JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

July 20, 2001

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

Dear Ms. Salmonson:

RE: Final Environmental Assessment (EA) for the Four-Story, 140-Room Kahului Ariport Hotel Project Located in the Vicinity of Kahului Airport, TMK: 3-8-079:016, and 017, Kahului, Maui, Hawaii (EA 2001/0002)

In accordance with the provisions of Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200 of the Administrative Rules of the State Department of Health, a Final Environmental Assessment (EA) has been prepared for the proposed project.

The Maui Planning Department (Department), as the accepting authority, is transmitting for publication in the upcoming OEQC Bulletin the Final Environmental Assessment for the Kahului Airport Hotel Project, in which a Finding of No Significant Impact (FONSI) has been determined. The applicant for the project is A&B Properties Inc.

Enclosed are one (1) copy of the OEQC Publication Form and four (4) copies of the Final EA. In addition, the project summary has not changed since the Draft EA publication. We respectfully request that the Final EA be published in the next edition of the Environmental Notice.

Thank you for your cooperation. If additional clarification is required, please contact Ms. Ann Cua, Staff Planner, of this office at 270-7735.

Very truly yours,

JOHN E. MIN
Planning Director

JEM:ATC:cmb
Enclosures
c: Clayton Yoshida, AICP, Deputy Director of Planning
Glenn Tadaki, Munekiyo & Hiraga Inc.
Ann Cua, Staff Planner
EA Project File (w/Enclosures)
General File
(s:\all\ann\kahuluiairporthotelfea)

Austin Tsutsumi and Associates, Inc.
501 Sumner Street, Suite 521
Honolulu, Hawaii 96817
Ph: (808) 533-3646 Fax: (808) 527-1267

File Name : HADAPM-T
Site Code : 00000000
Start Date : 11/16/1999
Page No : 1

Groups Printed- Vehicle group 1

	KEOLANI PL Westbound				HALEAKALA HWY From Southeast				DAIRY RD From Southwest				HALEAKALA HWY From Northwest				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:00 PM	13	127	87	227	42	37	5	84	16	63	7	86	44	43	11	98	495
03:15 PM	11	89	99	199	33	34	7	74	20	80	13	113	54	37	11	102	488
03:30 PM	12	113	109	234	51	49	3	103	16	64	9	89	47	42	12	101	527
03:45 PM	10	78	78	166	47	41	4	92	10	57	13	80	52	49	13	114	452
Total	46	407	373	826	173	161	19	353	62	264	42	368	197	171	47	415	1962
04:00 PM	7	90	77	174	52	40	2	94	13	58	10	81	54	48	13	115	464
04:15 PM	5	82	76	163	43	46	3	92	18	42	10	70	46	49	16	111	436
04:30 PM	7	75	87	169	43	30	4	77	12	60	11	83	42	55	13	110	439
04:45 PM	3	65	61	129	33	37	2	72	11	42	15	68	54	56	14	124	393
Total	22	312	301	635	171	153	11	335	54	202	46	302	196	208	56	460	1732
05:00 PM	6	63	57	126	40	23	1	64	5	37	15	57	37	66	9	112	359
05:15 PM	5	58	61	124	37	37	2	76	8	42	17	67	40	56	17	113	380
05:30 PM	6	68	60	134	42	40	3	85	11	48	19	78	35	52	12	99	396
05:45 PM	2	57	53	112	50	44	3	97	7	39	18	64	27	39	19	85	358
Total	19	246	231	496	169	144	9	322	31	166	69	266	139	213	57	409	1493
06:00 PM	6	64	48	118	36	41	1	78	7	49	12	68	37	44	8	89	353
Grand Total	93	1029	953	2075	549	499	40	1088	154	681	169	1004	569	636	168	1373	5540
Apprch %	4.5	49.6	45.9		50.5	45.9	3.7		15.3	67.8	16.8		41.4	46.3	12.2		
Total %	1.7	18.6	17.2	37.5	9.9	9.0	0.7	19.6	2.8	12.3	3.1	18.1	10.3	11.5	3.0	24.8	

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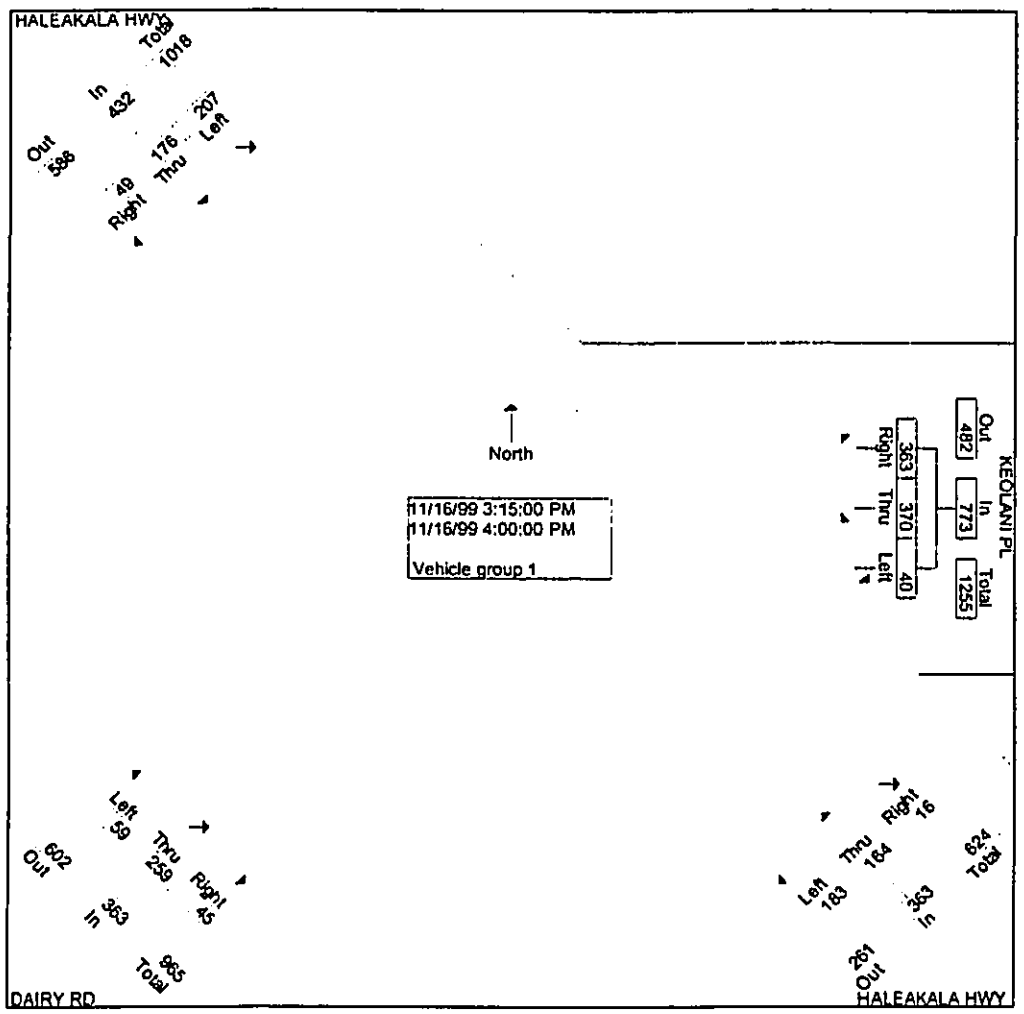
	KEOLANI PL Westbound				HALEAKALA HWY From Southeast				DAIRY RD From Southwest				HALEAKALA HWY From Northwest				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 03:15 PM to 04:00 PM - Peak 1 of 1																	
Intersection	03:15 PM																
Volume	40	370	363	773	183	164	16	363	59	259	45	363	207	176	49	432	1931
Percent	5.2	47.9	47.0		50.4	45.2	4.4		16.3	71.3	12.4		47.9	40.7	11.3		
03:30 Volume	12	113	109	234	51	49	3	103	16	64	9	89	47	42	12	101	527
Peak Factor																	0.916
High Int.	03:30 PM				03:30 PM				03:15 PM				04:00 PM				
Volume	12	113	109	234	51	49	3	103	20	80	13	113	54	48	13	115	
Peak Factor				0.826				0.881				0.803				0.939	



AUSTIN, TSUTSUMI & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS

APPENDIX B

LEVEL OF SERVICE (LOS) DEFINITIONS

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM 1994)

The level of service criteria for unsignalized intersections is defined as the average total delay, in seconds per vehicle. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of the 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 to the first-in-queue position.

While the criteria for level of service for two-way stop-controlled (TWSC) and alll-way stop-controlled (AWSC) intersections are the same, procedures to calculate the average total delay may differ.

Level of Service Criteria for TWSC Intersections

Level of Service	Average Total Delay (sec/veh)
A	≤ 5
B	>5 - ≤ 10
C	>10 - ≤ 20
D	>20 - ≤ 30
E	>30 - ≤ 45
F	> 45

LEVEL OF SERVICE OF SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of **delay**, which 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 criteria are given in Table A-1.

Table A-1. Level-of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (sec.)
A	≤ 5.0
B	>5.0 and ≤ 15.0
C	>15.0 and ≤ 25.0
D	>25.0 and ≤ 40.0
E	>40.0 and ≤ 60.0
F	> 60.0

Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group or approach in question.

Level-of-service A describes operations with very low delay, up to 5.0 seconds per vehicle. This level of service 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 igreater than 5.0 and up to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

Level-of-service C describes operations with delay greater than15.0 and up 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 greater than 25.0 and up 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 high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level-of-service E describes operations with delay greater than 40.0 and up to 60.0 seconds per vehicle. This level is considered by many agencies 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.

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APPENDIX C

LEVEL OF SERVICE CALCULATIONS

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APPENDIX C

LEVEL OF SERVICE CALCULATIONS

- Existing Conditions

Airport Marriott
AM Peak Hour Existing
Hana Highway/Dairy Road

03/30/**
11:14:50

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS				
GRADES	.0	.0	.0	.0
PEDLEVELS	0	0	0	0
PARKINGSIDES	NONE	NONE	NONE	NONE
PARKVOLUMES	20	20	20	20
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	39	163	36	68	1858	773	253	270	72	115	364	38
WIDTHS	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
LANES	0	2	1	1	2	2	1	2	1	1	2	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	0	3618	1770	1583	3725	3539	1583	3588	1770	1583	3725	1770

Phasing Parameters

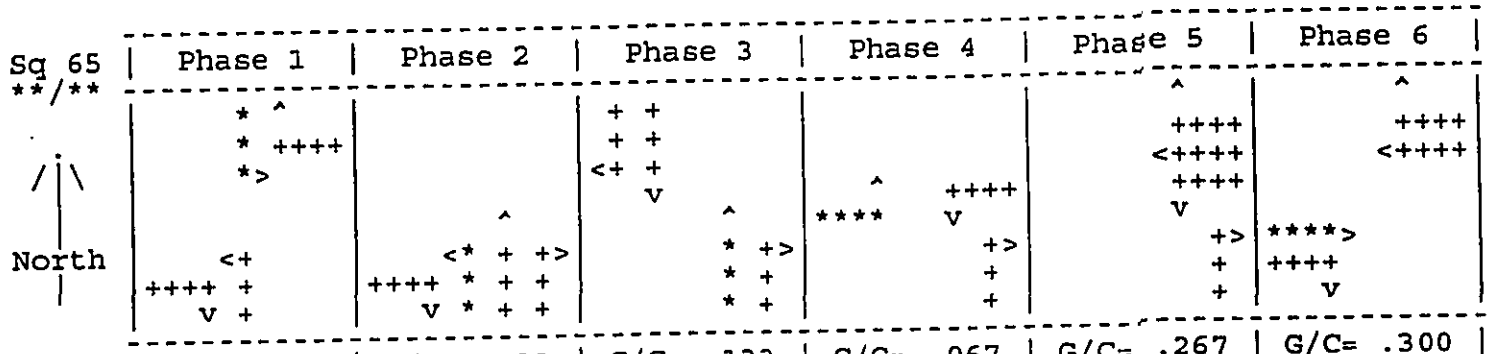
SEQUENCES	65							
PERMISSIVES	NO	NO	NO	NO		LEADLAGS	NONE	NONE
OVERLAPS	YES	YES	YES	YES		OFFSET	.00	1
CYCLES	120	180	5			PEDTIME	.0	0
GREENTIMES	5.00	5.00	20.00	10.00	40.00	45.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	3	9	8	12	0	11		
EXCESS	0							

Airport Marriott
AM Peak Hour Existing
Hana Highway/Dairy Road

03/30/**
11:15:11

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .71 Vehicle Delay 30.4 Level of Service D+



C=150 sec G=125.0 sec = 83.3% Y=25.0 sec = 16.7% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								46.5	E+	
TH+RT	24/2	.360	.147	1	475	235	.443	44.8	E+	211 ft
LT	12/1	.345	.047	1	49	40	.482	56.3	*E	80 ft
NB Approach								37.2	D	
RT	12/1+	.377	.580	778	918	178	.194	11.3	B	158 ft
TH	24/2-	.378	.180	1	599	418	.647	45.0	*E+	361 ft
LT	12/1	.353	.080	1	99	80	.563	54.2	*E	155 ft
WB Approach								27.6	D+	
RT	12/1	.354	.680	995	1077	76	.071	6.1	B+	51 ft
TH	24/2	.623	.613	2117	2285	2167	.948	27.3	D+	883 ft
LT	24/2	.431	.380	432	1345	885	.658	30.1	D+	578 ft
EB Approach								29.8	D+	
RT	12/1	.365	.413	318	653	128	.196	21.4	C	158 ft
TH	24/2	.377	.313	1	1167	424	.363	30.4	*D+	307 ft
LT	12/1	.346	.080	1	99	42	.296	49.8	*E+	81 ft

Airport Marriott
PM Peak Hour Existing
Hana Highway/Dairy Road

03/30/**
11:16:22

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS				
GRADES	.0	.0	.0	.0
PEDLEVELS	0	0	0	0
PARKINGSIDES	NONE	NONE	NONE	NONE
PARKVOLUMES	20	20	20	20
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	34	599	71	80	714	455	499	450	119	203	1102	148
WIDTHS	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
LANES	0	2	1	1	2	2	1	2	1	1	2	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	0	3695	1770	1583	3725	3539	1583	3554	1770	1583	3725	1770

Phasing Parameters

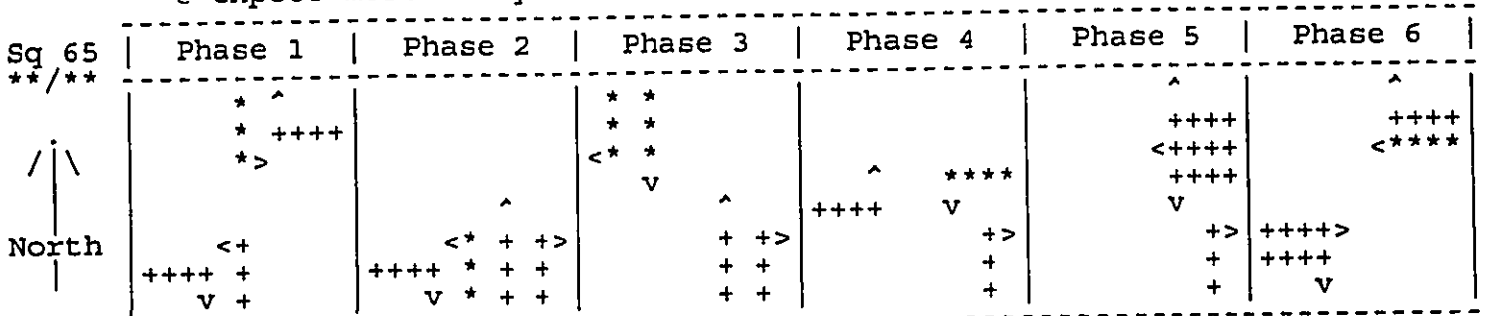
SEQUENCES	65							
PERMISSIVES	NO	NO	NO	NO		LEADLAGS	NONE	NONE
OVERLAPS	YES	YES	YES	YES		OFFSET	.00	1
CYCLES	180	180	5			PEDTIME	.0	0
GREENTIMES	10.00	5.00	40.00	17.00	56.00	32.00		
YELLOWTIMES	5.00	.00	5.00	5.00	.00	5.00		
CRITICALS	3	9	2	6	12	5		
EXCESS	0							

Airport Marriott
PM Peak Hour Existing
Hana Highway/Dairy Road

03/30/**
11:18:07

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .91 Vehicle Delay 60.3@ Level of Service F
@ expect more delay due to extreme v/c's (see EVALUATE)



C=180 sec G=160.0 sec = 88.9% Y=20.0 sec = 11.1% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								57.8	E	
TH+RT	24/2	.461	.233	1	778	739	.857	56.3	*E	717 ft
LT	12/1	.409	.067	1	12	79	.669	71.4	*F	187 ft
NB Approach								42.5	E+	
RT	12/1+	.463	.694	998	1100	322	.293	8.1	B+	249 ft
TH	24/2-	.465	.261	1	860	757	.816	51.5	E	708 ft
LT	12/1	.419	.094	1	77	132	.790	75.3	*F	302 ft
WB Approach								23.4	C	
RT	12/1	.413	.583	725	924	89	.096	12.6	B	94 ft
TH	24/2	.469	.500	1134	1863	833	.447	22.1	*C	527 ft
LT	24/2	.442	.417	244	1475	521	.353	27.4	*D+	384 ft
EB Approach								106.1@	F	
RT	12/1	.441	.300	1	428	226	.476	39.7	D	400 ft
TH	24/2	.517	.189	1	594	1285	1.825	120.6@	F	1318 ft
LT	12/1	.424	.106	1	98	164	.877	83.9	*F	371 ft

Airport Marriott
AM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

03/30/**
11:24:27

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	39	163	36	68	1858	773	253	270	72	115	364	38
WIDTHS	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
LANES	0	2	1	1	2	2	1	2	1	1	2	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	0	3618	1770	1583	3725	3539	1583	3588	1770	1583	3725	1770

Phasing Parameters

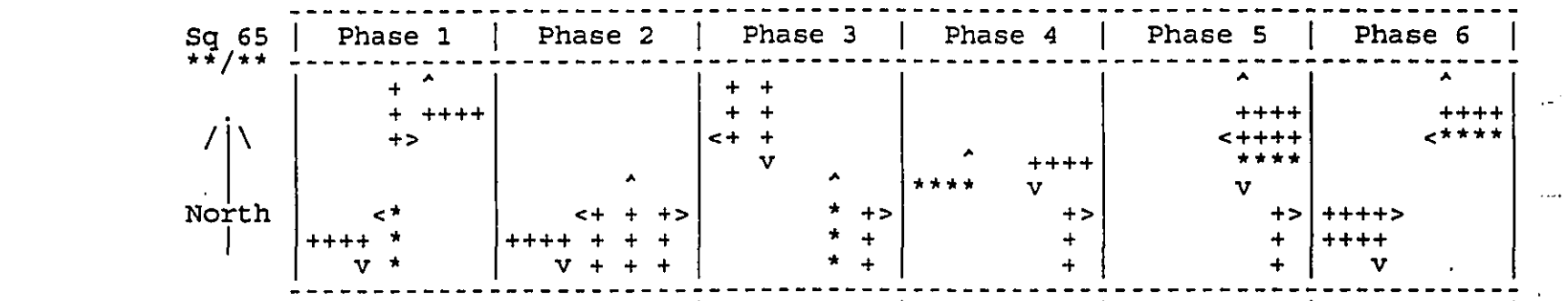
SEQUENCES	65					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	90	180	5					
GREENTIMES	6.00	.00	15.00	5.00	24.00	45.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	9	0	8	12	6	5		
EXCESS	0							

Airport Marriott
AM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

03/30/**
11:24:38

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .74 Vehicle Delay 25.6 Level of Service D+



C=120 sec G= 95.0 sec = 79.2% Y=25.0 sec = 20.8% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								37.1	D	
TH+RT	24/2	.284	.142	1	491	235	.458	36.4	D	170 ft
LT	12/1	.268	.067	1	92	40	.339	41.3	E+	63 ft
NB Approach								37.9	D	
RT	12/1+	.306	.467	591	739	178	.241	14.6	B	160 ft
TH	24/2-	.306	.142	1	486	418	.823	45.3	*E+	303 ft
LT	12/1	.277	.067	1	92	80	.678	51.2	*E	126 ft
WB Approach								23.1	C	
RT	12/1	.278	.725	1106	1148	76	.066	3.6	A	35 ft
TH	24/2	.607	.633	2287	2359	2167	.919	19.3	*C+	670 ft
LT	24/2	.371	.300	366	1062	885	.833	33.9	*D	522 ft
EB Approach								19.5	C+	
RT	12/1	.291	.483	626	765	128	.167	13.3	B	112 ft
TH	24/2	.304	.392	1068	1459	424	.291	19.1	C+	218 ft
LT	12/1	.268	.058	1	79	42	.408	42.9	*E+	67 ft

Airport Marriott
PM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

03/30/**
11:25:27

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD
LOSTTIME	3.0
LEVELOFSERVICE	C S
NODELOCATION	0 0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
MOVLABELS	34	599	71	80	714	455	499	450	119	203	1102	148
VOLUMES	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
WIDTHS	0	2	1	1	2	2	1	2	1	1	2	1
LANES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
UTILIZATIONS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TRUCKPERCENTS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
PEAKHOURFACTORS	3	3	3	3	3	3	3	3	3	3	3	3
ARRIVALTYPES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ACTUATIONS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
IDEALSATFLOWS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
GROUPTYPES	0	3695	1770	1583	3725	3539	1583	3554	1770	1583	3725	1770
SATURATIONFLOWS												

Phasing Parameters

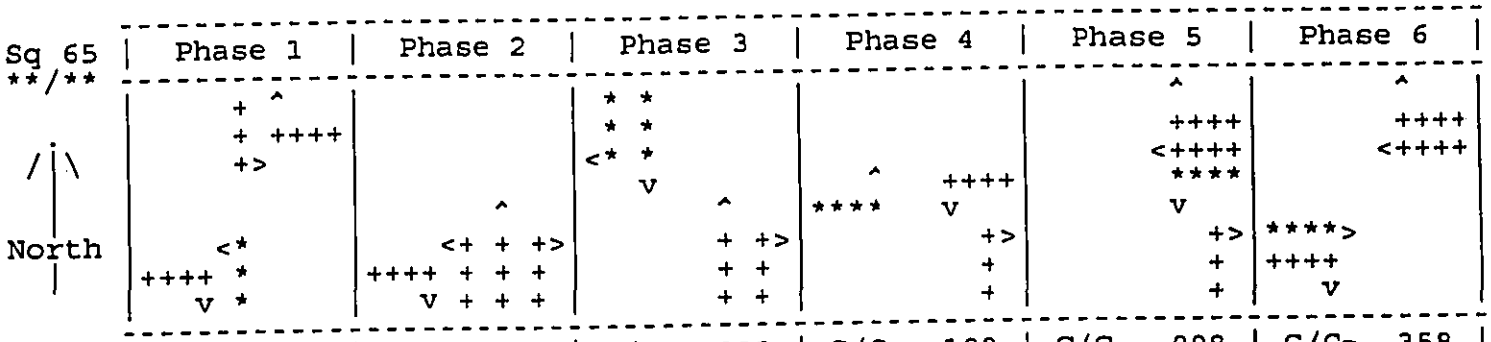
SEQUENCES	65					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	120	120	5					
GREENTIMES	11.00	.00	27.00	13.00	1.00	43.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	9	0	2	12	6	11		
EXCESS	0							

Airport Marriott
PM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

03/30/**
11:25:37

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .74 Vehicle Delay 32.7 Level of Service D



C=120 sec G= 95.0 sec = 79.2% Y=25.0 sec = 20.8% Ped= .0 sec = .0%

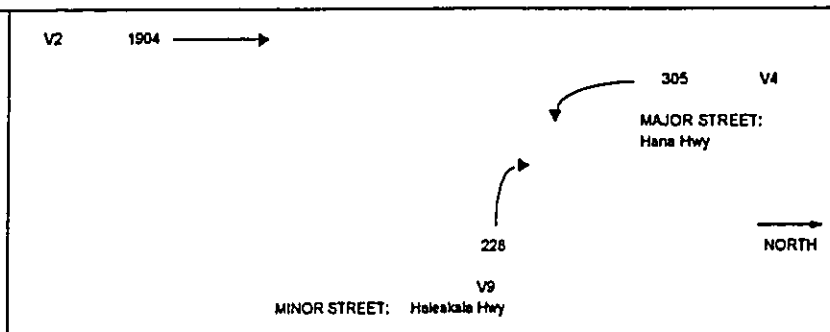
Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								37.5	D	
TH+RT	24/2	.344	.242	1	893	739	.828	37.4	*D	473 ft
LT	12/1	.277	.108	1	165	79	.411	38.8	D	119 ft
NB Approach								35.4	D	
RT	12/1+	.354	.442	536	699	322	.461	18.2	C+	303 ft
TH	24/2-	.351	.242	1	859	757	.881	40.8	E+	484 ft
LT	12/1	.289	.108	1	165	132	.688	45.8	*E+	199 ft
WB Approach								27.7	D+	
RT	12/1	.281	.558	781	884	89	.101	9.4	B+	66 ft
TH	24/2	.357	.425	1268	1583	833	.526	19.7	C+	404 ft
LT	24/2	.319	.175	1	605	521	.842	43.5	*E+	362 ft
EB Approach								32.8	D	
RT	12/1	.320	.508	679	805	226	.281	12.9	B	187 ft
TH	24/2	.428	.375	960	1397	1285	.920	34.5	*D	677 ft
LT	12/1	.296	.125	1	194	164	.742	46.9	*E+	242 ft

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

Major Street: Hana Hwy
Minor Street: Haleakala Hwy
Peak Hour: AM
Scenario: Existing

Print Date: 22-Nov-99
Analyst: JAI
File Name: Hana-Haleakala

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	1904	0	305	0	0	228
VOLUME, v (pcph)	1904	0	336	0	0	251

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =		0	+	952	=	952 vph
Potential Capacity:	Cp,9 =						456 pcph
Movement Capacity:	Cm,p = Cp,9 =						456 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =		0	+	1904	=	1904 vph
Potential Capacity:	Cp,4 =						163 pcph
Movement Capacity:	Cm,4 = Cp,4 =						163 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =						-1.06
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =						NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	2209 vph
Potential Capacity:	Cp,7 =	41 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	-1.06
Movement Capacity:	Cm,7 = Cp,7 =	-43 pcph

DELAY AND LEVEL OF SERVICE SUMMARY

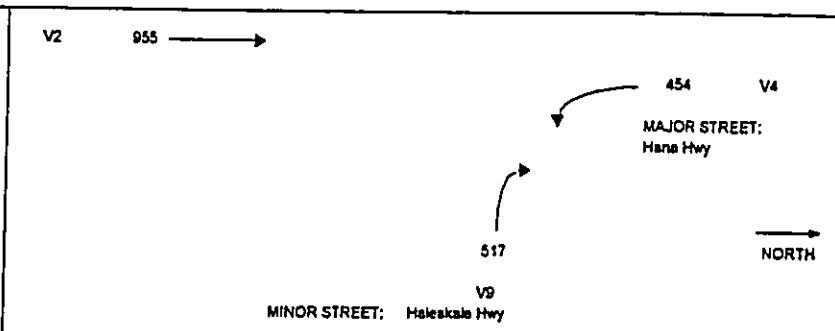
Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	251	456	--NA--	17.12	C
MAJOR LEFT TURN (4)	336	163	——	538.50	F

AVERAGE MINOR APPROACH DELAY =	17.12 sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	74.27 sec/veh
LEVEL OF SERVICE =	C	LEVEL OF SERVICE =	F

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

Major Street:	Hana Hwy	Print Date:	22-Nov-99
Minor Street:	Haleakala Hwy	Analyst	JAI
Peak Hour:	PM	File Name:	Hana Hwy
Scenario:	Existing		

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	955	0	454	0	0	517
VOLUME, v (pcph)	955	0	499	0	0	569

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	478	=	478 vph
Potential Capacity:	Cp,9 =					793 pcph
Movement Capacity:	Cm,p = Cp,9 =					793 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	955	=	955 vph
Potential Capacity:	Cp,4 =					627 pcph
Movement Capacity:	Cm,4 = Cp,4 =					627 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.05
Major Left Shared Lane						
Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	1409	vph
Potential Capacity:	Cp,7 =	133	pcph
Capacity Adjustment Factor			
Due To Impeding Movements:	f7=po,4=	0.05	
Movement Capacity:	Cm,7 = Cp,7 =	7	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	569	793	--NA--	15.15	C
MAJOR LEFT TURN (4)	499	627	----	50.50	F

AVERAGE MINOR APPROACH DELAY =	15.15	sec/veh	AVERAGE TOTAL INTERSECTION DELAY = 16.73 sec/veh
LEVEL OF SERVICE =	C		LEVEL OF SERVICE = C

Airport Marriott
AM Peak Hour Existing
Haleakala Highway/Dairy Road/Keolani Place

03/30/**
14:54:26

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS				
GRADES	.0	.0	.0	.0
PEDLEVELS	0	0	0	0
PARKINGSIDES	NONE	NONE	NONE	NONE
PARKVOLUMES	20	20	20	20
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	205	172	3	2	40	15	15	237	8	21	37	219
WIDTHS	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
LANES	1	1	1	0	1	1	0	2	1	0	1	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	1583	1863	1770	0	1851	1770	0	3692	1770	0	1762	1770

Phasing Parameters

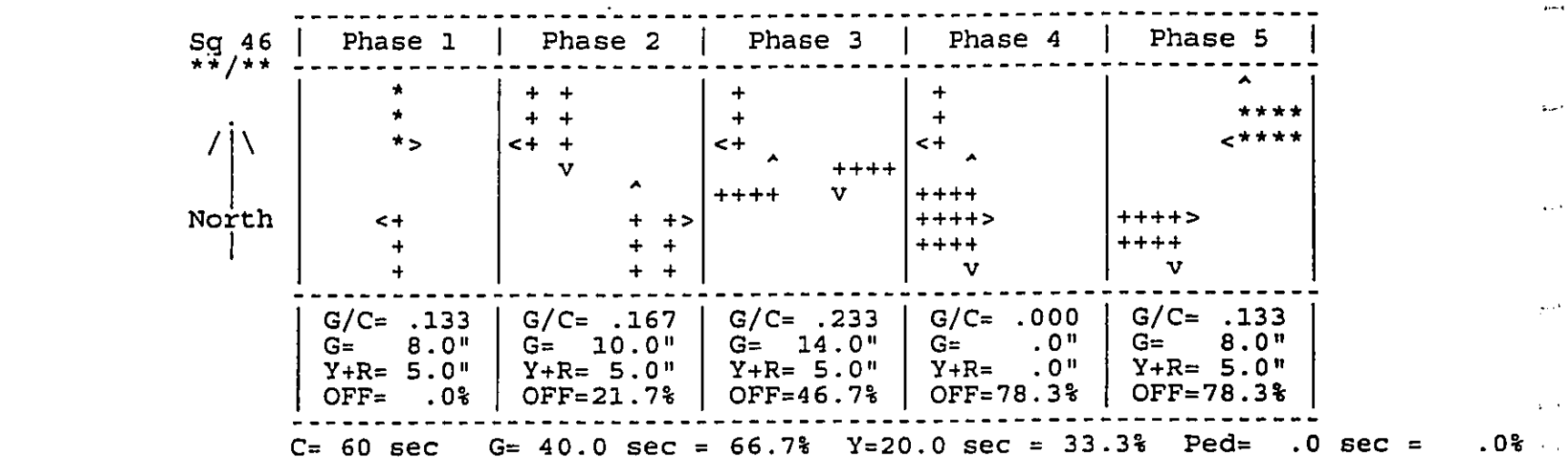
SEQUENCES	46						
PERMISSIVES	NO	NO	NO	NO		LEADLAGS	NONE NONE
OVERLAPS	YES	YES	YES	YES		OFFSET	.00 1
CYCLES	60	180	5			PEDTIME	.0 0
GREENTIMES	8.00	10.00	14.00	.00	8.00		
YELLOWTIMES	5.00	5.00	5.00	.00	5.00		
CRITICALS	3	0	2	6	5		
EXCESS	0						

Airport Marriott
AM Peak Hour Existing
Haleakala Highway/Dairy Road/Keolani Place

03/30/**
14:54:36

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .39 Vehicle Delay 14.0 Level of Service B



C= 60 sec G= 40.0 sec = 66.7% Y=20.0 sec = 33.3% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								11.3	B	
RT	12/1	.189	.517	776	818	228	.279	6.3	B+	93 ft
TH	12/1	.142	.200	296	373	191	.512	17.3	*C+	129 ft
LT	12/1	.007	.167	222	295	3	.010	15.9	*C+	25 ft
NB Approach								16.0	C+	
TH+RT	24/2	.107	.200	638	738	294	.398	16.1	C+	99 ft
LT	12/1	.015	.167	222	295	9	.031	15.9	C+	25 ft
WB Approach								15.2	C+	
TH+RT	12/1	.049	.167	233	308	46	.149	16.3	*C+	32 ft
LT	12/1	.024	.267	399	472	17	.036	12.4	*B	25 ft
EB Approach								15.3	C+	
TH+RT	12/1	.065	.167	221	294	64	.218	16.5	C+	45 ft
LT	12/1	.179	.267	399	472	243	.515	15.0	C+	150 ft

03/30/**
14:53:32

Airport Marriott
PM Peak Hour Existing
Haleakala Highway/Dairy Road/Keolani Place

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	363	370	40	16	164	183	45	259	59	49	176	207
WIDTHS	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
LANES	1	1	1	0	1	1	0	2	1	0	1	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	1583	1863	1770	0	1838	1770	0	3643	1770	0	1802	1770

Phasing Parameters

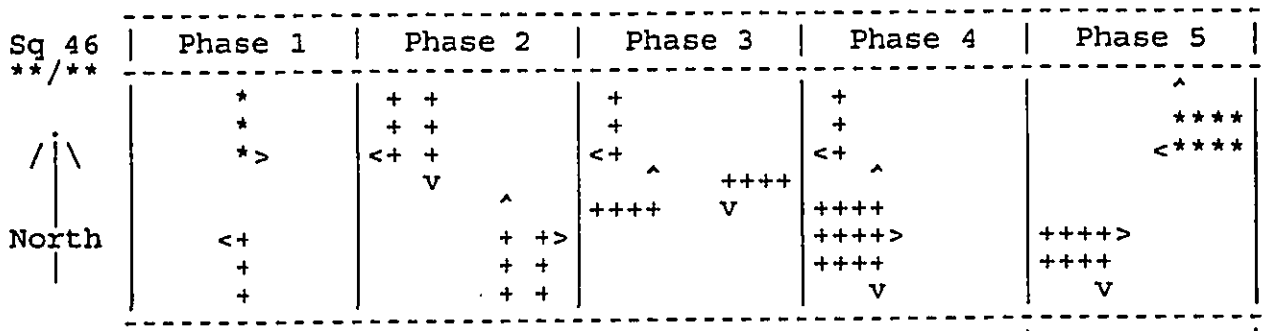
SEQUENCES	46					LEADLAGS	NONE NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00 1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0 0
CYCLES	90	180	5				
GREENTIMES	7.00	28.00	17.00	11.00	18.00		
YELLOWTIMES	5.00	5.00	5.00	.00	5.00		
CRITICALS	3	0	2	6	5		
EXCESS	0						

Airport Marriott
PM Peak Hour Existing
Haleakala Highway/Dairy Road/Keolani Place

03/30/**
14:53:50

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .50 Vehicle Delay 22.4 Level of Service C



C=101 sec G= 81.0 sec = 80.2% Y=20.0 sec = 19.8% Ped= .0 sec = .0%

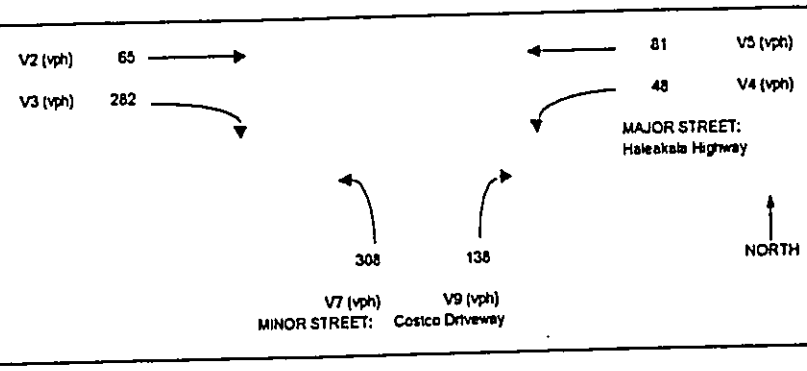
Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								18.6	C+	
RT	12/1	.350	.624	930	988	403	.408	7.4	B+	215 ft
TH	12/1	.321	.297	350	553	411	.743	28.1	*D+	410 ft
LT	12/1	.203	.089	1	138	44	.278	32.9	*D	57 ft
NB Approach								23.1	C	
TH+RT	24/2	.236	.297	737	1082	355	.328	21.1	C	177 ft
LT	12/1	.209	.089	1	138	66	.418	34.1	D	85 ft
WB Approach								30.0	D+	
TH+RT	12/1	.245	.198	24	354	200	.549	29.1	*D+	228 ft
LT	12/1	.249	.188	1	321	203	.610	30.9	*D+	234 ft
EB Approach								22.0	C	
TH+RT	12/1	.264	.307	362	553	250	.452	21.8	C	246 ft
LT	12/1	.259	.297	331	526	230	.437	22.2	C	230 ft

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

Major Street: Haleakala Highway
Minor Street: Costco Driveway
Peak Hour: PM
Scenario: Existing

Print Date: 21-Jun-01
Analyst: EV
File Name: Costco-Hale

Peak Hour Factor.	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	2
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	65	282	48	81	308	138
VOLUME, v (pcph)	65	282	53	81	339	152

STEP 1: RT FROM MINOR STREET - V9						
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	65	=	65 vph
Potential Capacity:	Cp,9 =					1283 pcph
Movement Capacity:	Cm,9 = Cp,9 =					1283 pcph
STEP 2: LT FROM MAJOR STREET - V4						
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	65	=	65 vph
Potential Capacity:	Cp,4 =					1596 pcph
Movement Capacity:	Cm,4 = Cp,4 =					1596 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.967
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)/(1-v5/s5)]					NA
STEP 3: LT FROM MINOR STREET - V7						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					194 vph
Potential Capacity:	Cp,7 =					817 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					0.967
Movement Capacity:	Cm,7 = f7*Cp,7 =					790 pcph

DELAY AND LEVEL OF SERVICE SUMMARY Movement	v(vph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	339	790	–NA–	7.93	B
MINOR RIGHT TURN (9)	152	1283	–NA–	3.18	A
MAJOR LEFT TURN (4)	53	1596	——	2.33	A

AVERAGE MINOR APPROACH DELAY =	6.46	sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	3.39 sec/veh
LEVEL OF SERVICE =	B		LEVEL OF SERVICE =	A

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS

APPENDIX C

LEVEL OF SERVICE CALCULATIONS

- Base Year 2002 Without Project Conditions

Airport Marriott
AM Peak Hour Future Base Year 2002
Hana Highway/Dairy Road

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	45	180	40	75	2015	840	275	295	80	125	395	45
WIDTHS	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
LANES	0	2	1	1	2	2	1	2	1	1	2	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	0	3614	1770	1583	3725	3539	1583	3588	1770	1583	3725	1770

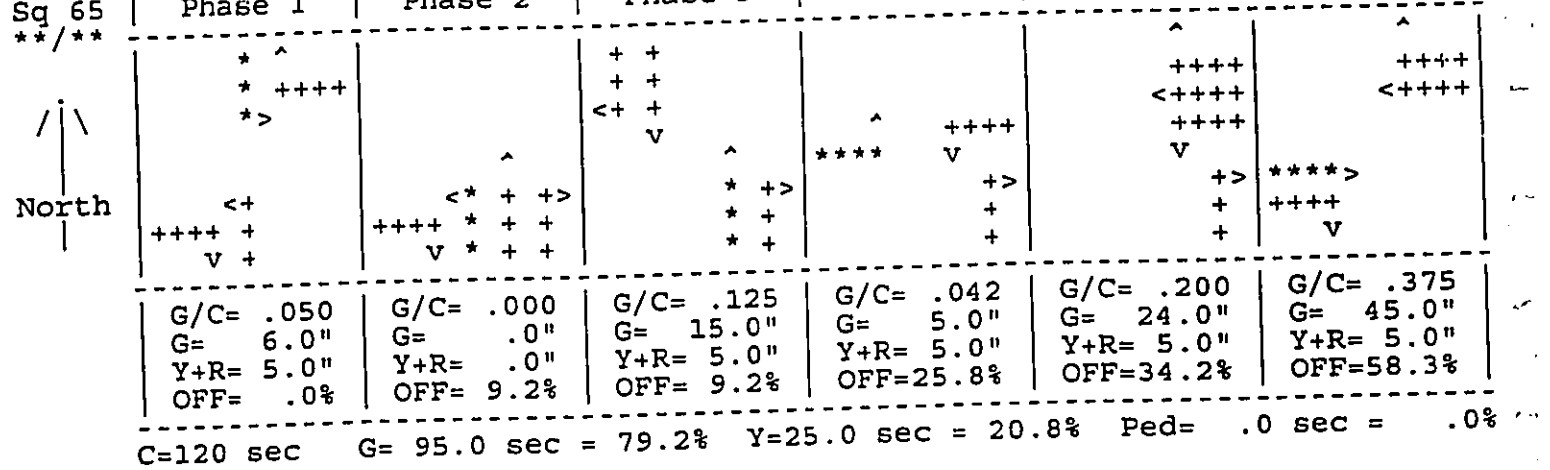
Phasing Parameters

SEQUENCES	65					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	120	180	5					
GREENTIMES	6.00	.00	15.00	5.00	24.00	45.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	3	9	8	12	0	11		
EXCESS	0							

Airport Marriott
AM Peak Hour Future Base Year 2002
Hana Highway/Dairy Road

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .80 Vehicle Delay 32.3 Level of Service D+



Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								37.6	D	
TH+RT	24/2	.287	.142	1	490	262	.512	37.0	D	190 ft
LT	12/1	.269	.067	1	92	44	.373	41.7	*E+	69 ft
NB Approach								42.7	E+	
RT	12/1+	.310	.467	591	739	194	.263	14.8	B	175 ft
TH	24/2-	.310	.142	1	486	456	.898	51.7	*E	330 ft
LT	12/1	.279	.067	1	92	89	.754	57.3	*E	140 ft
WB Approach								31.9	D+	
RT	12/1	.280	.725	1106	1148	83	.072	3.6	A	38 ft
TH	24/2	.648	.633	2287	2359	2351	.997	30.2	D+	727 ft
LT	24/2	.384	.300	366	1062	961	.905	38.5	D	567 ft
EB Approach								20.0	C+	
RT	12/1	.294	.483	626	765	139	.182	13.4	B	121 ft
TH	24/2	.309	.392	1068	1459	461	.316	19.3	*C+	237 ft
LT	12/1	.270	.058	1	79	50	.485	44.4	*E+	79 ft

Airport Marriott
PM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

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SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	34	599	71	80	714	455	499	450	119	203	1102	148
WIDTHS	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
LANES	0	2	1	1	2	2	1	2	1	1	2	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	0	3695	1770	1583	3725	3539	1583	3554	1770	1583	3725	1770

Phasing Parameters

SEQUENCES	65					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	120	120	5					
GREENTIMES	11.00	.00	27.00	13.00	1.00	43.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	9	0	2	12	6	11		
EXCESS	0							

Airport Marriott
PM Peak Hour Existing Revised Cycle Length
Hana Highway/Dairy Road

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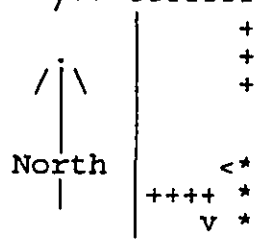
SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .74 Vehicle Delay 32.7 Level of Service D

Sq 65
/



Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G/C= .092	G/C= .000	G/C= .225	G/C= .108	G/C= .008	G/C= .358
G= 11.0"	G= .0"	G= 27.0"	G= 13.0"	G= 1.0"	G= 43.0"
Y+R= 5.0"	Y+R= .0"	Y+R= 5.0"	Y+R= 5.0"	Y+R= 5.0"	Y+R= 5.0"
OFF= .0%	OFF=13.3%	OFF=13.3%	OFF=40.0%	OFF=55.0%	OFF=60.0%

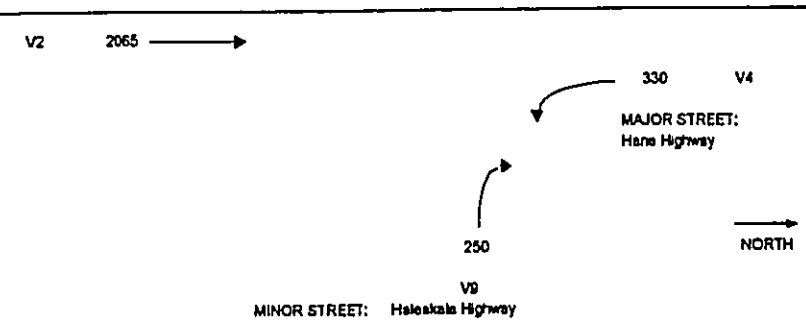
C=120 sec G= 95.0 sec = 79.2% Y=25.0 sec = 20.8% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								37.5	D	
TH+RT	24/2	.344	.242	1	893	739	.828	37.4	*D	473 ft
LT	12/1	.277	.108	1	165	79	.411	38.8	D	119 ft
NB Approach								35.4	D	
RT	12/1+	.354	.442	536	699	322	.461	18.2	C+	303 ft
TH	24/2-	.351	.242	1	859	757	.881	40.8	E+	484 ft
LT	12/1	.289	.108	1	165	132	.688	45.8	*E+	199 ft
WB Approach								27.7	D+	
RT	12/1	.281	.558	781	884	89	.101	9.4	B+	66 ft
TH	24/2	.357	.425	1268	1583	833	.526	19.7	C+	404 ft
LT	24/2	.319	.175	1	605	521	.842	43.5	*E+	362 ft
EB Approach								32.8	D	
RT	12/1	.320	.508	679	805	226	.281	12.9	B	187 ft
TH	24/2	.428	.375	960	1397	1285	.920	34.5	*D	677 ft
LT	12/1	.296	.125	1	194	164	.742	46.9	*E+	242 ft

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

Major Street:	Hana Highway	Print Date:	07-Mar-00
Minor Street:	Haleakala Highway	Analyst:	JAI
Peak Hour:	AM	File Name:	Hana-Hale wo proj
Scenario:	Future Base Year 2002		

Peak Hour Factor:	0.95
MAJOR STREET	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
MINOR STREET	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	2065	0	330	0	0	250
VOLUME, v (pcph)	2065	0	363	0	0	275

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	1033	=	1033 vph
Potential Capacity:	Cp,9 =					415 pcph
Movement Capacity:	Cm,p = Cp,9 =					415 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	2065	=	2065 vph
Potential Capacity:	Cp,4 =					134 pcph
Movement Capacity:	Cm,4 = Cp,4 =					134 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					-1.72
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	2395	vph
Potential Capacity:	Cp,7 =	31	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	-1.72	
Movement Capacity:	Cm,7 = Cp,7 =	-54	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	275	415	--NA--	24.12	D
MAJOR LEFT TURN (4)	363	134	----	840.99	F

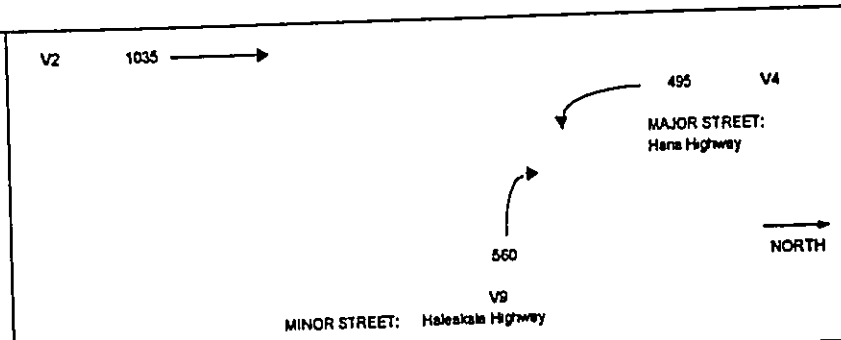
AVERAGE MINOR APPROACH DELAY =	24.12	sec/veh	
LEVEL OF SERVICE =	D		
AVERAGE TOTAL INTERSECTION DELAY =	115.39	sec/veh	
LEVEL OF SERVICE =	F		

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

Major Street: Hana Highway
Minor Street: Haleakala Highway
Peak Hour: PM
Scenario: Future Base Year 2002

Print Date: 07-Mar-00
Analyst: JAI
File Name: hana-hale wo proj

Peak Hour Factor:	0.95
MAJOR STREET	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
MINOR STREET	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	1035	0	495	0	0	560
VOLUME, v (pcph)	1035	0	545	0	0	616

STEP 1: RT FROM MINOR STREET - V9							
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	616	=	616	vph
Potential Capacity:	Cp,9 =					757	pcph
Movement Capacity:	Cm,p = Cp,9 =					757	pcph
STEP 2: LT FROM MAJOR STREET - V4							
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	1035	=	1035	vph
Potential Capacity:	Cp,4 =					477	pcph
Movement Capacity:	Cm,4 = Cp,4 =					477	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					-0.14	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA	
STEP 3: LT FROM MINOR STREET - V7							
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					1530	vph
Potential Capacity:	Cp,7 =					111	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					-0.14	
Movement Capacity:	Cm,7 = Cp,7 =					-16	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	616	757	--NA--	21.98	D
MAJOR LEFT TURN (4)	545	477	----	109.38	F

AVERAGE MINOR APPROACH DELAY = 21.98 sec/veh
LEVEL OF SERVICE = D

AVERAGE TOTAL INTERSECTION DELAY = 33.30 sec/veh
LEVEL OF SERVICE = E

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Airport Marriott
AM Peak Hour Future Base Year 2002
Haleakala Highway/Dairy Road/Keolani Place

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	225	190	5	5	45	20	20	260	10	25	40	240
WIDTHS	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
LANES	1	1	1	0	1	1	0	2	1	0	1	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	1583	1863	1770	0	1833	1770	0	3686	1770	0	1754	1770

Phasing Parameters

SEQUENCES	46					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	60	180	5					
GREENTIMES	8.00	10.00	14.00	.00	8.00			
YELLOWTIMES	5.00	5.00	5.00	.00	5.00			
CRITICALS	3	0	2	6	5			
EXCESS	0							

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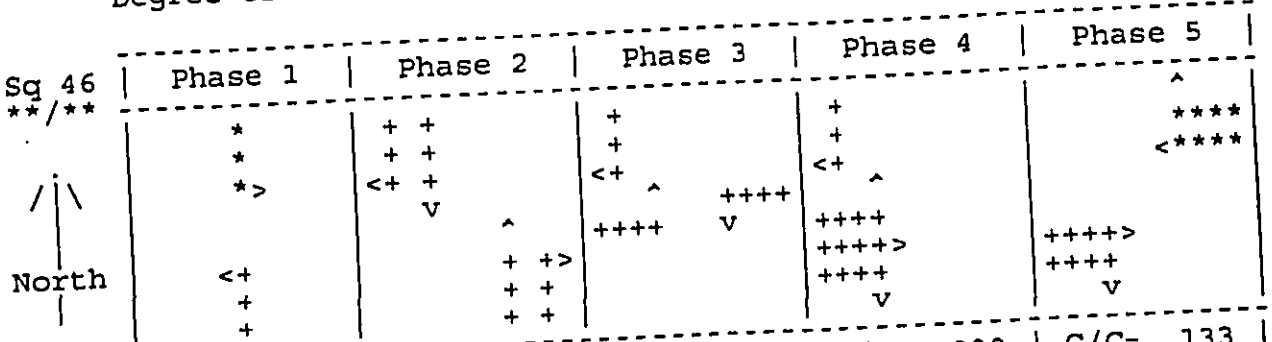
Airport Marriott
AM Peak Hour Future Base Year 2002
Haleakala Highway/Dairy Road/Keolani Place

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .43 Vehicle Delay 14.4 Level of Service B



C= 60 sec G= 40.0 sec = 66.7% Y=20.0 sec = 33.3% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
								11.7	B	
SB Approach										
RT	12/1	.203	.517	776	818	250	.306	6.4	B+	102 ft
TH	12/1	.153	.200	296	373	211	.566	18.0	*C+	142 ft
LT	12/1	.011	.167	222	295	6	.020	15.9	*C+	25 ft
								16.3	C+	
NB Approach										
TH+RT	24/2	.116	.200	637	737	327	.444	16.3	C+	110 ft
LT	12/1	.017	.167	222	295	11	.037	15.9	C+	25 ft
								15.3	C+	
WB Approach										
TH+RT	12/1	.057	.167	230	305	56	.184	16.4	*C+	39 ft
LT	12/1	.029	.267	399	472	22	.047	12.4	*B	25 ft
								15.8	C+	
EB Approach										
TH+RT	12/1	.072	.167	219	292	72	.247	16.6	C+	51 ft
LT	12/1	.194	.267	399	472	267	.566	15.6	C+	165 ft

Airport Marriott
PM Peak Hour Future Base Year 2002
Haleakala Highway/Dairy Road/Keolani Place

03/30/**
14:57:09

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	395	405	45	20	180	200	50	285	65	55	195	225
WIDTHS	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
LANES	1	1	1	0	1	1	0	2	1	0	1	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	1583	1863	1770	0	1835	1770	0	3642	1770	0	1801	1770

Phasing Parameters

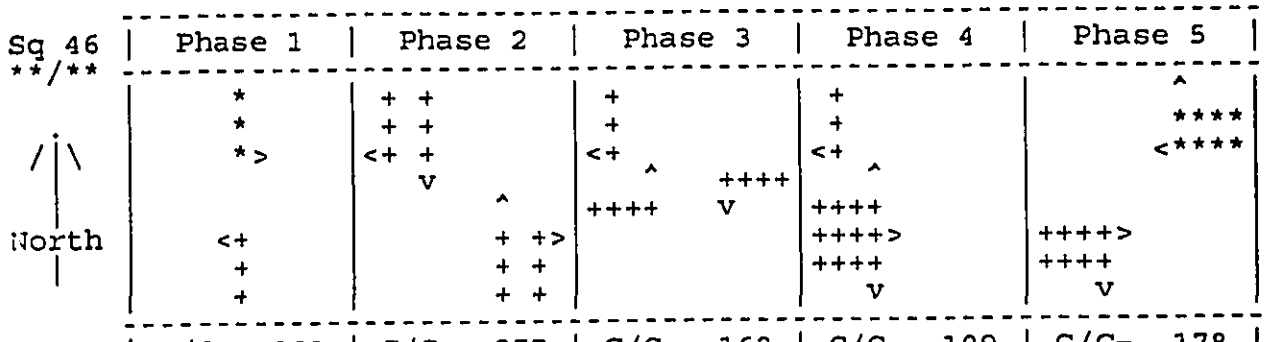
SEQUENCES	46					LEADLAGS	NONE NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00 1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0 0
CYCLES	100	180	5				
GREENTIMES	7.00	28.00	17.00	11.00	18.00		
YELLOWTIMES	5.00	5.00	5.00	.00	5.00		
CRITICALS	3	0	2	6	5		
EXCESS	0						

Airport Marriott
PM Peak Hour Future Base Year 2002
Haleakala Highway/Dairy Road/Keolani Place

03/30/**
14:57:20

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .54 Vehicle Delay 23.5 Level of Service C



C=101 sec G= 81.0 sec = 80.2% Y=20.0 sec = 19.8% Ped= .0 sec = .0%

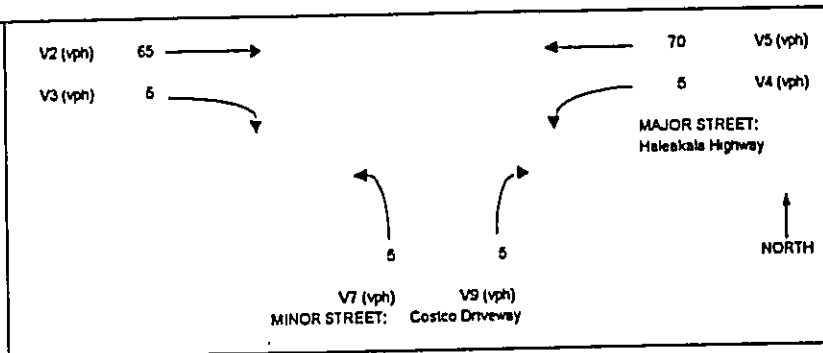
Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								20.4	C	
RT	12/1	.368	.624	930	988	439	.444	7.7	B+	234 ft
TH	12/1	.337	.297	350	553	450	.814	31.3	*D+	449 ft
LT	12/1	.205	.089	1	138	50	.316	33.2	*D	65 ft
NB Approach								23.4	C	
TH+RT	24/2	.241	.297	737	1082	392	.362	21.3	C	196 ft
LT	12/1	.210	.089	1	138	72	.456	34.7	D	93 ft
WB Approach								31.3	D+	
TH+RT	12/1	.253	.198	24	353	222	.612	30.2	*D+	253 ft
LT	12/1	.256	.188	1	321	222	.667	32.4	*D+	256 ft
EB Approach								22.5	C	
TH+RT	12/1	.275	.307	362	553	278	.503	22.4	C	274 ft
LT	12/1	.266	.297	331	526	250	.475	22.6	C	249 ft

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

Major Street: Haleakala Highway
Minor Street: Costco Driveway
Peak Hour: AM
Scenario: Future Base Year 2002

Print Date: 21-Jun-01
Analyst: EV
File Name: Costco-Hale

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	2
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	65	5	5	70	5	5
VOLUME, v (pcph)	65	5	6	70	6	6

STEP 1: RT FROM MINOR STREET - V9						
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	65	=	65 vph
Potential Capacity:	Cp,9 =					1283 pcph
Movement Capacity:	Cm,9 = Cp,9 =					1283 pcph
STEP 2: LT FROM MAJOR STREET - V4						
Conflicting Flows:	Vc,4 = V3+V2 =	0	+	65	=	65 vph
Potential Capacity:	Cp,4 =					1596 pcph
Movement Capacity:	Cm,4 = Cp,4 =					1596 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.997
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)/(1-v5/s5)]					NA
STEP 3: LT FROM MINOR STREET - V7						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					140 vph
Potential Capacity:	Cp,7 =					879 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					0.997
Movement Capacity:	Cm,7 = f7*Cp,7 =					876 pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	876	--NA--	4.14	A
MINOR RIGHT TURN (9)	6	1283	--NA--	2.82	A
MAJOR LEFT TURN (4)	6	1596	——	2.26	A

AVERAGE MINOR APPROACH DELAY = 3.48 sec/veh
LEVEL OF SERVICE = A

AVERAGE TOTAL INTERSECTION DELAY = 0.32 sec/veh
LEVEL OF SERVICE = A

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS

APPENDIX C
LEVEL OF SERVICE CALCULATIONS
• · Future Year 2002 With Project Conditions

Airport Marriott
AM Peak Hour Future Year 2002 With Project
Hana Highway/Dairy Road

03/30/**
11:43:06

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
MOVLABELS	45	185	45	80	2015	840	275	305	80	125	395	45
VOLUMES	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
WIDTHS	0	2	1	1	2	2	1	2	1	1	2	1
LANES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
UTILIZATIONS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TRUCKPERCENTS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
PEAKHOURFACTORS	3	3	3	3	3	3	3	3	3	3	3	3
ARRIVALTYPES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ACTUATIONS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
IDEALSATFLOWS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
GROUPTYPES	0	3616	1770	1583	3725	3539	1583	3594	1770	1583	3725	1770
SATURATIONFLOWS												

Phasing Parameters

SEQUENCES	65							
PERMISSIVES	NO	NO	NO	NO		LEADLAGS	NONE	NONE
OVERLAPS	YES	YES	YES	YES		OFFSET	.00	1
CYCLES	120	180	5			PEDTIME	.0	0
GREENTIMES	6.00	.00	15.00	5.00	24.00	45.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	3	9	8	12	0	11		
EXCESS	0							

Airport Marriott
AM Peak Hour Future Year 2002 With Project
Hana Highway/Dairy Road

03/30/**
11:43:34

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .80 Vehicle Delay 32.5 Level of Service D+

Sq 65
/

North

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G/C= .050 G= 6.0" Y+R= 5.0" OFF= .0%	G/C= .000 G= .0" Y+R= .0" OFF= 9.2%	G/C= .125 G= 15.0" Y+R= 5.0" OFF= 9.2%	G/C= .042 G= 5.0" Y+R= 5.0" OFF=25.8%	G/C= .200 G= 24.0" Y+R= 5.0" OFF=34.2%	G/C= .375 G= 45.0" Y+R= 5.0" OFF=58.3%

C=120 sec G= 95.0 sec = 79.2% Y=25.0 sec = 20.8% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	@E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
								37.9	D	
SB Approach										
TH+RT	24/2	.288	.142	1	490	269	.525	37.1	D	195 ft
LT	12/1	.270	.067	1	92	50	.424	42.4	*E+	79 ft
								43.9	E+	
NB Approach										
RT	12/1+	.311	.467	591	739	197	.267	14.9	B	177 ft
TH	24/2-	.311	.142	1	487	465	.914	53.6	*E	337 ft
LT	12/1	.279	.067	1	92	89	.754	57.3	*E	140 ft
								31.8	D+	
WB Approach										
RT	12/1	.281	.725	1106	1148	89	.078	3.7	A	41 ft
TH	24/2	.648	.633	2287	2359	2351	.997	30.2	D+	727 ft
LT	24/2	.384	.300	366	1062	961	.905	38.5	D	567 ft
								20.0	C+	
EB Approach										
RT	12/1	.294	.483	626	765	139	.182	13.4	B	121 ft
TH	24/2	.309	.392	1068	1459	461	.316	19.3	*C+	237 ft
LT	12/1	.270	.058	1	79	50	.485	44.4	*E+	79 ft

03/30/**
16:03:58

Airport Marriott
PM Peak Hour Future Year 2002 With Project
Hana Highway/Dairy Road

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
MOVLABELS	40	660	80	90	775	495	545	500	130	220	1195	165
VOLUMES	.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0	12.0	12.0	24.0	12.0
WIDTHS	0	2	1	1	2	2	1	2	1	1	2	1
LANES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
UTILIZATIONS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TRUCKPERCENTS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
PEAKHOURFACTORS	3	3	3	3	3	3	3	3	3	3	3	3
ARRIVALTYPES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ACTUATIONS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
IDEALSATFLOWS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	NORM	NORM	NORM	NORM	NORM	NORM	DOPT	NORM	NORM	NORM	NORM	NORM
GROUPTYPES	0	3694	1770	1583	3725	3539	1583	3558	1770	1583	3725	1770
SATURATIONFLOWS												

Phasing Parameters

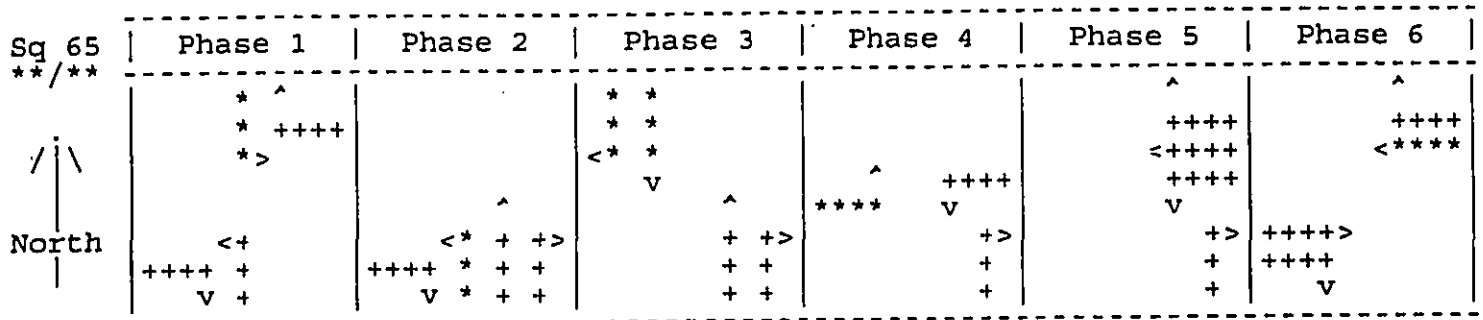
SEQUENCES	65					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	120	180	5					
GREENTIMES	11.00	.00	27.00	13.00	1.00	43.00		
YELLOWTIMES	5.00	.00	5.00	5.00	5.00	5.00		
CRITICALS	3	9	2	12	0	5		
EXCESS	0							

Airport Marriott
PM Peak Hour Future Year 2002 With Project
Hana Highway/Dairy Road

03/30/**
16:04:10

SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .81 Vehicle Delay 39.4 Level of Service D



C=120 sec G= 95.0 sec = 79.2% Y=25.0 sec = 20.8% Ped= .0 sec = .0%

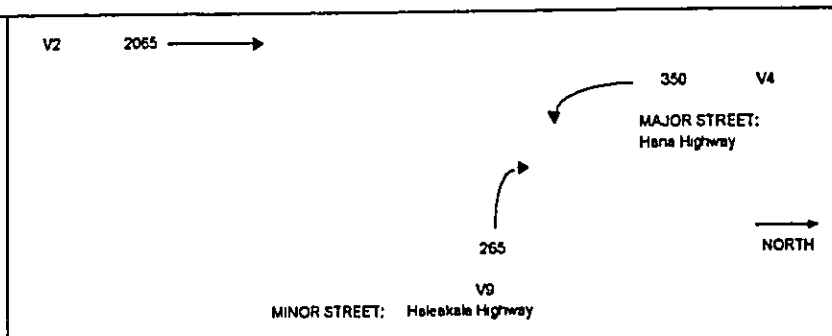
Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								43.1	E+	
TH+RT	24/2	.355	.242	1	893	816	.914	43.5	*E+	522 ft
LT	12/1	.279	.108	1	165	89	.464	39.5	*D	134 ft
NB Approach								42.9	E+	
RT	12/1+	.366	.442	536	699	355	.508	18.8	C+	334 ft
TH	24/2-	.363	.242	1	860	835	.971	51.9	E	534 ft
LT	12/1	.291	.108	1	165	144	.750	49.5	*E+	217 ft
WB Approach								30.3	D+	
RT	12/1	.284	.558	781	884	100	.113	9.5	B+	74 ft
TH	24/2	.367	.425	1268	1583	904	.571	20.3	*C	438 ft
LT	24/2	.325	.175	1	605	566	.914	50.0	E	394 ft
EB Approach								42.8	E+	
RT	12/1	.326	.508	679	805	244	.303	13.1	B	202 ft
TH	24/2	.448	.375	960	1397	1394	.998	46.5	E+	735 ft
LT	12/1	.301	.125	1	194	183	.828	54.0	*E	270 ft

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

Major Street: Hana Highway
Minor Street: Haleakala Highway
Peak Hour: AM
Scenario: Future Year 2002 with Project

Print Date: 07-Mar-00
Analyst: JAI
File Name: hana-hale w proj

Peak Hour Factor:	0.95
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	2065	0	350	0	0	265
VOLUME, v (pcph)	2065	0	385	0	0	292

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	1033	=	1033 vph
Potential Capacity:	Cp,9 =					415 pcph
Movement Capacity:	Cm,p = Cp,9 =					415 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	2065	=	2065 vph
Potential Capacity:	Cp,4 =					134 pcph
Movement Capacity:	Cm,4 = Cp,4 =					134 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					-1.88
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	2415	vph
Potential Capacity:	Cp,7 =	30	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	-1.88	
Movement Capacity:	Cm,7 = Cp,7 =	-57	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	292	415	--NA--	26.70	D
MAJOR LEFT TURN (4)	385	134	——	914.06	F

AVERAGE MINOR APPROACH DELAY = 26.70 sec/veh
LEVEL OF SERVICE = D

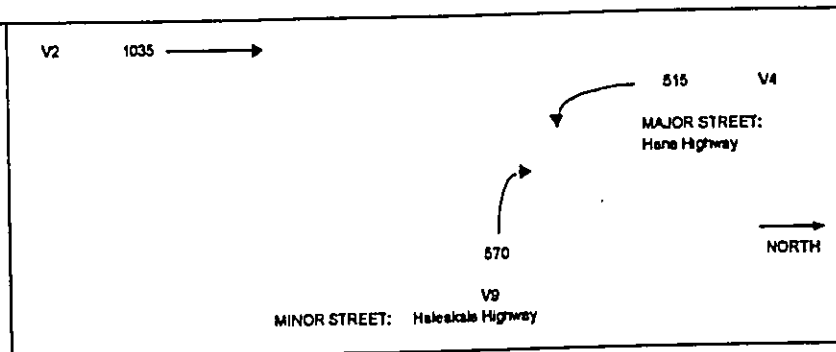
AVERAGE TOTAL INTERSECTION DELAY = 131.20 sec/veh
LEVEL OF SERVICE = F

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

Major Street: Hana Highway
Minor Street: Haleakala Highway
Peak Hour: PM
Scenario: Future Year 2002 with Project

Print Date: 09-Mar-00
Analyst: JAI
File Name: hana-hale w proj

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	Y
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	1035	0	515	0	0	570
VOLUME, v (pcph)	1035	0	567	0	0	627

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	0	+	518	=	518 vph
Potential Capacity:	Cp,9 =					757 pcph
Movement Capacity:	Cm,p = Cp,9 =					757 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	0	+	1035	=	1035 vph
Potential Capacity:	Cp,4 =					477 pcph
Movement Capacity:	Cm,4 = Cp,4 =					477 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					-0.19
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 =					NA

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	1550	vph
Potential Capacity:	Cp,7 =	108	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	-0.19	
Movement Capacity:	Cm,7 = Cp,7 =	-20	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR RIGHT TURN (9)	627	757	--NA--	23.25	D
MAJOR LEFT TURN (4)	567	477	——	126.09	F

AVERAGE MINOR APPROACH DELAY =	23.25	sec/veh	
LEVEL OF SERVICE =	D		
AVERAGE TOTAL INTERSECTION DELAY =	38.60	sec/veh	
LEVEL OF SERVICE =	E		

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15:24:21

Airport Marriott
AM Peak Hour Future Year 2002 With Project
Haleakala Highway/Dairy Road/Keolani Place

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS	.0	.0	.0	.0
GRADES	0	0	0	0
PEDLEVELS	NONE	NONE	NONE	NONE
PARKINGSIDES	20	20	20	20
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS				

Movement Parameters

	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
MOVLABELS	225	190	5	5	60	25	20	270	10	25	50	245
VOLUMES	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
WIDTHS	1	1	1	0	1	1	0	2	1	0	1	1
LANES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
UTILIZATIONS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TRUCKPERCENTS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
PEAKHOURFACTORS	3	3	3	3	3	3	3	3	3	3	3	3
ARRIVALTYPES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ACTUATIONS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
IDEALSATFLOWS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
GROUPTYPES	1583	1863	1770	0	1840	1770	0	3687	1770	0	1770	1770
SATURATIONFLOWS												

Phasing Parameters

SEQUENCES	46					LEADLAGS	NONE NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00 1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0 0
CYCLES	60	180	5				
GREENTIMES	8.00	10.00	14.00	.00	8.00		
YELLOWTIMES	5.00	5.00	5.00	.00	5.00		
CRITICALS	3	0	2	6	5		
EXCESS	0						

Airport Marriott
AM Peak Hour Future Year 2002 With Project
Haleakala Highway/Dairy Road/Keolani Place

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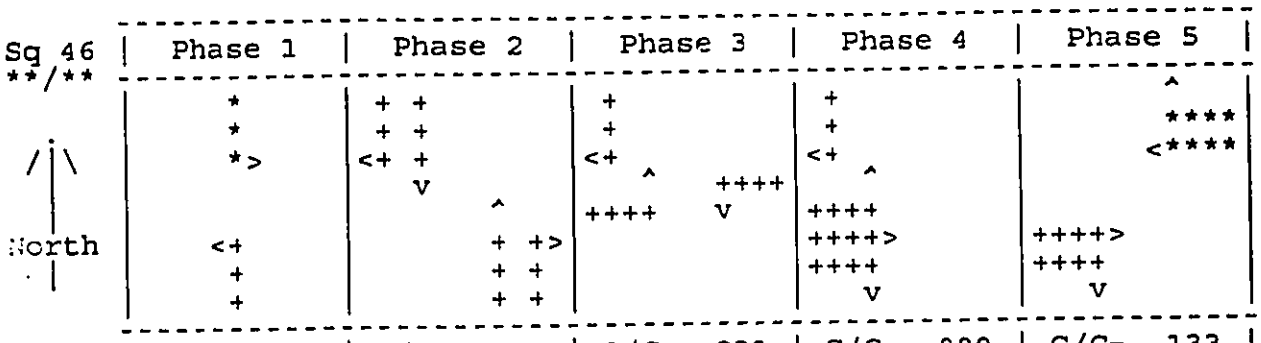
SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .43 Vehicle Delay 14.5 Level of Service B



C= 60 sec G= 40.0 sec = 66.7% Y=20.0 sec = 33.3% Ped= .0 sec = .0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	90% Max Queue
SB Approach								11.7	B	
RT	12/1	.203	.517	776	818	250	.306	6.4	B+	102 ft
TH	12/1	.153	.200	296	373	211	.566	18.0	*C+	142 ft
LT	12/1	.011	.167	222	295	6	.020	15.9	*C+	25 ft
NB Approach								16.4	C+	
TH+RT	24/2	.119	.200	637	737	338	.459	16.4	C+	114 ft
LT	12/1	.017	.167	222	295	11	.037	15.9	C+	25 ft
WB Approach								15.4	C+	
TH+RT	12/1	.069	.167	232	307	73	.238	16.6	*C+	51 ft
LT	12/1	.035	.267	399	472	28	.059	12.5	*B	25 ft
EB Approach								16.0	C+	
TH+RT	12/1	.079	.167	222	295	84	.285	16.8	C+	59 ft
LT	12/1	.196	.267	399	472	272	.576	15.8	C+	168 ft

Airport Marriott
PM Peak Hour Future Year 2002 With Project
Haleakala Highway/Dairy Road/Keolani Place

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15:25:25

SIGNAL94/TEAPAC[V1 L1.4] - Summary of Parameter Values

Intersection Parameters

METROAREA	NONCBD	
LOSTTIME	3.0	
LEVELOFSERVICE	C	S
NODELOCATION	0	0

Approach Parameters

	SB	WB	NB	EB
APPLABELS				
GRADES	.0	.0	.0	.0
PEDLEVELS	0	0	0	0
PARKINGSIDES	NONE	NONE	NONE	NONE
PARKVOLUMES	20	20	20	20
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0

Movement Parameters

	SB			WB			NB			EB		
MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	400	405	45	20	190	210	55	295	65	55	205	235
WIDTHS	12.0	12.0	12.0	.0	12.0	12.0	.0	24.0	12.0	.0	12.0	12.0
LANES	1	1	1	0	1	1	0	2	1	0	1	1
UTILIZATIONS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TRUCKPERCENTS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PEAKHOURFACTORS	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REQCLEARANCES	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
MINIMUMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GROUPTYPES	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
SATURATIONFLOWS	1583	1863	1770	0	1836	1770	0	3638	1770	0	1804	1770

Phasing Parameters

SEQUENCES	46					LEADLAGS	NONE	NONE
PERMISSIVES	NO	NO	NO	NO		OFFSET	.00	1
OVERLAPS	YES	YES	YES	YES		PEDTIME	.0	0
CYCLES	100	180	5					
GREENTIMES	7.00	28.00	17.00	11.00	18.00			
YELLOWTIMES	5.00	5.00	5.00	.00	5.00			
CRITICALS	3	0	2	6	5			
EXCESS	0							

Airport Marriott
PM Peak Hour Future Year 2002 With Project
Haleakala Highway/Dairy Road/Keolani Place

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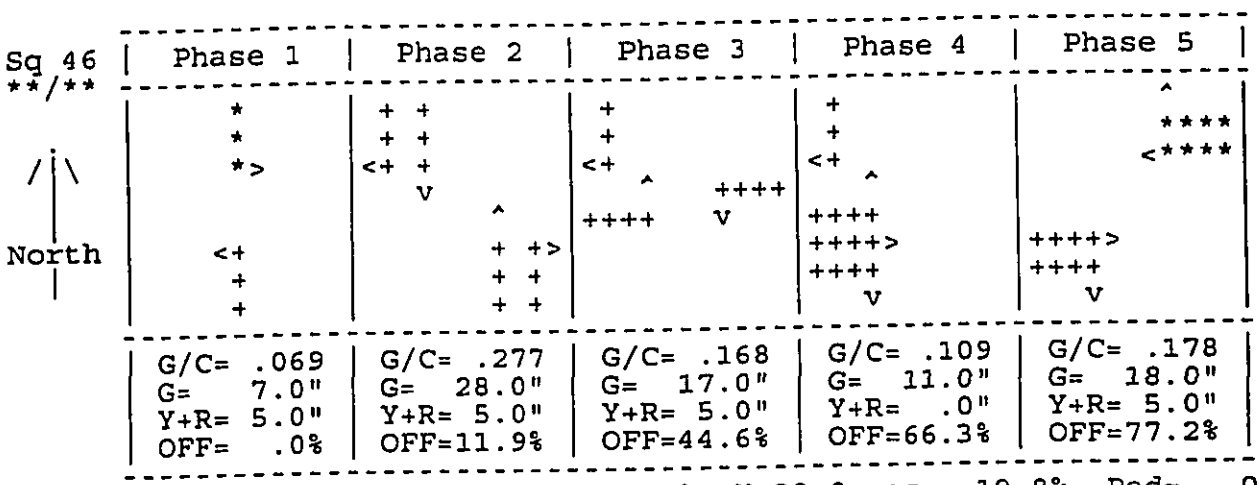
SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
Degree of Saturation (v/c) .56 Vehicle Delay 23.8 Level of Service C



C=101 sec G= 81.0 sec = 80.2% Y=20.0 sec = 19.8% Ped= .0 sec = .0%

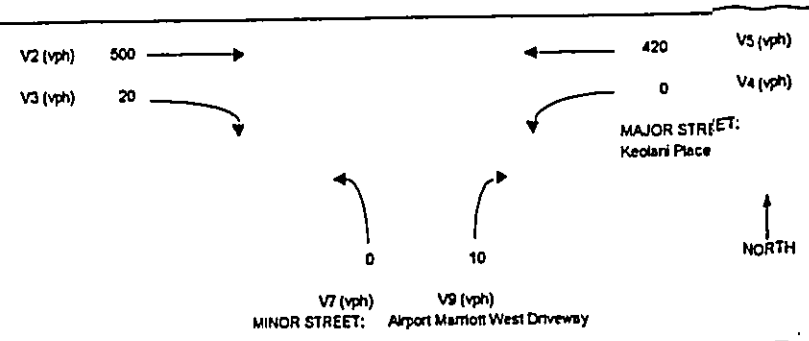
Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
SB Approach								20.3	C	
RT	12/1	.371	.624	930	988	444	.449	7.8	B+	237 ft
TH	12/1	.337	.297	350	553	450	.814	31.3	*D+	449 ft
LT	12/1	.205	.089	1	138	50	.316	33.2	*D	65 ft
NB Approach								23.4	C	
TH+RT	24/2	.244	.297	736	1081	408	.377	21.5	C	204 ft
LT	12/1	.210	.089	1	138	72	.456	34.7	D	93 ft
WB Approach								32.2	D+	
TH+RT	12/1	.256	.198	24	354	233	.640	30.9	*D+	265 ft
LT	12/1	.260	.188	1	321	233	.700	33.5	*D	269 ft
EB Approach								22.8	C	
TH+RT	12/1	.279	.307	363	554	289	.522	22.7	C	284 ft
LT	12/1	.270	.297	331	526	261	.496	22.9	C	260 ft

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

Major Street: Keolani Place
Minor Street: Airport Marriott West Driveway
Peak Hour: AM
Scenario: Future Year 2002 with Project

Print Date: 21-Jun-01
Analyst: JAI
File Name: keolani west drwy

Peak Hour Factor:	0.95
—MAJOR STREET—	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
—MINOR STREET—	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	500	20	0	420	0	10
VOLUME, v (pcph)	500	20	0	420	0	11

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows: Vc,9 = 1/2*V3+V2 = 10 + 250 = 260 vph
Potential Capacity: Cp,9 = 1022 pcph
Movement Capacity: Cm,9 = Cp,9 = 1022 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows: Vc,4 = V3+V2 = 20 + 500 = 520 vph
Potential Capacity: Cp,4 = 901 pcph
Movement Capacity: Cm,4 = Cp,4 = 901 pcph
Prob. of Queue-free State: po,4 = 1-v4/Cm,4 = 1.000
Major Left Shared Lane Prob. of Queue-free State: p*o,4 = 1-[(1-po,4)(1-v5/s5)] 1.000

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows: Vc,7 = 1/2V3+V2+V5+V4 = 930 vph
Potential Capacity: Cp,7 = 769 pcph
Capacity Adjustment Factor Due To Impeding Movements: f7=po,4= 1.000
Movement Capacity: Cm,7 = f7*Cp,7 = 769 pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	--NA--	--NA--	--NA--	--NA--	--NA--
MINOR RIGHT TURN (9)	11	1022	--NA--	3.56	A
MAJOR LEFT TURN (4)	0	901	----	3.99	A

AVERAGE MINOR APPROACH DELAY = 3.56 sec/veh
LEVEL OF SERVICE = A

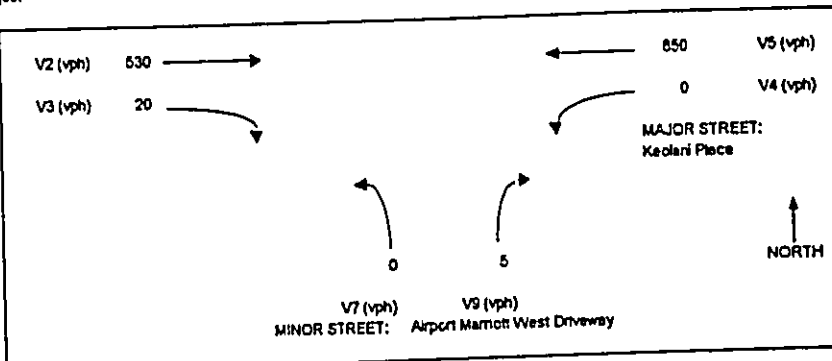
AVERAGE TOTAL INTERSECTION DELAY = 0.04 sec/veh
LEVEL OF SERVICE = A

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

Major Street: Keolani Place
Minor Street: Airport Marriott West Driveway
Peak Hour: PM
Scenario: Future Year 2002 with Project

Print Date: 21-Jun-01
Analyst: JAI
File Name: keolani west drwy

Peak Hour Factor:	0.95
MAJOR STREET	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
MINOR STREET	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	N
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	530	20	0	650	0	5
VOLUME, v (pcph)	530	20	0	650	0	6

STEP 1: RT FROM MINOR STREET - V9						
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	10	+	265	=	275 vph
Potential Capacity:	Cp,9 =					1005 pcph
Movement Capacity:	Cm,9 = Cp,9 =					1005 pcph
STEP 2: LT FROM MAJOR STREET - V4						
Conflicting Flows:	Vc,4 = V3+V2 =	20	+	530	=	550 vph
Potential Capacity:	Cp,4 =					869 pcph
Movement Capacity:	Cm,4 = Cp,4 =					869 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					1.000
Major Left Shared Lane						
Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)(1-v5/s5)]					1.000
STEP 3: LT FROM MINOR STREET - V7						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					1390 vph
Potential Capacity:	Cp,7 =					137 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					1.000
Movement Capacity:	Cm,7 = f7*Cp,7 =					137 pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	--NA--	--NA--	--NA--	--NA--	--NA--
MINOR RIGHT TURN (9)	6	1005	--NA--	3.60	A
MAJOR LEFT TURN (4)	0	869	----	4.14	A

AVERAGE MINOR APPROACH DELAY = 3.60 sec/veh
LEVEL OF SERVICE = A

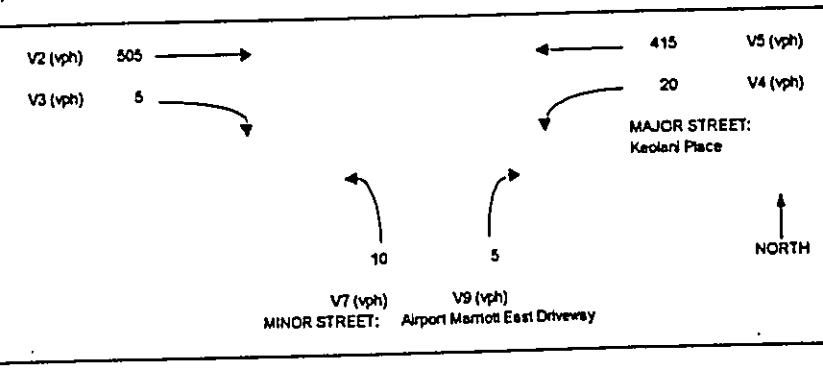
AVERAGE TOTAL INTERSECTION DELAY = 0.01 sec/veh
LEVEL OF SERVICE = A

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

Major Street: Keolani Place
Minor Street: Airport Marriott East Driveway
Peak Hour: AM
Scenario: Future Year 2002 with Project

Print Date: 21-Jun-01
Analyst: JAI
File Name: keolani east drwy

Peak Hour Factor:	0.95
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS								
MOVEMENT NO.	2	3	4		5	7	9	
VOLUME, V (vph)	505	5	20		415	10	5	
VOLUME, v (pcph)	505	5	22		415	11	5	
STEP 1: RT FROM MINOR STREET - V9								
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =		3	+	253	=	255	vph
Potential Capacity:	Cp,9 =						1028	pcph
Movement Capacity:	Cm,9 = Cp,9 =						1028	pcph
STEP 2: LT FROM MAJOR STREET - V4								
Conflicting Flows:	Vc,4 = V3+V2 =		5	+	505	=	510	vph
Potential Capacity:	Cp,4 =						913	pcph
Movement Capacity:	Cm,4 = Cp,4 =						913	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =						0.976	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)(1-v5/s5)]						0.973	
STEP 3: LT FROM MINOR STREET - V7								
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =						943	vph
Potential Capacity:	Cp,7 =						264	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=						0.973	
Movement Capacity:	Cm,7 = f7*Cp,7 =						257	pcph

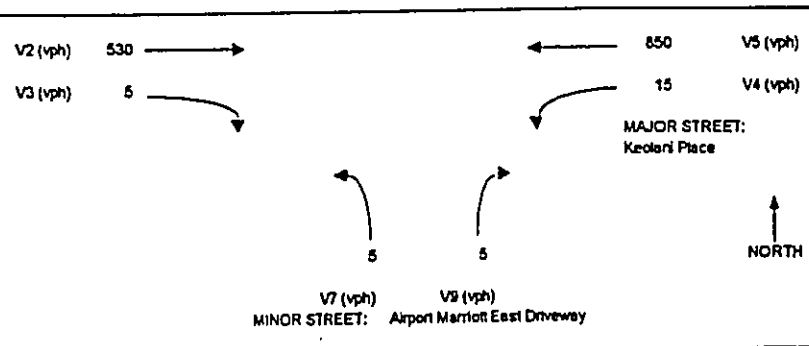
DELAY AND LEVEL OF SERVICE SUMMARY Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	11	257	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	5	1028	343	11.03	C
MAJOR LEFT TURN (4)	22	913	——	4.04	A

AVERAGE MINOR APPROACH DELAY =	11.03	sec/veh	AVERAGE TOTAL INTERSECTION DELAY =	0.28 sec/veh
LEVEL OF SERVICE =	C		LEVEL OF SERVICE =	A

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

Major Street:	Keolani Place	Print Date:	21-Jun-01
Minor Street:	Airport Marriott East Driveway	Analyst:	JAI
Peak Hour:	PM	File Name:	keolani east drwy
Scenario:	Future Year 2002 with Project		

Peak Hour Factor:	0.95
——MAJOR STREET——	
Num of Lanes - V2:	2
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	2
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
——MINOR STREET——	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS						
MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	530	5	15	850	5	5
VOLUME, v (pcph)	530	5	17	850	6	6

STEP 1: RT FROM MINOR STREET - V9						
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	3	+	265	=	268 vph
Potential Capacity:	Cp,9 =					1013 pcph
Movement Capacity:	Cm,9 = Cp,9 =					1013 pcph
STEP 2: LT FROM MAJOR STREET - V4						
Conflicting Flows:	Vc,4 = V3+V2 =	5	+	830	=	835 vph
Potential Capacity:	Cp,4 =					885 pcph
Movement Capacity:	Cm,4 = Cp,4 =					885 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.981
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)(1-v5/s5)]					0.976
STEP 3: LT FROM MINOR STREET - V7						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =					1398 vph
Potential Capacity:	Cp,7 =					135 pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=					0.976
Movement Capacity:	Cm,7 = f7*Cp,7 =					132 pcph

DELAY AND LEVEL OF SERVICE SUMMARY Movement	v(vph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	132	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	6	1013	234	15.17	C
MAJOR LEFT TURN (4)	17	885	——	4.15	A

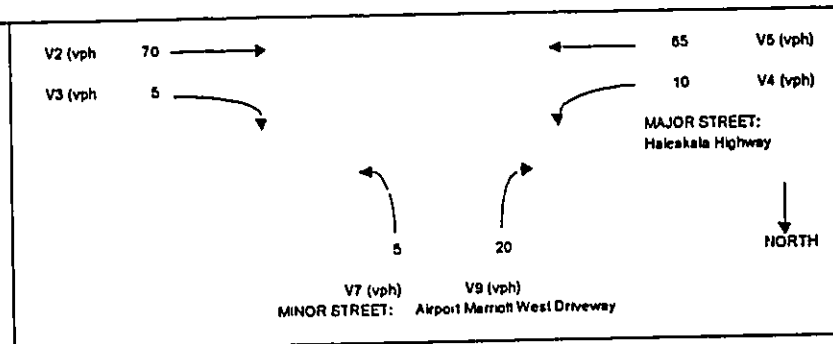
AVERAGE MINOR APPROACH DELAY =	16.17	sec/veh	AVERAGE TOTAL INTERSECTION DELAY = 0.17 sec/veh
LEVEL OF SERVICE =	C		LEVEL OF SERVICE = A

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

Major Street: Haleakala Highway
Minor Street: Airport Marriott West Driveway
Peak Hour: AM
Scenario: Future Year 2002 with Project

Print Date: 30-Mar-00
Analyst: JAI
File Name: haleakala west drwy

Peak Hour Factor:	0.95
------MAJOR STREET--------	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
------MINOR STREET--------	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS

MOVEMENT NO.	2	3	4	5	7	9
VOLUME, V (vph)	70	5	10	65	5	20
VOLUME, v (pcph)	70	5	11	65	6	22

STEP 1: RT FROM MINOR STREET - V9

Conflicting Flows:	Vc,9 = 1/2*V3+V2 =	3	+	70	=	73 vph
Potential Capacity:	Cp,9 =					1272 pcph
Movement Capacity:	Cm,9 = Cp,9 =					1272 pcph

STEP 2: LT FROM MAJOR STREET - V4

Conflicting Flows:	Vc,4 = V3+V2 =	5	+	70	=	75 vph
Potential Capacity:	Cp,4 =					1579 pcph
Movement Capacity:	Cm,4 = Cp,4 =					1579 pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =					0.993
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)/(1-v5/s5)]					0.993

STEP 3: LT FROM MINOR STREET - V7

Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =	148	vph
Potential Capacity:	Cp,7 =	870	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=	0.993	
Movement Capacity:	Cm,7 = f7*Cp,7 =	863	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	863	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	22	1272	1152	3.17	A
MAJOR LEFT TURN (4)	11	1579	------	2.30	A

AVERAGE MINOR APPROACH DELAY = 3.17 sec/veh
LEVEL OF SERVICE = A

AVERAGE TOTAL INTERSECTION DELAY = 0.63 sec/veh
LEVEL OF SERVICE = A

ATA Inc.

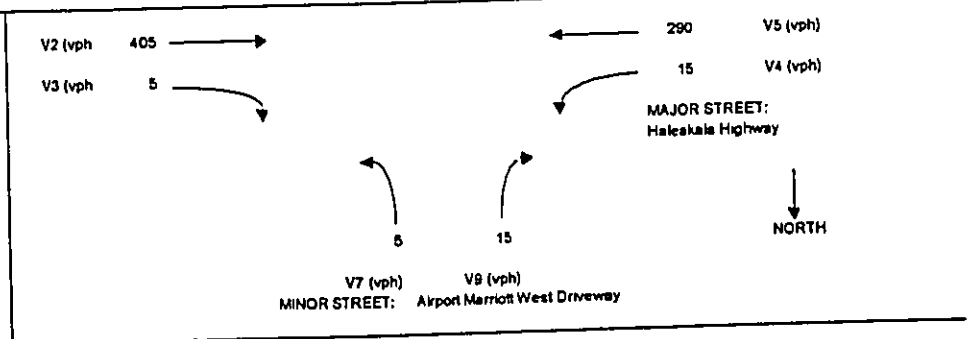
STOP CONTROLLED T-INTERSECTION LEVEL OF SERVICE ANALYSIS

1994 HCM

Major Street: Haleakala Highway
Minor Street: Airport Marriott West Driveway
Peak Hour: PM
Scenario: Future Year 2002 with Project

Print Date: 30-Mar-00
Analyst: JAI
File Name: haleakala west drwy

Peak Hour Factor:	0.95
------MAJOR STREET------	
Num of Lanes - V2:	1
Excl RT - V3 (Y/N):	N
Stop/Yield - V3 (Y/N):	N
% Grade - V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	N
% Grade - V4,V5:	0
------MINOR STREET------	
Num of Lanes - V7,V9:	1
Shared Lane (Y/N):	Y
% Grade - V7&V9:	0



VOLUME ADJUSTMENTS									
MOVEMENT NO.	2		3	4		5	7	9	
VOLUME, V (vph)	405		5	15		290	5	15	
VOLUME, v (pcph)	405		5	17		290	6	17	
STEP 1: RT FROM MINOR STREET - V9									
Conflicting Flows:	Vc,9 = 1/2*V3+V2 =			3	+	405	=	408	vph
Potential Capacity:	Cp,9 =							861	pcph
Movement Capacity:	Cm,9 = Cp,9 =							861	pcph
STEP 2: LT FROM MAJOR STREET - V4									
Conflicting Flows:	Vc,4 = V3+V2 =			5	+	405	=	410	vph
Potential Capacity:	Cp,4 =							1093	pcph
Movement Capacity:	Cm,4 = Cp,4 =							1093	pcph
Prob. of Queue-free State:	po,4 = 1-v4/Cm,4 =							0.985	
Major Left Shared Lane Prob. of Queue-free State:	p*o,4 = 1-[(1-po,4)/(1-v5/s5)]							0.982	
STEP 3: LT FROM MINOR STREET - V7									
Conflicting Flows:	Vc,7 = 1/2V3+V2+V5+V4 =							713	vph
Potential Capacity:	Cp,7 =							409	pcph
Capacity Adjustment Factor Due To Impeding Movements:	f7=po,4=							0.982	
Movement Capacity:	Cm,7 = f7*Cp,7 =							402	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

Movement	v(vcph)	cm(pcph)	csh (pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	402	SHRD	SHRD	SHRD
MINOR RIGHT TURN (9)	17	861	670	5.56	B
MAJOR LEFT TURN (4)	17	1093	-----	3.34	A

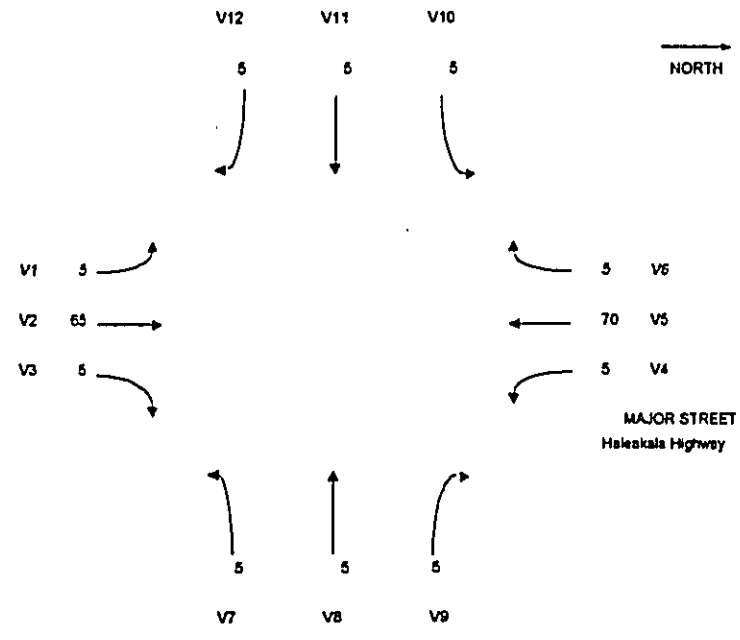
AVERAGE MINOR APPROACH DELAY = 5.56 sec/veh
LEVEL OF SERVICE = B

AVERAGE TOTAL INTERSECTION DELAY = 0.24 sec/veh
LEVEL OF SERVICE = A

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

Major Street:	Haleakala Highway	Print Date:	21-Jun-01
Minor Street:	Costco Driveway/ Airport Marriot East Driveway	Analyst:	EV
Peak Hour:	AM PEAK	File Name:	Costco-Hale Future
Scenario:	Future Year 2002 with Project		

Peak Hour Factor:	1.00
MAJOR STREET	
Num of Lanes - V2:	1
Excl LT - V1 (Y/N):	Y
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
Grade - V1,V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
Excl RT - V6 (Y/N):	N
Stop/Yield - V6 (Y/N):	N
Grade - V4,V5,V6:	0
MINOR STREET	
Num of Lanes - V8:	2
Grade - V7,V8,V9:	0
Shared Lane-V7,8,9: (0=N,1=LT,2=TR,3=LTR)	2
Num of Lanes - V11:	1
Grade - V10,V11,V12:	0
Shared Lane-V10,11,12: (0=N,1=LT,2=TR,3=LTR)	3



VOLUME ADJUSTMENTS												
MOVEMENT NO.	1	2	3	4	5	6	7	8	9	10	11	12
HOURLY FLOW RATE, V(vph)	5	65	5	5	70	5	5	5	5	5	5	5
VOLUME, v (pcph)	6	65	5	6	70	5	6	6	6	6	6	6

STEP 1: RT FROM MINOR STREET						
Conflicting Flows:	Vc9 = 1/2 V3 + V2 =	65	vhp	Vc12 = 1/2 V6 + V5 =	73	vhp
Potential Capacity:	Cp,9 =	1283	pcph	Cp,12 =	1272	pcph
Movement Capacity:	Cm,9=Cp,9=	1283	pcph	Cm,12=Cp,12=	1272	pcph
Prb. of Queu-free State:	po,9=1-v9/Cm,9=	1.00		po,12=1-v12/Cm,12=	1.00	
STEP 2: LT FROM MAJOR STREET						
Conflicting Flows:	Vc,4 = V2 + V3 =	70	vhp	Vc,1 = V5 + V6 =	75	vhp
Potential Capacity:	Cp,4 =	1588	pcph	Cp,1 =	1579	pcph
Movement Capacity:	Cm,4=Cp,4=	1588	pcph	Cm,1=Cp,1=	1579	pcph
Prb. of Queu-free State:	po,4=1-v4/Cm4=	1.00		po,1=1-v1/Cm1=	1.00	
Major Left Shared Lane Prob. of Queue-free State	p*o,4=	NA		p*o,1=	NA	

—continued—

Major Street:	Haleakala Highway	DATE:	21-Jun-01
Minor Street	Costco Driveway/ Airport Marriot East Driveway	Analyst	EV
Peak Hour:	AM PEAK	File Name:	Costco-Hale Future
Scenario:	Future Year 2002 with Project		

STEP 3: TH FROM MINOR STREET						
Conflicting Flows:	Vc,8 = 1/2V3+V2+V1+V6+V5+V4			Vc,11 = 1/2V6+V5+V4+V3+V2+V1		
	=	150	vph	=	145	vph
Potential Capacity:	Cp,8 =	910	pcph	Cp,11 =	916	pcph
Capacity Adj Factor:	f8 = po,4*po,1 =	0.99		f11 = po,4*po,1 =	0.99	
Movement Capacity:	Cm,8 = Cp,8*f8 =	903	pcph	Cm,11 = Cp,11*f11 =	909	pcph
Prob. of Queue-free State:	po,8 = 1-v8/Cm,8 =	0.99		po,11 = 1-v11/Cm,11 =	0.99	

STEP 4: LT FROM MINOR STREET						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V1+1/2V6+V5+V4+			Vc,10 = 1/2V6+V5+V4+1/2V3+V2+V1+		
	1/2(V11+V12) =	153	vph	1/2(V8+V9) =	153	vph
Potential Capacity:	Cp7 =	864	pcph	Cp10 =	864	pcph
Major Left, Minor Through Impedance Factor:	P*7=po,11*f11 =	0.99		P*10=po,8*f8 =	0.99	
Major Left, Minor Through Adjusted Impedance Factor:	p'7 =	0.99		p'10 =	0.99	
Capacity Adjustment Factor:	f7 = p'7*po,12 =	0.98		f10 = p'10*po,9 =	0.98	
Movement Capacity:	Cm,7 = f7*Cp,7 =	851	pcph	Cm,10 = f10*Cp,10 =	851	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

MOVEMENT	v(pcph)	cm(pcph)	csh(pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	6	851	–NA–	4.26	A
MINOR THROUGH (8)	6	903	1060	3.43	A
MINOR RIGHT TURN (9)	6	1283	SHRD	SHRD	—
MINOR LEFT TURN (10)	6	851	SHRD	SHRD	—
MINOR THROUGH (11)	6	909	960	3.74	A
MINOR RIGHT TURN (12)	6	1272	SHRD	SHRD	—
MAJOR LEFT (1)	6	1579	–NA–	2.29	A
MAJOR LEFT (4)	6	1588	–NA–	2.26	A
MINOR APPROACH (7)(8)(9)	-	-	-	3.71	A
MINOR APPROACH (10)(11)(12)	-	-	-	3.74	A
MAJOR APPROACH (1)(2)(3)	-	-	-	0.18	A
MAJOR APPROACH (4)(5)(6)	-	-	-	0.17	A
TOTAL INTERSECTION (1-12)	-	-	-	0.87	A

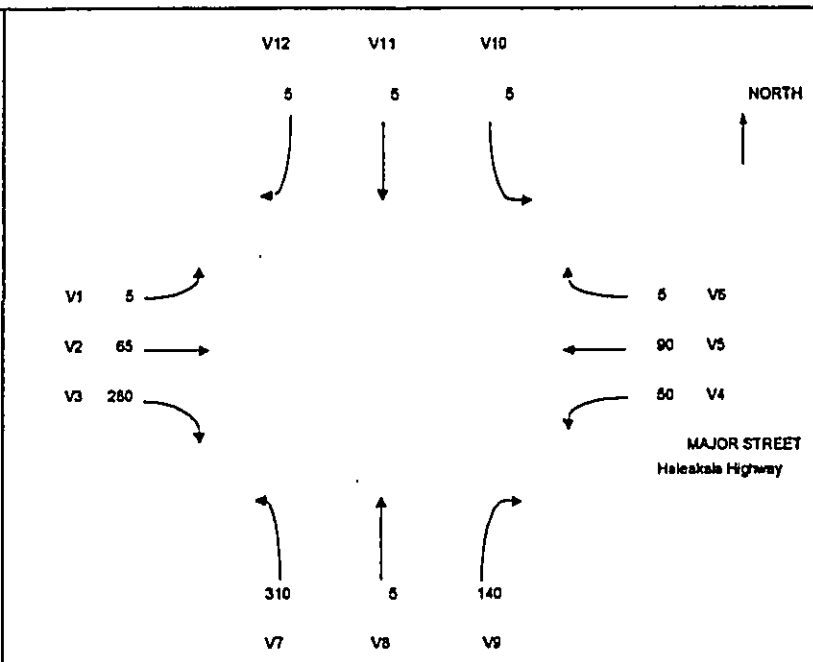
LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	AVG TOTAL DELAY (SEC/VEH)
A	<=5
B	>5&<=10
C	>10&<=20
D	>20&<=30
E	>30&<=45
F	>45

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

Major Street:	Haleakala Highway	Print Date:	21-Jun-01
Minor Street:	Costco Driveway/ Airport Marriot East Driveway	Analyst:	EV
Peak Hour:	PM PEAK	File Name:	Costco-Hale Future
Scenario:	Future Year 2002 with Project	Intesection #:	

Peak Hour Factor:	1.00
——MAJOR STREET——	
Num of Lanes - V2:	1
Excl LT - V1 (Y/N):	Y
Excl RT - V3 (Y/N):	Y
Stop/Yield - V3 (Y/N):	N
Grade - V1,V2,V3:	0
Num of Lanes - V5:	1
Excl LT - V4 (Y/N):	Y
Excl RT - V6 (Y/N):	N
Stop/Yield - V6 (Y/N):	N
Grade - V4,V5,V6:	0
——MINOR STREET——	
Num of Lanes - V8:	2
Grade - V7,V8,V9:	0
Shared Lane-V7,8,9: (0=N,1=LT,2=TR,3=LTR)	2
Num of Lanes - V11:	1
Grade - V10,V11,V12:	0
Shared Lane-V10,11,12: (0=N,1=LT,2=TR,3=LTR)	3



VOLUME ADJUSTMENTS

MOVEMENT NO.	1	2	3	4	5	6	7	8	9	10	11	12
HOURLY FLOW RATE, V(vph)	5	65	280	50	90	5	310	5	140	5	5	5
VOLUME, v (pcph)	6	65	280	55	90	5	341	6	154	6	6	6

STEP 1: RT FROM MINOR STREET						
Conflicting Flows:	Vc9 = 1/2 V3 + V2 =	65	vhp	Vc12 = 1/2 V6 + V5 =	93	vhp
Potential Capacity:	Cp,9 =	1283	pcph	Cp,12 =	1243	pcph
Movement Capacity:	Cm,9=Cp,9=	1283	pcph	Cm,12=Cp,12=	1243	pcph
Prb. of Queu-free State:	po,9= 1-v9/Cm,9=	0.88		po,12=1-v12/Cm,12=	1.00	

STEP 2: LT FROM MAJOR STREET						
Conflicting Flows:	Vc,4 = V2 + V3 =	345	vhp	Vc,1 = V5 + V6 =	95	vhp
Potential Capacity:	Cp,4 =	1174	pcph	Cp,1 =	1545	pcph
Movement Capacity:	Cm,4=Cp,4=	1174	pcph	Cm,1=Cp,1=	1545	pcph
Prb. of Queu-free State:	po,4=1-v4/Cm4=	0.95		po,1=1-v1/Cm1=	1.00	
Major Left Shared Lane Prob. of Queue-free State	p*o,4=	NA		p*o,1=	NA	

—continued—

Major Street:	Haleakala Highway	DATE:	21-Jun-01
Minor Street:	Costco Driveway/ Airport Marriot East Driveway	Analyst:	EV
Peak Hour:	PM PEAK	File Name:	Costco-Hale Future
Scenario:	Future Year 2002 with Project		

STEP 3: TH FROM MINOR STREET						
Conflicting Flows:	Vc,8 = 1/2V3+V2+V1+V6+V5+V4 =	215	vph	Vc,11 = 1/2V6+V5+V4+V3+V2+V1 =	210	vph
Potential Capacity:	Cp,8 =	841	pcph	Cp,11 =	846	pcph
Capacity Adj Factor:	f8 = po,4*po,1 =	0.95		f11 = po,4*po,1 =	0.95	
Movement Capacity:	Cm,8 = Cp,8*f8 =	799	pcph	Cm,11 = Cp,11*f11 =	804	pcph
Prob. of Queue-free State:	po,8 = 1-v8/Cm,8 =	0.99		po,11 = 1-v11/Cm,11 =	0.99	

STEP 4: LT FROM MINOR STREET						
Conflicting Flows:	Vc,7 = 1/2V3+V2+V1+1/2V6+V5+V4+ 1/2(V11+V12) =	218	vph	Vc,10 = 1/2V6+V5+V4+1/2V3+V2+V1+ 1/2(V8+V9) =	285	vph
Potential Capacity:	Cp7 =	782	pcph	Cp10 =	724	pcph
Major Left, Minor Through Impedance Factor:	P*7=po,11*f11 =	0.94		P*10=po,8*f8 =	0.94	
Major Left, Minor Through Adjusted Impedance Factor:	p'7 =	0.96		p'10 =	0.96	
Capacity Adjustment Factor:	f7 = p'7*po,12 =	0.95		f10 = p'10*po,9 =	0.84	
Movement Capacity:	Cm,7 = f7*Cp,7 =	754	pcph	Cm,10 = f10*Cp,10 =	609	pcph

DELAY AND LEVEL OF SERVICE SUMMARY

MOVEMENT	v(pcph)	cm(pcph)	csh(pcph)	AVG TOTAL DELAY	LOS
MINOR LEFT TURN (7)	341	754	--NA--	8.66	B
MINOR THROUGH (8)	6	799	1255	3.29	A
MINOR RIGHT TURN (9)	154	1283	SHRD	SHRD	--
MINOR LEFT TURN (10)	6	609	SHRD	SHRD	--
MINOR THROUGH (11)	6	804	813	4.53	A
MINOR RIGHT TURN (12)	6	1243	SHRD	SHRD	--
MAJOR LEFT (1)	6	1545	--NA--	2.34	A
MAJOR LEFT (4)	55	1174	--NA--	3.22	A
MINOR APPROACH (7)(8)(9)	-	-	-	6.95	B
MINOR APPROACH (10)(11)(12)	-	-	-	4.53	A
MAJOR APPROACH (1)(2)(3)	-	-	-	0.04	A
MAJOR APPROACH (4)(5)(6)	-	-	-	1.18	A
TOTAL INTERSECTION (1-12)	-	-	-	3.89	A

LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	AVG TOTAL DELAY (SEC/VEH)
A	<=5
B	>5&<=10
C	>10&<=20
D	>20&<=30
E	>30&<=45
F	>45

Appendix B

Preliminary Engineering Report

PRELIMINARY ENGINEERING REPORT

FOR

PROPOSED KAHULUI AIRPORT HOTEL

TMK: 3-8-79:16 & 17

1.0 INTRODUCTION

This report provides a description of the project site and infrastructure that will serve this development. It will also evaluate the existing infrastructure and discuss the improvements that would be required for this project.

2. TOPOGRAPHY

The topography of the site varies with a small mounded area that rises to about elevation 16-feet at the southeast corner of the property and a low lying area at about elevation 6-feet at the northeast side of the lot. The major portion of the lot is relatively level with elevations between 7-8 feet.

3. EXISTING INFRASTRUCTURE

3.1 Water System:

This area is served by the Department of Water Supply, County of Maui. There is an existing 12-inch waterline in Keolani Place and a 3-inch line in an easement through the project site and continues easterly along Haleakala Highway. There is also a 16-inch transmission line to serve Kahului Airport located in Keolani Place.

The source for this system is the Waihee wells, which were developed by the Central Maui Source Joint Venture. The three developed wells have a total capacity of 13.5 million gallons per day. A&B Properties is a member of this joint venture and has an allocation of 4/19 of the developed capacity. The remaining A&B source credits from these wells will be adequate to supply this development.

The water storage tanks that serve the system for this area are located in Wailuku.

3.2 Wastewater System:

There is no existing wastewater system serving this area. The existing structures on this site are served by onsite cesspools. The nearest existing County 18-inch sewerline is located on Dairy Road between Costco and Kmart. The wastewater in this system flows to the Airport Industrial Subdivision sewage pump station on Kele Street. The 6-inch force main from this SPS pumps the wastewater to the 12-inch Alamaha Street sewerline to a pump station at Alamaha Street and Wakea Avenue. Flows from this SPS are pumped through an 8-inch force main to the Kahului Pump Station, and from there to the Kahului Wastewater Reclamation Facility.

3.3 Storm Drainage:

Runoff from the site currently flows to the low lying area and then flows into the existing concrete channel located to the eastern portion of this property. The estimated runoff is about 5.6 cubic feet per second (cfs) for a 10-year, 1-hour storm.

3.4 Roadways:

The project site is located between Keolani Place, which is the northerly boundary and Haleakala Highway, its southerly boundary. Both roads intersect at Dairy Road, which is west of this property. Keolani Place is a fully improved roadway. The south half of Haleakala Highway is improved, fronting Costco and the north half is paved but has no curbs, gutters or sidewalks.

3.5 Electrical, Telephone and Cable Television Systems:

The primary electrical and telephone and cable television systems that serve this site are overhead and run along Haleakala Highway. There are existing underground systems in Dairy Road to serve Kmart and Costco.

4.0 GRADING

This site will be graded to accommodate the proposed hotel by filling the low areas of the lot to ensure that storm runoff drains from the site into the existing drainage system.

5.0 PROPOSED SUBDIVISION IMPROVEMENTS

5.1 Water System Improvements:

Water consumption for this 3.35 acre parcel is estimated to be about 29,000 gallons per day (gpd). This is based on the Interim Water Usage Standards for Central Maui. The source for this project will be the Waihee wells that were developed by the Central Maui Source Joint Venture and dedicated to the Department of Water Supply. A&B Properties, Inc. is a member of this joint

venture and has an allocation of 4/19 of the developed water. Water for this project will be from A&B's allocation.

A new 12-inch waterline will be connected to the existing 12-inch line at the intersection of Dairy Road and Haleakala Highway and extended past the project site. New fire hydrants will be installed along Haleakala Highway at the standard spacing. This proposed system would provide adequate water to meet domestic and fire flow requirements for this development.

5.2 Sewage System:

The daily average sewage flow generated by this 140-room hotel is estimated at about 22,000 gallons per day. The Kahului Wastewater Reclamation Facility has adequate capacity for this flow.

A new 12-inch sewerline will be installed from an existing sewer manhole on Dairy Road near Kelè Street. This line extension will be constructed in Dairy Road and Haleakala Highway, with service laterals to the project site and other lots to be served by this system.

5.3 Storm Drainage:

The estimated runoff from the developed project will be about 5.2 cfs, which is for a 10-year, 1-hour storm. This would be a decrease of about 0.4 cfs from the existing runoff. This decrease is due to the additional areas that will be landscaped on the hotel site. An onsite storm drainage system will be designed to collect the runoff and direct it to the existing channel that is located at the east side of the project. This channel was designed to take flows from this area.

5.4 Roadways:

This hotel will have access to two roadways. Keolani Place to the north of the site is an improved street. Haleakala Highway will be improved to meet County standards, with curbs, gutters and sidewalks. The pavement will also be widened where required.

5.5 Electrical, Telephone and Cable Television Systems:

Electrical, telephone and cable television systems will be extended from the existing systems that are maintained by the respective utility companies. These systems will be designed to meet current standards of the companies.

6.0 CONCLUSION

This preliminary engineering report concludes that the existing infrastructure has the capacity for this development and construction of the proposed improvements will mitigate the impact of the proposed hotel.

Appendix C

Preliminary Storm Drainage Report

PRELIMINARY STORM DRAINAGE REPORT
FOR
PROPOSED KAHULUI AIRPORT HOTEL
TMK: 3-8-79:16 & 17

DRAINAGE PLAN

A. General:

Presently, single story buildings housing commercial businesses occupy a portion of the site, the remainder of the site is undeveloped land. A portion of the undeveloped land is being used to park automobiles; the balance is covered with grass, brush, and trees. Ground elevations range from about 16 feet at the eastern end to 6 feet in depressions. Estimated runoff under present site conditions is approximately 5.6 cubic feet per second (cfs). (see Appendix, "HYDRAULIC CALCULATIONS EXISTING CONDITIONS"). This runoff is collected by an existing drainage channel, which ultimately discharges into Kalialinui Stream.

The soil is generally Jaucas Sand, saline (JcC) and is characterized by having very high infiltration rates and low runoff potential. It is subject to moderate erosion if not protected.

Proposed improvements include a 140 unit, 4-story hotel building with outdoor swimming pool, a paved parking lot and landscaped areas. Storm water runoff from the developed site will be about 5.2 cfs. (see Appendix, "HYDROLOGIC CALCULATIONS DEVELOPED CONDITIONS"). The development will cause a decrease of about 0.4 cfs to the existing conditions. Storm water runoff will be collected by an onsite drainage system and deposited into the existing concrete drainage channel at the East-end of the project site. This channel was designed to accommodate this area under developed conditions. The drainage facility was constructed in 1990 with the Airport Industrial Subdivision project in preparation for the development of this site and other surrounding areas.

B. Hydrology:

The rational method will be used to determine storm runoff from the project site in accordance with the "Rules for the Design of Storm Drainage Facilities in the County of Maui", November 12, 1995. This design criteria indicates that the runoff volume be determined using a storm having a recurrence interval of 10 years and one hour duration, since the drainage area is less than 100 acres (see Appendix).

C. Conclusion:

With the majority of the property's runoff being directed to the existing adjacent drainage channel and the remainder to the existing roadway drainage facilities, the proposed development will not have an adverse effect on adjacent or downstream property.

APPENDIX
HYDROLOGIC CALCULATIONS
EXISTING CONDITIONS

PURPOSE:

Determine the onsite surface runoff volume generated by the existing conditions of the project site. The rational method will be used to determine the peak onsite surface runoff volume having a 10-year recurrence interval and a one-hour rainfall of 2 inches.

I. Drainage Area = 3.35 Acres (lot) – 0.15 Acres (existing open ditch) = 3.20 Acres

II. Runoff Coefficient, C:

a) Open Areas

Infiltration (high)	=	0.00
Relief (flat)	=	0.00
Vegetal Cover (poor)	=	0.05
Development Type (business)	=	0.55
C	=	0.60
Area	=	2.65 Acres

b) Paved Areas

Infiltration (negligible)	=	0.20
Relief (flat)	=	0.00
Vegetal Cover (none)	=	0.07
Development Type (business)	=	0.55
C	=	0.82
Area	=	0.41 Acres

c) Roof Tops

Infiltration (negligible)	=	0.20
Relief (high)	=	0.06
Vegetal Cover (none)	=	0.07
Development Type (business)	=	0.55
C	=	0.88
Area	=	0.14 Acres

Determine Weighted Coefficient, "C":

$$\frac{0.60 \times 2.65}{3.20} + \frac{0.82 \times 0.41}{3.20} + \frac{0.88 \times 0.14}{3.20} =$$

Weight Coefficient, "C", = 0.64

III. Time of Concentration, tc:
tc = 31 minutes

IV. Rainfall Intensity, I:
One Hour Rainfall, for tm = 10 years, = 2 inches
Therefore, i = 2.75 in./hr.

V. Runoff, Q:
Q = CIA
Q = 0.64 x 2.75 x 3.20
Q = 5.6 cfs.

HYDROLOGIC CALCULATIONS
DEVELOPED CONDITIONS

PURPOSE:

Determine the onsite surface runoff volume generated by the developed project site. The rational method will be used to determine the peak onsite surface runoff volume having a 10-year recurrence interval and a one-hour rainfall of 2 inches.

I. Drainage Area = 3.35 Acres (lot) – 0.15 Acres (existing open ditch) = 3.20 Acres

II. Runoff Coefficient, C:

a) Open Areas

Infiltration (high)	=	0.00
Relief (flat)	=	0.00
Vegetal Cover (high)	=	0.00
Development Type (hotel)	=	0.45
C	=	0.45
Area	=	1.34 Acres

b) Paved Areas

Infiltration (negligible)	=	0.20
Relief (flat)	=	0.00
Vegetal Cover (none)	=	0.07
Development Type (hotel)	=	0.45
C	=	0.72
Area	=	1.45 Acres

c) Roof Tops

Infiltration (negligible)	=	0.20
Relief (flat)	=	0.00
Vegetal Cover (none)	=	0.07
Development Type (hotel)	=	0.45
C	=	0.72
Area	=	0.41 Acres

Determine Weighted Coefficient, "C":

$$\frac{0.45 \times 1.34}{3.20} + \frac{0.72 \times 1.45}{3.20} + \frac{0.72 \times 0.41}{3.20} =$$

Weight Coefficient, "C", = 0.607

III. Time of Concentration, tc:
tc = 34 minutes

IV. Rainfall Intensity, I:
One Hour Rainfall, for tm = 10 years, = 2 inches
Therefore, I = 2.65 in./hr.

V. Runoff, Q:
Q = CIA
Q = 0.607 x 2.65 x 3.20
Q = 5.15 cfs.

APPENDIX

DESIGN CHARTS

Table 1

GUIDE FOR THE DETERMINATION OF RUNOFF COEFFICIENTS FOR BUILT-UP AREAS*

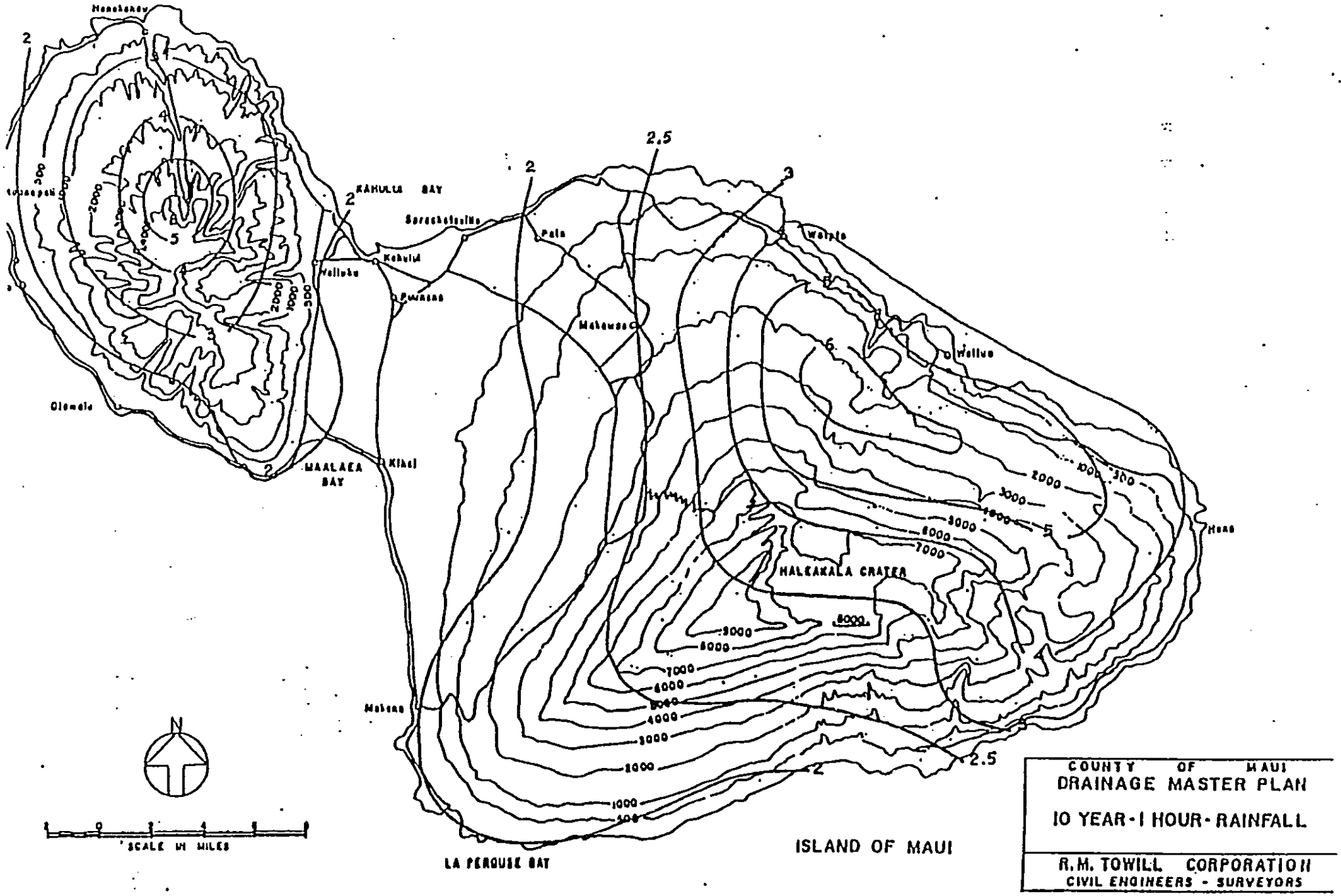
WATERSHED CHARACTERISTICS	EXTREME	HIGH	MODERATE	LOW
INFILTRATION	NEGLIGIBLE 0.20	SLOW 0.14	MEDIUM 0.07	HIGH 0.0
RELIEF	STEEP (> 25%) 0.08	HILLY (15-25%) 0.06	ROLLING (5-15%) 0.03	FLAT (0-5%) 0.0
VEGETAL COVER	NONE 0.07	POOR (< 10%) 0.05	GOOD (10-50%) 0.03	HIGH (50-90%) 0.0
DEVELOPMENT TYPE	INDUSTRIAL & BUSINESS 0.55	HOTEL-APARTMENT 0.45	RESIDENTIAL 0.40	AGRICULTURAL 0.15

*NOTE: *The design coefficient "c" must result from a total of the values for all four watershed characteristics of the site.*

Table 2

RUNOFF COEFFICIENTS

Type of Drainage Area	Runoff Coefficient C
Parks, cemeteries	0.25
Playgrounds	0.35
Railroad yard areas	0.40
Unimproved areas	0.30
Streets:	
Asphaltic	0.95
Concrete	0.95
Brick	0.85
Driveway and walks	0.85
Roofs	0.95
Lawns:	
Sandy soil, flat, 2%	0.10
Sandy soil, avg., 2-7%	0.15
Sandy soil, steep, 7%	0.20
Heavy soil, flat, 2%	0.17
Heavy soil, avg., 2-7%	0.22
Heavy soil, steep, 7%	0.35


Honokohau
KAHULUI BAY
Kahului
Pulehu
Paia
Makawao
Haiku
Hana
Wailua
Olowalu
MAALAEA BAY
Kihei
Makena
HALEAKALA CRATER
LA PEROUSE BAY
SCALE IN MILES
ISLAND OF MAUI
COUNTY OF MAUI
DRAINAGE MASTER PLAN
10 YEAR - 1 HOUR - RAINFALL
R.M. TOWILL CORPORATION
CIVIL ENGINEERS - SURVEYORS

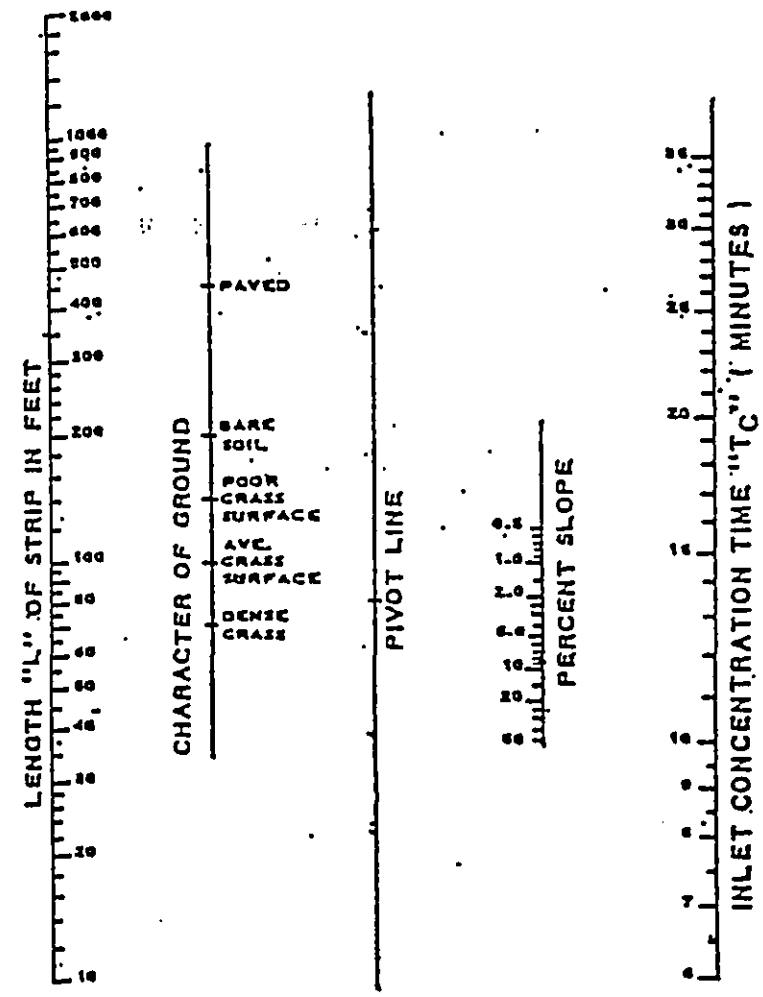
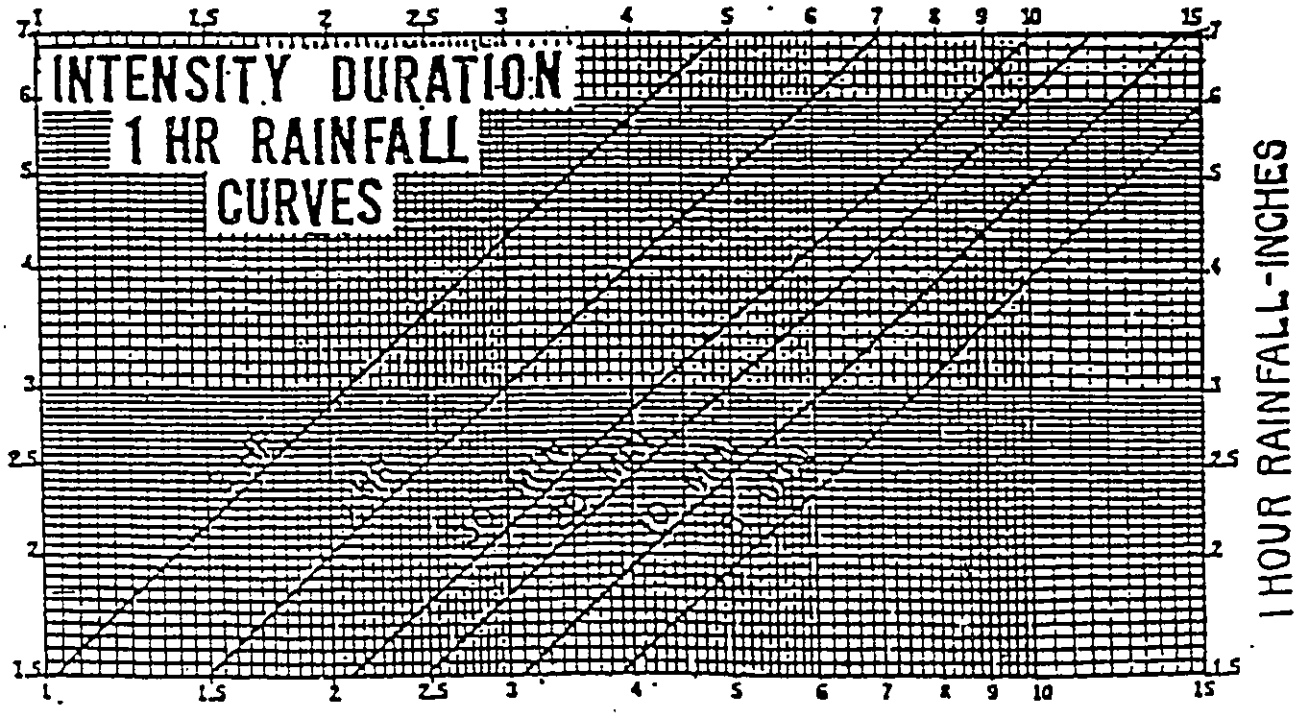


Plate 1

Overland Flow Chart

Plate 2



2001-08-08-MA-FEA-

Final Environmental Assessment

PROPOSED KAHULUI AIRPORT HOTEL

Prepared for:

July 2001

A&B PROPERTIES, INC.
A Subsidiary of Alexander & Baldwin, Inc.

MUNEKIYO & HIRAGA, INC.

Final
Environmental Assessment

PROPOSED KAHULUI AIRPORT HOTEL

Prepared for:

A&B PROPERTIES, INC.
A Subsidiary of Alexander & Baldwin, Inc.

July 2001

MUNEKIYO & HIRAGA, INC.

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Preface

The applicant, A&B Properties, Inc., is proposing to develop a four-story hotel containing up to 140-rooms in the vicinity of the Kahului Airport in Kahului, Maui, Hawaii. Identified by TMKs 3-8-79:16 and 17, the project site encompasses approximately 3.35 acres. In addition to the hotel, a swimming pool, as well as parking, landscaping, and infrastructure improvements are proposed.

Since the proposed action involves an amendment to the Wailuku-Kahului Community Plan that is independent of the County's ten (10) year update process, as well as the installation of water and sewerlines in State and County roadway rights-of-way (Dairy Road, Haleakala Highway), this Environmental Assessment (EA) has been prepared as required by Chapter 343, Hawaii Revised Statutes to document the proposed action's technical characteristics, environmental impacts and alternatives, and advances findings and conclusions relative to the significance of the project.

Chapter I

Project Overview

I. PROJECT OVERVIEW

A. PROPERTY LOCATION, BACKGROUND, AND LAND OWNERSHIP

The applicant, A&B Properties, Inc., is proposing to develop a four-story hotel containing up to 140 rooms in the vicinity of the Kahului Airport in Kahului, Maui, Hawaii. See Figure 1.

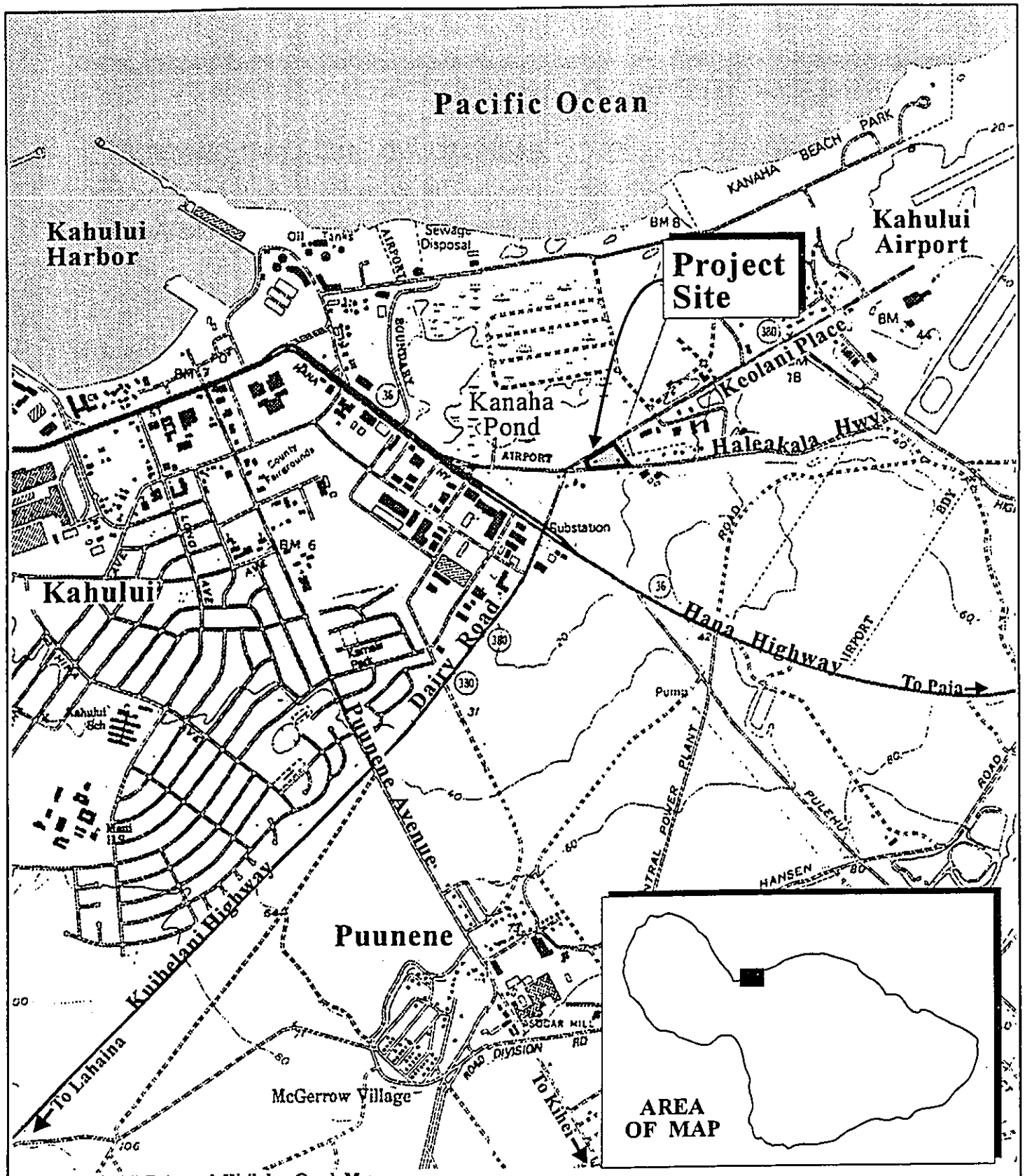
The subject property encompasses approximately 3.35 acres and is identified by TMKs 3-8-79:16 and 17. See Figure 2. The property is occupied by scattered trees and scrub vegetation, as well as a concrete-lined drainage channel along its eastern boundary. In addition to parking areas, several structures housing short-term tour and retail operations, as well as U-Haul, park-n-fly, and rent-a-car services occupy the remainder of the site.

The project site is enroute to the Kahului Airport and is bordered by Keolani Place to the north, the County Department of Water Supply (DWS) baseyard to the east, Haleakala Highway to the south, and a building with a retail store and car rental agency to the west. Access to the site is currently provided from Keolani Place and Haleakala Highway.

The project site is located in the State "Urban" district and is designated "Light Industrial" by the Wailuku-Kahului Community Plan and "M-2, Heavy Industrial" by Maui County zoning, respectively. Alexander & Baldwin, Inc. is the fee simple owner of the land underlying the project site.

B. PROPOSED ACTION

The proposed hotel is intended to appeal to frequent business travelers, as well as accommodate leisure travelers.



Source: USGS Paia and Wailuku Quad Maps

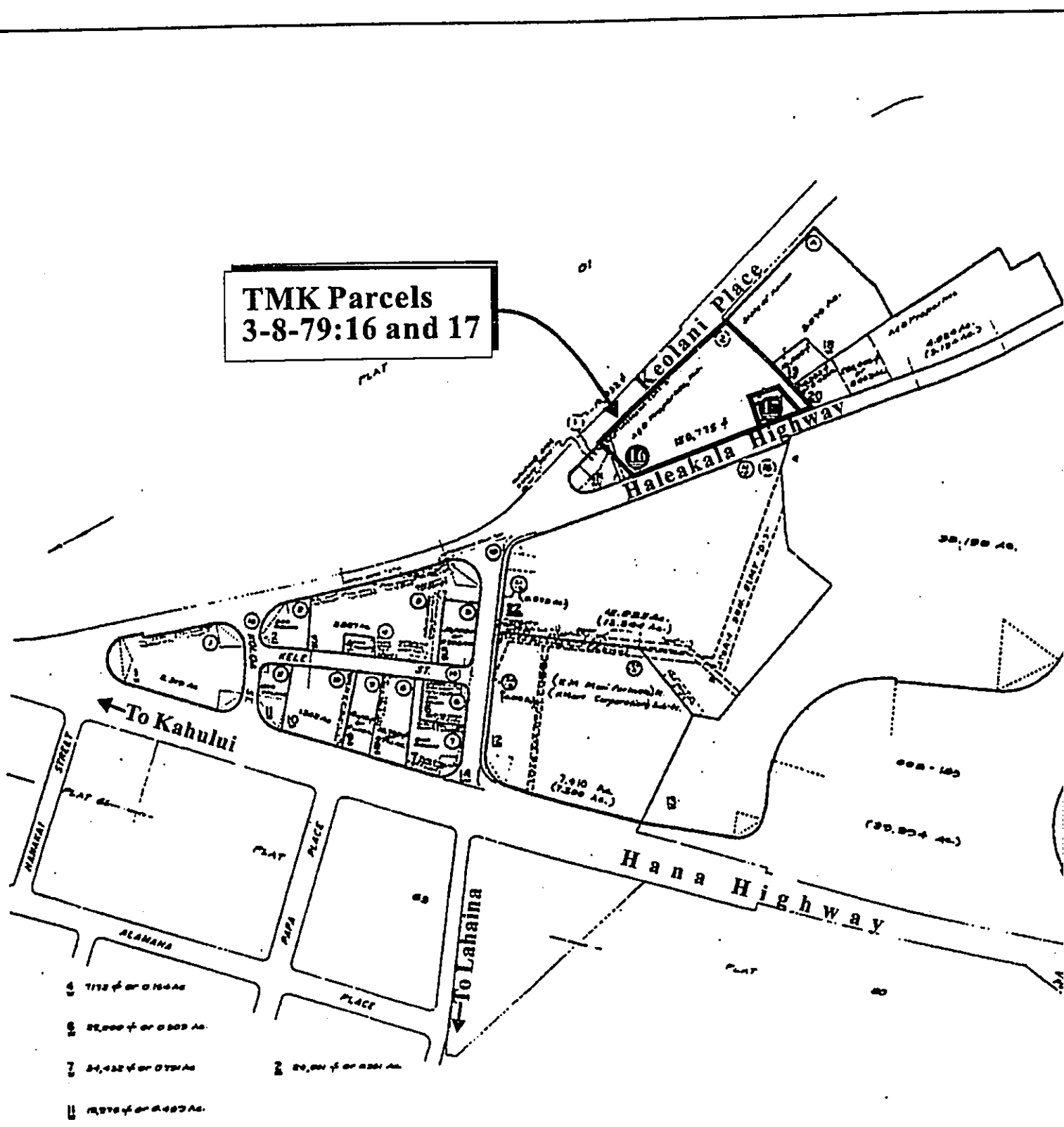
Figure 1 Proposed Kahului Airport Hotel

Regional Location Map

1000
0
500
2000

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.

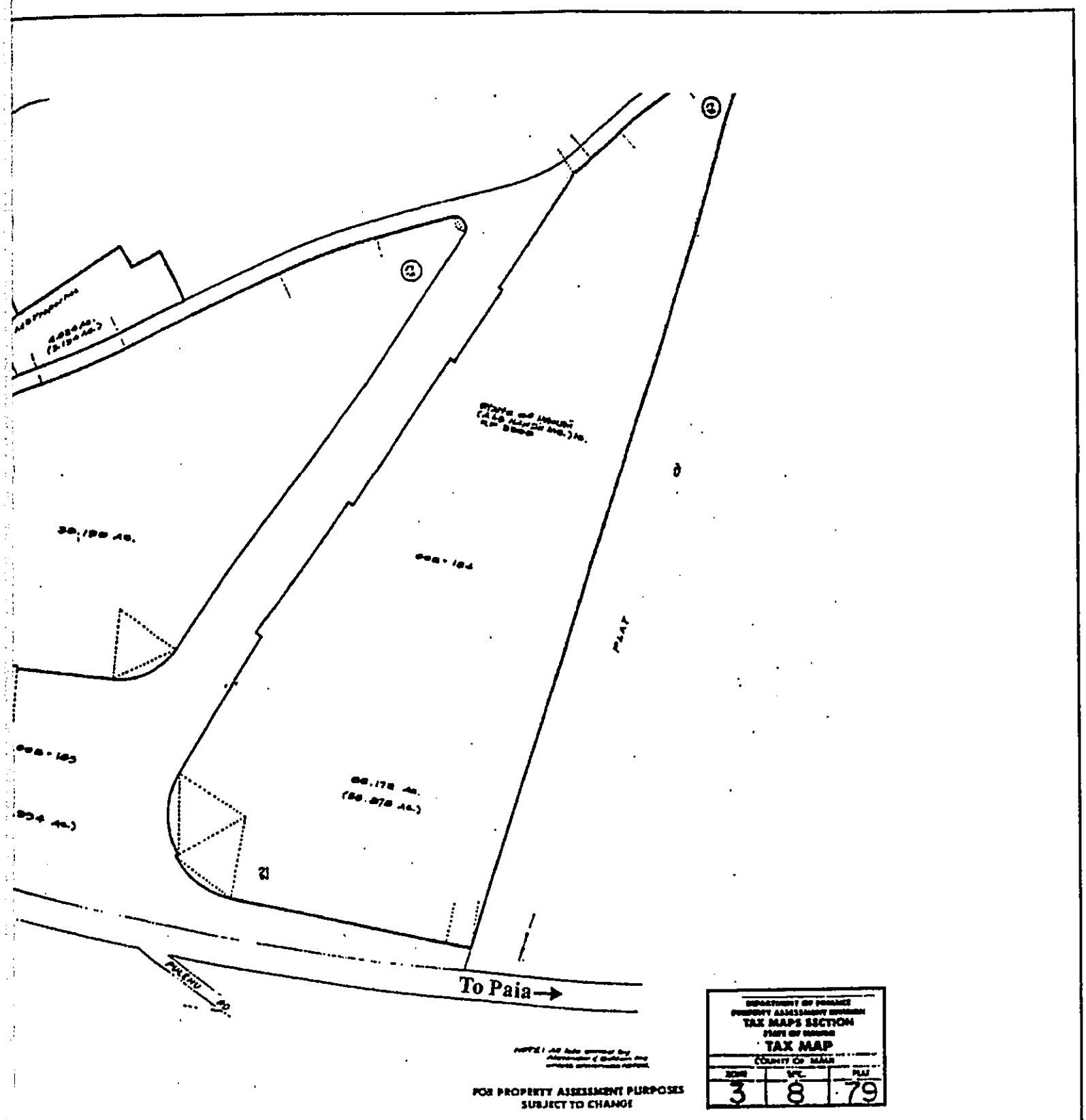


Source: TMK Plat Map 3-8-79

Figure 2

Proposed Kahului Airpor
TMK Parcel Location M

Prepared for: A&B Properties, Inc.



ui Airport Hotel

Location Map

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

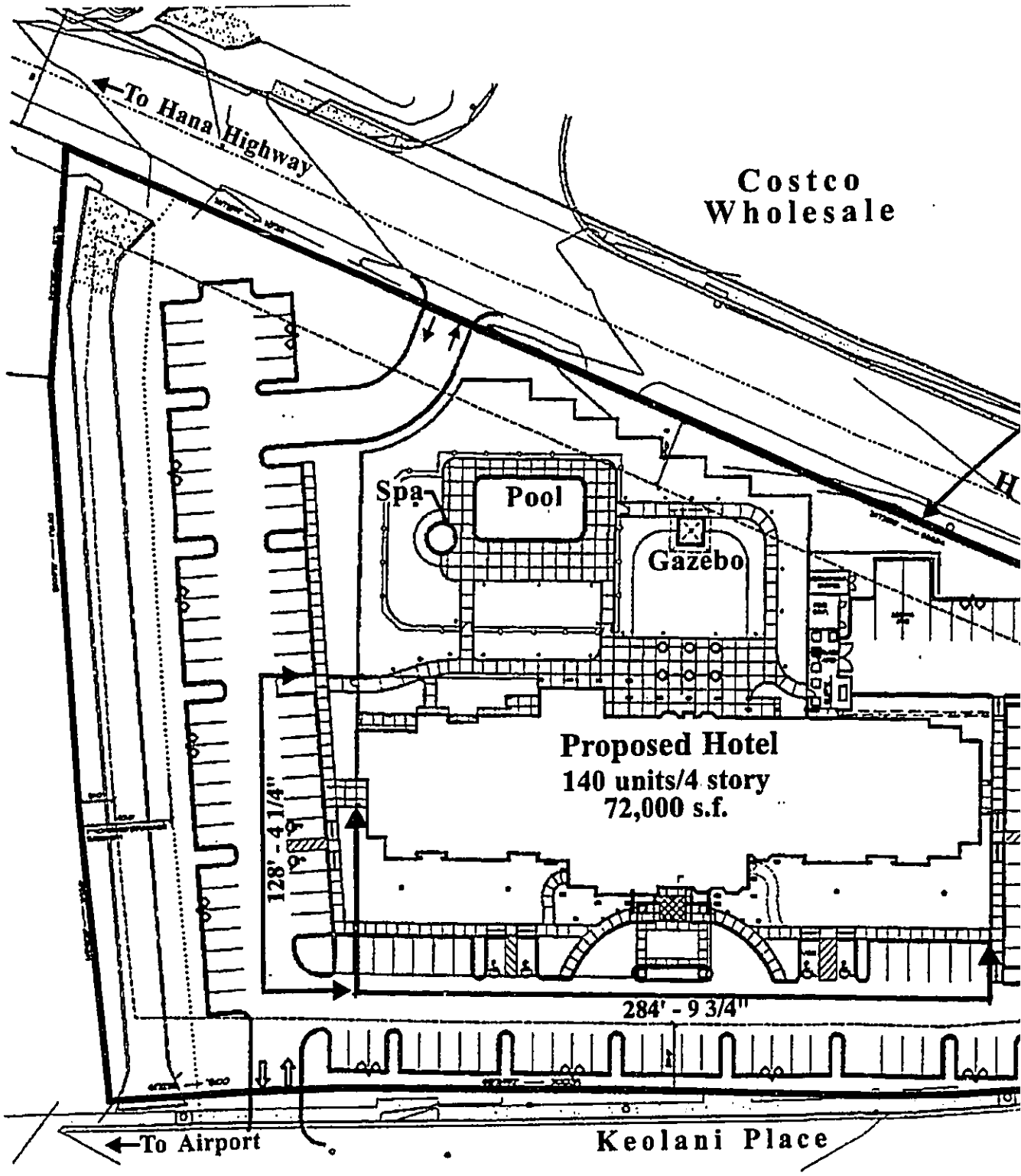
The proposed action involves the development of a four-story hotel containing up to 140 rooms on a site containing approximately 3.35 acres. See Figure 3 and Figure 4. Ancillary improvements include infrastructure improvements, a swimming pool, a spa, and a courtyard, as well as a 132 stall parking area and site landscaping and irrigation. Access to the hotel will be provided via two (2) new driveways along Keolani Place and two (2) new driveways along Haleakala Highway.

In addition to guestrooms, the approximately 72,000 sq. ft. hotel will contain spaces for public areas and circulation, as well as areas for support and administrative functions. Features and amenities planned for the hotel include a meeting room, an exercise room, an outdoor swimming pool, a restaurant/lounge, a landscaped courtyard with gazebo, and courtesy shuttle service to the airport. Preliminary staffing requirements for the hotel reflects a need for about 30 to 40 full-time employees.

The estimated construction cost for the proposed project is about $11.0 million. The project will be developed in a single phase, with construction expected to commence upon the receipt of applicable regulatory permits and approvals. The estimated construction time frame for the project is approximately 12 months.

C. ***PROPOSED REQUESTS***

In connection with the proposed action, three (3) existing parcels, TMK 3-8-79:15 (16,032 sq. ft.), TMK 3-8-79:16 (3.46 acres), and TMK 3-8-79:17 (12,853 sq. ft.), will be consolidated and resubdivided. As a result of this action, the area of Parcel 15 will be increased to 33,887 sq. ft., while Parcels 16 and 17 will be combined into a single lot (3.35 acres) forming the project site.



Source: Nishikawa Architects, Inc.

Figure 3

Proposed Kahului Airport
Preliminary Site Plan

Prepared for: A&B Properties, Inc.

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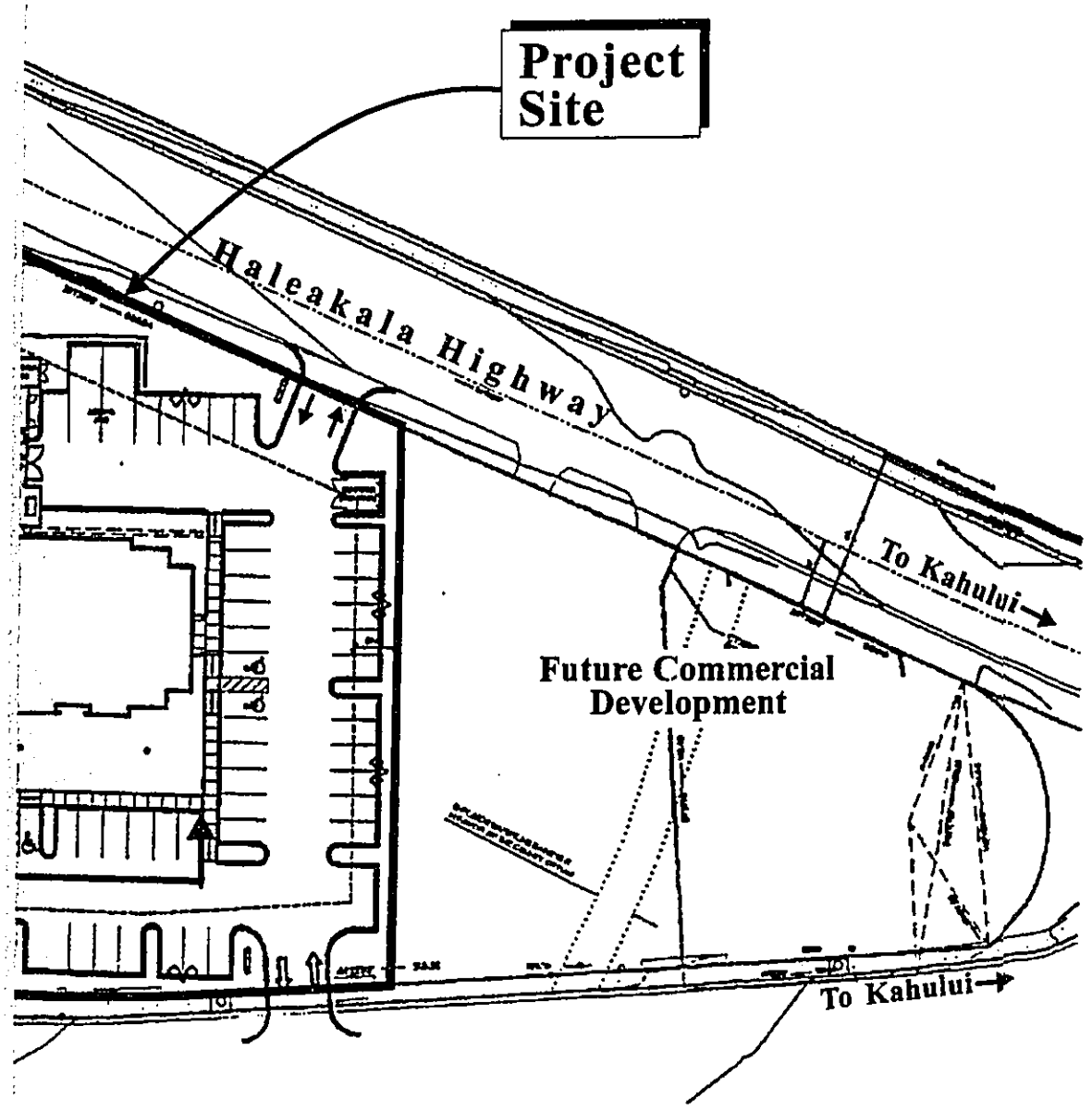
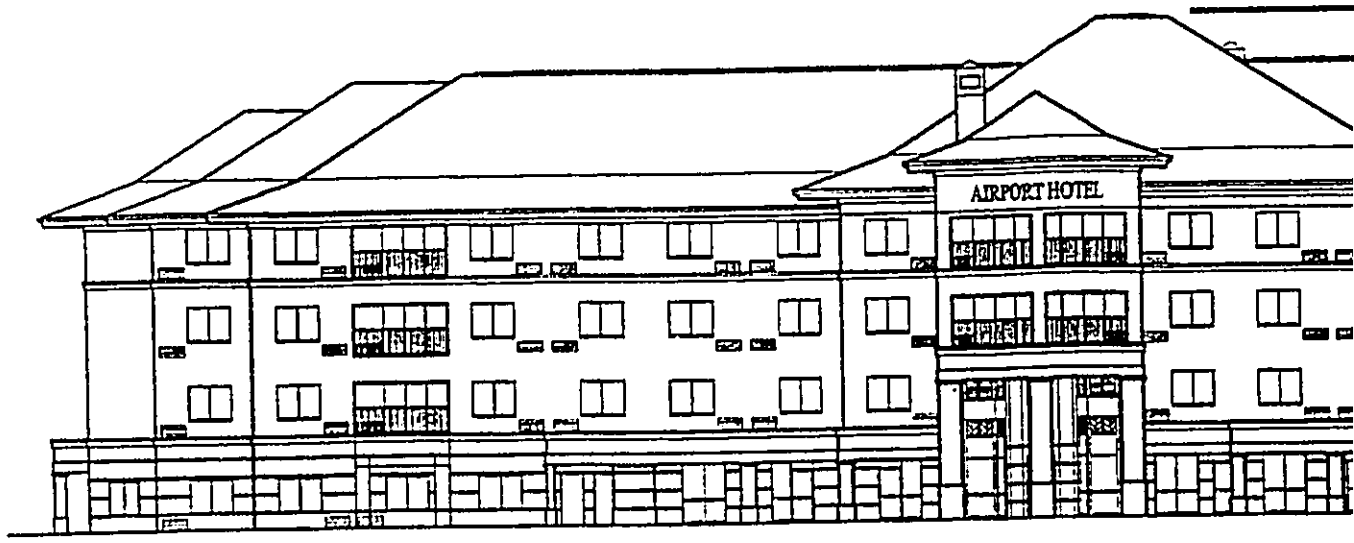
ale



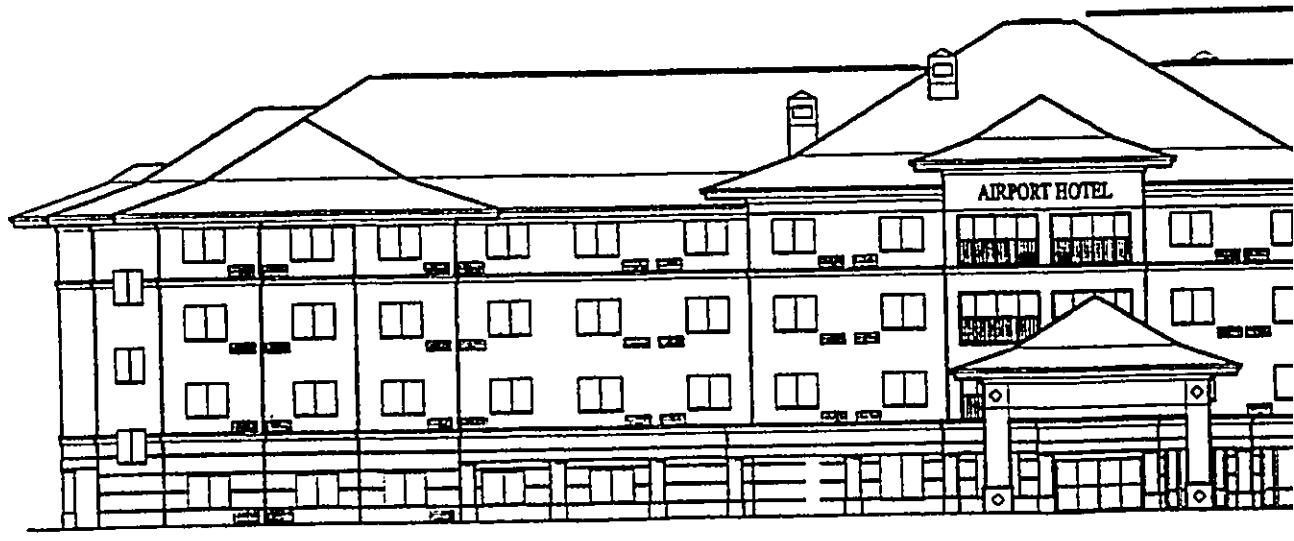
ui Airport Hotel
y Site Plan

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.



Rear Elevation



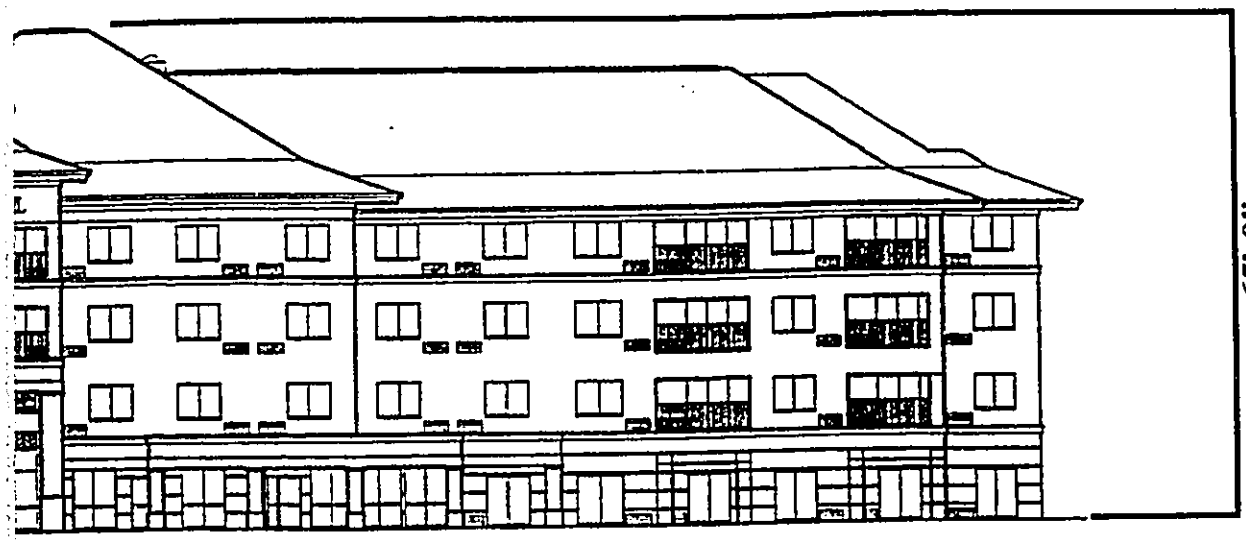
Front Elevation

Source: Nishikawa Architects, Inc.

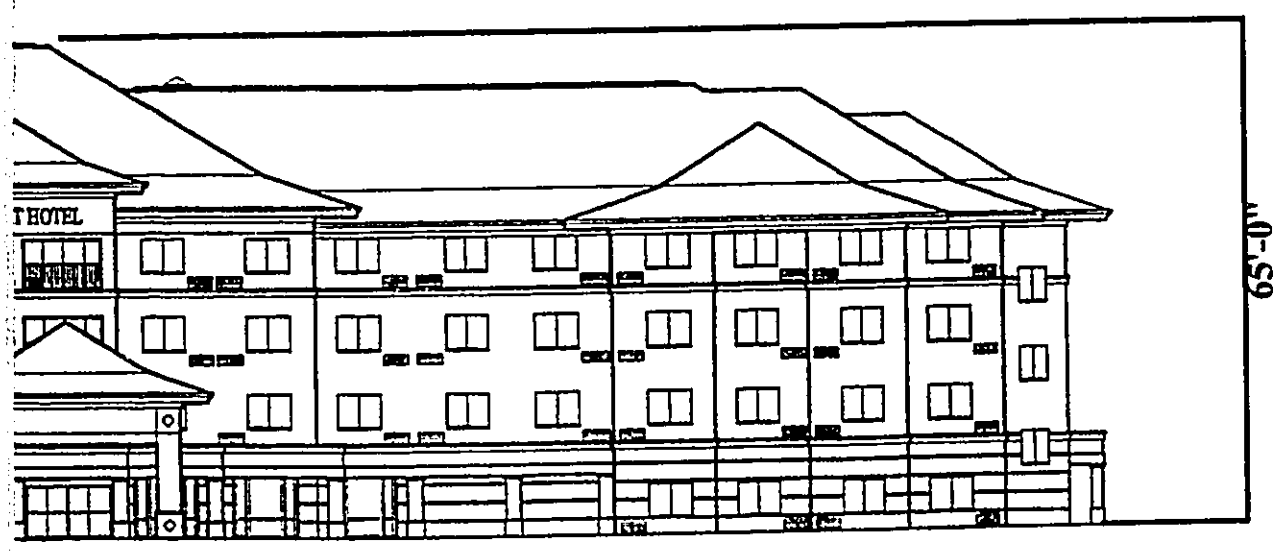
Figure 4

Proposed Kahului Airport
Building Elevations

Prepared for: A&B Properties, Inc.



evation



evation

ui Airport Hotel
Elevations

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

The 3.35 acres that comprise the project site will require a Community Plan Amendment and a Change in Zoning for the development of the proposed hotel. Accordingly, a Community Plan Amendment from "Light Industrial" to "Hotel" and a Change in Zoning from "M-2, Heavy Industrial" to "H-M, Hotel" are being sought for the proposed development.

In addition, since the project site is located within the limits of the County's Special Management Area (SMA), a SMA Use Permit application for the proposed development has been prepared for review and approval by the Maui Planning Commission.

It should be noted that the development of Parcel 15, which will retain its existing "Light Industrial" Community Plan and "M-2, Heavy Industrial" zoning designations, will proceed independently of the proposed action. While specific plans for the development of this parcel have yet to be formulated, the future development of this site will be in consonance with its Community Plan and zoning designations, as well as compatible with existing surrounding land uses in the area. All necessary regulatory permits and approvals will be obtained prior to the development of this parcel.

Since the proposed action involves an amendment to the Wailuku-Kahului Community Plan that is independent of the County's 10-year update process, and because the proposed action also includes the installation of water and sewerlines in State and County roadway rights-of-way (Dairy Road, Haleakala Highway), an Environmental Assessment (EA) has been prepared pursuant to the requirements of Chapter 343, Hawaii Revised Statutes.

D. *REASONS JUSTIFYING THE REQUEST*

As previously noted, the proposed action involves the development of a hotel and related improvements in the Kahului area that will fulfill the needs of business and leisure travelers.

The proposed project will provide business travelers with a facility that is in a convenient location and in close proximity to the island's centers of commerce and government in Kahului and Wailuku, respectively. For the leisure traveler, it will provide a facility that is in proximity to dining, shopping, entertainment, and recreational activities on the island. For both the business and leisure travelers, the proposed project will provide a facility that not only provides quality, service, and value, but also provides accommodations that are in proximity to the island's communities and attractions.

Chapter II

Description of the Existing Environment

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The project site is located in Kahului, the island of Maui's center of commerce. Kahului is home to Kahului Harbor, the island's only deep water port, and the Kahului Airport, the second busiest airport in the State. With its proximity to the harbor and airport, the Kahului region has emerged as the focal point for heavy industrial, light industrial and commercial activities and services such as warehousing, baseyard operations, automotive sales and maintenance, and retailing for equipment and materials suppliers. The region is considered Central Maui's commercial retailing center with the Kaahumanu Center, the Maui Mall, the Kahului Shopping Center, and the Maui Marketplace located within proximity of the project site.

Surrounding this commercial core is an expansive residential area comprised principally of single-family residential units. Residential uses encompass the area extending from Maui Memorial Medical Center to Puunene Avenue.

Land uses immediately surrounding the project site include Keolani Place to the north, a vacant parcel and the County Department of Water Supply (DWS) baseyard to the east, Haleakala Highway to the south, and a building on TMK 3-8-79:15 containing a retail store and car rental agency to the west.

Situated beyond Keolani Place to the north is Kanaha Pond, a State Wildlife Refuge, while beyond the DWS baseyard to the east are the Maui District offices of the State Department of

Transportation (DOT), Highways Division and the State Department of Accounting and General Services (DAGS). Beyond Haleakala Highway to the south lie a K-Mart store and a Costco Wholesale facility, as well as several buildings formerly utilized by Hawaiian Commercial & Sugar Company (HC&S) in support of its agricultural operations. To the west, beyond the building on Parcel 15, is Triangle Square, a development consisting of various retail, service, and restaurant establishments.

2. ***Climate***

Like most areas of Hawaii, Maui's climate is relatively uniform year-round. Characteristic of Hawaii's climate, the project site experiences mild and uniform temperatures year round, moderate humidity and a relatively consistent northeasterly tradewind. Variation in climate on the island is largely left to local terrain.

Average temperatures at the project site (based on temperatures recorded at Kahului Airport) range from lows in the 60's to highs in the 80's. August is historically the warmest month, while January and February are the coolest. Rainfall at the project site averages approximately 20 inches per year. Winds in the Kahului region are predominantly out of the north-northeast and northeast.

3. ***Topography and Soil Characteristics***

The subject property varies in topography. Onsite elevations range from about 16 feet above mean sea level (amsl) at the southeast corner of the project site to approximately 6 feet amsl at the northeast side of the site. The majority of the property is characterized by relatively level terrain with elevations ranging from about 7 to 8 feet amsl.

Underlying the project site is the Pulehu-Ewa-Jaucas soil association. See Figure 5. This association occurs in basins and on alluvial fans and is characterized by well-drained and excessively drained soils that have a moderately fine to coarse-textured subsoil or underlying material. The Jaucas Series is the soil series identified with the project site. This series consists of excessively drained soils that occur as narrow strips on coastal plains adjacent to the ocean. The soil type specific to the project site is Jaucas sand, saline (JcC), 0 to 12 percent slopes. See Figure 6. This soil type occurs near the ocean in areas where the water table is near the surface and salts have accumulated. This soil is used for pasture, wildlife habitat, and urban development.

The Detailed Land Classification-Island of Maui establishes a soil productivity rating ranging from "A" to "E", with "A" representing the highest level of productivity and "E" being very poor for agricultural production. This rating system is based on factors including machine tillability, stoniness, texture, clay properties, drainage, rainfall, elevation, and slope. The land underlying the project site is unclassified, as it is situated within an existing urbanized area.

In 1977, the State Department of Agriculture established a classification system for identifying Agricultural Lands of Importance to the State of Hawaii (ALISH), primarily, but not exclusively on the basis of soil characteristics. The three (3) classes of ALISH lands are: "prime", "unique", and "other". As indicated by the ALISH map, the project site falls within the limits of existing urban development. See Figure 7.

LEGEND

① Pulehu-Ewa-Jaucas association

② Waiakoa-Keahua-Molokai association

③ Honolua-Olelo association

④ Rock land-Rough mountainous land association

⑤ Puu Pa-Kula-Pane association

⑥ Hydrandepts-Tropaquods association

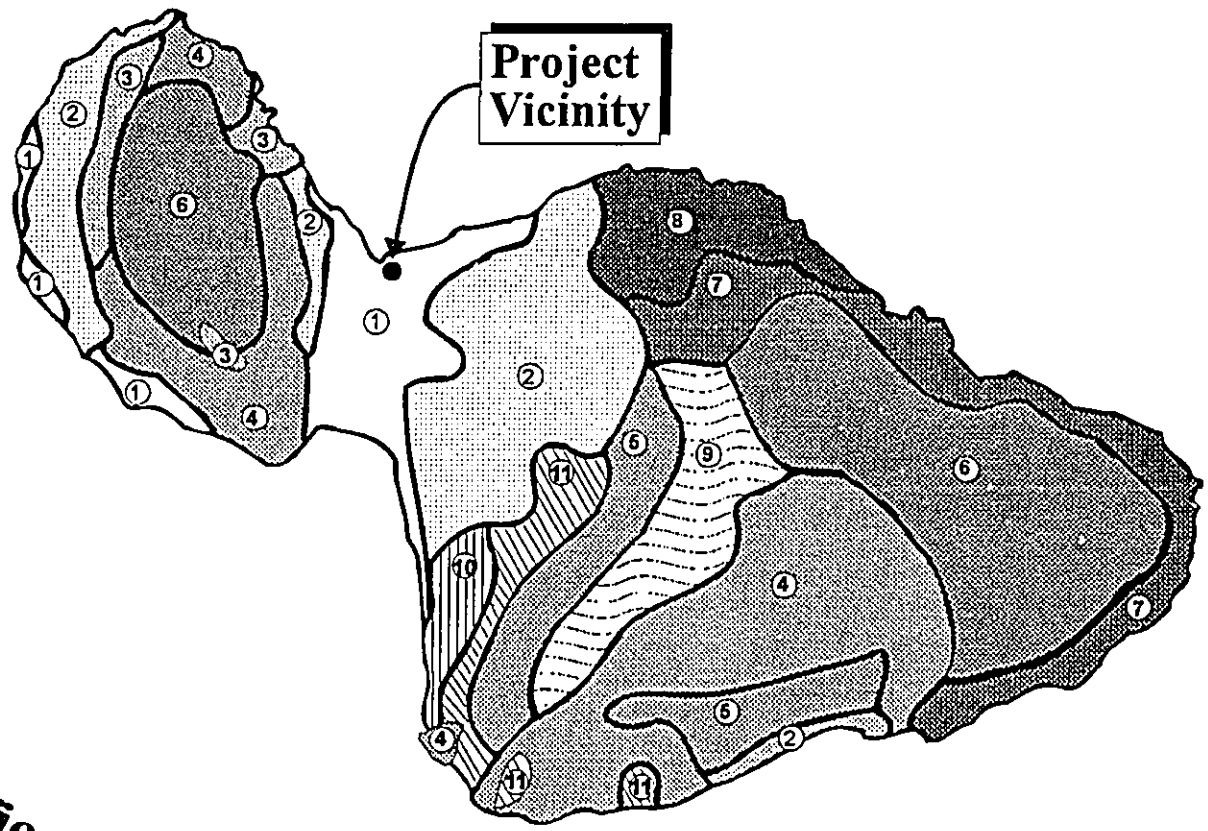
⑦ Hana-Makaalae-Kailua association

⑧ Pauwela-Haiku association

⑨ Laumaia-Kaipoipoi-Olinda association

⑩ Keawakapu-Makena association

⑪ Kamaole-Oanapuka association



Map Source: USDA Soil Conservation Service

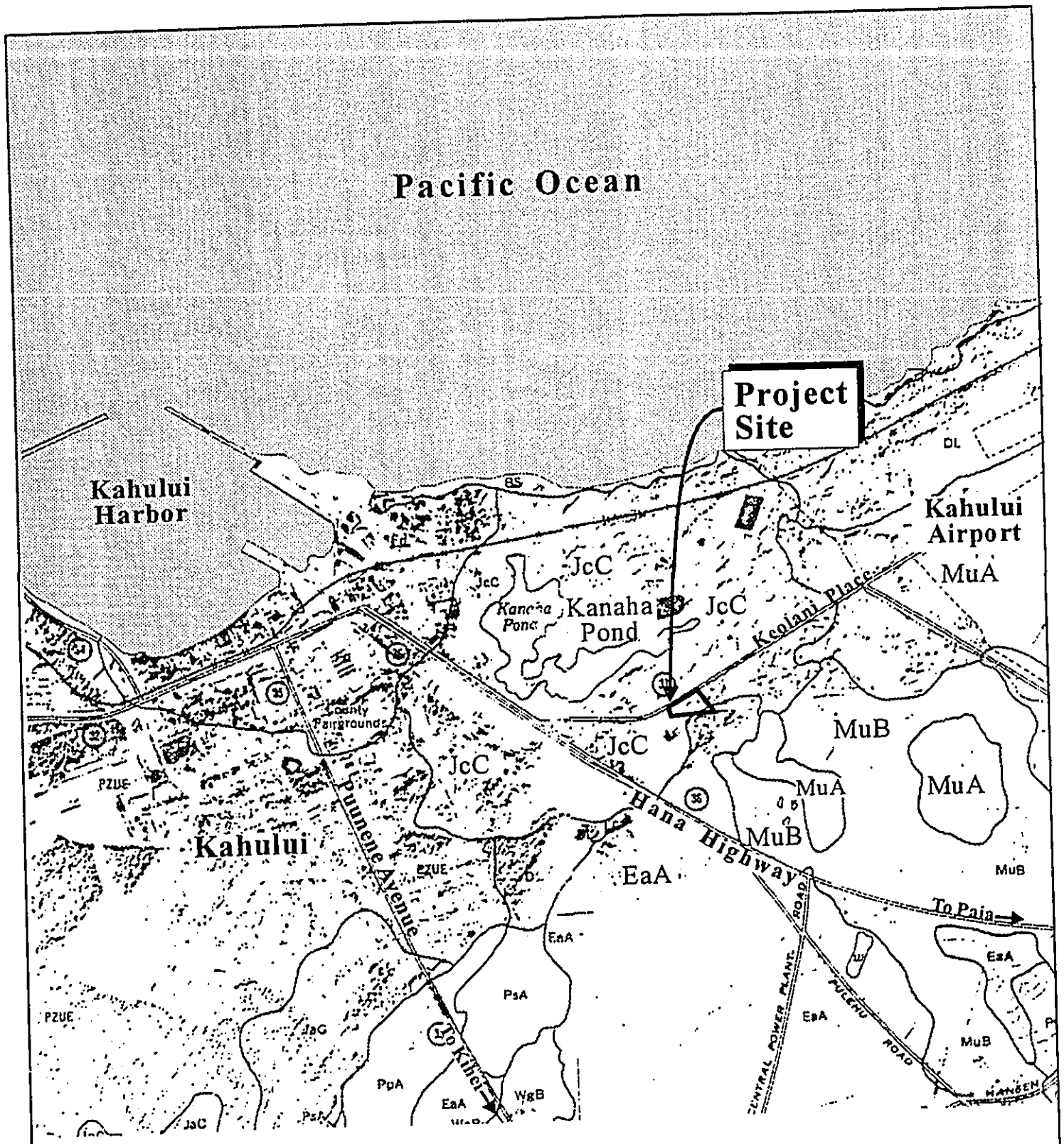
Figure 5 Proposed Kahului Airport Hotel

Soil Association Map

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.



Source: USDA Soil Conservation Service

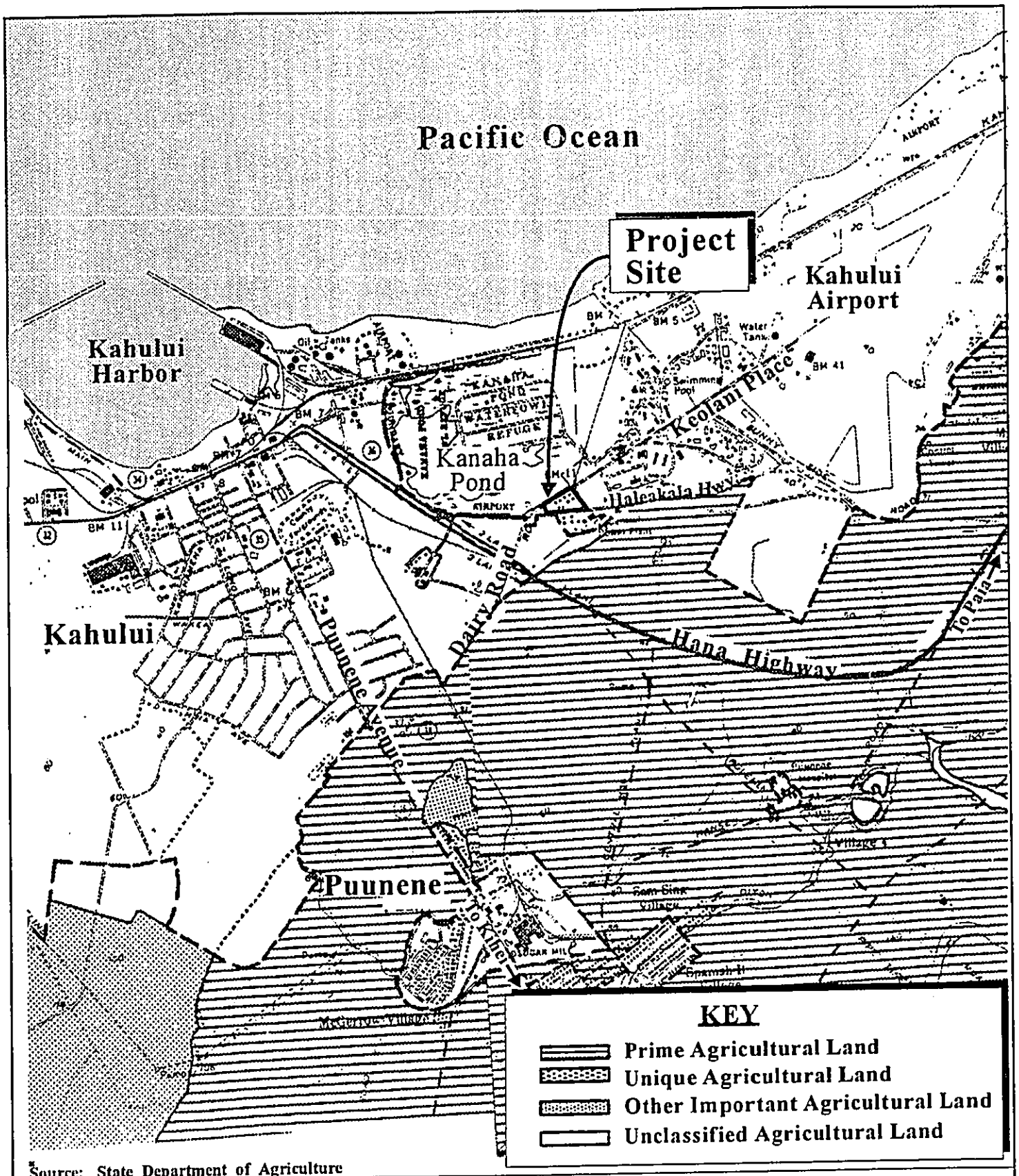
Figure 6 Proposed Kahului Airport Hotel

Soil Classification Map

0 500 1000 2000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.



Source: State Department of Agriculture

Figure 7 Proposed Kahului Airport Hotel
ALISH Map

0 500 1000 2000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.

4. ***Flood and Tsunami Hazard***

The project site is situated in an area designated Zone "C" by the Flood Insurance Rate Map. See Figure 8. Zone "C" is an area of minimal flooding.

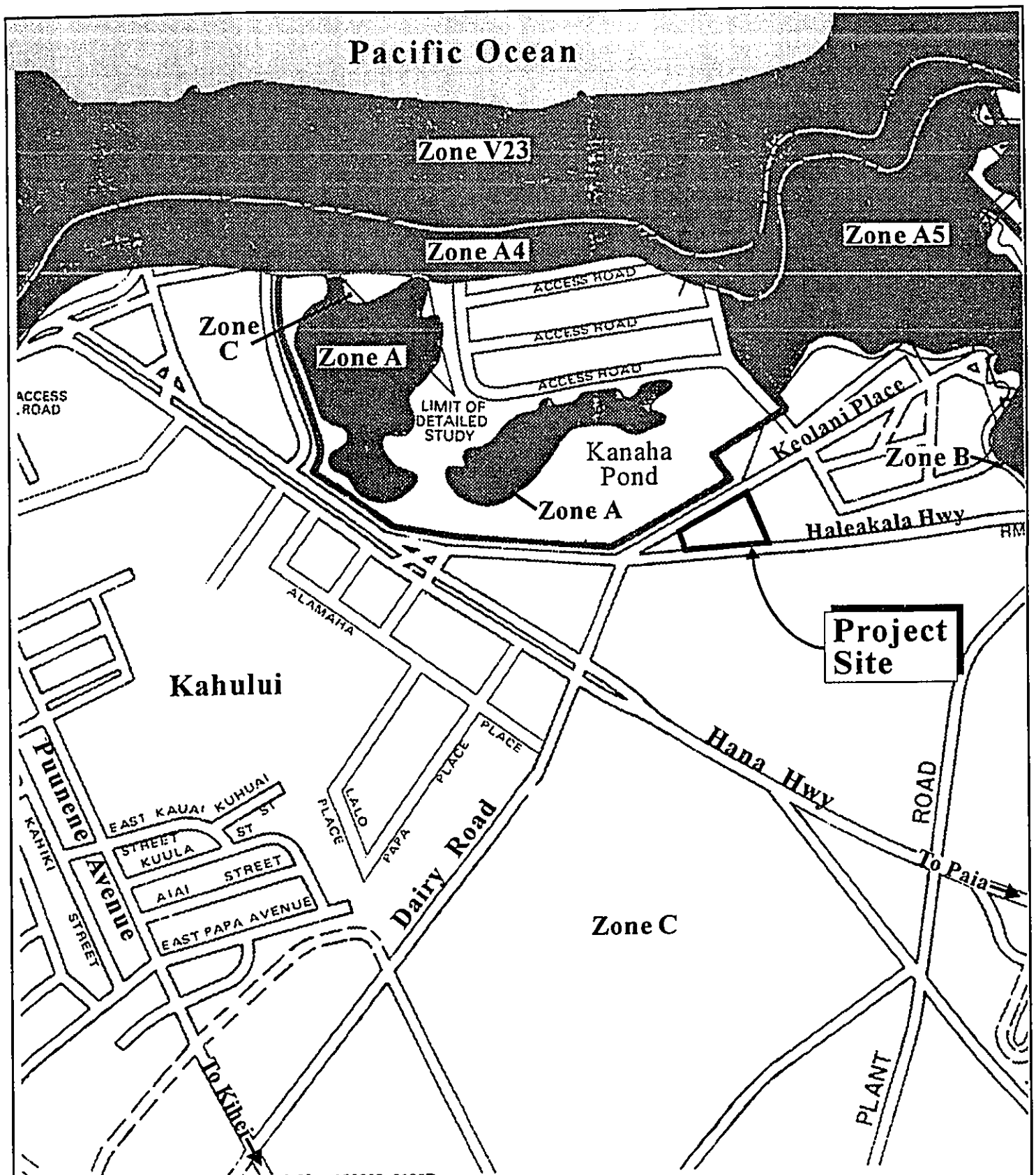
5. ***Flora and Fauna***

The project site contains several structures and areas which are utilized for drainage and commercial purposes. The intervening portions of the site are occupied by trees and scrub vegetation. Plant life typically associated with lands in the vicinity of the site include kiawe, koa haole, finger grass, bermuda grass, bristly foxtail, and Australian saltbush.

Terrestrial fauna in the vicinity of the project site include introduced species, such as rats, feral cats and mongoose. Avifauna typically found in this area include the Mynah, Spotted Dove, Barred Dove, Japanese White-Eye, Cardinal, and Red-Crested Cardinal.

There are no known rare, threatened, or endangered species of flora and fauna located on the project site. In addition, there are no wetland areas located within the limits of the site.

In correspondence dated May 7, 2001, the U.S. Fish and Wildlife Service (USFWS) indicated that the Blackburn's Sphinx Moth (BSM), also known as Manduca blackburni, is known to occur in the project vicinity. See USFWS letter in Chapter XI. The Blackburn's Sphinx Moth (BSM) is Hawaii's largest native insect and the only federally listed endangered insect in the State. The letter also indicates that a recent site visit to the project vicinity (including the subject property) by the applicant's consultant and a



Source: FIRM Community Panel No. 150003 0190D

Figure 8 Proposed Kahului Airport Hotel

Flood Insurance Rate Map

0 250 500 1000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.

biologist from the Department of Land and Natural Resources' Division of Forestry and Wildlife (DoFaW) revealed indications of larval feeding on some of the introduced tree tobacco (Nicotiana glauca) plants that currently occupy a portion of the property. The BSM utilizes the tree tobacco plant during its larval stage when the caterpillars feed on the stems, leaves, and new shoots of the plants.

6. ***Archaeological Resources***

The project site contains several existing commercial structures, parking areas, and an existing concrete-lined drainage channel. The lands underlying the project site have been previously disturbed in connection with the construction of the existing improvements. There are no surface or subsurface cultural artifacts or archaeological features located on the site.

7. ***Air Quality***

Air quality in the Wailuku-Kahului region is considered good as emissions from point sources, including the Maui Electric Company (MECO) power plant and the HC&S sugar mill, as well as non-point sources such as automobile emissions, do not generate problematic concentrations of pollutants. The relatively high quality of air can also be attributed to the region's constant exposure to winds which quickly disperse concentrations of emissions. This rapid dispersion is evident during burning of sugar cane in fields located to the southeast of the Kahului residential core.

8. ***Noise***

Traffic noise from neighboring roadways is the predominant source of background noise in the vicinity of the project site. In addition, distant noise from Kahului Airport and aircraft flying by the project

area contributes to the background noise levels in the surrounding region.

9. *Scenic and Open Space Resources*

Scenic resources to the west of the project site include Iao Valley and the West Maui Mountains. Toward the east is Haleakala, while to the north lie Kahului Harbor, the Pacific Ocean, and the Kanaha Pond State Wildlife Sanctuary. The majority of undeveloped lands in the Central Maui isthmus is utilized for sugar cane cultivation. This agricultural use creates a vast expanse of sugar cane fields that establishes and dominates the open space character of the region.

B. *SOCIO-ECONOMIC ENVIRONMENT*

1. *Population*

The population of the County of Maui has exhibited relatively strong growth over the past decade with the 1990 population estimated to be 100,374, a 41.7 percent increase over the 1980 population of 70,847. Growth in the County is expected to continue, with resident population projection for the year 2010 estimated to be 140,060 (Community Resources, Inc., January 1994).

Just as the County's population has grown, the resident population of the island of Maui and the Wailuku-Kahului region has increased dramatically in the last two (2) decades. Population gains were especially pronounced in the 1970's due to the growth of the visitor industry. The current population for the island and the Wailuku-Kahului region is estimated to be 112,349 and 40,452, respectively (Community Resources, Inc., January 1994). A projection of the resident populations for the island and region for the year 2010 are

estimated to be 127,670 and 46,026, respectively (Community Resources, Inc., January 1994).

2. *Economy*

The Kahului region is the island's center of commerce. Combined with neighboring Wailuku, the region's economic character encompasses a broad range of commercial, service, and governmental activities. In addition, the region is surrounded by significant agricultural acreages which include sugar cane fields. The vast expanse of agricultural land, managed by HC&S, is considered a key component of the local economy.

Currently, visitor accommodations in the Wailuku-Kahului region are provided by the Maui Beach, Maui Palms, and Maui Seaside hotels which are situated in Kahului. A current estimate of the number of available visitor units in the region is about 402 units (Maui County Data Book, 2000).

Visitor arrivals on the island of Maui are expected to increase from a present estimate of about 3.3 million visitors annually to approximately 4.0 million visitors in the year 2010 (Community Resources, Inc., January 1994).

From May 1997 to May 2000, hotel jobs grew 8.9 percent. Meanwhile, construction jobs grew 41 percent; transportation, telecommunication and utility jobs grew 22.4 percent; agricultural jobs grew 17.5 percent; and federal government jobs grew 80 percent (Pacific Business News, July 28, 2000).

According to data from the State Department of Labor and

Industrial Relations, about 65,900 individuals were employed on the island of Maui in June 2000. The island's growth rate remains high and unemployment continues to be low. In June 2000, Maui's job count was up 5.2 percent from the previous year, while unemployment was down to 4.3 percent (Pacific Business News, July 28, 2000).

C. PUBLIC SERVICES

1. Recreational Facilities

County recreational facilities are administered and maintained by the Department of Parks and Recreation. The Wailuku-Kahului region contains a network of recreational facilities comprised of mini-parks, as well as neighborhood and district parks. The region's seven (7) mini-parks are distributed uniformly throughout the area, while the region's eleven (11) neighborhood and three (3) district parks provide a wide range of facilities to meet the recreational needs of the community.

In the vicinity of the project site, a wide range of shoreline and ocean recreation activities such as boating, fishing, diving, surfing, canoeing, kayaking, picnicking, and windsurfing are available at the Kahului Harbor and nearby beach parks. County parks in the vicinity include Kanaha Beach Park, Hoaloha Park, Kahului Community Center, Keopuolani Park, and the War Memorial Sports Complex. The site is also within proximity of Iao Valley State Park.

2. Police and Fire Protection

Police protection for the Wailuku-Kahului region is provided by the Maui Police Department headquartered at the Wailuku Station,

approximately 2.0 miles from the project site. The region is served by the department's Central Maui patrol.

Fire prevention, suppression, and protection services for the Wailuku-Kahului region are provided by the Maui Fire Department's Wailuku Station located in Wailuku Town about 3.0 miles from the project site, and the department's Kahului Station, which lies to the northeast of the subject property.

3. ***Solid Waste***

Single-family residential solid waste collection service is provided by the County of Maui on a once-a-week basis. Residential solid waste collected by County crews are disposed at the County's 55-acre Central Maui Landfill, located 4.0 miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies. Refuse collection for the subdivision's tenants will be provided by a private collection company.

4. ***Health Care***

Maui Memorial Medical Center, the only major medical facility on the island, services the Wailuku-Kahului region. Acute, general and emergency care services are provided by this facility, which is licensed for 194 beds. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

5. ***Schools***

The Wailuku-Kahului region is served by the State Department of Education's public school system, as well as several privately

operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the Kahului area include Lihikai and Kahului Schools (Grades K to 5), Maui Waena Intermediate School (Grades 6 to 8), and Maui High School (Grades 9 to 12). Existing facilities in the Wailuku area include Wailuku Elementary School (Grades K to 5), Iao Intermediate School (Grades 6 to 8), and Baldwin High School (Grades 9 to 12).

D. INFRASTRUCTURE

1. Roadways

The Wailuku-Kahului region is served by a roadway network which includes arterial, collector and local roads. Major roadways in the vicinity of the project site include Haleakala Highway, Hana Highway, Dairy Road, and Keolani Place. See Appendix A.

Haleakala Highway, in the vicinity of the project site, is a two-lane, undivided State collector highway with an east-west orientation. A traffic signal system with exclusive left-turn lanes for all approaches is provided at its intersection with Dairy Road and Keolani Place. The posted speed limits on Haleakala Highway, to the west and east of its intersection with Dairy Road and Keolani Place are 30 miles per hour (mph) and 25 mph, respectively. In the project vicinity, the portion of Haleakala Highway, from its intersection with Dairy Road and Keolani Place to its intersection with Hana Highway, is under the jurisdiction of the County of Maui (State of Hawaii, Department of Transportation, June 2001).

In proximity of the project site, Hana Highway has an east-west orientation and functions as a four-lane, major divided State arterial

highway which links East Maui and Central Maui. A traffic signal system is provided at its intersection with Dairy Road. Two (2) westbound left-turn lanes from Hana Highway to southbound Dairy Road are provided; the remaining approaches are served by single left-turn lanes. The posted speed limit on Hana Highway is 45 mph at the approaches to the Dairy Road intersection.

Dairy Road, in the vicinity of the project site, is a four-lane, north-south State collector road which connects the airport area to Kuihelani Highway at Puunene Avenue and also provides access to the Kahului Industrial area. Dairy Road begins at its signalized intersection with Haleakala Highway and Keolani Place and proceeds southward to Puunene Avenue. The posted speed limit on Dairy Road is 30 mph.

Keolani Place is a four-lane, east-west State collector road that provides access to the Kahului Airport. The posted speed limit on Keolani Place is 30 mph.

Keolani Place and Haleakala Highway border the project site to the north and south, respectively. Keolani Place is fully improved with curbs, gutters, and sidewalks. Haleakala Highway is improved with curbs, gutters, and sidewalks along its frontage with Costco but is unimproved along its frontage with the project site.

2. ***Wastewater***

Domestic wastwater generated in the Wailuku-Kahului region is conveyed to the County's Wailuku-Kahului Wastewater Treatment Facility located 0.5 mile south of Kahului Harbor. The design capacity of the facility is 7.9 million gallons per day (MGD).

Cumulative wastewater flow allocated is approximately 6.6 MGD.

Presently, there is no wastewater system serving the subject property. The existing commercial structures located on the property are served by onsite cesspools. The nearest County sewerline is an 18-inch line located in Dairy Road between Costco and K-Mart. Wastewater from this system flows to a sewage pump station (SPS) on Kele Street in the Airport Industrial Subdivision. A 6-inch force main from this pump station conveys wastewater via a 12-inch sewerline in Alamaha Street to a pump station by the Alamaha Street/Wakea Avenue intersection. The flow from this pump station is transported by a 8-inch force main to the Kahului Pump Station before it continues on to the Wailuku-Kahului Wastewater Treatment Facility. See Appendix B.

3. ***Water***

Domestic water from the Wailuku-Kahului region is provided by the DWS' Central Maui Water System. The major source of water for this system is the Iao Aquifer. The regulatory sustainable yield of the Iao Aquifer is 20 MGD. As of December 1, 2000, the annual average groundwater withdrawals from this aquifer were 16.919 MGD. The DWS is implementing a plan to bring new water sources on-line; two (2) wells in North Waihee were brought on-line in July 1997. A new well, with a production rate of about 1.0 MGD, came on-line during the first quarter of the year 2000.

The project area is served by the DWS system. The source for this water is the Waihee wells that were developed by the Central Maui Source Joint Venture. The three (3) developed wells currently have a total capacity of 13.5 MGD. The water storage

tanks that serve the system for this area are located in Wailuku. Existing waterlines in the area include a 12-inch line located in Keolani Place and a 3-inch line situated in an easement through the project site that continues in an easterly direction along Haleakala Highway. Also located in Keolani Place is a 16-inch transmission line which serves Kahului Airport. Refer to Appendix B.

4. ***Drainage***

The subject property is characterized by elevations which range from 16 feet amsl at a small mounded area at the southeast corner of the property to 6 feet amsl at a lowlying area at the northeast side of the site. The majority of the property is relatively level with elevations ranging between 7 to 8 feet amsl.

The project site contains several commercial structures and parking areas, as well as a concrete drainage channel. The intervening portions of the site are occupied by trees and scrub vegetation.

Surface runoff from the project site currently flows to the lowlying area on the site. The runoff then flows into an existing drainline with an outlet into the drainage channei located along the eastern portion of the property. Based on a 10-year, 1-hour storm, the existing runoff from the project site is estimated to be about 5.6 cubic feet per second (cfs). See Appendix C.

5. ***Electrical and Communication Systems***

Electrical, telephone and cable television (CATV) services to the project site are available through Maui Electric Company, Verizon Hawaii, and Hawaiian Cablevision, respectively.

The primary electrical, telephone and cable television (CATV) systems that serve the project site are overhead and run along Haleakala Highway. Existing underground systems in Dairy Road provide service to Costco and K-Mart.

Chapter III

Potential Impacts and Mitigation Measures

III. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Surrounding Uses

The subject property is situated in an area of existing urban development as reflected by commercial uses in the immediate vicinity of the property such as Costco, K-Mart, Triangle Square, and the Maui Marketplace, as well as governmental uses such as the baseyard for the County Department of Water Supply and the Maui District Offices of the State Department of Accounting and General Services and the State Department of Transportation, Highways Division. The subject property is also located in close proximity to the Kahului Airport and the Kahului Harbor, as well as the island's centers of commerce and government in Kahului and Wailuku, respectively.

The proposed action is anticipated to provide an appropriate location for hotel use that is consistent and compatible with existing surrounding land uses.

2. Topography and Landform

As previously noted, the majority of the subject property is relatively level with onsite elevations averaging from 7 to 8 feet above mean sea level (amsl). The topography of the remainder of the property varies and includes a small mounded area that rises to about 16 feet amsl at the southeast corner of the property and a low lying area of approximately 6 feet on the northeast side of the lot.

To accommodate the proposed hotel, the subject property will be graded to fill the low lying areas of the property, as well as to ensure that surface runoff drains into the proposed onsite drainage

system, which will be connected to the existing drainline outlet at the concrete drainage channel along the eastern boundary of the site. To the extent practicable, finished contours will follow existing grades to minimize earthwork costs and maintain existing drainage patterns.

While terrain within the project site will be locally modified to meet design requirements, the proposed use of the property is not anticipated to alter the slope characteristics in the vicinity.

3. ***Flora and Fauna***

There are no known significant habitats or rare, threatened, or endangered species of flora or fauna located on the project site. In addition, the proposed improvements are not anticipated to impact wetland areas and wildlife habitats. Project-related lighting will utilize appropriate design features to minimize impacts to migratory seabirds traversing the area. As such, the development of the project is not anticipated to adversely impact these elements of the natural environment.

In its letter dated May 7, 2001, the U.S. Fish and Wildlife Service (USFWS) notes the possible effects of the proposed project on the Blackburn's Sphinx Moth (BSM) eggs and caterpillars, as well as BSM females due to the loss of host plants. Refer to USFWS letter in Chapter XI.

The USFWS and the Department of Land and Natural Resources' Division of Forestry and Wildlife (DoFaW) have discussed measures to minimize and mitigate impacts to BSM as it relates to the proposed project. These measures include:

- Removal of the tree tobacco plants should occur during the months of June through September, BMS larvae and eggs are least likely to be present.

- If the project's time line requires removal of the tree tobacco plants during October through May, the USFWS and DoFaW should be contacted to examine all plants for signs of recent BSM larval feeding. In addition, the ground in a 5-foot radius around all plants exhibiting larval feeding should not be disturbed for a 30-day period to allow any pupating moths to emerge and disperse.

- As compensatory mitigation for the loss of BSM habitat and host plants that will result from the proposed project, the applicant should fund the propagation and out-planting of the native BSM host plant 'aiea (Nothocestrum latifolium) within the State's nearby Kanaha Pond Wildlife Sanctuary. The exact number of 'aiea should be out-planted to correspond with a 3:1 ratio of tree tobacco plants removed from the project site. As indicated by the USFWS, the 'aiea is relatively drought-tolerant and naturally suited to this area of Maui.

In correspondence dated May 30, 2001, the applicant agreed to comply with the recommendations contained in the USFWS' May 7, 2001 letter. See applicant's letter in Chapter XI.

4. ***Archaeological Resources and Cultural Impact Considerations***

In correspondence dated December 29, 2000, the State Historic Preservation Division (SHPD) noted that the subject property has undergone extensive alteration due to modern grading activities, making it unlikely that significant historic sites still remain. In this light, the SHPD has indicated that the proposed project will have "no effect" on significant historic sites. Refer to the SHPD letter in Chapter X. Redevelopment of the property is not expected to affect cultural practices of the community and State.

In the event that unrecorded historic remains (i.e., human burials, cultural artifacts, archaeological features) are discovered during construction of the project, work will promptly cease in the immediate area of the find, and the SHPD will be immediately notified to ensure that proper mitigation measures will be implemented in compliance with Chapter 6E, HRS.

The archaeological inventory survey contained in the Draft Environmental Impact Statement for the Kahului Airport Improvements notes that the subject property lies in the traditional ahupua'a of Wailuku, which includes the coastal areas of Kahului Bay, as well as all of Iao Valley and the northern half of the Central Maui isthmus (Edward K. Noda & Associates, March 1996).

As indicated by the inventory survey, it was not until the mid-1800s that the Kahului Airport area was documented in any historical records. This area falls within the limits of what was once called Ka'a Lands, or Wailuku Commons, a region which covered about 24,000 acres between Wailuku and Paia. In 1882, Claus Spreckels acquired fee simple title to all of Wailuku ahupua'a, including the

Commons. Later that year, Spreckels founded HC&S, and within a short time, developed a state-of-the-art sugar mill, as well as a support system of railways and irrigation ditches.

An 1882 map of Kahului Harbor shows the Commons as vacant land south of Kahului town, which was then a mixture of about 20 buildings and a wharf. Around this same time, the area is described as "a complete desert, a great, barren stretch of sand and dust spread from Wailuku to Paia, except for a little cattle grazing around the present location of Spreckelsville". An 1881 map of this area shows "undulating sand hills" crossed only by dirt roads and the railroad line to Paia, while a 1910 map shows the seaward half of the area as "pasture". In 1942, the U.S. Government annexed 3,800 acres at Puunene and Kahului for the construction of naval air stations. At Kahului, 1,350 acres were leased from HC&S for Naval Air Station Kahului (NASKA). In the early 1950's NASKA was taken over by civilian authorities for public airport purposes. In recent decades, the Kahului Airport has expanded. Remnants from Navy use of the area still remain.

The inventory survey also notes that the subject property is located within the limits of the subarea that comprises the developed area west of the airport. This subarea is bordered by the Kalialinui Channel on the east, Haleakala Highway on the south, and Hana Highway on the west, as well as Kanaha Pond and Amala Place on the north. As indicated by the inventory survey, the first modern construction in this subarea was the Central Power Plant, a structure shown on the 1922 USGS map which continued to operate into the mid-1950s when it was abandoned. In addition, the inventory survey notes that this subarea has seen considerable

alteration and has been largely developed, originally as NASKA and later as the existing support area for the Kahului Airport. Although modern construction of commercial structures and government facilities has resulted in the demolition of many of the military structures in this subarea, the remains of several foundations are still in place, and a few structures remain intact. Garner Ivey, a retired A&B Properties executive who arrived on Maui in the early 1960's, recalls that remnants of the Central Power Plant Camp occupied the lands in the project area. At the time of Mr. Ivey's arrival, the Camp, which was constructed by HC&S to provide housing for plantation workers, consisted of 10 homes on the subject property, 10 dwellings on the present Costco site, and 6 homes on the existing governmental facilities site (off Palapala Drive). Phased out for use as plantation housing later in the 1960's, the dwellings have since been demolished (Garner Ivy, April 5, 2001).

In light of the project area's land use history and its location relative to coastal areas, the proposed action is not expected to impact gathering rights, nor is it anticipated to adversely affect cultural beliefs, practices, and resources.

5. Air Quality

Emissions from construction equipment and other vehicles involved in construction activities may temporarily affect the ambient air quality within the immediate vicinity. However, these effects can be minimized by properly maintaining construction equipment and vehicles.

In addition, dust generated during construction, especially from

earth-moving operations such as excavating, trenching, and filling, may also result in a temporary decrease in ambient air quality. Mitigation measures include utilizing dust barriers, waterwagons, and/or sprinklers to control dust, and watering graded areas upon the completion of daily construction activities and/or weekends and holidays to the extent practicable.

On a long-term basis, emissions associated with hotel-related traffic are not expected to adversely impact air quality conditions. Accordingly, the proposed project is not anticipated to generate adverse air quality impacts.

6. ***Noise***

Ambient noise conditions may be temporarily affected by construction activities. Heavy construction machinery, such as backhoes, dump trucks, front-end loaders, paving equipment, and material-transport vehicles, are anticipated to be the dominant noise-generating sources during the construction period.

Proper equipment and vehicle maintenance are anticipated to minimize noise levels. Equipment mufflers or other noise attenuating equipment may also be employed as required. All construction activities will be limited to daylight working hours.

Upon completion, the primary noise generators will be hotel-related vehicular traffic, as well as vehicles passing by the subject property. In addition, distant noise from Kahului Airport and aircraft flying by the project area are expected to add to background noise levels. From a long-term perspective, the proposed project is not anticipated to generate adverse noise conditions.

7. *Scenic and Open Space Resources*

The proposed project will utilize landscaping and architectural design elements to provide a facility which is not only compatible with its surrounding environment but satisfies spatial, aesthetic, and functional requirements as well.

The project site is not part of a scenic corridor and will not affect views from inland vantage points. Accordingly, the proposed project is not anticipated to have an adverse impact upon the scenic and open space character of the surrounding area.

B. *SOCIO-ECONOMIC ENVIRONMENT*

1. *Population and Economy*

The proposed project is not anticipated to have an adverse effect on population parameters.

As previously noted, the number of jobs on Maui are projected to increase to about 72,000 by the year 2010, an increase of approximately 38 percent from the 52,000 jobs in the year 1990. In this regard, the proposed project will provide opportunities for economic development and create positive short- and long-term benefits for the Island's economy. On a short-term basis, the proposed project will provide construction employment and support construction-related services and suppliers. Upon completion, the hotel and businesses that support the hotel's operations will contribute to the long-term support of the regional economy through their contributions of property taxes, payment of employee salaries and wages, and purchases of goods and services from local merchants and service providers. Purchases relating to facilities maintenance will also benefit the local economy.

2. ***Police, Fire, and Medical Services***

Medical, police and fire protection services are not expected to be adversely impacted by the proposed project. The proposed project will not extend existing service area limits for emergency services.

3. ***Solid Waste***

The clearing of the project site will be implemented in accordance with the provisions of Chapter 20.08 of the Maui County Code pertaining to Soil Erosion and Sedimentation Control.

Upon completion, solid waste collection service for the hotel will be handled by a private refuse disposal company.

4. ***Housing***

In connection with the change in zoning process, the affordable housing requirements for the development of the proposed hotel will be coordinated by the applicant and the County Department of Housing and Human Concerns.

C. *INFRASTRUCTURE*

1. ***Roadways***

Access to the proposed hotel will be provided by Keolani Place and Haleakala Highway. Keolani Place is improved with curbs, gutters, and sidewalks, while the subject property's frontage along Haleakala Highway will be improved to meet County standards. The paved travelway along the property's frontage with Haleakala Highway will also be widened as required.

A Traffic Impact Analysis Report (TIAR) for the proposed project was prepared in June 2000 and revised in June 2001 to include

information on the Haleakala Highway and Costco driveway intersection, as well as additional recommendations. Refer to Appendix A. While there are no specific plans for the development of the "M-1, Light Industrial" zoned parcel (TMK 3-8-79: 15) that adjoins the subject property, a future commercial/restaurant use has been assumed for traffic analysis purposes.

Manual turning movements were documented at the following intersections: Hana Highway and Dairy Road; Hana Highway and Haleakala Highway; Haleakala Highway and Costco driveway; and Haleakala Highway, Dairy Road, and Keolani Place. Turning movement counts during the AM peak period of traffic at the Haleakala Highway and Costco driveway intersection were not conducted since Costco opens for business after the AM peak hour of traffic. Based on this data, the weekday morning and afternoon peak traffic hours were determined to be from 7:15 a.m. to 8:15 a.m. and 3:15 p.m. to 4:15 p.m., respectively. Existing levels of service (LOS) were evaluated at the study intersections. LOS is a qualitative measure used to describe traffic conditions with LOS A reflecting free-flow conditions and LOS F representing congested conditions.

a. Existing Conditions

Currently, the signalized Hana Highway and Dairy Road intersection operates at LOS D and LOS F during the AM and PM peak traffic hours, respectively. The TIAR notes that optimizing the traffic signal timing at this intersection could improve traffic operations to LOS D during the PM peak hour, albeit some turning movements would still operate at LOS E.

The capacity analysis for the unsignalized Hana Highway and Haleakala Highway intersection indicates that eastbound, left-turn traffic from Hana Highway onto

Haleakala Highway (in the airport direction) operates at LOS F during both AM and PM peak traffic hours. However, field observations reveal that the traffic signal system at the adjacent Hana Highway and Dairy Road intersection creates gaps in the traffic flow which accommodate left-turn traffic. The right-turn traffic from Haleakala Highway onto Hana Highway operates at LOS C during both the AM and PM peak hours.

The TIAR indicates that the signalized intersection of Haleakala Highway, Dairy Road, and Keolani Place operates at LOS B and LOS C during the AM and PM peak traffic hours, respectively. In addition, the unsignalized Haleakala Highway and Costco driveway intersection operates at LOS A during the PM peak hour of traffic.

b. Year 2002 Base Traffic Conditions

Analysis of historical data collected by the State Department of Transportation (DOT) indicates an annual traffic growth rate of 2.7 percent for roadways surrounding the project site. This rate was used to growth factor existing traffic volumes in order to derive base Year 2002 traffic volumes (the proposed project is anticipated to be completed in the Year 2002). Future base Year 2002 intersection operations are described below:

The signalized Hana Highway and Dairy Road intersection is estimated to operate at LOS D during both the AM and PM peak traffic hours. Certain individual movements are projected to operate near capacity (LOS E) during the AM and PM peak hours.

The unsignalized Haleakala Highway and Hana Highway intersection is estimated to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. As previously noted, westbound Hana Highway traffic is metered by the traffic signal system at the upstream intersection of Hana Highway and Dairy Road which creates acceptable gaps in traffic for eastbound, left-turn traffic.

The signalized Haleakala Highway, Dairy Road, and Keolani Place intersection is projected to operate at LOS B and LOS C during the AM and PM peak hours.

The unsignalized Haleakala Highway and Costco driveway intersection is projected to operate at LOS A in both the AM and PM peak hour of traffic.

c. Future Roadway System

The DOT has proposed the construction of a new access road to the Kahului Airport which will be located to the east of Dairy Road. The new access road will begin at the intersection of Kuihelani Highway and Puunene Avenue and veer to the east of the present Dairy Road alignment before intersecting with Hana Highway, approximately 1,500 feet east of the Hana Highway and Dairy Road intersection. The new access road will then continue in a northerly direction to the Kahului Airport. The new access road will alleviate some of the congestion occurring at the Hana Highway and Dairy Road intersection by providing another route to the airport, as well as to communities Upcountry and in East Maui. The construction schedule for the access road has yet to be determined.

d. Trip Generation

Trip generation rates for the proposed hotel and future commercial/restaurant on the adjacent parcel were based on trip rates for a business hotel and high-turnover restaurant, respectively. Based on average hotel room occupancy rates for Maui, a hotel occupancy rate of 70 percent was used for the traffic study, and as the proposed hotel will contain up to 140 rooms, the estimated average number of occupied rooms is therefore projected to be 100. In addition, it is assumed that a portion of the vehicle trips generated by the restaurant will consist of hotel guests who will walk to the restaurant and not utilize the adjacent roadways. On the basis of the preceding, the proposed hotel is anticipated to generate 48 trips and 42 trips during the AM and PM peak hours, respectively, while the future commercial/restaurant is projected to generate 46 trips during the AM peak hour and 45 trips during the PM peak hour. The combined number of trips generated by the proposed hotel and future restaurant during the AM and PM peak traffic hours are projected to be 94 trips and 87 trips, respectively.

e. ***Access to Hotel Site***

The proposed project will involve the construction of four (4) new driveways, two (2) on Keolani Place, and two (2) on Haleakala Highway. Each driveway will provide full access to the project site except for the western most driveway on Keolani Place. Due to its close proximity to the intersection of Haleakala Highway, Dairy Road, and Keolani Place, it is recommended that traffic using this driveway be restricted to right turns in and out only.

f. ***Findings and Conclusions***

The signalized Hana Highway and Dairy Road intersection is currently operating at over capacity conditions during the PM peak traffic hour. Optimizing the traffic signal timing at this intersection will improve existing intersection operations to LOS D during both the AM and PM peak hours. With the proposed project, this intersection will continue to operate at LOS D (after optimizing traffic signal timing) during both peak hours.

The unsignalized Haleakala Highway and Hana Highway intersection is currently operating at LOS F and LOS C during the AM and PM peak hours. In the Year 2002 (with or without the project), this intersection is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour. The LOS at this intersection is attributable to the delay created by eastbound left-turns onto Haleakala Highway. However, the adjacent signalized intersection of Hana Highway and Dairy Road will continue to meter westbound traffic on Hana Highway and provide acceptable gaps in westbound traffic to accommodate left-turn movements.

In the Year 2002 (with or without the project), the signalized Haleakala Highway, Dairy Road, and Keolani Place intersection is projected to operate at the same LOS as existing conditions, LOS B during the AM peak hour and LOS C during the PM peak hour.

In the Year 2002, the Haleakala Highway and Costco driveway intersection is projected to operate at LOS A during both the AM and PM peak traffic hours with and

without the proposed project.

The proposed hotel and future commercial restaurant are projected to generate a combined total of 94 trips during the AM peak hour and 87 trips during the PM peak hour. The project's four (4) driveways are estimated to operate at LOS A during the AM and PM peak hours. With or without the project, the three (3) study intersections are projected to operate at conditions similar to existing conditions.

g. Recommendations

To accommodate the existing and future base year conditions, the TIAR recommends optimizing the traffic signal timing at the intersection of Hana Highway and Dairy Road. The TIAR also recommends providing four (4) driveways for the proposed project, two (2) on Keolani Place and two (2) on Haleakala Highway, with each driveway providing two (2) lanes (one (1) for entering, one (1) for exiting). In addition, the TIAR recommends that traffic using the western most driveway on Keolani Place be restricted to right turns in and out only due to the driveway's proximity to the Haleakala Highway, Dairy Road, and Keolani Place intersection. Also, a 50-foot (minimum length) westbound, left-turn storage lane on Keolani Place into the hotel's eastern most driveway is recommended, as well as a 50-foot (minimum length) eastbound, left-turn storage lane on Haleakala Highway into the hotel's western most driveway. Additional recommendations include restriping the existing median acceleration lane on Haleakala Highway at the Costco driveway intersection to provide a left-turn storage lane into the hotel and lengthening the existing median westbound, left-turn storage lane at the Haleakala Highway, Dairy Road and Keolani Place intersection to provide 300 feet of storage. Finally, the TIAR recommends that the Airport Access Road (from Kahului Airport to the intersection of Kuihelani Highway and Puunene Avenue) be constructed even without the project, in order to alleviate existing and future congestion on Dairy Road.

2. Wastewater System

The average daily wastewater flow generated by the proposed

hotel is estimated to be about 22,000 gallons per day (gpd). Refer to Appendix B. The Wailuku-Kahului Wastewater Treatment Facility has adequate capacity to accommodate this flow.

A new 12-inch sewerline will be installed and connected to an existing sewer manhole on Dairy Road near Kele Street in Triangle Square. This sewerline extension will be constructed in the Dairy Road and Haleakala Highway right-of-way with service laterals to the project site and other lots to be served by this system. Construction plans for the proposed improvements were submitted to the State and County in April 2001.

All wastewater system improvements will be designed in accordance with Department of Public Works and Waste Management (DPWWM) standards.

An allocation of capacity, as well as any necessary wastewater contribution calculations, will be coordinated with the DPWWM as part of the project's building permit application process.

The proposed project is not expected to have an adverse effect upon the region's wastewater capacities and facilities.

3. ***Water System***

Water for the proposed project will be furnished by the County's domestic water system servicing the area.

Based on the Interim Water Usage Standards for Central Maui, the estimated water demand for the proposed project is estimated to be about 29,000 gpd. Refer to Appendix B. A new 12-inch

waterline will be connected to an existing 12-inch line at the intersection of Dairy Road and Haleakala Highway and extended past the project site. New fire hydrants will be installed along Haleakala Highway at standard spacing. The proposed water system improvements are anticipated to meet the domestic water and fireflow requirements for the project. Construction plans for the proposed improvements were submitted to the State and County in April 2001.

The source of water for the proposed project will be provided by the Waihee wells that were developed by the Central Maui Source Joint Venture and dedicated to the Department of Water Supply (DWS). A&B Properties, Inc. is a member of this joint venture and has an allocation of 4/19 of the water produced. Water for the proposed project will be provided from A&B's allocation.

Domestic water and fireflow requirements, as well as connection to the County's domestic water system will be coordinated with the DWS as part of the project's building permit application process.

The proposed water system improvements will be constructed in accordance with applicable regulatory design standards. The proposed project is not anticipated to have an adverse effect on water sources and storage facilities as well as transmission and distribution systems.

4. ***Drainage***

Based on a 10-year, 1-hour storm, existing runoff from the subject property is estimated to be about 5.6 cfs, while the post-development runoff is projected to be approximately 5.2 cfs. Refer

to Appendix C. The decrease of 0.4 cfs is attributable to the additional areas that will be landscaped on the project site. An onsite drainage system will be designed to collect surface runoff and direct it through an existing outlet into the existing concrete drainage channel along the eastern part of the site. This drainage channel, which was constructed in 1990 in connection with the Airport Industrial Subdivision, was designed to accommodate runoff from the project site and other surrounding areas.

The proposed drainage system will be coordinated with the DPWWM and will be designed in accordance with County standards to produce no adverse effects to adjoining and downstream properties. In addition, appropriate mitigative measures and Best Management Practices (BMPs) will be implemented during construction to minimize soil loss and erosion. Examples of erosion control measures include the following:

1. Minimize the time of construction.

2. Retain existing ground cover until the latest possible date to complete construction.

3. Early construction of drainage features.

4. Use temporary area sprinklers in non-active construction areas when ground cover is removed.

5. Station water truck on site during construction period to provide for immediate sprinkling, as needed, in active construction zones (weekends and holidays included).

6. Use temporary berms, filter berms, and cut-off ditches, where needed, for control of erosion.

7. Graded areas shall be thoroughly watered after construction activity has ceased for the day and on weekends.

8. All cut and fill slopes shall be sodded or planted immediately after grading work has been completed.

A detailed grading and erosion control plan will be prepared in accordance with County standards and will be submitted to the DPWWM for review and approval.

5. Electrical, Telephone and CATV Systems

Electrical, telephone, and CATV systems will be extended to the project site from the existing systems that are respectively maintained by Maui Electric, Verizon Hawaii, and Hawaiian Cablevision. Refer to Appendix B. The proposed systems will be designed to meet the current standards of these service providers.

The proposed project is not anticipated to adversely impact electrical, telephone and CATV services in the region.

Chapter IV

Relationship to Governmental Plans, Policies and Controls

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

A. STATE LAND USE DISTRICTS

Pursuant to Chapter 205A, HRS, all lands in the State have been divided and placed into one (1) of four (4) land use districts by the State Land Use Commission. These land use districts have been designated "Urban", "Rural", "Agricultural", and "Conservation". The project site is located within the State "Urban" district. Refer to Figure 9. The proposed development of the Kahului Airport Hotel is compatible with, and permitted within, the State "Urban" land use district.

B. HAWAII STATE PLAN

Chapter 226, HRS, also known as the Hawaii State Plan, is a long-range comprehensive plan which serves as a guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The goals, objectives, policies, and priority guidelines which contribute to the development of the proposed project include the following:

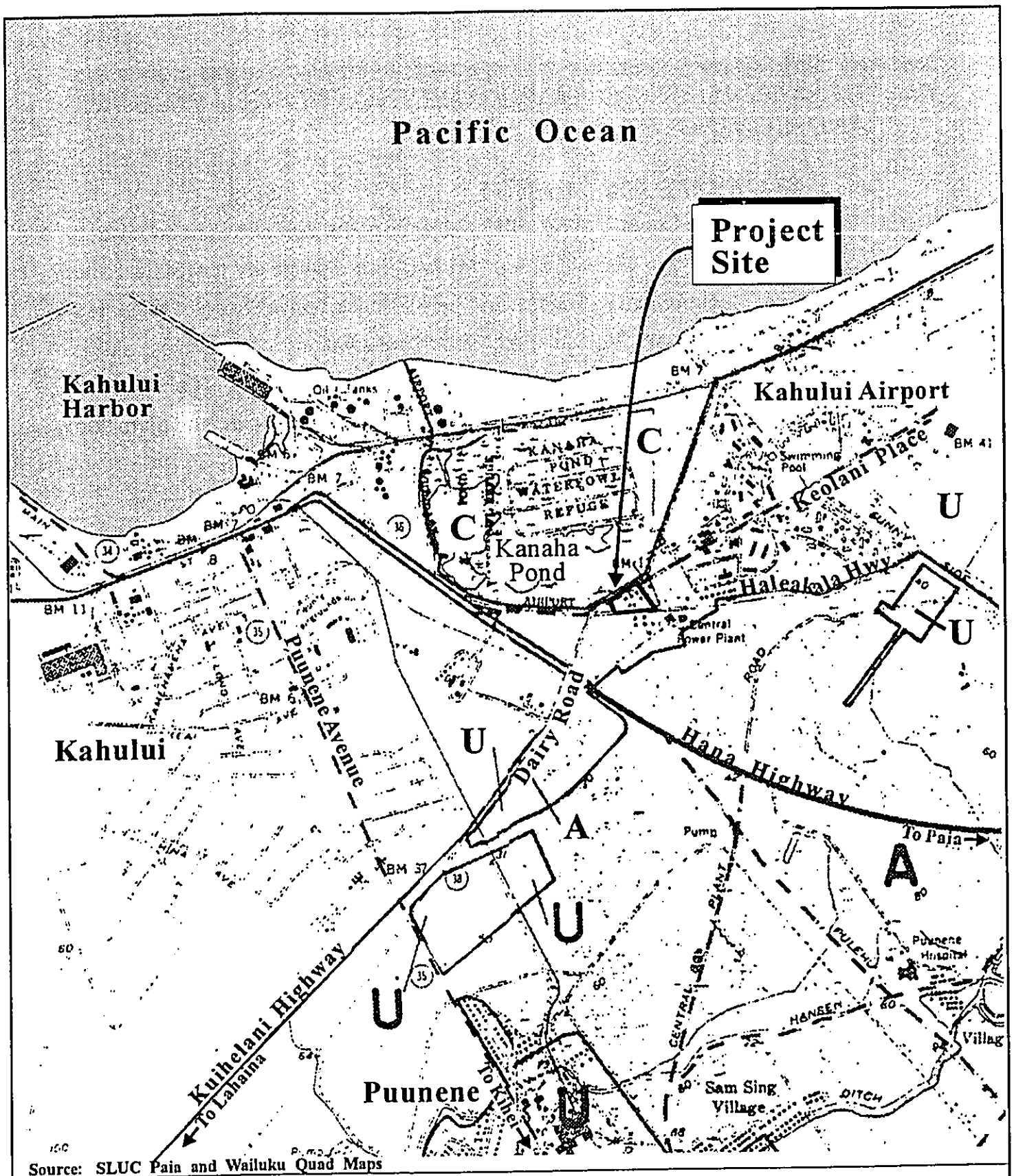
a. **Goal:** A strong, viable economy characterized by stability, diversity, and growth that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.

b. **Goal:** Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.

The proposed project also promotes the following State Plan objectives, policies, and priority guidelines:

Sec. 226-5 Objective and policies for population

Policy (b)(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with



Source: SLUC Paia and Wailuku Quad Maps

Figure 9 Proposed Kahului Airport Hotel
State Land Use District Designations

0 500 1000 2000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: A&B Properties, Inc.

community needs and desires.

Policy (b)(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.

Sec. 226-6 Objectives and policies for economy - in general

Objective (a)(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.

Sec. 226-8 Objective and policies for the economy - visitor industry

Objective (a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.

Policy (b)(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.

Policy (b)(3) Improve the quality of existing visitor destination areas.

Policy (b)(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.

Policy (b)(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.

Sec. 226-103 Economic priority guidelines

Priority Guideline (a)(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:

(A) An industry that can take advantage of Hawaii's unique

location and available physical and human resources.

(B) A clean industry that would have minimal adverse effects on Hawaii's environment.

(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.

(D) An industry that would provide reasonable income and steady employment.

Priority Guideline (b)(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.

Priority Guideline (b)(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.

Priority Guideline (b)(5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.

C. *STATE TOURISM FUNCTIONAL PLAN*

Chapter 226, HRS, The Hawaii State Plan, provides a long-range guide for Hawaii's future and establishes a Statewide Planning System. The system includes the formulation of 14 State Functional Plans to manage and coordinate functional area activities and to guide resource allocation decision-making. Each plan addresses statewide needs, problems and issues, and recommends policies and priority actions to mitigate those problems and bring about desirable conditions.

The State Tourism Functional Plan (1991 Update) sets forth objectives, policies, programs and projects to guide State and County governments and the private sector in implementing the visitor industry objectives, policies and priority guidelines contained in the Hawaii State Plan. The

overall theme of the Tourism Functional Plan is "The achievement of a visitor industry that constitutes a major component of steady growth for Hawaii's economy."

The proposed project is in consonance with the following objectives and policies of the Tourism Functional Plan:

Objective I.A.

Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.

Policy I.A.2.

Ensure that visitor industry growth maximizes benefits to the residents of the State in general and revenues to State and County governments specifically.

Policy I.A.3.

Provide opportunities for the visitor industry to grow keeping in mind the effects of the importation of labor.

Policy I.A.5.

Ensure that the benefits of tourism development are spread evenly throughout the State, to the extent desired by the counties, by making special efforts to distribute growth to the Neighbor Islands.

Policy II.A.2.

Enhance tourism product and encourage continued development of a diverse range of tourism products.

Policy II.A.5.

Improve the availability of affordable housing for those employed in the visitor industry.

Policy II.A.8.

Encourage the development of hotels and related facilities within

designated visitor destination areas with adequate infrastructure and support services before development of other possible visitor destinations.

Objective V.B.

Enhancement of career and employment opportunities in the visitor industry.

D. *MAUI COUNTY GENERAL PLAN*

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

The proposed project is in keeping with the following General Plan objectives relating to land use, economic activity, and the visitor industry.

Objective: Land Use:

- To use the land within the County for the social and economic betterment of the County's residents.

Objective: Economic Activity:

- To provide an economic climate which will achieve stabilization, controlled expansion, and diversification of the County's economic base.

Objectives: Visitor Industry:

- To require exceptional and continuing quality in the development of visitor industry facilities.

- To control the development of visitor facilities so that they do not infringe upon the traditional social, economic and environmental values of the community.

- To ensure that visitor industry facilities shall not disrupt agricultural and social pursuits and will not be allowed to deplete the County's natural resources.

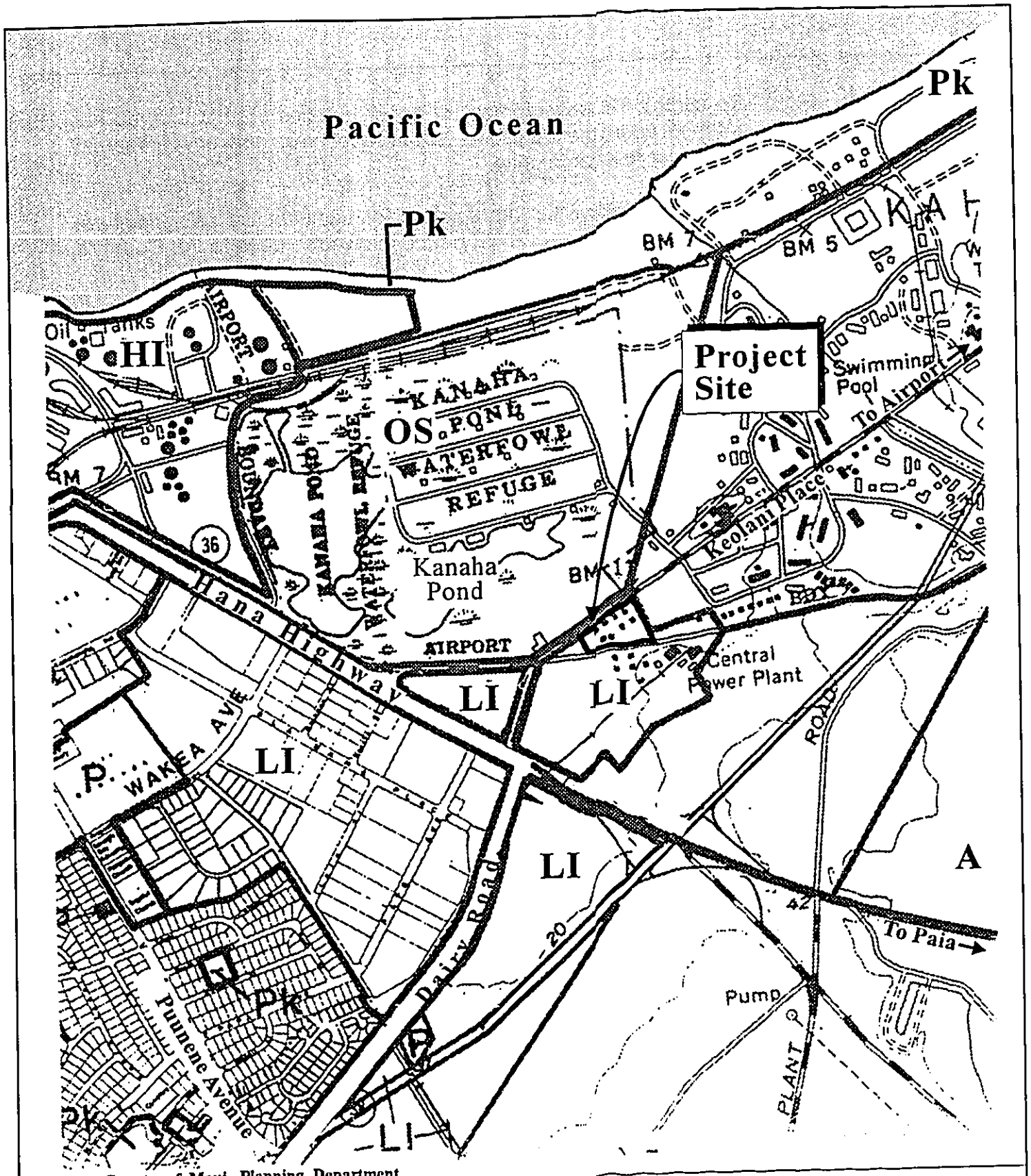
- To develop a visitor industry which will enhance the social and economic lifestyles of Maui County's residents.

E. *WAILUKU-KAHULUI COMMUNITY PLAN*

The project site is located in the Wailuku-Kahului Community Plan region which is one (1) of nine (9) Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan. Each Community Plan contains recommendations and standards which guide the sequencing, patterns and characteristics of future development in the region.

Land use guidelines are set forth by the existing Wailuku-Kahului Community Plan Land Use Map. See Figure 10. The project site is currently designated for "Light Industrial" use by the Community Plan. It should be noted, however, that while the Community Plan is currently in the process of being updated by the Maui County Council, the proposed updated plan does not address the subject property.

Since the proposed action involves the development of the Kahului Airport Hotel, a request to change the subject property's present Wailuku-Kahului Community Plan land use designation to "Hotel" is being sought to establish the appropriate land use designation for the implementation of the project. As reflected by the current Community Plan, the "Hotel" land use category "applies to transient accommodations which do not contain



Source: County of Maui, Planning Department

Figure 10 Proposed Kahului Airport Hotel
Wailuku-Kahului Community
Plan Land Use Map

0 250 500 1000 Feet

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Prepared for: A&B Properties, Inc.

kitchens within individual units. Such hotel facilities may include permissible accessory uses primarily intended to serve hotel guests".

It should also be noted that as part of the Wailuku-Kahului Community Plan update process, the following proposed objective is presently being considered by the Maui County Council.

> "Allow opportunities for hotel accommodations within the region at Kahului and Wailuku - at the existing hotel district by Kahului Harbor; near the Kahului Airport; and within the Wailuku Town core".

The proposed project is consistent with the proposed Community Plan objective.

F. ZONING

The project site is currently zoned for "M-2, Heavy Industrial" use by Maui County zoning. To provide for the development of the proposed Kahului Airport Hotel, as well as to establish overall land use consistency for the subject property once the Community Plan Amendment has been granted, a Change in Zoning to the "HM, Hotel" District is being sought for the property. Land uses permitted under "HM, Hotel" zoning include, but are not limited to the following: (a) any use permitted in Residential and Apartment Districts, (b) hotels, and (c) apartment-hotels.

Once all the necessary regulatory permits and approvals for the proposed hotel have been obtained, the subject property will be constructed and utilized in accordance with the standards of the "HM, Hotel" District.

G. COUNTY OF MAUI - SPECIAL MANAGEMENT AREA

The subject property is located within the County of Maui's Special Management Area (SMA). Pursuant to Chapter 205A, HRS, and the

Rules and Regulations of the Maui Planning Commission, actions proposed within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastai zone management considerations, as set forth in Chapter 205A, HRS and the Rules and Regulations of the Maui Planning Commission.

(1) Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point

and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of Section 46-6, HRS.

Response: The subject property is situated about 0.6 mile from the shoreline. As such, the proposed project is not anticipated to affect existing coastal recreational resources. The project is intended to provide opportunities for "HM, Hotel" uses which are considered compatible and complementary with existing land uses in the area.

(2) ***Historical/Cultural Resources***

Objective: Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

(A) Identify and analyze significant archeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Response: The subject property has been previously disturbed in connection with the construction of the existing commercial structures, parking areas, and concrete-lined drainage channel. As

such, the proposed action is not anticipated to have an adverse impact on historical or cultural resources and practices. Should human remains be inadvertently discovered during earth moving activities, work shall cease at once in the immediate area of the find, and the find shall be protected from further damage. The State Historic Preservation Division shall be immediately notified and procedures for the treatment of inadvertently discovered human remains shall be implemented pursuant to Chapter 6E, HRS.

(3) Scenic and Open Space Resources

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

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

Response: The proposed project will be developed and landscaped to ensure visual compatibility with surrounding land uses. The proposed improvements are not contrary to the objectives and policies for scenic and open space resources.

(4) Coastal Ecosystems

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

(A) Improve the technical basis for natural resource management;

(B) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Response: The proposed improvements are not expected to adversely impact coastal ecosystems. The existing concrete-lined drainage channel will be utilized to accommodate surface runoff from the proposed development. Drainage improvements shall be designed in accordance with County standards to ensure that there are no adverse effects to adjacent or downstream properties. Applicable BMPs and erosion control measures will also be implemented during the construction of the project.

(5) ***Economic Uses***

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

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

Response: The subject property is situated approximately 0.6 mile inland from the shoreline in an area of existing commercial and industrial uses. The property also provides an appropriate location for the development of the project as the site is centrally located and is conveniently situated for use by both business and leisure travelers. Moreover, the property is located in proximity to the centers of commerce and government, as well as visitor attractions, activities, and facilities.

(6) Coastal Hazards

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

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program;

(D) Prevent coastal flooding from inland projects; and

(E) Develop a coastal point and nonpoint source pollution control program.

Response: The project site is located within Zone C, which is an area of minimal flooding. No significant adverse drainage impacts to downstream properties are anticipated from the proposed project.

(7) ***Managing Development***

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

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Response: This Environmental Assessment has been prepared for public review in compliance with Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Administrative Rules, Environmental Impact Statement Rules.

In addition, applicable State and County requirements will be adhered to in the design and construction of the proposed project.

(8) ***Public Participation***

Objectives: Stimulate public awareness, education, and

participation in coastal management.

Policies:

(A) Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and

(C) Organize workshops, policy dialogues, and site-specific medications to respond to coastal issues and conflicts.

Response: Public awareness and participation for this project is facilitated through the Chapter 343, HRS environmental review process. The proposed project is not contrary to the objective of public awareness, education and participation.

(9) ***Beach Protection***

Objectives: Protect beaches for public use and recreation.

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The proposed project is located approximately 0.6 mile inland from the shoreline and is not anticipated to impact

shoreline activities and beach processes.

(10) ***Marine Resources***

Objectives: Implement the State's ocean resources management plan.

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(C) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

(D) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(E) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(F) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Response: The proposed project is not anticipated to have adverse effects upon marine and coastal resources in the vicinity. Runoff from the project site will flow into the existing concrete-lined drainage channel and is not anticipated to adversely affect marine or coastal resources.

Chapter V

Summary of Adverse Environmental Effects Which Cannot Be Avoided

V. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The development of the proposed project will result in some construction-related impacts as described in Chapter III, Potential Impacts and Mitigation Measures.

Potential effects include noise generated impacts occurring from construction activities. In addition, there may be temporary air quality impacts associated with dust generated from construction activities, and exhaust emissions discharged by construction equipment.

The proposed project is not anticipated to create any long-term adverse environmental effects.

Chapter VI

Alternatives to the Proposed Action

VI. ALTERNATIVES TO THE PROPOSED ACTION

A. PREFERRED ALTERNATIVE

The preferred alternative represents the proposed action. The establishment of an appropriate site for accommodating hotel uses in an area of existing commercial and industrial activities will be accomplished through the development of the proposed project. The subject property is in the immediate vicinity of commercial uses in the area, such as Costco, K-Mart, Triangle Square, and the Maui Marketplace, as well as industrial uses as reflected by the Maui Industrial Park, the Dairy Road and Hana Highway Industrial Subdivisions, and the Maui Business Park Subdivision.

Considering its convenient and centralized location, infrastructure, surrounding land uses, economic benefits to the community, and its proximity to the Kahului Airport and visitor attractions and facilities, as well as its proximity to the island's centers of commerce and government, the subject property provides a suitable location for the proposed project.

B. NO ACTION ALTERNATIVE

The "no action" alternative calls for retaining the project site in its current condition. While the project site has the necessary land use entitlements for the implementation of industrial uses, the need for a hotel in Central Maui that can accommodate business and leisure travelers is deemed to be more appropriate in the current market context. In this light, retaining the project site in its current condition is not presently considered the highest and best use of the site, nor is maintaining its existing Community Plan and zoning designations. Accordingly, the "no action" alternative was deleted from consideration.

C. *DEFERRED ACTION ALTERNATIVE*

As with the "no action" alternative, the "deferred action" alternative is not deemed appropriate.

D. *SITE PLAN ALTERNATIVES*

During the project's conceptual site planning stage, several site layouts were considered. However, these preliminary plans were discounted due to considerations relating to hotel access, operations, development costs, and internal traffic circulation. It should be noted that the site planning phase involved an examination of the operational requirements for the proposed hotel in order to ensure that spatial and functional criteria for the project were adequately addressed. In addition, the site planning process involved an analysis of space needs, missions and functions, area requirements, spaces and adjacencies, and people/equipment activities schedule. Through the project's planning process, a site plan was prepared and reviewed to ensure that all operational and performance standards can be addressed.

Although there may be other site layouts which could be examined, the proposed site layout is intended to best accommodate the needs of the hotel and its targeted market by providing a facility which provides for convenient access, central location, adequate infrastructure, compatibility with its surrounding environs, and a sufficient range of hotel services and amenities.

Chapter VII

Irreversible and Irretrievable Commitments of Resources

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed action would involve a commitment of fuel, labor, funding and material resources.

Development of the proposed project will involve the commitment of land for a hotel which may preclude other land use options for the site. This commitment of land resources, however, is consistent with existing and future land uses in and around the project area.

Chapter VIII

Findings and Conclusions

VIII. FINDINGS AND CONCLUSIONS

The "Significance Criteria", Section 12 of the Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed project will have significant impacts to the environment. The following analysis is provided:

1. ***No Irrevocable Commitment to Loss or Destruction of any Natural or Cultural Resource Would Occur as a Result of the Proposed Project***

   The project will not result in any adverse environmental impacts. There are no known, rare, endangered or threatened species of flora, fauna or avifauna located within the project site.

   The subject property has been previously disturbed in connection with the construction of the existing onsite improvements. Accordingly, redevelopment of the property is not expected to result in any adverse impacts to cultural resources. Should any artifacts or human remains be encountered during construction, work will stop in the immediate vicinity of the find and the State Historic Preservation Division will be immediately notified to establish an appropriate mitigation strategy.

2. ***The Proposed Action Would Not Curtail the Range of Beneficial Uses of the Environment***

   The proposed project and the commitment of land resources would not curtail the range of beneficial uses of the environment.

3. ***The Proposed Action Does Not Conflict with the State's Long-term Environmental Policies or Goals or Guidelines as Expressed in Chapter 334, Hawaii Revised Statutes***

   The State's Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes. The proposed action does not contravene

provisions of Chapter 344, Hawaii Revised Statutes.

4. ***The Economic or Social Welfare of the Community or State Would Not be Substantially Affected***

The proposed project would have a direct beneficial effect on the local economy during construction. In the long term, the proposed project will support the local economy through the contribution of salaries, wages, and benefits, as well as through the purchases of goods and services from local merchants and service providers.

5. ***The Proposed Action Does Not Affect Public Health***

No adverse impacts to the public's health and welfare are anticipated as a result of the proposed project.

6. ***No Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities are Anticipated***

No significant population changes are anticipated as a result of the proposed project.

From a land use standpoint, the proposed project will enhance existing land uses. The project site is situated in an area of existing commercial and industrial development which includes Costco, K-Mart, Triangle Square, and the Maui Marketplace, as well as the Maui Industrial Park, the Dairy Road and Hana Highway Industrial Subdivisions, and the Maui Business Park Subdivision. The proposed project complements and is compatible with these surrounding land uses.

The proposed improvements will hookup to existing County water and wastewater systems. No adverse impacts to water and wastewater capacities and facilities are anticipated. Onsite and offsite surface runoff

are expected to be accommodated by the proposed drainage system improvements. The project is not expected to significantly impact public services such as police, fire, and medical services. Impacts upon educational, recreational, and solid waste collection and disposal facilities and resources are considered minimal. Affordable housing requirements for the proposed hotel will be coordinated with the County of Maui.

7. ***No Substantial Degradation of Environmental Quality is Anticipated***

During the construction phase of the project, there will be short-term air quality and noise impacts as a result of the project. In the long term, effects upon air quality and ambient noise levels should be minimal. The project is not anticipated to significantly affect the open space and scenic character of the area.

No substantial degradation of environmental quality resulting from the project is anticipated.

8. ***The Proposed Action Does Not Involve a Commitment to Larger Actions, Nor Would Cumulative Impacts Result in Considerable Effects on the Environment***

The proposed action is considered a stand alone project that will be developed in a single phase. The proposed action does not represent a commitment to larger actions. In addition, the proposed action is not expected to result in any cumulative impacts that would adversely affect the environment.

9. ***No Rare, Threatened or Endangered Species or Their Habitats Would be Adversely Affected by the Proposed Action***

There are no rare, threatened or endangered species of flora, fauna, avifauna or their habitats that will be adversely affected by the proposed

action.

10. ***Air Quality, Water Quality or Ambient Noise Levels Would Not be Detrimentally Affected by the Proposed Project***

Construction activities will result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind-blown emissions. Noise impacts will occur primarily from construction-related activities. It is anticipated that construction will be limited to daylight working hours. Water quality is not expected to be affected.

In the long term, the project is not anticipated to have a significant impact on air and water quality or ambient noise levels.

11. ***The Proposed Project Would Not Affect Environmentally Sensitive Areas, Such as Flood Plains, Tsunami Zones, Erosion-prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters***

The project is not located within and would not affect environmentally sensitive areas. The project site is not subject to flooding or tsunami inundation. Soils of the project site are not erosion-prone. There are no geologically hazardous lands, estuaries, or coastal waters within or adjacent to the project site.

12. ***The Proposed Action Would Not Substantially Affect Scenic Vistas and Viewplanes Identified in County or State Plans or Studies***

The project site is not identified as a scenic vista or viewplane. The proposed project will not affect scenic corridors and coastal scenic and open space resources.

13. ***The Proposed Action Would Not Require Substantial Energy Consumption***

The proposed project will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this use is not anticipated to result in a substantial consumption of energy resources. In the long term, the project will create an additional demand for electricity. However, this demand is not deemed substantive or excessive within the context of the region's overall energy consumption.

Based on the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

Chapter IX

List of Permits and Approvals

IX. LIST OF PERMITS AND APPROVALS

The following permits and approvals will be required prior to the implementation of the project.

State of Hawaii

1. Community Noise Permit
2. Work to Perform in State Highway Right-of-Way

County of Maui

1. Subdivision Approval
2. Construction Permits (Grubbing, Grading, Building, Electrical, Plumbing, Driveway)

Chapter X

Agencies and Organizations Consulted During the Preparation of the Draft Environmental Assessment; Letters Received and Responses to Substantive Comments

X. AGENCIES AND ORGANIZATIONS CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies and organizations were consulted during the preparation of the Draft Environmental Assessment. Agency comments and responses to substantive comments are also included in this section.

1. Neal Fujiwara, Soil Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, Hawaii 96793-2100

2. George Young, Chief Regulatory Branch
Department of the Army
U.S. Army Engineer District, Hnl.
Attn: Operations Division
Bldg. T-1, Room 105
Fort Shafter, Hawaii 96858-5440

3. Robert P. Smith
Pacific Islands Manager
U. S. Fish and Wildlife Service
P.O. Box 50167
Honolulu, Hawaii 96850

4. Gary Gill, Deputy Director
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

5. Herbert Matsubayashi
District Environmental Health Program Chief
State of Hawaii
Department of Health
54 High Street
Wailuku, Hawaii 96793

6. Timothy Johns, Director
State of Hawaii
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

7. Don Hibbard
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawaii 96707

8. Robert Siarot, Maui District Engineer
State of Hawaii
Department of Transportation
Highways Division
650 Palapala Drive
Kahului, Hawaii 96732

9. Colin Kippen, Deputy Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

10. Clayton Ishikawa, Chief
County of Maui
Department of Fire Control
200 Dairy Road
Kahului, Hawaii 96732

11. Alice Lee, Director
County of Maui
Department of Housing and Human Concerns
200 S. High Street
Wailuku, Hawaii 96793

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

13. David Goode, Director
County of Maui
Department of Public Works and Waste Management
200 South High Street
Wailuku, Hawaii 96793

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

15. Tom Phillips, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

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

17. Roz Baker, Economic Development Coordinator
Office of Economic Development
County of Maui
200 South High Street
Wailuku, Hawaii 96793

18. Terryl Vencl, Executive Director
Maui Hotel Association
1727 Wili Pa Loop, Suite B
Wailuku, Hawaii 96793

19. Marsha Weinert, Executive Director
Maui Visitors Bureau
1727 Wili Pa Loop
Wailuku, Hawaii 96793

20. Lynne Woods, Executive Director
Maui Chamber of Commerce
250 Alamaha Street, Suite N16A
Kahului, Hawaii 96732

In addition to the foregoing, the applicant met with local community organizations such as the Maui Rotary Club (February 2001 meeting), Paia Main Street Association Board of Directors (February 2001 meeting), Maui Board of Realtors (February 16, 2001 meeting), Maui Contractors Association (May 2001 meeting), and Maui Electric Company, Ltd. (April 17, 2001 annual Economic Outlook meeting) to discuss the proposed project. The comments provided by these organizations reflected their support of the project, as well as expressed the need for additional hotel accommodations in the Central Maui area that would serve local residents and business travelers.

Comments

DEC 2 1 2000

BENJAMIN J. CAYETANO
GOVERNOR

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH
LORRIN W. PANG, M.D., M.P.H.
[redacted]
DISTRICT HEALTH OFFICER

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

December 19, 2000

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa
& Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

Subject: **Proposed Kahului Airport Hotel**
TMK: (2) 3-8-79: 16 & 17

Thank you for the opportunity to provide early comment on the proposed Kahului Airport Hotel. We have no comments on the general overview of the proposed project and look forward to the review of the Environmental Assessment.

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

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

Mayor

FLOYD S. MIYAZONO
Director

ELIZABETH D. MENOR
Deputy Director

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

December 19, 2000

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: PROPOSED KAHULUI AIRPORT HOTEL

Thank you for the opportunity to review the summary for the subject project. At this time, we have no comments or objections to the proposed action.

Please contact me or Mr. Patrick Matsui, Chief of Parks Planning and Development, at 270-7387 if there are any questions.

Sincerely,

Floyd Miyazono

FLOYD S. MIYAZONO
Director

c. Patrick Matsui, Chief of Planning and Development

JAN 0 2 2001

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

December 21, 2000

Mr. Glenn Tadaki
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

SUBJECT: Proposed Kahului Airport Hotel, TMK: 3-8-79: 016 and 017

Dear Mr. Tadaki,

Thank you for the opportunity to provide comments in the preparation of the Environmental Assessment. We provide the following information:

The EA should include the sources and expected potable and non-potable water usage. This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of December 1, 2000 were 16.919 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. If rolling annual average withdrawals exceed 20 MGD, the State Commission on Water Resource Management will designate Iao Aquifer. The Department is implementing a plan to bring new sources on-line and to mitigate withdrawals. Two wells in North Waihee were brought on-line in July 1997. Another well producing about 1 MGD was brought on-line during the first quarter of 2000. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. Nevertheless, the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments. Water availability will be reviewed at the time of application for meter or meter reservation.

Using System standards, total consumption for the proposed hotel development would range approximately between 49,000 to 57,000 gallons per day (gpd). Actual use will depend on number of fixtures, type of water features and intensity of use. Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991. The applicant are encouraged to contact our engineering division early in the process at 270-7835 with respect to required system improvements. The applicant should be made aware that they may be

required to participate in or construct a storage tank to serve the project. We have included a portion of our water system map pertaining to the project area for your reference.

Where possible, brackish and/or reclaimed water should be used for all non-potable uses, including irrigation, outdoor water features, and dust control during construction. Where appropriate, the applicants should consider these measures:
Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low flow water fixtures and devices in faucets, showerheads, urinals, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available.
Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.
Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zones 3 and 5. Please refer to the "Maui County Planting Plan", and to the attached document. We encourage the applicants to consider using climate-adapted and salt-tolerant native plants in landscaping of hotel grounds. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.
Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

The project overlies the Kahului aquifer. The Department of Water Supply strives to protect the integrity of surface water and groundwater resources by encouraging applicants to adopt best management practices (BMPs) relevant to potentially polluting activities. We list a few BMP references here. Additional information can be obtained from the State Department of Health.

"The Megamanual - Nonpoint Source Management Manual - A Guidance Document for Municipal Officials." Massachusetts Department of Environmental Protection.
"Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters." United States Environmental Protection Agency, Office of Water.

If you need additional information, please call our Water Resources and Planning Division at 270-7199.

Sincerely,

David Craddick
Director
emb

cc: engineering division

attachments:
1) "The Costly Drip"
2) "Saving Water in the Yard: What & How to Plant in Your Area"
3) Ordinance 2108 - "An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
4) A Checklist of Water Conservation Ideas For Hotels and Motels
5) Portion of fire water system map

S:\PLANNING\EMB\Kahului Airport Hotel.wpd

By Water All Things Find Life

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

JAN 0 2 2001

JAMES "KIMO" APANA
Mayor

ALICE L. LEE
Director

PRISCILLA P. MIKELL
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

December 26, 2000

Mr. Glenn Tadaki, Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

Subject: Proposed Kahului Airport Hotel
TMKs: 3-8-79:16 and 17

We have reviewed the project summary for the proposed project and would like to inform you that the provisions of Chapter 2.94 (Affordable Housing Policies For Hotel-Related Developments), Maui County Code, is applicable to the project.

Thank you for the opportunity to comment.

Very truly yours,

ALICE L. LEE
Director of Housing &
Human Concerns

ETO:df

c: Housing Administrator

JAN 0 2 2001

MAUI HOTEL ASSOCIATION

December 29, 2000

1727 Wili Pa Loop, Suite B • Wailuku, Maui, Hawai'i 96793 • Phone (808) 244-8625 • Fax (808) 244-3094

Mr. Glenn Tadaki
Munekiyo, Arakawa & Hiaga, Inc.
305 High Street Suite 104
Wailuku, Hi 96793

Aloha Glenn:

Thank you for the opportunity to comment on the A & B proposal for a 140-room hotel located at the Kahului Airport. The Maui Hotel Association has known for some time that a businessperson type property is sorely needed in the Kahului/Wailuku area.

We have visited this issue among our Board Members and we support this type of project because it fills a void. Often times our visitors are detained by road closures and have nowhere to stay when their flight has left them behind. We are also aware that many businesses and government offices have a great number of vendors and purveyors who need a convenient place to stay in the business/government district of central Maui. Additionally, I receive calls on a regular basis from sports teams around the state looking for rooms for their teams during times of tournaments, which are all held in the central Maui area. This project will fit right in with the ambiance of the surrounding airport and businesses.

If you have any further questions please feel free to call me at 244-8625.

Sincerely,

Terryl Vencl
Executive Director

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
UNNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

December 29, 2000

Mr. Glen Tadaki
Munekiyo, Arakawa, & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

LOG NO: 26756 ✓
DOC NO: 0012CD31

Dear Mr. Tadaki:

SUBJECT: Chapter 6E-42 Historic Preservation Review of the General Overview for the Proposed Kahului Airport Hotel Wailuku Ahupua`a, Wailuku District, Island of Maui
TMK: 3-8-79:016 & 017

Thank you for the opportunity to comment on the general overview regarding the proposed Kahului Airport Hotel and related improvements.

We understand that the submitted document is pursuant to the early consultation requirements of Title 11, Chapter 200, Section 9, of the Administrative Rules of the State Department of Health. We further understand the proposed undertaking will involve an amendment to the Community Plan and that the use of State Lands (roadway right-of-way) for the installation of utility lines will require an Environmental Assessment to be prepared, as required by Chapter 343, Hawaii Revised Statutes.

From the submitted general overview, we understand the proposed project area is located in route to the Kahului Airport, is bordered by Keolani Place to the north, the County Department of Water Supply to the East, Haleakala Highway to the south and a retail store and car rental outlet to the west. The proposed undertaking consists of the construction of a four-story hotel and ancillary improvements including, a swimming pool, spa, courtyard, paved parking area, site landscaping, and associated irrigation.

A search of our records indicates that an archaeological inventory survey has not been conducted of the subject property. However, judging from aerial photographs taken in the mid-1970s, it appears the subject property has undergone extensive alteration due to modern grading activities, making it unlikely that unlikely that significant historic sites still remain.

Given the above information, we believe the proposed undertaking will have "no effect" on significant historic sites.

Please call Cathleen Dagher at 692-8023 if you have any questions.

Aloha,

Don Hibbard, Administrator
Historic Preservation Division

CD:jk

THE FOLLOWING EARLY CONSULTATION COMMENTS WERE RECEIVED AFTER THE DRAFT ENVIRONMENTAL ASSESSMENT WAS FILED

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

REPLY TO
ATTENTION OF

January 9, 2001

Regulatory Branch

Mr. Glenn Tadaki, Planner
Munekiyo, Arakawa & Hiraga, Inc
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

This responds to your request for written comments for the preparation of an Environmental Assessment (EA) which will address activities proposed for the proposed Kahului Airport Hotel Project, Kahului, Maui Island (TMK 3-8-79: parcels 16, 17). The information provided locates the project off Haleakala Highway and adjacent to Kanaha Pond. The EA should address those activities which may or will not result in a discharge of fill material into those jurisdictional waters. Until more specific information is provided we can only offer general comments at this time.

Our records indicate that waters of the United States, as represented by perennial or intermittent streams and wetlands do not occur within the project area, except for the adjacency of the proposed project to Kanaha Pond. As agent for A&B Properties, Inc., you should consult with the Corps to determine whether a Department of Army permit application may be required for phases of the project that may entail ground disturbance, construction, and alteration as well as the placement of fill material within the limits of jurisdictional waters.

Please contact Mr. Farley Watanabe of my staff at 438-7701 or FAX 438-4060 if you have any questions or additional information. Please refer to File Number 200100091 in any future correspondence with us.

Sincerely,

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

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE
YOUR REFERENCE TV

POLICE DEPARTMENT
COUNTY OF MAUI

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

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

January 9, 2001

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Tadaki:

SUBJECT: Proposed Kahului Airport Hotel
TMKs 3-8-79: 16 and 17

Thank you for your letter of December 15, 2000 requesting comments on the above subject.

We have reviewed the proposed summary and have enclosed our recommendations. Thank you for giving us the opportunity to comment on the proposed project.

Very truly yours,

Assistant Chief Robert Tam Ho
for: Thomas M. Phillips
Chief of Police

Enclosure

c: John E. Min, Planning Department

COPY

Recommend Denial
AC
12/29/00

TO : THOMAS PHILLIPS, CHIEF OF POLICE

VIA : CHANNELS

FROM : RYAN RODRIGUES, COMMUNITY POLICE OFFICERS KAHULUI

SUBJECT : PROPOSED KAHULUI AIRPORT HOTEL
TMKs 3-8-79: 16 and 17

Sir, this communication is being submitted for your information regarding the above mentioned subject matter.

I have reviewed the proposed plan regarding the development of a 140 room hotel to be located at the corner of Keolani Place / Dairy Road in Kahului.

After looking over the initial proposal, and looking at the bigger development picture for this area and the rest of central Maui to include District I (Wailuku/Kahului) and VI (Kihei). I cannot recommend this project or other large scale developments for approval. Traffic in this area is heavy and getting worse. If a hotel is built at this location it would adversly impact traffic. It should also be noted that our infrastructure such as other Maui roadways (State and County), Public Safety (Police, Fire, EMS, Parks Dept. Public Works Dept. and Landuse Division) at present cannot keep up with the growth and development being planned for the near future.

Presently our roadways are not designed to handle any more increases in traffic, for reasons such as poor roadway designs or the lack of funds to improve these roadways or create new ones.

There are several large scale developments being planned in Kihei and Kahului, which include both business and large scale subdivisions. All these other developments will not only adversely impact the already over crowded Maui streets and highways, but they will also have a major impact on this intersection at Keolani and Dairy Road. Keolani Street and Dairy Road is a main Intersection in which everyone that travels to the airport go's through, and adding a 140 room hotel so close to this intersection will not only create more unwanted traffic in this area but create a traffic hazard as well.

I suggest that this development plan be relocated, or denied.

Submitted for your perusal.

CONCUR WITH RECOMMENDATIONS.
Capt. [illegible]
12/29/00

RYAN RODRIGUES, E#0312
12/27/00 1059 HOURS

I concur with Officer RODRIGUES' assessment of this proposed project. The proposed area supports a high volume of vehicular traffic and with a hotel added to the area, the nearly non-existent pedestrian traffic will increase highly. The area does not support pedestrian traffic at this time.
[illegible] 1041 12/29/00

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732

Brian K. Minaai
Director - Designate
DEPUTY DIRECTORS
Jadine Y. Urasaki
GLENN M. OKIMOTO

January 16, 2001

IN REPLY REFER TO:

HWY-M 2.003-01

MEMORANDUM

TO: Glenn Tadaki
Munekiyo, Arakawa & Hiraga, Inc.

FROM: Paul M. Chung
State Highways

SUBJECT: PROPOSED KAHULUI AIRPORT HOTEL
I.D. NO. ME-01-01

The following comments are based on our review of the project summary:

1. A Traffic Impact Analysis Report (TIAR) will probably be required;

2. Submit a drainage report for review and comment; and

3. Road widening lots may be required depending on the recommendations of the TIAR for roadway improvements, such as left turn, deceleration and acceleration lanes, etc.

If there are any questions, please call me at 873-3535.

PMC:dmf

JAMES "KIMO" APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

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

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

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

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

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

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

JAN 19

January 16, 2001

Mr. Glenn Tadaki
Munekiyo & Hiraga
305 High Street
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: EARLY CONSULTATION
KAHULUI AIRPORT HOTEL
TMK: (2) 3-8-079:016, 017

We reviewed the subject proposed project and have the following comments.

1. The Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for this project.

2. The developer is required to fund any necessary off-site improvements to the collection system and wastewater pump station and pay assessment fees for treatment plant expansion costs.

3. There are no County or private wastewater lines adjacent to this property. These comments apply if the developer plans to install off-site improvements that will convey flows to the County collection system.

4. The applicant shall construct roadway and drainage improvements as determined by the Department of Public Works and Waste Management, Engineering Division, to mitigate impacts created by this project.

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

6. Public Law 101-336 requires all construction to meet the design guidelines of the Americans with Disabilities Act.

7. A detailed final drainage report and site specific erosion control plan shall be submitted with the construction plans for review and approval prior to the issuance of grading or building permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for the disposal of runoff waters. It must comply with the provisions of the "Rules for Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The site specific erosion control plan shall show the location and details of structural and non-structural Best Management measures.

If you have any questions, please call me at 270-7845.

Sincerely,

DAVID GOODE
Director of Public Works
and Waste Management

DG:msc/mt

S:\LUCA\CZM\kahuluihotel.wpd

JAN 2 4 2001

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

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

January 23, 2001

LD-NAV

Ref.: AIRPORTHOTEL.RCM

Munekiyo, Arakawa & Hiraga, Inc.
Glenn Tadaki, Planner
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: Pre-Consultation for proposed Kahului Airport Hotel
A & B Properties, Kahului, Island of Maui, Hawaii

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

We had transmitted the subject informational material to our appropriate divisions for their review and comment on the subject proposed project.

Attached herewith is a copy of our Division of Forestry and Wildlife comments, related to drainage concerns for projects being develop near Kanaha pond.

Please provide us with four (4) copies of the Draft Environmental Assessment when they are available for review.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office

Division of Forestry & Wildlife

1151 Punchbowl Street, Rm. 325 • Honolulu, HI 96813 • (808) 587-0166 • Fax: (808) 587-0160

January 9, 2001

MEMORANDUM

TO: Nick Vaccaro, Land Agent
Land Division

THRU: Dean Uchida, Administrator
Land Division

FROM: Michael G. Buck, Administrator
Division of Forestry and Wildlife

SUBJECT: **Pre-consultation for proposed Kahului Airport Hotel by A & B Properties - Munekiyo, Arakawa & Hiraga, Inc. Consultants to the project, Kahului, Maui,**

DOFAW has been working with Eric Yuasa, Engineering Branch, Land Division regarding the Kanaha Flood Control Project, DOT Kahului Airport Expansion and presently the Kahului Airport Hotel project. We have drainage concerns for projects being develop near Kanaha pond. Mr. Michael Munekiyo, Consultant to the Kahului Airport Hotel will provide DOFAW Administration with the Draft EA for our review. Our comments will be presented following the review of the draft EA. Thank you for the opportunity to comment.

C: Maui DOFAW Branch
Eric Yuasa, Engineering Branch, DLNR

JAN 2 6 2001

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

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

January 25, 2001

LD-NAV
Ref.: AIRPORTHOTEL.RCM2

Munekiyo, Arakawa & Hiraga, Inc.
Glenn Tadaki, Planner
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: Pre-Consultation for proposed Kahului Airport Hotel
A & B Properties, Kahului, Island of Maui, Hawaii

This is a follow-up to our letter (Ref: AIRPORTHOTEL.RCM) to you dated January 23, 2001, regarding the subject matter.

Attached herewith is a copy of our Commission on Water Resource Management comment related to water resources for the proposed project.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN
CHAIRPERSON

BRUCE S. ANDERSON
ROBERT G. GIRALD
BRIAN C. NISHIDA
DAVID A. NOBRIGA
HERBERT M. RICHARDS, JR.

LINNEL T. NISHIOKA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

JAN 23 2001

TO: Mr. Dean Uchida, Administrator
Land Division

FROM: Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Kahului Airport Hotel
Preconsultation

FILE NO.: None

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.

[X] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[ ] We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] A Well Construction Permit and/or a Pump Installation Permit from the Commission 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 Commission would be required prior to use of this source.

[ ] Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.

[ ] If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).

[ ] If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.

[X] OTHER: The aquifer that serves as the water supply source for this project has been overpumped beyond its sustainable yield in the recent past, and the aquifer continues to show signs it has not fully recovered. If the Commission has to designate the aquifer as a water management area, all groundwater withdrawals to the purveyor would be subject to water use permits. The service area would be subject to a declaration of a water shortage or a water emergency. If withdrawals are constrained, uses may be subject to allocation to users by the purveyor.

If there are any questions, please contact Charley Ice at 587-0251.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii

January 5, 2001

LD/NAV
Ref.: AIRPORTHOTEL.COM

Suspense Date: 01/19/01

MEMORANDUM:

TO:
- Division of Aquatic Resources
- XXX Division of Forestry & Wildlife
- Division of State Parks
- Division of Boating and Ocean Recreation
- XXX Historic Preservation Division
- XXX Commission on Water Resource Management

Land Division Branches of:

- XXX Planning and Technical Services
- XXX Engineering Branch
- XXX Maui District Land Office
- Shoreline Processing Services

FROM: Dean Y. Uchida, Administrator
Land Division

SUBJECT: Pre-consultation for proposed Kahului Airport Hotel
A & B Properties - Munekiyo, Arakawa & Hiraga, Inc.
Kahului, Maui, Hawaii

Please review the following:

Project overview

and submit your comments (if any) on Division letterhead (signed and dated)within the time requested above. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

( ) We have no comments.

(✓) Comments attached.

Signed:

Date:

JAN 30 2001

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

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

January 25, 2001

LD-NAV
Ref.: AIRPORTHOTEL.RCM3

Munekiyo, Arakawa & Hiraga, Inc.
Glenn Tadaki, Planner
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: Pre-Consultation for proposed Kahului Airport Hotel
A & B Properties, Kahului, Island of Maui, Hawaii

This is a follow-up to our letter (Ref: AIRPORTHOTEL.RCM) to you dated January 23, 2001, regarding the subject matter.

Our Land Division Engineering Branch had requested that we inform you that you coordinate with them the proposed hotel development that relates to the drainage system (run off). Copy of their comment is enclosed.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii

January 5, 2001

RECEIVED
LAND DIVISION
2001 JAN 24 P 3:48

RECEIVED
2001 JAN 24 P 3:54

LD/NAV
Ref.: AIRPORTHOTEL.COM

Suspense Date: 01/19/01

01 JAN 08 PM 1:45 WATER & LAND

MEMORANDUM:

TO:
- Division of Aquatic Resources
- XXX Division of Forestry & Wildlife
- Division of State Parks
- Division of Boating and Ocean Recreation
- XXX Historic Preservation Division
- XXX Commission on Water Resource Management

Land Division Branches of:

- XXX Planning and Technical Services
- XXX Engineering Branch
- XXX Maui District Land Office
- Shoreline Processing Services

FROM: Dean Y. Uchida, Administrator
Land Division

SUBJECT: Pre-consultation for proposed Kahului Airport Hotel
A & B Properties - Munekiyo, Arakawa & Hiraga, Inc.
Kahului, Maui, Hawaii

Please review the following:

Project overview

and submit your comments (if any) on Division letterhead (signed and dated)within the time requested above. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

( ) We have no comments.

(X) Comments attached.

Signed: Andrew M. Monden
ANDREW M. MONDEN, CHIEF ENGINEER

Date: 1/23/01

ENGINEERING BRANCH

COMMENTS

For your information, the Engineering Branch, Land Division is preparing the Kahului Flood Control Project (Kanaha Pond) report for the proposed East Drainage System (EDS). As part of the proposed EDS, the existing A & B concrete ditch between Haleakala Highway and Keolani Place will be removed, and replaced with a 52-feet wide covered concrete drainage system (See Figure 1). The proposed drainage system will be constructed with its east wall coinciding with that of the existing A & B concrete ditch. Also, a 12-feet wide maintenance access road will be constructed along the proposed drainage system's west wall. To prevent conflict with the hotel development, we recommend that no development occur 64 feet (proposed drainage system width plus access road width) from the existing A & B concrete ditch's east wall, between Haleakala Highway and Keolani Place.

According to the Kahului Flood Control Project report, run off from the proposed hotel site is handled by the existing A & B concrete ditch. The existing A & B concrete ditch is currently at its limit in handling run off, and will not be able to handle any additional run off. We recommend that the additional run off from the proposed hotel be detained onsite.

Please have A & B and/or their consultant(s) coordinate with the Engineering Branch the proposed hotel development.

Responses

MUNEKIYO HIRAGA, INC.

January 19, 2001

George P. Young, Chief
Regulatory Branch
Department of the Army
U.S. Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17 (File Number 200100091)

Dear Mr. Young:

Thank you for your January 9, 2001 letter providing early consultation comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note that the proposed project will not result in a discharge of fill material into jurisdictional waters (Kanaha Pond does not adjoin the subject property but lies to the north of Keolani Place, a four-lane, State collector road that borders the property). The subject property will be graded to accommodate the proposed hotel by filling low lying areas of the property to ensure that storm runoff from the site drains into an existing concrete drainage channel situated at the eastern extent of the property. The drainage channel, which was constructed in 1990 in connection with the Airport Industrial Subdivision, was designed to accommodate runoff from the project site and other surrounding areas.

A Preliminary Engineering Report and Preliminary Storm Drainage Report, which discusses grading activities as well as drainage system improvements, will be included in the subject's Draft Environmental Assessment (EA). In addition, a detailed drainage and erosion control plan will be submitted to the County Department of Public Works and Waste Management for review and approval in connection with the project's building permit application process.

mahinc@aloha.net
305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

A copy of the Draft EA will be provided to you. Thank you again for providing us with your comments.

Sincerely,

for Glenn Tadaki, Planner

GT:to
cc: Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.
Ann Cua, Department of Planning

...hotelss/armyltr.001

MUNEKIYO & HIRAGA, INC.

February 2, 2001

Robert Tam Ho, Assistant Chief
Maui Police Department
County of Maui
55 Mahalani Street
Wailuku, Hawaii 96793

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17

Dear Assistant Chief Tam Ho:

Thank you for your January 9, 2001 letter providing early consultation comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note that a Traffic Impact Analysis Report (TIAR) for the project has been prepared to address traffic-related comments noted in your letter.

A copy of the Draft EA, including the TIAR will be provided to you for review. Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.
Keith Niiya, Austin, Tsutsumi & Associates

a&b/hotelee/mpdltr.001

planning environment
mahinc@aloha.net
305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhincontline.com

MUNEKIYO & HIRAGA, INC.

February 2, 2001

Paul Chung, Highways Division
Department of Transportation
State of Hawaii
650 Palapala Drive
Kahului, Hawaii 96732

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17

Dear Mr. Chung:

Thank you for your January 16, 2001 memorandum providing early consultation comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note that a Traffic Impact Analysis Report and Preliminary Storm Drainage Report have been prepared for the project and will be included in the project's Draft Environmental Assessment (EA).

A copy of the Draft EA will be provided to you. Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dan Yasui, A&B Properties, Inc.
Hideo Kawahara, A&B Properties, Inc.
Keith Niiya, Austin, Tsutsumi & Associates, Inc.

a&b/hotelea/doltr.001

planning environment
mahinc@aloha.net
305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com

MUNEKIYO & HIRAGA, INC.

February 2, 2001

David Goode, Director
Department of Public Works and
Waste Management
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation for Proposed Kahului Airport Hotel
(TMK 3-8-79:16 and 17)

Dear Mr. Goode:

Thank you for your letter of January 16, 2001 commenting on the proposed project. This letter will confirm the applicant's (A&B Properties, Inc.) intent to work with the Department of Public Works and Waste Management to ensure that applicable regulatory and policy requirements are addressed during the design and construction phases of project development.

Please feel free to call if there are any questions regarding the proposed action.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.
Project Manager

MTM:to
cc: Dan Yasui, A&B Properties
Hideo Kawahara, A&B Properties
a&b/hotelctz/dpwwmltr.001

mahinc@aloha.net

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

Chapter XI

Letters Received During the Draft Environmental Assessment Public Comment Period and Responses to Substantive Comments

XI. LETTERS RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

Pursuant to the requirements of the environmental review process, letters received during the Draft Environmental Assessment public comment period, as well as responses to substantive comments, are included in this section.

DRAFT ENVIRONMENTAL ASSESSMENT COMMENT LETTERS

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONS
DIRECTOR

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

March 8, 2001

John Min
Maui Planning Department
250 South High Street
Wailuku, HI 96793

Attn: Ann Cua

Dear Mr. Min:

Subject: Draft environmental assessment (EA) for **Kahului Airport Hotel**

Please include the following in the final EA:

Cultural impacts assessment:

Act 50 was passed by the Legislature in April of 2000. This mandates an assessment of impacts to local cultural practices by the proposed project. In the final EA include such an assessment.

If the subject area is in a developed urban setting, cultural impacts must still be assessed. Many incorrectly assume that the presence of urban infrastructure effectively precludes consideration of current cultural factors. For example, persons are known to gather kauna'oa, 'ilima, 'uhaloa, noni or ki on the grassy slopes and ramps of the H-1 freeway and some state highways on the neighbor islands. Certain landmarks and physical features are used by Hawaiian navigators for sailing, and the lines of sight from landmarks to the coast by fisherman to determine certain fishing spots. Blocking these features by the construction of buildings or tanks may constitute an adverse cultural impact.

For assistance in the preparation refer to our *Guidelines for Assessing Cultural Impacts.* Contact us for a paper copy or go to our homepage at *http://www.state.hi.us/health/oegc/index.html.* You will also find the text of Act 50 linked to this section of our homepage.

Time frame: What are the anticipated start and end dates of this project?

Sustainable building techniques: Please consider applying sustainable building techniques presented in the "Guidelines for Sustainable Building Design in Hawaii." In the final EA include a description of any of the techniques you will implement. For a paper copy contact our office or go to our homepage at *http://www.state.hi.us/health/oegc/guidance/sustainable.htm."*

Paving; landscaping: HRS 103D-407 requires the use of recycled glass in paving materials whenever possible, and HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible. Enclosed are copies of the referenced chapter and sections of the statute.

Affordable housing requirements: Section III-B-4 of the draft EA, *Housing*, and the December 26th, 2000 letter from the Department of Housing and Human Concerns, mention affordable housing requirements. In the final EA give a complete description of how such requirements apply to a commercial property.

If you have any questions, please call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

Enc.

c: Glenn Tadaki
Dan Yasui, A&B Properties

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

IN REPLY REFER TO:

AIR-P
01.0114

March 6, 2001

Mr. Dan Yasui
A&B Properties, Inc.
P.O. Box 3440
Honolulu, Hawaii 96801-3440

Dear Mr. Yasui:

Subject: Kahului Airport Hotel
Draft Environmental Assessment

We have reviewed the Draft Environmental Assessment for the above project and have the following comments:

- Due to the close proximity of the proposed hotel to Kahului Airport, we recommend that the applicant file a Form 7460, "Notice of Proposed Construction or Alteration," with the Federal Aviation Administration for airspace approval. Enclosed is a Form 7460. Please send us a copy.

- Traffic mitigation should be done such that traffic generated from the hotel mesh easily with traffic flow into and from the airport. If the hotel intends to run a shuttle service into the airport, they should contact the Maui District Manager, Mr. Jon Sakamoto, at (808) 872-3808.

Thank you for the opportunity of reviewing the document and providing comments. Please contact Lynn Becones, Planner, at 838-8811 to clarify any questions you may have.

Sincerely,

Jerry M. Matsuda

JERRY M. MATSUDA, P.E.
Airports Administrator

Enclosure: Form 7460

c: OEQC

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

JAMES "KIMO" APANA
Mayor

FLOYD S. MIYAZONO
Director

ELIZABETH D. MENOR
Deputy Director

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

February 28, 2001

MEMO TO: John E. Min, Planning Director

F R O M: FLOYD S. MIYAZONO, Director

SUBJECT: KAHULUI AIRPORT HOTEL
CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003

We have reviewed the subject applications and have no comments to submit at this time.

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

c: Patrick Matsui, Chief-Planning and Development

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

210 Imi Kala St.
Suite 209
Wailuku, HI 96793

USDA

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

DATE: March 5, 2001

Mr. Joh E. Min, Director
Departn ent of Planr ng
County f Maui
250 S. ligh Street
Wailuku Hawaii 96 03

Dear M: Min,

SUBJE(T: Kahului Airport Hotel; TMK: 3-8-079: 016
I.D. CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003

We hav no comment on the subject application.

Thank y ou for the opportunity to comment.

Sincerely,

Neal S. Fujiwara
District Conservationist

BENJAMIN J. CAYETANO
GOVERNOR

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

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD/CWB

03013PKP.01

March 6, 2001

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

Attention: Ms. Ann T. Cua
Staff Planner

Dear Mr. Min:

Subject: **Applications for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permit for Proposed Kahului Airport Hotel**

The Department of Health, Clean Water Branch has reviewed the subject submittal dated January 2001 and has the following comments:

1. If the construction project involves any of the following discharges into Class A or Class II State waters, National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for each type of discharge:

   a. Storm water runoff associated with construction activities, including clearing, grading, and excavation that result in the disturbance of one (1) acre or more, occurring after March 10, 2003.

   b. Hydrotesting water; and

   c. Construction dewatering effluent.

2. If any of the types of wastewater mentioned above discharges to Class AA or Class 1 State waters, then an NPDES individual permit would be required. One NPDES individual permit would cover all types of discharges.

2. Notices of Intent (NOI) for NPDES general permits should be submitted at least 30 days before the discharge is to occur. NPDES individual permit applications should be submitted at least 180 days before the discharge is to occur. NOI forms and NPDES individual permit application forms can be downloaded from our website at *http://www.state.hi.us/doh/eh/cwb/forms/index.html.*

Should you have any questions, please contact Ms. Kris Poentis, Engineering Section of the Clean Water Branch, at 586-4309.

Sincerely,

DENIS R. LAU, P.E., CHIEF
Clean Water Branch

KP:cr

MAR 2 1 2001

ORIGINAL

POLICE DEPARTMENT
COUNTY OF MAUI

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE
ty
YOUR REFERENCE

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

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

March 14, 2001

MEMORANDUM

TO : JOHN E. MIN, PLANNING DIRECTOR

FROM : THOMAS M. PHILLIPS, CHIEF OF POLICE

SUBJECT : I.D. CPA 2001/0001 CIZ 2001/0001 SM1 2001/0003
TMK: 3-8-079:0160
Project Name: Kahului Airport Hotel
Applicant: A & B Properties, Inc.

____ No further recommendation or comment is necessary or desired.

_X_ Refer to enclosed comments and/or recommendations.

Assistant Chief Robert Tam Ho
For: THOMAS M. PHILLIPS
Chief of Police

Enclosures

COPY

TO : THOMAS PHILLIPS, CHIEF OF POLICE

VIA : CHANNELS

FROM : RYAN RODRIGUES, COMMUNITY POLICE OFFICER DISTRICT I

SUBJECT : PROPOSED KAHULUI AIRPORT HOTEL (TMKs 3-8-79: 16 and 17)

Sir, this communication is being submitted in regards to the above mentioned subject matter.

I was assigned to review and comment on the above mentioned development plants. A&B properties have submitted a plan to construct a 140 room airport hotel at the corner of Keolani Place and Dairy Road. I am concerned that traffic in this area will be adversely impacted by this development.

Because the hotel will be located so close to the intersection at Keolani Place and Dairy Road, I am concerned that traffic travelling in and out of the hotel on Keolani Place and Haleakala Highway will create a safety hazard.

Vehicles travelling East on Haleakala Highway will need to have a deceleration lane installed to allow vehicles to turn left safely into the hotels drive way. The same improvements will also need to be done on Keolani Place for vehicles travelling West towards the hotel from the airport. Lastly it is also suggested that deceleration lanes be installed with in the East bound lane of Keolani Place for vehicles turning right into the hotel. These improvements will reduce the risk of potential traffic accidents and improve roadway safety. At present, these concerns I have raised need to be addressed, as they are related to traffic safety specific to this project. However as mentioned in an earlier memo submitted on 12/27/00, their is a bigger concern dealing with the number of large scale developments occurring on Maui and there adverse impacts on our roads. Refer to the attached memo dated 12/27/00.

Submitted for your information and perusal.

RYAN RODRIGUES, E0312
3/13/01 1224 HOURS

Noted.

Sgt. Barry AOKI 1041
03/13/01 @ 1615 hours

I FEEL THAT THESE ARE VALID CONCERNS THAT SHOULD BE ADDRESSED. I AGREE WITH OFC. RODRIGUES.

Capt. Wayne Miller 03/14/01

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

01 JAN 16 P3:03

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

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

January 9, 2001

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Tadaki:

SUBJECT: Proposed Kahului Airport Hotel
TMKs 3-8-79: 16 and 17

Thank you for your letter of December 15, 2000 requesting comments on the above subject.

We have reviewed the proposed summary and have enclosed our recommendations. Thank you for giving us the opportunity to comment on the proposed project.

Very truly yours,

Assistant Chief Robert Tam Ho
for: Thomas M. Phillips
Chief of Police

Enclosure

c: John E. Min, Planning Department

Recommend Denial
AC JW
12/29/00

TO : THOMAS PHILLIPS, CHIEF OF POLICE

VIA : CHANNELS

FROM : RYAN RODRIGUES, COMMUNITY POLICE OFFICERS KAHULUI

SUBJECT : PROPOSED KAHULUI AIRPORT HOTEL
TMKs 3-8-79: 16 and 17

Sir, this communication is being submitted for your information regarding the above mentioned subject matter.

I have reviewed the proposed plan regarding the development of a 140 room hotel to be located at the corner of Keolani Place / Dairy Road in Kahului.

After looking over the initial proposal, and looking at the bigger development picture for this area and the rest of central Maui to include District I (Wailuku/Kahului) and VI (Kihei). I cannot recommend this project or other large scale developments for approval. Traffic in this area is heavy and getting worse. If a hotel is built at this location it would adversly impact traffic. It should also be noted that our infrastructure such as other Maui roadways (State and County), Public Safety (Police, Fire, EMS, Parks Dept. Public Works Dept. and Landuse Division) at present cannot keep up with the growth and development being planned for the near future.

Presently our roadways are not designed to handle any more increases in traffic, for reasons such as poor roadway designs or the lack of funds to improve these roadways or create new ones.

There are several large scale developments being planned in Kihei and Kahului, which include both business and large scale subdivisions. All these other developments will not only adversely impact the already over crowded Maui streets and highways, but they will also have a major impact on this intersection at Keolani and Dairy Road. Keolani Street and Dairy Road is a main Intersection in which everyone that travels to the airport go's through, and adding a 140 room hotel so close to this intersection will not only create more unwanted traffic in this area but create a traffic hazard as well.

I suggest that this development plan be relocated, or denied.

Submitted for your perusal.

CONCUR WITH RECOMMENDATIONS.
Capt. Wayne Phillips
12/29/00

RYAN RODRIGUES, E#0312
12/27/00 | 1059 HOURS

I concur with Officer RODRIGUES' assessment of this proposed project. The proposed area supports a high volume of vehicular traffic and with a hotel added to the area, the nearly non-existent pedestrian traffic will increase highly. The area does not support pedestrian traffic at this time.
Ser [illegible] 1041 12/29/00

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

REPLY TO
ATTENTION OF

March 16, 2000

Civil Works Technical Branch

Ms. Ann T. Cua, Staff Planner
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui 96793

Dear Ms. Cua:

Thank you for the opportunity to review and comment on the Special Management Area Application and Draft Environmental Assessment (DEA) for the Kahului Airport Hotel Project, Kahului, Maui (TMK 3-8-79: 16). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit will not be required for the project.

b. The flood hazard information provided on page 15 of the DEA is correct.

Should you require additional information, please contact Ms. Jessie Dobinchick of my staff at (808) 438-8876.

Sincerely,

James Pennaz

James Pennaz, P.E.
Chief, Civil Works
Technical Branch

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

BRUCE S. ANDERSON, Ph.D. M.P.H
DIRECTOR OF HEALTH

In reply, please refer to:
EMD - CAB

March 16, 2001

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

Dear Mr. Min:

Subject: Comments on the "Kahului Airport Hotel Project"

Thank you for allowing the Department of Health, Clean Air Branch, to review and comment on the applications for the Community Plan Amendment, Change in Zoning, Special Management Area Use Permit, and Draft Environmental Assessment for the proposed Kahului Airport Hotel project. The project proposes the construction of a four-story, 140-room hotel in the vicinity of the Kahului Airport. Due to the location and nature of the project, there is a significant potential for fugitive dust to be generated during the removal of debris and during the grading, trenching, and construction activities that would impact nearby businesses and thoroughfares. It is suggested that a dust control management plan be developed which identifies and addresses activities that have a significant potential for fugitive dust to be generated. Implementation of adequate dust control measures during all phases of the project is warranted.

Construction activities must comply with provisions of Hawaii Administrative Rules §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, including but not limited to:

a. planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing material transfer points and 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 start-up 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; and
e. providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.

If you have any questions regarding fugitive dust, please contact Mr. Calen Miyahara of the Clean Air Branch at 586-4200.

Sincerely,

BRUCE S. ANDERSON, Ph.D., M.P.H.
Director of Health

... Company, ... 210 West Kamehameha Avenue • P O Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8...

MAR 2 8 2001

March 20, 2001

Mr. John Min
Planning Director
County of Maui
Maui Planning Department
250 So. High Street
Wailuku, HI 96793

Dear Mr. Min:

Subject: Kahului Airport Hotel
CPA 2001/0001; CIZ 2001/0001; SM1 2001/0003
(TMK: 3-8-079:016, Kahului)

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

In reviewing the information transmitted and our records, Maui Electric Company (MECO) at this time has no objections to the proposed project.

MECO encourages the project's consultant meet with us as soon as practical so that we may discuss the electrical requirements of this project.

If you have any questions or concerns, please call Fred Oshiro at 872-3202.

Sincerely,

Edward Reinhardt

Edward Reinhardt
Manager, Energy Delivery

ER/fo:lkh

MAR 2 0 2001

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

March 20, 2001

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

Re: I.D.: CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003
TMK: 3-8-79:016
Project Name: Kahului Airport Hotel

Dear Mr. Min,

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

This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of March 1, 2001 were 17.017 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. If rolling annual average withdrawals exceed 20 MGD, the State Commission on Water Resource Management will designate Iao Aquifer. The Department is implementing a plan to bring new sources on-line and to mitigate withdrawals. Two wells in North Waihee were brought on-line in July 1997 and another two adjacent wells were brought on-line during 2000. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. Nevertheless, the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments. Water availability will be reviewed at the time of application for meter or meter reservation. The applicant is subject to the Central Maui Water Transmission and Source Development Joint Venture (CMJV). Water requirements must be coordinated with DWS pursuant to the CMJV agreement.

The applicant estimates water consumption for the proposed development to 29,000 gpd based on the Interim Water Usage Standards of the CMJV agreement. Actual demand for this project could be higher, considering proposed water features including swimming pool, whirlpool, spa, restaurant and other amenities. Using System

standards, total consumption for the proposed hotel development would range approximately between 49,000 to 57,000 gallons per day (gpd). Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. The Preliminary Engineering Report included in the application material states that the proposed system of a new 12-inch waterline and fire hydrants would provide adequate fire protection. The applicant should be made aware that storage improvements may be required to serve the project.

Where possible, brackish and/or reclaimed water should be used for all non-potable uses, including irrigation, outdoor water features, and dust control during construction. Where appropriate, the applicants should consider these measures:

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

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

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zones 3 and 5. Please refer to the "Maui County Planting Plan", and to the attached document. We encourage the applicants to consider using climate-adapted and salt-tolerant native plants in landscaping of hotel grounds. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

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

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

Sincerely,

David Craddick
Director
emb

cc: engineering division

attachments:
1) "The Costly Drip"
2) "Saving Water in the Yard: What & How to Plant in Your Area"
3) Ordinance 2108 - "An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
4) A Checklist of Water Conservation Ideas For Hotels and Motels

C:\WPdocs\Permcomm\Kahului Airport Hotel.wpd

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

March 5, 2001

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

LOG NO: 27058
DOC NO: 0103CD03

Dear Mr. Min,

SUBJECT **Chapter 6E-42 Historic Preservation Review Pertaining to the Applications for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permit for the Proposed Kahului Airport Hotel (Subject I.D.: CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003)**
Wailuku Ahupua`a, Wailuku District, Island of Maui
TMK: 3-8-79:016

Thank you for the opportunity to comment on the applications for Community Plan Amendment (CPA), Change in Zoning (CIZ), and Special Management Area Use Permit (SMA) for the Proposed Kahului Airport Hotel. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject property.

From the submitted CPA, CIZ, and SMA, we understand the proposed undertaking entails the construction of a hotel (consisting of up to 140 rooms) and related improvements on a property in the vicinity of the Kahului Airport. The subject property contains vacant land, a drainage channel, and various tour, retail, U-Haul, park – n – fly, and rent – a – car facilities.

We have previously issued comments pertaining to the proposed undertaking (SHPD DOC NO.: 0012CD31/LOG NO.: 26756). As the subject property has undergone extensive alteration due to modern grading and construction activities we found the proposed undertaking to have "no effect" on significant historic sites.

Please call Cathleen Dagher at 692-8023 if you have any questions.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

CD:jet

Post-it® Fax Note 7671 | Date 3/14/01 | # of pages ▶ 1
To GLEN TADAKI | From C. DAGHER
Co./Dept. | Co.
Phone # | Phone # 692-8023
Fax # 244-8729 | Fax #

MAR 14 2001

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to
File:

March 20, 2001

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Glenn Tadaki	From Dawn Yamada
Co. Planner	Co. Dept. of Health
Dept.	Phone # 586-4700
Fax # 244-8729	Fax # 586-5838

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

Dear Mr. Min:

This is in reference to the Application for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permit for the Proposed Kahului Airport Hotel, TMK: 3-8-079: 016.

1. The contractor shall obtain a Community 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), Hawaii Administrative Rules, Chapter 11-46, Community Noise Control.

2. Construction equipment and on-site vehicles requiring an exhaust of gas or air shall be equipped with mufflers as stated in Section 11-46-6(b)(1)(A).

3. The contractor shall comply with the requirements pertaining to construction activities as specified in the rules and the conditions issued with the permit as stated in Section 11-46-7(d)(4).

If there are any questions, please contact Russell S. Takata, Environmental Health Program Manager, Noise, Radiation and Indoor Air Quality Branch at 586-4700.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

JAMES "KIMO" APANA
Mayor
ALICE L. LEE
Director
PRISCILLA P. MIKELL
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

March 23, 2001

TO: MR. JOHN E. MIN, Director
Department of Planning

FROM: MS. ALICE L.LEE, Director
Department of Housing and Human Concerns

SUBJECT: **I.D.: CPA 2001/0001, CIZ 2001/0001 & SM1 2001/0003**
TMK: 3-8-079:016
PROJECT: KAHULUI AIRPORT HOTEL
APPLICANT: A & B PROPERTIES, INC.
CONSULTANT: MICHAEL MUNEKIYO, MUNEKIYO & HIRAGA, INC.

As indicated in my 12/26/00 letter to Mr. Glenn Tadaki of Munekiyo, Arakawa & Hiraga, Inc., the proposed project is subject to the provisions of Chapter 2.94 (Affordable Housing Policies For Hotel-Related Developments) of the Maui County Code (MCC). Therefore, pursuant to the provisions of Section 2.94.030, MCC, we are hereby requesting that the applicant file with our department the required written affordable housing program proposal.

Thank you for the opportunity to comment.

ETO:df

c: Housing Administrator

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

JAMES "KEMO" APANA
Mayor
ALICE L. LEE
Director
PRISCILLA P. MIDDLI
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

April 12, 2001

COPY

NB DIH LNA JAC PWH VR
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DMS MAY - 4 2001 SKM
BRS JP
MGW BZK
RKS SWR CC SG JY DY RBS

TO: MR. JOHN E. MIN, Director
Department of Planning

FROM: MS. ALICE L. LEE, Director
Department of Housing and Human Concerns

SUBJECT: I.D.: CPA 2001/0001, CIZ 2001/0001 & SMI 2001/0003
TMK: 3-8-079:016
PROJECT: KAHULUI AIRPORT HOTEL
APPLICANT: A & B PROPERTIES, INC.
CONSULTANT: MICHAEL MUNEKIYO, MUNEKIYO & HIRAGA, INC.

As a follow up to my 3/23/01 memo, please be advised that we are working with the applicant in addressing the requirements of Chapter 2.94, Maui County Code. Therefore, we have no objection to the Maui Planning Commission taking action on the subject applications at this time.

Thank you for the opportunity to offer additional comments.

ETO:df

c: Housing Administrator

Post-it® Fax Note 7671	Date 5/4/01	# of pages ▶ 1
To Dan Issac	From Ed Ofalt	
Co./Dept. A+B Properties	Co. Housing Div.	
Phone # 525-8449	Phone # 270-7355	
Fax # 525-8447	Fax # 270-6284	

APR 0 6 2001

C... I... ...UI
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2001 APR -4 PM 3:19

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

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

April 3, 2001

LD-NAV
LOG 1223

Ref.: CPA2001-0001.RCM

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

Dear Mr. Min:

SUBJECT: Application for Community Plan Amendment and Change in Zoning and Conditional Use Permit - I.D.: CPA 2000 0001 CIZ 2001 0001 and SM1x2002 0003 Proposed Kahului Airport Hotel, Maui, Hawaii

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

Attached herewith is a copy of our Commission on Water Resource Management comment.

The department has no other comment to offer at this time.

Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office
Land Division Engineering Branch
Division of Forestry and Wildlife

APR 0 6 2001

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN
CHAIRPERSON

BRUCE S. ANDERSON
ROBERT G. GIRALD
BRIAN C. NISHIDA
DAVID A. NOBRIGA
HERBERT M. RICHARDS, JR

LINNEL T. NISHIOKA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

March 28, 2001

TO: Mr. Dean Uchida, Administrator
Land Division

FROM: Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Kahului Airport Hotel
Application for Community Plan Amendment, Zoning Change, and Special Management Area Use Permit

FILE NO.: CPA2000101.COM

Thank you for the opportunity to review the subject document. Our comments related to water resources were provided earlier, although we note the comment was not reported in the recently received Application for Community Plan Amendment, Zoning Change, and Special Managment Area Use Permit. That comment is attached for your reference. We note that the Department of Water Supply has made some reference to this issue.

If there are any questions, please contact Charley Ice at 587-0251.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

March 28, 2001

TO: Mr. Dean Uchida, Administrator
Land Division

FROM: Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Kahului Airport Hotel
Preconsultation

FILE NO.: None

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.

[X] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[ ] We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] A Well Construction Permit and/or a Pump Installation Permit from the Commission 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 Commission would be required prior to use of this source.

[ ] The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.

[ ] Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.

[ ] If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).

[ ] If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.

[X] OTHER: The aquifer that serves as the water supply source for this project has been overpumped beyond its sustainable yield in the recent past, and the aquifer continues to show signs it has not fully recovered. If the Commission has to designate the aquifer as a water management area, all groundwater withdrawals to the purveyor would be subject to water use permits. The service area would be subject to a declaration of a water shortage or a water emergency. If withdrawals are constrained, uses may be subject to allocation to users by the purveyor.

If there are any questions, please contact Charley Ice at 587-0251.

BENJAMIN J. CAYETANO
GOVERNOR

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

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

APR 0 6 2001

IN REPLY REFER TO:
STP 8.9848

March 30, 2001

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

Dear Mr. Min:

Subject: Kahului Airport Hotel
Community Plan Amendment CPA 2001/0001
Change in Zoning CIZ 2001/ 0001 and
Special Management Area Use Permit SM1 2001/0003
TMK: 3-8-079: 016

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

We offer the following comments:

1. The project Traffic Impact Analysis Report (TIAR) should include mitigation measures to improve the level of service at Hana Highway and Haleakala Highway, particularly the left turn movements from Hana Highway. A building setback along the project's Haleakala Highway frontage should be required.

2. A building setback of at least 12 feet along the projects' Keolani Place frontage should be required to preserve options to accommodate the traffic growth projected in the area.

3. The project TIAR should evaluate the traffic impacts in the event of full hotel occupancy and minimal guest patronage of the adjacent restaurant.

4. We will require the developer to provide a storage lane on Keolani Place for left turns to the project driveway closest to Kahului Airport and a deceleration lane on Keolani Place for right turns to the project driveway closest to Dairy Road. Only right turns will be allowed to and from the driveway closest to Dairy Road. Both driveways must be

designed to State highway standards and include appropriate street lighting. Access restrictions will be imposed along the remainder of the property's highway frontage.

5. The developer should consult our Highways Right-of-Way Branch concerning documentation, appraisals, and fees to relocate/modify highway access and utility easements. New accesses and easements must be appraised for their fair market value by a certified appraiser and consideration paid in accordance with Federal regulations.

6. All plans for work within the State highway right-of-way must be submitted to our Maui District Office for review and approval.

We appreciate the opportunity to provide comments.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

PHONE (808) 594-1888

FAX (808) 594-1865

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

March 14, 2001

John Min
Department of Planning
250 South High Street
Wailuku, HI 96793

Subject: Applications for Community Plan Amendment, Change in Zoning and Special Management Area Use Permit for Proposed Kahului Airport Hotel
TMK 3-8-079: 016

Dear Mr. Min:

Thank you for the opportunity to comment on the above referenced project. The Office of Hawaiian Affairs has the following concerns:

Cultural Resources
The application contains an environmental assessment indicating that the proposed action is not anticipated to have an adverse impact on historical or cultural resources. The Office of Hawaiian Affairs asks that you contact us in the event of an inadvertent discovery of human remains. Pursuant to HRS Chapter 6e, the Kaua'i Burial Council and the Office of Hawaiian Affairs must be contacted if human burials are inadvertently discovered.

Beneficiary Concerns
Some of OHA's beneficiaries on Maui have informed us of their concerns and we submit this feedback for your consideration. Over-development is a concern of our beneficiaries. They are concerned about the project's impacts on wetlands nearby, increased traffic, and infrastructure needs such as water. The draft EA states that the water demand for the project is 29,000 gpd. which will be provided from A&B's allocation. Will A&B's allocation of 4/19 of water produced by the Waihee wells adequately provide for the proposed use?

If you have any questions, please contact Sharla Manley, assistant policy analyst at 594-1944, or e-mail her at sharlam@oha.org.

Sincerely,

Colin C. Kippen, Jr.
Deputy Administrator

CK: sam

cc: Board of Trustees
Randall K. Ogata
Maui CAC

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

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

April 6, 2001

LOG1223

LD-NAV
Ref.: CPA200101.RCM

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

Dear Mr. Min:

SUBJECT: I.D.: CPA 2001/0001 & SM1 2001/0003
TMK: 3-8-079: 016
Project: Kahului Airport Hotel
Applicant: A and B Properties

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

We had submitted the subject informational material to our appropriate divisions for their review and comment.

Attached herewith is a copy of our Division of Forestry & Wildlife and Commission on Water Resource Management comments.

The Department of Land and Natural Resources has no other comment to offer.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office

Division of Forestry & Wildlife

1151 Punchbowl Street, Rm. 325 • Honolulu, HI 96813 • (808) 587-0166 • Fax: (808) 587-0160

March 21, 2001

MEMORANDUM

TO: Nick Vaccaro, Land Agent
Land Division

THRU: Dean Uchida, Administrator
Land Division

FROM: Michael G. Buck, Administrator
Division of Forestry and Wildlife

SUBJECT: **Application for Community Plan Amendment, Change in Zoning and Conditional Permit and Special Management Area Use Permit - ID No: CPA2001/0001, CIZ 2001/0001 and AM1 2001 0003 - Proposed Kahului Airport Hotel, Maui, Hawaii.**

DOFAW has reviewed the subject document and it has addressed our initial concern about drainage and lighting. We would appreciate that the Developer consider using native plants for their landscape plan which will help soften the effects of the lighting issue as well as the hotel building in general. Thank you for the opportunity to comment.

C: Maui DOFAW Branch
Vickie Caraway, State Botanist

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

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

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

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

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

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

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

April 16, 2001

MEMO TO: JOHN E. MIN, DIRECTOR OF PLANNING

FROM: for DAVID GOODE, DIRECTOR OF PUBLIC WORKS AND WASTE MANAGEMENT Milton Arakawa

SUBJECT: COMMUNITY PLAN AMENDMENT/CHANGE IN ZONING/SPECIAL MANAGEMENT AREA PERMIT APPLICATIONS
KAHULUI AIRPORT HOTEL
TMK: (2) 3-8-079:016
CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003

We reviewed the subject application and have the following comments.

1. Construction waste is to go to the C & D landfill, if not recycled.

2. Although wastewater system capacity is currently available as of February 28, 2001, the developer should be informed that wastewater system capacity cannot be ensured at the time of building permit final approval or if the project completion is delayed.

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

4. The developer shall pay assessment fees for treatment plant expansion costs in accordance with the ordinance setting forth such fees.

5. The developer is required to fund any necessary off-site improvements to the collection system and wastewater pump stations.

6. Sewage calculations are required to substantiate the size/slope of the proposed sewer lines.

7. Plans should show the installation of a service manhole for this development and advanced risers for other lots serviced by the proposed sewer installation.

8. Indicate on the plans the ownership of each easement (in favor of which party). Note: The County will not accept sewer easements that traverse private property.

9. A hold harmless agreement should be executed. A signed agreement is required before the Wastewater Reclamation Division will give its recommendations for final subdivision approval.

10. A road widening lot shall be provided for the adjoining half of Haleakala Highway to provide for a future 70-foot wide right-of-way and improved to County standards to include, but not limited to, pavement widening, construction of curb, gutter, and sidewalk, street lights, and relocation of utilities underground. Said lot shall be dedicated to the County upon completion of the improvements.

11. All structures, such as walls, trees, etc., shall be removed or relocated from the road widening strip. The rear boundaries of the road widening strip shall be clearly marked to determine if said structures have been properly removed and relocated.

12. A 30-foot radius shall be provided at all intersections of the proposed driveway and Haleakala Highway.

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

14. The traffic impact analysis report shall be revised and submitted for review and approval by Department of Public Works and Waste Management to assess traffic on Haleakala Highway, including Costco and other business establishments. The two proposed full access driveways on Haleakala Highway shall be analyzed for safe access. Driveways might be restricted.

15. A site plan and a sight distance report to determine required sight distance and available sight distance at existing and proposed street intersections shall be provided for our review and approval.

16. Existing left-turn lanes and proposed separate left-turn lanes for proposed driveways on Haleakala Highway shall be analyzed and a report submitted for our review and approval. Based on the preliminary traffic report, the existing left-turn storage lane on Haleakala Highway at Dairy Road shall be extended to handle more traffic.

17. Roadway frontage improvements from this project site to the intersection of Haleakala Highway/Keolani Drive/Dairy Road shall be constructed as part of this development. These improvements will provide safe pedestrian access from the hotel to other businesses across the street.

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

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

20. The provisions of the subdivision and grading ordinances shall be complied with.

MA:da/mt

S:\LUCA\CZM\kahuluihotel.wpd

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

In reply refer to: MSR

MAY - 7 2001

Ann T. Cua,
Staff Planner
County of Maui
Department of Planning
250 South High Street
Wailuku, HI 96793

Re: Applications for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permit for the Kahului Airport Hotel Project, Island of Maui, Hawai`i

Dear Ms. Cua:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter dated March 20, 2001, requesting recommendations and comments on applications for a Community Plan Amendment, Change in Zoning, and Special Management Area Use Permit for the Kahului Airport Hotel Project, Maui, Hawai`i. The project applications and draft Environmental Assessment (EA) were prepared by the project consultants, Munekiyo & Hiraga, Inc. (consultant), on behalf of the project applicant, A & B Properties, Inc. (applicant). The Service offers the following comments for your consideration.

The proposed project includes construction of a four-story hotel containing 140 rooms and ancillary improvements such as recreational facilities, landscaped areas, parking areas, and access to the proposed hotel. The purpose of the project is development of a hotel facility that will fulfill the needs of business and leisure travelers to the Kahului area of Maui. The subject property encompasses approximately 3.35 acres and is currently occupied by scattered trees and scrub vegetation, as well as a concrete-lined drainage channel along its eastern boundary. In addition to parking areas, several structures housing short-term tour and retail operations, as well as U-Haul, Park-n-Fly, and Rent-a-Car services occupy the remainder of the site. The proposed project site is enroute to the Kahului Airport and is bordered by Keolani Place to the north, the County Department of Water Supply base yard to the east, Haleakala Highway to the south, and a building with a retail store and car rental agency to the west.

The draft EA does not discuss effects of the proposed project on the Federal and State endangered Blackburn's sphinx moth (BSM)(*Manduca blackburni*). Based upon information provided in your letter, the draft EA, information contained in our files, including maps prepared by the Hawai`i Heritage Program and the Service's National Wetlands Inventory Program, and

our knowledge of recent project site visits, BSM is known to occur within the project area. During a recent site visit to the proposed project area by the consultant and Hawai`i State Division of Forestry and Wildlife (DoFaW) Biologist Dr. Fern Duvall, larval feeding was documented on some of the at least one-hundered introduced tree tobacco (*Nicotiana glauca*) plants currently occupying the project area.

BSM require the introduced tree tobacco and other host plants during their larval stage when the caterpillars can be found feeding on the stems, leaves, and new shoots of the plants. Anticipated impacts of the proposed project would be both the potential direct impacts to BSM eggs and caterpillars and the permanent displacement of BSM females in the area due to the project-related loss of the host plants. This area of Maui is near a proposed BSM critical habitat unit and historical observation records of the moth in this area are persistent and frequent. The Service believes this project, as proposed, will result in "take" of this species, due to the permanent destruction of BSM host plants on the project site.

Section 9 of the Endangered Species Act (ESA) prohibits "take" of federally listed species and defines "take" as actions or attempted actions to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect such species. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. "Harass" is further defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns including, but not limited to, breeding, feeding or sheltering.

If measures to avoid take cannot be incorporated into the proposed project and included in the final EA, the applicant should apply for a Federal incidental take permit through section 10(a)(1)(B) of the Federal ESA (see enclosed fact sheet) as well as a State incidental take license. Violations of the "take" prohibition may result in civil or criminal penalties.

Recommendations for Minimizing and Mitigating Impacts to BSM

BSM is Hawai`i's largest native insect and the only federally listed endangered insect in the State. My office is currently in the process of formulating a comprehensive plan to guide future development projects on the island of Maui while simultaneously minimizing and mitigating for BSM habitat impacts. However, in the interim, the Service and DoFaW have recently discussed how this applicant might minimize and mitigate for potential take of BSM resulting from this proposed project. Based on this coordination with DoFaW, the Service recommends the following guidelines be incorporated into the project's final EA:

(1) The applicant should remove the tree tobacco plants only during the months of June through September, when *M. blackburni* larvae and eggs are least likely to be present.

(2) If the project's time line requires tree tobacco removal during October through May, then the applicant should contact Dr. Duvall and Fish and Wildlife Service Biologist Mike Richardson of my staff and request that they examine all plants for signs of recent BSM larval feeding. The ground in a five-foot radius around all plants exhibiting recent larval feeding should not be disturbed for a 30-day period to allow any pupating moths to emerge and disperse.

(3) As compensatory mitigation for the loss of BSM habitat and host plants that will result from this project, the applicant should fund the propagation and out-planting of the native BSM host plant `aiea (*Nothocestrum latifolium*) within the nearby Kanaha Pond State Sanctuary. An exact number of *N. latifolium* should be out-planted to correspond with a 3:1 ratio of tree tobacco removed from the project grounds. Because the establishment of fully functional habitats can often be unavoidably delayed due to slow maturation of out-planted plants and re-vegetation failures we recommend a host plant replacement ratio of 3:1 for impacts occurring concurrent with or prior to successful mitigation initiation. The native *N. latifolium* is relatively drought-tolerant and naturally suited to this area of Maui. Either Dr. Duvall or Art Medeiros, with the U.S. Geological Survey, Biological Resources Division (USGS-BRD) may be consulted regarding the acquisition and out-planting of healthy *N. latifolium* seedlings. My staff in Honolulu is available to assist the applicant with development of an onsite public educational point display to communicate the applicant's goodwill and desire to protect this endangered, native Hawaiian insect.

Summary

Although the draft EA lacks discussion of project-related impacts to BSM, the Service believes the document adequately describes other fish and wildlife resources and habitats existing at the proposed project site and adequately evaluates the potential impacts to those resources. We recommend the final EA address potential impacts to BSM and incorporate the measures to minimize and mitigate for potential take of this species resulting from the proposed project. The Service looks forward to working with the consultant and applicant to evaluate the range of potential impacts to BSM and to develop a mitigation plan designed to prevent harm to this spectacular native Hawaiian insect species.

The Service appreciates the opportunity to review the draft EA, and we look forward to receiving a copy of the final EA when it is ready for review. If you have any questions regarding these comments, please contact Mr. Richardson by telephone at (808) 541-3441 or facsimile transmission at (808) 541-3470.

Sincerely,

Donald Palanker

FOR Paul Henson
Field Supervisor
Ecological Services

cc: A & B Properties, Inc.
DOFAW, Honolulu
DOFAW, Maui
USGS-BRD, Maui

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

TEL. (808) 270-7745
FAX (808) 270-7975

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT
ENGINEERING DIVISION
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

July 13, 2001

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

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

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

ANDREW M. HIROSE
Solid Waste Division

BRIAN HASHIRO, P.E.
Highways Division

MEMO TO: JOHN E. MIN, DIRECTOR OF PLANNING

F R O M: for DAVID GOODE, DIRECTOR OF PUBLIC WORKS & WASTE MANAGEMENT

SUBJECT: KAHULUI AIRPORT HOTEL
CPA/CIZ/SMA PERMIT APPLICATIONS

Reference is made to our previous comment letter dated April 16, 2001, specifically comments '10', '12', '14', '15', '16', & '17'. The developers traffic consultant, Austin Tsutsumi & Associates, Inc., wrote a letter to A&B addressing the referenced comments (copy of letters attached).

We reviewed the responses and request revising our comment letter as follows:

Comment '10': Analysis provided, adequately justifies the proposed four-lane section within a 63' right-of-way. Therefore, revise right-of-way width from "70-foot" to "63-foot";

Comment '12': It was agreed that standard commercial driveway layouts to accommodate at least service trucks and small shuttle bus turning templates would be sufficient. Therefore, amend comment to read: "12. The two (2) proposed driveways onto Haleakala Highway from this development shall have minimum turning radii to allow movement of service trucks and buses.";

Comment '14': Amend to read: "14. The two (2) proposed driveways onto Haleakala Highway will be approved and designated as 'full vehicular access' permitted. Underground traffic signal conduits and appurtenances (i.e. pull boxes, etc.) shall be installed at the Kahului Airport/Costco driveway intersection as part of the initial construction of this driveway. The applicant shall submit a traffic signal warrant analysis to the County, DPWWM, Engineering Division upon receiving a written request, and construct a new traffic signal system when warranted at no cost to the County of Maui";

Comment '15': Submitting the sight distance report with the construction plans are acceptable. Appropriate design considerations on landscaping, signs, and structures can then be made to insure clear "sight triangles." Provisions for these requirements can be reflected in the

construction plans.

Comment '16': The applicant submitted an updated traffic analysis report addressing the separate left-turn lanes on Haleakala Highway. The analysis on left turn storage lane lengths required are satisfactory. Provisions for these requirements will be reflected in the construction plans. Therefore, comment no. 16 can be deleted in its entirety.

Comment '17': The applicant will provide for roadway frontage improvements to the Haleakala Highway/Keolani Drive/Dairy Road intersection to include pedestrian access. The applicant will reflect these improvements on the construction plans.

If there are any questions, please contact Lloyd Lee of our Engineering Division at Ext. 7745.

LPL/CSS:c(ED01-752)
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Attachments

cc: Glenn Tadaki (M&H; fax 244-8729) w/out attachments
Keith Niiya (ATA; fax 526-1267) w/out attachments

STP 8.9963

July 17, 2001

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

Dear Mr. Min:

Subject: Kahului Airport Hotel
Community Plan Amendment CPA 2001/0001
Change in Zoning CIZ 2001/0001 and
Special Management Area Use Permit SM1 2001/0003
TMK: 3-8-079: 016

Pursuant to our letter of March 30, 2001, STP 8.9848, regarding the subject project, we have since met with the applicant's traffic consultant to resolve our concerns. The following remaining issues must be addressed:

1. The developer will provide a left-turn storage lane on Keolani Place for westbound vehicles entering the proposed hotel at the easternmost driveway (driveway closest to the airport). The western most driveway will be restricted to right turns into and out of the proposed project.

   The developer will provide curb cuts, instead of a drop driveway, which would expedite the vehicles turning right into the property.

2. The developer will work with our Highway Right-of-Way Branch concerning the location of the two driveways.

3. Construction plans for work within our right-of-way must be submitted for review and approval

We appreciate the opportunity to provide comments.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

DRAFT ENVIRONMENTAL ASSESSMENT RESPONSE LETTERS

MUNEKIYO HIRAGA, INC.

March 20, 2001

Jerry Matsuda, Administrator
Airports Division
Department of Transportation
State of Hawaii
400 Rogers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

SUBJECT: Kahului Airport Hotel
TMK 3-8-79:16 and 17

Dear Mr. Matsuda:

Thank you for your March 6, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note the following.

1. A "Notice of Proposed Construction or Alteration" (Form 7460) will be submitted to the Federal Aviation Administration and a copy of the form will be provided to the Airports Division.

2. Prior to any airport/hotel shuttle service being implemented, appropriate coordination with the Airports Division's Maui District Manager will be undertaken.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Ann Cua, Department of Planning
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.
a&b/hotelctz/doltr.001

mahinc@aloha.net
305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

MUNEKIYO & HIRAGA, INC.

March 22, 2001

Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17

Dear Ms. Salmonson:

Thank you for your March 8, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note the following.

1. An assessment of cultural impacts will be included in the subject's Final Environmental Assessment (EA).

2. The current estimated start and completion dates for the project are mid-2002 and mid-2003, respectively.

3. The "Guidelines for Sustainable Building Design in Hawaii" will be examined and appropriate design techniques which may be implemented will be noted in the subject's Final EA.

4. Recycled glass (in paving materials) and native Hawaiian plants will be utilized to the extent possible.

5. Chapter 2.94 of the Maui County Code pertaining to "Affordable Housing Policies for Hotel-Related Developments" requires that developers of hotels, motels, and apartment-hotels provide affordable housing units in conjunction with their projects. The affordable housing requirements for this project will be coordinated with the County of Maui, Department of Housing and Human Concerns.

mahinc@aloha.net

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Ann Cua, Planning Department
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.
a&b/hololea/oeqcltr.002

MUNEKIYO HIRAGA, INC.

April 3, 2001

Bruce Anderson, Director
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17

Dear Mr. Anderson:

Thank you for your March 16, 2001 letter providing comments from the department's Clean Air Branch on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note that construction activities will comply with the provisions of Section 11-60.1-33, Hawaii Administrative Rules pertaining to Fugitive Dust.

An erosion control plan and Best Management Practices (BMPs) to minimize dust and soil erosion, will be included in the grading permit application submittal for the project as necessary, in accordance with Chapter 20.08 of the Maui County Code regarding Soil Erosion and Sedimentation.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:to
cc: Ann Cua, Planning Department
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.
a&b/hotelcz/dohlr.001

mahinc@aloha.net
305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

MUNEKIYO HIRAGA, INC.

April 6, 2001

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

SUBJECT: Kahului Airport Hotel
TMK 3-8-79:16 and 17

Dear Mr. Craddick:

Thank you for your March 20, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note that the preliminary water use estimate for the project was based on the hotel's room count. Detailed domestic, fire protection, and irrigation calculations will be submitted to the department for review in connection with the project's building permit application process. Water use estimates for the swimming pool, spa, and restaurant, as well as other ancillary uses will be included in this submittal as well.

In addition, the water conservation measures referenced in your letter will be considered and appropriate measures utilized.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Ann Cua, Department of Planning
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara and Mercer Vicens, A&B Properties, Inc.

a&b/hotelctz/dwsltr.001

mahinc@aloha.net

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

MUNEKIYO HIRAGA, INC.

April 19, 2001

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

SUBJECT: Kahului Airport Hotel
TMK 3-8-79:16 and 17

Dear Mr. Kippen:

Thank you for your March 14, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note the following.

In the event human remains are inadvertently discovered during site work, the Office of Hawaiian Affairs and the Maui/Lana'i Islands Burial Council will be notified. As indicated in the subject's Draft Environmental Assessment (EA), there are no wetland areas within the limits of the project site. Accordingly, no adverse impacts to this component of the physical environment are anticipated nor are any significant impacts to wetland areas in the nearby Kanaha Pond Wildlife Sanctuary expected. Project-related infrastructure requirements (roads, water, sewer) will be coordinated with the appropriate governmental agencies and any necessary improvements will be constructed in accordance with applicable design standards. It should also be noted that A&B's 4/19 allocation from the Central Maui Source Joint Venture's developed capacity will adequately address the domestic water needs for the proposed project.

environmen

305 High Street, Suite 104 · Wailuku, Hawaii 96793 ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Ann Cua, Department of Planning
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.

a&b/hotelciz/ohaltr.001

A&B PROPERTIES, INC.

April 23, 2001

Officer Ryan Rodrigues
Community Police Officer, District I
Maui Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

Dear Officer Rodrigues:

Subject: Proposed Kahului Airport Hotel
TMK: (2) 3-8-79:16 & 17
CPA 2001/0001, CIZ 2001/0001, SM1 2001/0003

This is a follow up to our meeting of March 29, 2001, regarding the subject Kahului Airport Hotel project. We appreciated the opportunity to meet with you and Officer J. Gapero to discuss your concerns and to clarify the Department's March 14, 2001 letter regarding the subject project.

Based on our meeting, we understand that the Department has an island-wide concern regarding the impact of any new development upon existing traffic conditions and public safety; that the Department seeks to address traffic and safety issues from a preventive perspective in order to mitigate potential adverse impacts; and that while the Department has concerns regarding traffic, it is not opposed to our hotel project.

As we discussed, the plan approval process will require the review and approval of the State Department of Transportation, the Maui County Department of Public Works and Waste Management, and other applicable governmental agencies to determine and implement appropriate traffic mitigation measures for this project.

We thank you for your time and effort in reviewing our project. We encourage your response should any matter described herein require your further clarification or comment.

Should you wish to discuss this matter further please contact me at 877-5525.

Sincerely,

A&B PROPERTIES, INC.

H. Kawahara, Manager
Engineering & Construction

HK

cc: D. Yasui
G. Tadaki

33 Lono Ave. • Suite 400 • Kahului, Hawaii 96732-1608 • Phone (808) 877-5523 • Fax (808) 871-7497
Mailing Address: P.O. Box 156 • Kahului, Hawaii 96733-6656

MUNEKIYO HIRAGA, INC.

May 30, 2001

Paul Henson, Field Supervisor
Pacific Islands Ecoregion
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

SUBJECT: Kahului Airport Hotel
TMK 3-8-79: 16 and 17

Dear Mr. Henson:

Thank you for your May 7, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, A&B Properties, Inc., we would like to note the following.

As referenced in your letter, a site inspection of the subject property was recently conducted. For purposes of clarification, Dr. Fern Duvall of the State Division of Forestry and Wildlife and myself undertook the inspection on April 6, 2001. Approximately 12 tree tobacco plants, ranging from keiki to mature plants were noted on the site. These plants were located in the vicinity of the Maui Park-n-Fly facility, on the eastern portion of the 3.35-acre project site. Additionally, other tree tobacco plants were observed outside of the subject property approximately 1,000 feet to the east, along Haleakala Highway.

As recommended in your letter, the Final Environmental Assessment will include discussion concerning impact to the Blackburn's sphinx moth (BSM). Further, in order to avoid a potential "take" of the BSM, the applicant has agree to comply with the three (3) recommended mitigation measures outlined in your letter of May 7, 2001. Implementation of these mitigation measures will be coordinated with the USFWS and the State Division of Forestry and Wildlife.

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhmconline.com

Thank you for your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:cc
Enclosure
cc: Ann Cua, Department of Planning
Dan Yasui, A&B Properties, Inc.
Hideo Kawahara & Mercer Vicens, A&B Properties, Inc.

a&b\hotels\henson.ltr

MUNEKIYO HIRAGA, INC.

June 13, 2001

Brian Minaai, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

SUBJECT: Kahului Airport Hotel (STP8.9848)

Dear Mr. Minaai:

As a follow-up to your March 30, 2001 letter regarding the subject project, a meeting was held with Messrs. Paul Hamamoto, Ron Tsuzuki, Doug Meller and Felipe Cabana on April 6, 2001 to discuss the comments provided. In addition to members of the Department of Transportation (DOT) staff, meeting participants included representatives of A&B Properties, Inc. and their consultant team.

The project traffic engineer has reviewed the DOT's comments in the context of our meeting discussion and has prepared a detailed response for your review. A copy of the traffic engineer's letter response is attached hereto as Exhibit "A".

Since the DOT's response is an important part of the County Planning Department's processing of the permitting applications for the project, may we also request your assistance in providing a follow-up letter to the Planning Department indicating that the comments provided in your March 30th letter have been appropriately addressed by the applicant.

If there are any questions or if additional information is needed, please do not hesitate to call.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.
Project Manager

MTM:to
Attachment
cc: Dan Yasui, A&B Properties, Inc.
Hideo Kawahara, A&B Properties, Inc.
Ron Tsuzuki, Department of Transportation

a&b/hotelctz/doutr.002

AUSTIN, TSUJI, SUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R AUSTIN IN 1934

TED S KAWAHIGASHI PE FACEC
KENNETH K KUROKAWA PE
DONOHUE M FUJII, PE.
STANLEY T WATANABE
TERRANCE S ARASHIRO, PE
MERNA S KIBE

99-071
June 8, 2001
Hand Delivered

Mr. Daniel Yasui
Project Manager
A&B Properties, Inc.
822 Bishop Street
Honolulu, HI 96801

Dear Mr. Yasui:

Subject: **Kahului Airport Hotel**
Community Plan Amendment CPA 2001/001
Change in Zoning CIZ 2001/001 and
Special Management Area Use Permit SM1 2001/0003

We have the following responses to the State Department of Transportation (SDOT) comments STP 8.9848 dated March 30, 2001.

Comment No. 1

At the western intersection of Hana Highway/Haleakala Highway, the left turn from Hana Highway onto Haleakala Highway is operating at LOS F. The traffic on Hana Highway, Kahului bound, is platooned due to the upstream traffic signal at the Hana Highway/Dairy Road intersection. When the Kahului bound traffic on Hana Highway is stopped for 60 seconds at the 120-second cycle length signalized intersection of Hana Highway/Dairy Road, gaps are created which appear to be able to accommodate the left-turn demand at the downstream Hana Highway/Haleakala Highway intersection.

If a traffic signal system were constructed at the Hana Highway/Haleakala Highway intersection it would need to be synchronized with the traffic signal system at the Hana Highway/Dairy Road intersection to provide progression along Hana Highway. With the traffic signal system the left-turn traffic on Hana Highway heading to the airport on Haleakala Highway will have to wait until the Kahului bound traffic on Hana Highway is stopped at the Hana Highway/Dairy Road intersection, approximately 60 seconds, LOS F. In addition, should a traffic signal system be installed, the left-turning vehicles from Hana Highway onto Haleakala Highway would have to wait for the green arrow in order to proceed even though there are gaps in the Kahului Bound traffic on Hana Highway. Therefore, there are no recommended mitigative measures for the Hana Highway/Haleakala Highway intersection.

Since Haleakala Highway fronting the proposed hotel belongs to the County of Maui, a building setback will be addressed with the County of Maui.

AUSTIN TSUTSUMI & ASSOC 3, INC
CIVIL ENGINEERS • SURVE

June 8, 2001

Mr. Daniel Yasui
Property Manager
A&B Properties, Inc.

Comment No. 2

Review of the State's right-of-way map indicates that Keolani Place has a minimum 90-foot wide right-of-way fronting the proposed project. An additional 12-foot setback requirement would seem excessive since it would be feasible to construct a 6-lane wide roadway within the existing 90-foot wide right-of-way. In addition, when Keolani Place was constructed, additional right-of-way was acquired from the property to create the 90-foot wide right-of-way.

Comment No. 3

The project TIAR was developed based upon standard practices by utilizing a 70% occupancy. In addition, as stated in the report, the hotel occupancy in Kahului from the 1998 State Data Book was at 68%. Although this would be a newer hotel than the existing hotels in the Kahului area, we would expect the occupancy to remain around 70% since the Maui Palms Hotel may also be reconstructed in the near future. In addition, an airport shuttle service will be available for hotel patrons and would reduce the number of vehicles accessing Keolani Place.

The hotel is proposed to have a small restaurant area in the lobby area that would most likely not be able to accommodate the entire hotel's guests. Therefore, it was felt that the guests would patronize the future restaurant.

Comment No. 4

A left-turn storage lane will be provided on Keolani Place for westbound vehicles entering the proposed hotel at the easternmost driveway (driveway closest to the airport). The western most driveway will be restricted to right turns into and out of the proposed project.

The developer will provide curb cuts, instead of a drop driveway, which would expedite the vehicles turning right into the property. Discussion with your staff has indicated that this is a satisfactory alternative to the right-turn deceleration lane on Keolani Place.

Comment No. 5

There are 5 existing driveways along Keolani Place. The proposed hotel would reduce that number of driveways to two. In addition, the frontage along Keolani Place is not access restrictive. The developer will work with Highway Rights-of-Way Branch concerning the location of the driveways.

Very truly yours,

AUSTIN TSUTSUMI & ASSOCIATES, INC.

By
KEITH K. NIIYA, P.E.
Senior Transportation/Traffic Engineer

KKN:lf

F:\home\everyone\1999\99-071\Yasui Ltr re CP Amend.doc

MUNEKIYO HIRAGA, INC.

June 18, 2001

David Goode, Director
County of Maui
Department of Public Works
and Waste Management
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Community Plan Amendment/Change in Zoning/Special Management Area Permit Applications for Kahului Airport Hotel (CPA 2001/0001; CIZ 2001/0001; SM1 2001/0003)

Dear Mr. Goode:

We appreciated the opportunity to meet with you and Ms. Charlene Shibuya to discuss the Department of Public Works and Waste Management's (DPWWM) written comments of April 16, 2001. As a follow-up to our meeting, please refer to the attached letter from the project's traffic consultant which addresses the pertinent comments of the department's April 16th letter. Based on our discussions, we understand that the DPWWM will be able to provide revised comments to the Department of Planning which take into account our traffic engineer's response to these comments.

Based on the foregoing, may we request that the DPWWM provide a follow-up letter to the Department of Planning to revise and/or delete the noted conditions, as appropriate.

Thank you again for taking the time to discuss and clarify the DPWWM's comments.

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhaconline.com

If there are any questions or if additional information is needed, please do not hesitate to call.

Very truly yours,

Michael T. Munekiyo, A.I.C.P.
Project Manager

MTM:to
Attachment
cc: Dan Yasui, A&B Properties, Inc.
Hideo Kawahara, A&B Properties, Inc.
Ted Kawahigashi, Austin, Tsutsumi & Associates, Inc.
Ann Cua, Department of Planning

a&b/hotelcz/dpwwmtr.002

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TED S. KAWANIGASHI P.E. FACEC
KENNETH K. KUROKAWA, P.E.
DONOHUE M. FUJII P.E.
STANLEY T WATANABE
TERRANCE S. ARASHIRO P.E.
MERNA S. KISE

99-071
June 15, 2001
Fax (525-8447) and Mail

Mr. Daniel Yasui
Project Manager
A&B Properties, Inc.
822 Bishop Street
Honolulu, HI 96801

Dear Mr. Yasui:

Subject: **Kahului Airport Hotel**
Community Plan Amendment CPA 2001/001
Change in Zoning CIZ 2001/001 and
Special Management Area Use Permit SM1 2001/0003

We have the following responses to the County of Maui, Department of Public Works and Waste Management's comments dated April 16, 2001

Comment No. 10

We have reviewed the operations on Haleakala Highway to see if the existing four-lane wide roadway within the proposed 63-foot-wide right-of-way would be sufficient to accommodate the future traffic generated by the two parcels located to the east of the planned hotel site owned by A&B Properties. Although there are no specific plans for the development of these parcels at this time, the following uses have been assumed for traffic analysis purposes:

1. Airport Commercial: TMK 3-8-79:20, 4.024 Acres, Zoned M2. Assumed to be developed as a 45,000 square foot warehouse site.

2. Central Power Plant: TMK 3-8-79 por. 13, 6.3 Acres, Zoned M2. Assumed to be developed as a 60,000 square foot commercial/light industrial site.

The project-generated traffic was estimated by applying trip generation rates for the warehouse and shopping center land uses contained in the ITE Trip Generation Manual, 6th Edition. The shopping center land use, which generates more traffic than the light industrial land use, was used to estimate the future traffic generated when the Central Power Plant is developed. Table 1 shows the trip rates, and Table 2 shows the trips generated by the proposed parcels. Table 1 also shows the trips rates for the light industrial land use.

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS

Mr. Daniel Yasui
Property Manager
A&B Properties, Inc.

June 15, 2001

TABLE 1

TRIP RATES

Traffic Site	Average Weekday	A.M. Peak Hour		P.M. Peak Hour	
	Daily Trip Rate	Trip Rate	% Enter	Trip Rate	% Enter
Warehousing, ITE Code 150 (per 1,000 SF GFA)	9.51	0.95	82	0.83	24
Shopping Center, ITE Code 820 (per 1,000 SF GLA)	42.92	1.97	61	7.47	48
General Light Industrial, ITE Code 110 (per 1,000 SF GLA)	6.97	0.92	88	0.98	12

TABLE 2

PEAK HOUR TRIPS

Traffic Site	Average Weekday	A.M. Peak Hour		P.M. Peak Hour	
	(veh)	ENTER	EXIT	ENTER	EXIT
Airport Commercial (40,000 SF GFA)	497	35	8	9	28
Central Power Plant (60,000 SF GFA)	4,908	72	46	215	233
Total	5,405	107	54	224	261

It is assumed that the proposed Kahului Airport Access Road, between Kahului Airport and the Puunene Avenue/Kuihelani Highway/Dairy Road intersection, when constructed, would sever the existing Haleakala Highway just west of the Kahului Airport. Therefore, access for the two proposed parcels would be via the Haleakala Highway/Dairy Road/Keolani Place intersection. The intersection of Haleakala Highway/Dairy Road/Keolani Place will operate at LOS B during the AM peak hour of traffic and LOS D during the PM peak hour of traffic with the additional traffic generated by the Airport Commercial and Central Power Plant parcels.

The Haleakala Highway/Costco Driveway/Airport Hotel Driveway will operate at LOS A during the AM peak hour of traffic and at LOS F during the PM peak hour of traffic due to the high volume of left turns, 450 vehicles, exiting Costco. Review of the traffic signal Peak Hour Warrant indicates that the intersection would warrant the installation of a traffic signal system. With a traffic signal system the intersection would operate at LOS B during the PM peak hour of

June 15, 2001

Mr. Daniel Yasui
Property Manager
A&B Properties, Inc.

traffic. An additional lane at this intersection will not improve the LOS of the intersection simply because of the high existing traffic from Costco. A traffic signal would still be warranted at this intersection with or without the widening.

Therefore, the existing four-lane wide roadway within the proposed 63-foot wide right-of-way should be able to accommodate the traffic generated by the Airport Hotel and the future Airport Commercial and Central Power Plant parcels. A traffic signal system should be installed at the Costco driveway when traffic volumes from the future development of the A&B parcels warrant it. Since specific information on the two developments is unknown at this time, it is recommended that a traffic study for the Airport Commercial and Central Power Plant parcels be conducted when specific development plans materialize to address whether a traffic signal system is warranted at the Haleakala Highway/Costco Driveway/Airport Hotel Driveway intersection.

Comment No. 12

It was agreed that this comment would be deleted.

Comment No. 14

As requested by the County of Maui, a traffic count of Costco's driveway on Haleakala Highway was conducted on May 29, 2001 during the PM peak hour of traffic. Traffic counts during the AM peak period were not conducted at the Costco driveway since Costco opens after the 7:15 to 8:15 AM peak hour of traffic. The Haleakala Highway/Costco Driveway is operating at LOS A during the PM peak hour of traffic. Figure 1 shows the existing turning movement volumes at the Costco driveway.

With the Airport Hotel's Driveway constructed directly across the existing Costco driveway, the Haleakala Highway/Costco Driveway/Airport Hotel Driveway intersection will continue to operate at LOS A during the PM peak hour of traffic. Figure 2 shows the Year 2002 with the traffic generated by the proposed hotel. The traffic study will be updated to incorporate the Costco traffic.

Comment No. 15

A site plan and sight distance report will be provided in connection with the construction plans review phase of the proposed airport hotel.

Comment No. 16

The existing left-turn lane for westbound Haleakala Highway to southbound Dairy Road is approximately 260 feet long. The left-turn lane should be extended to provide 300 feet of storage to accommodate the existing traffic and the traffic generated by the proposed hotel. A 50-foot long left-turn storage lane for vehicles traveling eastbound on Haleakala Highway making a left turn into the westernmost driveway to the proposed hotel on Haleakala Highway can also be provided even with the extension of the left-turn lane to 300 feet.

AUSTIN, TSUTSUMI & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS

Mr. Daniel Yasui
Property Manager
A&B Properties, Inc.

June 15, 2001

Comment No. 17

Roadway frontage improvements to the Haleakala Highway/Keolani Drive/Dairy Road intersection will be provided. Pedestrian access will be accommodated at this intersection.

Very truly yours,

AUSTIN TSUTSUMI & ASSOCIATES, INC.

By
KEITH K. NIIYA, P.E.
Senior Transportation/Traffic Engineer

KKN:jl

Attachments: Figure 1
Figure 2

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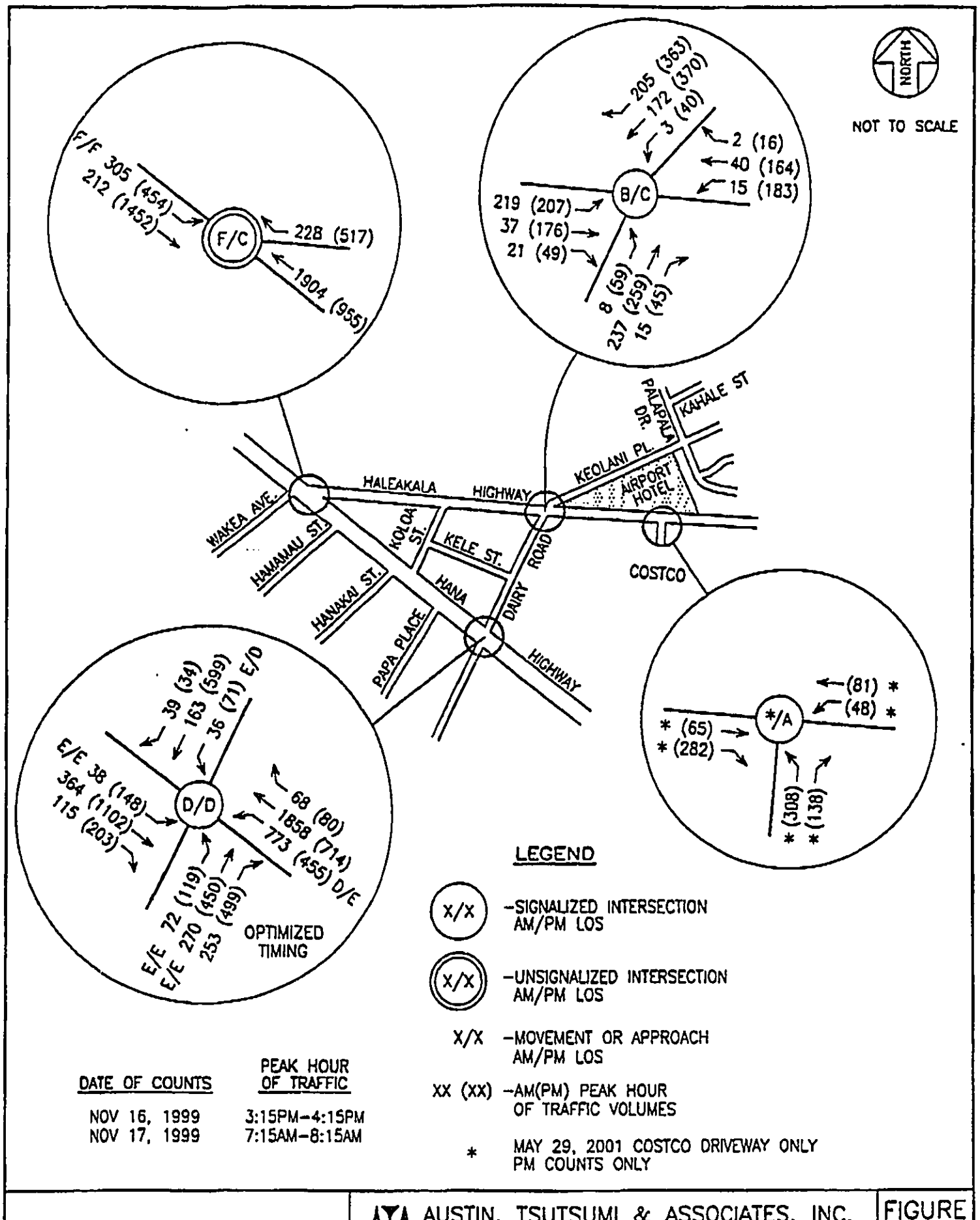


LEGEND

X/X –SIGNALIZED INTERSECTION AM/PM LOS

X/X –UNSIGNALIZED INTERSECTION AM/PM LOS

X/X –MOVEMENT OR APPROACH AM/PM LOS

XX (XX) –AM(PM) PEAK HOUR OF TRAFFIC VOLUMES

* MAY 29, 2001 COSTCO DRIVEWAY ONLY PM COUNTS ONLY

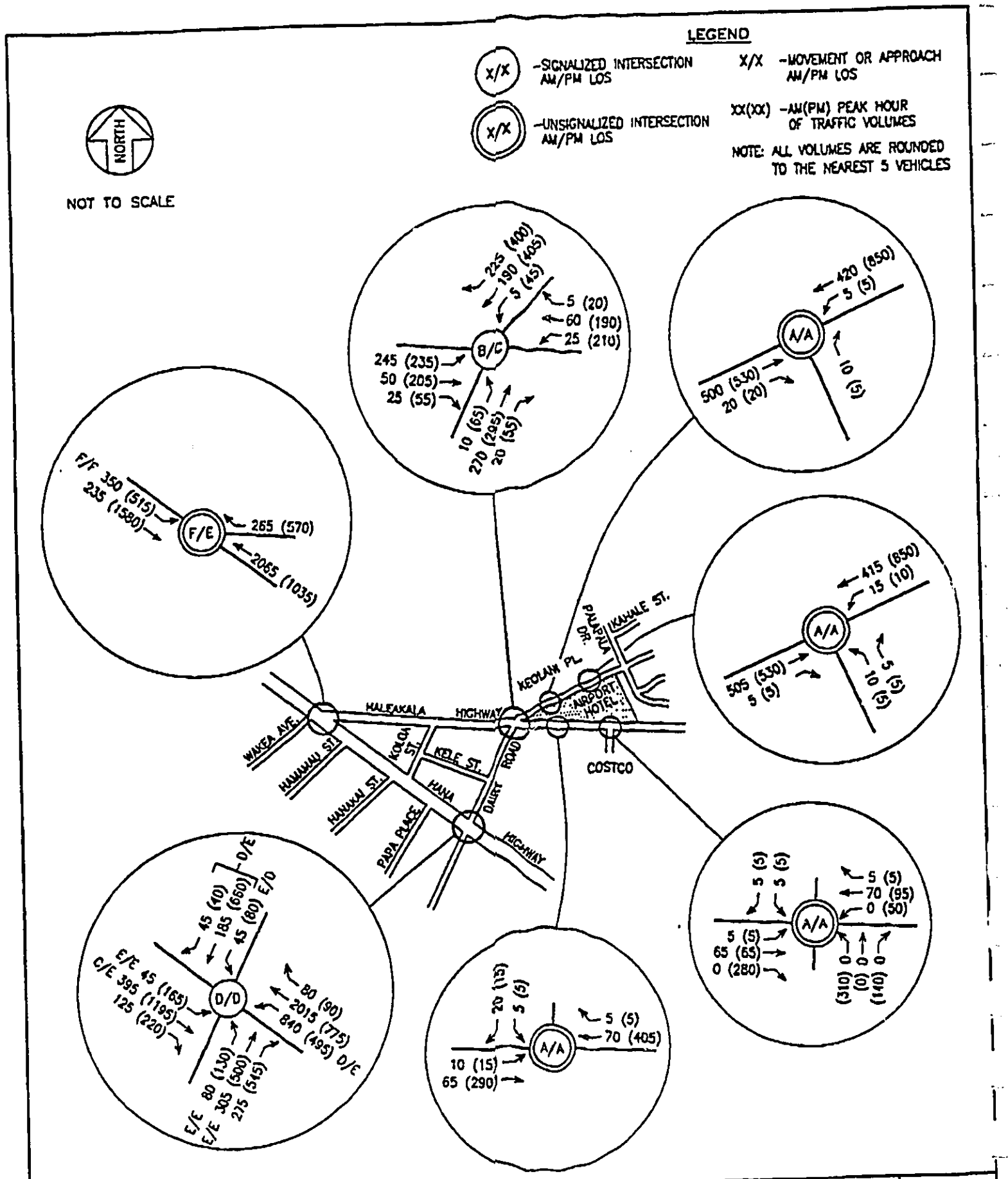
DATE OF COUNTS	PEAK HOUR OF TRAFFIC
NOV 16, 1999	3:15PM–4:15PM
NOV 17, 1999	7:15AM–8:15AM

TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE

FIGURE 1



TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

YEAR 2002 WITH
PROJECT TRAFFIC VOLUMES

FIGURE
2

A&B PROPERTIES, INC.

July 11, 2001

Officer Ryan Rodrigues
Community Police Officer, District I
Police Department
County of Maui
55 Mahalani Street
Wailuku, HI 96793

Subject: Proposed Kahului Airport Hotel
CPA 2001/0001, CIZ 2001/0001, SM1 2001/003

Dear Officer Rodrigues:

Thank you for sending us a copy of your memo dated March 29, 2001 (copy attached) concerning matters discussed at your meeting with Hideo Kawahara and Dan Yasui regarding the subject project. As I indicated to you, we were not aware of this memo until you provided us a copy on July 3, 2001.

Please be advised that we are working with the State Department of Transportation and the County Department of Public Works and Waste Management to determine appropriate traffic mitigation measures. We believe that these measures will satisfactorily address the traffic-related impact of this project.

We thank you for your time and effort in reviewing this project.

Sincerely,

A&B PROPERTIES, INC.

Mercer K. Vicens
Vice President

MKV:shs
Attachment

cc: Properties, Honolulu (w/attachment)
A. Cua, Maui Planning Department (w/attachment)
G. Tadaki, Munekiyo & Hiraga, Inc. (w/attachment)

[illegible] • Phone (808) 877-3333 • Fax (808) 871-7107

RECEIVED

JUL - 3 2001

H KAWAHARA, P.E.

TO : THOMAS PHILLIPS, CHIEF OF POLICE

VIA : CHANNELS

FROM : RYAN RODRIGUES, COMMUNITY POLICE OFFICER KAHULUI

SUBJECT : PROPOSED KAHULUI AIRPORT HOTEL TMKs 3-8-79: 16 and 17

Sir, this communication is being submitted as additional information on the above mentioned subject matter.

On Thursday March 29th 2001 at about 0900 hours, OFC. J. GAPERO and I met with a Mr. Daniel YASUI (Project Manager), and Mr. Hideo KAWAHARA (Manager of Engineering and Construction) of A&B Properties.

This meeting asked for by YASUI and KAWAHARA, was in regards to the above mentioned subject matter. YASUI and KAWAHARA wanted a better perspective on my initial comments made on the attached memos dated 12/27/01 and 3/13/01. In our discussion I referred to my memos regarding this development. I tried to clarify my reasons for recommending this project to be denied.

I explained that this project taken alone and by itself would still have an impact on traffic in and around the development area. However, the impact on traffic could be resolved with the proper roadway improvements along Keolani Place and Haleakala Highways. These improvements call for the installation of right/left turn storage lanes on both Keolani Place and Haleakala Highway. This would create a safe lane of travel for vehicles turning into the property, and open up the main traffic lane reducing traffic congestion and the potential for rear end traffic collisions.

I related to YASUI and KAWAHARA that if this project was being looked at alone and by itself, it would be recommended for approval. Provided the suggested improvements are included in its development.

I explained however, that I am looking at Maui County's bigger development picture. Large scale developments are taking place or are being planned for development in, Kihei, Lahaina and Kahului. As it is now, Maui's roadways and highways are over crowded and in need of improvements. As I stated in my earlier memo, our roadways need time to catch up with our County's growth. Because these large scale developments are taking place faster than our roadway system can catch up with, I am recommending this and other large scale developments be denied.

Submitted for your information.

Post-it® Fax Note 7671	Date 7/3/01	# of pages ▶ 2
To CHUBBY	From RYAN	
Co./Dept. A&B	Co. MPD	
Phone #	Phone #	
Fax #	Fax #	

RYAN RODRIGUES, R#0312
3/29/01 1418 HOURS

CC: Daniel Y. YASUI
Project Manager
A&B Properties, INC.

References

CORRECTION

References

References

Case & Lynch, Petition for District Boundary Amendment for Reclassification of Certain Lands Situate at Kahului, Island and County of Maui, State of Hawaii, TMK 3-8-01:portion of 02, 3-8-01:portion of 16, 3-8-06:portion of 04; 3-8-06:64, December 1988.

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Appendices

Appendix A

Traffic Impact Analysis Report

AIRPORT HOTEL
TRAFFIC IMPACT ANALYSIS REPORT
Kahului, Maui, Hawaii

June 2001

Prepared for:

A&B Properties, Inc.

Austin, Tsutsumi & Associates, Inc.
Civil Engineers • Surveyors
501 Sumner Street, Suite 521
Honolulu, Hawaii 96817-5031
Telephone: (808) 533-3646
Facsimile: (808) 526-1267
Honolulu • Wailuku, Hawaii

AIRPORT HOTEL
TRAFFIC IMPACT ANALYSIS REPORT
Kahului, Maui, Hawaii

Prepared for

A&B Properties, Inc.

Prepared by

Austin, Tsutsumi & Associates, Inc.

Engineers • Surveyors
Honolulu, Hawaii

June 2001

TABLE OF CONTENTS

TABLE OF CONTENTS
(Cont'd.)

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TED S. KAWAHIGASHI, P.E., FACEC
KENNETH K. KUROKAWA, P.E
DONOHUE M. FUJII, P.E
STANLEY T. WATANABE
TERRANCE S. ARASHIRO, P.E
MERNA S. KIBE

AIRPORT HOTEL

TRAFFIC IMPACT ANALYSIS REPORT

I. INTRODUCTION

A&B Properties, Inc. is proposing to construct a 140-room airport hotel on an approximately 3.35-acre site in Kahului, Maui, west of Kahului Airport in the vicinity of the Costco Warehouse store. The hotel is proposed to be a limited service, moderately priced hotel catering to business and leisure travelers. This Traffic Impact Analysis Report (TIAR) documents the findings of a traffic report to evaluate the traffic impacts of the proposed 140-room hotel and future commercial/restaurant site. Figure 1 shows the location of the proposed project. Figure 2 shows the proposed site plan for the airport hotel.

A. Location

The project site is located just east of the intersection of Dairy Road, Keolani Place and Haleakala Highway. The Costco Warehouse store is diagonally across Haleakala Highway from the proposed project site. The project site is more specifically identified as TMK: 3-8-79: 15, 16 and 17.

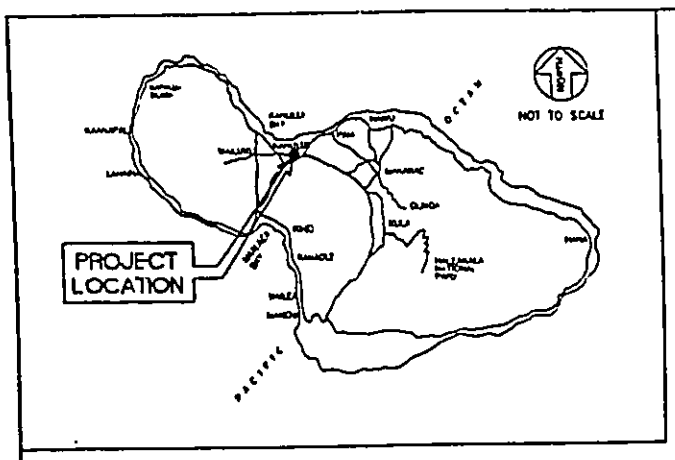
B. Project Description

The proposed project will include the following:

- Construction of an approximate 72,000 square foot, 4-story building with 140 rooms, 132 parking stalls, a small restaurant and swimming pool. Completion of the hotel is scheduled for the Year 2002.
- The hotel will not have any banquet facilities or large meeting rooms.
- Although there are no specific plans proposed for the 0.8-acre triangular portion of the property at the intersection of Keolani Place and Haleakala Highway, a future commercial/restaurant use has been assumed for project traffic analysis purposes.

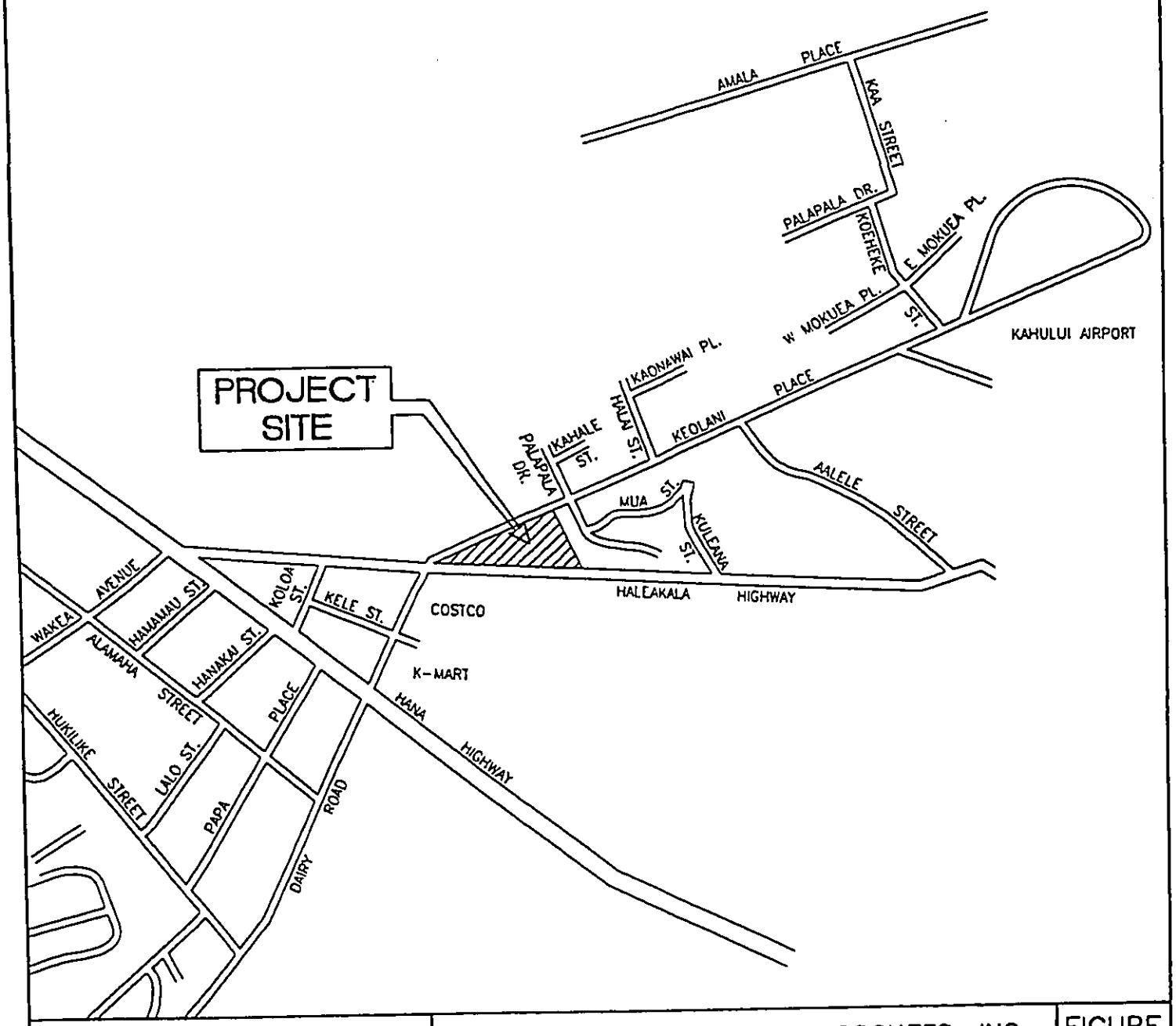
REPLY TO:
501 SUMNER STREET, SUITE 521 • HONOLULU, HAWAII 96817-5031
PHONE (808) 533-3646 • FAX (808) 526-1267 • EMAIL: atahnl@atohawaii.com

OFFICES IN:
HONOLULU, HAWAII
WAILUKU, MAUI, HAWAII



NORTH

NOT TO SCALE

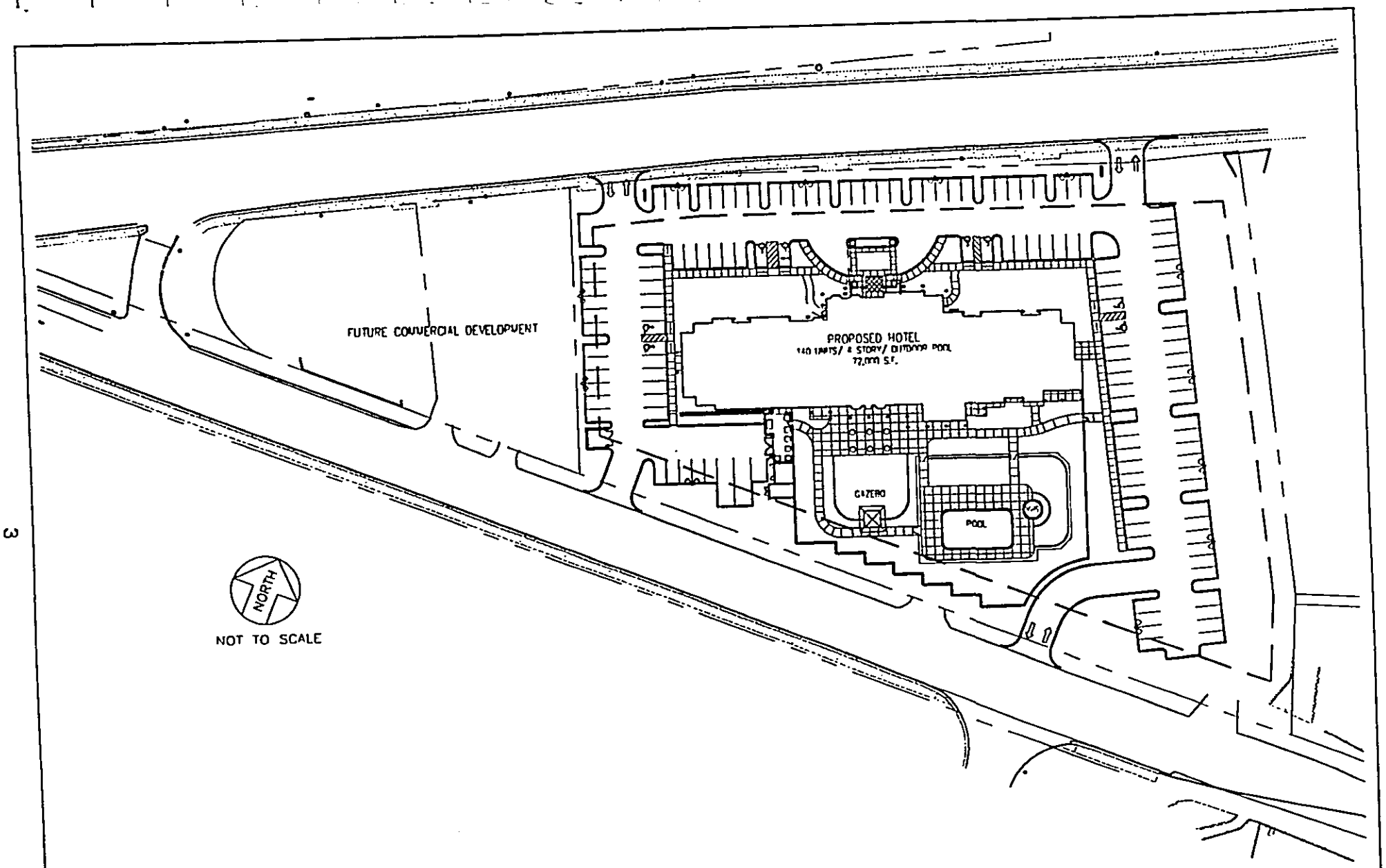


TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

PROJECT LOCATION

FIGURE 1



NOT TO SCALE

SOURCE
NISHIKAWA ARCHITECTS, INC.

TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

SITE PLAN

FIGURE
2

To ensure that the trip generation rate for this portion of the parcel is appropriately defined, a high-turnover restaurant use (ITE Code 832) has been assumed.

- Access to the proposed project site will be provided through four driveways, two on Keolani Place and two on Haleakala Highway.

Figure 2 illustrates the proposed site plan.

C. Study Methodology

This study will address the following:

1. Existing roadway volumes.
2. Base Year (build-out year of project) traffic projections without project-generated traffic.
3. Trip generation and traffic assignment characteristics for the proposed project.
4. Superimposing the site-generated traffic onto the Base Year traffic projections.
5. The identification and analyses of traffic impacts resulting from the proposed project.
6. Recommendations of traffic improvements, if appropriate, that would mitigate the traffic impacts resulting from the development of the proposed project.

II. EXISTING CONDITIONS

The proposed project site currently contains a variety of small short-term tenants including tour, retail and car rental facilities. The project site is bounded by Haleakala Highway to the south, Keolani Place to the north and a storm drain channel to the east. Currently, there are five driveways on Keolani Place and 6 accesses on Haleakala Highway that serve the proposed project site.

A. Roadway System

The following are brief descriptions of the roadway network:

Haleakala Highway, in the vicinity of the project, is a two-lane, east-west undivided State collector highway. A traffic signal system with exclusive left-turn lanes for all approaches is provided at its intersection with Dairy Road and Keolani Place. The posted speed limit on Haleakala Highway west of its intersection with Dairy Road and Keolani Place is 30 miles per hour (mph); east of its intersection is 25 mph.

Hana Highway, in the vicinity of the project, is a four-lane, east-west major divided State arterial highway providing access between the east Maui communities and Kahului. A traffic signal system is provided at its intersection with Dairy Road. Two westbound left-turn lanes from Hana Highway to southbound Dairy Road are provided,

with the remaining approaches being served by single left-turn lanes. The posted speed limit on Hana Highway is 45 mph at the approaches to the Dairy Road intersection.

Dairy Road, in the vicinity of the project, is a four-lane, north-south State collector road, which connects the airport area to Kuihelani Highway at Puunene Avenue and also provides access to the Kahului Industrial area. Dairy Road begins at its signalized intersection with Haleakala Highway and Keolani Place and proceeds southward to Puunene Avenue. The posted speed limit on Dairy Road is 30 mph.

Keolani Place is a four-lane, east-west State collector road providing access to the Kahului Airport. The posted speed limit on Keolani Place is 30 mph.

B. Study Intersections

Weekday AM and PM peak periods of traffic turning movement volumes were obtained at the following intersections:

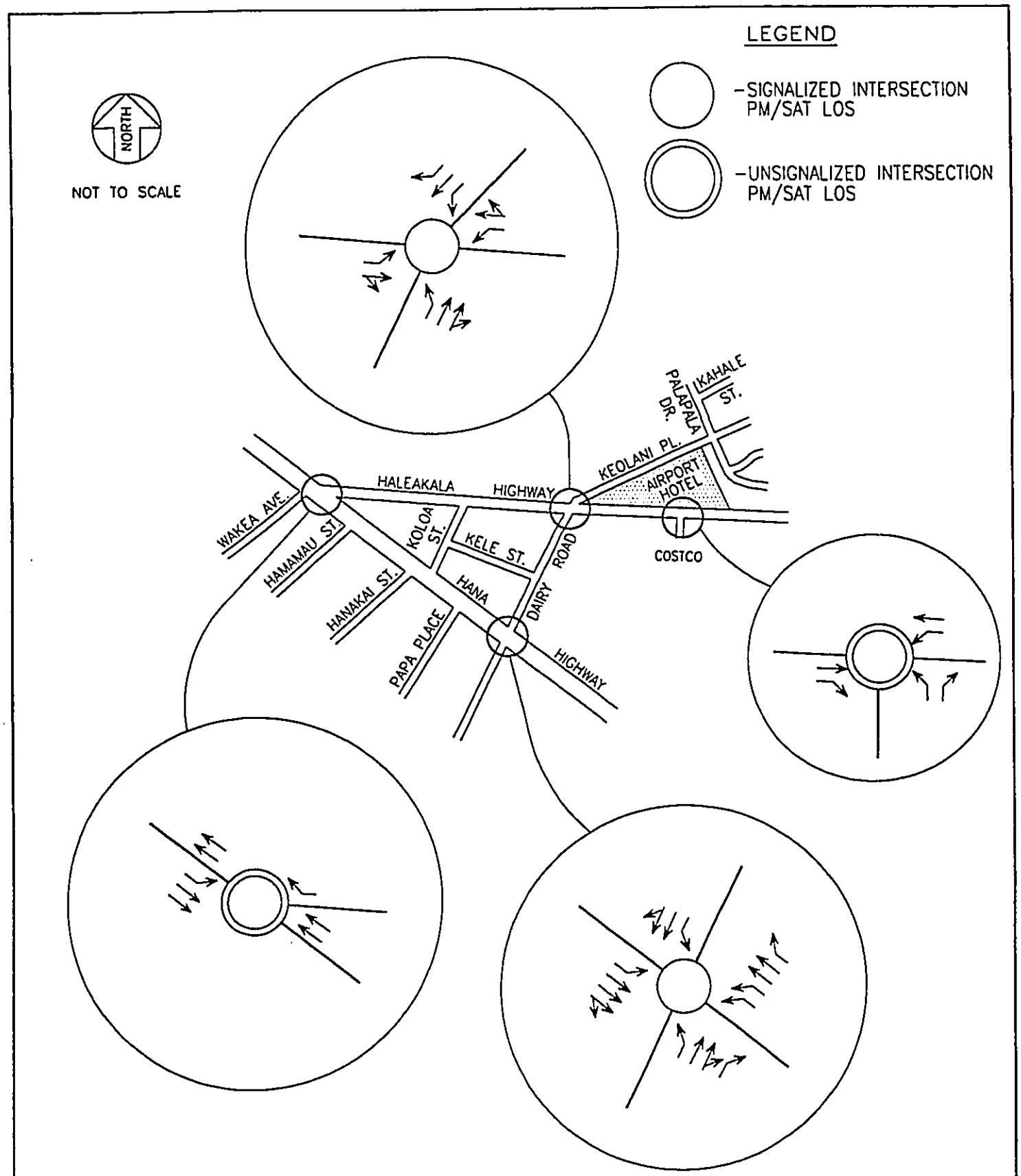
- Hana Highway and Dairy Road; signalized
- Hana Highway and Haleakala Highway; unsignalized
- Haleakala Highway, Dairy Road and Keolani Place; signalized
- Haleakala Highway, Costco Driveway; unsignalzed

Manual turning movement count surveys were conducted on Tuesday, November 16, 1999 and Wednesday, November 17, 1999. From the count data, the peak hours of traffic were determined to be from 7:15 to 8:15 AM and 3:15 to 4:15 PM on weekdays. A supplemental turning movement count was conducted on Tuesday May 29, 2001, from 3:15 to 4:15 PM, at the Costco Driveway on Haleakala Highway. Turning movement counts during the AM peak period of traffic were not conducted at the Costco Driveway since Costco opens for business after the 7:15 to 8:15 AM peak hour of traffic. Count data are provided in Appendix A.

Figure 3 shows the existing lane configurations at the study intersections. Figure 4 shows the existing turning movement volumes at the study intersections.

C. Existing Level of Service Analysis

Level of Service (LOS) is a qualitative measure used to describe the conditions of traffic flow ranging from free-flow conditions at LOS A to congested conditions at LOS F. The 1994 Highway Capacity Manual – Special Report 209 methods for calculating volume-to-capacity (v/c) ratios, delays and corresponding levels of service were utilized in this study. LOS definitions for signalized and unsignalized intersections are provided in Appendix B.

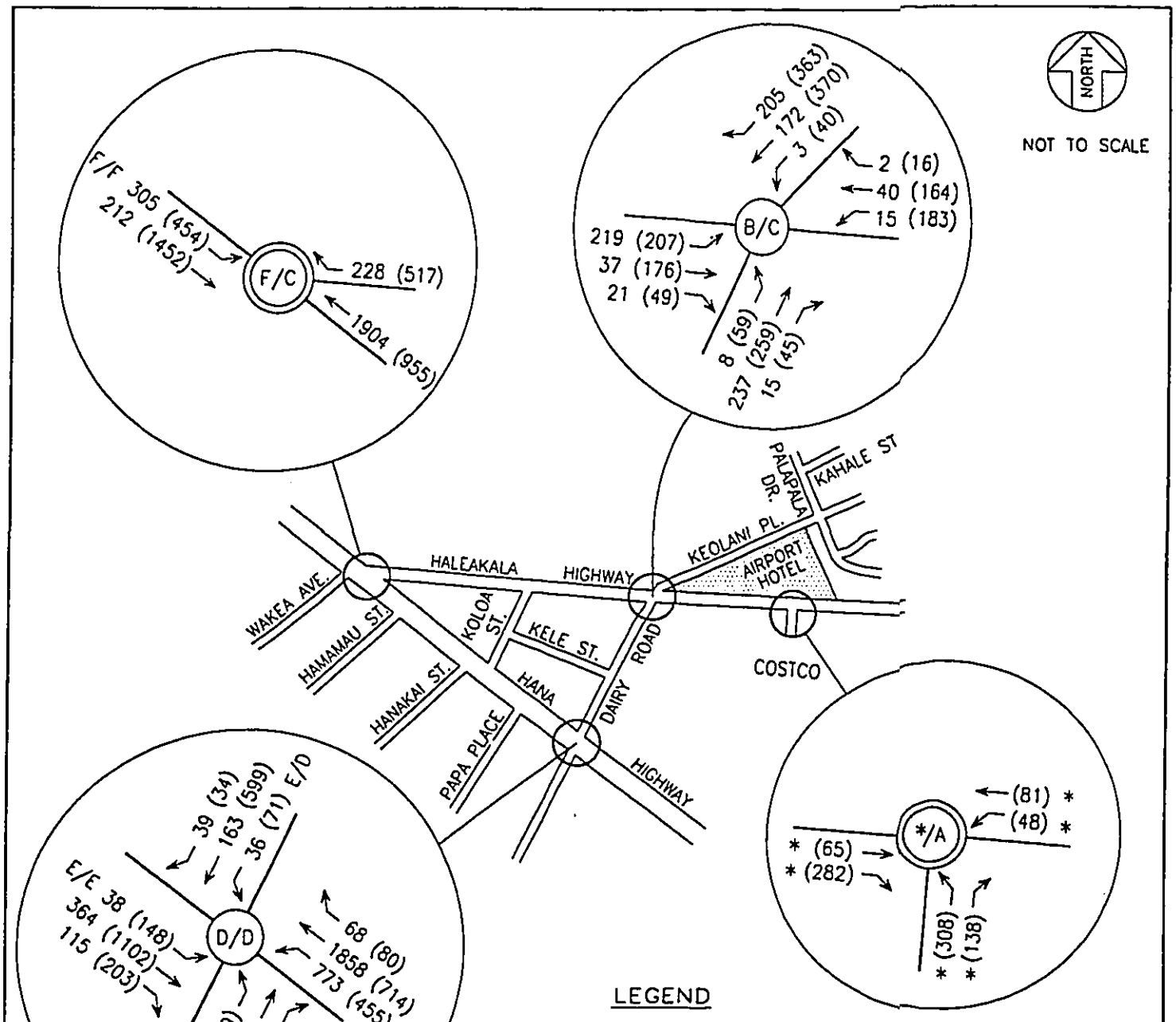


TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

FIGURE 3

EXISTING LANE CONFIGURATION



LEGEND

X/X – SIGNALIZED INTERSECTION AM/PM LOS

X/X – UNSIGNALIZED INTERSECTION AM/PM LOS

X/X – MOVEMENT OR APPROACH AM/PM LOS

XX (XX) – AM(PM) PEAK HOUR OF TRAFFIC VOLUMES

* SUPPLEMENTAL COUNTS AT HALEAKALA HWY/COSTCO DRWY. DURING PM PEAK HOUR ONLY

DATE OF COUNTS	PEAK HOUR OF TRAFFIC
NOV 16, 1999	3:15PM–4:15PM
NOV 17, 1999	7:15AM–8:15AM
MAY 29, 2001	3:15PM–4:15PM*

TRAFFIC IMPACT STUDY Kahului Airport Hotel	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII	FIGURE
	EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE	4

Hana Highway and Dairy Road – This signalized intersection is currently operating at LOS D during the AM peak hour of traffic and LOS F during the PM peak hour of traffic. Optimization of the traffic signal timing indicates that the intersection operations could be improved to LOS D during the PM peak hour of traffic if the cycle length is shortened from 180 seconds to 120 seconds. With the shortened cycle length, some of the movements will still operate at LOS E. Table 1 compares the LOS for each movement without and with optimization of the traffic signal system.

Hana Highway and Haleakala Highway – Capacity analysis at the unsignalized intersection of Hana Highway and Haleakala Highway indicates that the eastbound left turn traffic from Hana Highway onto Haleakala Highway heading towards the airport is operating at LOS F during the AM and PM peak hours of traffic. However field observations indicate that the traffic signal system at the adjacent Hana Highway and Dairy Road intersection is creating gaps in the traffic flow, which accommodate the left turn traffic. The right turn traffic from Haleakala Highway onto Hana Highway is operating at LOS C during both the AM and PM peak hours of traffic.

Haleakala Highway, Dairy Road and Keolani Place – The signalized intersection is currently operating at LOS B during the AM and LOS C during the PM peak hours of traffic.

Haleakala Highway, Costco Driveway – The unsignalized intersection is currently operating at LOS A during the PM peak hour of traffic.

Figure 4 and Table 1 illustrates the existing operating conditions (LOS) for the study intersections.

III. FUTURE CONDITIONS

A. Year 2002 Base Traffic Conditions

- Background Traffic

  Future background traffic projections were developed using historical data collected by State of Hawaii, Department of Transportation (SDOT). Analysis of the historical data indicates a growth rate of 2.7% per year in traffic for roadways surrounding the proposed project. Therefore, a 2.7% per year growth factor was used for this study. The Year 2002 was selected based upon the development schedule for the proposed project. Future traffic volumes were projected using the existing Year 1999 traffic volumes as a base and applying the projected growth

Table 1
Existing Level of Service

	Existing		Existing with Optimization	
	AM Peak	PM Peak	AM Peak	PM Peak
Hana Highway and Dairy Road				
Northbound				
Left	E	F	E	E
Through	E	E	E	E
Right	B	B	B	C
Southbound				
Left	E	F	E	D
Through/Right	E	E	D	D
Westbound				
Left	D	D	D	E
Through	D	C	C	C
Right	B	B	A	B
Eastbound				
Left	E	F	E	E
Through	D	F	C	D
Right	C	D	B	B
Overall	*D*	*F*	*D*	*D*
Hana Highway and Haleakala Highway				
Southbound				
Right	C	C	--	--
Eastbound				
Left	F	F	--	--
Overall	*F*	*C*	--	--
Haleakala Highway, Dairy Road and Keolani Place				
Northbound				
Left	C	D	--	--
Through/Right	C	C	--	--
Southbound				
Left	C	D	--	--
Through	C	D	--	--
Right	B	B	--	--
Westbound				
Left	B	D	--	--
Through/Right	C	D	--	--
Eastbound				
Left	C	C	--	--
Through/Right	C	C	--	--
Overall	*B*	*C*	--	--
Haleakala Highway, Costco Driveway				
Southbound				
Left	*	A	--	--
Westbound				
Left	*	B	--	--
Right	*	A	--	--
Overall	*	*A*	--	--

* - Traffic Counts were not Conducted during the AM Peak Hour of Traffic

factor to derive the Year 2002 base traffic volumes. Figure 5 shows the Base Year 2002 traffic projections without the proposed hotel.

- Future Base Year 2002 Intersection Operations

  Hana Highway and Dairy Road – The intersection is estimated to operate at LOS D during both the AM and PM peak hours of traffic. However, certain individual movements are estimated to operate near capacity at LOS E in both the AM and PM peak hours of traffic. Figure 5 shows the movements that are anticipated to operate at LOS E conditions.

  Haleakala Highway and Hana Highway – This intersection is projected to operate at LOS F during the AM peak hour of traffic and LOS E during the PM peak hour of traffic. As previously discussed, the westbound traffic on Hana Highway is metered by the traffic signal system at the upstream intersection of Hana Highway and Dairy Road, creating acceptable gaps in traffic for the eastbound left-turning vehicles.

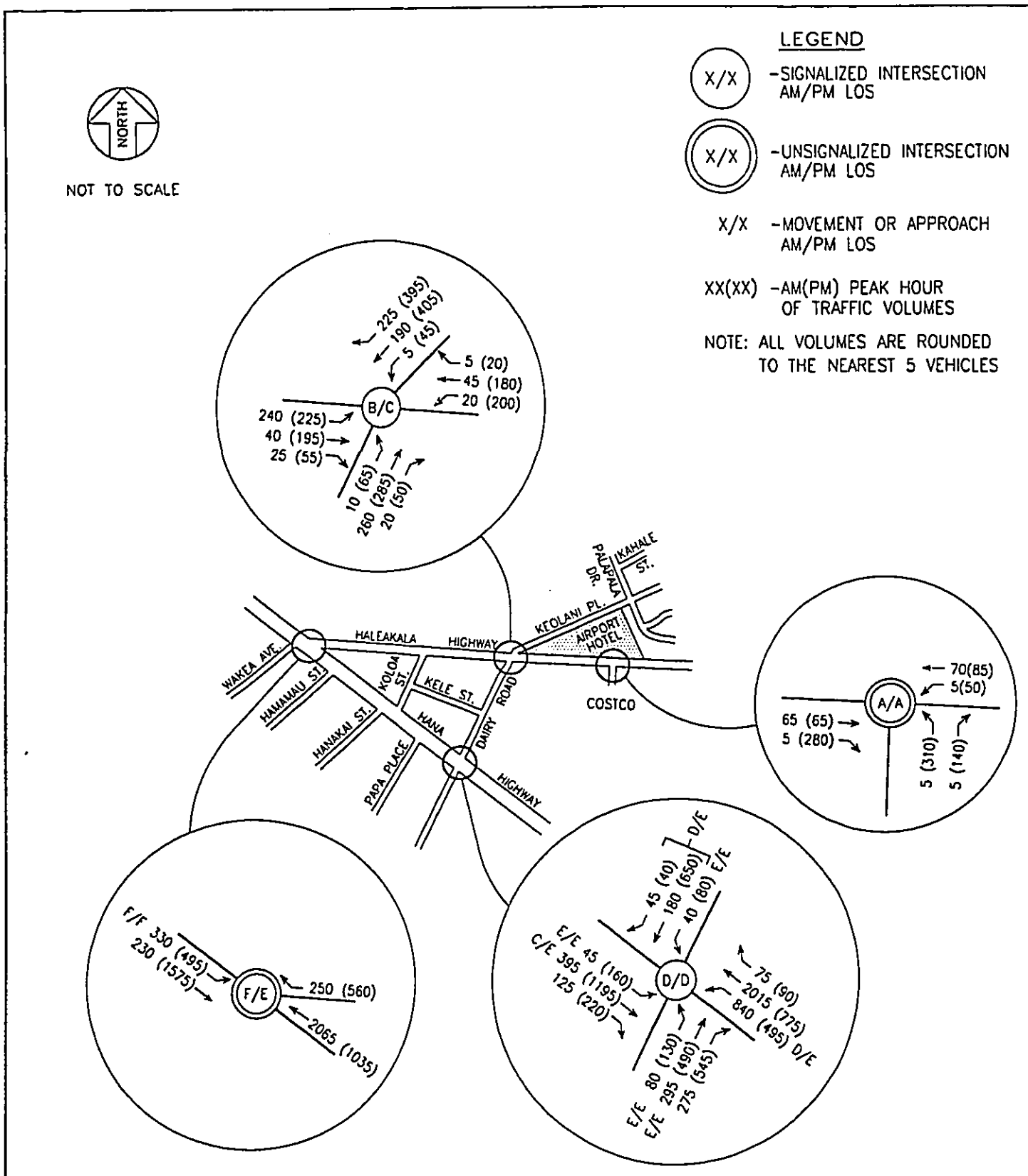
  Haleakala Highway, Dairy Road and Keolani Place – The signalized intersection is, overall, projected to operate at LOS B during the AM and LOS C during the PM peak hours of traffic.

  Haleakala Highway and Costco Driveway – The unsignalized intersection is projected to operate at LOS A in both the AM and PM peak hour of traffic.

  Figure 5 shows the Year 2002 base LOS without vehicle trips generated by the proposed project.

B. Future Roadway System

State of Hawaii, Department of Transportation has proposed to construct a new access road to the Kahului Airport, which will be located east of Dairy Road. The new airport access road is proposed to begin at the intersection of Kuihelani Highway and Puunene Avenue, and veer to east of the present Dairy Road alignment and intersect Hana Highway approximately 1,500 feet to the east of the Hana Highway and Dairy Road intersection. The new airport access road would continue north to the Kahului Airport. This proposed airport access road would alleviate some of the congestion occurring at the Hana Highway and Dairy Road intersection by providing another route to the airport and to east Maui and up country communities. At the time of this report the construction schedule for the Airport Access Road was unknown.



TRAFFIC IMPACT STUDY Kahului Airport Hotel	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII YEAR 2002 BASE TRAFFIC VOLUMES AND LEVEL OF SERVICE (WITHOUT PROJECT GENERATED TRAFFIC)	FIGURE 5

C. Trip Generation

Trip generation estimates the number of trips produced by a given land use. Trip rates contained in the nationally published ITE Trip Generation, 6th Edition, were used to estimate the number of trips generated by the proposed hotel and restaurant. Trip generation rates provided for business hotels are based on the average number of occupied rooms. Based on data for the Island of Maui, contained in the 1998 State of Hawaii, Data Book, the average hotel room occupancy rate for Maui was 68%. Therefore, a hotel occupancy rate of 70% was used for this report. By applying this rate to the proposed 140-room hotel, the estimated average number of occupied rooms for the airport hotel would be 100.

Table 2 summarizes the trip rates used and Table 3 shows the trips generated by the proposed project.

Table 2
Trip Rates

	Average Weekday Daily Trip Rate	A.M. Peak Hour		P.M. Peak Hour	
		Trip Rate	% Enter	Trip Rate	% Enter
Business Hotel, ITE Code 312 (per Occupied Unit)	7.27	0.58	59	0.62	60
High-Turnover Restaurant, ITE Code 832 (per 1,000 SF GFA)	130.34	9.27	52	10.86	60

Table 3
Peak Hour Trips

	Average Weekday (veh)	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
Airport Hotel (100 Occupied Units)	727	29	19	27	15
Restaurant (6,000 SF GFA)	782	24	22	29	16
Total	1,509	53	41	56	31

It is assumed that a portion of the vehicle trips generated by the restaurant will consist of hotel guests, who will walk to the restaurant and not affect the adjacent

roadways. Therefore, the total number of trips generated by both the restaurant and hotel were reduced by 10 trips (5 entering, 5 exiting) during the AM peak hour of traffic and 20 trips (10 entering, 10 exiting) during the PM peak hour of traffic. The vehicle trips contained in Table 3 were reduced to account for the hotel guests that eat at the adjacent restaurant.

D. Trip Distribution and Assignment

Trip distribution is the directional distribution of vehicle trips from the proposed project site. Trip assignment refers to the allocation of vehicle trips to the surrounding roadway network based on the directional distribution. Trips generated by the proposed project were distributed based on existing traffic patterns. Trips generated by the proposed project were assigned to the roadway network based upon this distribution. Figure 6 illustrates the project generated traffic assignment.

Distributed trips were added to Year 2002 base volumes to estimate Year 2002 traffic volumes with the proposed project. Figure 7 shows the Year 2002 with traffic projections at build out of the proposed project.

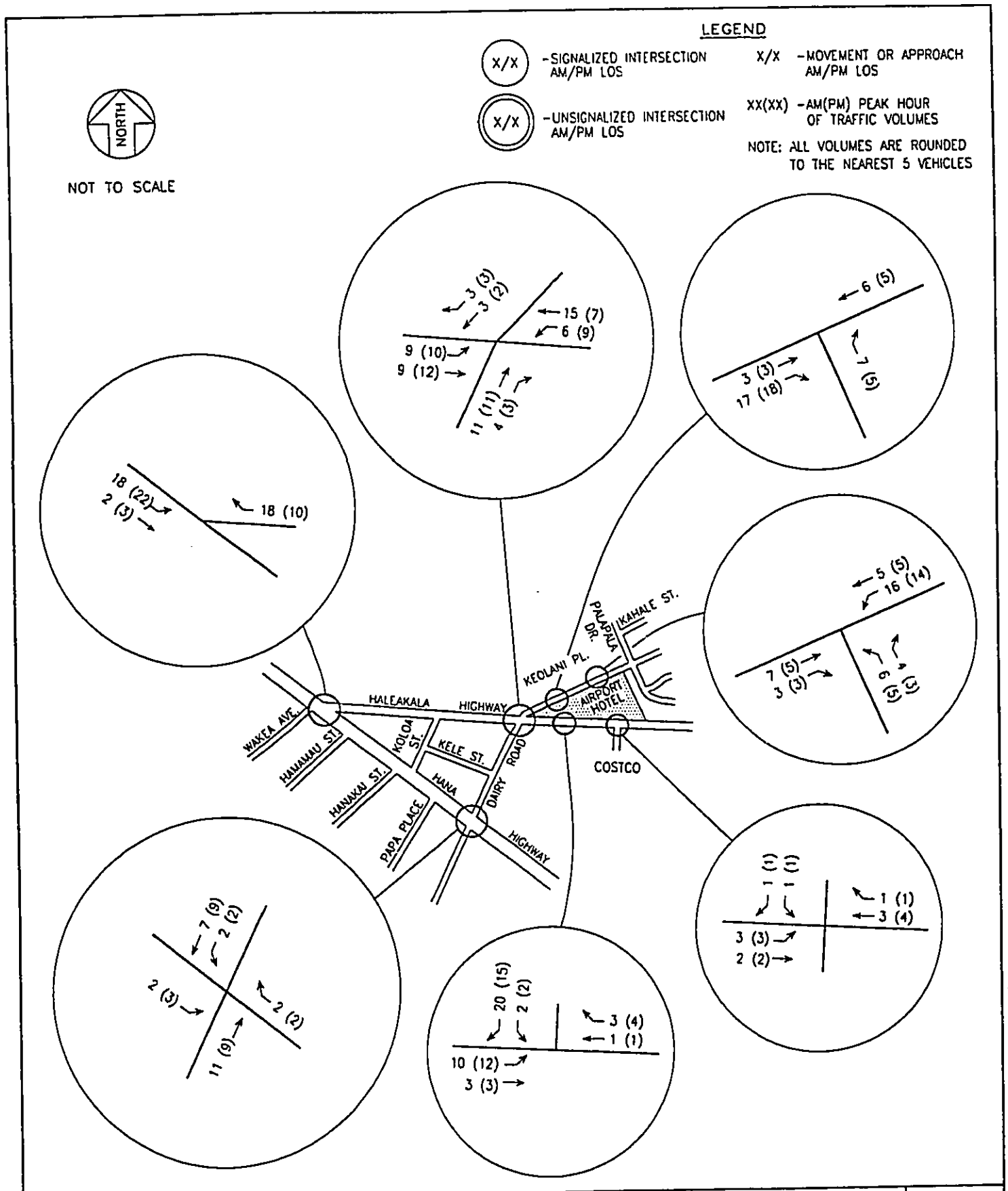
E. Access to Hotel Site

The proposed project will include the construction of four new driveways, two on Keolani Place and two on Haleakala Highway. Each two-lane driveway will provide full access to the project site, with the exception of the western driveway on Keolani Place, due to its close proximity to the intersection of Haleakala Highway, Dairy Road and Keolani Place. It is recommended that traffic be restricted to right-turns into and right-turns out-of.

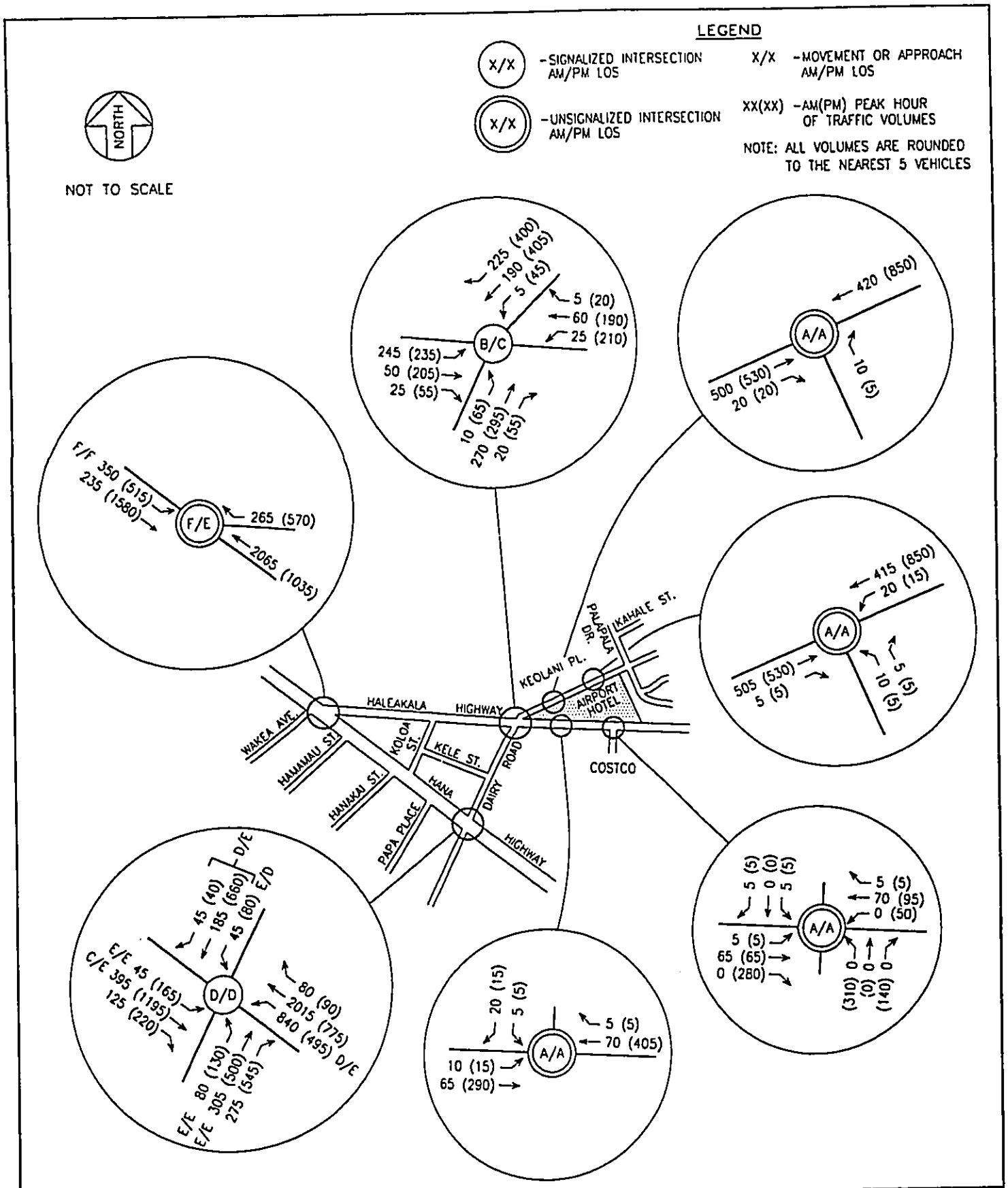
F. Future Year Intersection Operation with Project Traffic

Hana Highway and Dairy Road – The intersection is estimated to operate at LOS D during both the AM and PM peak hours of traffic. However, certain individual movements are estimated to operate near capacity at LOS E in both the AM and PM peak hours of traffic and are summarized in Table 4.

Haleakala Highway and Hana Highway – The intersection is, overall, projected to operate at LOS F during the AM peak hour of traffic and LOS E during the PM peak hour of traffic. As previously discussed, the high LOS is due to the delay experience by the eastbound left turns on to Haleakala Highway. The traffic signal system at the adjacent intersection of Hana Highway and Dairy Road will continue to meter westbound traffic on



TRAFFIC IMPACT STUDY Kahului Airport Hotel	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII	FIGURE
	PROJECT GENERATED TRAFFIC ONLY	6



TRAFFIC IMPACT STUDY
Kahului Airport Hotel

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

YEAR 2002 WITH
PROJECT TRAFFIC VOLUMES

FIGURE
7

Table 4
Level of Service Summary

	Existing		Existing with Optimization		Base Year 2002 without Project		Future Year 2002 with Project	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Hana Highway and Dairy Road								
Northbound								
Left	E	F	E	E	E	E	E	E
Through	E	E	E	E	E	E	E	E
Right	B	B	B	C	B	C	B	C
Southbound								
Left	E	F	E	D	E	D	E	D
Through/Right	E	E	D	D	D	D	D	E
Westbound								
Left	D	D	D	E	D	E	D	E
Through	D	C	C	C	D	C	D	C
Right	B	B	A	B	A	B	A	B
Eastbound								
Left	E	F	E	E	E	E	E	E
Through	D	F	C	D	C	D	C	E
Right	C	D	B	B	B	B	B	B
Overall	*D*	*F*	*D*	*D*	*D*	*D*	*D*	*D*
Hana Highway and Haleakala Highway								
Southbound								
Right	C	C	–	–	D	D	D	D
Eastbound								
Left	F	F	–	–	F	F	F	F
Overall	*F*	*C*	–	–	*F*	*E*	*F*	*E*
Haleakala Highway, Dairy Road and Keolani Place								
Northbound								
Left	C	D	–	–	C	D	C	D
Through/Right	C	C	–	–	C	C	C	C
Southbound								
Left	C	D	–	–	C	D	C	D
Through	C	D	–	–	C	D	C	D
Right	B	B	–	–	B	B	B	B
Westbound								
Left	B	D	–	–	B	D	B	D
Through/Right	C	D	–	–	C	D	C	D
Eastbound								
Left	C	C	–	–	C	C	C	C
Through/Right	C	C	–	–	C	C	C	C
Overall	*B*	*C*	–	–	*B*	*C*	*B*	*C*
Keolani Place and North Driveway								
Southbound								
Left	–	–	–	–	–	–	A	A
Westbound								
Left/Right	–	–	–	–	–	–	C	C
Overall	–	–	–	–	–	–	*A*	*A*
Keolani Place and South Driveway								
Westbound								
Right	–	–	–	–	–	–	A	A
Overall	–	–	–	–	–	–	*A*	*A*
Haleakala Highway and East Driveway								
Westbound								
Left	*	A	–	–	A	A	A	A
Eastbound								
Left	–	–	–	–	–	–	A	A
Northbound								
Left	*	B	–	–	A	B	A	B
Through/Right	*	A	–	–	A	A	A	A
Southbound								
Left/Through/Right	–	–	–	–	–	–	A	A
Overall	–	*A*	–	–	*A*	*A*	*A*	*A*
Haleakala Highway and West Driveway								
Eastbound								
Left	–	–	–	–	–	–	A	A
Southbound								
Left/Right	–	–	–	–	–	–	A	A
Overall	*	–	–	–	–	–	*A*	*A*

Hana Highway, creating acceptable gaps in traffic for eastbound left-turning vehicles at the intersection of Haleakala Highway and Hana Highway.

Haleakala Highway, Dairy Road and Keolani Place – The signalized intersection is, overall, projected to operate at LOS B during the AM and LOS C during the PM peak hours of traffic.

Haleakala Highway, Costco Driveway and Hotel Driveway – The unsignalized intersection is, overall, projected to operate at LOS A during both AM and PM peak hours of traffic.

Project Driveways – It is estimated that with the traffic generated by the proposed project, the four driveways, two on Keolani Place and two on Haleakala Highway, would operate at LOS C or better during both the AM and PM peak hours of traffic.

Figure 7 and Table 4 shows the Year 2002 LOS with vehicle trips generated by the proposed hotel.

IV. FINDINGS AND CONCLUSIONS

The intersection of Hana Highway and Dairy Road is currently operating at over capacity conditions during the PM peak hour of traffic. Optimization of the traffic signal timing will improve the existing intersection operations to LOS D during the AM and PM peak hours of traffic. With the proposed Airport Hotel, the intersection of Hana Highway and Dairy Road would remain operating at LOS D after optimization during the AM and PM peak hours of traffic.

The intersection of Haleakala Highway and Hana Highway is currently operating at LOS F during the AM peak hour of traffic and LOS C during the PM peak hour of traffic. In the Year 2002 without and with the proposed Airport Hotel, the intersection of Haleakala Highway and Hana Highway will operate at LOS F during the AM peak hour of traffic and LOS E during the PM peak hour of traffic. The high-calculated LOS is due to the delay to the eastbound left turns onto Haleakala Highway. However, the adjacent signalized intersection of Hana Highway and Dairy Road provides acceptable gaps in the westbound traffic to accommodate the left turns.

In the Year 2002, the Haleakala Highway, Dairy Road and Keolani Place signalized intersection is projected to operate at the same LOS as existing conditions, LOS B during the AM peak hour of traffic and LOS C during the PM peak hour of traffic, without and with the proposed Airport Hotel.

In the Year 2002, the intersection of Haleakala Highway, Costco Driveway and project driveway is projected to operate at LOS A during the AM and PM peak hours of traffic without and with the proposed Airport Hotel.

The proposed Airport Hotel and future Restaurant will increase traffic on the surrounding roadways by 94 vehicle trips during the AM peak hour of traffic and 87 vehicle trips during the PM peak hour of traffic. The proposed four driveways, which will provide access to the project site, are estimated to operate at LOS A during both the AM and PM peak hours of traffic. The study intersections are estimated to operate at similar to existing conditions for the Year 2002 without or with the proposed Airport Hotel and future Restaurant project. Therefore, the construction of the proposed Airport Hotel will not have a significant impact on the surrounding roadways.

V. RECOMMENDATIONS

To accommodate the existing and future base year conditions it is recommended that the intersection of Hana Highway and Dairy Road signal timings be optimized.

For the project, the following improvements are recommended:

- Provide four driveways, two on Keolani Place and two on Haleakala Highway each one providing two lanes (one for entering and one for exiting traffic).
- Restrict traffic on the westernmost driveway on Keolani Place to right turns into and out-of due to its close proximity to the Haleakala Highway, Dairy Road and Keolani Place intersection.
- Provide a minimum 50-foot-long westbound left-turn storage lane on Keolani Place into the eastern most driveway for the proposed hotel.
- Restripe the existing median acceleration lane on Haleakala Highway at its intersection with the Costco Driveway to provide a left turn storage lane into the proposed hotel.
- Provide a minimum 50-foot-long eastbound left-turn storage lane on Haleakala Highway into the western most driveway for the proposed hotel.
- Lengthen the existing median westbound left turn storage lane at the Haleakala Highway, Dairy Road and Keolani Place intersection to provide 300 feet of storage.

It is recommended, even without the Airport Hotel, that the Airport Access Road from Kahului Airport to the intersection of Kuihelani Highway and Puunene Avenue be constructed to help reduce the existing and future congestion on Dairy Road.

REFERENCES

1. Trip Generation, 6th Edition, Institute of Transportation Engineers, 1997
2. Highway Capacity Manual, Special Report 209, Transportation Research Board, 1994
3. The State of Hawaii, Data Book 1998, A Statistical Abstract, State of Hawaii, The Department of Business, Economic Development and Tourism (DBEDT), 1999

AUSTIN, TSUTSUMI & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS

APPENDICES

AUSTIN, TSUTSUMI & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS

APPENDIX A

EXISTING TRAFFIC COUNT AND VEHICLE CLASSIFICATION DATA

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501 Sumner Street, Suite 521
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File Name : HANDAIAM
Site Code : 00000000
Start Date : 11/17/1999
Page No : 1

Groups Printed- Vehicle group 1

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45 AM	3	81	17	0	101	2	38	3	0	43	167	418	26	0	611	15	93	55	0	163	918
Total	3	81	17	0	101	2	38	3	0	43	167	418	26	0	611	15	93	55	0	163	918
07:00 AM	3	103	14	0	120	6	38	2	0	46	175	417	14	0	606	9	56	53	0	118	890
07:15 AM	5	62	18	0	85	8	36	11	0	55	206	503	18	0	727	19	51	72	0	142	1009
07:30 AM	11	88	26	0	125	6	37	5	0	48	179	483	19	0	681	19	57	62	0	138	992
07:45 AM	10	110	33	0	153	6	41	8	0	55	220	488	20	0	728	16	77	48	0	141	1077
Total	29	363	91	0	483	26	152	26	0	204	780	1891	71	0	2742	63	241	235	0	539	3968
08:00 AM	12	104	38	0	154	16	49	15	0	80	168	384	11	0	563	18	85	71	0	174	971
08:15 AM	16	118	36	0	170	12	43	12	0	67	140	327	33	0	500	21	51	90	0	162	899
08:30 AM	18	124	32	0	174	14	53	9	0	76	102	271	15	0	388	25	82	69	0	176	814
08:45 AM	26	98	29	0	153	13	64	8	0	85	115	253	13	0	381	27	85	90	0	202	821
Total	72	444	135	0	651	55	209	44	0	308	525	1235	72	0	1832	91	303	320	0	714	3505
Grand Total	104	888	243	0	1235	83	399	73	0	555	1472	3544	169	0	5185	169	637	610	0	1416	8391
Apprch %	8.4	71.9	19.7	0.0		15.0	71.9	13.2	0.0		28.4	68.4	3.3	0.0		11.9	45.0	43.1	0.0		
Total %	1.2	10.6	2.9	0.0	14.7	1.0	4.8	0.9	0.0	6.6	17.5	42.2	2.0	0.0	61.8	2.0	7.6	7.3	0.0	16.9	

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Ph: (808) 533-3646 Fax: (808) 527-1267

File Name : HANDAIPM
Site Code : 00000000
Start Date : 11/16/1999
Page No : 1

Groups Printed- Vehicle group 1

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:00 PM	42	196	62	0	300	18	184	6	0	208	100	100	27	0	227	28	148	101	0	277	1012
03:15 PM	28	247	50	0	325	16	140	8	0	164	95	162	29	0	286	31	129	109	0	269	1044
03:30 PM	37	279	57	0	373	16	160	9	0	185	112	158	19	0	289	31	102	109	0	242	1089
03:45 PM	30	281	46	0	357	20	154	7	0	181	131	222	19	0	372	28	114	134	0	276	1186
Total	137	1003	215	0	1355	70	638	30	0	738	438	642	94	0	1174	118	493	453	0	1064	4331
04:00 PM	53	295	50	0	398	19	145	10	0	174	117	172	13	0	302	29	105	147	0	281	1155
04:15 PM	36	305	42	0	383	24	141	7	0	172	121	164	12	0	297	22	95	145	0	262	1114
04:30 PM	30	360	42	0	432	20	135	12	0	167	115	139	24	0	278	18	86	154	0	258	1135
04:45 PM	19	348	46	0	413	20	139	10	0	169	97	128	19	0	244	33	94	168	0	295	1121
Total	138	1308	180	0	1626	83	560	39	0	682	450	603	68	0	1121	102	380	614	0	1096	4525
05:00 PM	40	331	47	0	418	18	130	12	0	160	123	115	18	0	256	21	102	130	0	253	1087
05:15 PM	32	312	50	0	394	27	110	16	0	153	124	137	16	0	277	10	108	164	0	282	1106
05:30 PM	33	317	49	0	399	32	128	4	0	164	124	129	22	0	275	25	91	137	0	253	1091
05:45 PM	35	280	38	0	353	29	132	11	0	172	109	131	16	0	256	21	93	138	0	252	1033
Total	140	1240	184	0	1564	106	500	43	0	649	480	512	72	0	1064	77	394	569	0	1040	4317
06:00 PM	26	301	44	0	371	20	124	7	0	151	116	113	27	0	256	19	92	162	0	273	1051
Grand Total	441	3852	623	0	4916	279	1822	119	0	2220	1484	1870	261	0	3615	316	1359	1798	0	3473	14224
Apprch %	9.0	78.4	12.7	0.0		12.6	82.1	5.4	0.0		41.1	51.7	7.2	0.0		9.1	39.1	51.8	0.0		
Total %	3.1	27.1	4.4	0.0	34.6	2.0	12.8	0.8	0.0	15.6	10.4	13.1	1.8	0.0	25.4	2.2	9.6	12.6	0.0	24.4	

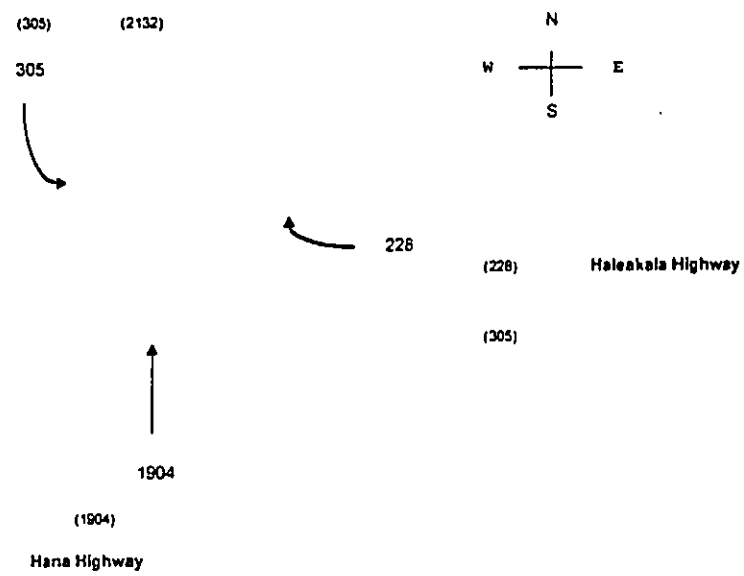
INTERSECTION COUNT SURVEY SUMMARY

North/South Street : Hana Highway
East/West Street : Haleakala Highway
Weather : Clear

Period: AM
Date: 11/17/99
Day : WED

15 MINUTE PERIOD	Hana Highway NORTHBOUND LEFT	THRU	RGHT	Hana Highway SOUTHBOUND LEFT	THRU	RGHT	Haleakala Highway EASTBOUND LEFT	THRU	RGHT	Haleakala Highway WESTBOUND LEFT	THRU	RGHT	TOTAL VOLUME 15 MIN	HOURLY
630 - 645	0	242	0	67	0	0	0	0	0	0	0	32	341	
645 - 700	0	425	0	101	0	0	0	0	0	0	0	30	556	
700 - 715	0	410	0	65	0	0	0	0	0	0	0	49	524	
715 - 730	0	488	0	75	0	0	0	0	0	0	0	45	608	2,029
730 - 745	0	536	0	77	0	0	0	0	0	0	0	52	665	2,353
745 - 800	0	474	0	70	0	0	0	0	0	0	0	52	596	2,393
800 - 815	0	406	0	83	0	0	0	0	0	0	0	79	568	2,437
815 - 830	0	341	0	57	0	0	0	0	0	0	0	90	488	2,317
830 - 845	0	313	0	70	0	0	0	0	0	0	0	68	451	2,103
845 - 900	0	306	0	74	0	0	0	0	0	0	0	61	441	1,948
PEAK 15 MINUTE PERIOD:														
730 - 745	0	536	0	77	0	0	0	0	0	0	0	52	665	-
PEAK HOUR PERIOD:														
715 - 815	0	1,904	0	305	0	0	0	0	0	0	0	228	-	2437
PEAK HOUR FACTOR:														
715 - 815	-	0.89	-	0.92	-	-	-	-	-	-	-	0.72		

AM PEAK HOUR TURNING MOVEMENT DIAGRAM



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1. Trip Generation, 6th Edition, Institute of Transportation Engineers, 1997
2. Highway Capacity Manual, Special Report 209, Transportation Research Board, 1994
3. The State of Hawaii, Data Book 1998, A Statistical Abstract, State of Hawaii, The Department of Business, Economic Development and Tourism (DBEDT), 1999

AUSTIN, TSUTSUMI & ASSOCIATES, INC
CIVIL ENGINEERS • SURVEYORS

APPENDICES

AUSTIN, TSUTSUMI & ASSOCIATES, INC
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APPENDIX A

EXISTING TRAFFIC COUNT AND VEHICLE CLASSIFICATION DATA

Austin Tsutsumi and Associates, Inc.
501 Sumner Street, Suite 521
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File Name : HANDAIAM
Site Code : 00000000
Start Date : 11/17/1999
Page No : 1

Groups Printed- Vehicle group 1

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45 AM	3	81	17	0	101	2	36	3	0	43	167	418	26	0	611	15	93	55	0	163	918
Total	3	81	17	0	101	2	38	3	0	43	167	418	26	0	611	15	93	55	0	163	918
07:00 AM	3	103	14	0	120	6	38	2	0	46	175	417	14	0	606	9	56	53	0	118	890
07:15 AM	5	62	18	0	85	8	36	11	0	55	206	503	18	0	727	19	51	72	0	142	1009
07:30 AM	11	88	26	0	125	6	37	5	0	48	179	483	19	0	681	19	57	62	0	138	992
07:45 AM	10	110	33	0	153	6	41	8	0	55	220	488	20	0	728	16	77	48	0	141	1077
Total	29	363	91	0	483	26	152	26	0	204	780	1891	71	0	2742	63	241	235	0	539	3968
08:00 AM	12	104	38	0	154	16	49	15	0	80	168	384	11	0	563	18	85	71	0	174	971
08:15 AM	16	118	36	0	170	12	43	12	0	67	140	327	33	0	500	21	51	90	0	162	899
08:30 AM	18	124	32	0	174	14	53	9	0	76	102	271	15	0	388	25	82	69	0	176	814
08:45 AM	26	98	29	0	153	13	64	8	0	85	115	253	13	0	381	27	85	90	0	202	821
Total	72	444	135	0	651	55	209	44	0	308	525	1235	72	0	1832	91	303	320	0	714	3505
Grand Total	104	888	243	0	1235	83	399	73	0	555	1472	3544	169	0	5185	169	637	610	0	1416	8391
Apprch %	8.4	71.9	19.7	0.0		15.0	71.9	13.2	0.0		28.4	68.4	3.3	0.0		11.9	45.0	43.1	0.0		
Total %	1.2	10.6	2.9	0.0	14.7	1.0	4.8	0.9	0.0	6.6	17.5	42.2	2.0	0.0	61.8	2.0	7.6	7.3	0.0	16.9	

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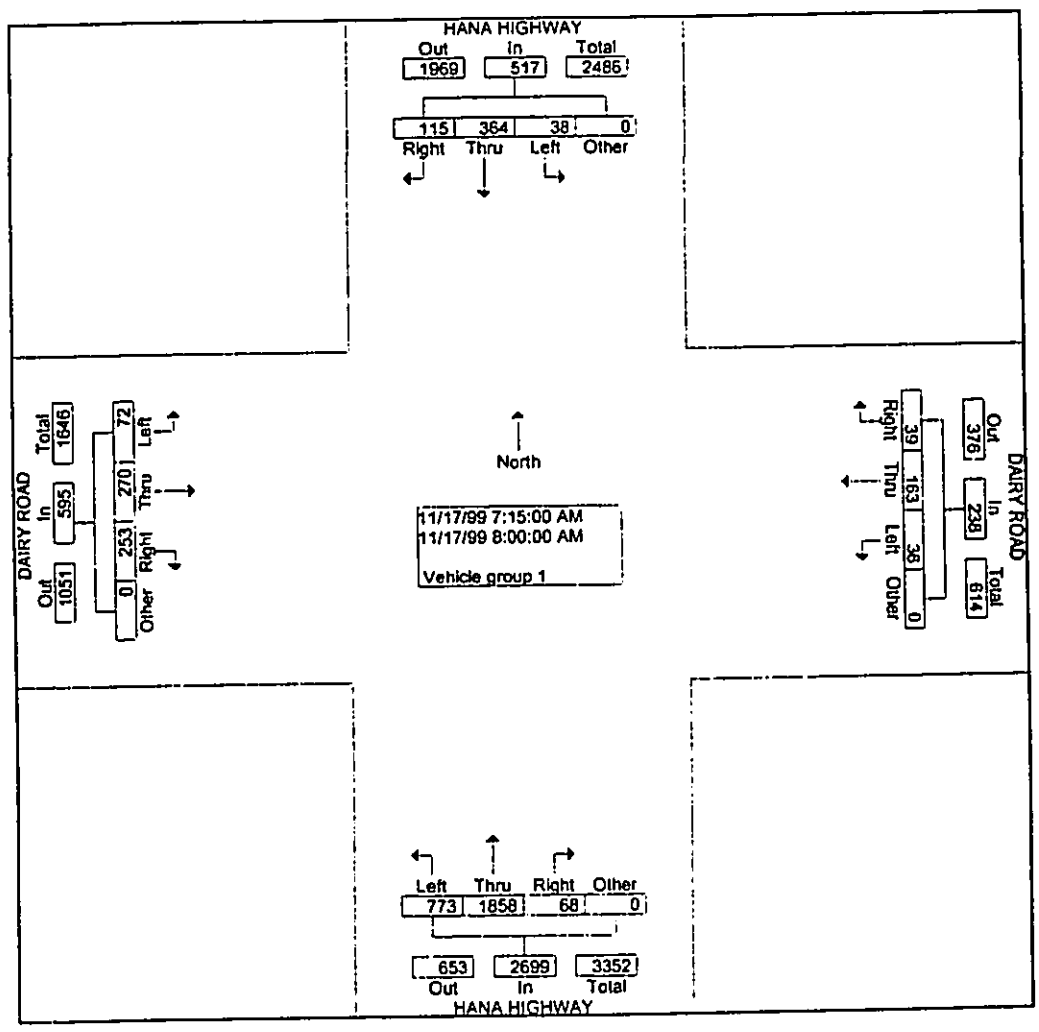
File Name : HANDAIAM
Site Code : 00000000
Start Date : 11/17/1999

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1																					
Intersection 07:15 AM																					
Volume	38	364	115	0	517	36	163	39	0	238	773	1858	68	0	2699	72	270	253	0	595	4049
Percent	7.4	70.4	22.2	0.0		15.1	68.5	16.4	0.0		28.6	68.8	2.5	0.0		12.1	45.4	42.5	0.0		
07:45 Volume	10	110	33	0	153	6	41	8	0	55	220	488	20	0	728	16	77	48	0	141	1077
Peak Factor																					0.940
High Int. 08:00 AM						08:00 AM					07:45 AM					08:00 AM					
Volume	12	104	38	0	154	16	49	15	0	80	220	488	20	0	728	18	85	71	0	174	
Peak Factor					0.839					0.744					0.927					0.855	



Austin Tsutsumi and Associates, Inc.
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File Name : HANDAIPM
Site Code : 00000000
Start Date : 11/16/1999
Page No : 1

Groups Printed- Vehicle group 1

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:00 PM	42	196	62	0	300	18	184	6	0	208	100	100	27	0	227	28	148	101	0	277	1012
03:15 PM	28	247	50	0	325	16	140	8	0	164	95	162	29	0	286	31	129	109	0	269	1044
03:30 PM	37	279	57	0	373	16	160	9	0	185	112	158	19	0	289	31	102	109	0	242	1089
03:45 PM	30	281	46	0	357	20	154	7	0	181	131	222	19	0	372	28	114	134	0	276	1186
Total	137	1003	215	0	1355	70	638	30	0	738	438	642	94	0	1174	118	493	453	0	1064	4331
04:00 PM	53	295	50	0	398	19	145	10	0	174	117	172	13	0	302	29	105	147	0	281	1155
04:15 PM	36	305	42	0	383	24	141	7	0	172	121	164	12	0	297	22	95	145	0	262	1114
04:30 PM	30	360	42	0	432	20	135	12	0	167	115	139	24	0	278	18	86	154	0	258	1135
04:45 PM	19	348	46	0	413	20	139	10	0	169	97	128	19	0	244	33	94	168	0	295	1121
Total	138	1308	180	0	1626	83	560	39	0	682	450	603	68	0	1121	102	380	614	0	1096	4525
05:00 PM	40	331	47	0	418	18	130	12	0	160	123	115	18	0	256	21	102	130	0	253	1087
05:15 PM	32	312	50	0	394	27	110	16	0	153	124	137	16	0	277	10	108	164	0	282	1106
05:30 PM	33	317	49	0	399	32	128	4	0	164	124	129	22	0	275	25	91	137	0	253	1091
05:45 PM	35	280	38	0	353	29	132	11	0	172	109	131	16	0	256	21	93	138	0	252	1033
Total	140	1240	184	0	1564	106	500	43	0	649	480	512	72	0	1064	77	394	569	0	1040	4317
06:00 PM	26	301	44	0	371	20	124	7	0	151	116	113	27	0	256	19	92	162	0	273	1051
Grand Total	441	3852	623	0	4916	279	1822	119	0	2220	1484	1870	261	0	3615	316	1359	1798	0	3473	14224
Apprch %	9.0	78.4	12.7	0.0		12.6	82.1	5.4	0.0		41.1	51.7	7.2	0.0		9.1	39.1	51.8	0.0		
Total %	3.1	27.1	4.4	0.0	34.6	2.0	12.8	0.8	0.0	15.6	10.4	13.1	1.8	0.0	25.4	2.2	9.6	12.6	0.0	24.4	

Austin Tsutsumi and Associates, Inc.
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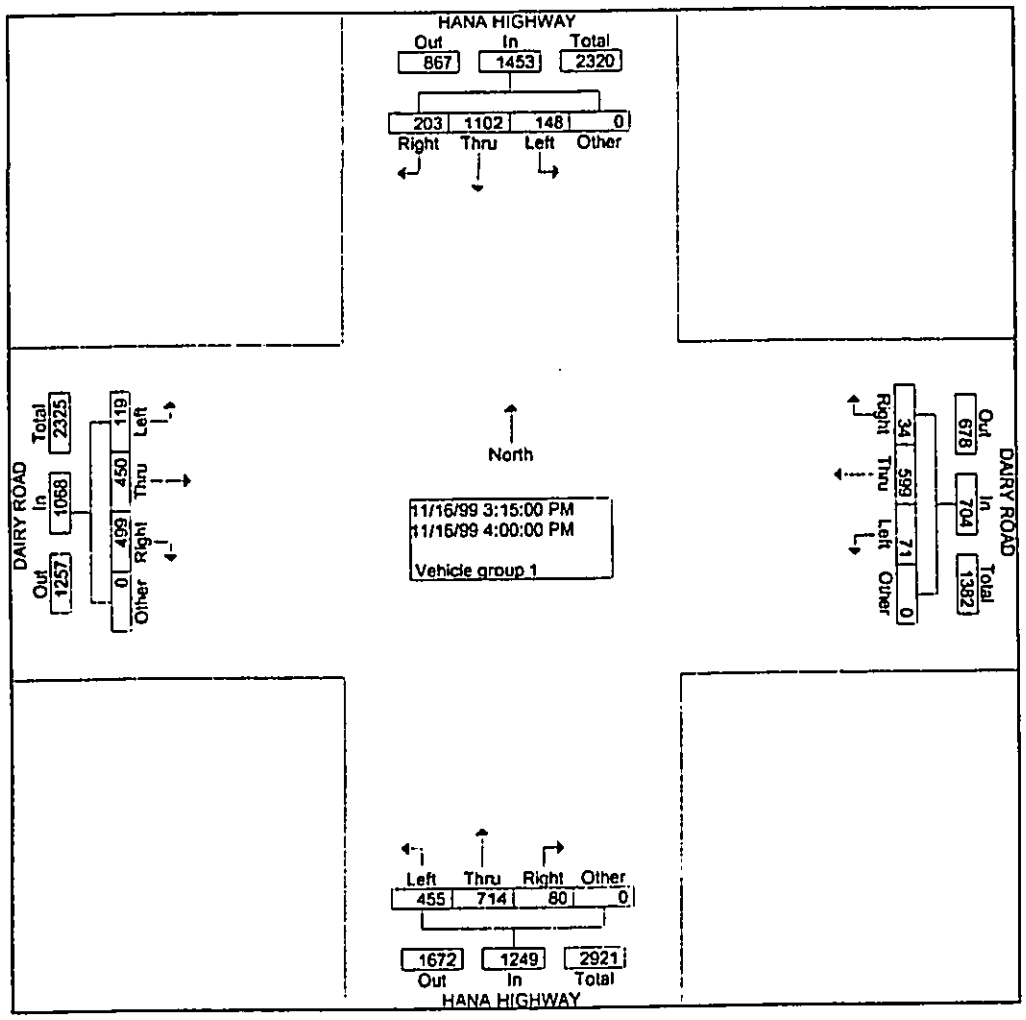
File Name : HANDAIPM
Site Code : 00000000
Start Date : 11/16/1999

	HANA HIGHWAY Southbound					DAIRY ROAD Westbound					HANA HIGHWAY Northbound					DAIRY ROAD Eastbound					
Start Time	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Int. Total
Peak Hour From 03:15 PM to 04:00 PM - Peak 1 of 1																					
Intersection 03:15 PM																					
Volume	148	1102	203	0	1453	71	599	34	0	704	455	714	80	0	1249	119	450	499	0	1068	4474
Percent	10.2	75.8	14.0	0.0		10.1	85.1	4.8	0.0		36.4	57.2	6.4	0.0		11.1	42.1	46.7	0.0		
03:45 Volume	30	281	46	0	357	20	154	7	0	181	131	222	19	0	372	28	114	134	0	276	1186
Peak Factor																					0.943
High Int.	04:00 PM					03:30 PM					03:45 PM					04:00 PM					
Volume	53	295	50	0	398	16	160	9	0	185	131	222	19	0	372	29	105	147	0	281	
Peak Factor					0.913					0.951					0.839					0.950	



ATA INC.

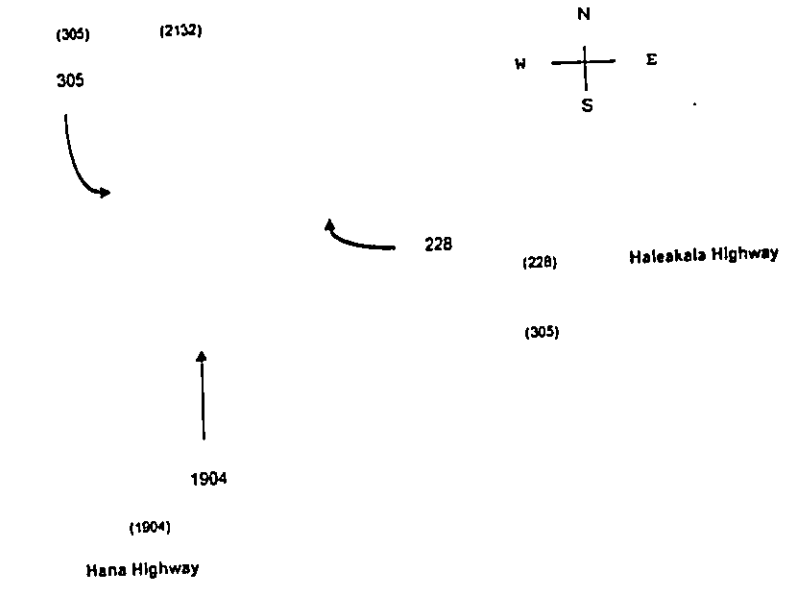
INTERSECTION COUNT SURVEY SUMMARY

North/South Street : Hana Highway
East/West Street : Haleakala Highway
Weather : Clear

Period: AM
Date: 11/17/99
Day : WED

15 MINUTE PERIOD	Hana Highway NORTHBOUND LEFT	THRU	RGHT	Hana Highway SOUTHBOUND LEFT	THRU	RGHT	Haleakala Highway EASTBOUND LEFT	THRU	RGHT	Haleakala Highway WESTBOUND LEFT	THRU	RGHT	TOTAL VOLUME 15 MIN	HOURLY
630 - 645	0	242	0	67	0	0	0	0	0	0	0	32	341	
645 - 700	0	425	0	101	0	0	0	0	0	0	0	30	556	
700 - 715	0	410	0	65	0	0	0	0	0	0	0	49	524	
715 - 730	0	488	0	75	0	0	0	0	0	0	0	45	608	2,029
730 - 745	0	536	0	77	0	0	0	0	0	0	0	52	665	2,353
745 - 800	0	474	0	70	0	0	0	0	0	0	0	52	596	2,393
800 - 815	0	406	0	83	0	0	0	0	0	0	0	79	568	2,437
815 - 830	0	341	0	57	0	0	0	0	0	0	0	90	488	2,317
830 - 845	0	313	0	70	0	0	0	0	0	0	0	68	451	2,103
845 - 900	0	306	0	74	0	0	0	0	0	0	0	61	441	1,948
PEAK 15 MINUTE PERIOD: 730 - 745	0	536	0	77	0	0	0	0	0	0	0	52	665	-
PEAK HOUR PERIOD: 715 - 815	0	1,904	0	305	0	0	0	0	0	0	0	228	-	2437
PEAK HOUR FACTOR: 715 - 815	-	0.89	-	0.92	-	-	-	-	-	-	-	0.72		
		0.89			0.92			-			0.72			

AM PEAK HOUR TURNING MOVEMENT DIAGRAM



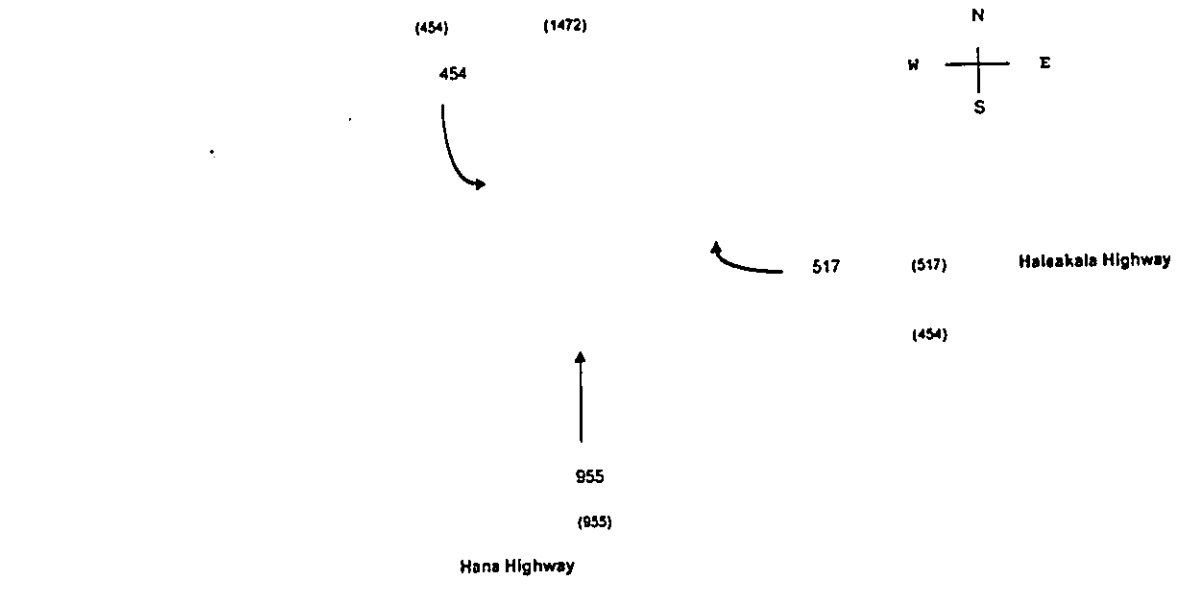
INTERSECTION COUNT SURVEY SUMMARY

North/South Street : Hana Highway
East/West Street : Haleakala Highway
Weather : Clear

Period: PM
Date: 11/16/99
Day: TUES

15 MINUTE PERIOD	Hana Highway NORTHBOUND LEFT	THRU	RGHT	Hana Highway SOUTHBOUND LEFT	THRU	RGHT	Haleakala Highway EASTBOUND LEFT	THRU	RGHT	Haleakala Highway WESTBOUND LEFT	THRU	RGHT	TOTAL VOLUME 15 MIN	HOURLY
1445 - 1500	0	396	0	148	0	0	0	0	0	0	0	150	694	
1500 - 1515	0	222	0	107	0	0	0	0	0	0	0	115	444	
1515 - 1530	0	227	0	117	0	0	0	0	0	0	0	140	484	
1530 - 1545	0	234	0	105	0	0	0	0	0	0	0	158	497	2,119
1545 - 1600	0	253	0	104	0	0	0	0	0	0	0	111	468	1,893
1600 - 1615	0	241	0	128	0	0	0	0	0	0	0	108	477	1,926
1615 - 1630	0	233	0	109	0	0	0	0	0	0	0	125	467	1,909
1630 - 1645	0	191	0	91	0	0	0	0	0	0	0	122	404	1,816
1645 - 1700	0	213	0	124	0	0	0	0	0	0	0	90	427	1,775
1700 - 1715	0	197	0	105	0	0	0	0	0	0	0	75	377	1,675
1715 - 1730	0	211	0	132	0	0	0	0	0	0	0	102	445	1,653
1730 - 1745	0	190	0	99	0	0	0	0	0	0	0	107	396	1,645
1745 - 1800	0	197	0	85	0	0	0	0	0	0	0	93	375	1,593
1800 - 1815	0	189	0	88	0	0	0	0	0	0	0	88	365	1,581
PEAK 15 MINUTE PERIOD: 1515 - 1530	0	227	0	117	0	0	0	0	0	0	0	140	694	-
PEAK HOUR PERIOD: 1515 - 1615	0	955	0	454	0	0	0	0	0	0	0	517	-	2119
PEAK HOUR FACTOR: 1515 - 1615	-	0.94	-	0.89	-	-	-	-	-	-	-	0.82		
		0.94			0.89			-			0.82			

PM PEAK HOUR TURNING MOVEMENT DIAGRAM



Austin Tsutsumi and Associates, Inc.
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File Name : HADAAM-T
Site Code : 00000000
Start Date : 11/17/1999
Page No : 1

Groups Printed- Vehicle group 1

	KEOLANI PL Westbound				HALEAKALA HWY From Southeast				DAIRY RD From Southwest				HALEAKALA HWY From Northwest				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:45 AM	0	27	28	55	4	3	3	10	2	82	6	90	93	10	3	106	261
Total	0	27	28	55	4	3	3	10	2	82	6	90	93	10	3	106	261
07:00 AM	2	38	45	85	5	9	0	14	2	52	1	55	55	6	5	66	220
07:15 AM	0	39	41	80	5	6	0	11	2	57	2	61	42	10	4	56	208
07:30 AM	0	34	43	77	3	11	0	14	3	56	4	63	59	7	7	73	227
07:45 AM	1	47	50	98	4	12	0	16	2	69	4	75	62	6	4	72	261
Total	3	158	179	340	17	38	0	55	9	234	11	254	218	29	20	267	916
08:00 AM	2	52	71	125	3	11	2	16	1	55	5	61	56	14	6	76	278
08:15 AM	0	60	82	142	8	6	2	16	1	52	2	55	65	6	6	77	290
08:30 AM	5	49	56	110	5	12	1	18	1	69	2	72	52	11	7	70	270
08:45 AM	2	45	53	100	7	9	4	20	5	74	5	84	45	9	6	60	264
Total	9	206	262	477	23	38	9	70	8	250	14	272	218	40	25	283	1102
Grand Total	12	391	469	872	44	79	12	135	19	566	31	616	529	79	48	656	2279
Apprch %	1.4	44.8	53.8		32.6	58.5	8.9		3.1	91.9	5.0		80.6	12.0	7.3		
Total %	0.5	17.2	20.6	38.3	1.9	3.5	0.5	5.9	0.8	24.8	1.4	27.0	23.2	3.5	2.1	28.8	

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File Name : HADAAM-T
Site Code : 00000000
Start Date : 11/17/1999
Page No : 2

	KEOLANI PL Westbound				HALEAKALA HWY From Southeast				DAIRY RD From Southwest				HALEAKALA HWY From Northwest				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	3	172	205	380	15	40	2	57	8	237	15	260	219	37	21	277	974
Percent	0.8	45.3	53.9		26.3	70.2	3.5		3.1	91.2	5.8		79.1	13.4	7.6		
08:00 Volume	2	52	71	125	3	11	2	16	1	55	5	61	56	14	6	76	278
Peak Factor																	0.876
High Int.	08:00 AM				07:45 AM				07:45 AM				08:00 AM				
Volume	2	52	71	125	4	12	0	16	2	69	4	75	56	14	6	76	
Peak Factor				0.760				0.891				0.867				0.911