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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

May 5, 2008

Robert B. Rechtman, Ph.D.
Rechtman Consulting, LLC
HC 1 Box 4149
Kea`au, HI 96749-9710

LOG NO: 2008.1339
DOC NO: 0805TS02
Archaeology

Dear Dr. Rechtman:

SUBJECT: Chapter 6E-42 Historic Preservation Review –
Archaeological Inventory Survey for Water Reservoir and Service Road
Keahuolū and Kealakehe Ahupua'a, North Kona District, Island of Hawai'i
TMK: (3) 7-4-021: por. 014, 020, 021

Thank you for the opportunity to comment on the above Archaeological Inventory Survey report (Ketner and Rechtman 2008).

This archaeological inventory survey investigated 7.3 acres. Four (4) new archaeological sites (SIHP#'s 50-10-28-26395 through -26398) and two (2) known sites (SIHP#'s 50-10-28-5011 and -13220) were identified and described. Site -13220 and the newly described sites appear to have been constructed and utilized prehistorically for activities related to agricultural production. -5011 is a historic core-filled boundary wall.

The report adequately describes the physical environment of the project area. The background section reviewing previous archaeological work in the vicinity is thorough. We believe the survey has covered the entire area of the property. The descriptions of the identified historic properties are acceptable. The SHPD concurs with the evaluations of significance under HAR §13-284-6 criterion "d." We agree with the recommended treatments for these sites, that none require further work. However we also agree that to mitigate any potential negative effects to nearby archaeological features all initial grubbing and grading activities should be monitored by a qualified archaeologist. We look forward to the submittal of a Monitoring Plan for this area prior to any groundbreaking activities.

The report satisfies the requirements of Hawaii Administrative Rules Chapter 13-276 and we approve of it as final. Please contact Assistant Hawaii Island Archaeologist, Tim Scheffler at (808) 981-2979 or, timothy.e.scheffler@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Nancy McMahon, Acting Archaeology Branch Chief
State Historic Preservation Division

TS

Appendix F

F-1
January 2008

TRAFFIC STUDY
FOR THE
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
NORTH KONA, ISLAND OF HAWAII, HAWAII

JANUARY 2008

PREPARED FOR

HAWAII HOUSING FINANCE & DEVELOPMENT CORP.

PREPARED BY

FEHR & PEERS
KAKUASSOCIATES

TRAFFIC STUDY
FOR THE
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
NORTH KONA, ISLAND OF HAWAII, HAWAII

January 2008

Prepared for:

HAWAII HOUSING FINANCE & DEVELOPMENT CORP.

Prepared by:

FEHR & PEERS/KAKU ASSOCIATES
201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
(310) 458-9916

Ref: 2145

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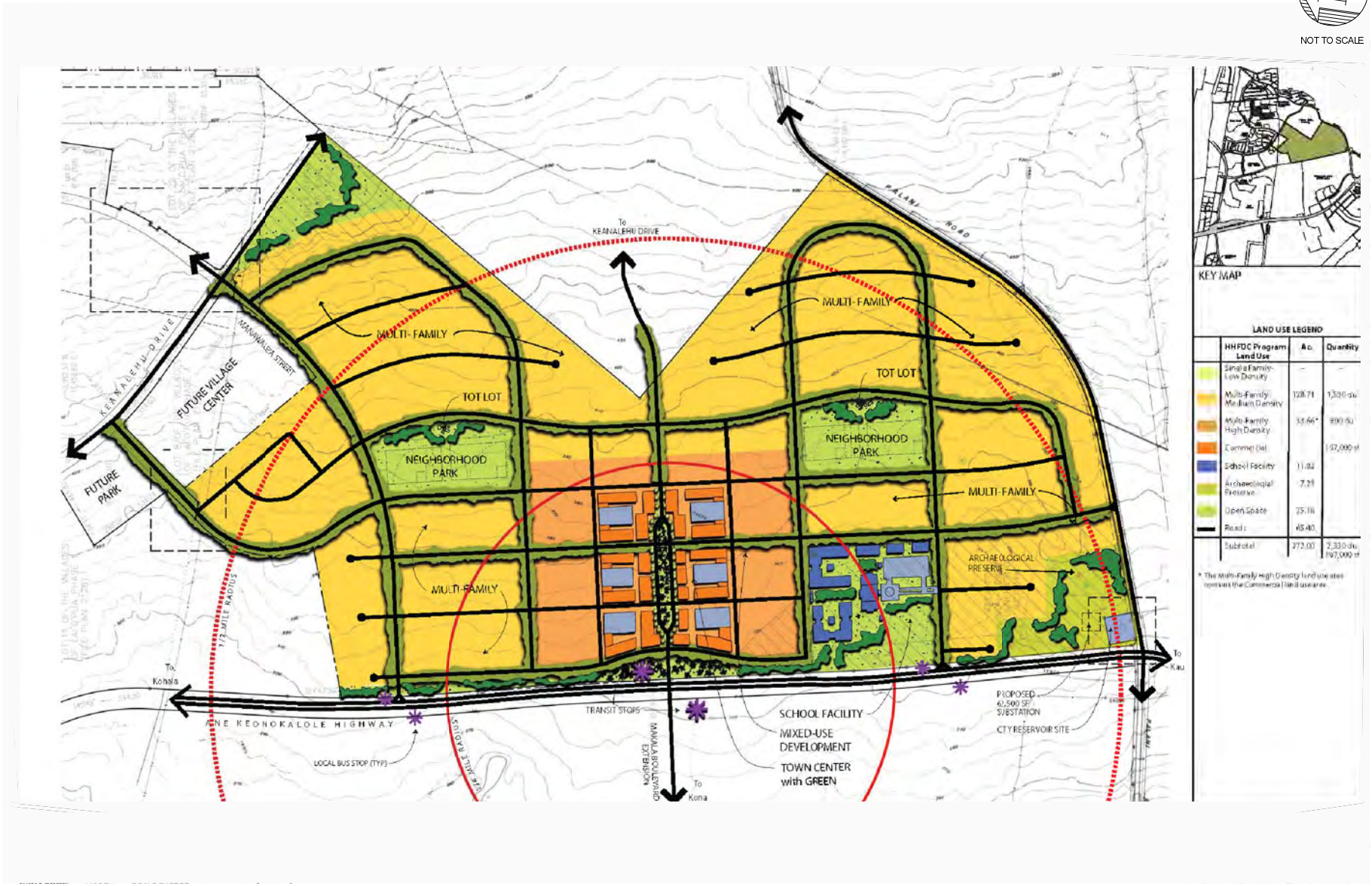
I. INTRODUCTION

This report documents the results of a traffic study conducted by Fehr & Peers/Kaku Associates to evaluate the potential traffic impacts associated with the proposed Keahuolu Affordable Housing Master Plan development (project) located in the North Kona area on the island of Hawaii. It includes a description of the assumptions and methods used to conduct the study as well as a discussion of the results.

PROJECT DESCRIPTION

The project would construct a new mixed-use neighborhood on vacant land in the area northeast of the intersection of Palani Road (SR 190) and Henry Street. Three project alternatives, as well as the No Action alternative, were assessed in this report. Each of the alternatives would have identical street and land use patterns but would vary in the overall intensity of development. Figure 1 presents the proposed land use plan for the project. Each alternative development concept would be focused on a mixed-use town center and would include 197,000 square feet of commercial/retail space, 25 acres of neighborhood parks, a seven-acre archeological preserve, a 12-acre site reserved for a school and between 1,020 and 2,330 housing units.

Concept A would construct 1,020 dwelling units, including 620 multi-family units and 400 single-family units in increments of 300 dwelling units per year from 2010-2012 and 120 additional dwelling units in 2013. Concept B would construct 1,840 dwelling units, including 1,240 multi-family units and 600 single-family units in increments of 300 dwelling units per year from 2010-2015 and 40 additional dwelling units in 2016. Concept C, illustrated in Figure 1, would construct 2,330 multi-family dwelling units in increments of 300 dwelling units from 2010-2016 and 230 additional dwelling units in 2017. Completion of the residential component of the project is anticipated by 2014 under Concept A, by 2015 under Concept B, and 2016 under Concept C. Each concept assumes that the entire project would be completed by the end of 2020.



Source: Belt Collins, 2007

FEHR & PEERS
KAKU ASSOCIATES

FIGURE 1
SITE PLAN FOR KEAHUOLU AFFORDABLE HOUSING MASTER PLAN

STUDY SCOPE

The study analyzes potential project-related traffic impacts on the roadway system in the vicinity of the proposed project. The study evaluates projected 2020 conditions with and without project completion when most of the planned streets in the region that are described in *Keahole to Honaunau Regional Circulation Plan* (County of Hawaii Planning Department, August 2006) are expected to be in place. The impact analysis examines projected future conditions, both with and without the proposed project. The following traffic scenarios are analyzed in the study:

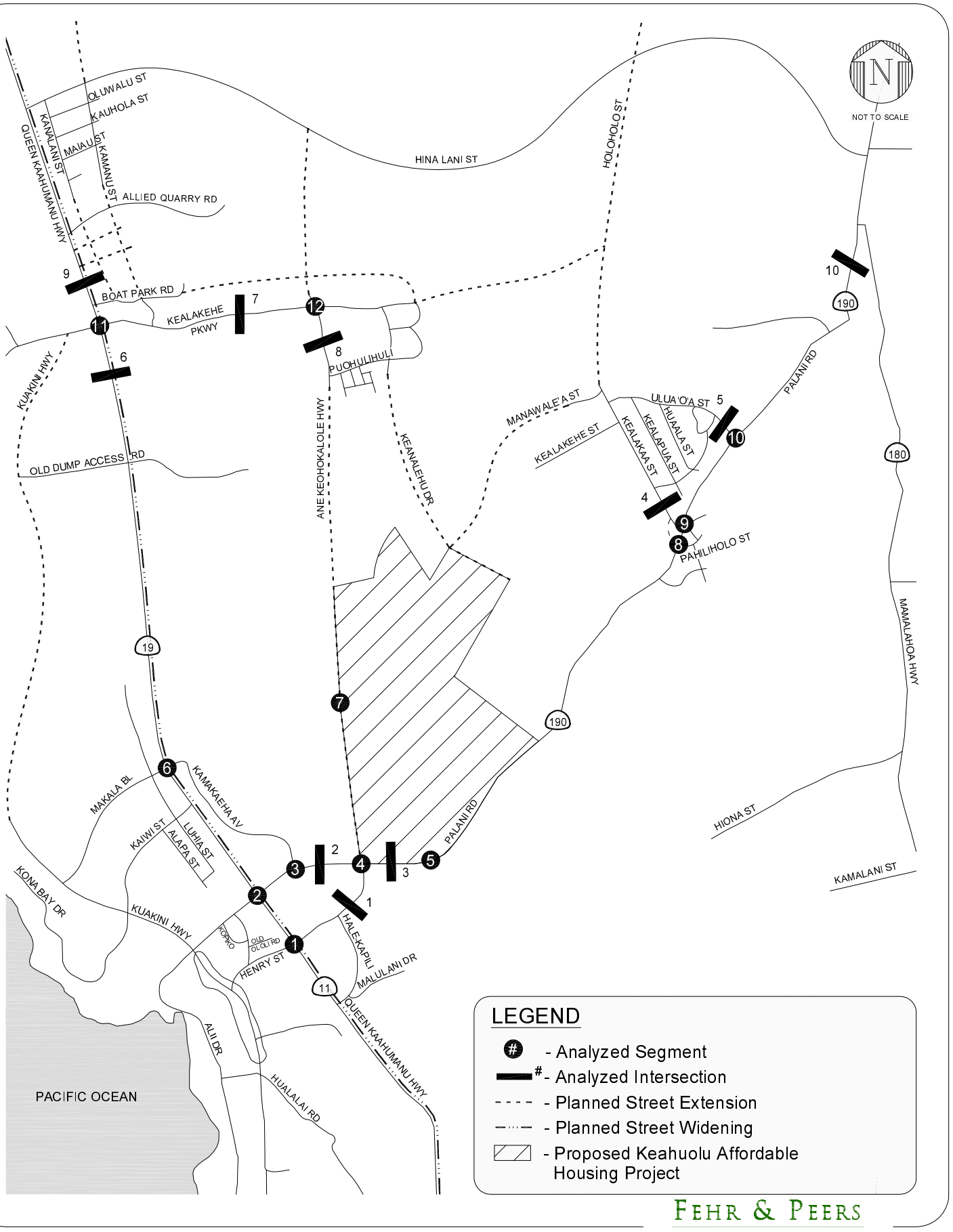
- Existing Conditions (2007) – The analysis of existing traffic conditions provides a basis for the remainder of the study. The existing conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.

- Cumulative Base (No Project) Conditions (2020) – The objective of this scenario is to project future traffic growth and operating conditions resulting from regional growth and related projects in the vicinity of the project site, without consideration of traffic generated by the proposed project.

- Cumulative plus Project Conditions (2020) – The objective of this scenario is to project potential impacts of the proposed project on future traffic operating conditions with project traffic added to the cumulative base traffic forecasts in 2020.

The study analyzed the potential project-related traffic impacts under typical weekday a.m. and p.m. peak hour traffic conditions at 12 intersections in the vicinity of the proposed project. The analyzed intersections are illustrated in Figure 2 and are:

1. Henry Street & Queen Kaahumanu Highway (SR 19)
2. Palani Road (SR 190) & Queen Kaahumanu Highway (SR 19)
3. Kamakaeha Avenue & Palani Road (SR 190)
4. Henry Street & Palani Road (SR 190)
5. future intersection of Palani Road (SR 190) & Minor Site Access Road
6. Queen Kaahumanu Highway (SR 19) & Makala Boulevard
7. future intersection of Ane Keohokalole Highway & Major Site Access Road
8. Pahiliholo Street & Palani Road (SR 190)
9. Kealakaa Street & Palani Road (SR 190)
10. Uluaoa Street & Palani Road (SR 190)
11. Queen Kaahumanu Highway (SR 19) & Kealakehe Parkway
12. Kealakehe Parkway & Ane Keohokalole Highway



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KAKU ASSOCIATES

FIGURE 2
STUDY AREA AND ANALYZED LOCATIONS

The effect of the proposed project options on daily traffic volumes was also measured on 10 street segments, also shown in Figure 2:

1. Henry Street south of Palani Road (SR 190)
2. Palani Road (SR 190) makai (west) of Henry Street
3. Palani Road (SR 190) mauka (east) of Henry Street
4. Kealakaa Street north of Palani Road (SR 190)
5. Uluaoa Street north of Palani Road (SR 190)
6. Queen Kaahumanu Highway (SR 19) south of Kealakehe Parkway
7. Kealakehe Parkway makai (west) of Ane Keohokalole Highway
8. Ane Keohokalole Highway south of Kealakehe Parkway
9. Queen Kaahumanu Highway (SR 19) north of Kealakehe Parkway
10. Palani Road (SR 190) south of Mamalahoa Highway

New baseline traffic counts were collected at these locations in August 2007 except at study intersections #5 and #7, both of which are future intersections.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introduction. Chapter II describes the existing circulation system, traffic volumes, and operating conditions in the study area as well as describes currently planned transportation improvements. The methodologies used to forecast future cumulative and project traffic volumes and the resultant forecasts are described in Chapter III. Chapter IV presents an assessment of future traffic impacts at intersections in the surrounding area and identifies mitigation measures to address both cumulative and project-specific impacts. Chapter V contains an assessment of potential future street segment impacts and discusses potential mitigation measures. Finally, the conclusions of the study are summarized in Chapter VI.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to identify existing transportation conditions in the vicinity of the proposed project. The assessment of existing conditions relevant to this study includes an inventory of the street and highway system, traffic volumes on these facilities, and operating conditions at key intersections and street segments.

EXISTING ROADWAY SYSTEM

The study area, as shown in Figure 2, is generally bounded by Kealakehe Parkway on the north, Queen Kaahumanu Highway (SR 19) on the west (makai), and Palani Road (SR 190) on the southeast. The street system in the study area is illustrated in Figure 2. Primary regional access to the area is provided by Queen Kaahumanu Highway, which runs north-south approximately one mile makai of the project site and by Mamalahoa Highway, which runs northeast-southwest approximately two miles mauka of the project site. Henry Street, currently running between Queen Kaahumanu Highway and Palani Road, also provides access to the project site. The proposed Ane Keohokahole Highway (Mid-Level Road) extension will extend Henry Street northward to Hina Lani Street and will serve the project site by providing direct access to Palani Road and Kealakehe Parkway. Diagrams of the existing intersection lane configurations at the ten existing study intersections are provided in Appendix A.

EXISTING TRAFFIC VOLUMES AND OPERATING CONDITIONS

The following sections present the existing peak hour traffic volumes at the study intersections, daily street segment traffic volumes, a description of the methodology used to analyze operating conditions, and the resulting level of service (LOS) at each location under existing conditions.

Existing Peak Hour Traffic Volumes

New weekday peak period intersection turning movement counts were collected between 6:00 and 9:00 a.m. and between 3:00 and 6:00 p.m. at the 10 existing study intersections on Tuesday, August 12, Wednesday, August 13, and Thursday, August 14, 2007. Existing weekday peak hour volumes at these intersections are illustrated in Figure 3 and the traffic count data sheets are provided in Appendix B.

Existing Daily Street Segment Traffic Volumes

24-hour machine counts were conducted at the 10 street segments listed in Chapter I for analysis of impacts of the proposed project on Tuesday, August 12, Wednesday, August 13, and Thursday, August 14, 2007. The existing daily traffic volume data are available in Appendix B.

Level of Service Methodology

LOS is a qualitative measure used to describe the condition of traffic flow ranging from excellent conditions at LOS A to overload conditions at LOS F. LOS definitions for signalized and unsignalized intersections are provided in Tables 1 and 2, respectively. LOS D is considered to be the minimum desirable level of service in this area.

LOS analyses were conducted at each of the existing study intersections to determine their current operating conditions using the operations methodology for signalized intersections and the two-way stop-controlled methodology for unsignalized intersections from *2000 Highway Capacity Manual* (2000 HCM) (Transportation Research Board, 2000).

Existing Peak Hour Intersection Levels of Service

The existing weekday a.m. and p.m. peak hour turning movements depicted in Figure 3 were used in conjunction with the LOS methodologies described above to determine existing operating conditions at each study intersection. Detailed LOS calculation worksheets are included in

1. Queen Kaahumanu Hwy (SR 19) & Henry St

98(166)
384(609)
100(109)
62(179)
330(390)
359(436)
61(67)
275(406)
25(107)
459(418)
534(331)
187(169)

2. Queen Kaahumanu Hwy (SR 19) & Palani Rd (SR 190) &

87(170)
453(580)
257(294)
29(44)
374(434)
18(51)
193(269)
144(293)
99(219)
15(15)
593(524)
71(28)

3. Kamakaeha Ave & Palani Rd (SR 190)

47(127)
13(63)
141(161)
453(474)
240(498)

4. Henry St & Palani Rd (SR 190)

550(501)
650(484)
185(484)
37(149)
399(377)
122(110)

5. Minor Site Access Rd & Palani Rd (SR 190)

INTERSECTION DOES NOT CURRENTLY EXIST

6. Queen Kaahumanu Hwy (SR 19) & Makala Blvd

47(70)
580(938)
138(240)
143(104)
21(71)
7(21)
309(417)
72(126)
32(41)
22(65)
652(569)
7(11)

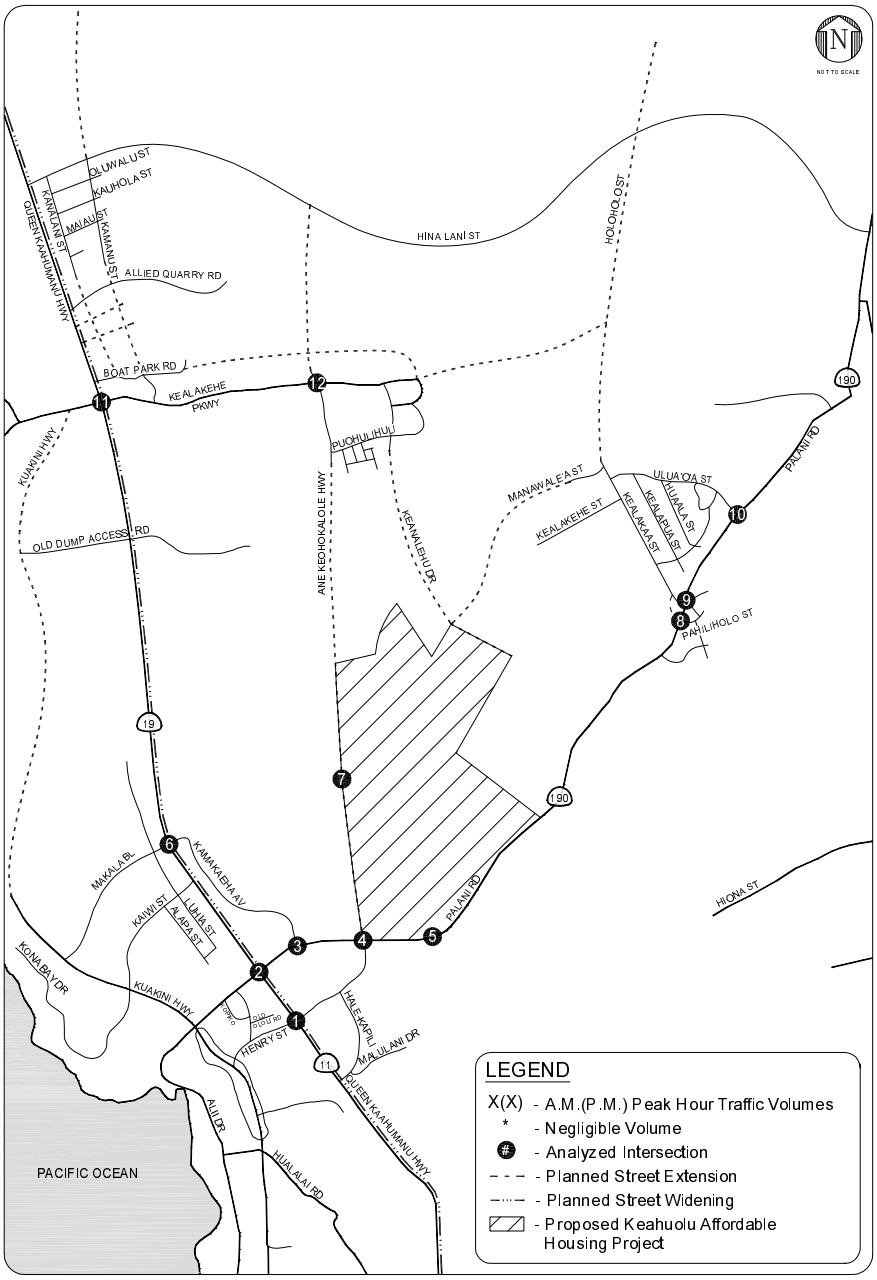

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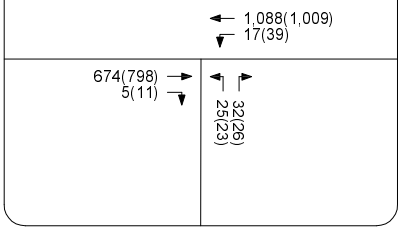
FIGURE 3
EXISTING PEAK HOUR TRAFFIC VOLUMES

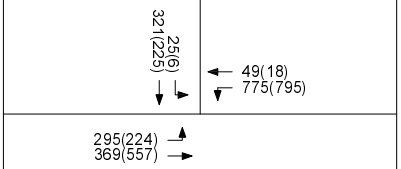
7. Ane Keohokalole Hwy & Major Site Access Rd

INTERSECTION DOES NOT CURRENTLY EXIST

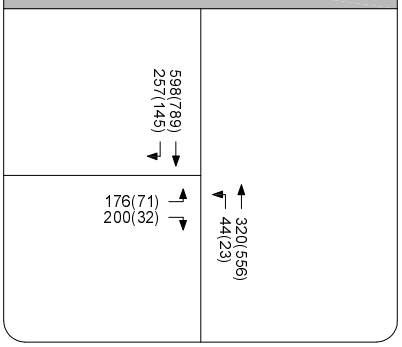
8. Pahiliholo St & Palani Rd (SR 190)



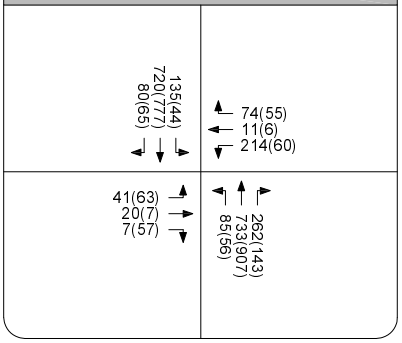
9. Kealakaa St & Palani Rd (SR 190)



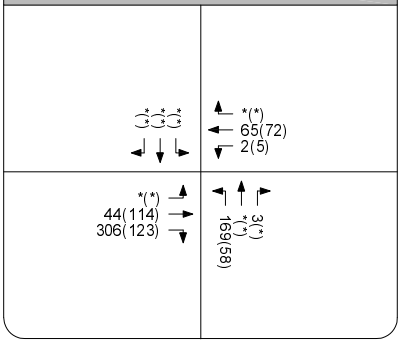
10. Palani Rd (SR 190) & Uluaoa St



11. Queen Kaahumanu Hwy (SR 19) & Kealakehe Pkwy



12. Ane Keohokalole Hwy & Kealakehe Pkwy



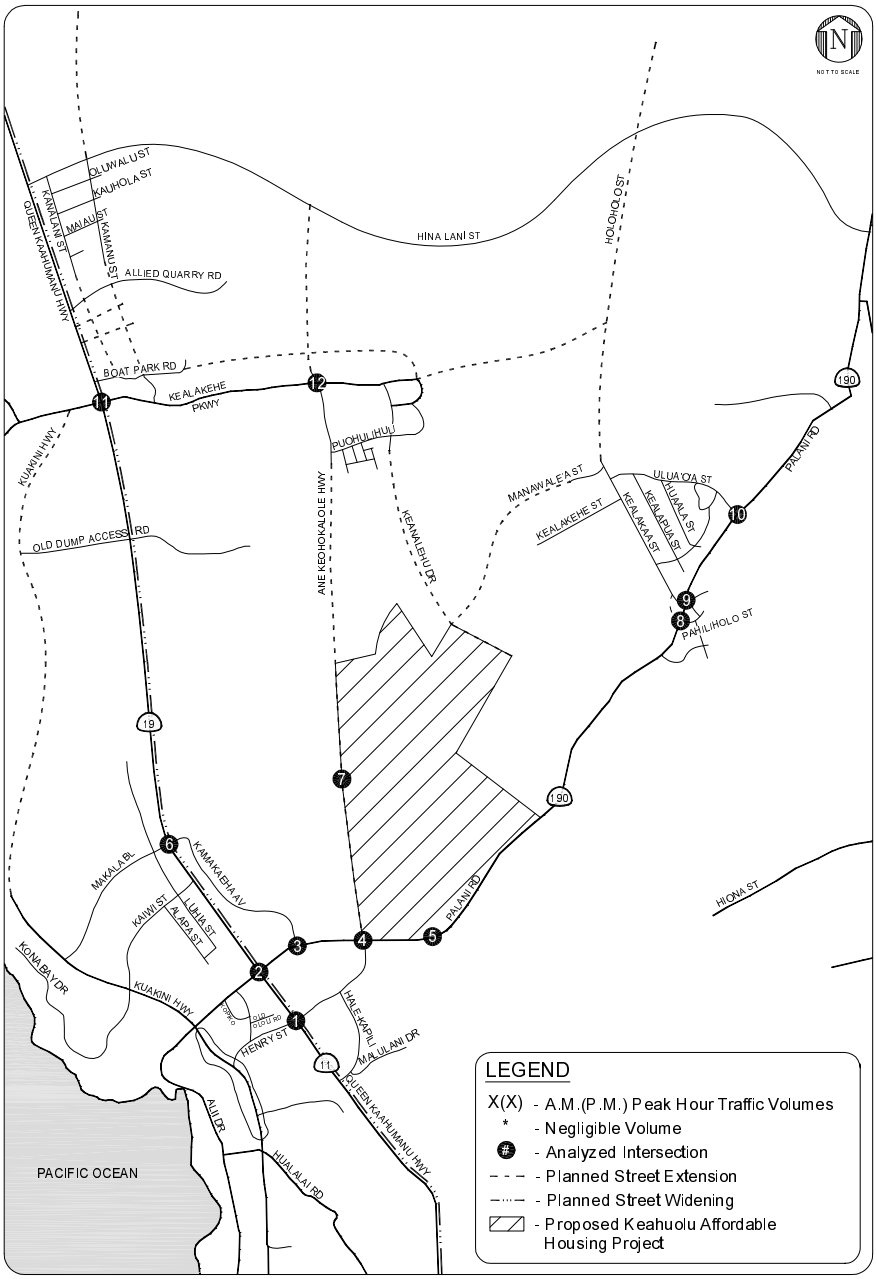


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FIGURE 3 (CONT.)
EXISTING PEAK HOUR TRAFFIC VOLUMES

TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity	Average Stopped Delay per Vehicle (seconds)*
A	0.000 - 0.600	≤10
B	>0.600 - 0.700	>10 and ≤20
C	>0.700 - 0.800	>20 and ≤35
D	>0.800 - 0.900	>35 and ≤55
E	>0.900 - 1.000	>55 and ≤80
F	> 1.000	>80

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR
UNSIGNALIZED INTERSECTIONS

Level of Service	Average Total Delay (seconds/vehicle)
A	$\leq$ 10.0
B	> 10.0 and $\leq$ 15.0
C	> 15.0 and $\leq$ 25.0
D	> 25.0 and $\leq$ 35.0
E	> 35.0 and $\leq$ 50.0
F	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Appendix C. Table 3 summarizes the results of this analysis, including the average control delay and corresponding LOS during the a.m. and p.m. peak hours. Calculated volume-to-capacity (V/C) ratios are also shown in Table 3. As indicated in Table 3, three of the 10 existing study intersections are operating at LOS E or F during both the a.m. and p.m. peak hours:

8. Palani Road (SR 190) & Pahiliholo Street
9. Kealakaa Street & Palani Road (SR 190)
10. Uluaoa Street & Palani Road (SR 190)

The other seven existing study intersections are operating at LOS D or better during the a.m. and p.m. peak hours.

TABLE 3
YEAR 2006 EXISTING CONDITIONS
PEAK HOUR LEVELS OF SERVICE

	Intersections	Peak Hour	V/C	Del/Veh*	LOS
1	Queen Kaahumanu Hwy (SR 19) & Henry St	A.M. P.M.	0.634 0.626	23 25	C C
2	Queen Kaahumanu Hwy (SR 19) & Palani Rd (SR 190)/Alii Dr	A.M. P.M.	0.777 0.874	26 31	C C
3	Kamakaeha Av & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	15 25	B D
4	Henry St & Palani Rd (SR 190)	A.M. P.M.	0.659 0.804	12 19	B B
5	Project Minor Access & Palani Rd (SR 190) [b]	A.M. P.M.	NA NA	NA NA	NA NA
6	Queen Kaahumanu Hwy (SR 19) & Makala Bl	A.M. P.M.	0.748 0.973	23 36	C D
7	Ane Keohokahole Hwy & Major Site Access Road [b]	A.M. P.M.	NA NA	NA NA	NA NA
8	Palihiolo St & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	48 **	E F
9	Kealakaa St & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	** 33	F D
10	Palani Rd & Uluaoa St (SR 190) [a]	A.M. P.M.	NC NC	** **	F F
11	Queen Kaahumanu Hwy (SR 19) & Kealakehe Hwy	A.M. P.M.	0.742 0.652	20 11	B B
12	Ane Keohokalole Hwy & Kealakehe Hwy [a]	A.M. P.M.	NC NC	12 11	B B

Note:

* Delay indicates average stopped delay per vehicle in seconds for signalized intersections. The worst case vehicular delay is reported for stop-controlled intersections.

** Indicates oversaturated conditions. Delay cannot be calculated.

NA = Not Applicable

NC = Not Calculated

[a] Intersection is controlled by stop signs on the minor approaches.

[b] Future intersection.

III. FUTURE TRAFFIC PROJECTIONS

In order to evaluate the potential impact of traffic generated by the proposed project on the surrounding street system, it was necessary to develop estimates of future traffic conditions in the area both with and without the project. Future traffic conditions without the proposed project reflect traffic increases due to general regional growth and development as well as traffic increases generated by other specific developments near the project site. These conditions are referred to as the cumulative base condition (i.e., no project conditions). The sum of the cumulative base and project-generated traffic represents the cumulative plus project conditions. Development of these future 2020 traffic scenarios conditions is described in this chapter.

CUMULATIVE BASE TRAFFIC PROJECTIONS

The cumulative base traffic projections include two elements. The first element is growth in the existing background traffic volumes reflecting the effects of overall regional growth and development in and around the study area, referred to as ambient growth. The second is the traffic generated by specific cumulative projects located in or near the study area.

Areawide Traffic Growth and Cumulative Development Projects

Traffic projections were estimated for this study on the basis of actual traffic growth on Queen Kaahumanu Highway (SR 19) and Mamalahoa Highway/Palani Road (SR 190) between 1998 and 2004, which shows that peak hour traffic volumes have increased at a simple growth rate of approximately 5% per year during the period. That estimate is consistent with the level of growth identified in *Keahole to Honaunau Regional Circulation Plan.* Accordingly, the 2007 northbound and southbound volumes were increased by 65% (5% annual simple growth rate x 13 years) through 2020.

Available information regarding potential future projects either under construction, planned, or proposed for development within or near the study area was obtained from the project team. Estimated trips from the related projects were assigned to the roadway system based on their anticipated distribution patterns. The geographic distribution of traffic generated by new developments depends on several factors, such as the type and density of the proposed land uses, the geographic distribution of the population from which employees and/or patrons may be drawn, the geographic distribution of activity centers (employment, commercial, and other) to which residents of proposed residential projects may be drawn, and its location in relation to the surrounding street system.

The resulting cumulative base traffic volumes, representing future conditions without the project for year 2020, are presented in Figure 4. These future projections take into account the estimated overall growth in the surrounding area without the addition of traffic generated by the proposed Keahuolu Affordable Housing Master Plan project.

Baseline Street System Improvements

Discussions were held with agency staff regarding the roadway improvements in or near the study area planned for completion by 2020. These improvements, whether the result of local capital improvement programs or in connection with planned or approved projects, would result in dramatically improved mobility options for residents and visitors and in capacity changes at various locations throughout the study area as shown in Figure 2 and discussed below. Relevant information from *Keahole to Honaunau Regional Circulation Plan* is presented in Appendix D. It shows that the following roadway system improvements are planned:

- Queen Kaahumanu Highway – The main arterial highway through Kailua-Kona is being widened from two to four lanes (two in each direction) with a median from Kona International Airport to Henry Street in Kailua.

- Main Street (Kamanu Street) – Kamanu Street will be extended to connect with Kealakehe Parkway and north to the proposed University Drive.

- Ane Keohokalole (Mid-Level Road) – This project will extend Henry Street from Palani Road to the existing segment of Ane Keohokalole Highway and northward to Hina Lani Street.

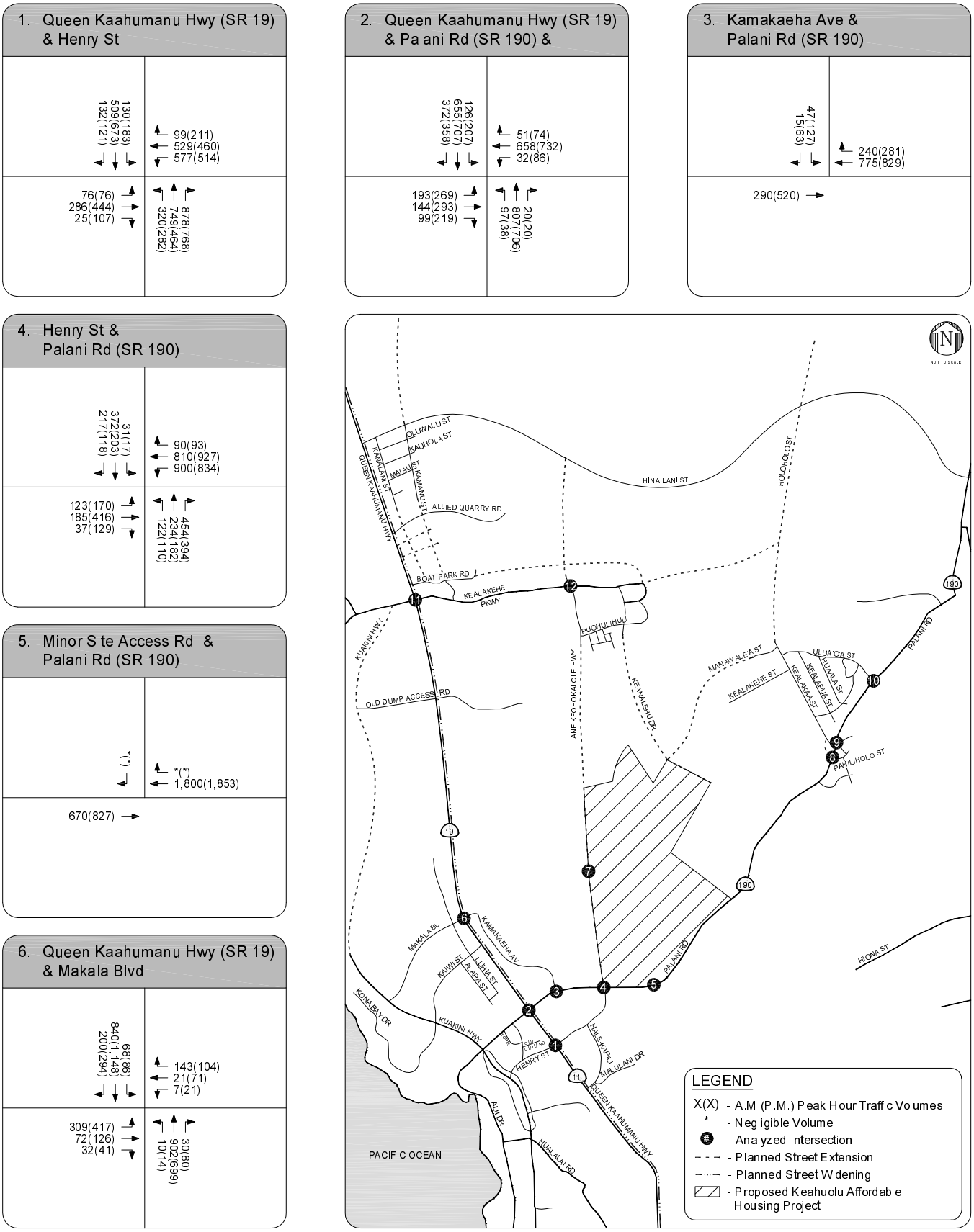

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FIGURE 4
CUMULATIVE BASE (2020) PEAK HOUR TRAFFIC VOLUMES

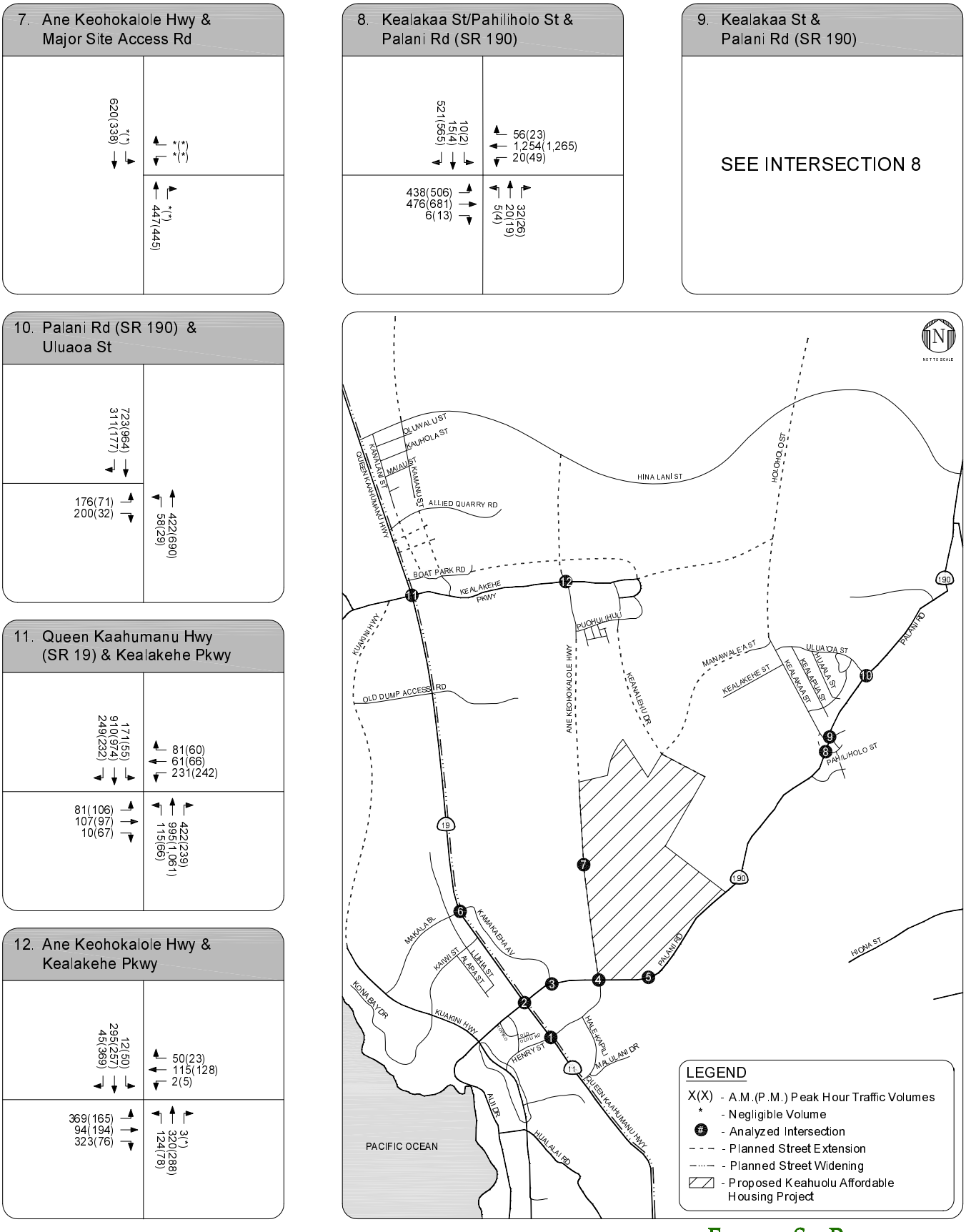

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FIGURE 4 (CONT.)
CUMULATIVE BASE (2020) PEAK HOUR TRAFFIC VOLUMES

- Kealakaa Street/Holoholo Street Extension – This planned street would extend Kealakaa Street northward to Holoholo Street and the planned Kealakehe Parkway.

- Kuakini Highway – Kuakini Highway will be extended northward to connect to Kealakehe Parkway, forming a new north-south roadway on the makai side of Queen Kaahumanu Highway.

- Intersection of Kealakaa Street and Palani Road – Two T-intersections, Kealakaa Street & Palani Road and Palihiolo Street & Palani Road, are being merged into a signalized intersection with additional turn lanes. This will result in the existing intersection of Kealakaa Street & Palani Road (Intersection 9) being limited to right turns in, with all other turning movements focused at Pahiliholo Street & Palani Road (Intersection 8). For this reason, only the latter of these locations is analyzed in the future scenarios.

- Keanalehu Drive and Manawale'a Street – These streets are currently being constructed just north of the project site to create a new mauka-makai connection.

Cumulative Base Traffic Volumes

Forecasts of cumulative base traffic volumes were developed by adding the total projected traffic growth to the background existing volumes and distributing it over the future street network. Estimated traffic shifts for the 2020 horizon year were developed based on field observations and current and future land use patterns. Approximately 20% of the vehicles traveling through Queen Kaahumanu Highway and Mamalahoa Highway/Palani Road are expected to divert to the planned new roads described above that will be parallel to these existing highways. The resulting projected traffic volumes at the analyzed intersections, illustrated in Figure 4, represent the 2020 cumulative base conditions, i.e., future conditions without the project.

PROJECT TRAFFIC PROJECTIONS

Development of future traffic projections for the proposed project involved a three-step process. This process included the estimation of project trip generation, trip distribution, and trip assignment.

Project Trip Generation

Trip generation rates found in *Trip Generation, 7th Edition* (Institute of Transportation Engineers, 2003) were used to estimate number of trips to and from the proposed project. The trip generation rates used in this study and the estimated new trips generated by the proposed project Concepts A, B and C are summarized in Tables 4, 5, and 6, respectively.

As shown in Table 4, Concept A is estimated to generate about 9,953 daily trips, including approximately 1,178 trips during the morning peak hour (631 inbound and 547 outbound) and approximately 1,046 trips during the evening peak hour (543 inbound and 503 outbound).

As shown in Table 5, Concept B is estimated to generate about 16,034 daily trips, including approximately 1,511 trips during the morning peak hour (665 inbound and 846 outbound) and approximately 1,629 trips during the evening peak hour (918 inbound and 711 outbound).

As shown in Table 6, Concept C is estimated to generate about 17,617 daily trips, including approximately 1,580 trips during the morning peak hour (646 inbound and 934 outbound) and approximately 1,695 trips during the evening peak hour (973 inbound and 722 outbound).

Project Trip Distribution and Trip Assignment

Factors considered in the development of the project trip distribution include a review of historic traffic volume data in the area, observations of existing traffic patterns and discussions with residents, the geographic distribution of employment and commercial activity in the vicinity, and the proposed street extension program described in *Keahole to Honaunau Regional Circulation Plan*. Based on these factors, the following trip distribution pattern was estimated for the project-generated traffic and is illustrated in Figure 5:

- Northwest 40%
- Northeast 20%
- Southwest 40%

TABLE 4
PRELIMINARY TRIP GENERATION ESTIMATES
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
CONCEPT A [a]

Land Use	ITE#	Rate	Daily	A.M. Peak Hour			P.M. Peak Hour		
				Trip Gen	In	Out	Trip Gen	In	Out
Trips Generation Rates [b]									
Single Family Housing	210	per Dwelling Unit [1]	9.57	0.75	25%	75%	1.01	63%	37%
Apartments	220	per Dwelling Unit [1]	6.72	0.51	20%	80%	0.62	65%	35%
Commercial/Retail	710	per 1,000 square feet [2]	11.01	1.55	88%	12%	1.49	17%	83%
High School	530	per ksf	12.89	3.06	71%	29%	0.97	54%	46%

Land Use	ITE#	Size	Daily	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Single Family Housing	210	400 DU	3,828	75	225	300	255	149	404
Apartments	220	620 DU	4,166	63	253	316	250	134	384
Commercial/Retail	710	197 ksf	2,169	268	37	305	50	244	294
High School	530	150 ksf [c]	1,934	326	133	459	79	67	146
TOTAL PROJECT			12,097	732	648	1,380	634	594	1,228
Less: Internal Capture [d]			*-2,144*	*-101*	*-101*	*-202*	*-91*	*-91*	*-182*
Net New Trips			**9,953**	**631**	**547**	**1,178**	**543**	**503**	**1,046**

Notes:
[1] Dwelling Unit = DU
[2] 1,000 square feet = ksf
[a] Source: *Keahuolu Affordable Housing Project Master Plan, Kailua-Kona, Hawaii,* Belt Collins Hawaii Ltd., June 2007.
[b] Source: *Trip Generation, 7th Edition,* Institute of Transportation Engineers (ITE), 2003.
[c] Assume that approximately 30% of the total school site (12 acres) is occupied by building area.
[d] Internal trip caputre estimates were based on methodology described in *Trip Generation Handbook, 2nd Edition,* ITE, 2004.

TABLE 5
PRELIMINARY TRIP GENERATION ESTIMATES
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
CONCEPT B [a]

Land Use	ITE#	Rate	Daily	A.M. Peak Hour			P.M. Peak Hour		
				Trip Gen	In	Out	Trip Gen	In	Out
Trips Generation Rates [b]									
Single Family Housing	210	per Dwelling Unit [1]	9.57	0.75	25%	75%	1.01	63%	37%
Apartments	220	per Dwelling Unit [1]	6.72	0.51	20%	80%	0.62	65%	35%
Commercial/Retail	710	per 1,000 square feet [2]	11.01	1.55	88%	12%	1.49	17%	83%
High School	530	per ksf	12.89	3.06	71%	29%	0.97	54%	46%

Land Use	ITE#	Size	Daily	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Single Family Housing	210	600 DU	5,742	113	338	450	382	224	606
Apartments	220	1,240 DU	8,333	126	506	632	500	269	769
Commercial/Retail	710	197 ksf	2,169	268	37	305	50	244	294
High School	530	150 ksf [c]	1,934	326	133	459	79	67	146
TOTAL PROJECT			18,178	833	1,014	1,846	1,011	804	1,815
Less: Internal Capture [d]			*-2,144*	*-168*	*-168*	*-335*	*-93*	*-93*	*-186*
Net New Trips			**16,034**	**665**	**846**	**1,511**	**918**	**711**	**1,629**

Notes:
[1] Dwelling Unit = DU
[2] 1,000 square feet = ksf
[a] Source: *Keahuolu Affordable Housing Project Master Plan, Kailua-Kona, Hawaii,* Belt Collins Hawaii Ltd., June 2007.
[b] Source: *Trip Generation, 7th Edition,* Institute of Transportation Engineers (ITE), 2003.
[c] Assume that approximately 30% of the total school site (12 acres) is occupied by building area.
[d] Internal trip caputre estimates were based on methodology described in *Trip Generation Handbook, 2nd Edition,* ITE, 2004.

TABLE 6
PRELIMINARY TRIP GENERATION ESTIMATES
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
CONCEPT C [a]

Land Use	ITE#	Rate	Daily	A.M. Peak Hour			P.M. Peak Hour		
				Trip Gen	In	Out	Trip Gen	In	Out
Trips Generation Rates [b]									
Apartments	220	per Dwelling Unit [1]	6.72	0.51	20%	80%	0.62	65%	35%
Commercial/Retail	710	per 1,000 square feet [2]	11.01	1.55	88%	12%	1.49	17%	83%
High School	530	per ksf	12.89	3.06	71%	29%	0.97	54%	46%

Land Use	ITE#	Size	Daily	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Apartments	220	2,330 DU	15,658	238	950	1,188	939	506	1,445
Commercial/Retail	710	197 ksf	2,169	268	37	305	50	244	294
High School	530	150 ksf [c]	1,934	326	133	459	79	67	146
TOTAL PROJECT			19,761	832	1,120	1,952	1,068	817	1,885
Less: Internal Capture [d]			*-2,144*	*-186*	*-186*	*-372*	*-95*	*-95*	*-190*
Net New Trips			**17,617**	**646**	**934**	**1,580**	**973**	**722**	**1,695**

Notes:
[1] Dwelling Unit = DU
[2] 1,000 square feet = ksf
[a] Source: *Keahuolu Affordable Housing Project Master Plan, Kailua-Kona, Hawaii,* Belt Collins Hawaii Ltd., June 2007.
[b] Source: *Trip Generation, 7th Edition,* Institute of Transportation Engineers (ITE), 2003.
[c] Assume that approximately 30% of the total school site (12 acres) is occupied by building area.
[d] Internal trip caputre estimates were based on methodology described in *Trip Generation Handbook, 2nd Edition,* ITE, 2004.

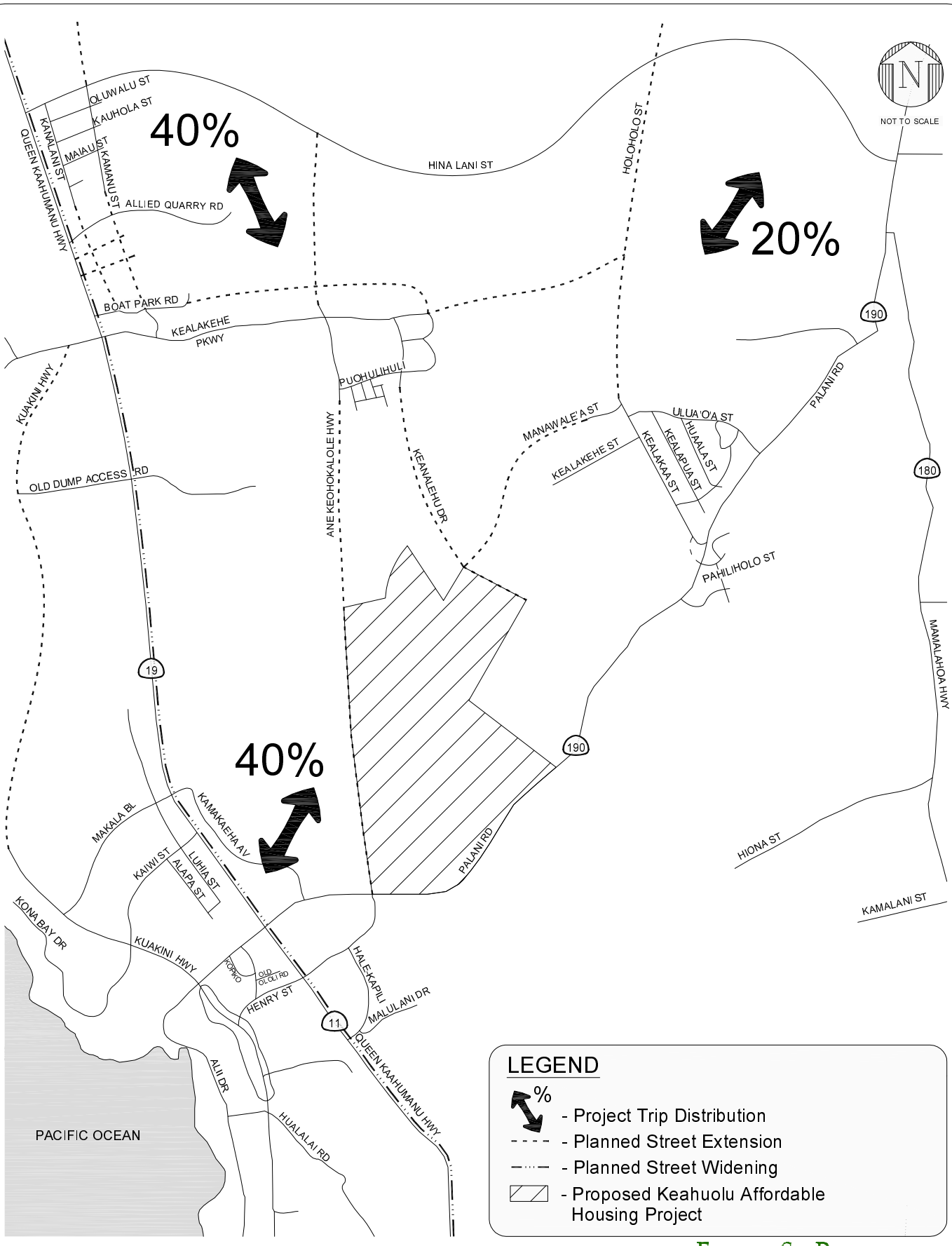

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FIGURE 5
PROJECT TRIP DISTRIBUTION

The project trip assignment took into account the roadway network anticipated to be in place by 2020, when the project would be fully built out. Figures 6, 7, and 8 illustrate the assignment of new project-related traffic at each study intersection.

CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

The project-generated traffic volumes were added to the cumulative base traffic projections to develop the cumulative plus project traffic forecasts for 2020. Figures 9, 10, and 11 illustrate the projected cumulative plus project a.m. and p.m. peak hour traffic volumes at each of the 12 study intersections. Appendix A depicts the anticipated future lane configurations at the study intersections, including assumptions regarding the future intersections of Palani Road (SR 190) & Minor Site Access Road and Ane Keohokalole Highway & Major Site Access Road and the north leg of Henry Street & Palani Road.

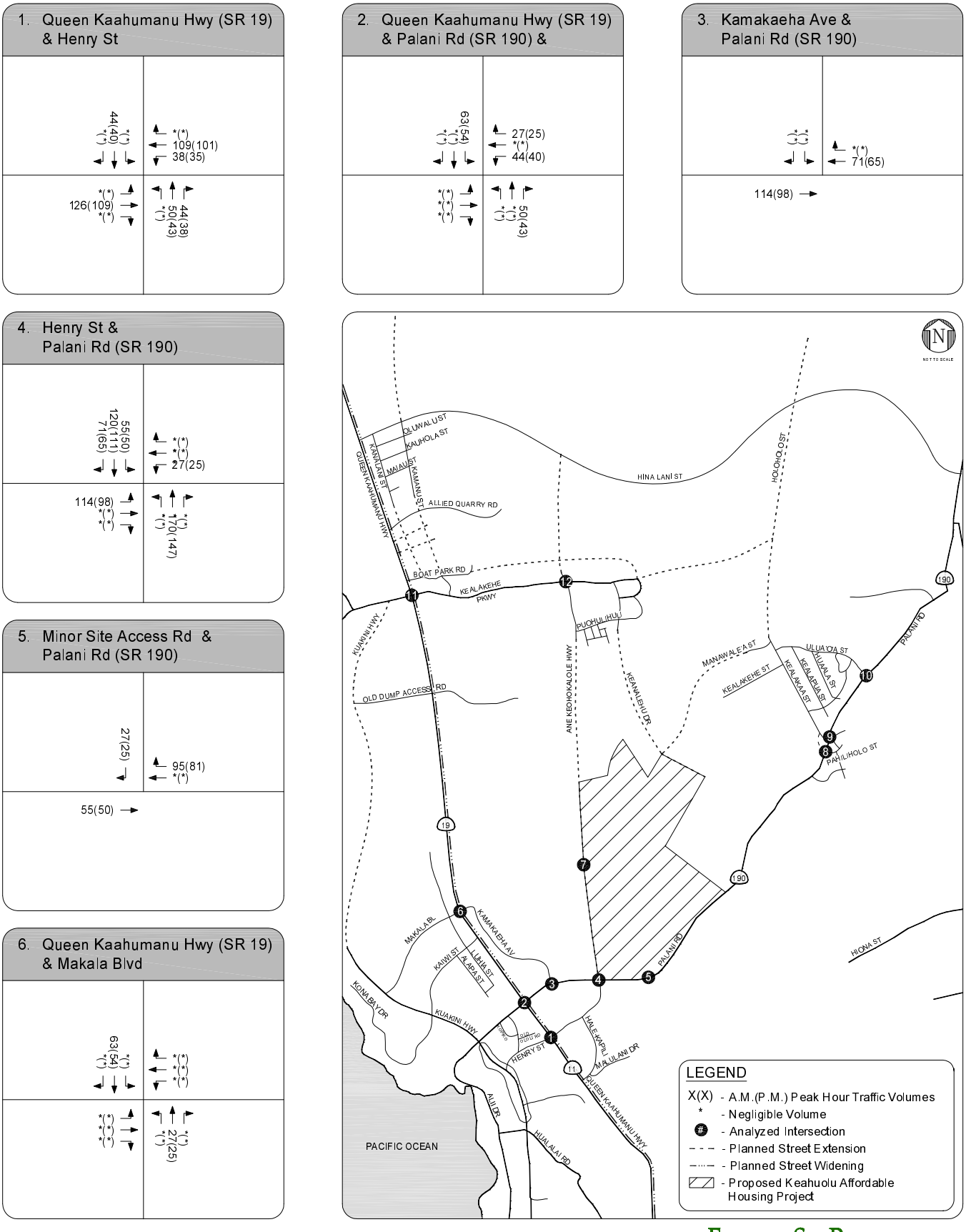

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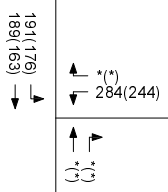
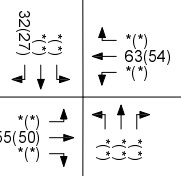
FIGURE 6
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO A

7. Ane Keohokalole Hwy & Major Site Access Rd



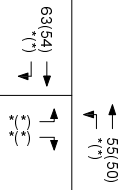
8. Kealakaa St/Pahiliholo St & Palani Rd (SR 190)



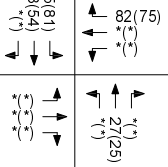
9. Kealakaa St & Palani Rd (SR 190)

SEE INTERSECTION 8

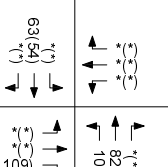
10. Palani Rd (SR 190) & Uluaoa St



11. Queen Kaahumanu Hwy (SR 19) & Kealakehe Pkwy



12. Ane Keohokalole Hwy & Kealakehe Pkwy



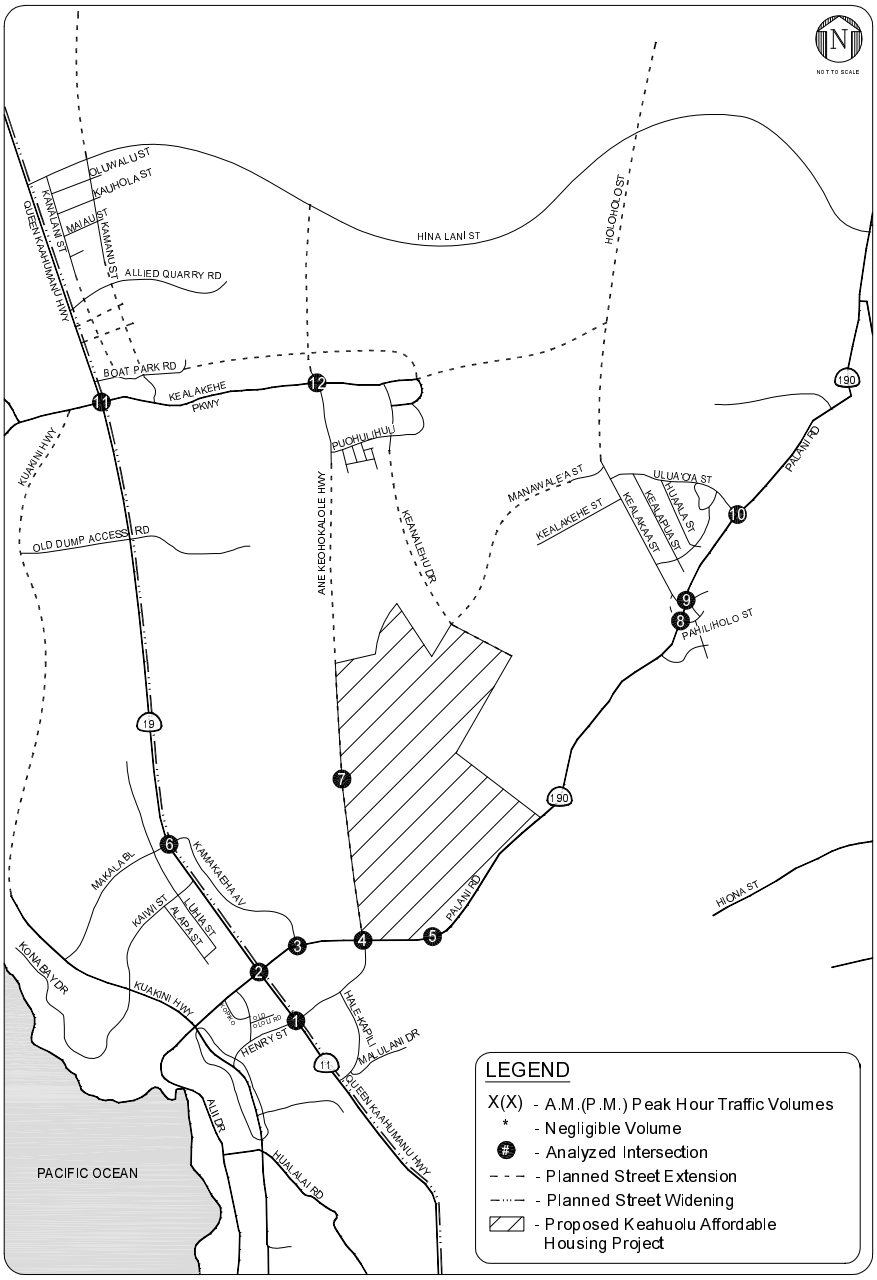


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FIGURE 6 (CONT.)
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO A

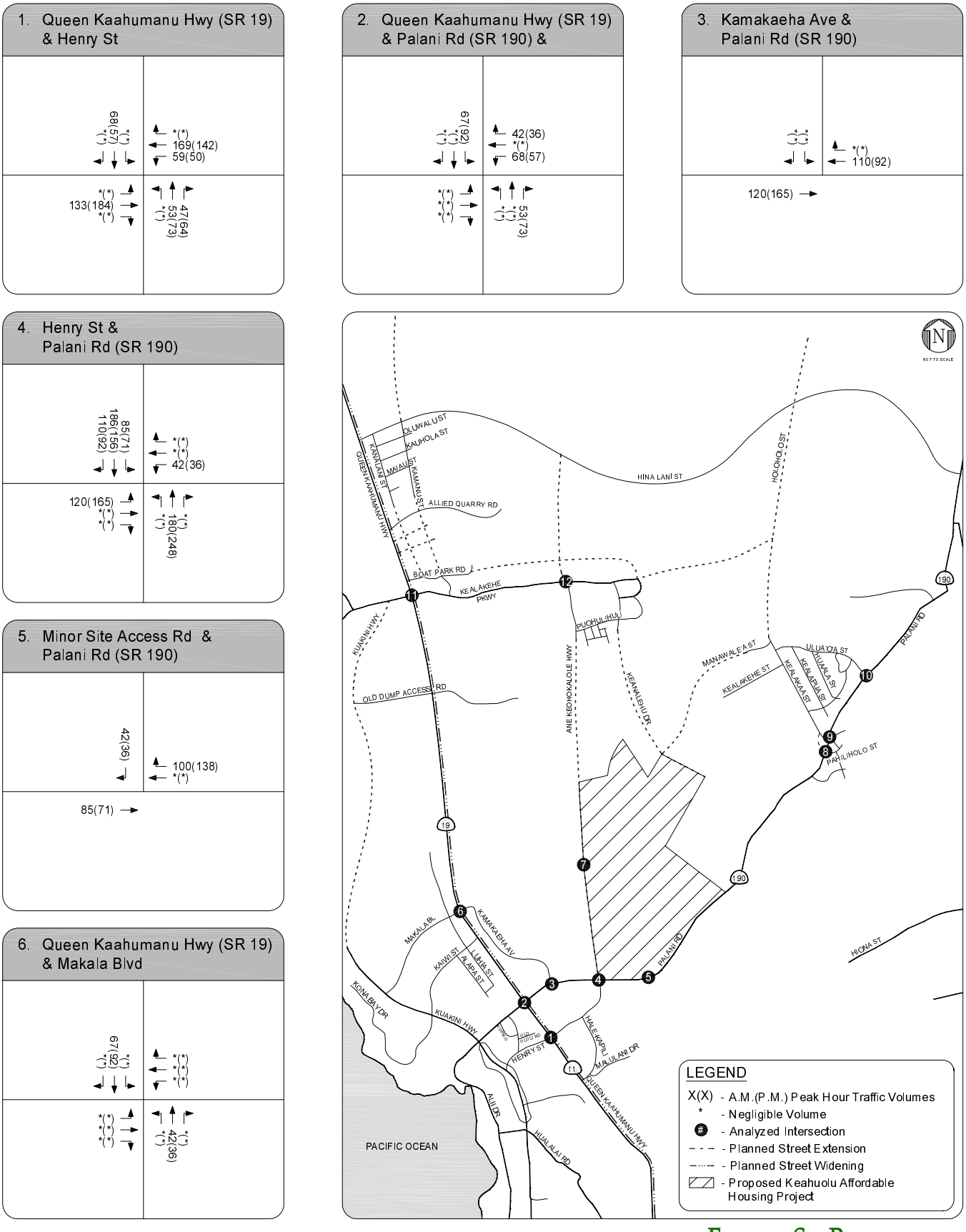

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FIGURE 7
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO B

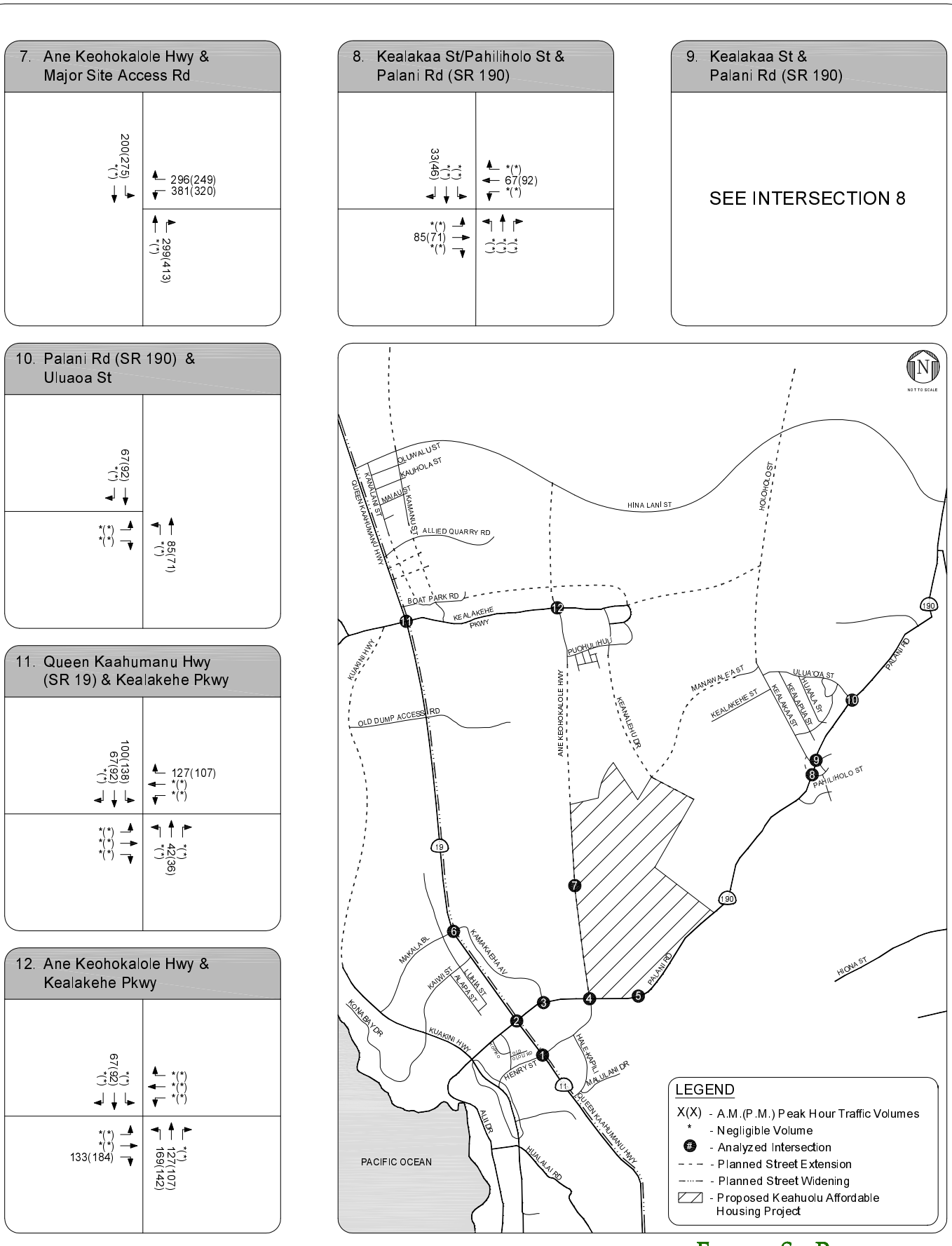

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FIGURE 7 (CONT.)
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO B

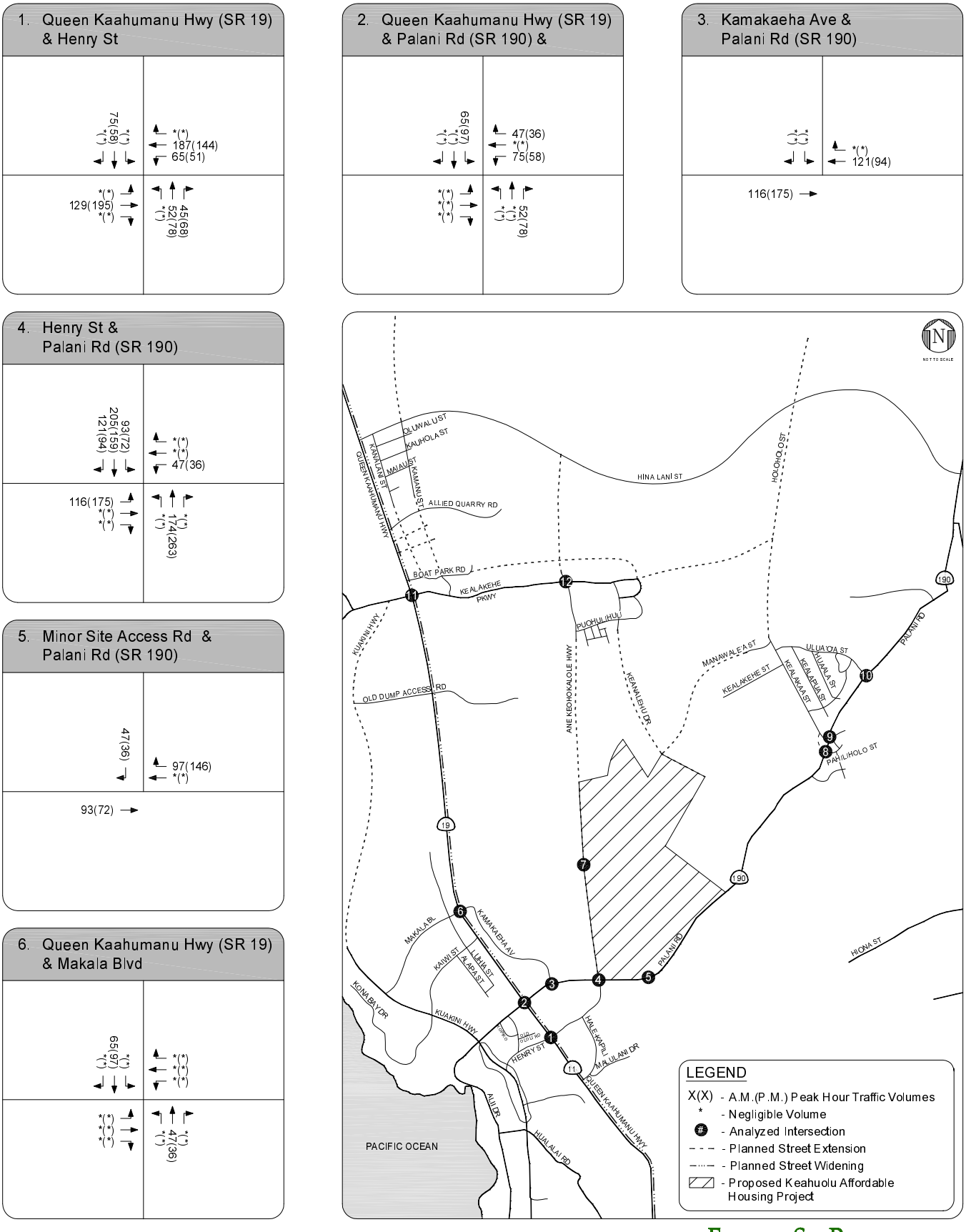

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FIGURE 8
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO C

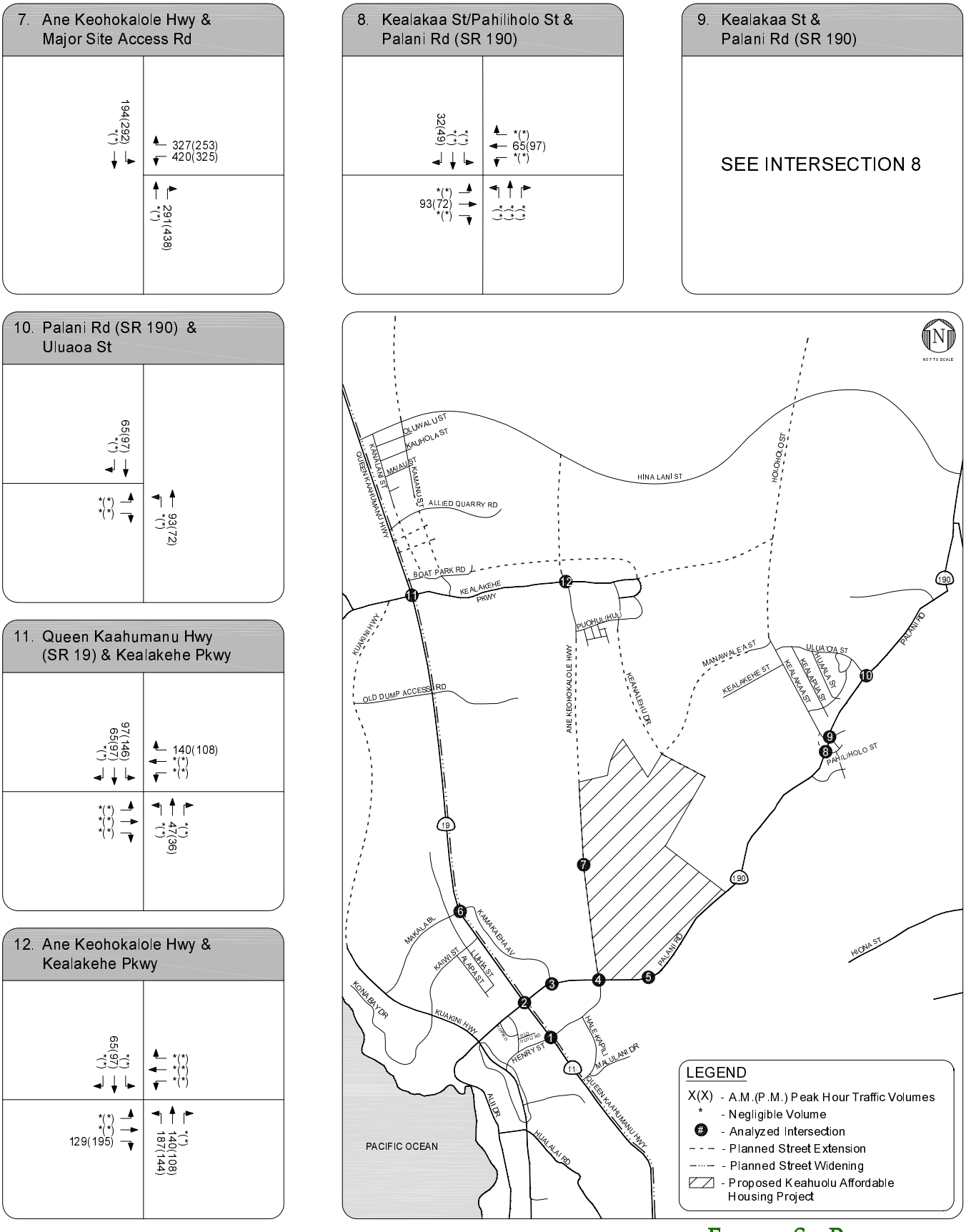

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FIGURE 8 (CONT.)
PROJECT ONLY (2020) PEAK HOUR TRAFFIC VOLUMES - SCENARIO C

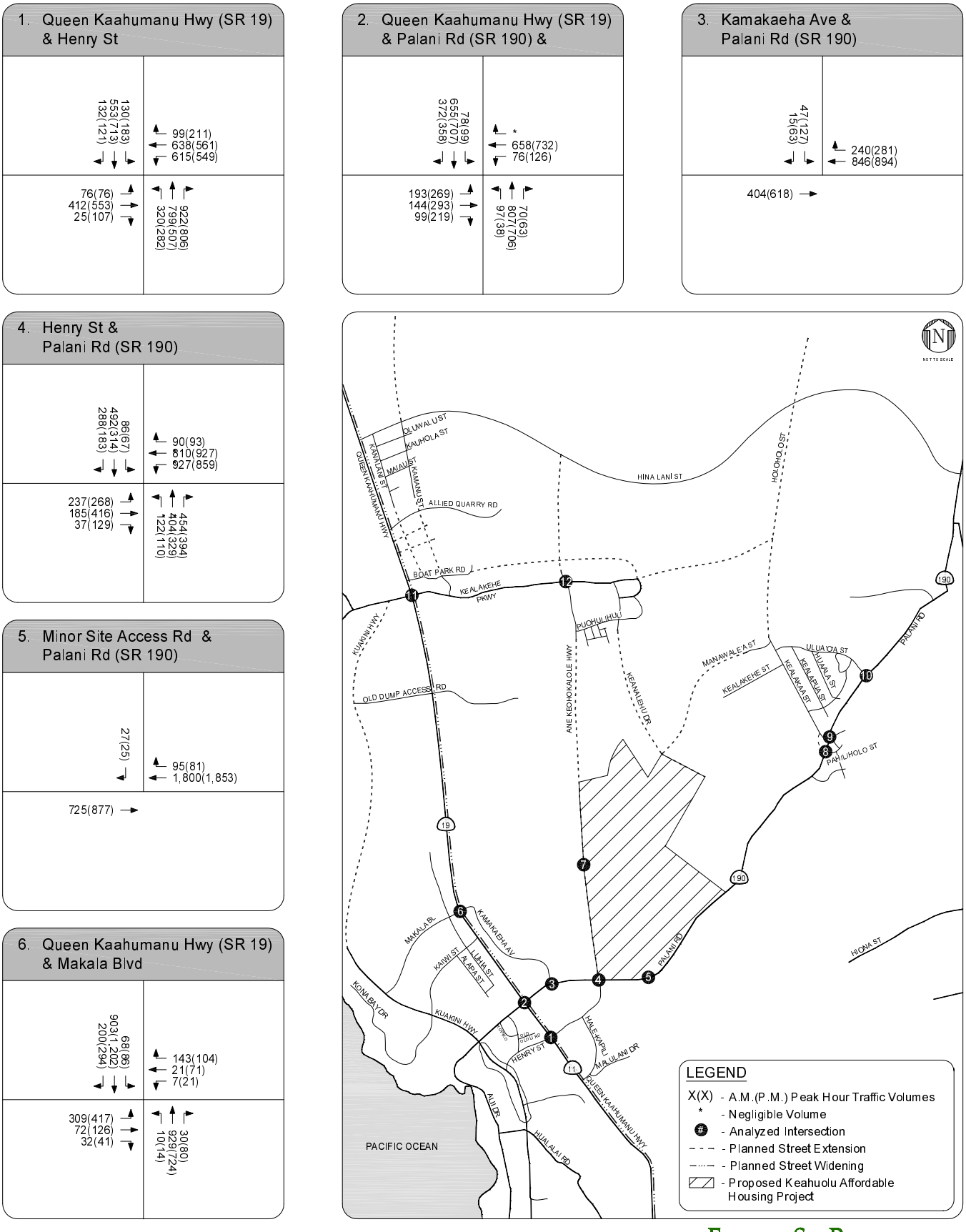

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FIGURE 9
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES SCENARIO A

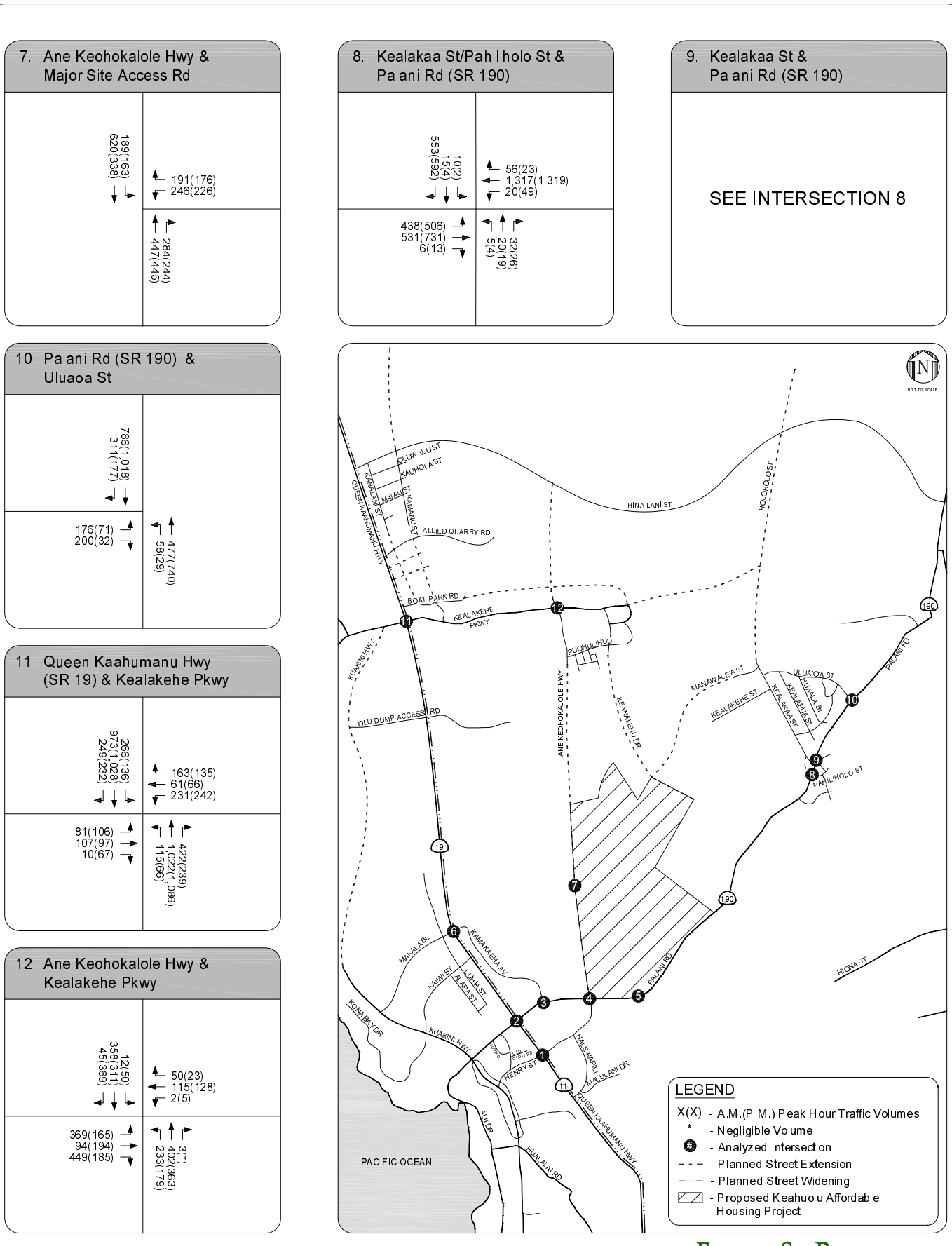

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FIGURE 9 (CONT.)
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES
SCENARIO A

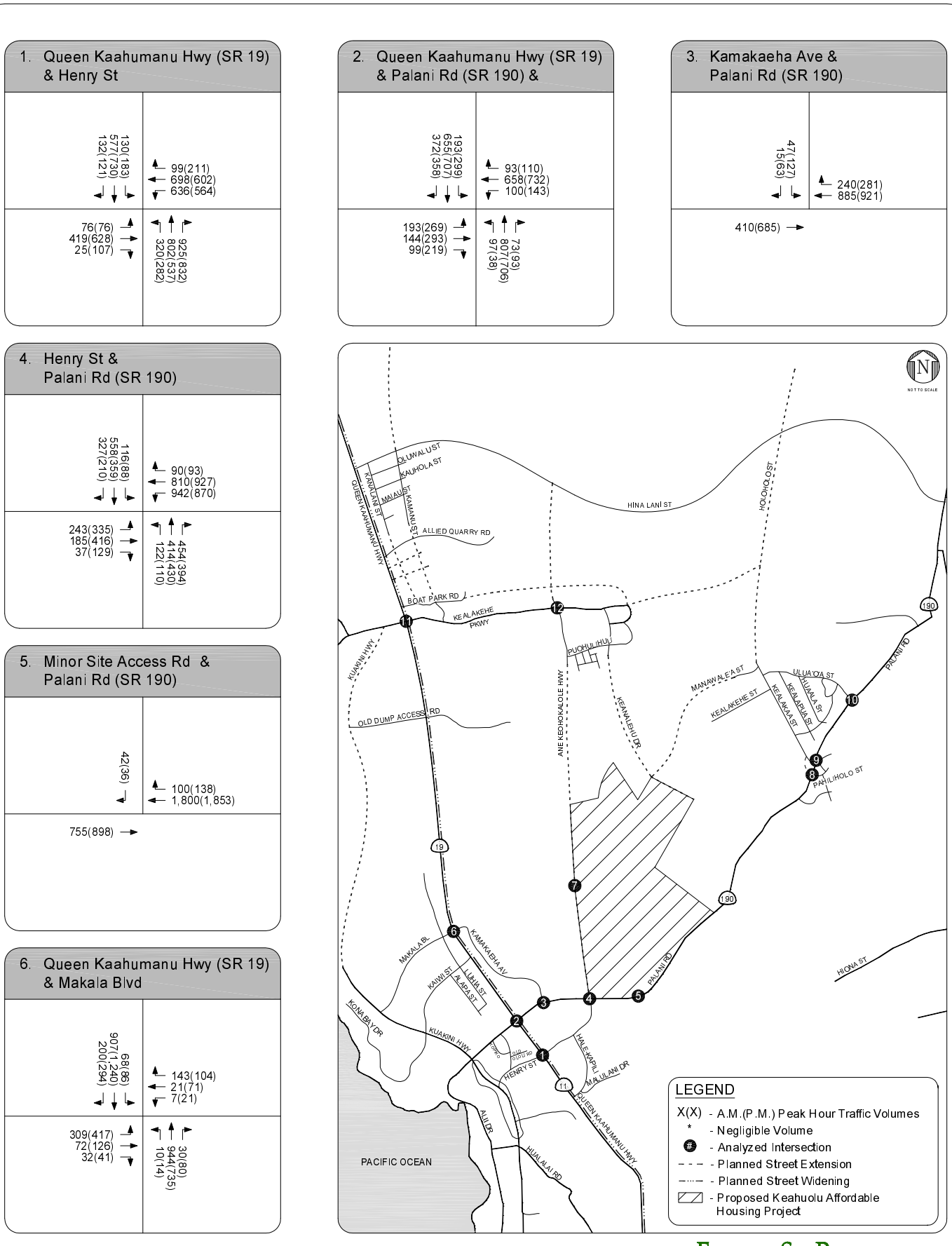

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FIGURE 10
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES SCENARIO B

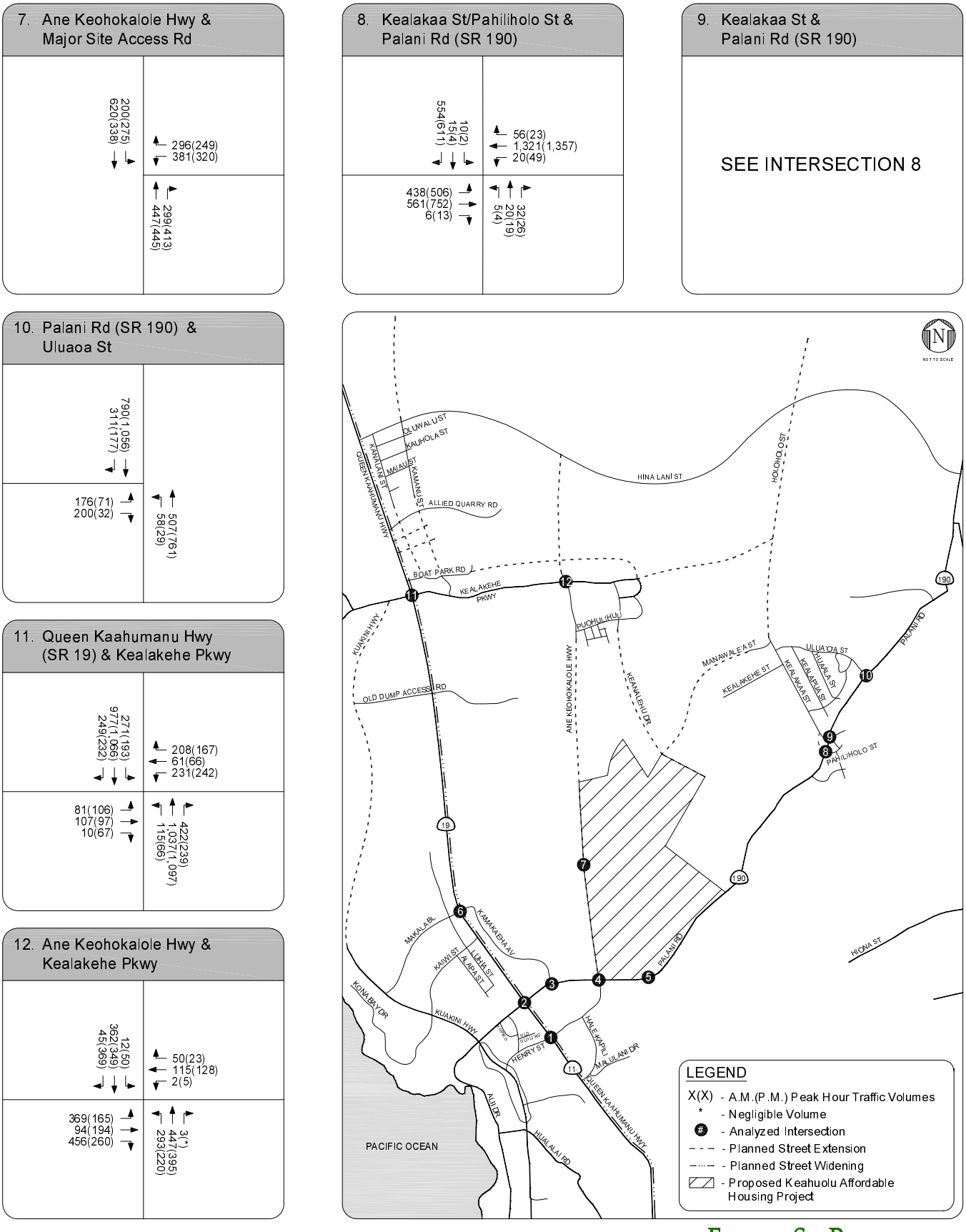

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FIGURE 10 (CONT.)
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES
SCENARIO B

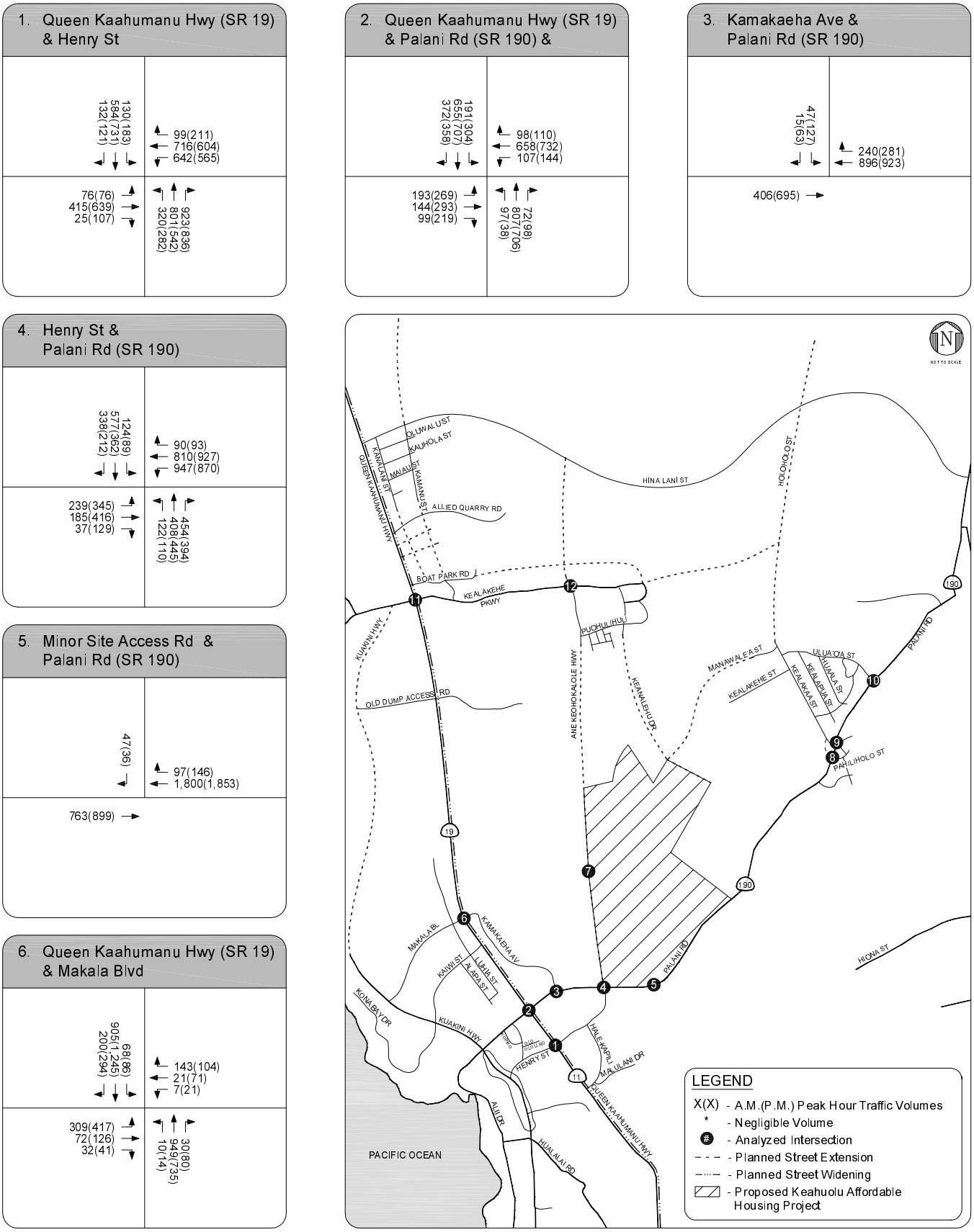

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FIGURE 11
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES SCENARIO C

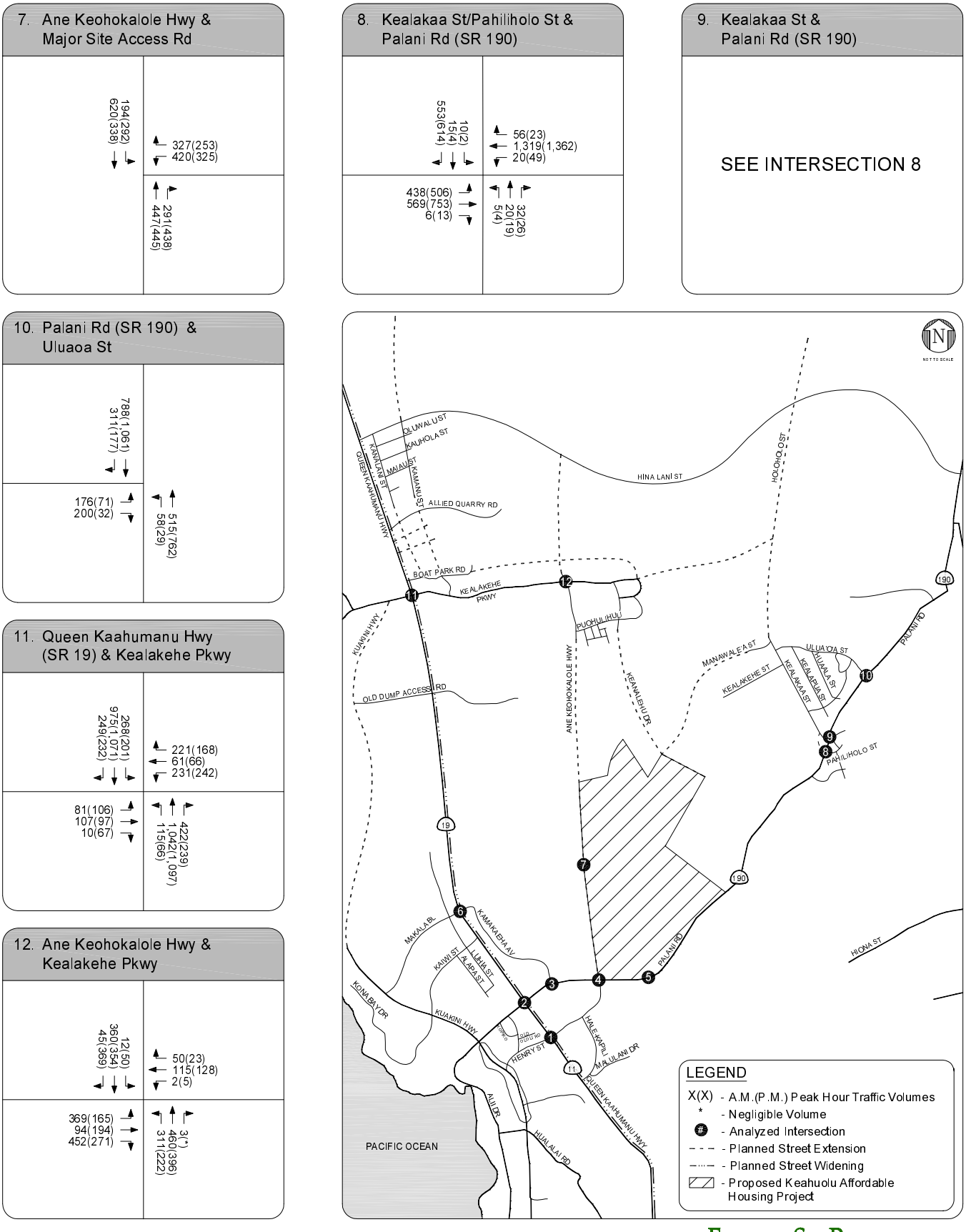

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FIGURE 11 (CONT.)
CUMULATIVE PLUS PROJECT (2020) PEAK HOUR TRAFFIC VOLUMES
SCENARIO C

IV. INTERSECTION TRAFFIC IMPACT ANALYSIS

This chapter presents an analysis of the potential impacts on the roadway system due to projected increase in traffic, including traffic generated by the proposed project under each of the three project development concepts. The analysis compares the projected levels of service at each study intersection under cumulative conditions for 2020 both with and without the proposed project to determine potential project impacts.

INTERSECTION SIGNIFICANT IMPACT CRITERIA

The levels of service range from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is considered the minimum desirable LOS in this area. If LOS E or F were projected under cumulative base conditions, this would be characterized as a cumulative impact. If the addition of project-generated traffic were to result in LOS E or F, this would be characterized as a project-specific impact.

CUMULATIVE BASE TRAFFIC CONDITIONS

This section presents an analysis of potential future traffic conditions under projected for the year 2020. The cumulative base traffic volumes projected in Chapter III were analyzed using the methodologies described in Chapter II to forecast cumulative base peak hour LOS at the study intersections. The first columns in Tables 7, 8, and 9 summarize the results of this analysis.

Future operations at the Intersections 8 and 9 are presented in the analysis of Intersection 8, as the ongoing safety improvements discussed previously will focus traffic at that location. The following five intersections are projected to operate at LOS E or F during one or both peak hours in 2020:

TABLE 7
INTERSECTION LEVEL OF SERVICE ANALYSIS SUMMARY
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
FUTURE CONDITIONS (2020)
CONCEPT A

	Intersections	Peak Hour	CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER	CUMULATIVE PLUS PROJECT WITH MITIGATION (2020)			LOS D OR BETTER
			V/C	Del/Veh*	LOS	V/C	Del/Veh*	LOS		V/C	Del/Veh*	LOS	
1	Queen Kaahumanu Hwy (SR 19) & Henry St	A.M. P.M.	0.813 0.819	26 27	C C	0.885 0.881	29 29	C C	YES YES	No mitigation necessary			YES YES
2	Queen Kaahumanu Hwy (SR 19) & Palani Rd (SR 190)/Alii Dr	A.M. P.M.	0.873 0.988	33 40	C D	0.914 1.015	35 43	D D	YES YES	No mitigation necessary			YES YES
3	Kamakaeha Av & Palani Rd (SR 190)	A.M. P.M.	NC NC	23 **	C F	NC NC	29 **	D F	YES NO	0.558 0.652	5 10	A B	YES YES
4	Henry St & Palani Rd (SR 190)	A.M. P.M.	1.099 1.248	81 **	F F	1.677 1.340	** **	F F	NO NO	0.833 0.926	32 33	C C	YES YES
5	Minor Site Access Road & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	- -	- -	A A	YES YES
6	Queen Kaahumanu Hwy (SR 19) & Makala Bl	A.M. P.M.	0.653 0.769	22 25	C C	0.661 0.787	22 25	C C	YES YES	No mitigation necessary			YES YES
7	Ane Keohokahole Hwy & Major Site Access Road	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	0.579 0.455	16 16	B B	YES YES
8	Kealakaa St/Palihiolo St & Palani Rd (SR 190) [b]	A.M. P.M.	1.522 1.734	** **	F F	1.638 1.837	** **	F F	NO NO	0.982 1.023	33 41	C D	YES YES
10	Palani Rd (SR 190) & Uluaoa St [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.757 0.725	14 5	B A	YES YES
11	Queen Kaahumanu Hwy (SR 19) & Kealakehe Hwy	A.M. P.M.	0.748 0.713	26 24	C C	0.825 0.781	28 25	C C	YES YES	No mitigation necessary			YES YES
12	Ane Keohokalole Hwy & Kealakehe Hwy [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.686 0.583	19 15	B B	YES YES

Note:
* Delay indicates average stopped delay per vehicle in seconds for signalized intersections. The worst case vehicular delay is reported for stop-controlled intersections.
** Indicates oversaturated conditions. Delay cannot be calculated.
NC = Not Calculated
[a] Intersection is controlled by stop signs on the minor approaches.

TABLE 8
INTERSECTION LEVEL OF SERVICE ANALYSIS SUMMARY
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
FUTURE CONDITIONS (2020)
CONCEPT B

	Intersections	Peak Hour	CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER	CUMULATIVE PLUS PROJECT WITH MITIGATION (2020)			LOS D OR BETTER
			V/C	Del/Veh*	LOS	V/C	Del/Veh*	LOS		V/C	Del/Veh*	LOS	
1	Queen Kaahumanu Hwy (SR 19) & Henry St	A.M. P.M.	0.813 0.819	26 27	C C	0.890 0.925	29 32	C C	YES YES	No mitigation necessary			YES YES
2	Queen Kaahumanu Hwy (SR 19) & Palani Rd (SR 190)/Alii Dr	A.M. P.M.	0.873 0.988	33 40	C D	0.917 1.031	35 46	D D	YES YES	No mitigation necessary			YES YES
3	Kamakaeha Av & Palani Rd (SR 190)	A.M. P.M.	NC NC	23 **	C F	NC NC	31 **	D F	YES NO	0.582 0.669	5 10	A B	YES YES
4	Henry St & Palani Rd (SR 190)	A.M. P.M.	1.099 1.248	81 **	F F	1.691 1.328	** **	F F	NO NO	0.899 1.009	37 41	D D	YES YES
5	Minor Site Access Road & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	- -	- -	A A	YES YES
6	Queen Kaahumanu Hwy (SR 19) & Makala Bl	A.M. P.M.	0.653 0.769	22 25	C C	0.666 0.799	22 25	C C	YES YES	No mitigation necessary			YES YES
7	Ane Keohokahole Hwy & Major Site Access Road	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	0.687 0.679	21 19	C B	YES YES
8	Kealakaa St/Palihiolo St & Palani Rd (SR 190) [b]	A.M. P.M.	1.522 1.734	** **	F F	1.647 1.905	** **	F F	NO NO	0.984 1.045	34 45	C D	YES YES
10	Palani Rd (SR 190) & Uluaoa St [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.759 0.746	14 5	B A	YES YES
11	Queen Kaahumanu Hwy (SR 19) & Kealakehe Hwy	A.M. P.M.	0.748 0.713	26 24	C C	0.834 0.826	28 26	C C	YES YES	No mitigation necessary			YES YES
12	Ane Keohokalole Hwy & Kealakehe Hwy [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.760 0.634	20 16	C B	YES YES

Note:
* Delay indicates average stopped delay per vehicle in seconds for signalized intersections. The worst case vehicular delay is reported for stop-controlled intersections.
** Indicates oversaturated conditions. Delay cannot be calculated.
NC = Not Calculated
[a] Intersection is controlled by stop signs on the minor approaches.

TABLE 9
INTERSECTION LEVEL OF SERVICE ANALYSIS SUMMARY
KEAHUOLU AFFORDABLE HOUSING MASTER PLAN
FUTURE CONDITIONS (2020)
CONCEPT C

	Intersections	Peak Hour	CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER	CUMULATIVE PLUS PROJECT WITH MITIGATION (2020)			LOS D OR BETTER
			V/C	Del/Veh*	LOS	V/C	Del/Veh*	LOS		V/C	Del/Veh*	LOS	
1	Queen Kaahumanu Hwy (SR 19) & Henry St	A.M. P.M.	0.813 0.819	26 27	C C	0.887 0.931	29 32	C C	YES YES	No mitigation necessary			YES YES
2	Queen Kaahumanu Hwy (SR 19) & Palani Rd (SR 190)/Alii Dr	A.M. P.M.	0.873 0.988	33 40	C D	0.915 1.033	35 46	D D	YES YES	No mitigation necessary			YES YES
3	Kamakaeha Av & Palani Rd (SR 190)	A.M. P.M.	NC NC	23 **	C F	NC NC	37 **	E F	NO NO	0.589 0.670	5 10	A B	YES YES
4	Henry St & Palani Rd (SR 190)	A.M. P.M.	1.099 1.248	81 **	F F	1.726 1.326	** **	F F	NO NO	0.923 1.014	39 42	D D	YES YES
5	Minor Site Access Road & Palani Rd (SR 190) [a]	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	- -	- -	A A	YES YES
6	Queen Kaahumanu Hwy (SR 19) & Makala Bl	A.M. P.M.	0.653 0.769	22 25	C C	0.668 0.801	22 25	C C	YES YES	No mitigation necessary			YES YES
7	Ane Keohokahole Hwy & Major Site Access Road	A.M. P.M.	NC NC	NC NC	NC NC	NC NC	** **	F F	NO NO	0.718 0.706	22 19	C B	YES YES
8	Kealakaa St/Palihiolo St & Palani Rd (SR 190) [b]	A.M. P.M.	1.522 1.734	** **	F F	1.644 1.914	** **	F F	NO NO	0.983 1.048	33 46	C D	YES YES
10	Palani Rd (SR 190) & Uluaoa St [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.758 0.749	14 5	B A	YES YES
11	Queen Kaahumanu Hwy (SR 19) & Kealakehe Hwy	A.M. P.M.	0.748 0.713	26 24	C C	0.834 0.832	28 26	C C	YES YES	No mitigation necessary			YES YES
12	Ane Keohokalole Hwy & Kealakehe Hwy [a]	A.M. P.M.	NC NC	** **	F F	NC NC	** **	F F	NO NO	0.779 0.640	21 16	C B	YES YES

Note:
* Delay indicates average stopped delay per vehicle in seconds for signalized intersections. The worst case vehicular delay is reported for stop-controlled intersections.
** Indicates oversaturated conditions. Delay cannot be calculated.
NC = Not Calculated
[a] Intersection is controlled by stop signs on the minor approaches.

3. Kamakaeha Avenue & Palani Road (SR 190)
4. Henry Street & Palani Road (SR 190)
8. Palani Road (SR 190) & Kealakaa Street/Pahiliholo Street
10. Uluaoa Street & Palani Road (SR 190)
12. Kealakehe Parkway & Ane Keohokalole Highway

The remaining study intersections are expected to continue operating at a desirable LOS (LOS D or better) during both peak hours.

CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

The cumulative plus project Concept A, B, and C peak hour traffic volumes illustrated in Figures 8, 9 and 10 respectively were analyzed to determine 2020 operating conditions with the addition of project-related traffic. The results of the cumulative plus project analysis are presented in Tables 7, 8 and 9. The proposed project would contribute to cumulative impacts (LOS E or F conditions) during one or both peak hours at five study intersections:

3. Kamakaeha Avenue & Palani Road (SR 190)
4. Henry Street & Palani Road (SR 190)
8. Palani Road (SR 190) & Kealakaa Street/Pahiliholo Street
10. Uluaoa Street & Palani Road (SR 190)
12. Kealakehe Parkway & Ane Keohokalole Highway

In addition, project-specific impacts are identified at two future intersections listed below, as the addition of project-generated traffic there would cause them to decline below LOS D in the peak hours:

5. Palani Road (SR 190) & Minor Site Access Road
7. Ane Keohokalole Highway & Major Site Access Road

The number of traffic impacts would be the same under Concepts A, B and C; however, the magnitude of those impacts would be greatest with Concept C.

PROPOSED MITIGATION MEASURES

The mitigation program for the project developed measures to increase the capacity and/or efficiency of the roadway system at the locations where the addition of project-related traffic would cause or contribute to projected poor operating conditions. The primary emphasis was to identify physical and/or operational improvements that could be implemented within the existing or planned roadway rights-of-way. The recommended intersection improvement measures are illustrated in Appendix A. Tables 7, 8 and 9 summarize the projected LOS in 2020 at the impacted locations with these mitigation measures in place.

The recommended mitigation measures to address the identified traffic impacts, both project-related and cumulative, are described below. Each of the identified project-related impacts would be fully mitigated (i.e., the recommended improvements would result in LOS D or better).

- Intersection 3: Kamakaeha Avenue & Palani Road (SR 190) - The intersection of Kamakaeha Avenue & Palani Road (SR 190) could be fully mitigated by installing a traffic signal with the existing lane configuration. Signal warrant analysis was conducted based on the Peak Hour Warrant found in *Manual on Uniform Traffic Control Devices* (MUTCD) (National Committee on Uniform Traffic Control Devices, 2003) and is included in Appendix E. It indicates that a traffic signal at the intersection of Kamakaeha Avenue and Palani Road (SR 190) would be warranted under future plus project conditions. Because this intersection is approximately 750 feet mauka of Queen Kaahumanu Highway and approximately 1,400 feet makai of Henry Street, the proposed traffic signal would need to be coordinated with the existing signals at the two adjacent intersections. With the installation of the traffic signal, the intersection of Kamakaeha Avenue and Palani Road (SR 190) would operate at LOS A.

- Intersection 4: Henry Street & Palani Road (SR 190) – The intersection of Henry Street & Palani Road (SR 190) could be fully mitigated by widening the makai-bound approach to provide two left-turn lanes, one through lane and one shared through/right-turn lane, widening the northbound approach to provide one left-turn lane, one through lane and one shared through/right-turn lane and constructing the southbound approach with one left-turn lane, one through lane and one shared through/right-turn lane. With this configuration, the intersection of Henry Street and Palani Road (SR 190) would operate at LOS D.

- Intersection 5: Palani Road (SR 190) & Minor Site Access Road – The future intersection of Palani Road & Minor Site Access Road would be approximately 1,250 feet mauka of Henry Street and could be fully mitigated by adding a makai-bound deceleration lane into the project site and a makai-bound acceleration lane out from the project, separated by a raised island to channelize traffic. A second makai-bound lane would be added to receive traffic exiting the project site. With this configuration, the intersection would operate at LOS A.

- Intersection 7: Ane Keohokahole Highway & Major Site Access Road – The intersection of Ane Keohokahole Highway & Major Site Access Road could be fully mitigated by installing a traffic signal. The future lane configuration would provide one left-turn lane and one right-turn lane on the makai-bound approach, one through lane and one right-turn lane on the northbound approach and one left-turn lane and one through lane on the southbound approach. Signal warrant analysis was conducted based on the Peak Hour Warrant found in the MUTCD and is included in Appendix E. It indicates that a traffic signal installation at the intersection of Ane Keohokahole Highway & Major Site Access Road would be warranted under future plus project conditions. With the installation of a traffic signal, the intersection of Ane Keohokahole Highway & Major Site Access Road would operate at LOS C or better.

- Intersection 8: Kealakaa Street/Pahiliholo Street & Palani Road (SR 190) – The intersection of Kealakaa Street/Pahiliholo Street & Palani Road (SR 190) is under construction and the future lane configuration is shown in *Palani Road Safety Improvements* (County of Hawaii, August 2005). With the lane configuration shown in that report, the intersection of Kealakaa Street/Pahiliholo Street and Palani Road is projected to operate at LOS F during both peak hours in 2020. A mitigation measure was developed that would widen Palani Road to provide one left-turn lane, one through lane and one shared through/right-turn lane on the southbound approach and two left-turn lanes and one shared through/right-turn lane on the northbound approach. The southbound departure would also be widened to two lanes, which would merge into a single lane downstream of the intersection. While additional right-of-way may be needed to implement this measure, it does not appear that existing development would preclude its implementation. With these improvements, the intersection is projected to operate at LOS C during the a.m. peak hour and LOS D during the p.m. peak hour.

- Intersection 10: Uluaoa Street & Palani Road (SR 190) – The intersection of Uluaoa Street & Palani Road could be fully mitigated by installing a traffic signal within the existing lane configuration. Signal warrant analysis was conducted based on the Peak Hour Warrant found in the MUTCD is included in Appendix E. It indicates that a traffic signal at the intersection of would be warranted under future plus project conditions. With this improvement, the intersection would operate at LOS B and A during the a.m. and p.m. peak hours, respectively.

- Intersection 12: Kealakehe Parkway & Ane Keohokalole Highway – The intersection of Kealakehe Parkway & Ane Keohokalole Highway could be fully mitigated by installing a traffic signal within the existing lane configuration. Signal warrant analysis was conducted based on the Peak Hour Warrant found in the MUTCD and is included in Appendix E. It indicates that a traffic signal at the intersection of would be warranted under future plus project conditions. With this improvement, the intersection would operate at LOS C or better in both peak hours.

V. STREET SEGMENT TRAFFIC IMPACT ANALYSIS

This chapter presents an analysis of the proposed project's potential impacts on several key street segments in the project vicinity. The analysis was conducted for the following 10 street segments, shown in Figure 2:

1. Henry Street south of Palani Road (SR 190)
2. Palani Road (SR 190) makai (west) of Henry Street
3. Palani Road (SR 190) mauka (east) of Henry Street
4. Kealakaa Street north of Palani Road (SR 190)
5. Uluaoa Street north of Palani Road (SR 190)
6. Queen Kaahumanu Highway (SR 19) south of Kealakehe Parkway
7. Kealakehe Parkway makai (west) of Ane Keohokalole Highway
8. Ane Keohokalole Highway south of Kealakehe Parkway
9. Queen Kaahumanu Highway (SR 19) north of Kealakehe Parkway
10. Palani Road (SR 190) south of Mamalahoa Highway

The existing peak hour volumes at each location were based on traffic counts conducted at adjacent intersections in August 2007, as well as new 24-hour machine counts. The peak hour traffic volumes on the 10 study street segments under existing conditions are shown in Tables 10, 11, and 12.

The roadway facility types were based on their physical characteristics as defined in the County of Hawaii General Plan and described in Table 13. The capacity of each facility was defined as the maximum hourly rate at which vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions.

Estimates of future peak hour traffic volumes for the 10 street segments were developed by increasing the existing peak hour traffic volumes to reflect the ambient growth and related development projects on the street system in the study area (cumulative base conditions) and

TABLE 10
STREET SEGMENT IMPACT ANALYSIS - CONCEPT A

Segment	Location	Facility Type	Peak Hour	Dir.	EXISTING (2006)			CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER
					Volumes	V/C	LOS	Volumes	V/C	LOS	Volumes	V/C	LOS	
1. Henry Street	south of Palani Road (SR 190)	Secondary Arterial	A.M.	NB	602	0.24	A	891	0.36	A	1,061	0.42	A	YES
				SB	720	0.29	A	1,342	0.54	A	1,489	0.60	A	YES
			P.M.	EB	646	0.26	A	845	0.34	A	992	0.40	A	YES
				WB	670	0.27	A	1,223	0.49	A	1,359	0.54	A	YES
2. Palani Road (SR 190)	makai (west) of Henry Street	Secondary Arterial	A.M.	EB	309	0.25	A	359	0.29	A	473	0.38	A	YES
				WB	636	0.51	A	1,057	0.85	D	1,128	0.90	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,128*	*0.45*	*A*	*YES*
			P.M.	EB	617	0.49	A	639	0.51	A	737	0.59	A	YES
				WB	658	0.53	A	1,133	0.91	E	1,198	0.96	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,198*	*0.48*	*A*	*YES*
3. Palani Road (SR 190)	mauka (east) of Henry Street	Secondary Arterial	A.M.	EB	716	0.57	A	802	0.64	B	857	0.69	B	YES
				WB	1,215	0.97	E	1,815	1.45	F	1,911	1.53	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,911*	*0.76*	*C*	*YES*
			P.M.	EB	982	0.79	C	982	0.79	C	1,032	0.83	D	YES
				WB	949	0.76	C	1,817	1.45	F	1,898	1.52	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,898*	*0.76*	*C*	*YES*
4. Kealakaa Street	north of Palani Road (SR 190)	Local Street (Existing) Secondary Arterial (Future)	A.M.	NB	520	0.87	D	1,034	0.86	D	1,034	0.86	D	YES
				SB	403	0.67	B	949	0.79	C	981	0.82	D	YES
			P.M.	NB	280	0.47	A	828	0.69	B	828	0.69	B	YES
				SB	305	0.51	A	876	0.73	C	903	0.75	C	YES
5. Uluaoa Street	makai (west) of Palani Road (SR 190)	Local Street	A.M.	EB	376	0.63	B	376	0.63	B	376	0.63	B	YES
				WB	301	0.50	A	369	0.62	B	369	0.62	B	YES
			P.M.	EB	113	0.19	A	113	0.19	A	113	0.19	A	YES
				WB	179	0.30	A	217	0.36	A	217	0.36	A	YES
6. Queen Kaahumanu Highway (SR 19)	south of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.64	B	1,545	0.48	A	1,572	0.49	A	YES
				SB	1,124	0.66	B	1,334	0.42	A	1,397	0.44	A	YES
			P.M.	NB	1,013	0.60	A	1,273	0.40	A	1,298	0.41	A	YES
				SB	987	0.58	A	1,376	0.43	A	1,430	0.45	A	YES
7. Kealakehe Parkway	makai (west) of Ane Keohokalole Highway	Secondary Arterial	A.M.	EB	424	0.34	A	707	0.57	A	802	0.64	B	YES
				WB	348	0.28	A	422	0.34	A	504	0.40	A	YES
			P.M.	EB	221	0.18	A	418	0.33	A	499	0.40	A	YES
				WB	382	0.31	A	629	0.50	A	704	0.56	A	YES
8. Ane Keohokalole Highway	south of Kealakehe Parkway	Secondary Arterial	A.M.	NB	241	0.19	A	561	0.45	A	752	0.60	B	YES
				SB	432	0.35	A	744	0.60	A	933	0.75	C	YES
			P.M.	NB	203	0.16	A	511	0.41	A	687	0.55	A	YES
				SB	150	0.12	A	407	0.33	A	570	0.46	A	YES
9. Queen Kaahumanu Highway (SR 19)	north of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.87	D	1,402	0.44	A	1,511	0.47	A	YES
				SB	1,124	0.90	D	1,519	0.47	A	1,677	0.52	A	YES
			P.M.	NB	1,013	0.81	D	1,215	0.38	A	1,315	0.41	A	YES
				SB	987	0.79	C	1,362	0.43	A	1,497	0.47	A	YES
10. Palani Road (SR 190)	south of Mamalahoa Highway	Secondary Arterial	A.M.	NB	541	0.43	A	643	0.51	A	698	0.56	A	YES
				SB	938	0.75	C	1,117	0.89	D	1,180	0.94	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,180*	*0.47*	*A*	*YES*
			P.M.	NB	659	0.53	A	793	0.63	B	843	0.67	B	YES
				SB	929	0.74	C	1,136	0.91	E	1,190	0.95	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,190*	*0.48*	*A*	*YES*

Note: Roadway Capacity for each facility types were assumed in Table 8.

TABLE 11
STREET SEGMENT IMPACT ANALYSIS - CONCEPT B

Segment	Location	Facility Type	Peak Hour	Dir.	EXISTING (2006)			CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER
					Volumes	V/C	LOS	Volumes	V/C	LOS	Volumes	V/C	LOS	
1. Henry Street	south of Palani Road (SR 190)	Secondary Arterial	A.M.	NB	602	0.24	A	891	0.36	A	1,071	0.43	A	YES
				SB	720	0.29	A	1,342	0.54	A	1,570	0.63	B	YES
			P.M.	EB	646	0.26	A	845	0.34	A	1,093	0.44	A	YES
				WB	670	0.27	A	1,223	0.49	A	1,415	0.57	A	YES
2. Palani Road (SR 190)	makai (west) of Henry Street	Secondary Arterial	A.M.	EB	309	0.25	A	359	0.29	A	479	0.38	A	YES
				WB	636	0.51	A	1,057	0.85	D	1,167	0.93	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,167*	*0.47*	*A*	*YES*
			P.M.	EB	617	0.49	A	639	0.51	A	804	0.64	B	YES
				WB	658	0.53	A	1,133	0.91	E	1,225	0.98	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,225*	*0.49*	*A*	*YES*
3. Palani Road (SR 190)	mauka (east) of Henry Street	Secondary Arterial	A.M.	EB	716	0.57	A	802	0.64	B	887	0.71	C	YES
				WB	1,215	0.97	E	1,815	1.45	F	1,915	1.53	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,915*	*0.77*	*C*	*YES*
			P.M.	EB	982	0.79	C	982	0.79	C	1,053	0.84	D	YES
				WB	949	0.76	C	1,817	1.45	F	1,955	1.56	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,955*	*0.78*	*C*	*YES*
4. Kealakaa Street	north of Palani Road (SR 190)	Local Street (Existing) Secondary Arterial (Future)	A.M.	NB	520	0.87	D	1,034	0.86	D	1,034	0.86	D	YES
				SB	403	0.67	B	949	0.79	C	982	0.82	D	YES
			P.M.	NB	280	0.47	A	828	0.69	B	828	0.69	B	YES
				SB	305	0.51	A	876	0.73	C	922	0.77	C	YES
5. Uluaoa Street	makai (west) of Palani Road (SR 190)	Local Street	A.M.	EB	376	0.63	B	376	0.63	B	376	0.63	B	YES
				WB	301	0.50	A	369	0.62	B	369	0.62	B	YES
			P.M.	EB	113	0.19	A	113	0.19	A	113	0.19	A	YES
				WB	179	0.30	A	217	0.36	A	217	0.36	A	YES
6. Queen Kaahumanu Highway (SR 19)	south of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.64	B	1,545	0.48	A	1,587	0.50	A	YES
				SB	1,124	0.66	B	1,334	0.42	A	1,401	0.44	A	YES
			P.M.	NB	1,013	0.60	A	1,273	0.40	A	1,309	0.41	A	YES
				SB	987	0.58	A	1,376	0.43	A	1,468	0.46	A	YES
7. Kealakehe Parkway	makai (west) of Ane Keohokalole Highway	Secondary Arterial	A.M.	EB	424	0.34	A	707	0.57	A	807	0.65	B	YES
				WB	348	0.28	A	422	0.34	A	549	0.44	A	YES
			P.M.	EB	221	0.18	A	418	0.33	A	556	0.44	A	YES
				WB	382	0.31	A	629	0.50	A	736	0.59	A	YES
8. Ane Keohokalole Highway	south of Kealakehe Parkway	Secondary Arterial	A.M.	NB	241	0.19	A	561	0.45	A	857	0.69	B	YES
				SB	432	0.35	A	744	0.60	A	944	0.76	C	YES
			P.M.	NB	203	0.16	A	511	0.41	A	760	0.61	B	YES
				SB	150	0.12	A	407	0.33	A	683	0.55	A	YES
9. Queen Kaahumanu Highway (SR 19)	north of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.87	D	1,402	0.44	A	1,571	0.49	A	YES
				SB	1,124	0.90	D	1,519	0.47	A	1,686	0.53	A	YES
			P.M.	NB	1,013	0.81	D	1,215	0.38	A	1,358	0.42	A	YES
				SB	987	0.79	C	1,362	0.43	A	1,592	0.50	A	YES
10. Palani Road (SR 190)	south of Mamalahoa Highway	Secondary Arterial	A.M.	NB	541	0.43	A	643	0.51	A	728	0.58	A	YES
				SB	938	0.75	C	1,117	0.89	D	1,184	0.95	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,184*	*0.47*	*A*	*YES*
			P.M.	NB	659	0.53	A	793	0.63	B	864	0.69	B	YES
				SB	929	0.74	C	1,136	0.91	E	1,228	0.98	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,228*	*0.49*	*A*	*YES*

Note: Roadway Capacity for each facility types were assumed in Table 8.

TABLE 12
STREET SEGMENT IMPACT ANALYSIS - CONCEPT C

Segment	Location	Facility Type	Peak Hour	Dir.	EXISTING (2006)			CUMULATIVE BASE (2020)			CUMULATIVE PLUS PROJECT (2020)			LOS D OR BETTER
					Volumes	V/C	LOS	Volumes	V/C	LOS	Volumes	V/C	LOS	
1. Henry Street	south of Palani Road (SR 190)	Secondary Arterial	A.M.	NB	602	0.24	A	891	0.36	A	1,065	0.43	A	YES
				SB	720	0.29	A	1,342	0.54	A	1,594	0.64	B	YES
			P.M.	EB	646	0.26	A	845	0.34	A	1,108	0.44	A	YES
				WB	670	0.27	A	1,223	0.49	A	1,418	0.57	A	YES
2. Palani Road (SR 190)	makai (west) of Henry Street	Secondary Arterial	A.M.	EB	309	0.25	A	359	0.29	A	475	0.38	A	YES
				WB	636	0.51	A	1,057	0.42	A	1,178	0.94	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,178*	*0.47*	*A*	*YES*
			P.M.	EB	617	0.49	A	639	0.51	A	814	0.65	B	YES
				WB	658	0.53	A	1,133	0.45	A	1,227	0.98	E	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,227*	*0.49*	*A*	*YES*
3. Palani Road (SR 190)	mauka (east) of Henry Street	Secondary Arterial	A.M.	EB	716	0.57	A	802	0.64	B	895	0.72	C	YES
				WB	1,215	0.97	E	1,815	0.73	C	1,912	1.53	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,912*	*0.76*	*C*	*YES*
			P.M.	EB	982	0.79	C	982	0.79	C	1,054	0.84	D	YES
				WB	949	0.76	C	1,817	0.73	C	1,963	1.57	F	NO
				WB	*With Mitigation (Second Westbound Lane)*						*1,963*	*0.79*	*C*	*YES*
4. Kealakaa Street	north of Palani Road (SR 190)	Local Street (Existing) Secondary Arterial (Future)	A.M.	NB	520	0.87	D	1,034	0.83	D	1,034	0.83	D	YES
				SB	403	0.67	B	949	0.76	C	981	0.78	C	YES
			P.M.	NB	280	0.47	A	828	0.66	B	828	0.66	B	YES
				SB	305	0.51	A	876	0.70	C	925	0.74	C	YES
5. Uluaoa Street	makai (west) of Palani Road (SR 190)	Local Street	A.M.	EB	376	0.63	B	376	0.63	B	376	0.63	B	YES
				WB	301	0.50	A	369	0.62	B	369	0.62	B	YES
			P.M.	EB	113	0.19	A	113	0.19	A	113	0.19	A	YES
				WB	179	0.30	A	217	0.36	A	217	0.36	A	YES
6. Queen Kaahumanu Highway (SR 19)	south of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.64	B	1,545	0.48	A	1,592	0.50	A	YES
				SB	1,124	0.66	B	1,334	0.42	A	1,399	0.44	A	YES
			P.M.	NB	1,013	0.60	A	1,273	0.40	A	1,309	0.41	A	YES
				SB	987	0.58	A	1,376	0.43	A	1,473	0.46	A	YES
7. Kealakehe Parkway	makai (west) of Ane Keohokalole Highway	Secondary Arterial	A.M.	EB	424	0.34	A	707	0.57	A	804	0.64	B	YES
				WB	348	0.28	A	422	0.34	A	562	0.45	A	YES
			P.M.	EB	221	0.18	A	418	0.33	A	564	0.45	A	YES
				WB	382	0.31	A	629	0.50	A	737	0.59	A	YES
8. Ane Keohokalole Highway	south of Kealakehe Parkway	Secondary Arterial	A.M.	NB	241	0.19	A	561	0.45	A	888	0.71	C	YES
				SB	432	0.35	A	744	0.60	A	938	0.75	C	YES
			P.M.	NB	203	0.16	A	511	0.41	A	763	0.61	B	YES
				SB	150	0.12	A	407	0.33	A	699	0.56	A	YES
9. Queen Kaahumanu Highway (SR 19)	north of Kealakehe Parkway	Primary Arterial 2 Lanes (Existing) 4 Lanes (Future)	A.M.	NB	1,093	0.87	D	1,402	0.44	A	1,589	0.50	A	YES
				SB	1,124	0.90	D	1,519	0.47	A	1,681	0.53	A	YES
			P.M.	NB	1,013	0.81	D	1,215	0.38	A	1,359	0.42	A	YES
				SB	987	0.79	C	1,362	0.43	A	1,605	0.50	A	YES
10. Palani Road (SR 190)	south of Mamalahoa Highway	Secondary Arterial	A.M.	NB	541	0.43	A	643	0.51	A	736	0.59	A	YES
				SB	938	0.75	C	1,117	0.89	D	1,182	0.95	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,182*	*0.47*	*A*	*YES*
			P.M.	NB	659	0.53	A	793	0.63	B	865	0.69	B	YES
				SB	929	0.74	C	1,136	0.91	E	1,233	0.99	E	NO
				SB	*With Mitigation (Second Southbound Lane)*						*1,233*	*0.49*	*A*	*YES*

Note: Roadway Capacity for each facility types were assumed in Table 8.

TABLE 13
CAPACITY OF FACILITIES

Facility Type*	Definition*	Capacity per lane per hour**
Primary Arterial	Includes major highways, parkways, and primary arterials that move vehicles in large volumes and at higher speeds from one geographic area to another; highest traffic volumes corridor. Designed as a limited access roadway. Primary arterials shall have a minimum right-of-way of 120 feet.	1,700
Secondary Arterial	A street of considerable continuity that is primarily a traffic artery between or through large areas; interconncect with and augment primary system. Designed as a limited access roadwa. Secondary arterials shall have a minium right-of-way of 80 feet.	1,250
Major Collector	Any street supplementary to the arterial street system that is a means of transit between this system and smaller areas; used to some extent for through traffic and to access abutting properties; collect and distribute traffic between nieghborhood and arterial system. Major coleectors shall have a minimum right-of-way of 60 feet.	800
Local Streets - Commercial/Industrial	Local streets within commercial and industrial areas shall have a minimum right-of-way of 60 feet.	600
Minor Collector & Local Street	Minor collectors are used at times as through streets and for access to abutting properties. The principal purpose of a local street is to provide access to property abutting the public right-of-way.	450

*Source: County of Hawaii General Plan Appendix A (County of Hawaii, February 2005)

** Capacity is based on HCM 2000 methodology.

then assigning the new project-generated trips using the same geographic distribution pattern described in Chapter III. The existing and forecast peak hour street segment traffic volumes are presented in Tables 10, 11 and 12 for Concepts A, B, and C, respectively.

As shown, three of the analyzed directional street segments are projected to operate at LOS E or F under cumulative base conditions, and the project would contribute to cumulative impacts at these three locations:

2. Palani Road (SR 190) makai (west) of Henry Street in the makai-bound direction
3. Palani Road (SR 190) mauka (east) of Henry Street in the makai-bound direction
10. Palani Road (SR 190) south of Mamalahoa Highway in the southbound direction

The number of traffic impacts would be the same under Concepts A, B and C; however, the magnitude of those impacts would be greatest with Concept C. The mitigation measures described in Chapter IV for study intersections #3 and #4 (Henry Street & Palani Road and Minor Site Access Road & Palani Road) would also fully mitigate the identified impacts at street segments #2 and #3 by constructing an additional makai-bound lane on Palani Road.

The southbound segment of street segment #10 (Palani Road south of Mamalahoa Highway) is projected to operate at LOS E during both a.m. and p.m. peak hours in the future. As mitigation to address this cumulative impact, to which the project would contribute, the southbound roadway could be widened to provide two lanes. This improvement could be coordinated with and would complement the proposed widening of southbound Palani Road immediately north of this location (between Hina Lani Street and Mamalahoa Highway) identified in *Final Environmental Impact Statement for the Kula Nei Project* (Belt Collins Hawaii Ltd., September 2007). This widening could be extended to Hao Kuni Street, a distance of approximately 2,000 feet, where the two lanes would merge into the single existing southbound lane. While additional right-of-way may be needed to implement this measure, it does not appear that existing development would necessarily preclude its implementation, although it is noted that there are three private driveways on the makai side of Palani Road on this segment. With this improvement, the segment of Palani Road south of Mamalahoa Highway would be fully mitigated.

VI. SUMMARY AND CONCLUSIONS

This study was undertaken to analyze potential traffic impacts of the proposed Keahuolu Affordable Housing Master Plan project in North Kona on the island of Hawaii. The following summarizes the key findings of the study:

- The proposed project would be completed by 2020 and has three alternative development scenarios, varying in the amount of new housing that would be constructed. Each of the alternatives would be focused on a mixed-use town center and would include 197,000 square feet of commercial/retail space, 25 acres of neighborhood parks, a seven-acre archeological preserve, and a 12-acre site reserved for a school. In addition, Concept A would provide 1,020 dwelling units, Concept B would provide 1,840 dwelling units, and Concept C would provide 2,330 dwelling units.

- Peak hour capacity analyses were conducted for 10 existing and two future intersections in the vicinity of the project site. Seven of 10 existing intersections currently operate at LOS D or better during the weekday peak hours.

- Street segment analysis was conducted for 10 street segments. Nine of 10 segments currently operate at LOS D or better during the weekday peak hours.

- Concept A is expected to generate approximately 9,953 weekday daily trips, including 1,178 trips during the weekday morning peak hour, and 1,046 trips during the weekday afternoon peak hour. Concept B is expected to generate approximately 16,034 weekday daily trips, including 1,511 trips during the weekday morning peak hour, and 1,629 trips during the weekday afternoon peak hour. Concept C is expected to generate approximately 17,617 weekday daily trips, including 1,580 trips during the weekday morning peak hour, and 1,695 trips during the weekday afternoon peak hour.

- Analysis of projected year 2020 cumulative base conditions, representing future conditions without the proposed project, indicates that five of the analyzed intersections would operate at LOS E or F during the a.m. peak hour, the p.m. peak hour, or both.

- Analysis of projected year 2020 cumulative base plus project conditions indicates that seven of the analyzed intersections would operate at LOS E or F during one or both peak hours. The project would result in two project-specific traffic impacts and would contribute to five cumulative traffic impacts. The number of traffic impacts would be the same under Concepts A, B and C; however, the magnitude of those impacts would be greatest with Concept C.

- Mitigation strategies were developed to address the identified deficiencies at the seven study intersections with projected poor levels of service (LOS E or F). Each of the

identified cumulative and project-related impacts could be fully mitigated with the recommended improvements.

- Future increases in peak hour traffic volumes were evaluated for 10 street segments. Street segment analysis of projected year 2020 cumulative base plus project conditions indicates that seven of those street segments could adequately accommodate the projected increase in volumes during the peak hours. The mitigation measures proposed to address at two study intersections would also fully mitigate the identified impacts on two of the three impacted street segments. An additional mitigation measure was developed to mitigate the third location. With these improvements, the identified cumulative street segment impacts, to which the project would contribute, would be fully mitigated.

REFERENCES

2000 Highway Capacity Manual, Transportation Research Board, 2000.

County of Hawaii General Plan, County of Hawaii, February 2005.

Final Environmental Impact Statement for the Kula Nei Project, Belt Collins Hawaii Ltd., September 2007.

Keahuolu Affordable Housing Master Plan, Kailua-Kona, Hawaii, Belt Collins Hawaii Ltd., June 2007.

Keahole to Honaunau Regional Circulation Plan, County of Hawaii Planning Department, August 2006.

Manual on Uniform Traffic Control Devices, National Committee on Uniform Traffic Control Devices, 2003.

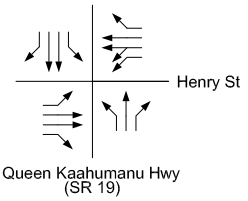
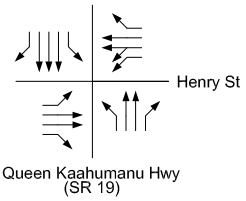
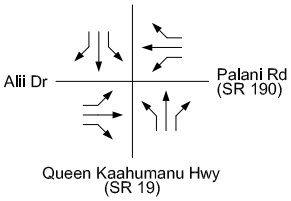
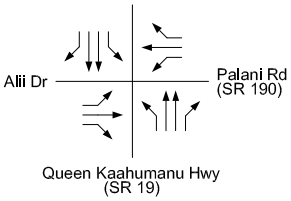
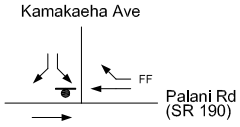
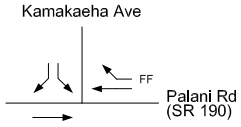
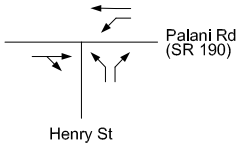
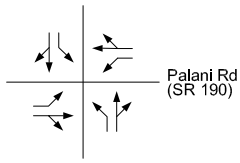
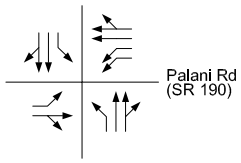
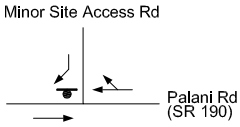
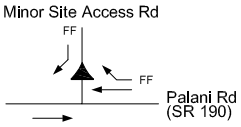
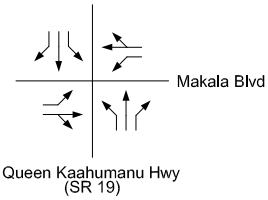
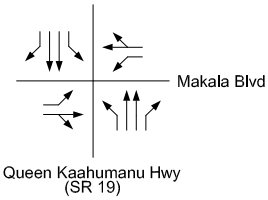
Trip Generation, 7th Edition, Institute of Transportation Engineers, 2003.

Trip Generation Handbook, 2nd Edition, Institute of Transportation Engineers, 2004.

APPENDIX A

INTERSECTION LANE CONFIGURATIONS

INTERSECTION LANE CONFIGURATIONS

	EXISTING CONDITIONS	FUTURE CONDITIONS	FUTURE CONDITIONS WITH MITIGATION
1. Queen Kaahumanu Hwy (SR 19) & Henry St			Same As Future Conditions
2. Queen Kaahumanu Hwy (SR 19) & Palini Rd (SR 190)/Alii Dr			Same As Future Conditions
3. Kamakaeha Ave & Palani Rd (SR 190)		Same As Existing Conditions	
4. Henry St & Palani Rd (SR 190)			
5. Minor Site Access Rd & Palani Rd (SR 190)	Intersection Does Not Currently Exist		
6. Queen Kaahumanu Hwy (SR 19) & Makala Blvd			Same As Future Conditions

LEGEND

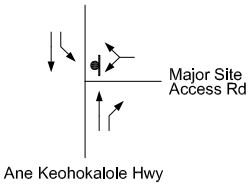
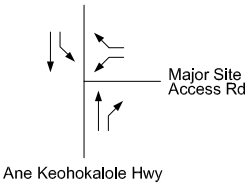
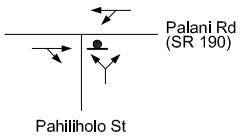
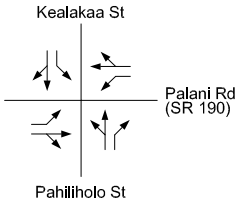
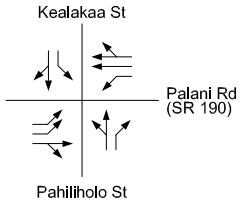
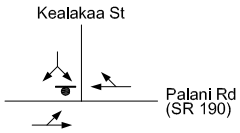
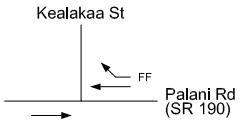
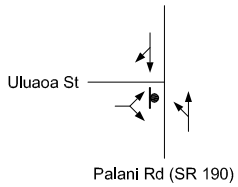
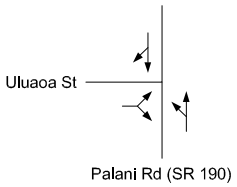
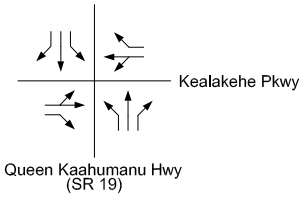
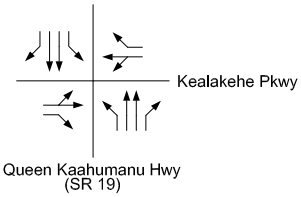
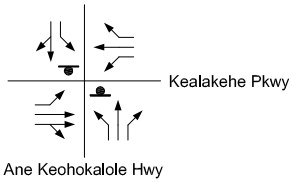
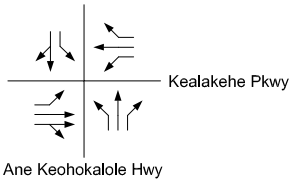
Stop Controlled

FF Free Flow

FEHR & PEERS

KAKU ASSOCIATES

INTERSECTION LANE CONFIGURATIONS

	EXISTING CONDITIONS	FUTURE CONDITIONS	FUTURE CONDITIONS WITH MITIGATION
7. Ane Keohokalole Hwy & Major Site Access Rd	Intersection Does Not Currently Exist		
8. Pahiliholo St & Palani Rd (SR 190)			
9. Kealakaa St & Palani Rd (SR 190)		 See Also Intersection 8	Same As Future Conditions
10. Palani Rd (SR 190) & Uluaoa St		Same As Existing Conditions	
11. Queen Kaahumanu Hwy (SR 19) & Kealakehe Pkwy			Same As Future Conditions
12. Ane Keohokalole Hwy & Kealakehe Pkwy		Same As Existing Conditions	

LEGEND

Stop Controlled

FF Free Flow

FEHR & PEERS

KAKU ASSOCIATES

APPENDIX B

INTERSECTION AND DAILY TRAFFIC COUNTS

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: HENRY STREET SOUTH OF PALANI ROAD

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	20	12	9	3	44
1:00	5	1	5	5	16
2:00	4	3	3	2	12
3:00	1	3	5	4	13
4:00	5	8	2	10	25
5:00	14	14	19	25	72
6:00	54	82	104	110	350
7:00	166	160	158	118	602
8:00	100	116	114	99	429
9:00	74	98	68	107	347
10:00	114	100	113	106	433
11:00	104	110	94	98	406
12:00	97	102	114	113	426
13:00	106	118	103	116	443
14:00	158	154	132	118	562
15:00	112	144	170	159	585
16:00	156	148	150	134	588
17:00	174	188	136	126	624
18:00	138	113	102	104	457
19:00	91	98	108	94	391
20:00	71	71	81	64	287
21:00	71	74	59	64	268
22:00	62	62	44	23	191
23:00	33	17	21	17	88
				TOTAL	7659

AM PEAK HOUR	0700-0800
VOLUME	602
PM PEAK HOUR	1630-1730
VOLUME	646

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	7	3	6	7	23
1:00	4	3	3	5	15
2:00	5	3	2	3	13
3:00	7	4	4	3	18
4:00	7	5	17	18	47
5:00	21	22	41	45	129
6:00	67	92	108	120	387
7:00	198	172	174	176	720
8:00	170	202	138	134	644
9:00	109	112	123	118	462
10:00	114	129	114	126	483
11:00	113	110	112	119	454
12:00	124	124	114	136	498
13:00	107	126	107	134	474
14:00	126	160	196	199	681
15:00	176	169	167	176	688
16:00	155	174	176	182	687
17:00	142	170	124	126	562
18:00	130	99	107	87	423
19:00	82	71	73	61	287
20:00	63	51	60	45	219
21:00	48	52	49	36	185
22:00	37	26	28	23	114
23:00	18	13	15	12	58
				TOTAL	8271

AM PEAK HOUR	0730-0830
VOLUME	722
PM PEAK HOUR	1430-1530
VOLUME	740

TOTAL BI-DIRECTIONAL VOLUME	15930

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: PALANI ROAD MAKAI (WEST) OF HENRY STREET

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	14	16	12	9	51
1:00	6	11	2	5	24
2:00	18	6	1	3	28
3:00	3	4	2	2	11
4:00	2	2	3	6	13
5:00	6	7	9	10	32
6:00	20	30	54	50	154
7:00	44	57	68	76	245
8:00	64	85	84	100	333
9:00	94	70	78	92	334
10:00	88	72	90	84	334
11:00	116	104	110	114	444
12:00	108	116	108	120	452
13:00	108	96	108	118	430
14:00	126	97	120	102	445
15:00	128	119	128	146	521
16:00	150	153	168	142	613
17:00	150	162	154	126	592
18:00	120	146	108	129	503
19:00	117	108	88	90	403
20:00	82	82	66	79	309
21:00	88	72	62	48	270
22:00	64	35	32	22	153
23:00	24	9	26	21	80
				TOTAL	6774

AM PEAK HOUR	1100-1200
VOLUME	444
PM PEAK HOUR	1630-1730
VOLUME	622

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	2	3	6	5	16
1:00	3	4	4	3	14
2:00	1	4	5	4	14
3:00	3	6	3	7	19
4:00	4	10	13	21	48
5:00	24	40	43	56	163
6:00	92	113	138	136	479
7:00	139	145	152	162	598
8:00	189	135	150	134	608
9:00	108	104	116	112	440
10:00	102	133	94	131	460
11:00	108	122	117	123	470
12:00	137	122	104	116	479
13:00	102	116	110	112	440
14:00	134	175	162	174	645
15:00	166	145	152	182	645
16:00	180	164	132	166	642
17:00	180	150	142	111	583
18:00	108	78	79	96	361
19:00	78	71	49	60	258
20:00	44	37	38	45	164
21:00	35	38	37	25	135
22:00	22	12	8	8	50
23:00	12	5	3	3	23
				TOTAL	7754

AM PEAK HOUR	0715-0815
VOLUME	648
PM PEAK HOUR	1530-1630
VOLUME	678

TOTAL BI-DIRECTIONAL VOLUME	14528

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: PALANI ROAD MAUKA (EAST) OF HENRY STREET

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	33	28	24	14	99
1:00	12	4	8	12	36
2:00	10	6	5	4	25
3:00	1	4	13	5	23
4:00	5	9	4	11	29
5:00	19	16	25	32	92
6:00	62	72	114	130	378
7:00	126	161	212	161	660
8:00	137	174	138	144	593
9:00	116	134	95	140	485
10:00	130	122	131	126	509
11:00	132	150	146	145	573
12:00	136	153	160	142	591
13:00	143	138	160	186	627
14:00	201	236	178	176	791
15:00	180	228	224	238	870
16:00	252	242	214	250	958
17:00	256	212	226	230	924
18:00	210	232	194	173	809
19:00	165	174	162	153	654
20:00	134	108	143	113	498
21:00	112	123	102	92	429
22:00	94	83	66	48	291
23:00	53	30	32	33	148
				TOTAL	11092

AM PEAK HOUR	0730-0830
VOLUME	684
PM PEAK HOUR	1615-1715
VOLUME	962

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	11	6	5	13	35
1:00	5	5	5	3	18
2:00	4	8	2	5	19
3:00	10	5	2	9	26
4:00	16	17	28	30	91
5:00	44	44	82	107	277
6:00	121	170	195	212	698
7:00	297	280	309	310	1196
8:00	326	294	198	214	1032
9:00	184	172	160	172	688
10:00	164	160	142	170	636
11:00	144	144	146	140	574
12:00	144	153	146	170	613
13:00	150	156	144	162	612
14:00	174	242	264	278	958
15:00	238	230	250	244	962
16:00	244	268	234	240	986
17:00	242	216	170	169	797
18:00	182	149	144	137	612
19:00	118	89	92	98	397
20:00	85	70	88	69	312
21:00	42	66	52	40	200
22:00	50	34	28	26	138
23:00	23	21	15	10	69
				TOTAL	11946

AM PEAK HOUR	0730-0830
VOLUME	1239
PM PEAK HOUR	1415-1515
VOLUME	1022

TOTAL BI-DIRECTIONAL VOLUME	23038

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: PALANI ROAD MAUKA (EAST) OF HENRY STREET

DATE: WEDNESDAY, AUGUST 22, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	26	24	19	17	86
1:00	13	11	8	10	42
2:00	10	13	6	7	36
3:00	4	5	8	6	23
4:00	8	9	6	11	34
5:00	20	15	24	35	94
6:00	73	76	123	142	414
7:00	137	178	227	169	711
8:00	142	116	113	146	517
9:00	134	117	132	112	495
10:00	126	114	150	124	514
11:00	151	128	130	136	545
12:00	140	174	146	144	604
13:00	146	172	146	190	654
14:00	190	210	194	192	786
15:00	188	222	223	238	871
16:00	220	213	240	259	932
17:00	274	289	226	202	991
18:00	210	220	167	150	747
19:00	139	180	157	126	602
20:00	117	118	118	121	474
21:00	136	108	107	91	442
22:00	100	71	49	37	257
23:00	54	52	29	32	167
				TOTAL	11038

AM PEAK HOUR	0715-0815
VOLUME	716
PM PEAK HOUR	1630-1730
VOLUME	1062

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	8	6	9	13	36
1:00	4	5	4	5	18
2:00	4	9	6	7	26
3:00	10	5	6	12	33
4:00	14	15	33	34	96
5:00	40	51	87	103	281
6:00	133	165	186	232	716
7:00	280	276	292	316	1164
8:00	332	292	206	180	1010
9:00	210	186	178	175	749
10:00	148	162	156	162	628
11:00	155	186	140	138	619
12:00	159	162	160	160	641
13:00	176	185	192	162	715
14:00	165	238	281	270	954
15:00	249	236	258	273	1016
16:00	242	253	240	276	1011
17:00	183	190	186	160	719
18:00	153	131	122	112	518
19:00	94	106	121	141	462
20:00	105	82	71	69	327
21:00	77	58	42	52	229
22:00	43	25	23	24	115
23:00	24	20	10	14	68
				TOTAL	12151

AM PEAK HOUR	0730-0830
VOLUME	1232
PM PEAK HOUR	1415-1515
VOLUME	1038

TOTAL BI-DIRECTIONAL VOLUME	23189

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: PALANI ROAD MAUKA (EAST) OF HENRY STREET

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	18	19	14	20	71
1:00	14	18	7	7	46
2:00	10	20	7	10	47
3:00	6	6	3	8	23
4:00	11	8	7	11	37
5:00	20	13	22	38	93
6:00	83	81	132	155	451
7:00	148	196	242	177	763
8:00	146	167	149	122	584
9:00	132	126	116	128	502
10:00	127	128	127	151	533
11:00	137	116	143	134	530
12:00	148	152	180	194	674
13:00	162	144	169	174	649
14:00	219	224	184	184	811
15:00	225	224	238	236	923
16:00	228	227	256	265	976
17:00	251	226	216	210	903
18:00	226	181	162	152	721
19:00	177	160	140	126	603
20:00	113	131	117	124	485
21:00	116	105	92	97	410
22:00	77	58	43	54	232
23:00	41	31	33	32	137
				TOTAL	11204

AM PEAK HOUR	0700-0800
VOLUME	763
PM PEAK HOUR	1615-1715
VOLUME	999

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	4	5	13	12	34
1:00	2	4	3	6	15
2:00	3	9	9	8	29
3:00	10	4	10	15	39
4:00	12	12	38	38	100
5:00	35	58	92	99	284
6:00	145	160	176	252	733
7:00	263	272	274	321	1130
8:00	338	290	212	216	1056
9:00	186	178	162	166	692
10:00	128	156	150	160	594
11:00	163	184	152	149	648
12:00	154	166	154	174	648
13:00	207	246	185	201	839
14:00	182	202	274	244	902
15:00	233	254	259	243	989
16:00	261	237	258	213	969
17:00	203	178	165	168	714
18:00	140	133	125	106	504
19:00	98	107	120	95	420
20:00	76	80	69	60	285
21:00	62	47	46	47	202
22:00	30	26	25	24	105
23:00	21	13	12	14	60
				TOTAL	11991

AM PEAK HOUR	0730-0830
VOLUME	1223
PM PEAK HOUR	1515-1615
VOLUME	1017

TOTAL BI-DIRECTIONAL VOLUME	23195

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: KEALAKAA STREET MAKAI (WEST) OF PALANI ROAD

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	2	2	0	2	6
1:00	2	2	1	0	5
2:00	2	3	1	2	8
3:00	0	3	4	3	10
4:00	1	10	9	6	26
5:00	13	10	24	28	75
6:00	31	38	38	64	171
7:00	100	105	158	136	499
8:00	121	91	48	44	304
9:00	42	40	42	48	172
10:00	35	32	24	29	120
11:00	34	40	32	36	142
12:00	18	30	28	45	121
13:00	34	26	42	40	142
14:00	92	126	123	98	439
15:00	69	92	79	100	340
16:00	48	67	78	72	265
17:00	74	80	62	64	280
18:00	44	55	42	48	189
19:00	34	38	32	23	127
20:00	42	30	20	22	114
21:00	11	16	20	12	59
22:00	23	8	10	8	49
23:00	4	6	3	6	19
				TOTAL	3682

AM PEAK HOUR	0715-0815
VOLUME	520
PM PEAK HOUR	1400-1500
VOLUME	439

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	12	10	7	10	39
1:00	5	0	3	1	9
2:00	5	2	2	0	9
3:00	3	4	12	5	24
4:00	1	4	3	4	12
5:00	2	7	8	14	31
6:00	24	26	28	60	138
7:00	88	92	134	107	421
8:00	70	50	34	45	199
9:00	28	25	17	29	99
10:00	36	21	23	28	108
11:00	28	26	34	36	124
12:00	24	46	36	38	144
13:00	30	39	60	94	223
14:00	86	83	83	58	310
15:00	54	60	60	58	232
16:00	60	72	61	61	254
17:00	75	78	74	78	305
18:00	73	51	49	56	229
19:00	42	50	48	47	187
20:00	40	40	42	38	160
21:00	25	30	36	37	128
22:00	26	30	28	13	97
23:00	20	12	11	15	58
				TOTAL	3540

AM PEAK HOUR	0700-0800
VOLUME	421
PM PEAK HOUR	1345-1445
VOLUME	346

TOTAL BI-DIRECTIONAL VOLUME	7222

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: ULUAOA STREET MAKAI (WEST) OF PALANI ROAD

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	5	2	0	2	9
1:00	0	1	1	2	4
2:00	1	1	3	2	7
3:00	2	1	2	4	9
4:00	1	7	10	5	23
5:00	12	12	26	19	69
6:00	31	27	38	51	147
7:00	43	50	72	108	273
8:00	104	92	31	24	251
9:00	16	17	10	14	57
10:00	9	8	15	16	48
11:00	12	8	24	20	64
12:00	10	12	20	18	60
13:00	28	14	18	28	88
14:00	42	108	86	50	286
15:00	34	38	30	29	131
16:00	34	33	26	37	130
17:00	25	25	26	19	95
18:00	16	12	18	22	68
19:00	20	24	29	50	123
20:00	23	18	13	8	62
21:00	12	14	12	9	47
22:00	12	6	7	6	31
23:00	3	3	0	3	9
				TOTAL	2091

AM PEAK HOUR	0730-0830
VOLUME	376
PM PEAK HOUR	1400-1500
VOLUME	286

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	2	2	1	2	7
1:00	3	0	5	2	10
2:00	0	1	1	0	2
3:00	0	0	0	0	0
4:00	0	1	0	0	1
5:00	3	0	8	4	15
6:00	13	13	4	13	43
7:00	24	56	92	109	281
8:00	54	46	28	14	142
9:00	6	12	8	12	38
10:00	18	11	11	6	46
11:00	9	15	15	11	50
12:00	18	18	20	13	69
13:00	8	21	26	29	84
14:00	59	68	42	46	215
15:00	32	44	24	36	136
16:00	37	38	36	42	153
17:00	43	54	40	36	173
18:00	28	26	18	14	86
19:00	13	22	15	14	64
20:00	14	5	1	12	32
21:00	16	8	8	5	37
22:00	10	7	5	9	31
23:00	2	5	1	3	11
				TOTAL	1726

AM PEAK HOUR	0715-0815
VOLUME	311
PM PEAK HOUR	1400-1500
VOLUME	215

TOTAL BI-DIRECTIONAL VOLUME	3817

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: QUEEN KAAHUMANU HIGHWAY SOUTH OF KEALAKEHE PARKWAY

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	16	14	14	13	57
1:00	8	6	0	5	19
2:00	6	7	6	14	33
3:00	13	14	17	22	66
4:00	18	32	47	66	163
5:00	88	144	193	207	632
6:00	246	220	232	224	922
7:00	248	278	268	256	1050
8:00	278	270	258	250	1056
9:00	268	256	264	240	1028
10:00	282	241	268	271	1062
11:00	283	250	264	248	1045
12:00	277	261	282	261	1081
13:00	248	274	258	296	1076
14:00	226	246	268	253	993
15:00	278	255	266	228	1027
16:00	240	270	236	267	1013
17:00	248	235	236	198	917
18:00	176	186	174	182	718
19:00	146	138	125	158	567
20:00	82	92	107	82	363
21:00	98	101	80	46	325
22:00	48	52	28	32	160
23:00	28	23	15	12	78
				TOTAL	15451

AM PEAK HOUR	0715-0815
VOLUME	1080
PM PEAK HOUR	1200-1300
VOLUME	1081

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	18	17	9	11	55
1:00	8	7	1	6	22
2:00	0	4	4	3	11
3:00	6	2	4	12	24
4:00	6	20	12	23	61
5:00	20	28	26	71	145
6:00	84	120	151	147	502
7:00	192	252	265	272	981
8:00	264	273	306	270	1113
9:00	251	240	270	256	1017
10:00	246	268	268	242	1024
11:00	275	283	282	228	1068
12:00	260	268	290	247	1065
13:00	256	268	250	254	1028
14:00	264	283	255	256	1058
15:00	258	244	244	226	972
16:00	246	248	239	247	980
17:00	242	212	250	220	924
18:00	228	221	163	194	806
19:00	213	156	163	148	680
20:00	123	137	112	106	478
21:00	102	94	82	78	356
22:00	80	50	65	58	253
23:00	58	32	32	20	142
				TOTAL	14765

AM PEAK HOUR	0745-0845
VOLUME	1115
PM PEAK HOUR	1200-1300
VOLUME	1065

TOTAL BI-DIRECTIONAL VOLUME	30216

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: QUEEN KAAHUMANU HIGHWAY SOUTH OF KEALAKEHE PARKWAY

DATE: WEDNESDAY, AUGUST 22, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	18	12	12	9	51
1:00	11	7	3	7	28
2:00	11	6	7	13	37
3:00	11	17	18	23	69
4:00	18	28	52	65	163
5:00	95	134	193	217	639
6:00	261	260	253	251	1025
7:00	261	270	260	270	1061
8:00	268	280	292	270	1110
9:00	264	242	232	258	996
10:00	286	262	262	294	1104
11:00	275	244	259	229	1007
12:00	234	276	257	258	1025
13:00	288	257	219	241	1005
14:00	246	238	249	221	954
15:00	238	220	241	256	955
16:00	289	232	232	238	991
17:00	291	285	240	188	1004
18:00	173	204	165	146	688
19:00	114	126	154	96	490
20:00	114	128	102	115	459
21:00	88	116	92	74	370
22:00	58	42	32	25	157
23:00	30	22	14	18	84
				TOTAL	15472

AM PEAK HOUR	0745-0845
VOLUME	1110
PM PEAK HOUR	1215-1315
VOLUME	1079

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	15	16	10	10	51
1:00	9	5	5	7	26
2:00	1	3	5	4	13
3:00	7	3	7	11	28
4:00	6	17	12	24	59
5:00	20	25	39	68	152
6:00	89	137	142	165	533
7:00	186	242	308	276	1012
8:00	258	282	294	248	1082
9:00	244	240	248	235	967
10:00	216	241	266	273	996
11:00	240	256	281	282	1059
12:00	245	276	279	232	1032
13:00	278	261	242	296	1077
14:00	276	242	258	238	1014
15:00	262	244	252	221	979
16:00	251	231	249	210	941
17:00	230	246	248	242	966
18:00	244	204	195	223	866
19:00	210	155	159	143	667
20:00	141	108	102	93	444
21:00	94	75	75	78	322
22:00	85	52	70	58	265
23:00	51	49	41	26	167
				TOTAL	14718

AM PEAK HOUR	0730-0830
VOLUME	1124
PM PEAK HOUR	1300-1400
VOLUME	1077

TOTAL BI-DIRECTIONAL VOLUME	30190

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: QUEEN KAAHUMANU HIGHWAY SOUTH OF KEALAKEHE PARKWAY

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	20	9	9	4	42
1:00	14	8	5	8	35
2:00	15	5	8	12	40
3:00	9	20	18	24	71
4:00	17	24	56	64	161
5:00	102	123	192	226	643
6:00	275	300	274	278	1127
7:00	274	274	266	268	1082
8:00	280	280	278	284	1122
9:00	276	257	251	258	1042
10:00	272	246	273	285	1076
11:00	230	264	288	284	1066
12:00	286	272	236	252	1046
13:00	268	238	276	275	1057
14:00	232	272	258	271	1033
15:00	271	255	266	266	1058
16:00	239	232	260	240	971
17:00	258	268	224	194	944
18:00	173	194	172	169	708
19:00	138	171	163	127	599
20:00	98	110	105	99	412
21:00	93	109	86	60	348
22:00	53	47	30	29	159
23:00	29	23	15	15	82
				TOTAL	15924

AM PEAK HOUR	0600-0700
VOLUME	1127
PM PEAK HOUR	1415-1515
VOLUME	1072

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	12	14	11	8	45
1:00	9	2	8	8	27
2:00	2	1	5	5	13
3:00	7	4	9	9	29
4:00	6	13	12	24	55
5:00	20	22	51	65	158
6:00	94	154	132	182	562
7:00	180	235	266	290	971
8:00	264	301	292	268	1125
9:00	258	256	258	270	1042
10:00	262	252	231	275	1020
11:00	235	230	244	230	939
12:00	252	228	270	272	1022
13:00	218	228	190	210	846
14:00	228	210	208	217	863
15:00	252	254	229	276	1011
16:00	278	260	246	254	1038
17:00	251	240	230	212	933
18:00	216	158	262	228	864
19:00	208	172	156	146	682
20:00	132	123	107	100	462
21:00	98	85	79	78	340
22:00	83	51	68	58	260
23:00	55	41	37	23	156
				TOTAL	14463

AM PEAK HOUR	0745-0845
VOLUME	1147
PM PEAK HOUR	1545-1645
VOLUME	1060

TOTAL BI-DIRECTIONAL VOLUME	30387

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: KEALAKEHE PARKWAY MAKEI (WEST) OF ANE KEOHOKALOLE HIGHWAY

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	4	1	3	0	8
1:00	0	1	3	3	7
2:00	1	1	0	2	4
3:00	1	1	0	0	2
4:00	2	0	2	1	5
5:00	2	4	3	10	19
6:00	11	16	10	26	63
7:00	32	50	62	78	222
8:00	120	115	111	49	395
9:00	14	16	16	17	63
10:00	14	18	18	15	65
11:00	16	14	24	26	80
12:00	24	10	16	17	67
13:00	21	23	17	14	75
14:00	30	31	45	70	176
15:00	79	52	44	46	221
16:00	34	30	52	43	159
17:00	40	36	38	32	146
18:00	30	32	36	28	126
19:00	22	20	10	10	62
20:00	20	11	30	12	73
21:00	8	12	13	10	43
22:00	10	7	6	4	27
23:00	10	7	1	3	21
				TOTAL	2129

AM PEAK HOUR	0745-0845
VOLUME	424
PM PEAK HOUR	1430-1530
VOLUME	246

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	0	0	1	0	1
1:00	0	0	1	1	2
2:00	0	1	1	2	4
3:00	2	0	4	3	9
4:00	2	6	4	6	18
5:00	6	13	20	20	59
6:00	20	25	30	38	113
7:00	38	71	69	70	248
8:00	94	96	88	43	321
9:00	24	19	22	20	85
10:00	12	14	24	14	64
11:00	20	18	11	48	97
12:00	67	19	20	11	117
13:00	16	34	28	29	107
14:00	17	14	23	35	89
15:00	182	94	52	54	382
16:00	46	34	30	24	134
17:00	26	50	25	22	123
18:00	26	37	77	46	186
19:00	23	5	20	14	62
20:00	11	18	16	23	68
21:00	32	8	18	10	68
22:00	12	3	3	4	22
23:00	6	1	6	4	17
				TOTAL	2396

AM PEAK HOUR	0745-0845
VOLUME	348
PM PEAK HOUR	1500-1600
VOLUME	382

TOTAL BI-DIRECTIONAL VOLUME	4525

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: ANE KEOHOKALOLE HIGHWAY SOUTH OF KEALAKEHE PARKWAY

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	0	0	0	0	0
1:00	0	0	0	0	0
2:00	0	0	0	1	1
3:00	0	0	0	0	0
4:00	0	0	0	2	2
5:00	1	1	1	0	3
6:00	2	5	5	7	19
7:00	15	16	36	42	109
8:00	67	68	64	34	233
9:00	10	8	8	5	31
10:00	6	3	5	4	18
11:00	9	10	2	29	50
12:00	46	11	6	6	69
13:00	17	14	12	13	56
14:00	5	5	16	22	48
15:00	88	54	27	34	203
16:00	31	15	17	11	74
17:00	19	35	13	10	77
18:00	12	22	61	23	118
19:00	9	0	5	4	18
20:00	4	10	7	20	41
21:00	26	2	14	7	49
22:00	4	0	0	1	5
23:00	1	0	0	0	1
				TOTAL	1225

AM PEAK HOUR	0745-0845
VOLUME	241
PM PEAK HOUR	1500-1600
VOLUME	203

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	0	0	1	0	1
1:00	0	0	0	0	0
2:00	1	0	0	0	1
3:00	0	0	0	0	0
4:00	0	0	0	0	0
5:00	0	2	1	4	7
6:00	10	10	7	15	42
7:00	22	48	60	78	208
8:00	122	116	116	52	406
9:00	10	6	8	4	28
10:00	7	4	4	3	18
11:00	6	5	9	14	34
12:00	17	4	7	7	35
13:00	12	14	10	4	40
14:00	10	16	26	56	108
15:00	66	40	27	17	150
16:00	12	12	19	16	59
17:00	15	16	20	21	72
18:00	18	16	18	10	62
19:00	3	1	0	2	6
20:00	4	4	7	3	18
21:00	4	2	1	1	8
22:00	2	0	0	1	3
23:00	1	0	0	0	1
				TOTAL	1307

AM PEAK HOUR	0745-0845
VOLUME	432
PM PEAK HOUR	1445-1545
VOLUME	189

TOTAL BI-DIRECTIONAL VOLUME	2532

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: QUEEN KAAHUMANU HIGHWAY NORTH OF KEALAKEHE PARKWAY

DATE: THURSDAY, AUGUST 23, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	14	5	10	4	33
1:00	9	9	5	4	27
2:00	13	6	8	7	34
3:00	7	15	18	24	64
4:00	14	26	46	65	151
5:00	96	111	159	203	569
6:00	214	294	262	250	1020
7:00	253	236	242	210	941
8:00	215	202	245	241	903
9:00	242	236	234	244	956
10:00	236	244	258	271	1009
11:00	229	230	228	236	923
12:00	252	260	224	226	962
13:00	242	208	230	266	946
14:00	199	254	224	216	893
15:00	252	296	258	281	1087
16:00	254	236	246	252	988
17:00	264	260	224	188	936
18:00	180	180	188	185	733
19:00	152	170	159	151	632
20:00	84	88	90	90	352
21:00	104	102	77	48	331
22:00	44	54	18	29	145
23:00	20	22	14	14	70
				TOTAL	14705

AM PEAK HOUR	0615-0715
VOLUME	1059
PM PEAK HOUR	1515-1615
VOLUME	1089

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	12	14	11	7	44
1:00	6	3	8	7	24
2:00	4	1	12	4	21
3:00	2	0	8	2	12
4:00	12	12	23	20	67
5:00	24	28	53	96	201
6:00	134	158	158	182	632
7:00	203	252	272	270	997
8:00	298	308	302	237	1145
9:00	232	238	227	275	972
10:00	260	227	242	248	977
11:00	246	209	276	256	987
12:00	215	224	240	262	941
13:00	236	215	167	204	822
14:00	208	235	214	209	866
15:00	228	236	204	275	943
16:00	223	222	260	237	942
17:00	212	229	208	178	827
18:00	180	128	258	170	736
19:00	176	142	128	130	576
20:00	117	114	116	102	449
21:00	76	83	61	62	282
22:00	77	42	63	56	238
23:00	60	24	23	17	124
				TOTAL	13825

AM PEAK HOUR	0745-0845
VOLUME	1178
PM PEAK HOUR	1545-1645
VOLUME	980

TOTAL BI-DIRECTIONAL VOLUME	28530

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCAITES
PROJECT: BIG ISLAND OF HAWAII TRAFFIC COUNTS
LOCATION: PALANI ROAD SOUTH OF MAMALAHOA HIGHWAY

DATE: TUESDAY, AUGUST 21, 2007

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	15	11	15	6	47
1:00	6	3	5	12	26
2:00	4	4	5	3	16
3:00	2	1	4	8	15
4:00	6	9	21	16	52
5:00	32	20	32	43	127
6:00	82	87	124	137	430
7:00	103	120	124	114	461
8:00	170	133	125	113	541
9:00	114	108	77	107	406
10:00	100	99	98	106	403
11:00	84	100	110	111	405
12:00	90	94	109	96	389
13:00	112	92	78	102	384
14:00	109	154	166	182	611
15:00	128	124	167	150	569
16:00	186	156	158	136	636
17:00	142	147	138	171	598
18:00	170	132	148	118	568
19:00	115	101	115	88	419
20:00	93	84	83	80	340
21:00	78	87	63	48	276
22:00	60	56	32	34	182
23:00	34	13	17	15	79
				TOTAL	7980

AM PEAK HOUR	0745-0845
VOLUME	542
PM PEAK HOUR	1530-1630
VOLUME	659

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	10	3	7	12	32
1:00	2	4	7	0	13
2:00	2	7	4	6	19
3:00	5	2	2	9	18
4:00	9	9	14	11	43
5:00	22	31	52	76	181
6:00	85	96	159	184	524
7:00	224	250	256	208	938
8:00	146	162	138	150	596
9:00	147	130	109	116	502
10:00	133	106	129	121	489
11:00	105	135	98	106	444
12:00	124	116	140	121	501
13:00	132	137	120	148	537
14:00	168	178	183	188	717
15:00	188	206	238	238	870
16:00	228	225	225	236	914
17:00	174	202	138	152	666
18:00	128	122	106	91	447
19:00	80	61	66	65	272
20:00	44	52	50	40	186
21:00	51	38	29	36	154
22:00	25	24	29	22	100
23:00	22	12	14	17	65
				TOTAL	9228

AM PEAK HOUR	0700-0800
VOLUME	938
PM PEAK HOUR	1530-1630
VOLUME	929

TOTAL BI-DIRECTIONAL VOLUME	17208

WILTEC

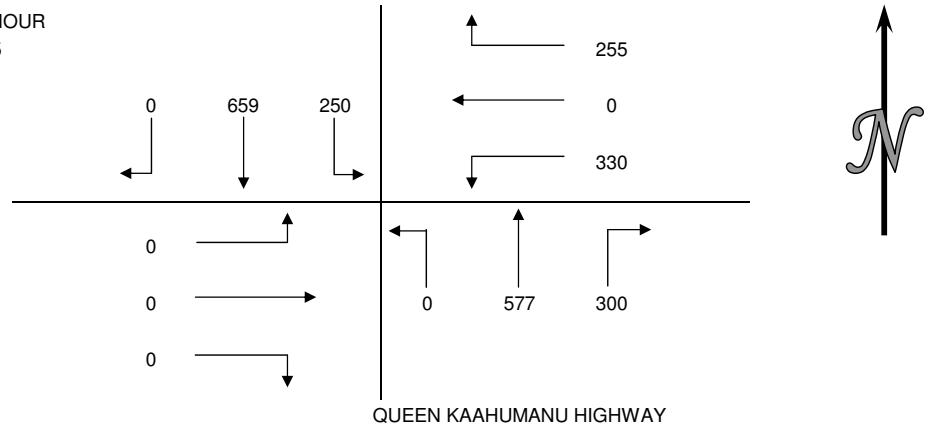
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS / KAKU ASSOCIATES
PROJECT: KONA TRAFFIC COUNTS
DATE: WEDNESDAY AUGUST 22, 2007
PERIOD: 6:00 AM TO 9:00 AM
INTERSECTION: N/S QUEEN KAAHUMANU HIGHWAY
E/W HIINA LANI STREET

15 MIN COUNTS													
	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-615	0	66	34	55	0	30	35	151	0	0	0	0	371
615-630	0	87	33	78	0	52	36	190	0	0	0	0	476
630-645	0	106	40	73	0	41	44	177	0	0	0	0	481
645-700	0	92	39	54	0	43	48	135	0	0	0	0	411
700-715	0	155	44	82	0	44	58	156	0	0	0	0	539
715-730	0	135	65	92	0	61	61	184	0	0	0	0	598
730-745	0	165	62	68	0	52	67	180	0	0	0	0	594
745-800	0	168	74	45	0	67	92	156	0	0	0	0	602
800-815	0	154	43	70	0	93	78	135	0	0	0	0	573
815-830	0	156	64	58	0	77	53	140	0	0	0	0	548
830-845	0	181	69	82	0	93	77	146	0	0	0	0	648
845-900	0	85	36	48	0	68	60	108	0	0	0	0	405
HOUR TOTALS													
	1	2	3	4	5	6	7	8	9	10	11	12	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-700	0	351	146	260	0	166	163	653	0	0	0	0	1739
615-715	0	440	156	287	0	180	186	658	0	0	0	0	1907
630-730	0	488	188	301	0	189	211	652	0	0	0	0	2029
645-745	0	547	210	296	0	200	234	655	0	0	0	0	2142
700-800	0	623	245	287	0	224	278	676	0	0	0	0	2333
715-815	0	622	244	275	0	273	298	655	0	0	0	0	2367
730-830	0	643	243	241	0	289	290	611	0	0	0	0	2317
745-845	0	659	250	255	0	330	300	577	0	0	0	0	2371
800-900	0	576	212	258	0	331	268	529	0	0	0	0	2174

A.M. PEAK HOUR
745-845



APPENDIX C

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING CONDITIONS

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.4
Optimal Cycle:	47	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	187	534	459	98	384	100	61	275	25	359	330	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	534	459	98	384	100	61	275	25	359	330	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	197	562	483	103	404	105	64	289	26	378	347	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	562	483	103	404	105	64	289	26	378	347	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	562	483	103	404	105	64	289	26	378	347	65
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.56	1.44	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	3610	1615	2751	2529	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.30	0.30	0.06	0.11	0.07	0.04	0.08	0.02	0.14	0.14	0.04
Crit Moves:		****		****				****		****		
Green/Cycle:	0.58	0.47	0.68	0.37	0.28	0.35	0.20	0.13	0.40	0.36	0.27	0.36
Volume/Cap:	0.28	0.63	0.44	0.29	0.40	0.18	0.25	0.63	0.04	0.48	0.50	0.11
Delay/Veh:	10.5	21.7	7.4	21.5	29.3	22.6	33.9	44.4	18.2	23.8	31.0	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.5	21.7	7.4	21.5	29.3	22.6	33.9	44.4	18.2	23.8	31.0	21.2
LOS by Move:	B	C	A	C	C	C	C	D	B	C	C	C
HCM2kAvgQ:	3	13	7	2	5	2	2	6	0	6	7	1

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.777
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	25.8
Optimal Cycle:	66	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	71	593	15	87	453	257	193	144	99	18	374	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	593	15	87	453	257	193	144	99	18	374	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	624	16	92	477	271	203	152	104	19	394	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	624	16	92	477	271	203	152	104	19	394	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	624	16	92	477	271	203	152	104	19	394	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.33	0.01	0.05	0.25	0.17	0.11	0.08	0.06	0.01	0.21	0.02
Crit Moves:		****			****			****			****	
Green/Cycle:	0.51	0.42	0.47	0.48	0.42	0.56	0.43	0.36	0.43	0.31	0.27	0.33
Volume/Cap:	0.22	0.78	0.02	0.39	0.60	0.30	0.59	0.22	0.15	0.05	0.78	0.06
Delay/Veh:	15.1	29.6	14.1	19.4	23.8	11.6	23.1	22.2	17.3	23.8	41.4	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	29.6	14.1	19.4	23.8	11.6	23.1	22.2	17.3	23.8	41.4	22.8
LOS by Move:	B	C	B	B	C	B	C	C	B	C	D	C
HCM2kAvgQ:	1	18	0	2	12	4	6	3	2	0	13	1

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[14.6]

Street Name:	Kamakaeha Ave									Palani Rd								
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled								
Rights:	Include			Include			Include			Include								
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			47	0		13		0	240		0		0	453		141	
Growth Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0			47	0		13		0	240		0		0	453		141	
User Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.95	0.95	0.95			0.95	0.95		0.95		0.95	0.95		0.95		0.95	0.95		0.95	
PHF Volume:	0	0	0			49	0		14		0	253		0		0	477		148	
Reduct Vol:	0	0	0			0	0		0		0	0		0		0	0		0	
FinalVolume:	0	0	0			49	0		14		0	253		0		0	477		148	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx		6.2		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx		3.3		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			729	xxxx		477		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx			393	xxxx		592		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx			393	xxxx		592		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx			0.13	xxxx		0.02		xxxx	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.4	xxxx		0.1		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx			15.5	xxxx		11.2		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*			C	*		B		*	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					14.6					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	12.3
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0	0	0 0 0	0	0	0 1 0	1 0	1	0 0
Volume Module:												
Base Vol:	122	0	399	0	0	0	0	185	37	650	550	0
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	122	0	399	0	0	0	0	185	37	650	550	0
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95	
PHF Volume:	128	0	420	0	0	0	0	195	39	684	579	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	0	420	0	0	0	0	195	39	684	579	0
PCE Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
MLF Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
FinalVolume:	128	0	420	0	0	0	0	195	39	684	579	0
Saturation Flow Module:												
Sat/Lane:	1900 1900	1900		1900 1900	1900		1900 1900	1900		1900 1900	1900	
Adjustment:	0.77 1.00	0.85		1.00 1.00	1.00		1.00 0.98	0.98		0.95 1.00	1.00	
Lanes:	1.00 0.00	1.00		0.00 0.00	0.00		0.00 0.83	0.17		1.00 1.00	0.00	
Final Sat.:	1461	0	1615	0	0	0	0	1547	309	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.09 0.00	0.26		0.00 0.00	0.00		0.00 0.13	0.13		0.38 0.30	0.00	
Crit Moves:	****							****		****		
Green/Cycle:	0.13 0.00	0.71		0.00 0.00	0.00		0.00 0.19	0.19		0.77 0.77	0.00	
Volume/Cap:	0.66 0.00	0.37		0.00 0.00	0.00		0.00 0.66	0.66		0.50 0.40	0.00	
Delay/Veh:	49.2	0.0	5.9	0.0	0.0	0.0	0.0	41.9	41.9	6.1	4.1	0.0
User DelAdj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
AdjDel/Veh:	49.2	0.0	5.9	0.0	0.0	0.0	0.0	41.9	41.9	6.1	4.1	0.0
LOS by Move:	D	A	A	A	A	A	A	D	D	A	A	A
HCM2kAvgQ:	5	0	5	0	0	0	0	8	8	8	6	0

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
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AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.748
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.3
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	1	0 1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	7	652	22	47	580	138	309	72	32	7	21	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	652	22	47	580	138	309	72	32	7	21	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	686	23	49	611	145	325	76	34	7	22	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	686	23	49	611	145	325	76	34	7	22	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	686	23	49	611	145	325	76	34	7	22	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.95	0.95	0.87	0.87
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.31	1.00	0.13	0.87
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1255	558	1805	211	1440
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.01	0.03	0.32	0.09	0.18	0.06	0.06	0.00	0.10	0.10
Crit Moves:		****			****			****			****	
Green/Cycle:	0.49	0.48	0.51	0.54	0.51	0.75	0.40	0.36	0.36	0.16	0.14	0.14
Volume/Cap:	0.03	0.75	0.03	0.24	0.63	0.12	0.62	0.17	0.17	0.03	0.75	0.75
Delay/Veh:	15.1	24.4	12.3	16.7	18.8	3.4	24.5	22.2	22.2	35.2	54.0	54.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	24.4	12.3	16.7	18.8	3.4	24.5	22.2	22.2	35.2	54.0	54.0
LOS by Move:	B	C	B	B	B	A	C	C	C	D	D	D
HCM2kAvgQ:	0	18	0	1	14	1	9	2	2	0	7	7

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: E[47.5]

Street Name:	Palihiolo St									Palani Rd								
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled								
Rights:	Include			Include			Include			Include								
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Volume Module:																				
Base Vol:	25	0	32	0	0	0	0	674	5	17	1088	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	25	0	32	0	0	0	0	674	5	17	1088	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95								
PHF Volume:	26	0	34	0	0	0	0	709	5	18	1145	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	26	0	34	0	0	0	0	709	5	18	1145	0								
Critical Gap Module:																				
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	1893	1893	712	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	715	xxxx	xxxxx								
Potent Cap.:	78	71	436	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	895	xxxx	xxxxx								
Move Cap.:	77	69	436	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	895	xxxx	xxxxx								
Volume/Cap:	0.34	0.00	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	142	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	1.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Shrd ConDel:	xxxxx	47.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx								
Shared LOS:	*	E	*	*	*	*	*	*	*	A	*	*								
ApproachDel:	47.5			xxxxxx			xxxxxx			xxxxxx										
ApproachLOS:	E			*			*			*										

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
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AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Kealakaa St/Palani

Average Delay (sec/veh): 14.8 Worst Case Level Of Service: F[68.0]

Street Name:	Kealakaa St									Palani Rd								
Approach:	North Bound				South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			25	0	321			295	369	0			0	775	49		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			25	0	321			295	369	0			0	775	49		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95		
PHF Volume:	0	0	0			26	0	338			311	388	0			0	816	52		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			26	0	338			311	388	0			0	816	52		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1851	xxxx	842			867	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx			83	xxxx	367			785	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx			52	xxxx	367			785	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx			0.51	xxxx	0.92			0.40	xxxx	xxxx		xxxx	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.9	xxxx	9.6			1.9	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx			132.5	xxxx	62.9			12.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*			F	*	F			B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			12.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*			*	*	*			B	*	*	*	*	*				
ApproachDel:	xxxxxx					68.0					xxxxxx					xxxxxx				
ApproachLOS:	*					F					*					*				

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 13.9 Worst Case Level Of Service: F[57.7]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	1 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	44	320	0	0	598	257	176	0	200	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	320	0	0	598	257	176	0	200	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	337	0	0	629	271	185	0	211	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	46	337	0	0	629	271	185	0	211	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	900	xxxx	xxxxx	xxxx	xxxx	xxxxx	1194	xxxx	765	xxxx	xxxx	xxxxx
Potent Cap.:	763	xxxx	xxxxx	xxxx	xxxx	xxxxx	208	xxxx	407	xxxx	xxxx	xxxxx
Move Cap.:	763	xxxx	xxxxx	xxxx	xxxx	xxxxx	198	xxxx	407	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	0.93	xxxx	0.52	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.6	xxxx	2.9	xxxx	xxxx	xxxxx
Control Del:	10.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	97.2	xxxx	23.0	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	F	*	C	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	10.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			57.7			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.742
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	19.7
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	1 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	85	733	262	135	720	80	41	20	7	214	11	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	733	262	135	720	80	41	20	7	214	11	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	89	772	276	142	758	84	43	21	7	225	12	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	772	276	142	758	84	43	21	7	225	12	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	772	276	142	758	84	43	21	7	225	12	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.67	0.67	0.85	0.68	0.68	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.33	1.00	0.95	0.05	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	849	414	1615	1229	63	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.41	0.17	0.08	0.40	0.05	0.05	0.05	0.00	0.18	0.18	0.05
Crit Moves:		****		****							****	
Green/Cycle:	0.62	0.55	0.55	0.68	0.58	0.58	0.25	0.25	0.32	0.25	0.25	0.35
Volume/Cap:	0.26	0.74	0.31	0.40	0.69	0.09	0.21	0.21	0.01	0.74	0.74	0.14
Delay/Veh:	11.3	20.2	12.6	13.3	16.4	9.3	30.2	30.2	23.3	43.8	43.8	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.3	20.2	12.6	13.3	16.4	9.3	30.2	30.2	23.3	43.8	43.8	22.1
LOS by Move:	B	C	B	B	B	A	C	C	C	D	D	C
HCM2kAvgQ:	1	19	5	2	17	1	2	2	0	8	8	2

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[11.7]

Street Name:	Ane Jeohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	169	0	3	0	0	0	0	44	306	2	65	0
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	169	0	3	0	0	0	0	44	306	2	65	0
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95	
PHF Volume:	178	0	3	0	0	0	0	46	322	2	68	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	178	0	3	0	0	0	0	46	322	2	68	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	280	280	184	96	441	68	xxxx	xxxx	xxxxx	368	xxxx	xxxxx
Potent Cap.:	714	632	863	892	513	1000	xxxx	xxxx	xxxxx	1201	xxxx	xxxxx
Move Cap.:	713	631	863	887	513	1000	xxxx	xxxx	xxxxx	1201	xxxx	xxxxx
Volume/Cap:	0.25 0.00	0.00		0.00 0.00	0.00		xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.0	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	11.7	xxxx	9.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	B	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.7			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.9
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	2	0 1	1 0	2	0 1	1 1	1	0 1
Volume Module:												
Base Vol:	169	331	418	166	609	109	67	406	107	436	390	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	169	331	418	166	609	109	67	406	107	436	390	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	178	348	440	175	641	115	71	427	113	459	411	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	348	440	175	641	115	71	427	113	459	411	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	178	348	440	175	641	115	71	427	113	459	411	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.58	1.42	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	3610	1615	2784	2490	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.27	0.10	0.18	0.07	0.04	0.12	0.07	0.16	0.16	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.46	0.29	0.56	0.44	0.29	0.37	0.28	0.19	0.35	0.48	0.37	0.52
Volume/Cap:	0.44	0.63	0.49	0.42	0.62	0.19	0.21	0.62	0.20	0.47	0.45	0.22
Delay/Veh:	17.9	33.2	14.0	19.5	32.2	21.3	27.4	38.9	23.0	17.2	24.0	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.9	33.2	14.0	19.5	32.2	21.3	27.4	38.9	23.0	17.2	24.0	13.1
LOS by Move:	B	C	B	B	C	C	C	D	C	B	C	B
HCM2kAvgQ:	4	10	8	4	10	2	2	7	2	7	7	3

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.874
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	30.9
Optimal Cycle:	94	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	28	524	15	170	580	294	269	293	219	51	434	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	524	15	170	580	294	269	293	219	51	434	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	29	552	16	179	611	309	283	308	231	54	457	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	552	16	179	611	309	283	308	231	54	457	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	552	16	179	611	309	283	308	231	54	457	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.29	0.01	0.10	0.32	0.19	0.16	0.16	0.14	0.03	0.24	0.03
Crit Moves:		****			****			****			****	
Green/Cycle:	0.35	0.33	0.40	0.47	0.42	0.60	0.47	0.38	0.41	0.35	0.28	0.39
Volume/Cap:	0.18	0.87	0.02	0.64	0.76	0.32	0.71	0.42	0.35	0.13	0.87	0.07
Delay/Veh:	23.4	44.3	18.0	25.6	28.6	9.9	27.7	23.0	20.9	22.2	49.7	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.4	44.3	18.0	25.6	28.6	9.9	27.7	23.0	20.9	22.2	49.7	19.3
LOS by Move:	C	D	B	C	C	A	C	C	C	C	D	B
HCM2kAvgQ:	1	19	0	5	17	5	8	7	5	1	17	1

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: D[25.4]

Street Name:	Kamakaeha Ave						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0	0 0	1	0 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	127	0	63	0	498	0	0	474	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	127	0	63	0	498	0	0	474	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	134	0	66	0	524	0	0	499	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	134	0	66	0	524	0	0	499	169
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1023	xxxx	499	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	263	xxxx	576	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	263	xxxx	576	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.51	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	2.7	xxxx	0.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	32.0	xxxx	12.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	D	*	B	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			25.4			xxxxxx			xxxxxx		
ApproachLOS:	*			D			*			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.804
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.5
Optimal Cycle:	72	Level Of Service:	B

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0	0	0 0 0	0	0	0 1 0	1 0	1	0 0
Volume Module:												
Base Vol:	110	0	377	0	0	0	0	484	149	484	501	0
Growth Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
Initial Bse:	110	0	377	0	0	0	0	484	149	484	501	0
User Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
PHF Adj:	0.95 0.95		0.95	0.95 0.95		0.95	0.95 0.95		0.95	0.95 0.95		0.95
PHF Volume:	116	0	397	0	0	0	0	509	157	509	527	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	0	397	0	0	0	0	509	157	509	527	0
PCE Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
MLF Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
FinalVolume:	116	0	397	0	0	0	0	509	157	509	527	0
Saturation Flow Module:												
Sat/Lane:	1900 1900		1900	1900 1900		1900	1900 1900		1900	1900 1900		1900
Adjustment:	0.77 1.00		0.85	1.00 1.00		1.00	1.00 0.97		0.97	0.95 1.00		1.00
Lanes:	1.00 0.00		1.00	0.00 0.00		0.00	0.00 0.76		0.24	1.00 1.00		0.00
Final Sat.:	1461	0	1615	0	0	0	0	1406	433	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.08 0.00		0.25	0.00 0.00		0.00	0.00 0.36		0.36	0.28 0.28		0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.10 0.00		0.45	0.00 0.00		0.00	0.00 0.45		0.45	0.80 0.80		0.00
Volume/Cap:	0.80 0.00		0.55	0.00 0.00		0.00	0.00 0.80		0.80	0.41 0.35		0.00
Delay/Veh:	71.1	0.0	21.0	0.0	0.0	0.0	0.0	29.4	29.4	6.5	2.9	0.0
User DelAdj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
AdjDel/Veh:	71.1	0.0	21.0	0.0	0.0	0.0	0.0	29.4	29.4	6.5	2.9	0.0
LOS by Move:	E	A	C	A	A	A	A	C	C	A	A	A
HCM2kAvgQ:	6	0	9	0	0	0	0	19	19	5	5	0

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.973
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	35.6
Optimal Cycle:	161	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	11	569	65	70	938	240	417	126	41	21	71	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	569	65	70	938	240	417	126	41	21	71	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	599	68	74	987	253	439	133	43	22	75	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	599	68	74	987	253	439	133	43	22	75	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	599	68	74	987	253	439	133	43	22	75	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.25	1.00	0.41	0.59
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1380	449	1805	702	1029
Capacity Analysis Module:												
Vol/Sat:	0.01	0.32	0.04	0.04	0.52	0.16	0.24	0.10	0.10	0.01	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.49	0.48	0.52	0.56	0.53	0.78	0.38	0.32	0.32	0.15	0.11	0.11
Volume/Cap:	0.13	0.66	0.08	0.24	0.97	0.20	0.84	0.30	0.30	0.11	0.97	0.97
Delay/Veh:	25.5	21.6	12.1	13.9	44.4	2.8	37.0	26.0	26.0	36.8	102	101.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.5	21.6	12.1	13.9	44.4	2.8	37.0	26.0	26.0	36.8	102	101.7
LOS by Move:	C	C	B	B	D	A	D	C	C	D	F	F
HCM2kAvgQ:	0	15	1	1	36	2	15	4	4	1	10	10

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: F[59.5]

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0 1	0		0 1 0	0	0
Volume Module:												
Base Vol:	23	0	26	0	0	0	0	798	11	39	1009	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	0	26	0	0	0	0	798	11	39	1009	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	24	0	27	0	0	0	0	840	12	41	1062	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	0	27	0	0	0	0	840	12	41	1062	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1990	1990	846	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	852	xxxx	xxxxx
Potent Cap.:	68	61	365	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	796	xxxx	xxxxx
Move Cap.:	65	58	365	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	796	xxxx	xxxxx
Volume/Cap:	0.37	0.00	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	115	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Shrd ConDel:	xxxxx	59.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	A	*	*
ApproachDel:		59.5		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		F		*			*			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Kealakaa St/Palani

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: D[32.5]

Street Name:	Kealakaa St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0	0 0	1	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	6	0	225	224	557	0	0	795	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	225	224	557	0	0	795	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	6	0	237	236	586	0	0	837	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	237	236	586	0	0	837	19
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1904	xxxx	846	856	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	77	xxxx	365	793	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	56	xxxx	365	793	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.11	xxxx	0.65	0.30	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	4.4	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	77.0	xxxx	31.3	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	D	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*
ApproachDel:	xxxxxx			32.5			xxxxxx			xxxxxx		
ApproachLOS:	*			D			*			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[53.3]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	1 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	23	556	0	0	789	145	71	0	32	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	556	0	0	789	145	71	0	32	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	24	585	0	0	831	153	75	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	585	0	0	831	153	75	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	983	xxxx	xxxxx	xxxx	xxxx	xxxxx	1541	xxxx	907	xxxx	xxxx	xxxxx
Potent Cap.:	710	xxxx	xxxxx	xxxx	xxxx	xxxxx	128	xxxx	337	xxxx	xxxx	xxxxx
Move Cap.:	710	xxxx	xxxxx	xxxx	xxxx	xxxxx	125	xxxx	337	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.60	xxxx	0.10	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.0	xxxx	0.3	xxxx	xxxx	xxxxx
Control Del:	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	69.7	xxxx	16.9	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	F	*	C	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			53.3			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.652
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	10.5
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	1 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	56	907	143	44	777	65	63	7	57	60	6	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	907	143	44	777	65	63	7	57	60	6	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	59	955	151	46	818	68	66	7	60	63	6	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	955	151	46	818	68	66	7	60	63	6	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	955	151	46	818	68	66	7	60	63	6	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.67	0.67	0.85	0.64	0.64	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.10	1.00	0.91	0.09	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1137	126	1615	1104	110	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.50	0.09	0.03	0.43	0.04	0.06	0.06	0.04	0.06	0.06	0.04
Crit Moves:		****		****				****				
Green/Cycle:	0.84	0.77	0.77	0.79	0.75	0.75	0.09	0.09	0.15	0.09	0.09	0.13
Volume/Cap:	0.12	0.65	0.12	0.12	0.57	0.06	0.65	0.65	0.25	0.64	0.64	0.28
Delay/Veh:	3.7	6.3	2.9	4.7	5.9	3.2	56.8	56.8	38.4	56.1	56.1	40.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.7	6.3	2.9	4.7	5.9	3.2	56.8	56.8	38.4	56.1	56.1	40.1
LOS by Move:	A	A	A	A	A	A	E	E	D	E	E	D
HCM2kAvgQ:	0	14	1	0	11	1	3	3	2	3	3	2

Note: Queue reported is the number of cars per lane.

Palani Affordable Housing
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[10.5]

Street Name:	Ane Jeohokalole Hwy							Kealakehe Pkwy						
Approach:	North Bound			South Bound				East Bound				West Bound		
Movement:	L	T	R	L	T	R		L	T	R		L	T	R
Control:	Stop Sign			Stop Sign				Uncontrolled				Uncontrolled		
Rights:	Include			Include				Include				Include		
Lanes:	1 0	1	0 1	1 0	0 1	0		1 0	1	1 0		1 0	1	0 1
Volume Module:														
Base Vol:	58	0	0	0	0	0		0	114	123		5	72	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Initial Bse:	58	0	0	0	0	0		0	114	123		5	72	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95
PHF Volume:	61	0	0	0	0	0		0	120	129		5	76	0
Reduct Vol:	0	0	0	0	0	0		0	0	0		0	0	0
FinalVolume:	61	0	0	0	0	0		0	120	129		5	76	0
Critical Gap Module:														
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2		xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3		xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx
Capacity Module:														
Cnflict Vol:	271	271	125	146	336	76		xxxx	xxxx	xxxxx		249	xxxx	xxxxx
Potent Cap.:	723	639	931	827	588	991		xxxx	xxxx	xxxxx		1328	xxxx	xxxxx
Move Cap.:	720	636	931	824	586	991		xxxx	xxxx	xxxxx		1328	xxxx	xxxxx
Volume/Cap:	0.08	0.00	0.00	0.00	0.00	0.00		xxxx	xxxx	xxxx		0.00	xxxx	xxxx
Level Of Service Module:														
2Way95thQ:	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx
Control Del:	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		7.7	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*		*	*	*		A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT		LT	LTR	RT		LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	0		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*		*	*	*		*	*	*
ApproachDel:	10.5			xxxxxx				xxxxxx				xxxxxx		
ApproachLOS:	B			*				*				*		

Note: Queue reported is the number of cars per lane.

CUMULATIVE BASE CONDITIONS

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.813
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	26.1
Optimal Cycle:	74	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	320	749	878	130	509	132	76	286	25	577	529	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	749	878	130	509	132	76	286	25	577	529	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	337	788	924	137	536	139	80	301	26	607	557	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	788	924	137	536	139	80	301	26	607	557	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	337	788	924	137	536	139	80	301	26	607	557	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.92	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.57	1.43	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2754	2525	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.22	0.57	0.08	0.10	0.09	0.04	0.08	0.02	0.22	0.22	0.06
Crit Moves:			****	****				****		****		
Green/Cycle:	0.55	0.43	0.70	0.28	0.19	0.25	0.17	0.10	0.44	0.39	0.31	0.40
Volume/Cap:	0.47	0.50	0.81	0.47	0.55	0.34	0.40	0.81	0.04	0.64	0.71	0.16
Uniform Del:	13.1	20.6	10.2	28.0	36.8	30.8	36.5	43.9	15.9	23.6	30.4	18.9
IncremntDel:	0.5	0.3	4.6	1.2	0.7	0.5	1.3	12.8	0.0	0.8	1.5	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	13.6	20.8	14.8	29.2	37.5	31.3	37.8	56.8	15.9	24.4	31.9	19.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	20.8	14.8	29.2	37.5	31.3	37.8	56.8	15.9	24.4	31.9	19.1
LOS by Move:	B	C	B	C	D	C	D	E	B	C	C	B
HCM2kAvgQ:	7	9	22	4	6	4	3	7	0	11	12	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	33.3
Optimal Cycle:	93	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	97	807	20	126	655	372	193	144	99	32	658	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	807	20	126	655	372	193	144	99	32	658	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	102	849	21	133	689	392	203	152	104	34	693	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	849	21	133	689	392	203	152	104	34	693	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	849	21	133	689	392	203	152	104	34	693	54
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.24	0.01	0.07	0.19	0.24	0.11	0.08	0.06	0.02	0.36	0.03
Crit Moves:		****		****			****				****	
Green/Cycle:	0.35	0.27	0.37	0.37	0.27	0.40	0.57	0.44	0.52	0.52	0.42	0.50
Volume/Cap:	0.45	0.87	0.03	0.59	0.70	0.60	0.66	0.18	0.12	0.05	0.87	0.07
Uniform Del:	23.8	34.9	19.9	24.0	32.7	23.6	22.0	16.9	12.1	11.7	26.7	12.8
IncremntDel:	1.4	8.8	0.0	3.9	2.3	1.6	5.2	0.1	0.1	0.0	10.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	25.2	43.7	19.9	28.0	34.9	25.2	27.2	17.0	12.2	11.7	37.2	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.2	43.7	19.9	28.0	34.9	25.2	27.2	17.0	12.2	11.7	37.2	12.9
LOS by Move:	C	D	B	C	C	C	C	B	B	B	D	B
HCM2kAvgQ:	3	16	0	4	11	10	6	3	2	1	23	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[22.5]

Street Name:	Kamakaeha Ave									Palani Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Ignore				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			47	0	15			0	290	0			0	775	240		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			47	0	15			0	290	0			0	775	240		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	0.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.00		
PHF Volume:	0	0	0			49	0	16			0	305	0			0	816	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			49	0	16			0	305	0			0	816	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1121	xxxx	816			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			230	xxxx	380			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			230	xxxx	380			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.21	xxxx	0.04			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.8	xxxx	0.1			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			24.9	xxxx	14.9			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			C	*	B			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					22.5					xxxxxx					xxxxxx				
ApproachLOS:	*					C					*					*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.099
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	81.1
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	122	234	454	31	372	217	123	185	37	900	810	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	234	454	31	372	217	123	185	37	900	810	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	128	246	478	33	392	228	129	195	39	947	853	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	246	478	33	392	228	129	195	39	947	853	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	246	478	33	392	228	129	195	39	947	853	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.16	0.90	0.90	0.09	0.95	0.95	0.95	0.98	0.98	0.96	0.99	0.99
Lanes:	1.00	0.34	0.66	1.00	0.63	0.37	1.00	0.83	0.17	1.00	0.90	0.10
Final Sat.:	312	582	1130	177	1134	661	1805	1544	309	1820	1684	187
Capacity Analysis Module:												
Vol/Sat:	0.41	0.42	0.42	0.18	0.35	0.35	0.07	0.13	0.13	0.52	0.51	0.51
Crit Moves:		****						****		****		
Green/Cycle:	0.35	0.35	0.79	0.35	0.35	0.35	0.07	0.11	0.11	0.48	0.48	0.48
Volume/Cap:	1.16	1.19	0.53	0.45	0.97	0.97	1.06	1.19	1.19	1.09	1.06	1.06
Uniform Del:	32.3	32.3	3.7	24.8	31.8	31.8	46.6	44.7	44.7	26.9	26.1	26.1
IncremntDel:	135.9	103	0.4	4.5	29.1	29.1	98.2	126	126.2	59.5	47.1	47.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	168.2	135	4.1	29.3	61.0	61.0	144.8	171	170.9	86.3	73.2	73.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	168.2	135	4.1	29.3	61.0	61.0	144.8	171	170.9	86.3	73.2	73.2
LOS by Move:	F	F	A	C	E	E	F	F	F	F	E	E
HCM2kAvgQ:	9	39	8	1	25	25	8	15	15	43	41	41

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.0
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	10	902	30	68	840	200	309	72	32	7	21	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	902	30	68	840	200	309	72	32	7	21	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	949	32	72	884	211	325	76	34	7	22	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	949	32	72	884	211	325	76	34	7	22	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	949	32	72	884	211	325	76	34	7	22	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	0.87	0.87
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.69	0.31	1.00	0.13	0.87
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1255	558	1805	211	1440
Capacity Analysis Module:												
Vol/Sat:	0.01	0.26	0.02	0.04	0.24	0.13	0.18	0.06	0.06	0.00	0.10	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.41	0.40	0.43	0.48	0.45	0.73	0.46	0.41	0.41	0.19	0.16	0.16
Volume/Cap:	0.05	0.65	0.05	0.32	0.54	0.18	0.53	0.15	0.15	0.03	0.65	0.65
Uniform Del:	18.0	24.2	16.5	16.6	19.8	4.2	18.2	18.6	18.6	33.1	39.4	39.4
IncremntDel:	0.1	1.1	0.0	0.8	0.4	0.1	0.9	0.1	0.1	0.0	5.7	5.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.1	25.3	16.6	17.4	20.2	4.3	19.1	18.7	18.7	33.2	45.1	45.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	25.3	16.6	17.4	20.2	4.3	19.1	18.7	18.7	33.2	45.1	45.1
LOS by Move:	B	C	B	B	C	A	B	B	B	C	D	D
HCM2kAvgQ:	0	13	1	2	11	2	8	2	2	0	6	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.522
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	171.2
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	5	20	32	10	15	521	438	476	6	20	1254	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	20	32	10	15	521	438	476	6	20	1254	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	21	34	11	16	548	461	501	6	21	1320	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	21	34	11	16	548	461	501	6	21	1320	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	5	21	34	11	16	548	461	501	6	21	1320	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	0.64	0.85	0.75	0.85	0.85	0.24	1.00	1.00	0.95	1.00	1.00
Lanes:	0.20	0.80	1.00	1.00	0.03	0.97	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	243	973	1615	1419	45	1577	451	1873	24	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.35	0.35	1.02	0.27	0.27	0.01	0.69	0.00
Crit Moves:					****		****					
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.63	0.63	0.63	0.03	0.48	0.00
Volume/Cap:	0.09	0.09	0.09	0.03	1.44	1.44	1.17	0.42	0.42	0.42	1.44	0.00
Uniform Del:	29.4	29.4	29.4	29.0	37.9	37.9	8.7	9.3	9.3	47.8	25.9	0.0
IncremntDel:	0.1	0.1	0.1	0.0	213	213.0	98.5	0.2	0.2	5.7	205	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.6	29.6	29.5	29.0	251	250.9	107.2	9.5	9.5	53.6	231	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.6	29.6	29.5	29.0	251	250.9	107.2	9.5	9.5	53.6	231	0.0
LOS by Move:	C	C	C	C	F	F	F	A	A	D	F	A
HCM2kAvgQ:	1	1	1	0	40	40	26	8	8	1	90	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 32.4 Worst Case Level Of Service: F[161.1]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	58 422	0	0	723	311		176	0	200	0	0	0
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58 422	0	0	723	311		176	0	200	0	0	0
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	61 444	0	0	761	327		185	0	211	0	0	0
Reduct Vol:	0 0	0	0	0	0		0	0	0	0	0	0
FinalVolume:	61 444	0	0	761	327		185	0	211	0	0	0
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx	xxxx	xxxxx			6.4 xxxx		6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2 xxxx xxxxx	xxxxx	xxxx	xxxxx			3.5 xxxx		3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1088 xxxx xxxxx	xxxx	xxxx	xxxxx			1491 xxxx		925	xxxx	xxxx	xxxxx
Potent Cap.:	649 xxxx xxxxx	xxxx	xxxx	xxxxx			138 xxxx		329	xxxx	xxxx	xxxxx
Move Cap.:	649 xxxx xxxxx	xxxx	xxxx	xxxxx			127 xxxx		329	xxxx	xxxx	xxxxx
Volume/Cap:	0.09 xxxx xxxx	xxxx	xxxx	xxxx			1.46 xxxx		0.64	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.3 xxxx xxxxx	xxxx	xxxx	xxxxx			12.7 xxxx		4.2	xxxx	xxxx	xxxxx
Control Del:	11.1 xxxx xxxxx	xxxxx	xxxx	xxxxx			306.2 xxxx		33.5	xxxxx	xxxx	xxxxx
LOS by Move:	B *	*	*	*			F *		D	*	*	*
Movement:	LT - LTR - RT		LT - LTR - RT				LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx xxxxx		xxxx xxxx xxxxx				xxxx xxxx xxxxx			xxxx xxxx xxxxx		
SharedQueue:	0.3 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx			xxxxx xxxx xxxxx		
Shrd ConDel:	11.1 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx			xxxxx xxxx xxxxx		
Shared LOS:	B *	*	*	*			* *			* *		*
ApproachDel:	xxxxxx		xxxxxx				161.1			xxxxxx		
ApproachLOS:	*		*				F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.748
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	25.9
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	115	995	422	171	910	249	81	107	10	231	61	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	995	422	171	910	249	81	107	10	231	61	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1047	444	180	958	262	85	113	11	243	64	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1047	444	180	958	262	85	113	11	243	64	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	1047	444	180	958	262	85	113	11	243	64	85
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.64	0.64	0.85	0.57	0.57	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.43	0.57	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	526	694	1615	858	227	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.29	0.28	0.10	0.27	0.16	0.16	0.16	0.01	0.28	0.28	0.05
Crit Moves:		****		****							****	
Green/Cycle:	0.49	0.39	0.39	0.55	0.42	0.42	0.38	0.38	0.48	0.38	0.38	0.51
Volume/Cap:	0.38	0.75	0.71	0.57	0.64	0.39	0.43	0.43	0.01	0.75	0.75	0.10
Uniform Del:	15.5	26.4	25.8	16.6	23.2	20.4	23.0	23.0	13.4	26.9	26.9	12.6
IncremntDel:	0.8	2.3	3.8	2.4	0.9	0.4	0.6	0.6	0.0	7.4	7.4	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	16.3	28.7	29.6	19.0	24.1	20.7	23.7	23.7	13.4	34.3	34.3	12.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.3	28.7	29.6	19.0	24.1	20.7	23.7	23.7	13.4	34.3	34.3	12.6
LOS by Move:	B	C	C	B	C	C	C	C	B	C	C	B
HCM2kAvgQ:	3	16	13	4	13	6	5	5	0	10	10	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	0	1	1 0	0	1 0	1 0	1	0	1 0	1	0
Volume Module:												
Base Vol:	124 320		3	12 295		45	369	94	323	2 115		50
Growth Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
Initial Bse:	124 320		3	12 295		45	369	94	323	2 115		50
User Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
PHF Adj:	0.95 0.95		0.95	0.95 0.95		0.95	0.95 0.95		0.95	0.95 0.95		0.95
PHF Volume:	131 337		3	13 311		47	388	99	340	2 121		53
Reduct Vol:	0 0		0	0 0		0	0	0	0	0 0		0
FinalVolume:	131 337		3	13 311		47	388	99	340	2 121		53
Critical Gap Module:												
Critical Gp:	7.1 6.5		6.2	7.1 6.5		6.2	4.1 xxxx		xxxxx	4.1 xxxx		xxxxx
FollowUpTim:	3.5 4.0		3.3	3.5 4.0		3.3	2.2 xxxx		xxxxx	2.2 xxxx		xxxxx
Capacity Module:												
Cnflict Vol:	1376 1224		219	1120 1341		121	174 xxxx		xxxxx	439 xxxx		xxxxx
Potent Cap.:	124 181		825	185 154		936	1415 xxxx		xxxxx	1132 xxxx		xxxxx
Move Cap.:	0 131		825	0 111		936	1415 xxxx		xxxxx	1132 xxxx		xxxxx
Volume/Cap:	xxxx 2.57		0.00	xxxx 2.79		0.05	0.27 xxxx		xxxx	0.00 xxxx		xxxx
Level Of Service Module:												
2Way95thQ:	xxxx 30.0		0.0	xxxx xxxx		xxxxx	1.1 xxxx		xxxxx	0.0 xxxx		xxxxx
Control Del:	xxxxx 783		9.4	xxxxx xxxx		xxxxx	8.5 xxxx		xxxxx	8.2 xxxx		xxxxx
LOS by Move:	* F		A	* *		*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx		xxxxx	xxxx xxxx		126	xxxx xxxx		xxxxx	xxxx xxxx		xxxxx
SharedQueue:	xxxxx xxxx		xxxxx	xxxxx xxxx		33.0	xxxxx xxxx		xxxxx	xxxxx xxxx		xxxxx
Shrd ConDel:	xxxxx xxxx		xxxxx	xxxxx xxxx		903.4	xxxxx xxxx		xxxxx	xxxxx xxxx		xxxxx
Shared LOS:	* *		*	* *		F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	27.2
Optimal Cycle:	76	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	282	464	768	183	673	121	76	444	107	514	460	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	282	464	768	183	673	121	76	444	107	514	460	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	297	488	808	193	708	127	80	467	113	541	484	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	488	808	193	708	127	80	467	113	541	484	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	488	808	193	708	127	80	467	113	541	484	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.58	1.42	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2783	2491	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.14	0.50	0.11	0.14	0.08	0.04	0.13	0.07	0.19	0.19	0.14
Crit Moves:			****	****				****		****		
Green/Cycle:	0.52	0.37	0.61	0.36	0.23	0.30	0.23	0.16	0.43	0.42	0.32	0.45
Volume/Cap:	0.50	0.36	0.82	0.44	0.60	0.26	0.29	0.82	0.16	0.59	0.60	0.30
Uniform Del:	14.6	22.7	15.1	23.0	34.4	26.4	30.9	40.7	17.2	21.8	28.5	17.4
IncremntDel:	0.7	0.2	5.5	0.7	0.8	0.3	0.6	9.1	0.1	0.6	0.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	15.3	22.8	20.6	23.7	35.3	26.7	31.5	49.8	17.3	22.4	29.1	17.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.3	22.8	20.6	23.7	35.3	26.7	31.5	49.8	17.3	22.4	29.1	17.6
LOS by Move:	B	C	C	C	D	C	C	D	B	C	C	B
HCM2kAvgQ:	6	6	21	5	8	3	2	10	2	9	10	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.988
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	39.8
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	38	706	20	207	707	358	269	293	219	86	732	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	706	20	207	707	358	269	293	219	86	732	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	743	21	218	744	377	283	308	231	91	771	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	743	21	218	744	377	283	308	231	91	771	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	743	21	218	744	377	283	308	231	91	771	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.01	0.12	0.21	0.23	0.16	0.16	0.14	0.05	0.41	0.05
Crit Moves:		****		****			****				****	
Green/Cycle:	0.24	0.21	0.34	0.35	0.30	0.46	0.59	0.43	0.47	0.54	0.41	0.53
Volume/Cap:	0.27	0.99	0.04	0.74	0.69	0.51	0.78	0.37	0.31	0.15	0.99	0.09
Uniform Del:	29.8	39.5	21.9	26.1	31.0	19.2	9.8	19.1	16.6	11.1	29.2	11.5
IncremntDel:	1.0	29.7	0.0	9.5	1.9	0.6	10.6	0.3	0.2	0.1	29.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.8	69.1	21.9	35.6	32.9	19.8	20.4	19.3	16.8	11.3	58.3	11.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	69.1	21.9	35.6	32.9	19.8	20.4	19.3	16.8	11.3	58.3	11.5
LOS by Move:	C	E	C	D	C	B	C	B	B	B	E	B
HCM2kAvgQ:	1	18	0	8	12	8	9	6	4	1	30	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 9.2 Worst Case Level Of Service: F[74.1]

Street Name:	Kamakaeha Ave									Palani Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Ignore				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			127	0	63			0	520	0			0	829	281		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			127	0	63			0	520	0			0	829	281		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	0.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.00		
PHF Volume:	0	0	0			134	0	66			0	547	0			0	873	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			134	0	66			0	547	0			0	873	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1420	xxxx	873			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			152	xxxx	353			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			152	xxxx	353			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.88	xxxx	0.19			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			6.0	xxxx	0.7			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			102.2	xxxx	17.6			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			F	*	C			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					74.1					xxxxxx					xxxxxx				
ApproachLOS:	*					F					*					*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.248
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	94.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	110	182	394	17	203	118	170	416	129	834	927	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	182	394	17	203	118	170	416	129	834	927	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	116	192	415	18	214	124	179	438	136	878	976	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	192	415	18	214	124	179	438	136	878	976	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	192	415	18	214	124	179	438	136	878	976	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.90	0.90	0.14	0.95	0.95	0.95	0.96	0.96	0.60	0.99	0.99
Lanes:	1.00	0.32	0.68	1.00	0.63	0.37	1.00	0.76	0.24	1.00	0.91	0.09
Final Sat.:	543	539	1166	274	1135	660	1805	1398	434	1144	1703	171
Capacity Analysis Module:												
Vol/Sat:	0.21	0.36	0.36	0.07	0.19	0.19	0.10	0.31	0.31	0.77	0.57	0.57
Crit Moves:		****								****		
Green/Cycle:	0.28	0.28	0.66	0.28	0.28	0.28	0.09	0.24	0.24	0.53	0.53	0.53
Volume/Cap:	0.77	1.28	0.54	0.24	0.68	0.68	1.08	1.28	1.28	1.16	1.08	1.08
Uniform Del:	33.2	36.1	9.2	28.0	32.2	32.2	45.4	37.8	37.8	19.0	23.4	23.4
IncremntDel:	21.0	143	0.5	1.6	3.8	3.8	92.6	144	143.8	84.5	52.4	52.4
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	54.3	179	9.7	29.6	36.0	36.0	138.0	182	181.6	103.5	75.9	75.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.3	179	9.7	29.6	36.0	36.0	138.0	182	181.6	103.5	75.9	75.9
LOS by Move:	D	F	A	C	D	D	F	F	F	F	E	E
HCM2kAvgQ:	5	37	10	1	10	10	11	35	35	45	47	47

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.769
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.5
Optimal Cycle:	65	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	14	699	80	86	1148	294	417	126	41	21	71	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	699	80	86	1148	294	417	126	41	21	71	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	736	84	91	1208	309	439	133	43	22	75	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	736	84	91	1208	309	439	133	43	22	75	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	736	84	91	1208	309	439	133	43	22	75	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.96	0.96	0.95	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.75	0.25	1.00	0.41	0.59
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1380	449	1805	702	1029
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.05	0.05	0.33	0.19	0.24	0.10	0.10	0.01	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.37	0.36	0.41	0.47	0.44	0.75	0.47	0.40	0.40	0.19	0.14	0.14
Volume/Cap:	0.15	0.57	0.13	0.30	0.77	0.26	0.68	0.24	0.24	0.08	0.77	0.77
Uniform Del:	22.3	25.9	18.4	16.5	24.0	3.8	18.7	19.7	19.7	33.2	41.5	41.5
IncremntDel:	0.8	0.6	0.1	0.6	2.4	0.1	2.9	0.2	0.2	0.1	14.1	14.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	23.1	26.5	18.5	17.1	26.4	3.9	21.6	19.9	19.9	33.4	55.6	55.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.1	26.5	18.5	17.1	26.4	3.9	21.6	19.9	19.9	33.4	55.6	55.6
LOS by Move:	C	C	B	B	C	A	C	B	B	C	E	E
HCM2kAvgQ:	0	10	2	2	18	3	11	4	4	1	7	7

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.734
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	185.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 1	1	0	0 1	0	1 0	0 1	1	0	1 0 1
Volume Module:												
Base Vol:	4	19	26	2	4	565	506	681	13	49	1265	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	19	26	2	4	565	506	681	13	49	1265	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	4	20	27	2	4	595	533	717	14	52	1332	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	20	27	2	4	595	533	717	14	52	1332	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	4	20	27	2	4	595	533	717	14	52	1332	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.67	0.85	0.75	0.85	0.85	0.24	1.00	1.00	0.95	1.00	1.00
Lanes:	0.17	0.83	1.00	1.00	0.01	0.99	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	221	1048	1615	1423	11	1606	447	1859	35	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.00	0.37	0.37	1.19	0.39	0.39	0.03	0.70	0.00
Crit Moves:					****		****					
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.61	0.61	0.61	0.05	0.46	0.00
Volume/Cap:	0.08	0.08	0.07	0.01	1.52	1.52	1.25	0.63	0.63	0.63	1.52	0.00
Uniform Del:	29.1	29.1	29.1	28.6	37.8	37.8	9.9	12.3	12.3	46.9	26.9	0.0
IncremntDel:	0.1	0.1	0.1	0.0	246	245.9	129.8	1.1	1.1	14.9	239	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.2	29.2	29.1	28.6	284	283.7	139.7	13.5	13.5	61.8	266	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.2	29.2	29.1	28.6	284	283.7	139.7	13.5	13.5	61.8	266	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	45	45	32	15	15	3	97	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 7.8 Worst Case Level Of Service: F[146.1]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	29 690	0	0	964	177		71	0	32	0	0	0
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29 690	0	0	964	177		71	0	32	0	0	0
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31 726	0	0	1015	186		75	0	34	0	0	0
Reduct Vol:	0 0	0	0	0	0		0	0	0	0	0	0
FinalVolume:	31 726	0	0	1015	186		75	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx	xxxx	xxxxx			6.4 xxxx		6.2 xxxxx	xxxx	xxxxx	
FollowUpTim:	2.2 xxxx xxxxx	xxxxx	xxxx	xxxxx			3.5 xxxx		3.3 xxxxx	xxxx	xxxxx	
Capacity Module:												
Cnflict Vol:	1201 xxxx xxxxx	xxxx	xxxx	xxxxx			1895 xxxx		1108	xxxx	xxxx	xxxxx
Potent Cap.:	588 xxxx xxxxx	xxxx	xxxx	xxxxx			77 xxxx		258	xxxx	xxxx	xxxxx
Move Cap.:	588 xxxx xxxxx	xxxx	xxxx	xxxxx			74 xxxx		258	xxxx	xxxx	xxxxx
Volume/Cap:	0.05 xxxx xxxx	xxxx	xxxx	xxxx			1.00 xxxx		0.13	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2 xxxx xxxxx	xxxx	xxxx	xxxxx			5.3 xxxx		0.4	xxxx	xxxx	xxxxx
Control Del:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx			202.5 xxxx		21.1	xxxxx	xxxx	xxxxx
LOS by Move:	B *	*	*	*	*		F	*	C	*	*	*
Movement:	LT - LTR - RT		LT - LTR - RT				LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx xxxxx		xxxx xxxx xxxxx				xxxx xxxx xxxxx			xxxx xxxx xxxxx		
SharedQueue:	0.2 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	B *	*	*	*	*		*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx				146.1			xxxxxx		
ApproachLOS:	*		*				F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.713
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.5
Optimal Cycle:	56	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2	0	1	1 0 2	0	1	0 1	0	1	0 1	0	1
Volume Module:												
Base Vol:	66	1061	239	55	974	232	106	97	67	242	66	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	1061	239	55	974	232	106	97	67	242	66	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	69	1117	252	58	1025	244	112	102	71	255	69	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1117	252	58	1025	244	112	102	71	255	69	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1117	252	58	1025	244	112	102	71	255	69	63
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.58	0.58	0.85	0.57	0.57	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.52	0.48	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	572	524	1615	848	231	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.16	0.03	0.28	0.15	0.19	0.19	0.04	0.30	0.30	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.51	0.43	0.43	0.47	0.42	0.42	0.42	0.42	0.48	0.42	0.42	0.47
Volume/Cap:	0.33	0.71	0.36	0.33	0.67	0.36	0.46	0.46	0.09	0.71	0.71	0.08
Uniform Del:	15.9	23.2	19.0	17.7	23.4	19.7	20.8	20.8	14.2	23.9	23.9	14.8
IncremntDel:	0.9	1.6	0.3	1.1	1.2	0.3	0.7	0.7	0.1	5.3	5.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	16.8	24.8	19.3	18.8	24.6	20.0	21.5	21.5	14.3	29.2	29.2	14.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.8	24.8	19.3	18.8	24.6	20.0	21.5	21.5	14.3	29.2	29.2	14.9
LOS by Move:	B	C	B	B	C	C	C	C	B	C	C	B
HCM2kAvgQ:	2	16	5	1	14	5	5	5	1	10	10	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	0	1	1 0	0	1 0	1 0	1	0	1 0	1	0
Volume Module:												
Base Vol:	78 288	0		50 257	369		165 194	76		5 128	23	
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	78 288	0		50 257	369		165 194	76		5 128	23	
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95	
PHF Volume:	82 303	0		53 271	388		174 204	80		5 135	24	
Reduct Vol:	0 0	0		0 0	0		0 0	0		0 0	0	
FinalVolume:	82 303	0		53 271	388		174 204	80		5 135	24	
Critical Gap Module:												
Critical Gp:	7.1 6.5	6.2		7.1 6.5	6.2		4.1 xxxx	xxxxx		4.1 xxxx	xxxxx	
FollowUpTim:	3.5 4.0	3.3		3.5 4.0	3.3		2.2 xxxx	xxxxx		2.2 xxxx	xxxxx	
Capacity Module:												
Cnflict Vol:	1078 761	142		746 777	135		159 xxxx	xxxxx		284 xxxx	xxxxx	
Potent Cap.:	198 337	911		332 330	920		1433 xxxx	xxxxx		1290 xxxx	xxxxx	
Move Cap.:	18 295	911		0 289	920		1433 xxxx	xxxxx		1290 xxxx	xxxxx	
Volume/Cap:	4.46 1.03	0.00		xxxx 0.94	0.42		0.12 xxxx	xxxx		0.00 xxxx	xxxx	
Level Of Service Module:												
2Way95thQ:	10.8 11.2	xxxxx		xxxx xxxx	xxxxx		0.4 xxxx	xxxxx		0.0 xxxx	xxxxx	
Control Del:	1980 98.4	xxxxx		xxxxx xxxx	xxxxx		7.9 xxxx	xxxxx		7.8 xxxx	xxxxx	
LOS by Move:	F F	*		* *	*		A *	*		A *	*	
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx	xxxxx		xxxx xxxx	485		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx	
SharedQueue:	xxxxx xxxx	xxxxx		xxxxx xxxx	30.0		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shrd ConDel:	xxxxx xxxx	xxxxx		xxxxx xxxx	197.9		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shared LOS:	* *	*		* *	F		* *	*		* *	*	
ApproachDel:	499.3			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

CUMULATIVE PLUS PROJECT CONDITIONS – CONCEPT A

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.885
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.9
Optimal Cycle:	98	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	320	799	922	130	553	132	76	412	25	615	638	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	799	922	130	553	132	76	412	25	615	638	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	337	841	971	137	582	139	80	434	26	647	672	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	841	971	137	582	139	80	434	26	647	672	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	337	841	971	137	582	139	80	434	26	647	672	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.47	1.53	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2594	2691	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.60	0.08	0.11	0.09	0.04	0.12	0.02	0.25	0.25	0.06
Crit Moves:			****	****				****		****		
Green/Cycle:	0.50	0.40	0.68	0.27	0.18	0.24	0.20	0.14	0.44	0.44	0.35	0.44
Volume/Cap:	0.54	0.59	0.89	0.52	0.62	0.35	0.37	0.89	0.04	0.68	0.70	0.15
Uniform Del:	15.8	23.7	12.9	29.1	37.8	31.3	33.6	42.5	16.1	21.6	27.8	16.8
IncremntDel:	1.0	0.6	8.8	1.8	1.3	0.5	1.1	17.4	0.0	1.0	1.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	16.8	24.4	21.8	30.8	39.0	31.8	34.7	59.8	16.1	22.6	29.0	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.8	24.4	21.8	30.8	39.0	31.8	34.7	59.8	16.1	22.6	29.0	16.8
LOS by Move:	B	C	C	C	D	C	C	E	B	C	C	B
HCM2kAvgQ:	8	11	27	4	7	4	3	10	0	12	13	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.914
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	35.0
Optimal Cycle:	113	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	97	807	70	189	655	372	193	144	99	76	658	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	807	70	189	655	372	193	144	99	76	658	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	102	849	74	199	689	392	203	152	104	80	693	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	849	74	199	689	392	203	152	104	80	693	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	849	74	199	689	392	203	152	104	80	693	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.24	0.05	0.11	0.19	0.24	0.11	0.08	0.06	0.04	0.36	0.05
Crit Moves:		****		****			****				****	
Green/Cycle:	0.34	0.26	0.44	0.40	0.29	0.41	0.46	0.34	0.42	0.54	0.40	0.52
Volume/Cap:	0.40	0.91	0.10	0.68	0.65	0.58	0.68	0.24	0.15	0.11	0.91	0.10
Uniform Del:	23.7	36.1	16.2	23.4	31.0	22.6	21.3	24.0	17.9	10.9	28.4	12.2
IncremntDel:	1.0	13.2	0.1	6.4	1.5	1.3	6.3	0.2	0.1	0.1	15.5	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.7	49.3	16.3	29.8	32.5	23.9	27.6	24.2	18.0	11.0	44.0	12.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	49.3	16.3	29.8	32.5	23.9	27.6	24.2	18.0	11.0	44.0	12.2
LOS by Move:	C	D	B	C	C	C	C	C	B	B	D	B
HCM2kAvgQ:	3	17	1	6	11	10	6	3	2	1	24	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: D[29.1]

Street Name:	Kamakaeha Ave								Palani Rd							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Ignore			
Lanes:	0	0	0	0 0	1	0	0	0 1	0	0	1	0 0	0	0	1	0 1
Volume Module:																
Base Vol:	0	0	0		47	0	15		0	404	0		0	846	240	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		47	0	15		0	404	0		0	846	240	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.00	
PHF Volume:	0	0	0		49	0	16		0	425	0		0	891	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	0	0	0		49	0	16		0	425	0		0	891	0	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	xxxx	6.2		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	xxxx	3.3		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1316	xxxx	891		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		176	xxxx	344		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		176	xxxx	344		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Volume/Cap:	xxxx	xxxx	xxxx		0.28	xxxx	0.05		xxxx	xxxx	xxxx		xxxx	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		1.1	xxxx	0.1		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		33.3	xxxx	16.0		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		D	*	C		*	*	*		*	*	*	
Movement:	LT	- LTR	- RT		LT	- LTR	- RT		LT	- LTR	- RT		LT	- LTR	- RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				29.1				xxxxxx				xxxxxx			
ApproachLOS:	*				D				*				*			

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.677
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	220.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	122	404	454	86	492	288	237	185	37	927	810	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	404	454	86	492	288	237	185	37	927	810	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	128	425	478	91	518	303	249	195	39	976	853	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	425	478	91	518	303	249	195	39	976	853	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	425	478	91	518	303	249	195	39	976	853	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.08	0.92	0.92	0.08	0.95	0.95	0.95	0.98	0.98	0.77	0.99	0.99
Lanes:	1.00	0.47	0.53	1.00	0.63	0.37	1.00	0.83	0.17	1.00	0.90	0.10
Final Sat.:	152	824	926	152	1133	663	1805	1544	309	1468	1684	187
Capacity Analysis Module:												
Vol/Sat:	0.84	0.52	0.52	0.60	0.46	0.46	0.14	0.13	0.13	0.66	0.51	0.51
Crit Moves:	****									****		
Green/Cycle:	0.50	0.50	0.82	0.50	0.50	0.50	0.09	0.08	0.08	0.31	0.31	0.31
Volume/Cap:	1.68	1.03	0.63	1.18	0.91	0.91	1.62	1.68	1.68	1.71	1.62	1.62
Uniform Del:	24.9	24.9	3.2	24.9	22.8	22.8	45.7	46.2	46.2	34.6	34.4	34.4
IncremntDel:	355.5	37.2	0.9	161.0	13.0	13.0	308.0	335	334.7	328.3	288	288.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	380.4	62.1	4.0	185.9	35.7	35.7	353.7	381	381.0	362.9	322	322.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	380.4	62.1	4.0	185.9	35.7	35.7	353.7	381	381.0	362.9	322	322.4
LOS by Move:	F	E	A	F	D	D	F	F	F	F	F	F
HCM2kAvgQ:	12	37	11	7	27	27	21	20	20	80	74	74

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: F[70.5]

Street Name:	Gate 2								/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled				
Rights:	Include			Include			Include			Include				
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0				
Volume Module:														
Base Vol:	0	0	0	0	0	27	0	725	0	0	1800	95		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	27	0	725	0	0	1800	95		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
PHF Volume:	0	0	0	0	0	28	0	763	0	0	1895	100		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	28	0	763	0	0	1895	100		
Critical Gap Module:														
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Capacity Module:														
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	1945	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.35	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		
Level Of Service Module:														
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	70.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*		
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*		
ApproachDel:	xxxxxx			70.5			xxxxxx			xxxxxx				
ApproachLOS:	*			F			*			*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.1
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	10	929	30	68	903	200	309	72	32	7	21	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	929	30	68	903	200	309	72	32	7	21	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	978	32	72	951	211	325	76	34	7	22	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	978	32	72	951	211	325	76	34	7	22	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	978	32	72	951	211	325	76	34	7	22	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	0.87	0.87
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.69	0.31	1.00	0.13	0.87
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1255	558	1805	211	1440
Capacity Analysis Module:												
Vol/Sat:	0.01	0.27	0.02	0.04	0.26	0.13	0.18	0.06	0.06	0.00	0.10	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.42	0.41	0.44	0.49	0.46	0.73	0.45	0.40	0.40	0.19	0.16	0.16
Volume/Cap:	0.06	0.66	0.04	0.33	0.57	0.18	0.54	0.15	0.15	0.03	0.66	0.66
Uniform Del:	17.8	23.9	16.2	16.5	19.8	4.1	18.6	18.9	18.9	33.3	39.6	39.6
IncremntDel:	0.1	1.1	0.0	0.9	0.5	0.1	1.0	0.1	0.1	0.0	6.2	6.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.0	25.0	16.2	17.4	20.3	4.2	19.6	19.0	19.0	33.4	45.8	45.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.0	25.0	16.2	17.4	20.3	4.2	19.6	19.0	19.0	33.4	45.8	45.8
LOS by Move:	B	C	B	B	C	A	B	B	B	C	D	D
HCM2kAvgQ:	0	13	1	2	12	2	8	2	2	0	6	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 91.7 Worst Case Level Of Service: F[410.4]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	447	284	189	620	0	0	0	0	246	0	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	447	284	189	620	0	0	0	0	246	0	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	471	299	199	653	0	0	0	0	259	0	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	471	299	199	653	0	0	0	0	259	0	201
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	769	xxxx	xxxxx	xxxx	xxxx	xxxxx	1521	xxxx	471
Potent Cap.:	xxxx	xxxx	xxxxx	854	xxxx	xxxxx	xxxx	xxxx	xxxxx	132	xxxx	597
Move Cap.:	xxxx	xxxx	xxxxx	854	xxxx	xxxxx	xxxx	xxxx	xxxxx	108	xxxx	597
Volume/Cap:	xxxx	xxxx	xxxx	0.23	xxxx	xxxx	xxxx	xxxx	xxxx	2.39	xxxx	0.34
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx	23.1	xxxx	1.5
Control Del:	xxxxx	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	718.2	xxxx	14.1
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			410.4		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.638
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	193.6
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	5	20	32	10	15	553	438	531	6	20	1317	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	20	32	10	15	553	438	531	6	20	1317	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	21	34	11	16	582	461	559	6	21	1386	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	21	34	11	16	582	461	559	6	21	1386	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	5	21	34	11	16	582	461	559	6	21	1386	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	0.64	0.85	0.75	0.85	0.85	0.22	1.00	1.00	0.95	1.00	1.00
Lanes:	0.20	0.80	1.00	1.00	0.03	0.97	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	244	977	1615	1419	43	1580	417	1875	21	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.37	0.37	1.11	0.30	0.30	0.01	0.73	0.00
Crit Moves:					****		****					
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.63	0.63	0.63	0.02	0.49	0.00
Volume/Cap:	0.09	0.09	0.09	0.03	1.50	1.50	1.21	0.47	0.47	0.47	1.50	0.00
Uniform Del:	29.1	29.1	29.1	28.7	37.7	37.7	32.5	9.7	9.7	48.1	25.7	0.0
IncremntDel:	0.1	0.1	0.1	0.0	240	239.6	114.6	0.3	0.3	7.7	232	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.3	29.3	29.2	28.7	277	277.3	147.1	10.0	10.0	55.9	258	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.3	29.3	29.2	28.7	277	277.3	147.1	10.0	10.0	55.9	258	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	44	44	27	9	9	1	99	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 42.9 Worst Case Level Of Service: F[227.2]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	58 477	0	0	786	311	176	0	200	0	0	0	
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	58 477	0	0	786	311	176	0	200	0	0	0	
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.95 0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
PHF Volume:	61 502	0	0	827	327	185	0	211	0	0	0	
Reduct Vol:	0 0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	61 502	0	0	827	327	185	0	211	0	0	0	
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2 xxxx xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx		
Capacity Module:												
Cnflict Vol:	1155 xxxx xxxxx	xxxx	xxxx	xxxxx	1615	xxxx	991	xxxx	xxxx	xxxxx		
Potent Cap.:	612 xxxx xxxxx	xxxx	xxxx	xxxxx	115	xxxx	301	xxxx	xxxx	xxxxx		
Move Cap.:	612 xxxx xxxxx	xxxx	xxxx	xxxxx	106	xxxx	301	xxxx	xxxx	xxxxx		
Volume/Cap:	0.10 xxxx xxxx	xxxx	xxxx	xxxx	1.74	xxxx	0.70	xxxx	xxxx	xxxx		
Level Of Service Module:												
2Way95thQ:	0.3 xxxx xxxxx	xxxx	xxxx	xxxxx	14.6	xxxx	4.9	xxxx	xxxx	xxxxx		
Control Del:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx	439.3	xxxx	40.6	xxxxx	xxxx	xxxxx		
LOS by Move:	B *	*	*	*	*	F	*	E	*	*	*	
Movement:	LT - LTR - RT		LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			
Shared Cap.:	xxxx xxxx xxxxx		xxxx xxxx xxxxx			xxxx xxxx xxxxx			xxxx xxxx xxxxx			
SharedQueue:	0.3 xxxx xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	B *	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx		xxxxxx			227.2			xxxxxx			
ApproachLOS:	*		*			F			*			

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.825
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.1
Optimal Cycle:	78	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2	0 1		1 0 2	0 1		0 1	0 0 1		0 1	0 0 1	
Volume Module:												
Base Vol:	115	1022	422	266	973	249	81	107	10	231	61	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	1022	422	266	973	249	81	107	10	231	61	163
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1076	444	280	1024	262	85	113	11	243	64	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1076	444	280	1024	262	85	113	11	243	64	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	1076	444	280	1024	262	85	113	11	243	64	172
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.61	0.61	0.85	0.56	0.56	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.43	0.57	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	499	659	1615	840	222	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.30	0.28	0.16	0.28	0.16	0.17	0.17	0.01	0.29	0.29	0.11
Crit Moves:		****		****							****	
Green/Cycle:	0.47	0.36	0.36	0.58	0.44	0.44	0.35	0.35	0.46	0.35	0.35	0.54
Volume/Cap:	0.38	0.83	0.76	0.68	0.64	0.37	0.49	0.49	0.01	0.83	0.83	0.20
Uniform Del:	16.2	29.1	28.1	22.9	21.6	18.4	25.4	25.4	14.9	29.7	29.7	11.9
IncremntDel:	0.8	4.4	5.8	4.4	0.9	0.3	0.9	0.9	0.0	13.9	13.9	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	17.0	33.5	34.0	27.3	22.4	18.8	26.3	26.3	14.9	43.6	43.6	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.0	33.5	34.0	27.3	22.4	18.8	26.3	26.3	14.9	43.6	43.6	12.0
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	3	18	14	7	13	5	5	5	0	11	11	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	233	402	3	12	358	45	369	94	449	2	115	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	233	402	3	12	358	45	369	94	449	2	115	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	245	423	3	13	377	47	388	99	473	2	121	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	245	423	3	13	377	47	388	99	473	2	121	53
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1476	1290	286	1163	1474	121	174	xxxx	xxxxx	572	xxxx	xxxxx
Potent Cap.:	105	165	758	173	128	936	1415	xxxx	xxxxx	1011	xxxx	xxxxx
Move Cap.:	0	119	758	0	93	936	1415	xxxx	xxxxx	1011	xxxx	xxxxx
Volume/Cap:	xxxx	3.54	0.00	xxxx	4.07	0.05	0.27	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	41.8	0.0	xxxx	xxxx	xxxxx	1.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	1220	9.8	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	F	A	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	103	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	43.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1489	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.881
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	29.4
Optimal Cycle:	97	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	282	507	806	183	713	121	76	553	107	549	561	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	282	507	806	183	713	121	76	553	107	549	561	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	297	534	848	193	751	127	80	582	113	578	591	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	534	848	193	751	127	80	582	113	578	591	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	534	848	193	751	127	80	582	113	578	591	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.48	1.52	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2614	2671	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.15	0.53	0.11	0.14	0.08	0.04	0.16	0.07	0.22	0.22	0.14
Crit Moves:			****	****				****		****		
Green/Cycle:	0.49	0.35	0.60	0.34	0.22	0.29	0.26	0.18	0.43	0.45	0.36	0.48
Volume/Cap:	0.57	0.43	0.88	0.48	0.66	0.27	0.29	0.88	0.16	0.63	0.61	0.29
Uniform Del:	17.1	25.2	17.2	24.4	35.7	27.3	29.0	39.8	17.4	20.3	26.2	15.5
IncremntDel:	1.5	0.2	9.6	0.9	1.5	0.3	0.6	13.2	0.1	0.7	0.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.5	25.4	26.7	25.3	37.2	27.6	29.6	53.0	17.5	21.0	26.8	15.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.5	25.4	26.7	25.3	37.2	27.6	29.6	53.0	17.5	21.0	26.8	15.7
LOS by Move:	B	C	C	C	D	C	C	D	B	C	C	B
HCM2kAvgQ:	7	7	25	5	9	3	2	12	2	10	11	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	1.015
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	43.4
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	38	706	63	261	707	358	269	293	219	126	732	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	706	63	261	707	358	269	293	219	126	732	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	743	66	275	744	377	283	308	231	133	771	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	743	66	275	744	377	283	308	231	133	771	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	743	66	275	744	377	283	308	231	133	771	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.87	0.95	0.85	0.81	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1645	3610	1615	1533	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.04	0.17	0.21	0.23	0.18	0.16	0.14	0.07	0.41	0.06
Crit Moves:		****		****			****				****	
Green/Cycle:	0.24	0.20	0.37	0.37	0.32	0.47	0.53	0.38	0.41	0.57	0.40	0.55
Volume/Cap:	0.24	1.02	0.11	0.80	0.65	0.50	0.80	0.43	0.35	0.22	1.02	0.12
Uniform Del:	30.0	39.9	20.5	25.5	29.5	18.4	13.0	23.1	20.1	10.7	30.2	11.0
IncremntDel:	0.8	39.3	0.1	12.6	1.4	0.5	12.4	0.4	0.3	0.2	38.7	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.8	79.2	20.6	38.2	30.8	18.9	25.4	23.5	20.4	10.9	68.8	11.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	79.2	20.6	38.2	30.8	18.9	25.4	23.5	20.4	10.9	68.8	11.1
LOS by Move:	C	E	C	D	C	B	C	C	C	B	E	B
HCM2kAvgQ:	1	18	1	10	11	8	9	7	5	2	32	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 14.8 Worst Case Level Of Service: F[132.2]

Street Name:	Kamakaeha Ave						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Ignore		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 1 0 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	127	0	63	0	618	0	0	894	281
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	127	0	63	0	618	0	0	894	281
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	0	0	134	0	66	0	651	0	0	941	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	134	0	66	0	651	0	0	941	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1592	xxxx	941	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	119	xxxx	322	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	119	xxxx	322	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	1.12	xxxx	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	8.0	xxxx	0.8	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	188.3	xxxx	19.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	C	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			132.2			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.340
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	157.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	110	329	394	67	314	183	268	416	129	859	927	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	329	394	67	314	183	268	416	129	859	927	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	116	346	415	71	331	193	282	438	136	904	976	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	346	415	71	331	193	282	438	136	904	976	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	346	415	71	331	193	282	438	136	904	976	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.12	0.92	0.92	0.12	0.95	0.95	0.95	0.96	0.96	0.67	0.99	0.99
Lanes:	1.00	0.46	0.54	1.00	0.63	0.37	1.00	0.76	0.24	1.00	0.91	0.09
Final Sat.:	232	794	951	232	1134	661	1805	1398	434	1277	1703	171
Capacity Analysis Module:												
Vol/Sat:	0.50	0.44	0.44	0.30	0.29	0.29	0.16	0.31	0.31	0.71	0.57	0.57
Crit Moves:	****									****		
Green/Cycle:	0.34	0.34	0.69	0.34	0.34	0.34	0.12	0.21	0.21	0.44	0.44	0.44
Volume/Cap:	1.46	1.28	0.64	0.89	0.85	0.85	1.31	1.46	1.46	1.30	1.31	1.31
Uniform Del:	32.9	32.9	8.8	31.2	30.6	30.6	44.0	39.3	39.3	25.4	28.1	28.1
IncremntDel:	262.8	137	1.2	65.6	11.1	11.1	167.2	220	219.8	146.5	147	146.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	295.7	170	9.9	96.7	41.7	41.7	211.2	259	259.1	171.8	175	174.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	295.7	170	9.9	96.7	41.7	41.7	211.2	259	259.1	171.8	175	174.7
LOS by Move:	F	F	A	F	D	D	F	F	F	F	F	F
HCM2kAvgQ:	10	46	14	4	18	18	19	41	41	55	65	65

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: F[74.7]

Street Name:	Gate 2						/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	25	0	877	0	0	1853	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	25	0	877	0	0	1853	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	26	0	923	0	0	1951	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	26	0	923	0	0	1951	85
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	1993	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	77	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	77	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.34	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	74.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			74.7			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.787
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.7
Optimal Cycle:	69	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	14	724	80	86	1202	294	417	126	41	21	71	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	724	80	86	1202	294	417	126	41	21	71	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	762	84	91	1265	309	439	133	43	22	75	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	762	84	91	1265	309	439	133	43	22	75	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	762	84	91	1265	309	439	133	43	22	75	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.96	0.96	0.95	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.75	0.25	1.00	0.41	0.59
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1380	449	1805	702	1029
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.05	0.05	0.35	0.19	0.24	0.10	0.10	0.01	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.38	0.37	0.42	0.48	0.45	0.75	0.46	0.39	0.39	0.19	0.14	0.14
Volume/Cap:	0.16	0.57	0.12	0.30	0.79	0.25	0.70	0.24	0.24	0.09	0.79	0.79
Uniform Del:	22.0	25.3	17.8	16.1	23.7	3.7	19.4	20.3	20.3	33.6	41.8	41.8
IncremntDel:	0.8	0.6	0.1	0.6	2.7	0.1	3.4	0.2	0.2	0.1	16.1	16.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	22.8	25.9	17.9	16.7	26.3	3.8	22.7	20.5	20.5	33.7	57.9	57.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.8	25.9	17.9	16.7	26.3	3.8	22.7	20.5	20.5	33.7	57.9	57.9
LOS by Move:	C	C	B	B	C	A	C	C	C	C	E	E
HCM2kAvgQ:	0	10	2	2	19	3	12	4	4	1	8	8

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 33.3 Worst Case Level Of Service: F[127.7]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	445	244	163	338	0	0	0	0	226	0	176
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	445	244	163	338	0	0	0	0	226	0	176
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	468	257	172	356	0	0	0	0	238	0	185
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	468	257	172	356	0	0	0	0	238	0	185
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	725	xxxx	xxxxx	xxxx	xxxx	xxxxx	1167	xxxx	468
Potent Cap.:	xxxx	xxxx	xxxxx	887	xxxx	xxxxx	xxxx	xxxx	xxxxx	216	xxxx	599
Move Cap.:	xxxx	xxxx	xxxxx	887	xxxx	xxxxx	xxxx	xxxx	xxxxx	184	xxxx	599
Volume/Cap:	xxxx	xxxx	xxxx	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	1.29	xxxx	0.31
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx	13.4	xxxx	1.3
Control Del:	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	216.5	xxxx	13.7
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			127.7		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.837
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	204.9
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	4	19	26	2	4	592	506	731	13	49	1319	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	19	26	2	4	592	506	731	13	49	1319	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	4	20	27	2	4	623	533	769	14	52	1388	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	20	27	2	4	623	533	769	14	52	1388	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	4	20	27	2	4	623	533	769	14	52	1388	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.67	0.85	0.75	0.85	0.85	0.22	1.00	1.00	0.95	1.00	1.00
Lanes:	0.17	0.83	1.00	1.00	0.01	0.99	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	221	1052	1615	1423	11	1606	421	1861	33	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.00	0.39	0.39	1.27	0.41	0.41	0.03	0.73	0.00
Crit Moves:					****		****					
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.61	0.61	0.61	0.04	0.47	0.00
Volume/Cap:	0.08	0.08	0.07	0.01	1.57	1.57	1.28	0.68	0.68	0.68	1.57	0.00
Uniform Del:	28.9	28.9	28.8	28.4	37.7	37.7	31.8	12.9	12.9	47.2	26.7	0.0
IncremntDel:	0.1	0.1	0.1	0.0	269	268.8	144.8	1.6	1.6	21.7	262	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.0	29.0	28.9	28.4	306	306.4	176.5	14.5	14.5	68.9	289	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	29.0	28.9	28.4	306	306.4	176.5	14.5	14.5	68.9	289	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	48	48	33	16	16	3	104	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 10.1 Worst Case Level Of Service: F[200.1]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0 0	0 1	0	1 0	0	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	29	740	0	0	1018	177	71	0	32	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	740	0	0	1018	177	71	0	32	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31	779	0	0	1072	186	75	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	31	779	0	0	1072	186	75	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1258	xxxx	xxxxx	xxxx	xxxx	xxxxx	2005	xxxx	1165	xxxx	xxxx	xxxxx
Potent Cap.:	560	xxxx	xxxxx	xxxx	xxxx	xxxxx	66	xxxx	239	xxxx	xxxx	xxxxx
Move Cap.:	560	xxxx	xxxxx	xxxx	xxxx	xxxxx	63	xxxx	239	xxxx	xxxx	xxxxx
Volume/Cap:	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	1.18	xxxx	0.14	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	6.0	xxxx	0.5	xxxx	xxxx	xxxxx
Control Del:	11.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	280.1	xxxx	22.5	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	F	*	C	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	11.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			200.1			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.781
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.7
Optimal Cycle:	67	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	66	1086	239	136	1028	232	106	97	67	242	66	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	1086	239	136	1028	232	106	97	67	242	66	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	69	1143	252	143	1082	244	112	102	71	255	69	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1143	252	143	1082	244	112	102	71	255	69	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1143	252	143	1082	244	112	102	71	255	69	142
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.55	0.55	0.85	0.56	0.56	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.52	0.48	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	546	499	1615	830	226	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.16	0.08	0.30	0.15	0.20	0.20	0.04	0.31	0.31	0.09
Crit Moves:		****		****							****	
Green/Cycle:	0.46	0.41	0.41	0.54	0.45	0.45	0.39	0.39	0.45	0.39	0.39	0.49
Volume/Cap:	0.32	0.78	0.38	0.55	0.67	0.34	0.52	0.52	0.10	0.78	0.78	0.18
Uniform Del:	16.8	25.9	20.9	17.5	21.7	17.9	23.2	23.2	15.8	26.6	26.6	14.0
IncremntDel:	0.8	2.8	0.4	2.6	1.1	0.3	1.2	1.2	0.1	9.2	9.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	17.7	28.6	21.3	20.1	22.7	18.1	24.4	24.4	15.8	35.8	35.8	14.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.7	28.6	21.3	20.1	22.7	18.1	24.4	24.4	15.8	35.8	35.8	14.1
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	2	18	6	4	14	5	6	6	1	11	11	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	179	363	0	50	311	369	165	194	185	5	128	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	363	0	50	311	369	165	194	185	5	128	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	188	382	0	53	327	388	174	204	195	5	135	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	188	382	0	53	327	388	174	204	195	5	135	24
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1164	818	199	786	892	135	159	xxxx	xxxxx	399	xxxx	xxxxx
Potent Cap.:	173	313	847	312	284	920	1433	xxxx	xxxxx	1171	xxxx	xxxxx
Move Cap.:	0	274	847	0	248	920	1433	xxxx	xxxxx	1171	xxxx	xxxxx
Volume/Cap:	xxxx	1.40	0.00	xxxx	1.32	0.42	0.12	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	20.5	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	235	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	F	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	44.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	367.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

CUMULATIVE PLUS PROJECT CONDITIONS – CONCEPT B

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.890
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	29.3
Optimal Cycle:	100	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	320	802	925	130	577	132	76	419	25	636	698	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	802	925	130	577	132	76	419	25	636	698	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	337	844	974	137	607	139	80	441	26	669	735	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	844	974	137	607	139	80	441	26	669	735	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	337	844	974	137	607	139	80	441	26	669	735	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.43	1.57	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2522	2768	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.60	0.08	0.12	0.09	0.04	0.12	0.02	0.27	0.27	0.06
Crit Moves:			****	****				****		****		
Green/Cycle:	0.48	0.38	0.68	0.26	0.18	0.24	0.20	0.14	0.42	0.46	0.37	0.46
Volume/Cap:	0.57	0.62	0.89	0.52	0.65	0.36	0.38	0.89	0.04	0.70	0.71	0.14
Uniform Del:	17.1	25.1	13.1	29.3	38.2	31.5	33.5	42.4	16.9	20.7	26.7	15.7
IncremntDel:	1.4	0.9	9.2	1.9	1.7	0.6	1.2	17.8	0.0	1.1	1.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.4	26.0	22.3	31.2	39.9	32.0	34.7	60.2	17.0	21.8	28.0	15.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.4	26.0	22.3	31.2	39.9	32.0	34.7	60.2	17.0	21.8	28.0	15.8
LOS by Move:	B	C	C	C	D	C	C	E	B	C	C	B
HCM2kAvgQ:	8	12	28	4	7	4	3	10	0	13	14	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.917
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	35.1
Optimal Cycle:	114	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	97	807	73	193	655	372	193	144	99	100	658	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	807	73	193	655	372	193	144	99	100	658	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	102	849	77	203	689	392	203	152	104	105	693	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	849	77	203	689	392	203	152	104	105	693	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	849	77	203	689	392	203	152	104	105	693	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.24	0.05	0.11	0.19	0.24	0.11	0.08	0.06	0.06	0.36	0.06
Crit Moves:		****		****			****				****	
Green/Cycle:	0.34	0.26	0.48	0.40	0.29	0.42	0.42	0.30	0.39	0.54	0.40	0.52
Volume/Cap:	0.40	0.92	0.10	0.69	0.65	0.58	0.68	0.27	0.17	0.15	0.92	0.12
Uniform Del:	23.6	36.1	14.4	23.3	30.9	22.5	22.4	26.6	20.1	11.2	28.5	12.2
IncremntDel:	1.0	13.6	0.1	6.5	1.5	1.3	6.4	0.3	0.1	0.1	15.9	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.7	49.7	14.4	29.9	32.4	23.9	28.8	26.8	20.2	11.3	44.5	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	49.7	14.4	29.9	32.4	23.9	28.8	26.8	20.2	11.3	44.5	12.3
LOS by Move:	C	D	B	C	C	C	C	C	C	B	D	B
HCM2kAvgQ:	3	17	1	7	11	10	6	4	2	2	24	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: D[31.3]

Street Name:	Kamakaeha Ave									Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Ignore		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 1 0 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	47	0	15	0	410	0	0	885	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	47	0	15	0	410	0	0	885	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	0	0	49	0	16	0	432	0	0	932	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	49	0	16	0	432	0	0	932	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1363	xxxx	932	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	165	xxxx	326	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	165	xxxx	326	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.30	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	1.2	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	36.0	xxxx	16.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	E	*	C	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			31.3			xxxxxx			xxxxxx		
ApproachLOS:	*			D			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.691
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	229.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 0 1	0	1	0 0 1 0
Volume Module:												
Base Vol:	122	414	454	116	558	327	243	185	37	942	810	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	414	454	116	558	327	243	185	37	942	810	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	128	436	478	122	587	344	256	195	39	992	853	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	436	478	122	587	344	256	195	39	992	853	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	436	478	122	587	344	256	195	39	992	853	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.08	0.92	0.92	0.08	0.95	0.95	0.95	0.98	0.98	0.77	0.99	0.99
Lanes:	1.00	0.48	0.52	1.00	0.63	0.37	1.00	0.83	0.17	1.00	0.90	0.10
Final Sat.:	152	836	916	152	1132	663	1805	1544	309	1465	1684	187
Capacity Analysis Module:												
Vol/Sat:	0.84	0.52	0.52	0.80	0.52	0.52	0.14	0.13	0.13	0.68	0.51	0.51
Crit Moves:	****									****		
Green/Cycle:	0.50	0.50	0.83	0.50	0.50	0.50	0.09	0.07	0.07	0.31	0.31	0.31
Volume/Cap:	1.69	1.04	0.63	1.61	1.04	1.04	1.62	1.69	1.69	1.73	1.62	1.62
Uniform Del:	25.0	25.0	3.2	25.0	25.0	25.0	45.6	46.3	46.3	34.6	34.4	34.4
IncremntDel:	360.2	42.2	0.9	325.4	40.1	40.1	306.3	339	339.3	337.0	287	287.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	385.2	67.2	4.1	350.4	65.1	65.1	351.9	386	385.6	371.6	321	321.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	385.2	67.2	4.1	350.4	65.1	65.1	351.9	386	385.6	371.6	321	321.4
LOS by Move:	F	E	A	F	E	E	F	F	F	F	F	F
HCM2kAvgQ:	12	39	11	11	39	39	22	20	20	82	74	74

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: F[91.9]

Street Name:	Gate 2						/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	42	0	755	0	0	1800	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	42	0	755	0	0	1800	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	44	0	795	0	0	1895	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	44	0	795	0	0	1895	105
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	1947	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.54	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	2.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	91.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			91.9			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.666
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.0
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	10	944	30	68	907	200	309	72	32	7	21	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	944	30	68	907	200	309	72	32	7	21	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	994	32	72	955	211	325	76	34	7	22	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	994	32	72	955	211	325	76	34	7	22	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	994	32	72	955	211	325	76	34	7	22	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	0.87	0.87
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.69	0.31	1.00	0.13	0.87
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1255	558	1805	211	1440
Capacity Analysis Module:												
Vol/Sat:	0.01	0.28	0.02	0.04	0.26	0.13	0.18	0.06	0.06	0.00	0.10	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.42	0.41	0.44	0.49	0.46	0.73	0.45	0.40	0.40	0.18	0.16	0.16
Volume/Cap:	0.06	0.67	0.04	0.33	0.57	0.18	0.54	0.15	0.15	0.03	0.67	0.67
Uniform Del:	17.6	23.8	16.0	16.5	19.6	4.1	18.8	19.1	19.1	33.4	39.7	39.7
IncremntDel:	0.1	1.2	0.0	0.9	0.5	0.1	1.0	0.1	0.1	0.0	6.5	6.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	17.8	24.9	16.0	17.4	20.1	4.2	19.9	19.2	19.2	33.5	46.2	46.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.8	24.9	16.0	17.4	20.1	4.2	19.9	19.2	19.2	33.5	46.2	46.2
LOS by Move:	B	C	B	B	C	A	B	B	B	C	D	D
HCM2kAvgQ:	0	14	1	2	12	2	8	2	2	0	6	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 238.9 Worst Case Level Of Service: F[788.3]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	447	299	200	620	0	0	0	0	381	0	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	447	299	200	620	0	0	0	0	381	0	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	471	315	211	653	0	0	0	0	401	0	312
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	471	315	211	653	0	0	0	0	401	0	312
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	785	xxxx	xxxxx	xxxx	xxxx	xxxxx	1544	xxxx	471
Potent Cap.:	xxxx	xxxx	xxxxx	842	xxxx	xxxxx	xxxx	xxxx	xxxxx	128	xxxx	597
Move Cap.:	xxxx	xxxx	xxxxx	842	xxxx	xxxxx	xxxx	xxxx	xxxxx	103	xxxx	597
Volume/Cap:	xxxx	xxxx	xxxx	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	3.89	xxxx	0.52
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	40.9	xxxx	3.0
Control Del:	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1387	xxxx	17.4
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	C
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			788.3		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.647
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	189.4
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	5	20	32	10	15	554	438	561	6	20	1321	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	20	32	10	15	554	438	561	6	20	1321	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	21	34	11	16	583	461	591	6	21	1391	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	21	34	11	16	583	461	591	6	21	1391	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	5	21	34	11	16	583	461	591	6	21	1391	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	0.64	0.85	0.75	0.85	0.85	0.22	1.00	1.00	0.95	1.00	1.00
Lanes:	0.20	0.80	1.00	1.00	0.03	0.97	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	244	977	1615	1419	43	1580	414	1876	20	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.37	0.37	1.11	0.31	0.31	0.01	0.73	0.00
Crit Moves:					****		****					
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.63	0.63	0.63	0.02	0.49	0.00
Volume/Cap:	0.09	0.09	0.09	0.03	1.51	1.51	1.21	0.50	0.50	0.50	1.51	0.00
Uniform Del:	29.1	29.1	29.1	28.7	37.8	37.8	8.6	9.9	9.9	48.2	25.7	0.0
IncremntDel:	0.1	0.1	0.1	0.0	241	241.0	115.4	0.3	0.3	9.0	234	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.3	29.3	29.2	28.8	279	278.7	124.0	10.2	10.2	57.2	260	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.3	29.3	29.2	28.8	279	278.7	124.0	10.2	10.2	57.2	260	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	45	45	27	10	10	1	100	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 45.9 Worst Case Level Of Service: F[247.6]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	58 507 0	0		0 790	311		176 0	200		0 0	0	
Growth Adj:	1.00 1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	58 507 0	0		0 790	311		176 0	200		0 0	0	
User Adj:	1.00 1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.95 0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95	
PHF Volume:	61 534 0	0		0 832	327		185 0	211		0 0	0	
Reduct Vol:	0 0 0	0		0 0	0		0 0	0		0 0	0	
FinalVolume:	61 534 0	0		0 832	327		185 0	211		0 0	0	
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx		xxxx xxxxx			6.4 xxxx	6.2		xxxxx xxxx xxxxx		
FollowUpTim:	2.2 xxxx xxxxx	xxxxx		xxxx xxxxx			3.5 xxxx	3.3		xxxxx xxxx xxxxx		
Capacity Module:												
Cnflict Vol:	1159 xxxx xxxxx	xxxx		xxxx xxxxx			1651 xxxx	995		xxxx xxxx xxxxx		
Potent Cap.:	610 xxxx xxxxx	xxxx		xxxx xxxxx			110 xxxx	300		xxxx xxxx xxxxx		
Move Cap.:	610 xxxx xxxxx	xxxx		xxxx xxxxx			101 xxxx	300		xxxx xxxx xxxxx		
Volume/Cap:	0.10 xxxx xxxx	xxxx		xxxx xxxx	xxxx		1.83 xxxx	0.70		xxxx xxxx	xxxx	
Level Of Service Module:												
2Way95thQ:	0.3 xxxx xxxxx	xxxx		xxxx xxxxx			15.1 xxxx	4.9		xxxx xxxx xxxxx		
Control Del:	11.6 xxxx xxxxx	xxxxx		xxxx xxxxx			482.3 xxxx	41.1		xxxxx xxxx xxxxx		
LOS by Move:	B *	*		* *	*		F *	E		* *	*	
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx xxxxx			xxxx xxxx xxxxx			xxxx xxxx xxxxx			xxxx xxxx xxxxx		
SharedQueue:	0.3 xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx	
Shrd ConDel:	11.6 xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx	
Shared LOS:	B *	*		* *	*		* *	*		* *	*	
ApproachDel:	xxxxxx			xxxxxx			247.6			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.834
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.2
Optimal Cycle:	80	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	115	1037	422	271	977	249	81	107	10	231	61	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	1037	422	271	977	249	81	107	10	231	61	208
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1092	444	285	1028	262	85	113	11	243	64	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1092	444	285	1028	262	85	113	11	243	64	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	1092	444	285	1028	262	85	113	11	243	64	219
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.61	0.61	0.85	0.56	0.56	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.43	0.57	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	495	654	1615	837	221	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.30	0.28	0.16	0.28	0.16	0.17	0.17	0.01	0.29	0.29	0.14
Crit Moves:		****		****							****	
Green/Cycle:	0.47	0.36	0.36	0.58	0.45	0.45	0.35	0.35	0.45	0.35	0.35	0.54
Volume/Cap:	0.38	0.83	0.76	0.68	0.64	0.36	0.49	0.49	0.01	0.83	0.83	0.25
Uniform Del:	16.1	29.1	28.0	23.3	21.4	18.3	25.7	25.7	15.0	29.9	29.9	12.4
IncremntDel:	0.8	4.8	5.7	4.6	0.9	0.3	1.0	1.0	0.0	15.0	15.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	16.9	33.9	33.8	27.9	22.3	18.6	26.6	26.6	15.1	45.0	45.0	12.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	33.9	33.8	27.9	22.3	18.6	26.6	26.6	15.1	45.0	45.0	12.5
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	3	19	14	7	13	5	5	5	0	11	11	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	293	447	3	12	362	45	369	94	456	2	115	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	293	447	3	12	362	45	369	94	456	2	115	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	308	471	3	13	381	47	388	99	480	2	121	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	308	471	3	13	381	47	388	99	480	2	121	53
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1482	1294	289	1187	1481	121	174	xxxx	xxxxx	579	xxxx	xxxxx
Potent Cap.:	104	164	754	167	127	936	1415	xxxx	xxxxx	1005	xxxx	xxxxx
Move Cap.:	0	119	754	0	92	936	1415	xxxx	xxxxx	1005	xxxx	xxxxx
Volume/Cap:	xxxx	3.96	0.00	xxxx	4.16	0.05	0.27	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	47.7	0.0	xxxx	xxxx	xxxxx	1.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	1407	9.8	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	F	A	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	102	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	44.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1530	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.925
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	31.6
Optimal Cycle:	119	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	282	537	832	183	730	121	76	628	107	564	602	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	282	537	832	183	730	121	76	628	107	564	602	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	297	565	876	193	768	127	80	661	113	594	634	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	565	876	193	768	127	80	661	113	594	634	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	565	876	193	768	127	80	661	113	594	634	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.45	1.55	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2556	2729	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.54	0.11	0.15	0.08	0.04	0.18	0.07	0.23	0.23	0.14
Crit Moves:			****	****				****		****		
Green/Cycle:	0.47	0.34	0.59	0.33	0.21	0.29	0.27	0.20	0.44	0.47	0.38	0.49
Volume/Cap:	0.59	0.47	0.92	0.51	0.69	0.28	0.28	0.92	0.16	0.64	0.62	0.28
Uniform Del:	18.0	26.2	18.7	25.2	36.3	27.7	27.9	39.4	17.1	20.0	25.3	14.9
IncremntDel:	1.9	0.3	14.4	1.1	1.9	0.3	0.6	17.8	0.1	0.8	0.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	19.9	26.5	33.1	26.3	38.2	28.0	28.4	57.2	17.3	20.7	25.8	15.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.9	26.5	33.1	26.3	38.2	28.0	28.4	57.2	17.3	20.7	25.8	15.1
LOS by Move:	B	C	C	C	D	C	C	E	B	C	C	B
HCM2kAvgQ:	7	7	29	5	9	3	2	15	2	11	11	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	1.031
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	46.2
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	38	706	93	299	707	358	269	293	219	143	732	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	706	93	299	707	358	269	293	219	143	732	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	743	98	315	744	377	283	308	231	151	771	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	743	98	315	744	377	283	308	231	151	771	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	743	98	315	744	377	283	308	231	151	771	116
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.80	0.95	0.85	0.71	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1513	3610	1615	1351	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.06	0.21	0.21	0.23	0.21	0.16	0.14	0.08	0.41	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.23	0.20	0.38	0.38	0.33	0.48	0.50	0.35	0.39	0.56	0.39	0.55
Volume/Cap:	0.22	1.05	0.16	0.84	0.63	0.49	0.82	0.46	0.37	0.25	1.05	0.13
Uniform Del:	30.2	40.2	20.5	25.1	28.5	17.8	14.6	24.9	21.7	11.5	30.6	10.7
IncremntDel:	0.6	46.8	0.1	15.4	1.1	0.5	14.1	0.5	0.4	0.2	46.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.9	87.0	20.7	40.6	29.6	18.3	28.6	25.3	22.1	11.7	76.9	10.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.9	87.0	20.7	40.6	29.6	18.3	28.6	25.3	22.1	11.7	76.9	10.8
LOS by Move:	C	F	C	D	C	B	C	C	C	B	E	B
HCM2kAvgQ:	1	19	2	12	11	8	10	7	5	2	34	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 19.1 Worst Case Level Of Service: F[180.7]

Street Name:	Kamakaeha Ave								Palani Rd							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Ignore				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			127	0	63			0	685	0			0	921	281		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			127	0	63			0	685	0			0	921	281		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	0.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.00		
PHF Volume:	0	0	0			134	0	66			0	721	0			0	969	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			134	0	66			0	721	0			0	969	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1691	xxxx	969			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			104	xxxx	310			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			104	xxxx	310			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			1.29	xxxx	0.21			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			9.2	xxxx	0.8			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			260.5	xxxx	19.7			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			F	*	C			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					180.7					xxxxxx					xxxxxx				
ApproachLOS:	*					F					*					*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.328
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	188.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	110	430	394	88	359	210	335	416	129	870	927	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	430	394	88	359	210	335	416	129	870	927	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	116	453	415	93	378	221	353	438	136	916	976	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	453	415	93	378	221	353	438	136	916	976	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	453	415	93	378	221	353	438	136	916	976	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.11	0.93	0.93	0.11	0.95	0.95	0.95	0.96	0.96	0.78	0.99	0.99
Lanes:	1.00	0.52	0.48	1.00	0.63	0.37	1.00	0.76	0.24	1.00	0.91	0.09
Final Sat.:	211	920	843	211	1133	663	1805	1398	434	1483	1703	171
Capacity Analysis Module:												
Vol/Sat:	0.55	0.49	0.49	0.44	0.33	0.33	0.20	0.31	0.31	0.62	0.57	0.57
Crit Moves:	****							****		****		
Green/Cycle:	0.36	0.36	0.69	0.36	0.36	0.36	0.14	0.21	0.21	0.40	0.40	0.40
Volume/Cap:	1.52	1.36	0.71	1.22	0.92	0.92	1.43	1.52	1.52	1.35	1.43	1.43
Uniform Del:	32.0	32.0	9.2	32.0	30.7	30.7	43.1	39.7	39.7	28.5	29.9	29.9
IncremntDel:	290.5	174	1.9	172.8	19.2	19.2	213.2	248	247.9	167.7	199	199.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	322.5	206	11.2	204.8	49.8	49.8	256.3	288	287.6	196.1	229	228.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	322.5	206	11.2	204.8	49.8	49.8	256.3	288	287.6	196.1	229	228.9
LOS by Move:	F	F	B	F	D	D	F	F	F	F	F	F
HCM2kAvgQ:	10	56	17	7	22	22	26	43	43	59	73	73

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: F[97.3]

Street Name:	Gate 2								/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	36	0	898	0	0	1853	138
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	36	0	898	0	0	1853	138
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	38	0	945	0	0	1951	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	38	0	945	0	0	1951	145
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	2023	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	74	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	74	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.52	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	2.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	97.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			97.3			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.799
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.8
Optimal Cycle:	71	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	14	735	80	86	1240	294	417	126	41	21	71	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	735	80	86	1240	294	417	126	41	21	71	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	774	84	91	1305	309	439	133	43	22	75	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	774	84	91	1305	309	439	133	43	22	75	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	774	84	91	1305	309	439	133	43	22	75	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.96	0.96	0.95	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.75	0.25	1.00	0.41	0.59
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1380	449	1805	702	1029
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.05	0.05	0.36	0.19	0.24	0.10	0.10	0.01	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.39	0.37	0.42	0.48	0.45	0.76	0.46	0.39	0.39	0.18	0.13	0.13
Volume/Cap:	0.16	0.57	0.12	0.30	0.80	0.25	0.70	0.25	0.25	0.09	0.80	0.80
Uniform Del:	21.9	24.9	17.5	15.8	23.5	3.7	19.8	20.7	20.7	33.8	42.0	42.0
IncremntDel:	0.8	0.6	0.1	0.6	2.9	0.1	3.7	0.2	0.2	0.2	17.7	17.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	22.7	25.5	17.6	16.3	26.4	3.8	23.5	20.9	20.9	34.0	59.7	59.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.7	25.5	17.6	16.3	26.4	3.8	23.5	20.9	20.9	34.0	59.7	59.7
LOS by Move:	C	C	B	B	C	A	C	C	C	C	E	E
HCM2kAvgQ:	0	10	2	2	20	3	12	4	4	1	8	8

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 163.3 Worst Case Level Of Service: F[579.5]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	445	413	275	338	0	0	0	0	320	0	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	445	413	275	338	0	0	0	0	320	0	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	468	435	289	356	0	0	0	0	337	0	262
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	468	435	289	356	0	0	0	0	337	0	262
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	903	xxxx	xxxxx	xxxx	xxxx	xxxxx	1403	xxxx	468
Potent Cap.:	xxxx	xxxx	xxxxx	761	xxxx	xxxxx	xxxx	xxxx	xxxxx	156	xxxx	599
Move Cap.:	xxxx	xxxx	xxxxx	761	xxxx	xxxxx	xxxx	xxxx	xxxxx	110	xxxx	599
Volume/Cap:	xxxx	xxxx	xxxx	0.38	xxxx	xxxx	xxxx	xxxx	xxxx	3.08	xxxx	0.44
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	1.8	xxxx	xxxxx	xxxx	xxxx	xxxxx	32.3	xxxx	2.2
Control Del:	xxxxx	xxxx	xxxxx	12.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1018	xxxx	15.6
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	C
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			579.5		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.905
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	213.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	4	19	26	2	4	611	506	752	13	49	1357	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	19	26	2	4	611	506	752	13	49	1357	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	4	20	27	2	4	643	533	792	14	52	1428	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	20	27	2	4	643	533	792	14	52	1428	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	4	20	27	2	4	643	533	792	14	52	1428	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.67	0.85	0.75	0.85	0.85	0.21	1.00	1.00	0.95	1.00	1.00
Lanes:	0.17	0.83	1.00	1.00	0.01	0.99	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	222	1053	1615	1423	11	1606	405	1862	32	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.00	0.40	0.40	1.31	0.43	0.43	0.03	0.75	0.00
Crit Moves:					****		****					
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.61	0.61	0.61	0.04	0.47	0.00
Volume/Cap:	0.08	0.08	0.07	0.01	1.61	1.61	1.31	0.70	0.70	0.70	1.61	0.00
Uniform Del:	28.7	28.7	28.7	28.2	37.6	37.6	9.8	13.2	13.2	47.3	26.6	0.0
IncremntDel:	0.1	0.1	0.1	0.0	285	285.0	155.3	1.9	1.9	25.2	279	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	28.9	28.9	28.8	28.3	323	322.5	165.1	15.1	15.1	72.6	306	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.9	28.9	28.8	28.3	323	322.5	165.1	15.1	15.1	72.6	306	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	51	51	34	17	17	3	110	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 11.7 Worst Case Level Of Service: F[237.4]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	29 761	0	0	1056	177		71	0	32	0	0	0
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29 761	0	0	1056	177		71	0	32	0	0	0
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31 801	0	0	1112	186		75	0	34	0	0	0
Reduct Vol:	0 0	0	0	0	0		0	0	0	0	0	0
FinalVolume:	31 801	0	0	1112	186		75	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2 xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1298 xxxx	xxxxx	xxxx	xxxx	xxxxx		2067	xxxx	1205	xxxx	xxxx	xxxxx
Potent Cap.:	541 xxxx	xxxxx	xxxx	xxxx	xxxxx		61	xxxx	226	xxxx	xxxx	xxxxx
Move Cap.:	541 xxxx	xxxxx	xxxx	xxxx	xxxxx		58	xxxx	226	xxxx	xxxx	xxxxx
Volume/Cap:	0.06 xxxx	xxxx	xxxx	xxxx	xxxx		1.29	xxxx	0.15	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2 xxxx	xxxxx	xxxx	xxxx	xxxxx		6.5	xxxx	0.5	xxxx	xxxx	xxxxx
Control Del:	12.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx		333.8	xxxx	23.7	xxxxx	xxxx	xxxxx
LOS by Move:	B *	*	*	*	*		F	*	C	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2 xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	12.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B *	*	*	*	*		*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			237.4			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	26.1
Optimal Cycle:	78	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	66	1097	239	193	1066	232	106	97	67	242	66	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	1097	239	193	1066	232	106	97	67	242	66	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	69	1155	252	203	1122	244	112	102	71	255	69	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1155	252	203	1122	244	112	102	71	255	69	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1155	252	203	1122	244	112	102	71	255	69	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.53	0.53	0.85	0.55	0.55	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.52	0.48	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	528	483	1615	820	224	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.16	0.11	0.31	0.15	0.21	0.21	0.04	0.31	0.31	0.11
Crit Moves:		****		****							****	
Green/Cycle:	0.45	0.39	0.39	0.55	0.47	0.47	0.38	0.38	0.43	0.38	0.38	0.51
Volume/Cap:	0.32	0.83	0.40	0.63	0.67	0.32	0.56	0.56	0.10	0.83	0.83	0.21
Uniform Del:	17.3	27.6	22.2	20.2	20.7	16.8	24.7	24.7	16.7	28.2	28.2	13.3
IncremntDel:	0.8	4.2	0.4	4.1	1.0	0.3	1.9	1.9	0.1	13.4	13.4	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.1	31.8	22.7	24.3	21.7	17.1	26.6	26.6	16.8	41.6	41.6	13.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	31.8	22.7	24.3	21.7	17.1	26.6	26.6	16.8	41.6	41.6	13.5
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	2	19	6	5	15	5	6	6	1	12	12	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	220	395	0	50	349	369	165	194	260	5	128	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	395	0	50	349	369	165	194	260	5	128	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	232	416	0	53	367	388	174	204	274	5	135	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	232	416	0	53	367	388	174	204	274	5	135	24
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1224	858	239	803	971	135	159	xxxx	xxxxx	478	xxxx	xxxxx
Potent Cap.:	157	297	805	304	255	920	1433	xxxx	xxxxx	1095	xxxx	xxxxx
Move Cap.:	0	259	805	0	223	920	1433	xxxx	xxxxx	1095	xxxx	xxxxx
Volume/Cap:	xxxx	1.60	0.00	xxxx	1.65	0.42	0.12	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	25.6	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	323	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	F	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	365	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	54.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	514.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

CUMULATIVE PLUS PROJECT CONDITIONS – CONCEPT C

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.887
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	29.3
Optimal Cycle:	99	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	320	801	923	130	584	132	76	415	25	642	716	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	801	923	130	584	132	76	415	25	642	716	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	337	843	972	137	615	139	80	437	26	676	754	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	843	972	137	615	139	80	437	26	676	754	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	337	843	972	137	615	139	80	437	26	676	754	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.42	1.58	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2501	2789	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.60	0.08	0.12	0.09	0.04	0.12	0.02	0.27	0.27	0.06
Crit Moves:			****	****				****		****		
Green/Cycle:	0.48	0.37	0.68	0.26	0.18	0.24	0.20	0.14	0.42	0.46	0.38	0.46
Volume/Cap:	0.58	0.63	0.89	0.52	0.66	0.36	0.39	0.89	0.04	0.70	0.71	0.14
Uniform Del:	17.4	25.6	13.0	29.3	38.3	31.6	33.6	42.4	17.3	20.4	26.4	15.3
IncremntDel:	1.5	0.9	9.0	1.9	1.8	0.6	1.2	17.5	0.0	1.1	1.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.9	26.5	22.0	31.2	40.1	32.1	34.8	59.9	17.3	21.5	27.7	15.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.9	26.5	22.0	31.2	40.1	32.1	34.8	59.9	17.3	21.5	27.7	15.4
LOS by Move:	B	C	C	C	D	C	C	E	B	C	C	B
HCM2kAvgQ:	8	12	28	4	8	4	3	10	0	13	14	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.915
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	35.0
Optimal Cycle:	114	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	97	807	72	191	655	372	193	144	99	107	658	98
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	807	72	191	655	372	193	144	99	107	658	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	102	849	76	201	689	392	203	152	104	113	693	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	849	76	201	689	392	203	152	104	113	693	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	849	76	201	689	392	203	152	104	113	693	103
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.24	0.05	0.11	0.19	0.24	0.11	0.08	0.06	0.06	0.36	0.06
Crit Moves:		****		****			****				****	
Green/Cycle:	0.34	0.26	0.49	0.40	0.29	0.42	0.42	0.29	0.38	0.54	0.40	0.52
Volume/Cap:	0.40	0.92	0.10	0.68	0.65	0.58	0.68	0.27	0.17	0.16	0.92	0.12
Uniform Del:	23.6	36.1	13.9	23.3	31.0	22.6	22.7	27.2	20.6	11.2	28.5	12.3
IncremntDel:	1.0	13.4	0.1	6.5	1.5	1.3	6.3	0.3	0.1	0.1	15.7	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.7	49.5	13.9	29.8	32.4	23.9	29.0	27.5	20.7	11.3	44.2	12.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	49.5	13.9	29.8	32.4	23.9	29.0	27.5	20.7	11.3	44.2	12.4
LOS by Move:	C	D	B	C	C	C	C	C	C	B	D	B
HCM2kAvgQ:	3	17	1	6	11	10	6	4	2	2	24	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: D[31.7]

Street Name:	Kamakaeha Ave									Palani Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Ignore				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			47	0	15			0	406	0			0	896	240		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			47	0	15			0	406	0			0	896	240		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	0.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.00		
PHF Volume:	0	0	0			49	0	16			0	427	0			0	943	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			49	0	16			0	427	0			0	943	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1371	xxxx	943			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			163	xxxx	321			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			163	xxxx	321			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.30	xxxx	0.05			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.2	xxxx	0.2			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			36.5	xxxx	16.8			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			E	*	C			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					31.7					xxxxxx					xxxxxx				
ApproachLOS:	*					D					*					*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.726
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	236.5
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	122	408	454	124	577	338	239	185	37	947	810	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	408	454	124	577	338	239	185	37	947	810	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	128	429	478	131	607	356	252	195	39	997	853	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	429	478	131	607	356	252	195	39	997	853	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	429	478	131	607	356	252	195	39	997	853	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.08	0.92	0.92	0.08	0.95	0.95	0.95	0.98	0.98	0.77	0.99	0.99
Lanes:	1.00	0.47	0.53	1.00	0.63	0.37	1.00	0.83	0.17	1.00	0.90	0.10
Final Sat.:	150	828	922	150	1132	663	1805	1544	309	1458	1684	187
Capacity Analysis Module:												
Vol/Sat:	0.86	0.52	0.52	0.87	0.54	0.54	0.14	0.13	0.13	0.68	0.51	0.51
Crit Moves:				****						****		
Green/Cycle:	0.51	0.51	0.83	0.51	0.51	0.51	0.09	0.07	0.07	0.31	0.31	0.31
Volume/Cap:	1.69	1.03	0.63	1.72	1.06	1.06	1.64	1.72	1.72	1.76	1.64	1.64
Uniform Del:	24.7	24.7	3.1	24.7	24.7	24.7	45.7	46.3	46.3	34.8	34.5	34.5
IncremntDel:	361.5	36.9	0.9	373.2	47.4	47.4	314.0	353	353.0	349.8	294	294.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	386.2	61.7	4.0	397.9	72.1	72.1	359.8	399	399.4	384.6	329	328.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	386.2	61.7	4.0	397.9	72.1	72.1	359.8	399	399.4	384.6	329	328.9
LOS by Move:	F	E	A	F	E	E	F	F	F	F	F	F
HCM2kAvgQ:	12	37	11	12	42	42	21	21	21	84	75	75

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: F[100.7]

Street Name:	Gate 2						/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	47	0	763	0	0	1800	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	47	0	763	0	0	1800	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	49	0	803	0	0	1895	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	49	0	803	0	0	1895	102
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	1946	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	82	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.60	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	2.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	100.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			100.7			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.668
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.0
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	10	949	30	68	905	200	309	72	32	7	21	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	949	30	68	905	200	309	72	32	7	21	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	999	32	72	953	211	325	76	34	7	22	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	999	32	72	953	211	325	76	34	7	22	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	999	32	72	953	211	325	76	34	7	22	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	0.87	0.87
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.69	0.31	1.00	0.13	0.87
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1255	558	1805	211	1440
Capacity Analysis Module:												
Vol/Sat:	0.01	0.28	0.02	0.04	0.26	0.13	0.18	0.06	0.06	0.00	0.10	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.42	0.41	0.44	0.49	0.46	0.73	0.45	0.40	0.40	0.18	0.16	0.16
Volume/Cap:	0.06	0.67	0.04	0.33	0.57	0.18	0.55	0.15	0.15	0.03	0.67	0.67
Uniform Del:	17.6	23.7	15.9	16.4	19.6	4.1	18.9	19.2	19.2	33.5	39.7	39.7
IncremntDel:	0.1	1.2	0.0	0.9	0.5	0.1	1.1	0.1	0.1	0.0	6.6	6.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	17.7	24.9	15.9	17.4	20.0	4.2	20.0	19.3	19.3	33.5	46.3	46.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.7	24.9	15.9	17.4	20.0	4.2	20.0	19.3	19.3	33.5	46.3	46.3
LOS by Move:	B	C	B	B	C	A	B	B	B	C	D	D
HCM2kAvgQ:	0	14	1	2	11	2	8	2	2	0	6	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 279.9 Worst Case Level Of Service: F[858.8]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	447	291	194	620	0	0	0	0	420	0	327
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	447	291	194	620	0	0	0	0	420	0	327
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	471	306	204	653	0	0	0	0	442	0	344
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	471	306	204	653	0	0	0	0	442	0	344
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	777	xxxx	xxxxx	xxxx	xxxx	xxxxx	1532	xxxx	471
Potent Cap.:	xxxx	xxxx	xxxxx	849	xxxx	xxxxx	xxxx	xxxx	xxxxx	130	xxxx	597
Move Cap.:	xxxx	xxxx	xxxxx	849	xxxx	xxxxx	xxxx	xxxx	xxxxx	106	xxxx	597
Volume/Cap:	xxxx	xxxx	xxxx	0.24	xxxx	xxxx	xxxx	xxxx	xxxx	4.18	xxxx	0.58
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx	45.7	xxxx	3.7
Control Del:	xxxxx	xxxx	xxxxx	10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1513	xxxx	18.9
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	C
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			858.8		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.644
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	188.2
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	5	20	32	10	15	553	438	569	6	20	1319	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	20	32	10	15	553	438	569	6	20	1319	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	21	34	11	16	582	461	599	6	21	1388	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	21	34	11	16	582	461	599	6	21	1388	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	5	21	34	11	16	582	461	599	6	21	1388	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	0.64	0.85	0.75	0.85	0.85	0.22	1.00	1.00	0.95	1.00	1.00
Lanes:	0.20	0.80	1.00	1.00	0.03	0.97	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	244	977	1615	1419	43	1580	415	1878	20	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.37	0.37	1.11	0.32	0.32	0.01	0.73	0.00
Crit Moves:					****		****					
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.63	0.63	0.63	0.02	0.49	0.00
Volume/Cap:	0.09	0.09	0.09	0.03	1.51	1.51	1.21	0.50	0.50	0.50	1.51	0.00
Uniform Del:	29.1	29.1	29.1	28.7	37.8	37.8	8.6	9.9	9.9	48.3	25.7	0.0
IncremntDel:	0.1	0.1	0.1	0.0	240	240.1	114.9	0.3	0.3	9.6	233	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	29.3	29.3	29.2	28.8	278	277.9	123.5	10.3	10.3	57.8	259	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.3	29.3	29.2	28.8	278	277.9	123.5	10.3	10.3	57.8	259	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	44	44	27	10	10	1	100	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 46.4 Worst Case Level Of Service: F[251.1]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	58 515	0	0	788	311		176	0	200	0	0	0
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58 515	0	0	788	311		176	0	200	0	0	0
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	61 542	0	0	829	327		185	0	211	0	0	0
Reduct Vol:	0 0	0	0	0	0		0	0	0	0	0	0
FinalVolume:	61 542	0	0	829	327		185	0	211	0	0	0
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx	xxxx	xxxxx			6.4 xxxx		6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2 xxxx xxxxx	xxxxx	xxxx	xxxxx			3.5 xxxx		3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1157 xxxx xxxxx	xxxx	xxxx	xxxxx			1657 xxxx		993	xxxx	xxxx	xxxxx
Potent Cap.:	611 xxxx xxxxx	xxxx	xxxx	xxxxx			109 xxxx		300	xxxx	xxxx	xxxxx
Move Cap.:	611 xxxx xxxxx	xxxx	xxxx	xxxxx			100 xxxx		300	xxxx	xxxx	xxxxx
Volume/Cap:	0.10 xxxx xxxx	xxxx	xxxx	xxxx			1.85 xxxx		0.70	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.3 xxxx xxxxx	xxxx	xxxx	xxxxx			15.2 xxxx		4.9	xxxx	xxxx	xxxxx
Control Del:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx			489.9 xxxx		40.8	xxxxx	xxxx	xxxxx
LOS by Move:	B *	*	*	*	*		F	*	E	*	*	*
Movement:	LT - LTR - RT		LT - LTR - RT				LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx xxxxx		xxxx xxxx xxxxx				xxxx xxxx xxxxx			xxxx xxxx xxxxx		
SharedQueue:	0.3 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	11.5 xxxx xxxxx	xxxxx	xxxx	xxxxx			xxxxx xxxx xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	B *	*	*	*	*		*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx				251.1			xxxxxx		
ApproachLOS:	*		*				F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.834
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.1
Optimal Cycle:	80	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	115	1042	422	268	975	249	81	107	10	231	61	221
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	1042	422	268	975	249	81	107	10	231	61	221
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1097	444	282	1026	262	85	113	11	243	64	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1097	444	282	1026	262	85	113	11	243	64	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	1097	444	282	1026	262	85	113	11	243	64	233
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.61	0.61	0.85	0.56	0.56	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.43	0.57	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	495	654	1615	837	221	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.30	0.28	0.16	0.28	0.16	0.17	0.17	0.01	0.29	0.29	0.14
Crit Moves:		****		****							****	
Green/Cycle:	0.47	0.36	0.36	0.58	0.45	0.45	0.35	0.35	0.45	0.35	0.35	0.54
Volume/Cap:	0.38	0.83	0.75	0.68	0.64	0.36	0.49	0.49	0.01	0.83	0.83	0.27
Uniform Del:	16.0	29.0	27.9	23.3	21.4	18.3	25.7	25.7	15.0	29.9	29.9	12.6
IncremntDel:	0.8	4.7	5.5	4.6	0.9	0.3	1.0	1.0	0.0	15.0	15.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	16.8	33.8	33.4	27.9	22.3	18.6	26.6	26.6	15.0	44.9	44.9	12.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.8	33.8	33.4	27.9	22.3	18.6	26.6	26.6	15.0	44.9	44.9	12.8
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	3	19	14	7	13	5	5	5	0	11	11	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	311	460	3	12	360	45	369	94	452	2	115	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	460	3	12	360	45	369	94	452	2	115	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	327	484	3	13	379	47	388	99	476	2	121	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	327	484	3	13	379	47	388	99	476	2	121	53
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1478	1292	287	1194	1477	121	174	xxxx	xxxxx	575	xxxx	xxxxx
Potent Cap.:	105	165	756	165	127	936	1415	xxxx	xxxxx	1008	xxxx	xxxxx
Move Cap.:	0	119	756	0	92	936	1415	xxxx	xxxxx	1008	xxxx	xxxxx
Volume/Cap:	xxxx	4.06	0.00	xxxx	4.11	0.05	0.27	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	49.3	0.0	xxxx	xxxx	xxxxx	1.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	1453	9.8	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	F	A	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	102	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	44.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1508	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Queen Kaahumanu Hwy / Henry St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.931
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	31.9
Optimal Cycle:	123	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Henry St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1	1 1	1 0	1
Volume Module:												
Base Vol:	282	542	836	183	731	121	76	639	107	565	604	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	282	542	836	183	731	121	76	639	107	565	604	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	297	571	880	193	769	127	80	673	113	595	636	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	571	880	193	769	127	80	673	113	595	636	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	571	880	193	769	127	80	673	113	595	636	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.91	0.85	0.95	0.95	0.85	0.93	0.93	0.85
Lanes:	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.45	1.55	1.00
Final Sat.:	1805	3610	1615	1805	5187	1615	1805	3610	1615	2554	2731	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.54	0.11	0.15	0.08	0.04	0.19	0.07	0.23	0.23	0.14
Crit Moves:			****	****				****		****		
Green/Cycle:	0.47	0.34	0.59	0.33	0.21	0.29	0.27	0.20	0.44	0.47	0.38	0.49
Volume/Cap:	0.59	0.47	0.93	0.51	0.70	0.28	0.28	0.93	0.16	0.64	0.62	0.28
Uniform Del:	18.1	26.2	18.9	25.3	36.3	27.7	27.7	39.3	17.1	20.0	25.2	14.9
IncremntDel:	1.9	0.3	15.3	1.2	2.0	0.3	0.5	18.7	0.1	0.8	0.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	20.0	26.5	34.2	26.4	38.3	28.1	28.3	58.0	17.2	20.7	25.8	15.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.0	26.5	34.2	26.4	38.3	28.1	28.3	58.0	17.2	20.7	25.8	15.1
LOS by Move:	B	C	C	C	D	C	C	E	B	C	C	B
HCM2kAvgQ:	7	7	29	5	9	3	2	15	2	11	11	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Queen Kaahumanu Hwy / Alli Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	1.033
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	46.4
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Queen Kaahumanu Hwy						Alli Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	38	706	98	304	707	358	269	293	219	144	732	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	706	98	304	707	358	269	293	219	144	732	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	743	103	320	744	377	283	308	231	152	771	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	743	103	320	744	377	283	308	231	152	771	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	743	103	320	744	377	283	308	231	152	771	116
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.79	0.95	0.85	0.70	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1498	3610	1615	1332	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.21	0.06	0.21	0.21	0.23	0.21	0.16	0.14	0.08	0.41	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.23	0.20	0.38	0.38	0.33	0.48	0.50	0.35	0.39	0.56	0.39	0.55
Volume/Cap:	0.22	1.05	0.17	0.84	0.63	0.49	0.82	0.46	0.37	0.26	1.05	0.13
Uniform Del:	30.3	40.2	20.6	22.6	28.3	17.7	14.7	25.0	21.8	11.6	30.7	10.7
IncremntDel:	0.6	47.9	0.1	15.8	1.1	0.5	14.3	0.5	0.4	0.2	47.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.9	88.1	20.8	38.5	29.4	18.2	29.0	25.5	22.2	11.8	78.0	10.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.9	88.1	20.8	38.5	29.4	18.2	29.0	25.5	22.2	11.8	78.0	10.7
LOS by Move:	C	F	C	D	C	B	C	C	C	B	E	B
HCM2kAvgQ:	1	19	2	12	11	8	10	7	5	3	34	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Average Delay (sec/veh): 19.7 Worst Case Level Of Service: F[187.6]

Street Name:	Kamakaeha Ave								Palani Rd							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Ignore				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	0	0			127	0	63			0	695	0			0	923	281		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			127	0	63			0	695	0			0	923	281		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	0.00		
PHF Adj:	0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.95			0.95	0.95	0.00		
PHF Volume:	0	0	0			134	0	66			0	732	0			0	972	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	0			134	0	66			0	732	0			0	972	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1703	xxxx	972			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			102	xxxx	309			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			102	xxxx	309			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			1.31	xxxx	0.21			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			9.3	xxxx	0.8			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			270.9	xxxx	19.8			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			F	*	C			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					187.6					xxxxxx					xxxxxx				
ApproachLOS:	*					F					*					*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.326
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	190.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	110	445	394	89	362	212	345	416	129	870	927	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	445	394	89	362	212	345	416	129	870	927	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	116	468	415	94	381	223	363	438	136	916	976	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	468	415	94	381	223	363	438	136	916	976	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	468	415	94	381	223	363	438	136	916	976	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.11	0.93	0.93	0.11	0.95	0.95	0.95	0.96	0.96	0.80	0.99	0.99
Lanes:	1.00	0.53	0.47	1.00	0.63	0.37	1.00	0.76	0.24	1.00	0.91	0.09
Final Sat.:	212	937	830	212	1132	663	1805	1398	434	1512	1703	171
Capacity Analysis Module:												
Vol/Sat:	0.55	0.50	0.50	0.44	0.34	0.34	0.20	0.31	0.31	0.61	0.57	0.57
Crit Moves:	****							****		****		
Green/Cycle:	0.36	0.36	0.69	0.36	0.36	0.36	0.14	0.21	0.21	0.40	0.40	0.40
Volume/Cap:	1.52	1.39	0.72	1.23	0.94	0.94	1.43	1.52	1.52	1.35	1.43	1.43
Uniform Del:	32.0	32.0	9.4	32.0	30.9	30.9	43.0	39.7	39.7	29.3	30.0	30.0
IncremntDel:	289.2	185	2.1	176.8	21.0	21.0	216.1	247	246.7	166.8	203	202.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	321.3	217	11.5	208.8	51.9	51.9	259.1	286	286.4	196.1	233	232.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	321.3	217	11.5	208.8	51.9	51.9	259.1	286	286.4	196.1	233	232.6
LOS by Move:	F	F	B	F	D	D	F	F	F	F	F	F
HCM2kAvgQ:	10	59	17	7	23	23	27	43	43	59	73	73

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gate 2/Palani

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: F[98.2]

Street Name:	Gate 2								/Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R		
Control:	Stop Sign			Yield Sign			Uncontrolled			Uncontrolled				
Rights:	Include			Include			Include			Include				
Lanes:	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0	0 0	0 1	0	
Volume Module:														
Base Vol:	0	0	0	0	0	36	0	899	0	0	1853	146		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	36	0	899	0	0	1853	146		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
PHF Volume:	0	0	0	0	0	38	0	946	0	0	1951	154		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	38	0	946	0	0	1951	154		
Critical Gap Module:														
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Capacity Module:														
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	2027	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	73	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	73	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.52	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		
Level Of Service Module:														
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	98.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*	*	*	F	*	*	*	*	*	*		
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*		
ApproachDel:	xxxxxx			98.2			xxxxxx			xxxxxx				
ApproachLOS:	*			F			*			*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Queen Kaahumanu Hwy / Makala Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.801
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	24.8
Optimal Cycle:	72	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Makala Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	14	735	80	86	1245	294	417	126	41	21	71	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	735	80	86	1245	294	417	126	41	21	71	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	774	84	91	1311	309	439	133	43	22	75	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	774	84	91	1311	309	439	133	43	22	75	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	774	84	91	1311	309	439	133	43	22	75	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.96	0.96	0.95	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.75	0.25	1.00	0.41	0.59
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1380	449	1805	702	1029
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.05	0.05	0.36	0.19	0.24	0.10	0.10	0.01	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.39	0.38	0.42	0.48	0.45	0.76	0.46	0.39	0.39	0.18	0.13	0.13
Volume/Cap:	0.16	0.57	0.12	0.30	0.80	0.25	0.71	0.25	0.25	0.09	0.80	0.80
Uniform Del:	21.9	24.8	17.4	15.7	23.5	3.7	19.9	20.8	20.8	33.9	42.1	42.1
IncremntDel:	0.8	0.6	0.1	0.6	2.9	0.1	3.7	0.2	0.2	0.2	17.9	17.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	22.7	25.4	17.5	16.3	26.4	3.8	23.6	21.0	21.0	34.0	60.0	60.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.7	25.4	17.5	16.3	26.4	3.8	23.6	21.0	21.0	34.0	60.0	60.0
LOS by Move:	C	C	B	B	C	A	C	C	C	C	E	E
HCM2kAvgQ:	0	10	2	2	20	3	12	4	4	1	8	8

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Average Delay (sec/veh): 186.4 Worst Case Level Of Service: F[667.6]

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	445	438	292	338	0	0	0	0	325	0	253
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	445	438	292	338	0	0	0	0	325	0	253
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	468	461	307	356	0	0	0	0	342	0	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	468	461	307	356	0	0	0	0	342	0	266
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	929	xxxx	xxxxx	xxxx	xxxx	xxxxx	1439	xxxx	468
Potent Cap.:	xxxx	xxxx	xxxxx	744	xxxx	xxxxx	xxxx	xxxx	xxxxx	148	xxxx	599
Move Cap.:	xxxx	xxxx	xxxxx	744	xxxx	xxxxx	xxxx	xxxx	xxxxx	100	xxxx	599
Volume/Cap:	xxxx	xxxx	xxxx	0.41	xxxx	xxxx	xxxx	xxxx	xxxx	3.41	xxxx	0.44
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	2.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	34.0	xxxx	2.3
Control Del:	xxxxx	xxxx	xxxxx	13.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1175	xxxx	15.7
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	C
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			667.6		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.914
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	215.1
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	4	19	26	2	4	614	506	753	13	49	1362	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	19	26	2	4	614	506	753	13	49	1362	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	4	20	27	2	4	646	533	793	14	52	1434	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	20	27	2	4	646	533	793	14	52	1434	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	4	20	27	2	4	646	533	793	14	52	1434	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.67	0.85	0.75	0.85	0.85	0.21	1.00	1.00	0.95	1.00	1.00
Lanes:	0.17	0.83	1.00	1.00	0.01	0.99	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	222	1055	1615	1423	10	1606	404	1862	32	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.00	0.40	0.40	1.32	0.43	0.43	0.03	0.75	0.00
Crit Moves:					****		****					
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.61	0.61	0.61	0.04	0.47	0.00
Volume/Cap:	0.08	0.08	0.07	0.01	1.61	1.61	1.31	0.70	0.70	0.70	1.61	0.00
Uniform Del:	28.7	28.7	28.7	28.2	37.5	37.5	9.8	13.3	13.3	47.3	26.6	0.0
IncremntDel:	0.1	0.1	0.1	0.0	287	287.3	156.8	1.9	1.9	25.5	281	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	28.8	28.8	28.7	28.2	325	324.8	166.7	15.2	15.2	72.8	308	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.8	28.8	28.7	28.2	325	324.8	166.7	15.2	15.2	72.8	308	0.0
LOS by Move:	C	C	C	C	F	F	F	B	B	E	F	A
HCM2kAvgQ:	1	1	1	0	51	51	34	17	17	3	110	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Average Delay (sec/veh): 11.8 Worst Case Level Of Service: F[241.5]

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	29 762	0		0 1061	177		71 0	32		0 0	0	
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	29 762	0		0 1061	177		71 0	32		0 0	0	
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95		0.95 0.95	0.95	
PHF Volume:	31 802	0		0 1117	186		75 0	34		0 0	0	
Reduct Vol:	0 0	0		0 0	0		0 0	0		0 0	0	
FinalVolume:	31 802	0		0 1117	186		75 0	34		0 0	0	
Critical Gap Module:												
Critical Gp:	4.1 xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		6.4 xxxx	6.2		xxxxx xxxx xxxxx		
FollowUpTim:	2.2 xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		3.5 xxxx	3.3		xxxxx xxxx xxxxx		
Capacity Module:												
Cnflict Vol:	1303 xxxx xxxxx	xxxx		xxxx xxxxx	2073		xxxx 1210	xxxx		xxxx xxxx xxxxx		
Potent Cap.:	538 xxxx xxxxx	xxxx		xxxx xxxxx	60		xxxx 225	xxxx		xxxx xxxx xxxxx		
Move Cap.:	538 xxxx xxxxx	xxxx		xxxx xxxxx	57		xxxx 225	xxxx		xxxx xxxx xxxxx		
Volume/Cap:	0.06 xxxx xxxx	xxxx		xxxx xxxx xxxx	1.30		xxxx 0.15	xxxx		xxxx xxxx xxxx		
Level Of Service Module:												
2Way95thQ:	0.2 xxxx xxxxx	xxxx		xxxx xxxxx	6.5		xxxx 0.5	xxxx		xxxx xxxx xxxxx		
Control Del:	12.1 xxxx xxxxx	xxxxx		xxxx xxxxx	339.7		xxxx 23.8	xxxxx		xxxx xxxx xxxxx		
LOS by Move:	B *	*		* *	*		F *	C		* *	*	
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx xxxx xxxxx	xxxx		xxxx xxxx xxxxx	xxxx		xxxx xxxx xxxxx	xxxx		xxxx xxxx xxxxx		
SharedQueue:	0.2 xxxx xxxxx	xxxxx		xxxx xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxx xxxxx		
Shrd ConDel:	12.1 xxxx xxxxx	xxxxx		xxxx xxxx xxxxx	xxxxx		xxxx xxxxx	xxxxx		xxxx xxxx xxxxx		
Shared LOS:	B *	*		* *	*		* *	*		* *	*	
ApproachDel:	xxxxxx			xxxxxx			241.5			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Queen Kaahumanu Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	26.3
Optimal Cycle:	80	Level Of Service:	C

Street Name:	Queen Kaahumanu Hwy						Kaalakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	66	1097	239	201	1071	232	106	97	67	242	66	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	1097	239	201	1071	232	106	97	67	242	66	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	69	1155	252	212	1127	244	112	102	71	255	69	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1155	252	212	1127	244	112	102	71	255	69	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1155	252	212	1127	244	112	102	71	255	69	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.53	0.53	0.85	0.55	0.55	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.52	0.48	1.00	0.79	0.21	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	526	481	1615	818	223	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.16	0.12	0.31	0.15	0.21	0.21	0.04	0.31	0.31	0.11
Crit Moves:		****		****							****	
Green/Cycle:	0.44	0.38	0.38	0.56	0.47	0.47	0.37	0.37	0.43	0.37	0.37	0.52
Volume/Cap:	0.32	0.83	0.41	0.64	0.67	0.32	0.57	0.57	0.10	0.83	0.83	0.21
Uniform Del:	17.4	27.8	22.4	20.8	20.6	16.7	24.8	24.8	16.9	28.4	28.4	13.2
IncremntDel:	0.8	4.4	0.4	4.2	1.0	0.3	2.0	2.0	0.1	14.1	14.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.2	32.3	22.9	25.1	21.6	16.9	26.9	26.9	16.9	42.5	42.5	13.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.2	32.3	22.9	25.1	21.6	16.9	26.9	26.9	16.9	42.5	42.5	13.3
LOS by Move:	B	C	C	C	C	B	C	C	B	D	D	B
HCM2kAvgQ:	2	19	6	6	15	5	6	6	1	12	12	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1	0 1	1 0	0 1	0	1 0	1	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	222	396	0	50	354	369	165	194	271	5	128	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	396	0	50	354	369	165	194	271	5	128	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	234	417	0	53	373	388	174	204	285	5	135	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	234	417	0	53	373	388	174	204	285	5	135	24
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1232	864	245	803	982	135	159	xxxx	xxxxx	489	xxxx	xxxxx
Potent Cap.:	155	294	799	304	251	920	1433	xxxx	xxxxx	1084	xxxx	xxxxx
Move Cap.:	0	257	799	0	220	920	1433	xxxx	xxxxx	1084	xxxx	xxxxx
Volume/Cap:	xxxx	1.62	0.00	xxxx	1.70	0.42	0.12	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	26.0	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	330	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	F	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	359	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	55.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	537.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the number of cars per lane.

CUMULATIVE PLUS PROJECT CONDITIONS WITH MITIGATION – CONCEPT A

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.558
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	4.8
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Kamakaeha Ave						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1	0 0	0 1	0	0 1	0 0	0	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	47	0	15	0	404	0	0	846	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	47	0	15	0	404	0	0	846	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	0	0	49	0	16	0	425	0	0	891	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	49	0	16	0	425	0	0	891	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	0	0	49	0	16	0	425	0	0	891	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	0	0	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.22	0.00	0.00	0.47	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.84	0.00	0.00	0.84	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.16	0.00	0.27	0.00	0.00	0.56	0.00
Uniform Del:	0.0	0.0	0.0	45.7	0.0	44.6	0.0	1.7	0.0	0.0	2.4	0.0
IncremntDel:	0.0	0.0	0.0	7.7	0.0	0.8	0.0	0.1	0.0	0.0	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	53.4	0.0	45.3	0.0	1.8	0.0	0.0	2.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	53.4	0.0	45.3	0.0	1.8	0.0	0.0	2.9	0.0
LOS by Move:	A	A	A	D	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	1	0	3	0	0	9	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.833
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	32.4
Optimal Cycle:	76	Level Of Service:	C

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	2 0	1	1 0
Volume Module:												
Base Vol:	122	404	454	86	492	288	237	185	37	927	810	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	404	454	86	492	288	237	185	37	927	810	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	128	425	478	91	518	303	249	195	39	976	853	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	425	478	91	518	303	249	195	39	976	853	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	425	478	91	518	303	249	195	39	976	853	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.20	0.87	0.87	0.17	0.90	0.90	0.95	0.98	0.98	0.92	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.26	0.74	1.00	0.83	0.17	2.00	1.80	0.20
Final Sat.:	386	1662	1662	321	2152	1260	1805	1544	309	3502	3200	356
Capacity Analysis Module:												
Vol/Sat:	0.33	0.26	0.29	0.28	0.24	0.24	0.14	0.13	0.13	0.28	0.27	0.27
Crit Moves:	****						****			****		
Green/Cycle:	0.41	0.41	0.75	0.41	0.41	0.41	0.17	0.15	0.15	0.33	0.33	0.33
Volume/Cap:	0.82	0.63	0.39	0.69	0.59	0.59	0.82	0.82	0.82	0.85	0.82	0.82
Uniform Del:	26.4	23.7	4.5	24.6	23.2	23.2	40.1	41.0	41.0	31.6	31.0	31.0
IncremntDel:	27.7	0.9	0.1	15.0	0.7	0.7	15.9	16.9	16.9	6.1	4.7	4.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	54.1	24.6	4.6	39.5	23.9	23.9	56.0	57.9	57.9	37.6	35.8	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.1	24.6	4.6	39.5	23.9	23.9	56.0	57.9	57.9	37.6	35.8	35.8
LOS by Move:	D	C	A	D	C	C	E	E	E	D	D	D
HCM2kAvgQ:	6	12	6	4	11	11	10	9	9	17	16	16

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Cycle (sec):	100	Critical Vol./Cap.(X):	0.579
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	15.9
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1	0 1	1	0 1	0 0	0 0	0	0 0	1	0 0	0 1
Volume Module:												
Base Vol:	0	447	284	189	620	0	0	0	0	246	0	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	447	284	189	620	0	0	0	0	246	0	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	471	299	199	653	0	0	0	0	259	0	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	471	299	199	653	0	0	0	0	259	0	201
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	471	299	199	653	0	0	0	0	259	0	201
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.41	1.00	1.00	1.00	1.00	1.00	0.77	1.00	0.85
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1615	783	1900	0	0	0	0	1461	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.19	0.25	0.34	0.00	0.00	0.00	0.00	0.18	0.00	0.12
Crit Moves:					****					****		
Green/Cycle:	0.00	0.59	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.31	0.00	0.31
Volume/Cap:	0.00	0.42	0.31	0.43	0.58	0.00	0.00	0.00	0.00	0.58	0.00	0.41
Uniform Del:	0.0	11.0	10.1	11.1	12.6	0.0	0.0	0.0	0.0	29.2	0.0	27.5
IncremntDel:	0.0	0.3	0.2	0.6	0.8	0.0	0.0	0.0	0.0	1.9	0.0	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.2	10.3	11.7	13.3	0.0	0.0	0.0	0.0	31.1	0.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.2	10.3	11.7	13.3	0.0	0.0	0.0	0.0	31.1	0.0	28.0
LOS by Move:	A	B	B	B	B	A	A	A	A	C	A	C
HCM2kAvgQ:	0	8	5	4	13	0	0	0	0	7	0	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.982
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	33.2
Optimal Cycle:	173	Level Of Service:	C

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Ovl			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 1	1	0	0 1	0	2 0	0 1	0	1 0	1 1 0
Volume Module:												
Base Vol:	5	20	32	10	15	553	438	531	6	20	1317	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	20	32	10	15	553	438	531	6	20	1317	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	21	34	11	16	582	461	559	6	21	1386	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	21	34	11	16	582	461	559	6	21	1386	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	5	21	34	11	16	582	461	559	6	21	1386	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.75	0.85	0.85	0.92	1.00	1.00	0.95	0.95	0.95
Lanes:	0.20	0.80	1.00	1.00	0.03	0.97	2.00	0.99	0.01	1.00	2.00	0.00
Final Sat.:	341	1365	1615	1419	43	1580	3502	1875	21	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.37	0.37	0.13	0.30	0.30	0.01	0.38	0.00
Crit Moves:					****		****				****	
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.51	0.51	0.51	0.51	0.02	0.39	0.00
Volume/Cap:	0.04	0.04	0.06	0.02	0.98	0.72	0.37	0.59	0.59	0.59	0.98	0.00
Uniform Del:	19.8	19.8	19.9	19.7	30.9	19.1	14.1	17.4	17.4	48.6	30.1	0.0
IncremntDel:	0.0	0.0	0.0	0.0	31.9	3.2	0.2	1.0	1.0	23.5	19.8	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	19.9	19.9	20.0	19.7	62.8	22.3	14.3	18.4	18.4	72.1	49.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.9	19.9	20.0	19.7	62.8	22.3	14.3	18.4	18.4	72.1	49.9	0.0
LOS by Move:	B	B	B	B	E	C	B	B	B	E	D	A
HCM2kAvgQ:	1	1	1	0	24	15	5	12	12	2	29	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.757
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.9
Optimal Cycle:	59	Level Of Service:	B

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 0	0	0 0	0 1	0	1 0	0 0 1	0	0 0	0 0 0
Volume Module:												
Base Vol:	58	477	0	0	786	311	176	0	200	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	477	0	0	786	311	176	0	200	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	61	502	0	0	827	327	185	0	211	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	502	0	0	827	327	185	0	211	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	502	0	0	827	327	185	0	211	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.81	0.81	1.00	1.00	0.96	0.96	0.78	1.00	0.85	1.00	1.00	1.00
Lanes:	0.11	0.89	0.00	0.00	0.72	0.28	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	167	1376	0	0	1310	518	1480	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.37	0.37	0.00	0.00	0.63	0.63	0.13	0.00	0.13	0.00	0.00	0.00
Crit Moves:					****		****					
Green/Cycle:	0.83	0.83	0.00	0.00	0.83	0.83	0.17	0.00	0.17	0.00	0.00	0.00
Volume/Cap:	0.44	0.44	0.00	0.00	0.76	0.76	0.76	0.00	0.79	0.00	0.00	0.00
Uniform Del:	2.2	2.2	0.0	0.0	3.7	3.7	39.8	0.0	40.1	0.0	0.0	0.0
IncremntDel:	0.2	0.2	0.0	0.0	2.2	2.2	12.7	0.0	14.5	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	2.4	2.4	0.0	0.0	5.9	5.9	52.5	0.0	54.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	2.4	2.4	0.0	0.0	5.9	5.9	52.5	0.0	54.5	0.0	0.0	0.0
LOS by Move:	A	A	A	A	A	A	D	A	D	A	A	A
HCM2kAvgQ:	5	5	0	0	17	17	7	0	8	0	0	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 Ane Keohokalole Hwy / Kealakehe Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.686
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.5
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Ane Keohokalole Hwy						Kealakehe Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	233	402	3	12	358	45	369	94	449	2	115	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	233	402	3	12	358	45	369	94	449	2	115	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	245	423	3	13	377	47	388	99	473	2	121	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	245	423	3	13	377	47	388	99	473	2	121	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	245	423	3	13	377	47	388	99	473	2	121	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.37	1.00	0.85	0.37	0.98	0.98	0.62	0.83	0.83	0.36	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	694	1900	1615	695	1659	209	1170	1581	1581	676	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.35	0.22	0.00	0.02	0.23	0.23	0.33	0.06	0.30	0.00	0.06	0.03
Crit Moves:	****						****					
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.69	0.43	0.00	0.04	0.44	0.44	0.69	0.13	0.62	0.01	0.13	0.07
Uniform Del:	18.1	15.1	11.7	11.9	15.2	15.2	19.9	14.2	19.0	13.3	14.2	13.8
IncremntDel:	5.5	0.3	0.0	0.0	0.3	0.3	3.5	0.0	1.3	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	23.6	15.4	11.7	12.0	15.5	15.5	23.4	14.2	20.3	13.4	14.3	13.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	15.4	11.7	12.0	15.5	15.5	23.4	14.2	20.3	13.4	14.3	13.8
LOS by Move:	C	B	B	B	B	B	C	B	C	B	B	B
HCM2kAvgQ:	7	8	0	0	8	8	10	2	12	0	2	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Kamakaeha Ave / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.652
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	10.3
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Kamakaeha Ave						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1	0 0	0 1	0	0 1	0 0	0	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	127	0	63	0	618	0	0	894	281
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	127	0	63	0	618	0	0	894	281
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	0	0	134	0	66	0	651	0	0	941	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	134	0	66	0	651	0	0	941	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	0	0	134	0	66	0	651	0	0	941	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	0	0	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.04	0.00	0.34	0.00	0.00	0.50	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.14	0.00	0.14	0.00	0.76	0.00	0.00	0.76	0.00
Volume/Cap:	0.00	0.00	0.00	0.65	0.00	0.29	0.00	0.45	0.00	0.00	0.65	0.00
Uniform Del:	0.0	0.0	0.0	40.7	0.0	38.5	0.0	4.4	0.0	0.0	5.7	0.0
IncremntDel:	0.0	0.0	0.0	7.3	0.0	0.7	0.0	0.2	0.0	0.0	1.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	48.0	0.0	39.3	0.0	4.6	0.0	0.0	6.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	48.0	0.0	39.3	0.0	4.6	0.0	0.0	6.8	0.0
LOS by Move:	A	A	A	D	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	0	2	0	7	0	0	14	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Henry St / Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	32.9
Optimal Cycle:	120	Level Of Service:	C

Street Name:	Henry St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	2 0	1	1 0
Volume Module:												
Base Vol:	110	329	394	67	314	183	268	416	129	859	927	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	329	394	67	314	183	268	416	129	859	927	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	116	346	415	71	331	193	282	438	136	904	976	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	346	415	71	331	193	282	438	136	904	976	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	346	415	71	331	193	282	438	136	904	976	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.30	0.87	0.87	0.14	0.90	0.90	0.95	0.96	0.96	0.92	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.26	0.74	1.00	0.76	0.24	2.00	1.82	0.18
Final Sat.:	569	1657	1657	269	2155	1256	1805	1398	434	3502	3235	325
Capacity Analysis Module:												
Vol/Sat:	0.20	0.21	0.25	0.26	0.15	0.15	0.16	0.31	0.31	0.26	0.30	0.30
Crit Moves:				****				****		****		
Green/Cycle:	0.28	0.28	0.56	0.28	0.28	0.28	0.21	0.34	0.34	0.41	0.41	0.41
Volume/Cap:	0.72	0.74	0.45	0.93	0.54	0.54	0.74	0.93	0.93	0.67	0.74	0.74
Uniform Del:	32.3	32.5	12.8	34.8	30.4	30.4	36.9	31.9	31.9	23.7	25.2	25.2
IncremntDel:	14.5	2.9	0.2	78.1	0.6	0.6	7.7	20.1	20.1	1.3	2.1	2.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.8	35.3	13.0	113.0	31.0	31.0	44.6	52.0	52.0	25.1	27.3	27.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.8	35.3	13.0	113.0	31.0	31.0	44.6	52.0	52.0	25.1	27.3	27.3
LOS by Move:	D	D	B	F	C	C	D	D	D	C	C	C
HCM2kAvgQ:	5	12	8	5	8	8	10	21	21	12	16	16

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Ane Keohokahole/Main Gate

Cycle (sec):	100	Critical Vol./Cap.(X):	0.455
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	16.4
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Ane Keohokahole Hwy						Main Gate					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1	0 1	1	0 1	0 0	0 0	0	0 0	1	0 0	0 1
Volume Module:												
Base Vol:	0	445	244	163	338	0	0	0	0	226	0	176
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	445	244	163	338	0	0	0	0	226	0	176
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	468	257	172	356	0	0	0	0	238	0	185
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	468	257	172	356	0	0	0	0	238	0	185
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	468	257	172	356	0	0	0	0	238	0	185
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.39	1.00	1.00	1.00	1.00	1.00	0.77	1.00	0.85
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1615	743	1900	0	0	0	0	1461	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.16	0.23	0.19	0.00	0.00	0.00	0.00	0.16	0.00	0.11
Crit Moves:		****								****		
Green/Cycle:	0.00	0.54	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.36	0.00	0.36
Volume/Cap:	0.00	0.45	0.29	0.43	0.35	0.00	0.00	0.00	0.00	0.45	0.00	0.32
Uniform Del:	0.0	13.9	12.5	13.6	12.9	0.0	0.0	0.0	0.0	24.6	0.0	23.3
IncremntDel:	0.0	0.3	0.2	0.7	0.2	0.0	0.0	0.0	0.0	0.6	0.0	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	14.2	12.7	14.4	13.1	0.0	0.0	0.0	0.0	25.2	0.0	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.2	12.7	14.4	13.1	0.0	0.0	0.0	0.0	25.2	0.0	23.6
LOS by Move:	A	B	B	B	B	A	A	A	A	C	A	C
HCM2kAvgQ:	0	9	4	4	6	0	0	0	0	6	0	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Palihiolo St/Palani Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.023
Loss Time (sec):	10 (Y+R=4.0 sec)	Average Delay (sec/veh):	40.7
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Palihiolo St						Palani Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Prot+Permit			Permitted		
Rights:	Include			Ovl			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	1	0 0	1 0	2	0 0	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	4	19	26	2	4	592	506	731	13	49	1319	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	19	26	2	4	592	506	731	13	49	1319	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	4	20	27	2	4	623	533	769	14	52	1388	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	20	27	2	4	623	533	769	14	52	1388	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	4	20	27	2	4	623	533	769	14	52	1388	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.85	0.75	0.85	0.85	0.91	1.00	1.00	0.95	0.95	0.95
Lanes:	0.17	0.83	1.00	1.00	0.01	0.99	2.00	0.98	0.02	1.00	2.00	0.00
Final Sat.:	293	1394	1615	1423	11	1606	3445	1861	33	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.00	0.39	0.39	0.15	0.41	0.41	0.03	0.38	0.00
Crit Moves:					****		****				****	
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.53	0.49	0.49	0.49	0.03	0.37	0.00
Volume/Cap:	0.04	0.04	0.04	0.00	1.03	0.74	0.42	0.85	0.85	0.85	1.03	0.00
Uniform Del:	19.6	19.6	19.7	19.4	31.1	18.4	15.4	22.3	22.3	48.1	31.3	0.0
IncremntDel:	0.0	0.0	0.0	0.0	43.6	3.4	0.2	7.3	7.3	63.7	31.8	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	19.7	19.7	19.7	19.4	74.7	21.8	15.7	29.6	29.6	111.8	63.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	19.7	19.7	19.4	74.7	21.8	15.7	29.6	29.6	111.8	63.0	0.0
LOS by Move:	B	B	B	B	E	C	B	C	C	F	E	A
HCM2kAvgQ:	0	0	1	0	27	16	6	23	23	3	31	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Palani Rd / Uluaoa St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.725
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	4.6
Optimal Cycle:	52	Level Of Service:	A

Street Name:	Palani Rd						Uluaoa St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	0	0	0 0	0 1	0	1 0	0 0 1	0	0 0	0 0 0
Volume Module:												
Base Vol:	29	740	0	0	1018	177	71	0	32	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	740	0	0	1018	177	71	0	32	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31	779	0	0	1072	186	75	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	779	0	0	1072	186	75	0	34	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	779	0	0	1072	186	75	0	34	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	1.00	1.00	0.98	0.98	0.79	1.00	0.85	1.00	1.00	1.00
Lanes:	0.04	0.96	0.00	0.00	0.85	0.15	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	67	1700	0	0	1586	276	1503	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.46	0.46	0.00	0.00	0.68	0.68	0.05	0.00	0.02	0.00	0.00	0.00
Crit Moves:					****		****					
Green/Cycle:	0.93	0.93	0.00	0.00	0.93	0.93	0.07	0.00	0.07	0.00	0.00	0.00
Volume/Cap:	0.49	0.49	0.00	0.00	0.73	0.73	0.73	0.00	0.30	0.00	0.00	0.00
Uniform Del:	0.4	0.4	0.0	0.0	0.7	0.7	45.6	0.0	44.3	0.0	0.0	0.0
IncremntDel:	0.2	0.2	0.0	0.0	1.6	1.6	22.5	0.0	1.6	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.7	0.7	0.0	0.0	2.3	2.3	68.1	0.0	45.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.7	0.7	0.0	0.0	2.3	2.3	68.1	0.0	45.9	0.0	0.0	0.0
LOS by Move:	A	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgQ:	4	4	0	0	10	10	4	0	1	0	0	0

Note: Queue reported is the number of cars per lane.