyza

August 31, 1984

Mr. Doak C. Cox, Director
University of Hawaii at Manoa
Environmental Center
Crawford 317
2550 Campus Road
Honolulu, Hawaii 96822

Dear Mr. Cox:

SUBJECT: Waiehu Planned Development
Environmental Impact Statement Addendum

Thank you for your comments on the subject addendum. Regarding the traffic study, the traffic consultant has considered the installation of traffic signals at the project access road intersections with Waiehu Beach Road and with Kahekili Highway, but has found that signals are not needed or warranted at these locations.

Specifically, the Federal Highway Administration's Manual on Uniform Traffic Control Devices states that "signals should not be installed unless one or more of the signal warrants in this Manual are met." Two of the eight warrants listed in the Manual are based on traffic volumes and require that hourly volumes in each of any eight hours of a normal weekday exceed minimum values for both major and minor (controlled) streets. A comparison of these minimum volumes with projected volumes indicate that these warrants will not be satisfied:

	VEHICLES PER HOUR	
	MAJOR STREET	MINOR STREET
Warrant 1, Minimum Vehicular Volume	500	200
Warrant 2, Interruption of Continuous Traffic	750	100
Eighth Highest Hour, Waiehu Beach Road	720	140
Highest Hour, Kahekili Highway	540	120

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AN EQUAL OPPORTUNITY EMPLOYER

GEORGE R. JANTZEN
DIRECTOR



STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
HAWAII HOUSING AUTHORITY
P. O. BOX 17887
HONOLULU, HAWAII 96817

August 31, 1984

Mr. Ralph Hayashi
August 31, 1984
Page 2

INTERNAL SECURITY

INTERNAL SECURITY

NO. 84:DEV-5079

HAWAII HOUSING AUTHORITY

2. Providing a connection to the existing subdivision meant a loss of potential residential lots which would decrease the number of available units and/or increase the cost of the project and ultimately unit prices. Since every effort was made to keep the cost of housing down, a connection was not proposed.

3. In addition, a connector road may also adversely affect the collective sense of community identity for its residents by a loss of physical integrity.

Again, we appreciate your continued interest in the project and look forward to future discussions with you and your staff as the project continues to move toward fruition.

Thank you.

Sincerely,

CHARLES L. SIGNED BY
KENNETH HARADA
Project Coordinator

SUBJECT: Waiehu Planned Development
Environmental Impact Statement Addendum

Thank you for your review of the addendum to the Waiehu Planned Development Environmental Impact Statement. In response to your comments we offer the following:

Comment:

"A connection should be provided to the adjacent Waiehu Heights Subdivision at Wailupe Drive and the connection to Anahio Street can be deleted. This eliminates the argument of adverse topography.

The connection would provide alternate routes and improve emergency access and circulation patterns for the affected area."

Response:

We have considered the possibility of providing a connection to the adjacent subdivision; however, during the planning of the project, it was concluded that this option be discarded because of the following:

1. The project, as designed, already has two circulation routes available--Waiehu Beach Road and Kahehiki Highway--and that a third alternate route would not substantially improve overall circulation for the project.