Other Projects List

#	Project	Land Use		ADT	Status
Projects Included in Near Term Analysis					
1	La Jolla Commons III	120 DU	Residential	10,319	Approved
		325 Rooms	Hotel		
		162,000 SF	Office		
		106,000 SF	Research & Development / Office		
2	Nexus Tech Center	67,000 SF	Research & Development / Office	1,915	Approved
3	Scripps Memorial Hospital La Jolla(1)	198,180 SF	Medical Office (Phase 1)	3,097	Approved
4	Genesee Executive Plaza	29,000 SF	Medical Office Conversion	788	Approved
5	UCSD East Campus Bed Tower	245 Beds	Medical	4,900	Approved
6	Coast Income Properties	100,000 SF	Office	1,688	Pending
7	UTC Revitalization Project(1)	251,454 SF	Regional Retail (Phase 2A)	5,541	Under Construction
8	La Jolla Centre 3	278,800 SF	Commercial Office	4,162	Approved
9	Monte Verde	560 DU (HD)	Residential	3,360	Approved
10	Bio Med Innovation Center	250,000 SF	Scientific Research & Development	585	Approved
11	La Jolla Crossroads IV	472 DU	Multi-Family Residential	2,832	Under Construction
12	Alexandria Campus Point	740,000 SF	Scientific Research	2,224	Under Review
13	Salk Institute	12 DU	Residential Quarters	1,788	Approved
		96,400 SF	Science Complex		
		1115,182 SF	Community Center		
Projects Considered but Not Included in Near Term Analysis(2)					
14	Scripps Green Hospital	39,024 SF	Hospital	780	Included in Existing Counts
15	University City Village	464 DU	Retirement Housing	1,856	Not included in project study area
16	Illumina Campus	123,375 SF	Scientific Research	987	Not included in project study area
17	La Jolla Country Day	1,050 Students	Replacement of Existing School	65	Included in Existing Counts

Notes:
(1) = The buildout phases of these projects are included in the Year 2035 forcast.
(2) = These projects are currently built and counts include these projects and/or traffic from these projects are outside the study area for 9455 Towne Centre Dr.

Legend:
SF = square feet
DU = dwelling unit
HD = high density
ADT = Average Daily Traffic

1

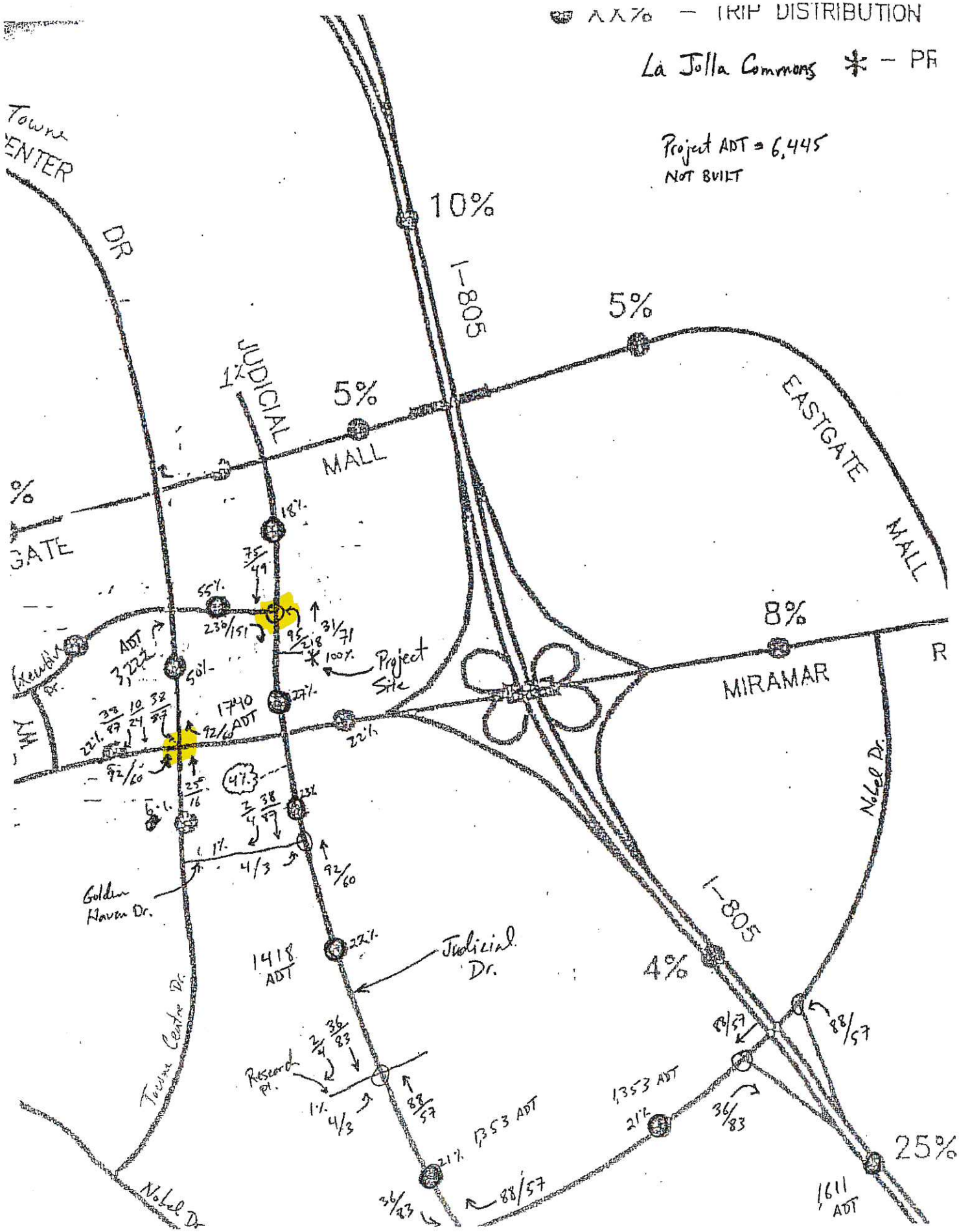
XX% — TRIP DISTRIBUTION
La Jolla Commons * — PR
Project ADT = 6,445
NOT BUILT
Towne CENTER DR
10%
I-805
5%
JUDICIAL
1%
5%
MALL
EASTGATE MALL
GATE
18%
75/49
55%
230/151
95/218
31/71
100%
Project Site
ADT 3,224
50%
27%
1740 ADT
92/60
22%
8%
MIRAMAR
R
Executive Dr.
22%
92/60
25/16
47.3
38/57
1%
4/3
92/60
Golden Haven Dr.
Nobel Dr.
I-805
1418 ADT
22%
Judicial Dr.
4%
88/57
88/57
Towne Centre Dr.
36/83
Research Pt.
1%
4/3
88/57
1,353 ADT
21%
1,353 ADT
21%
36/83
25%
36/83
88/57
1,611 ADT
Nobel Dr

Table 10
La Jolla Commons Trip Generation Calculation Summary and Comparison

Trip Generation Rates for La Jolla Commons Project

Land Use	Daily Trip Generation	AM Peak Hour Percent of Daily (In:Out)	PM Peak Hour Percent of Daily (In:Out)
La Jolla Commons Project:			
▸ *Hotel*	10 Trips/Room	6% (6:4)	8% (6:4)
▸ *Scientific Research & Development*	Ln(T)=0.756Ln(x)+3.95	16% (9:1)	14% (1:9)
▸ *Commercial Office*	Ln(T)=0.756Ln(x)+3.95	13% (9:1)	14% (2:8)
▸ *Condominiums*	8 Trips/Dwelling Unit	8% (2:8)	10% (7:3)

Ln = Natural Logarithm
T=Total Number of Trips
x = Gross Leasable Area in 1,000 SF

Trip Generation for La Jolla Commons Project

Land Use	Total No. of Units	Daily Trips	AM Peak Hour Trips (In:Out)	PM Peak Hour Trips (In:Out)
Hotel	325 Rooms	3,250	155 (117:78)	260 (156:104)
Scientific Research & Development	40,000 Square Feet	845	136 (122:14)	119 (1:107)
Commercial Office	450,000 Square Feet	5,264	685 (617:68)	737 (147:590)
Condominiums	120 Dwelling Units	960	77 (15:62)	96 (67:29)
Total Trips Generated By La Jolla Commons:		10,319	1,093 (871:222)	1,212 (382:830)

Trip Generation for University Community Plan

Land Use	Daily Trip Generation	Total No. of Units	Daily Trips
University Community Plan			
▸ *Visitor Commercial*	~~258~~ Trips/Acre	9.39 Acres	2,423
▸ *Scientific & Research Uses*	185 Trips/Acre	7.5 Acres	1,388
Total Trips Generated By University Community Plan:			3,811
Daily Trip Generation Difference (La Jolla Commons Project - Community Plan):			6,508

Land Use	Amount	ADT	AM	PM
Existing Uses (Built 2008)	300,000 S.F. Commercial Office	3,874	503 (453 : 50)	542 (108 : 434)

TOTAL	ADT	AM (IN : OUT)	PM (IN : OUT)
Net New Trips (Not Built)	6,445	590 (418 : 172)	670 (274 : 396)

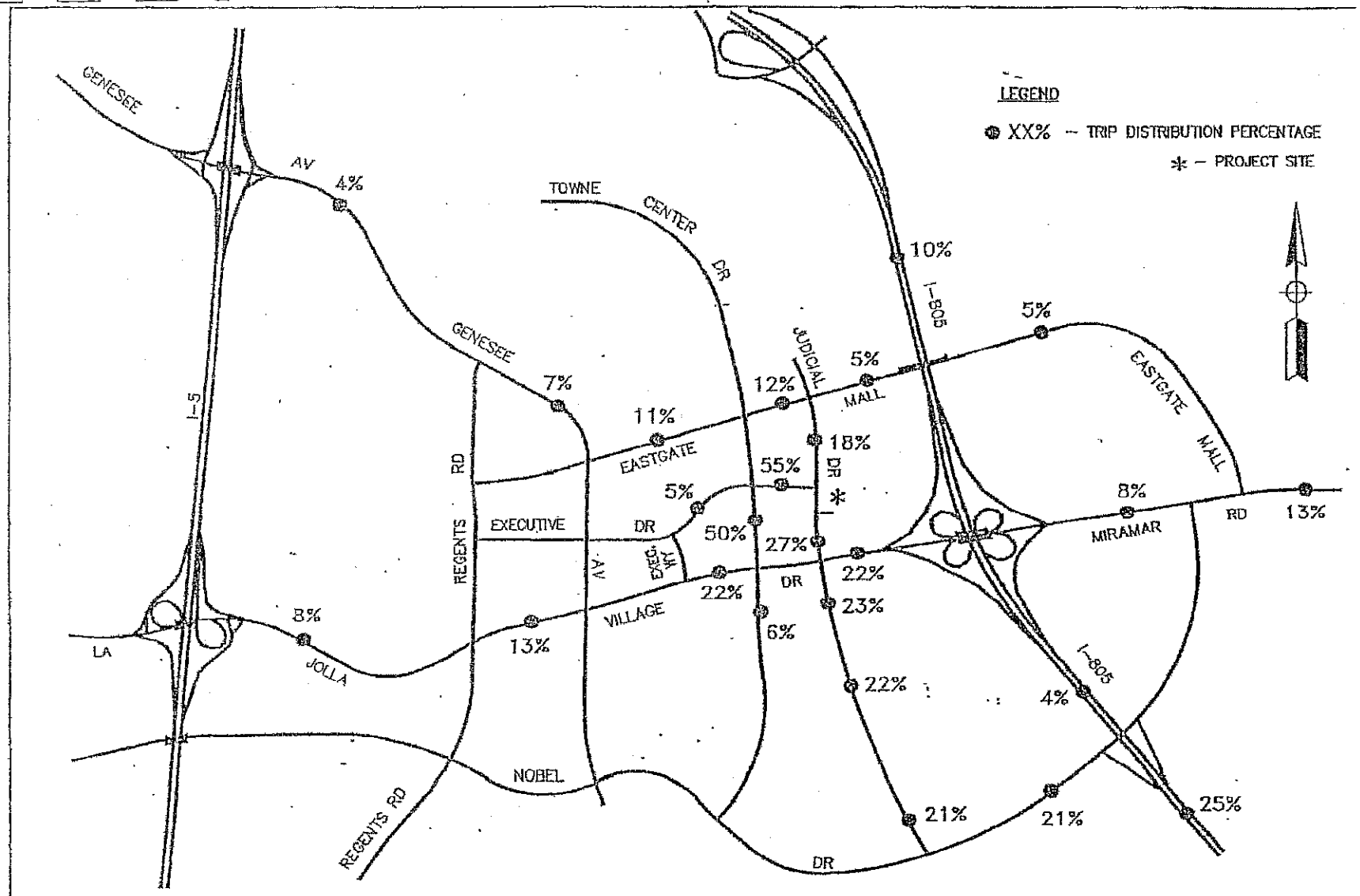

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FIGURE 8

LA JOLLA COMMONS TRIP DISTRIBUTION (WITH JUDICIAL DR)

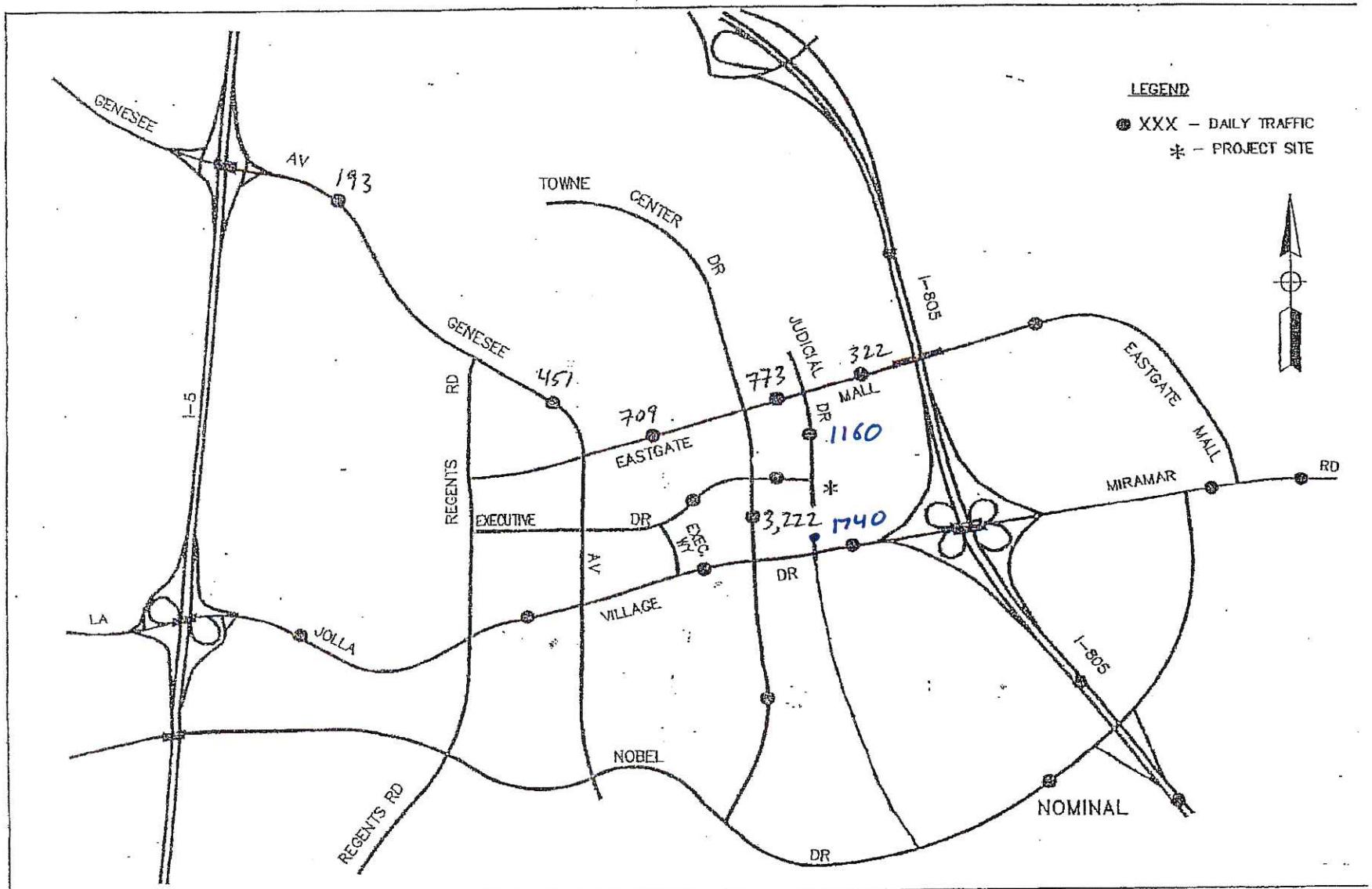

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FIGURE 9

PROJECT RELATED TRAFFIC VOLUMES (WITH JUDICIAL DR)

La Jolla Commons Office Tower

La Jolla Commons Office Tower

Sophisticated Architecture coupled with LEED Efficiency

Property Brochure

The 13-story, 300,000-square-foot high-rise, La Jolla Commons Office Tower, is a joint venture development between managing partner Hines and TIAA-CREF. Renowned architectural firm DMJM designed the elegant tower of pewter glass and silver metal. San Diego landscape architect Spurlock Poirier designed the verdant two-acre park-like setting for the twelve-acre campus. Construction of the office tower, which is prominently located off La Jolla Village Drive in the UTC area of San Diego, commenced in November 2008 and completed construction in July of 2008. La Jolla Commons has received Gold certification in the Leadership in Energy and Environmental Design Core and Shell (LEED-CS) program, which is sponsored by the U.S. Green Building Council (USGBC).

For leasing info, contact: 858-435-4100

Campus News

In December 2005, Hines purchased two parcels of land from Makallon (Makar/Faralion Venture) for the development of an office building and parking structure in the UTC submarket of San Diego. These two parcels are part of a five-parcel, 12-acre mixed-use development site that also includes planned residential condominium and hotel components.

Under the terms of the land purchase, a venture sponsored by Hines has developed a 300,000-square-foot office building and a 1500-car parking structure.

2

SECTION III

PROPOSED PROJECT TRIP GENERATION & DISTRIBUTION

TRIP GENERATION FOR NEXUS PROPERTIES

The proposed Nexus Properties project consists of 191,456 square feet of research and development land use. The rates used to generate the project traffic are in conformance with the City of San Diego Trip Generation Manual (2003). Trip generation for the project is summarized on Table 10. As shown on Table 10, the project will generate approximately 1,915 daily trips with 306 morning peak hour and 268 evening peak hour trips.

The North University City Transportation Phasing Plan (April 2002) allocation for the site is 20,000 square feet per acre of scientific research. The Community Plan's allocation would allow 191,456 square feet (9.5728 acres), and the project proposes 191,456 square feet. As shown on Table 11, the project is consistent with the Community Plan intensity allocation, developing at a lesser intensity.

TABLE 10
TRIP GENERATION RATES & CALCULATIONS

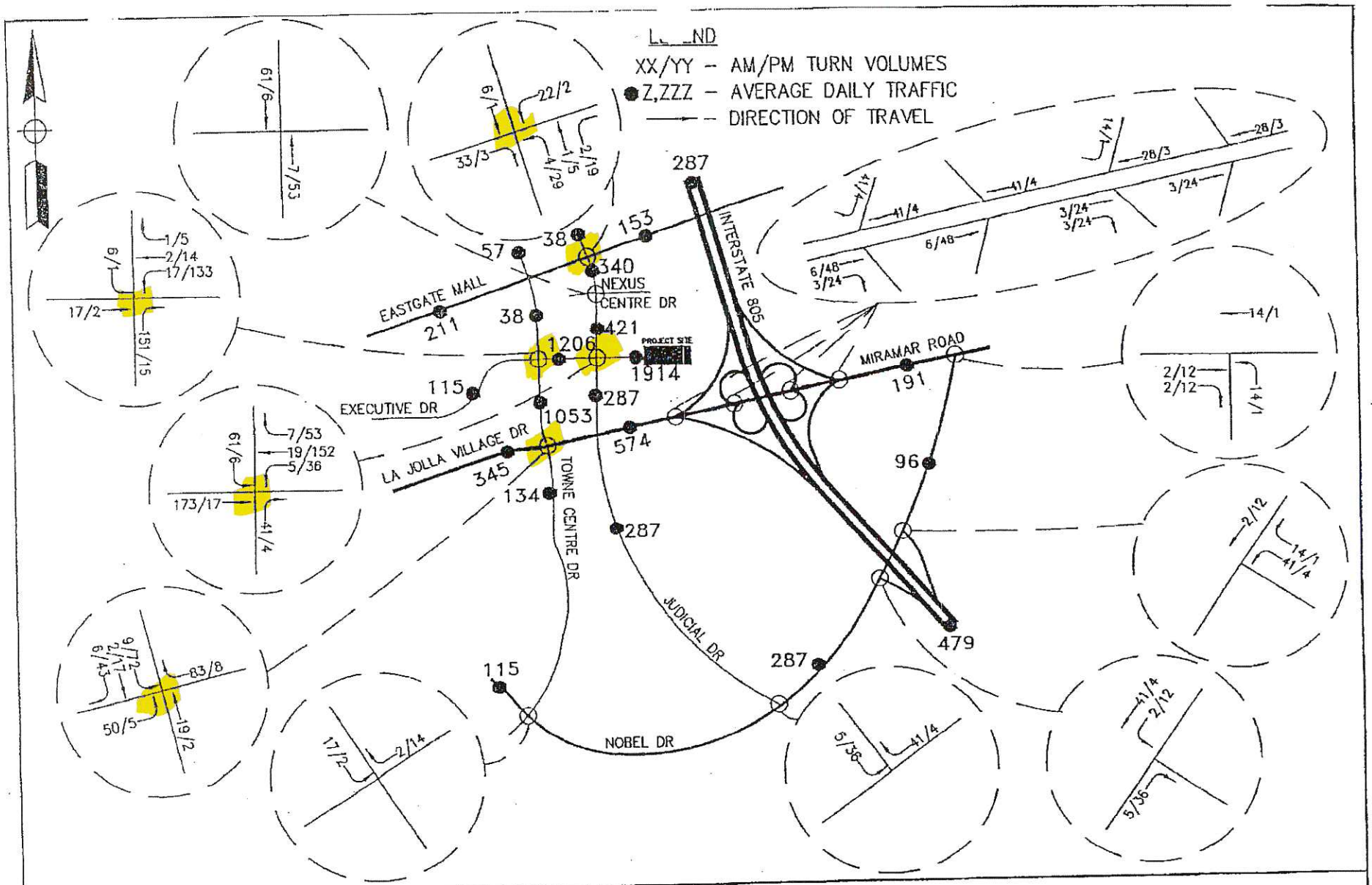
Trip Generation Rates

Land Use	Daily Trip Generation Rate	AM Peak Hour			PM Peak Hour		
		Total - % of Daily	% In	% Out	Total - % of Daily	% In	% Out
Research & Development	10/1,000 Square Ft	16%	90%	10%	14%	10%	90%

Trip Generation Calculations

Land Use	Total No. of Units	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
Research & Development	191,456 SF	1,915	306	276	30	268	27	241

Source: Trip Generation Rates are based on the City of San Diego Trip Generation Manual (2003).
SF=Square Feet



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021001BB.dwg 1-31-05 /SN/CDJ/TMC

FIGURE 8

PROJECT RELATED TRAFFIC WITH JUDICIAL DR

3

PHASE I (2015) CONDITIONS

Study year 2015 conditions were evaluated without and with the project. The Without Project condition assumes the construction of Ximed II as approved in Amendment 8 for 5 floors to the Scripps campus. Background traffic conditions include the addition of the Phase I (2015) cumulative project trips (as shown previously in Table 19).

The proposed project traffic was added to the Without Project condition to determine the potential project impacts by 2015. The Phase I (2015) With Project condition includes the addition of forecasted project-generated traffic resulting from the following activities:

- Demolition of the existing Whittier Institute;
- Demolition of the existing McDonald Building;
- Demolition of the existing Administration/Human Resources Building;
- Conversion of the sixth floor of Ximed II Building to medical office use;
- Construction of Tower I of the hospital; and
- Construction of the Outpatient Pavilion Building.

The forecasted project trip generation for the Phase I (2015) With Project scenario is provided in **Table 22.**

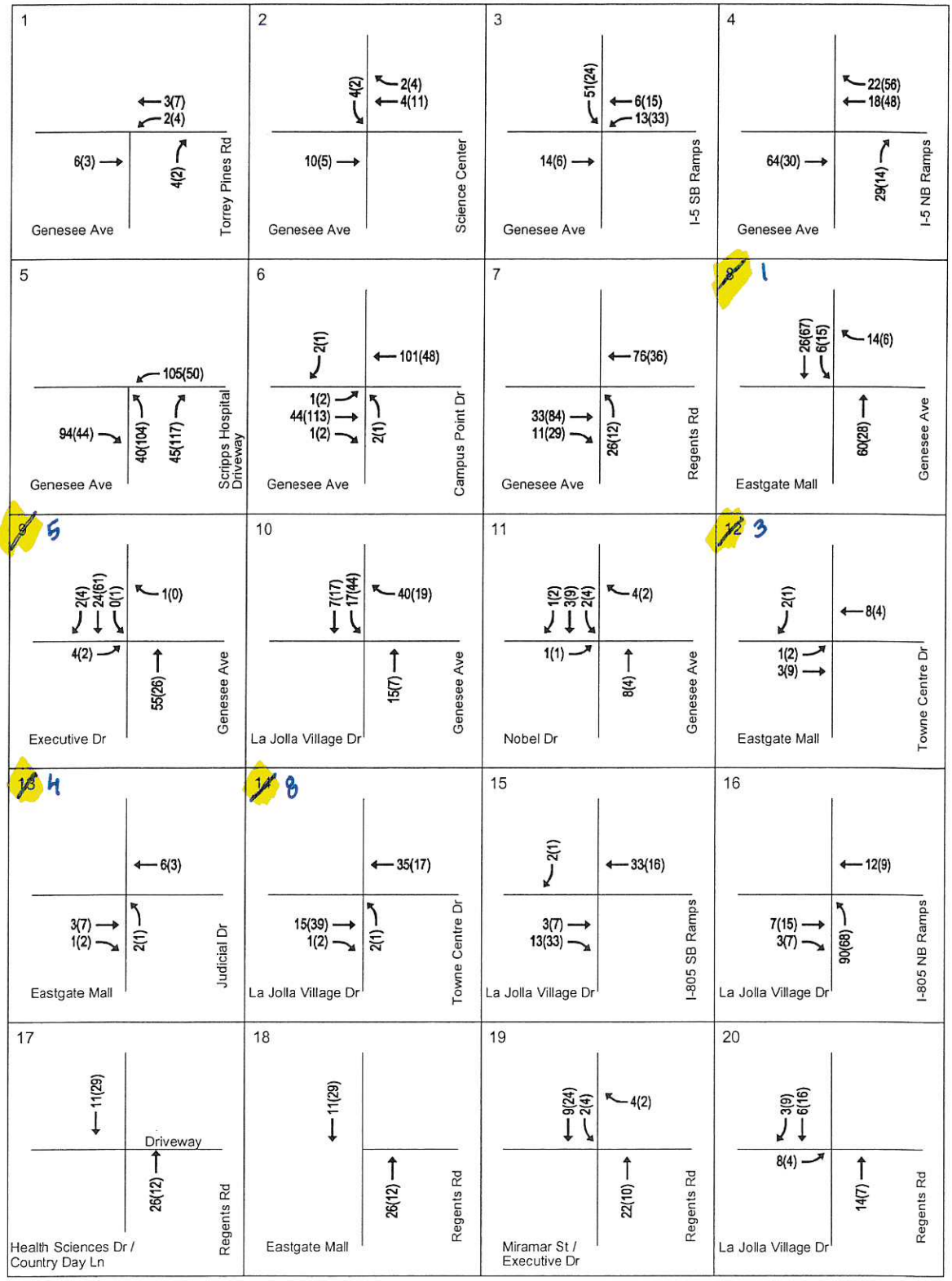
Table 22
Proposed Land Uses and Forecast Project-Generated Trips by Phase I (2015)

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	IN	OUT	Total	IN	OUT
HOSPITAL	*Trip Rates:*	*20 / bed*	*9%*	*70%*	*30%*	*10%*	*30%*	*70%*
Demolish McDonald	-26 beds	-520	-47	-33	-14	-52	-16	-36
Shift from Existing to Tower I	+/-168 beds	0	0	0	0	0	0	0
MEDICAL OFFICE	*Trip Rates:*	*20 / KSF*	*9%*	*70%*	*30%*	*10%*	*30%*	*70%*
Demolish Whittier	-36.006 KSF	-288	-26	-18	-8	-29	-9	-20
Convert Ximed 6th Floor	23.180 KSF	464	42	29	13	46	14	32
Demolish Admin/HR	-2.951 KSF	-59	-5	-3	-2	-6	-2	-4
Construct Outpatient Pavilion	175.000 KSF	3,500	315	221	95	350	105	245
SCIENTIFIC RESEARCH	*Trip Rates:*	*8 / KSF*	*9%*	*70%*	*30%*	*10%*	*30%*	*70%*
	0	0	0	0	0	0	0	0
Total Phase I (2015) Project Trips		**3,097**	**279**	**195**	**84**	**309**	**92**	**217**

Note: based on City of San Diego University Community Plan Trip Generation Rates KSF = Thousand Square Feet

As summarized in Table 22, the proposed Project Phase I is forecast to add 3,097 daily trips to the study area by year 2015. Construction activities will involve shifting 168 hospital beds from the existing hospital to Tower I. Therefore, no new hospital beds are proposed to be added to the campus by 2015.

Roadway improvements assumed by year 2015 as part of the North University City Public Facilities Financing Plan (NUC PFFP) include a dedicated southbound right-turn lane at La Jolla Village Drive / Regents Road (NUC-41); improvements to the I-805 / La Jolla Village Drive interchange (NUC-C), and the widening of the Genesee Avenue Bridge over I-5 to six lanes (NUC-24).



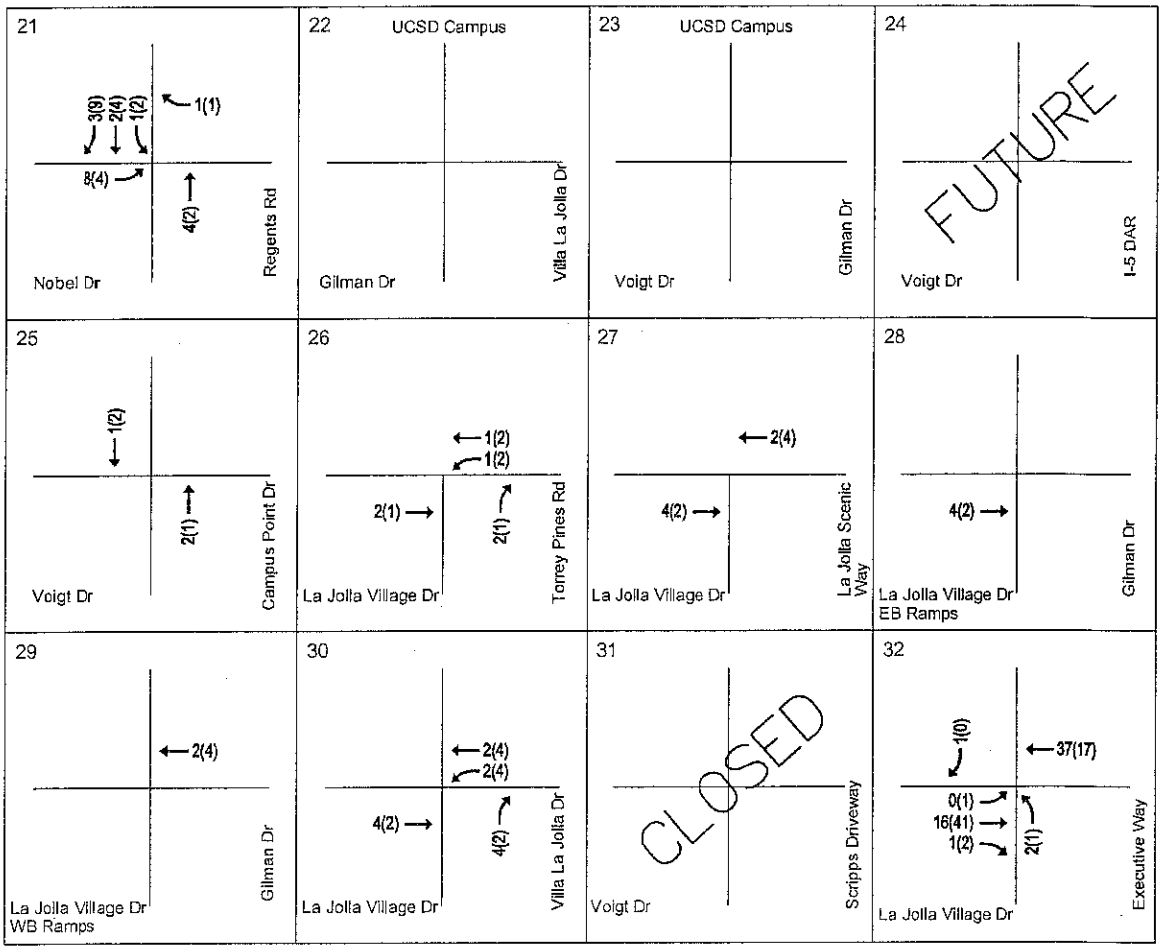
LEGEND

XX(XX) AM/PM PEAK HOUR VOLUME

PHASE I (2015) PEAK HOUR PROJECT TRIP ASSIGNMENT

55-100698.001 MAY 2012

EXHIBIT 22



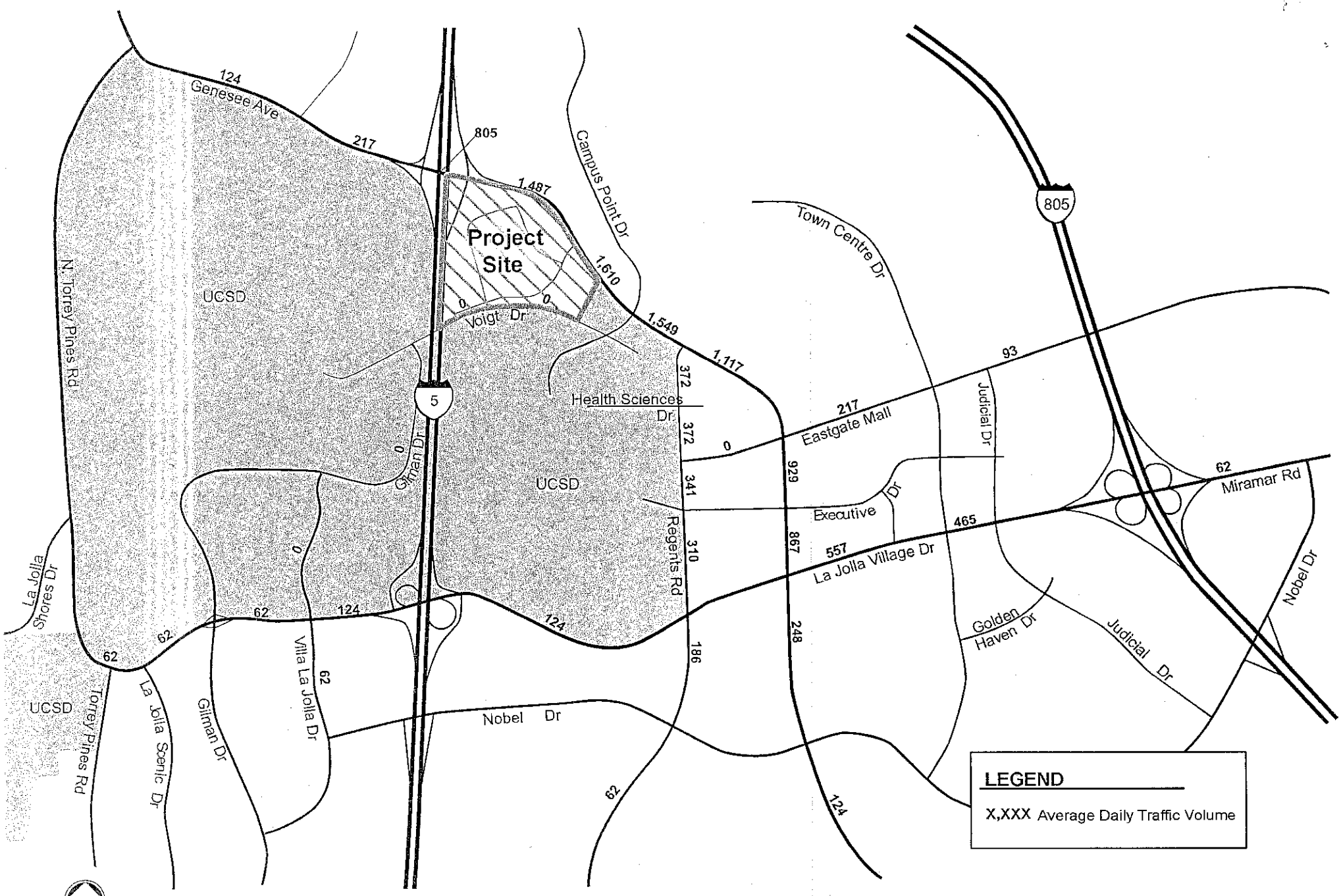
LEGEND

XX(XX) AM/PM PEAK HOUR VOLUME

PHASE I (2015) PEAK HOUR PROJECT TRIP ASSIGNMENT

55-100698.001 MAY 2012

EXHIBIT 22



NOT TO SCALE

RBF

55-100698.001 MAY 2012

PHASE I (2015) DAILY PROJECT TRIP ASSIGNMENT

EXHIBIT 23

TABLE 8-1
TRIP GENERATION SUMMARY

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
		Rate	Volume	Rate	In:Out Split	Volume In	Volume Out	Volume Total	Rate	In:Out Split	Volume In	Volume Out	Volume Total
Current Trip Generation: Commercial Office	29.0 KSF	[a]	479	13%	9:1	56	6	62	14%	2:8	13	54	67
Post-Project Trip Generation: Medical Office	29.0 KSF	50/KSF[b]	1,450	6%	8:2	70	17	87	10%	3:7	44	102	146
Increase			+971			-14	11	25			+31	+48	+79

Source: City of San Diego Trip Generation Manual, Revised May 2003.

Footnotes:

a. Existing Site Rate = Ln(T) = 0.756Ln(109.145)+3.95 = 1,804 trips. 1,804/109.145 ksf = existing site rate of 16.5 trips/ksf. 29.0 ksf * 16.5 trips/ksf = 479 ADT credit for existing uses.

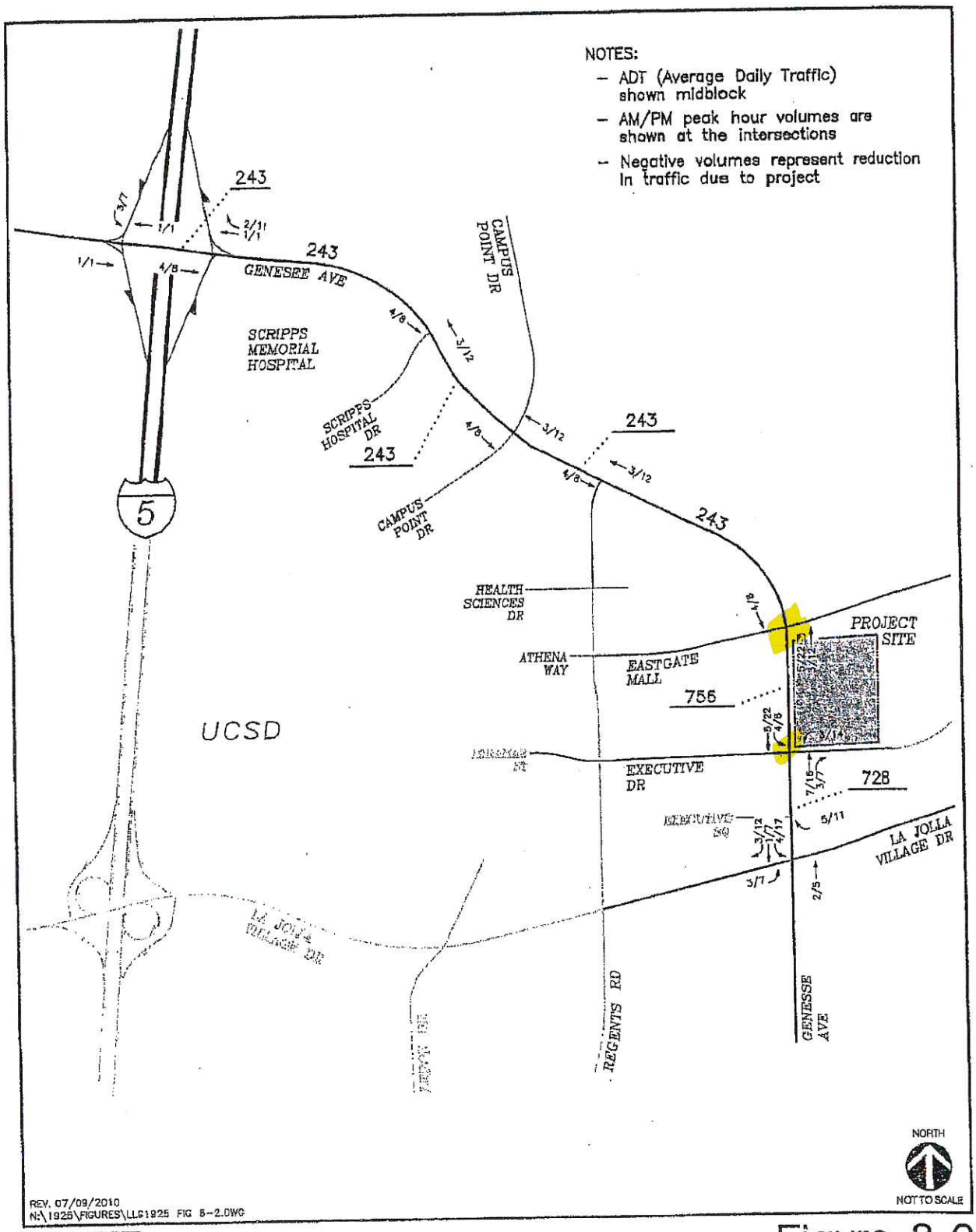
b. City of San Diego Traffic Generators Rate for "Medical Office Space", May 2003.

General Notes:

KSF = Thousand Square Feet

ADT = Average Daily Trips

5

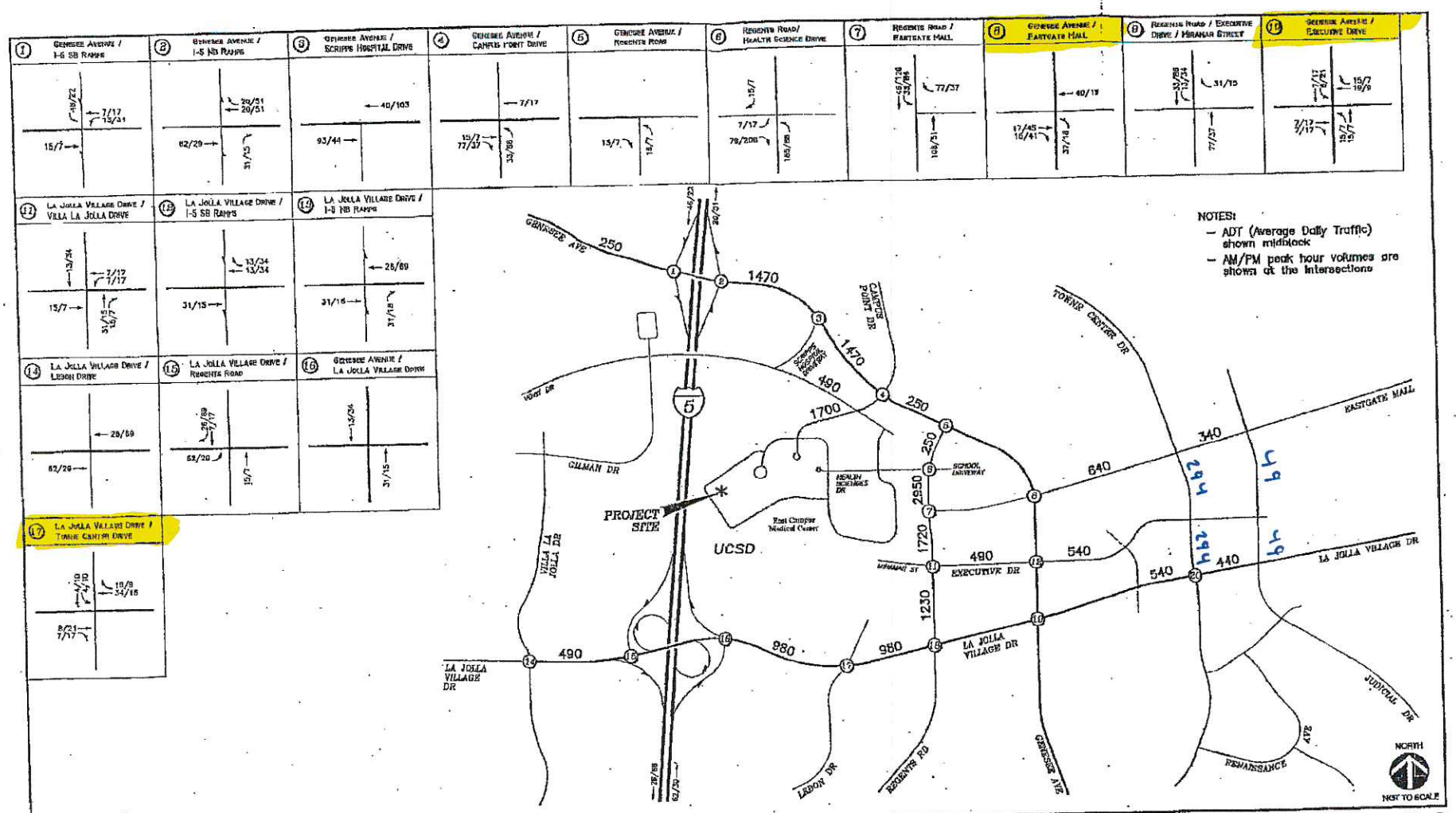


LINSCOTT LAW & GREENSPAN engineers

Figure 8-2

Project Traffic Volumes AM/PM Peak Hours & ADT

GENESSE EXECUTIVE PLAZA MEDICAL OFFICE BUILDING



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REV. 11/3/2009
N:\3921\Figures\LLG1921 Figure 9-2.dwg

Figure 9-2

Project Traffic Volumes AM/PM Peak Hours

EAST CAMPUS BED TOWER PROJECT

5

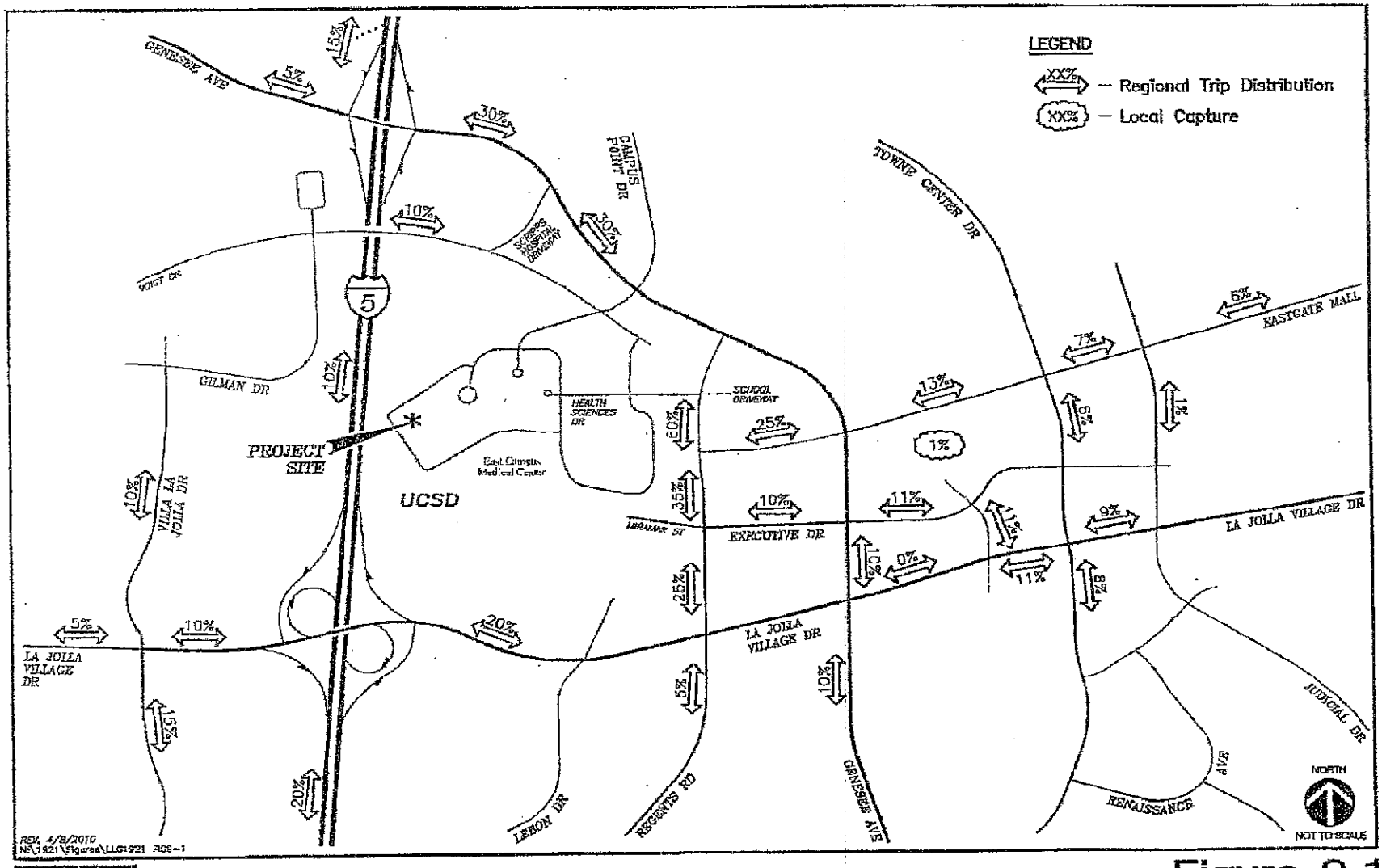

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Figure 9-1

Regional Traffic Distribution

EAST CAMPUS BED TOWER PROJECT

TABLE 3-1

Project Trip Generation

Use	Amount	Trip		ADT	AM Peak Hour							PM Peak Hour						
					% *	#	In	:	Out	In	Out	% *	#	In	:	Out	In	Out
Commercial Office	100,000 SF	Log Formula		1,688	13%	219	9	:	1	197	22	14%	236	2	:	8	47	189
Existing Entitlement per City Calculations	40,251 SF	8	/KSF	322	16%	52	9	:	1	46	5	14%	45	1	:	9	5	41
NET NEW TRIPS				1,366		168				151	17		191				43	148

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

Log Formula: Ln(T) = 0.756Ln(x)+3.95

KSF = 1,000 square feet

Coast Income Properties

FIGURE 3-1

Project Only Traffic Distribution

FIGURE 3-2

Project Only Average Daily Traffic

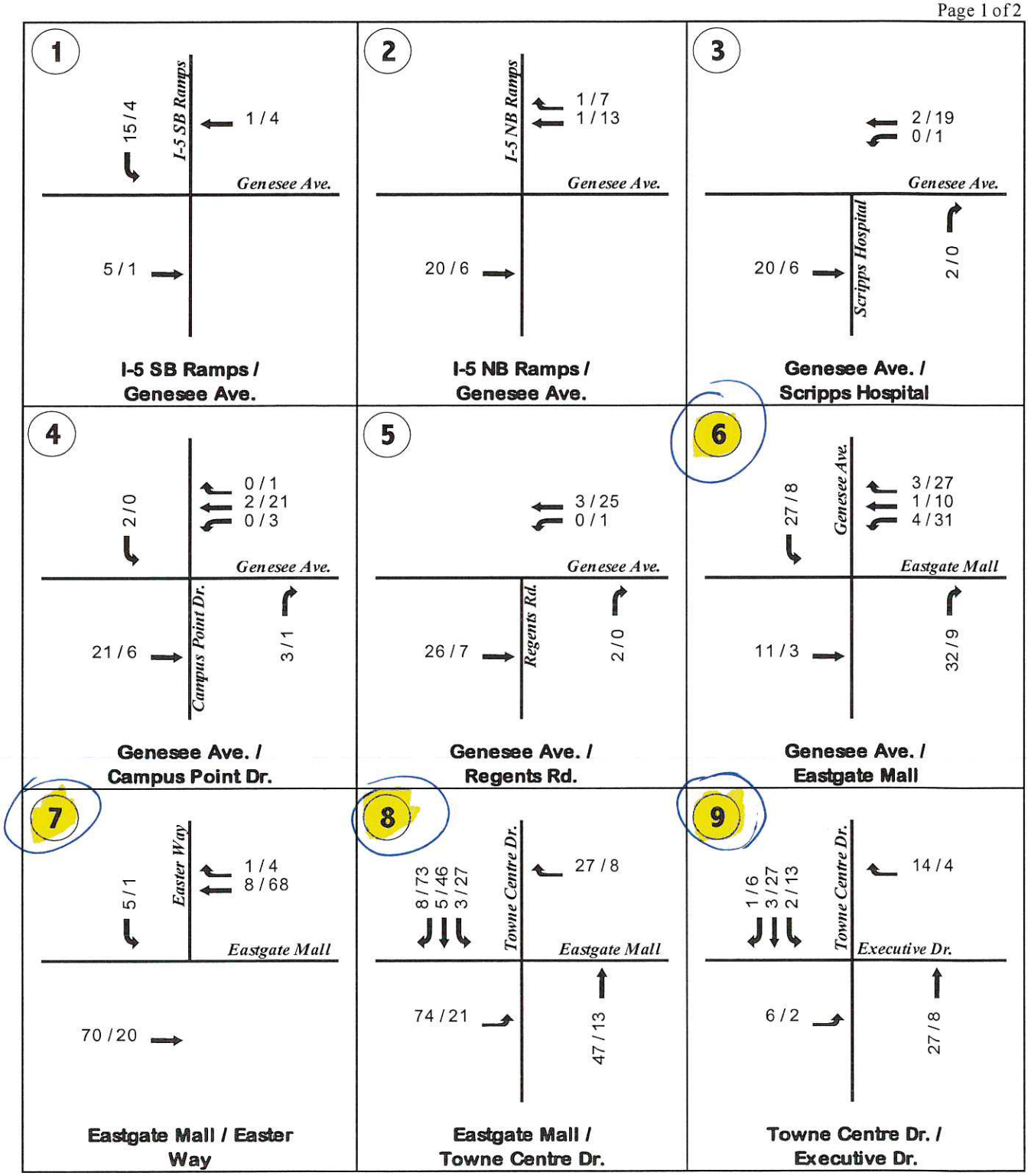

FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

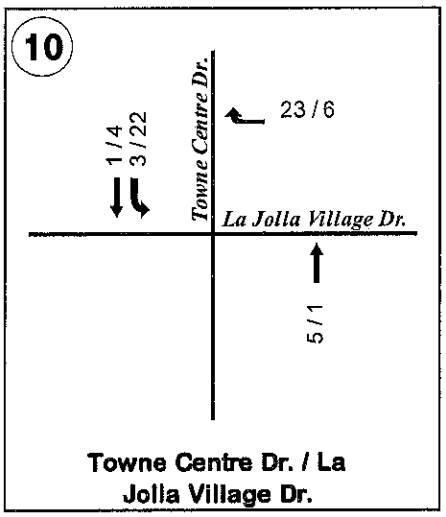

FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

7

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LAW &
GREENSPAN
engineers

TRAFFIC IMPACT STUDY

UNIVERSITY TOWNE CENTRE REVITALIZATION PROJECT

San Diego, California
July 23, 2007 Final Submittal

Prepared for:

WESTFIELD CORPORATION, INC.
11601 Wilshire Boulevard, 12th Floor
Los Angeles, California 90025

LLG Ref. 3-04-1415

Prepared by:

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Transportation Planner I

Walter B. Musial, P.E.
Transportation Engineer III

Under the Supervision of:

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9455 Town Centre Drive (3)

People

Jacob Swim Hi Robin, As we discussed the ot! — Today at 9:07 AM

Robin Madaffer <robin@sdlandlaw.com> — Today at 2:05 PM
To Jacob Swim
CC henryk@urbansystems.net

Phase 2A net new GLA is 251,454 and new ADT is 5,541, expected completion Q4 2017
Phase 2B net new GLA is 199,034 and new ADT is 4,385, expected completion 2019

Sent from iPhone.

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To Robin Madaffer

Thanks

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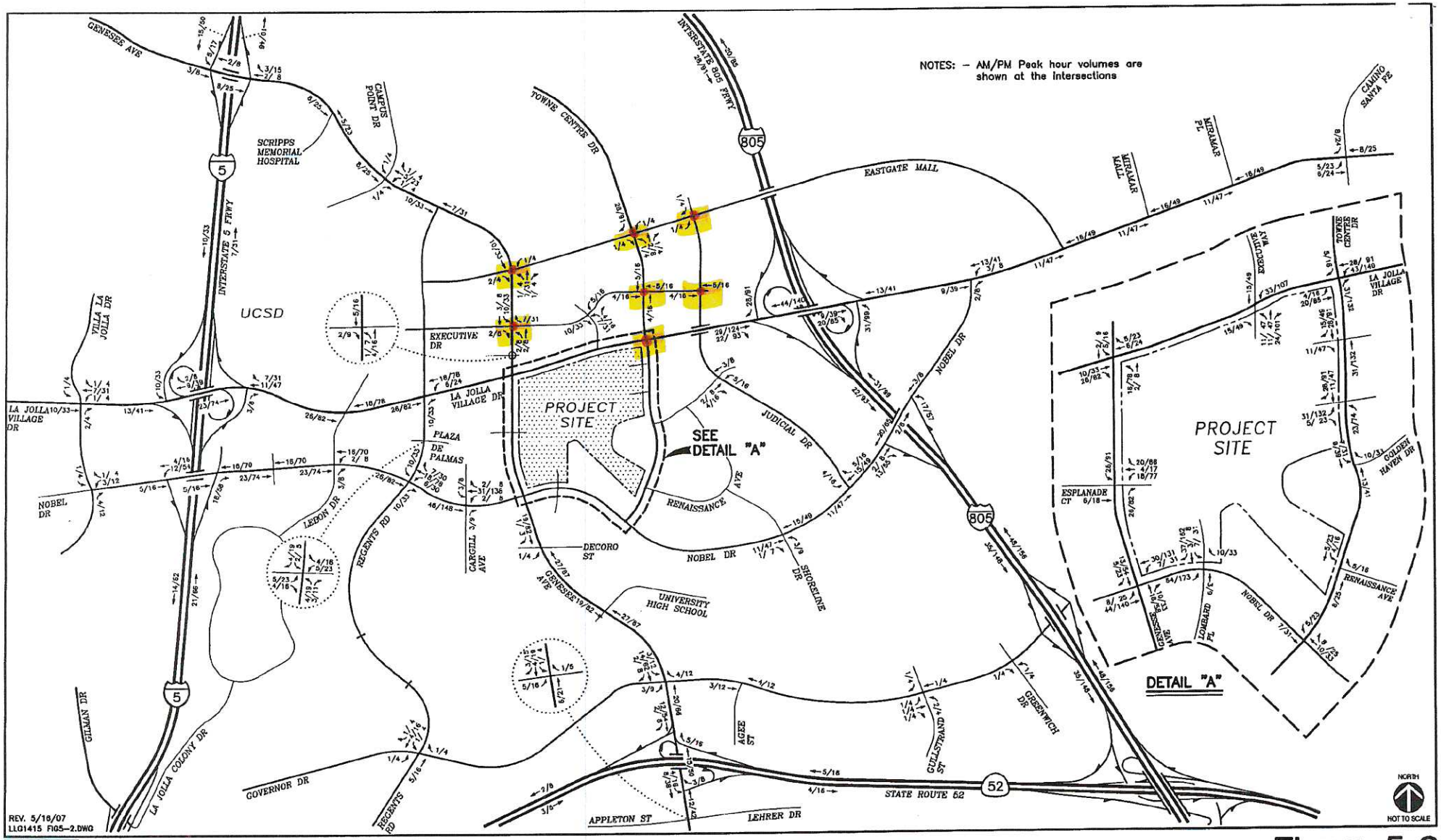
Click to Reply, Reply All or Forward

Send

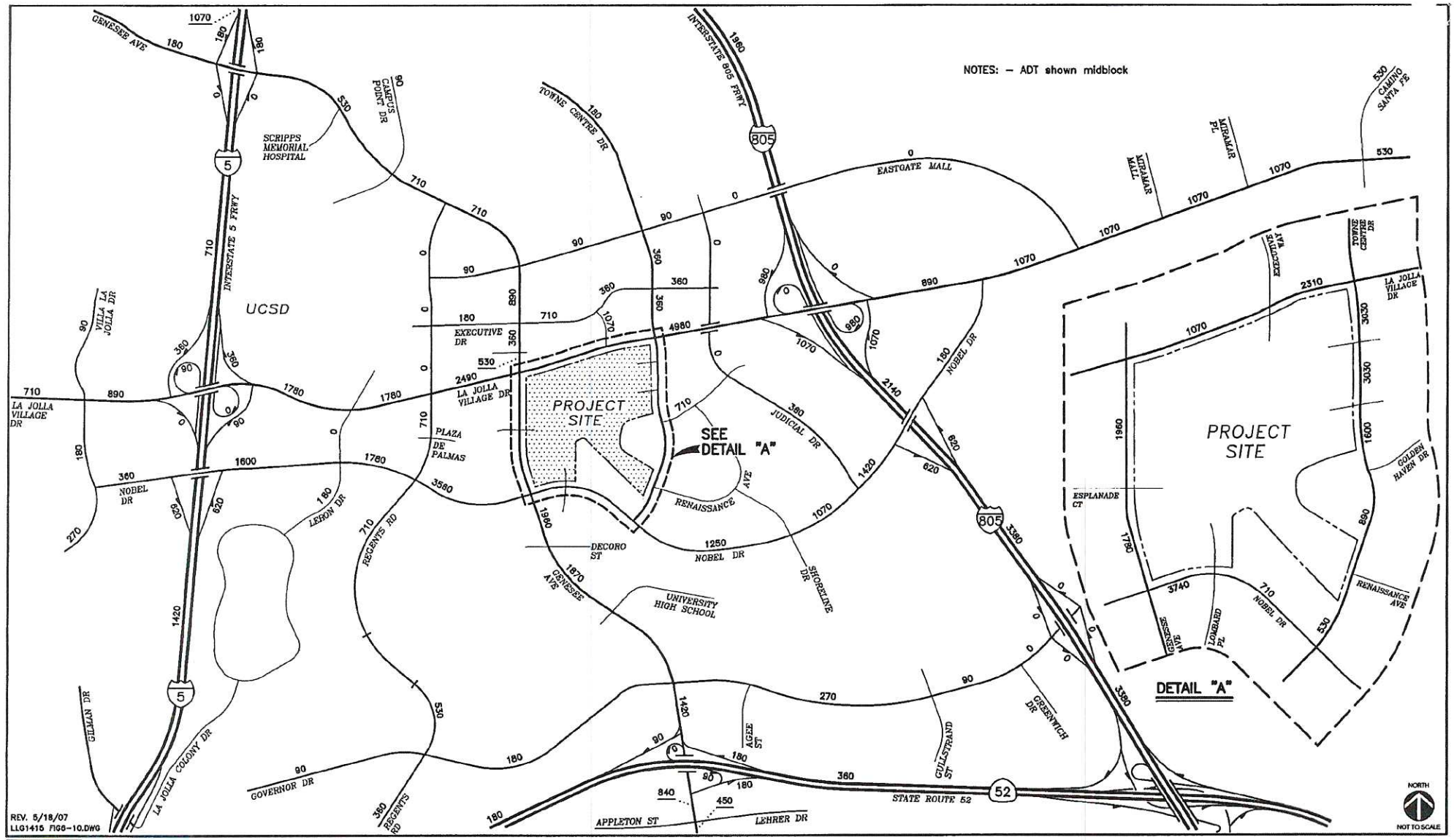


LINSCOTT LAW & GREENSPAN engineers

Figure 5-2

PROJECT TRIPS (CUMULATIVE) AM/PM PEAK HOURS

UNIVERSITY TOWNE CENTRE REVITALIZATION PROJECT

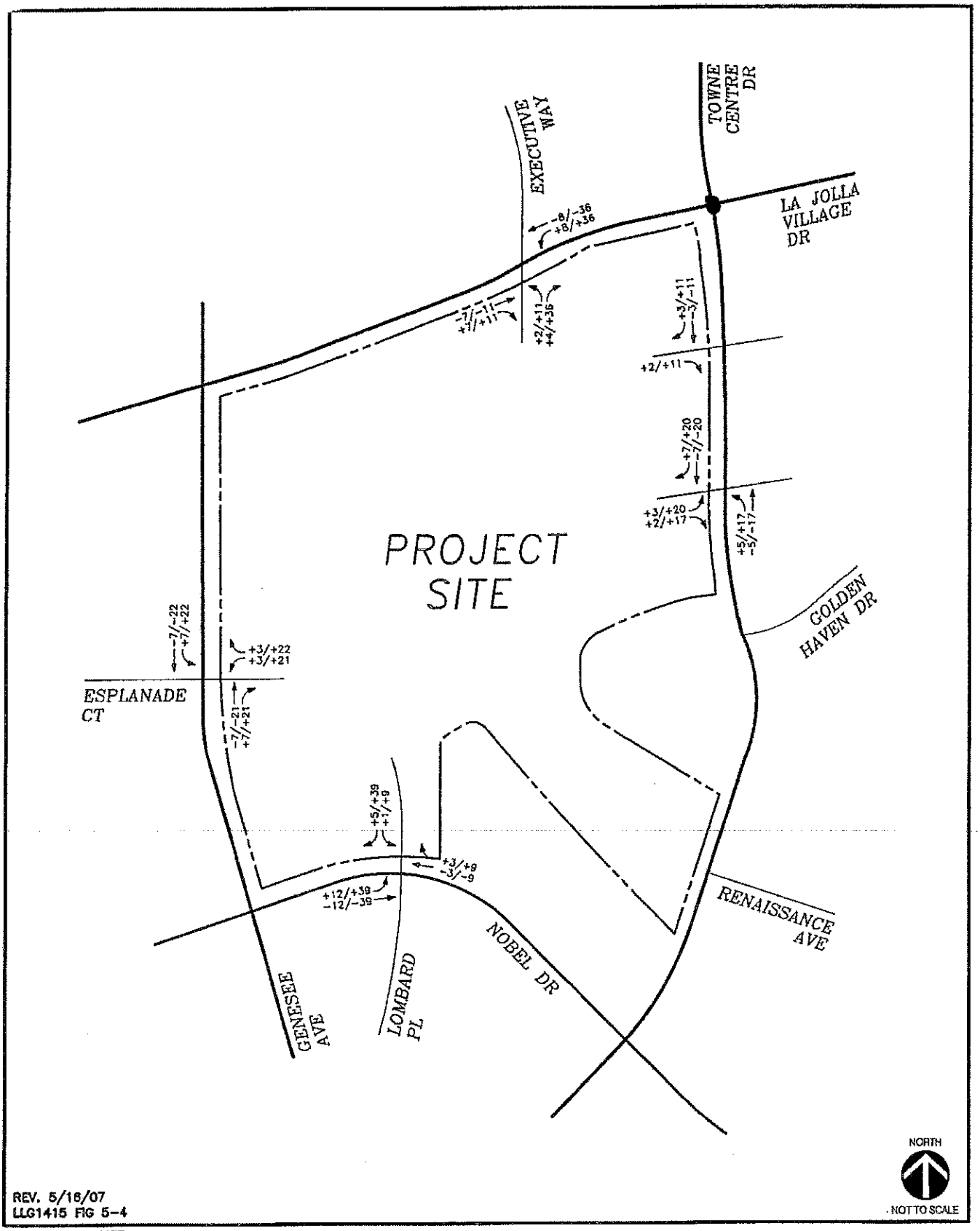


LINSCOTT LAW & GREENSPAN engineers

Figure 5-3

PROJECT TRIPS (CUMULATIVE) DAILY VOLUMES

UNIVERSITY TOWNE CENTRE REVITALIZATION PROJECT



REV. 5/16/07
LLG1415 FIG 5-4

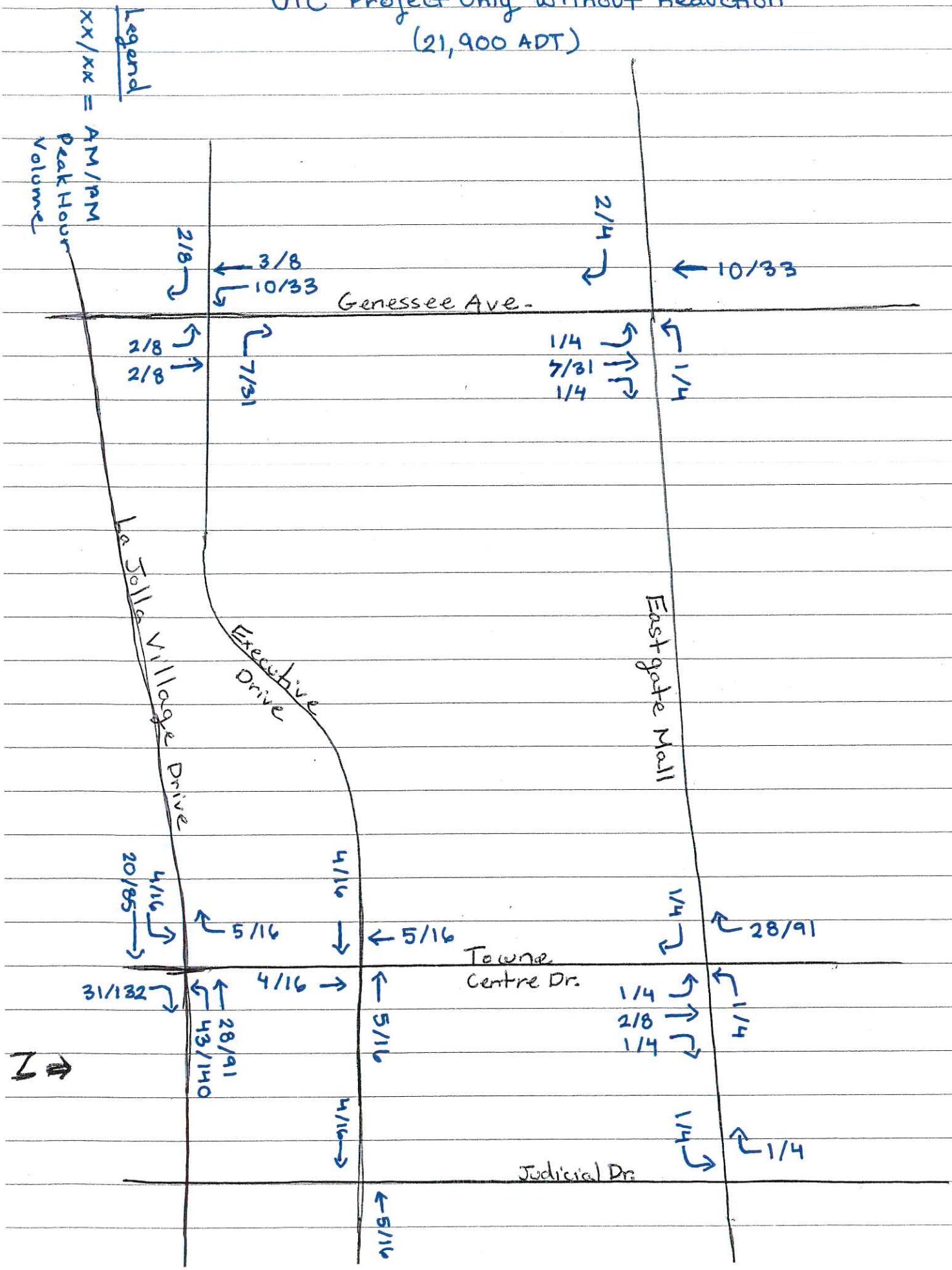
LINSCOTT LAW & GREENSPAN engineers

Figure 5-4

PASS-BY TRIP ADJUSTMENTS AM/PM PEAK HOURS

UNIVERSITY TOWNE CENTRE REVITALIZATION PROJECT

UTC Project Only Without Reduction
(21,900 ADT)



UTC Project Only with Reduction
(5,541 ADT)

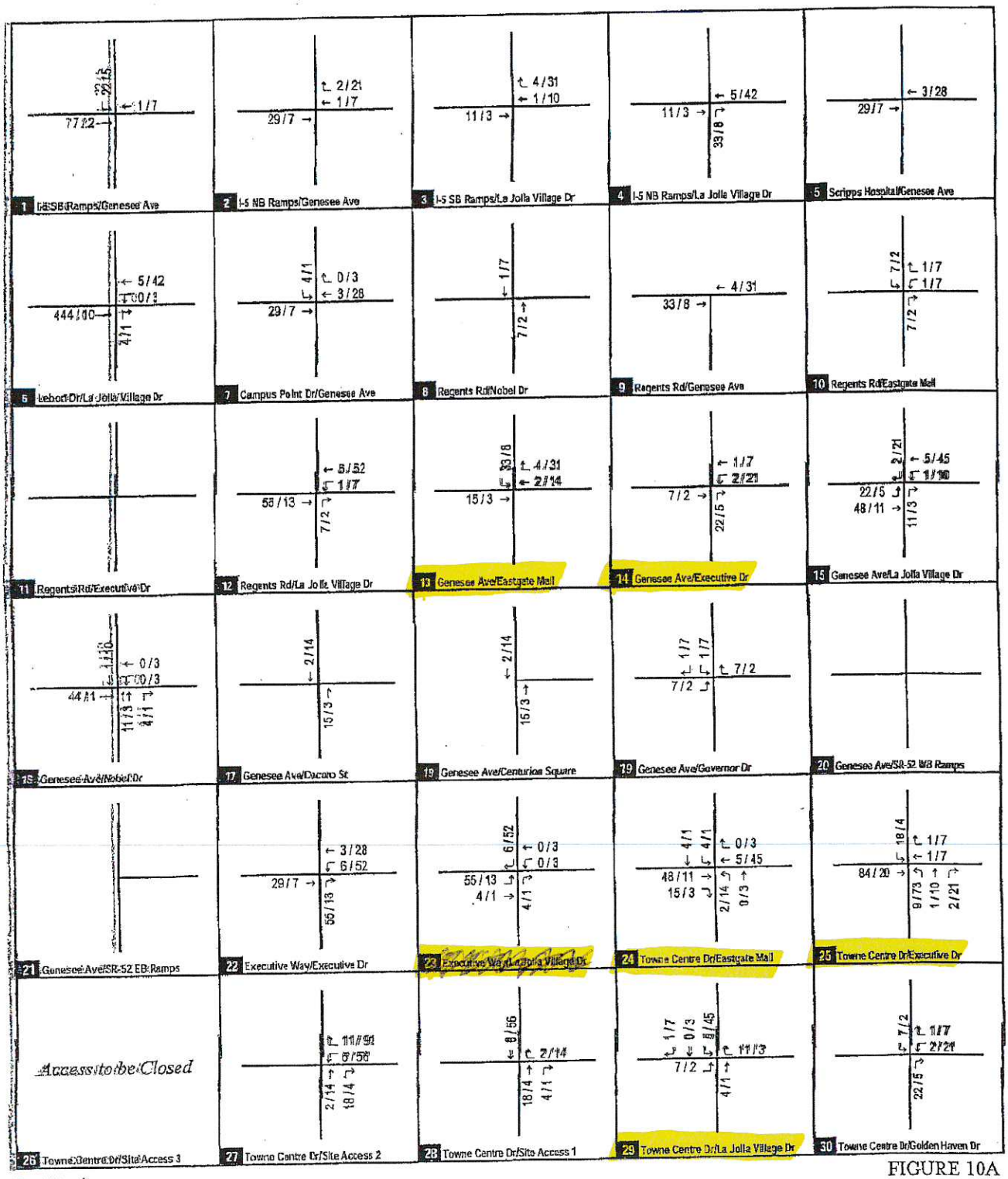


FIGURE 10A

LSA

XX / YY AM / PM Peak Hour Trips

La Jolla Centre 3
Traffic Impact Study
Project Peak Hour Traffic Volumes

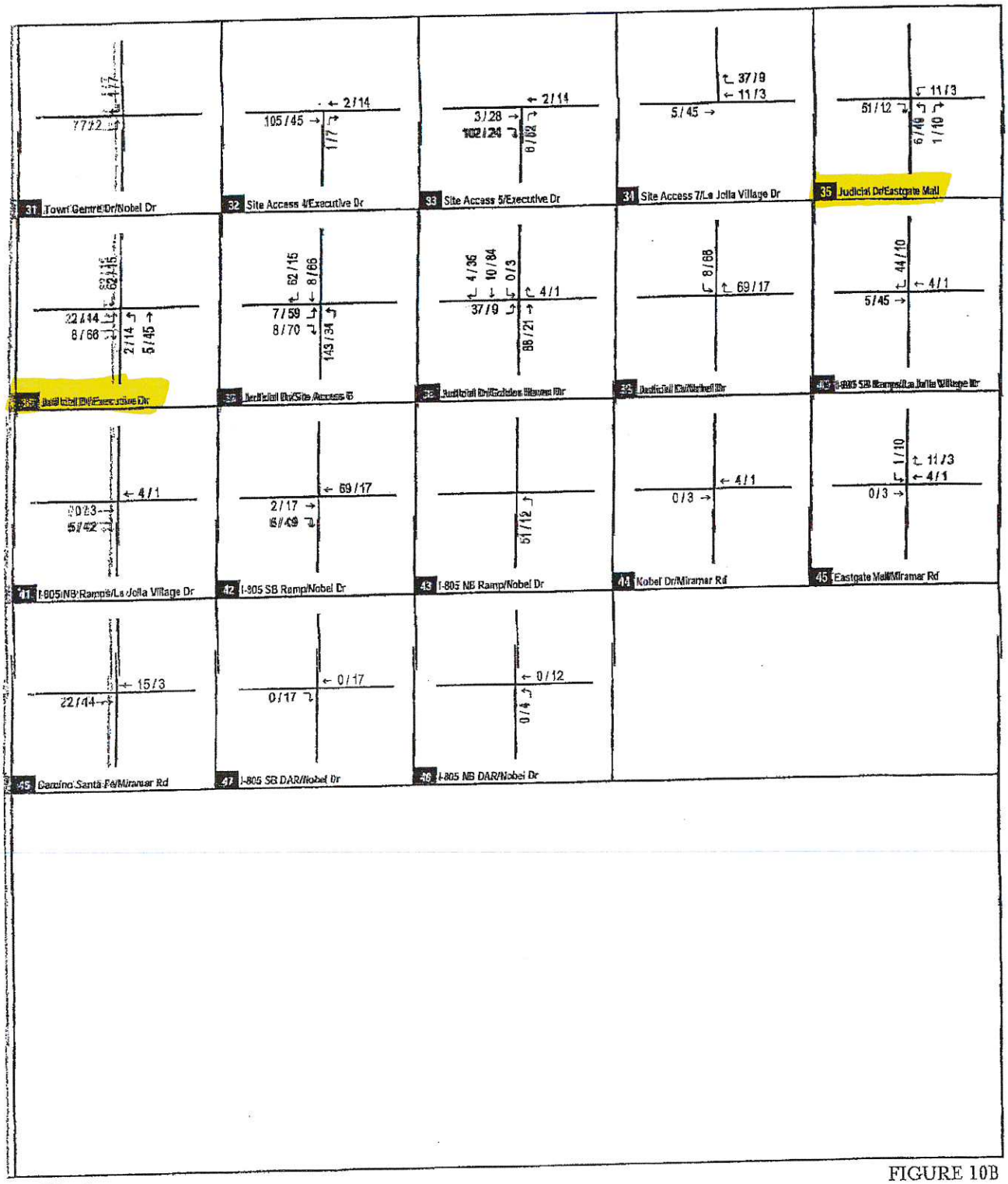


FIGURE 10B

LSA

XX/YY AM / PM Peak Hour Trips

La Jolla Centre 3
Traffic Impact Study
Project Peak Hour Traffic Volumes

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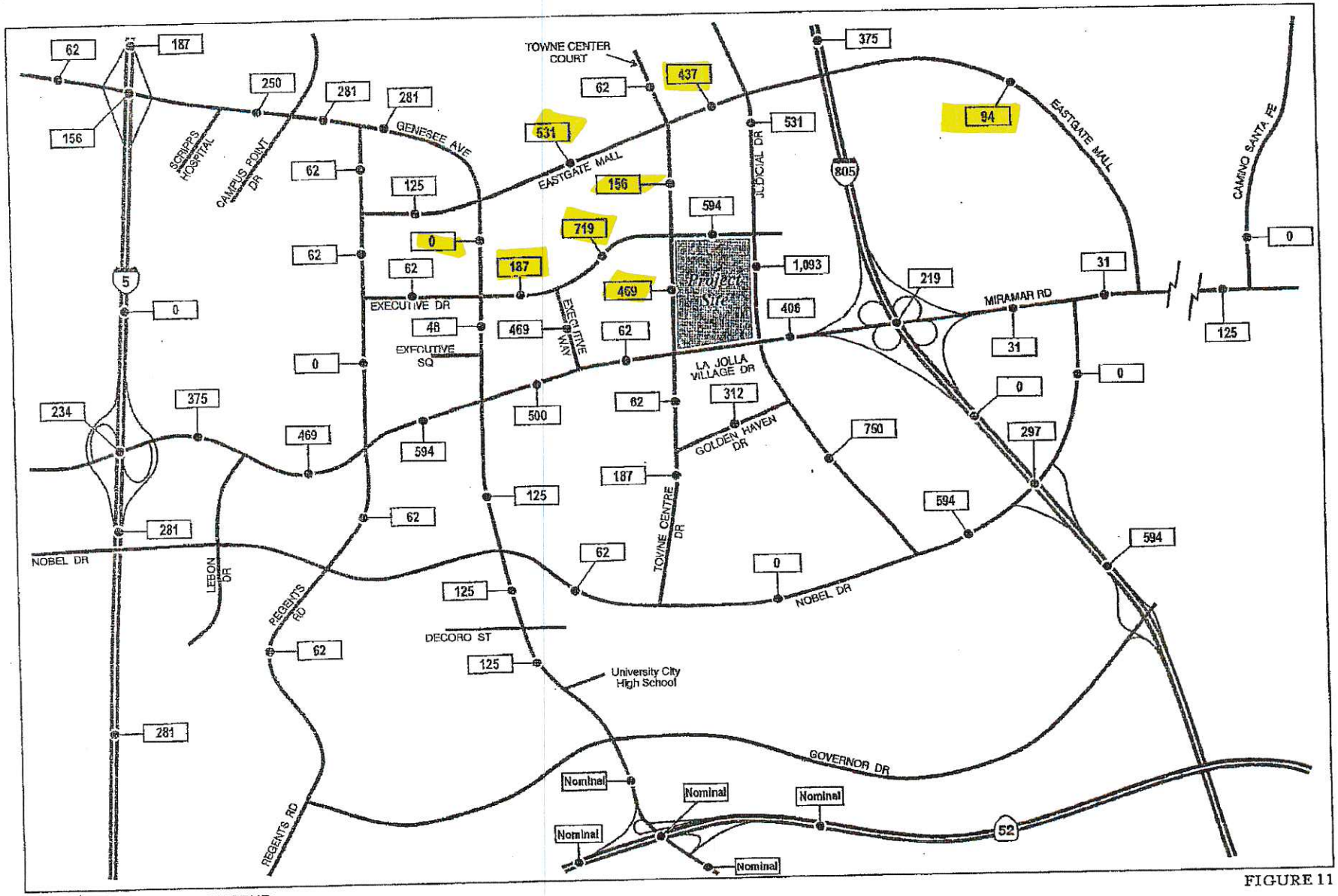

FIGURE 11

LSA

LEGEND:

X,XXX – Average Daily Traffic Volumes

N

SCHEMATIC - NOT TO SCALE

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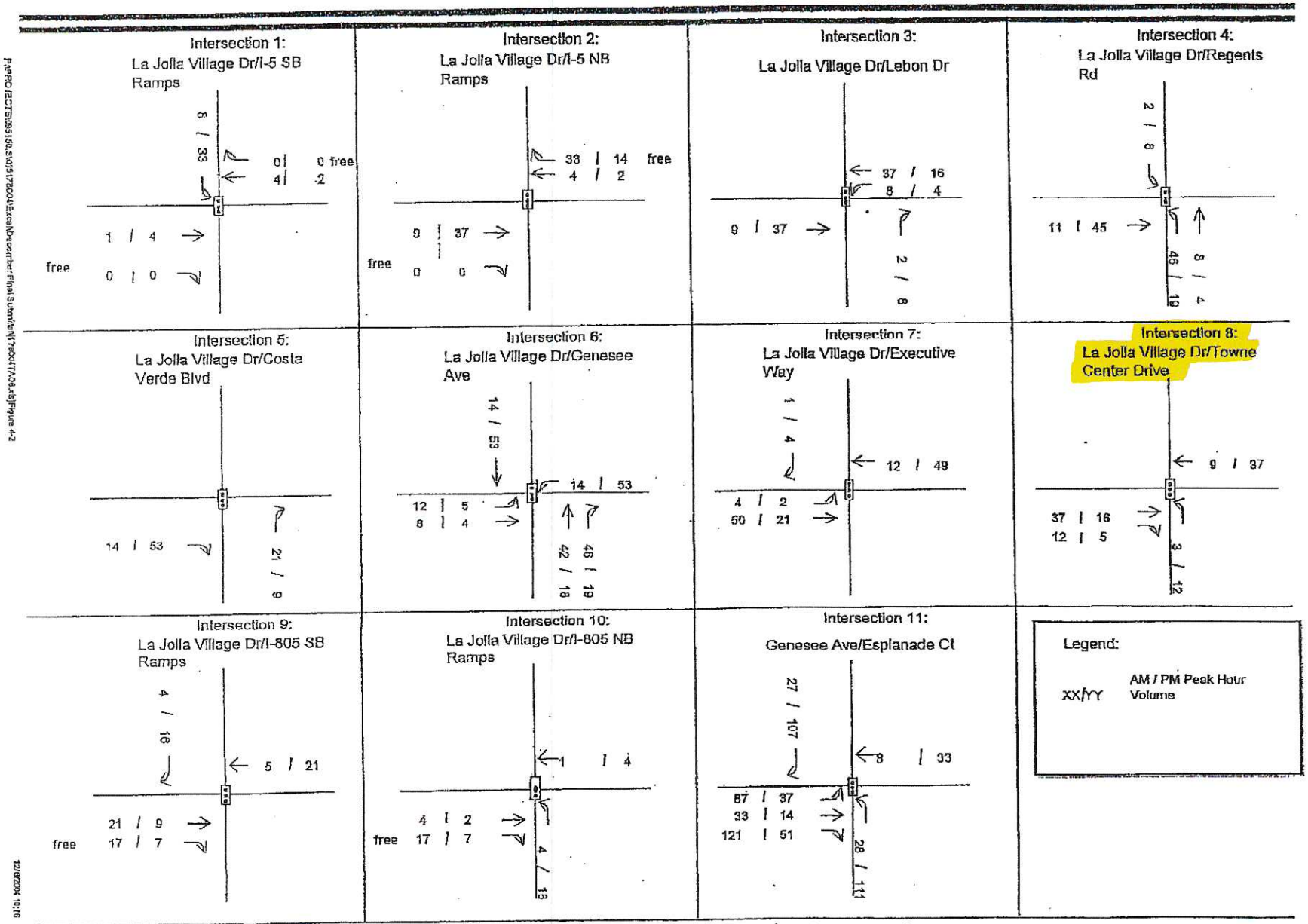
La Jolla Centre 3

Project Traffic Volumes (ADTs) with Regents Road Bridge



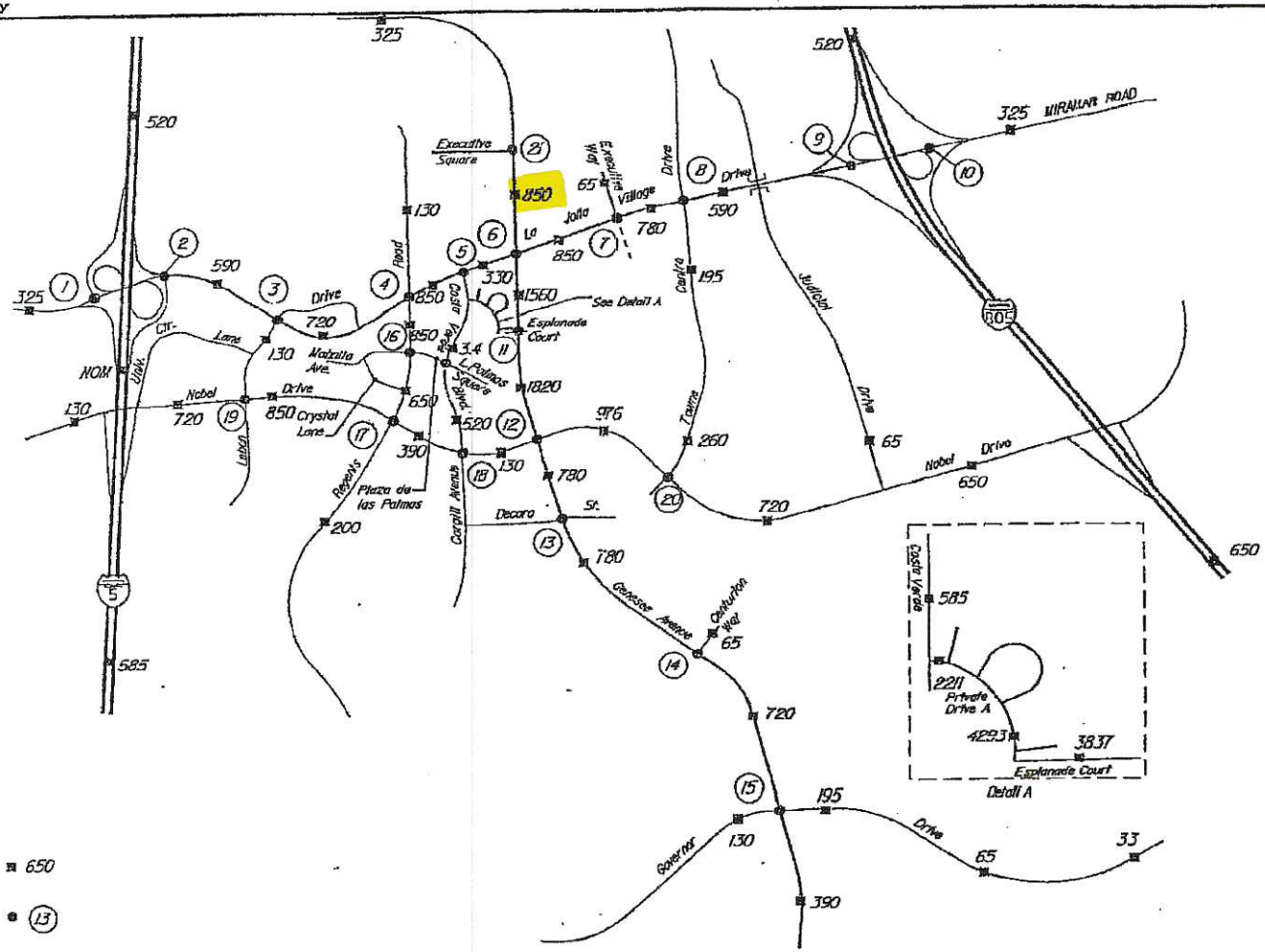
Monte Verde Project Trip Assignment

Kimley-Horn and Associates, Inc.

Monte Verde

Figure 4-2

9



Note: Based on April 2, 2004 SANDAG model plot (W/O Regent's Road extension)

Figure 4-3

KIMLEY-HORN and ASSOCIATES

Monte Verde Roadway Segment Project Trip Assignment

10

TRAFFIC IMPACT ANALYSIS

For

BIOMED INNOVATION CENTER

Prepared for

THE CITY OF SAN DIEGO

Final Submittal: September 11, 2012

REGISTERED PROFESSIONAL ENGINEER
14
STATE OF CALIFORNIA

TRAFFIC PLANNING & ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT
4540 Kearny Villa Road, Suite 106
San Diego, CA 92123-15

TABLE 3-1

Project Trip Generation

Use	Amount	*Daily Trip Rate	ADT	AM Peak Hour							PM Peak Hour						
				% *	#	In	:	Out	In	Out	% *	#	In	:	Out	In	Out
Entitlement to be added to Existing Conditions																	
Original Entitlement	141,520 SF	10 /KSF	1,415	16%	226	9	:	1	204	23	14%	198	1	:	9	20	178
Total Adjustment to Existing Conditions			1,415		226				204	23		198				20	178
New Project traffic to be studied																	
Scientific R&D	250,000 SF	8 /KSF	2,000	16%	320	9	:	1	288	32	14%	280	1	:	9	28	252
Original Entitlement	141,520 SF	10 /KSF	1,415	16%	226	9	:	1	204	23	14%	198	1	:	9	20	178
Change from Entitlement			**585**		**94**				**84**	**9**		**82**				**8**	**74**

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

SF = Square Feet

KSF = Thousand Square Feet

ADT = Average Daily Traffic

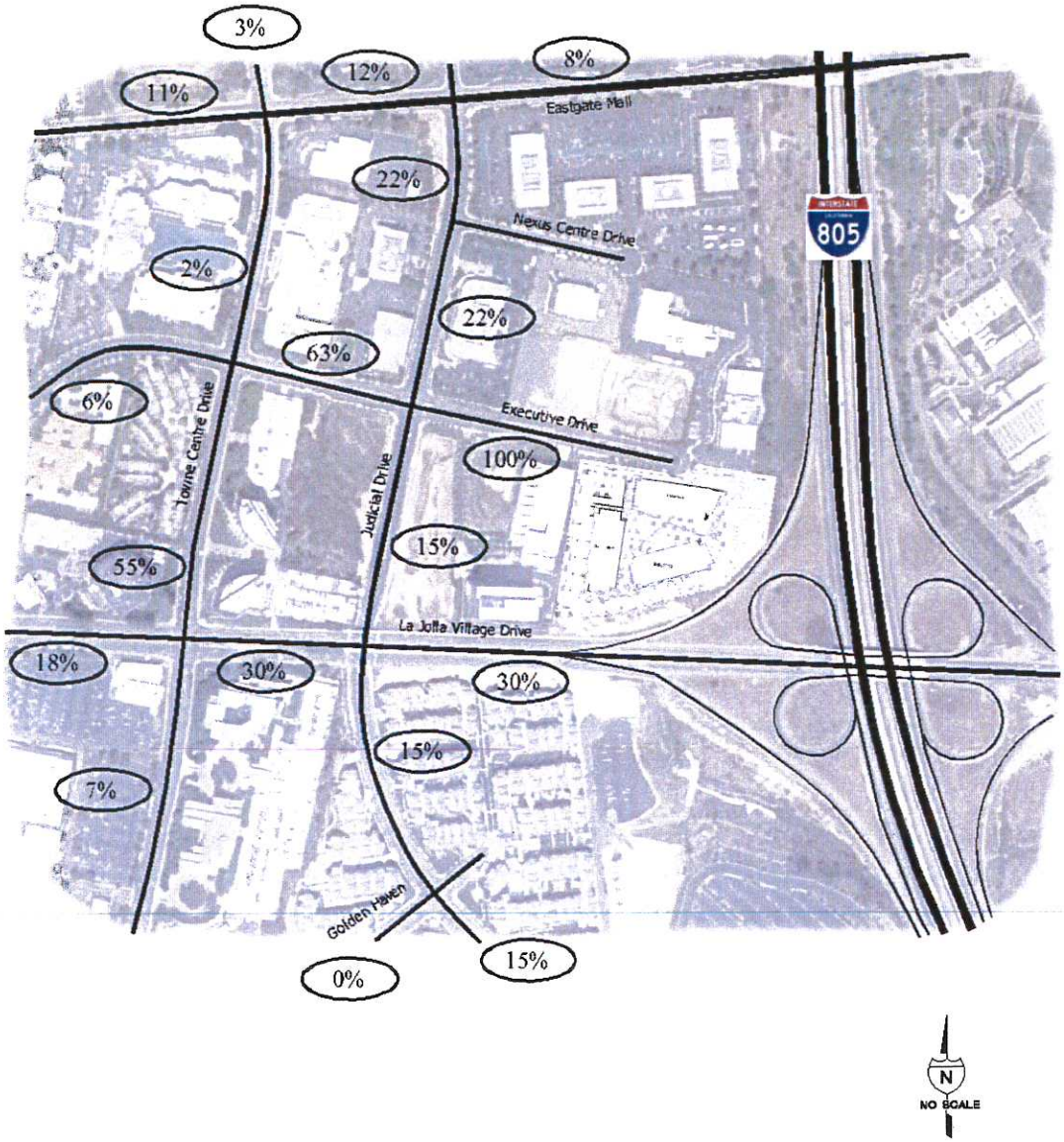


FIGURE 3-1

Project Only Traffic Distribution

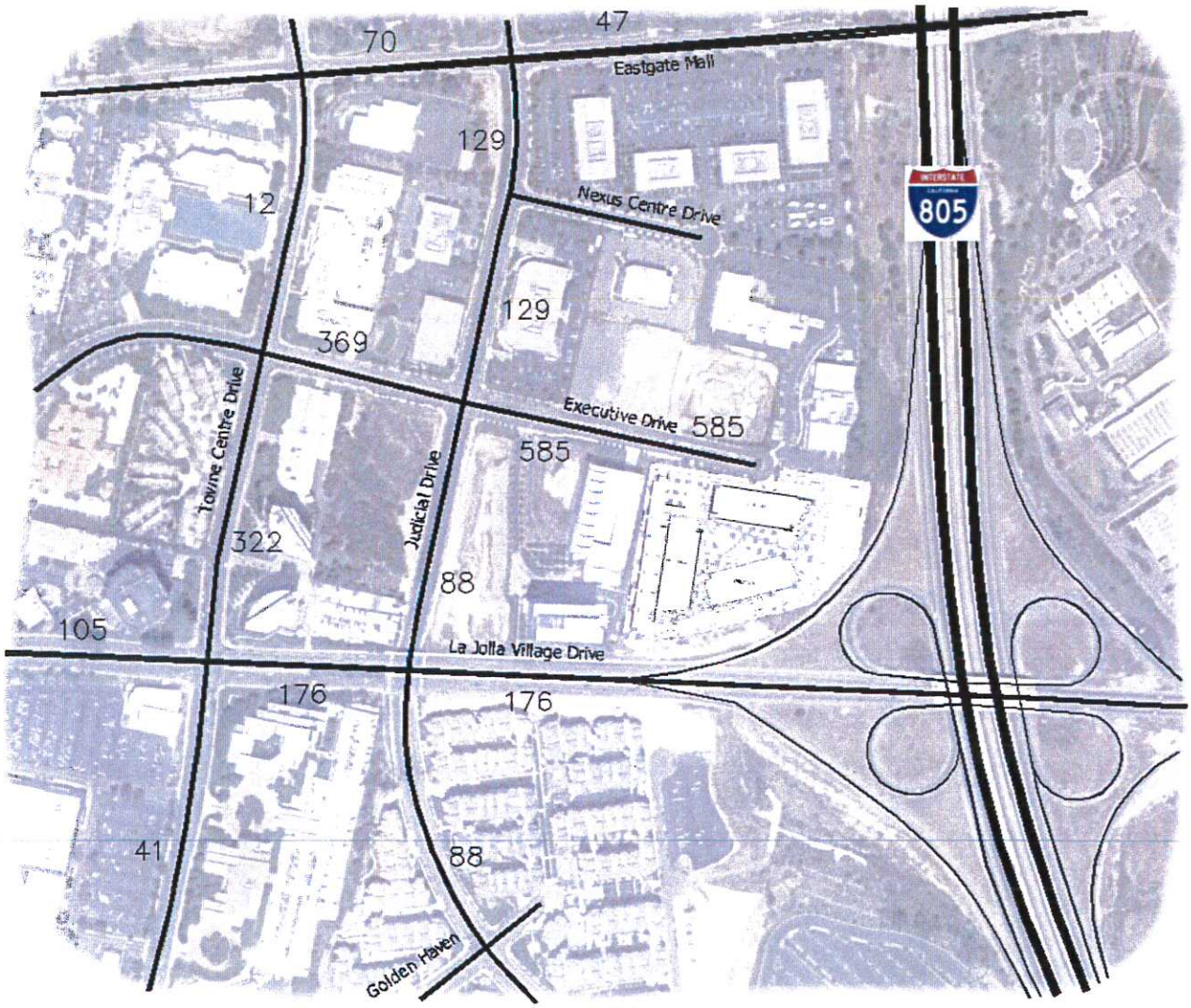


FIGURE 3-2

Project Only Average Daily Traffic

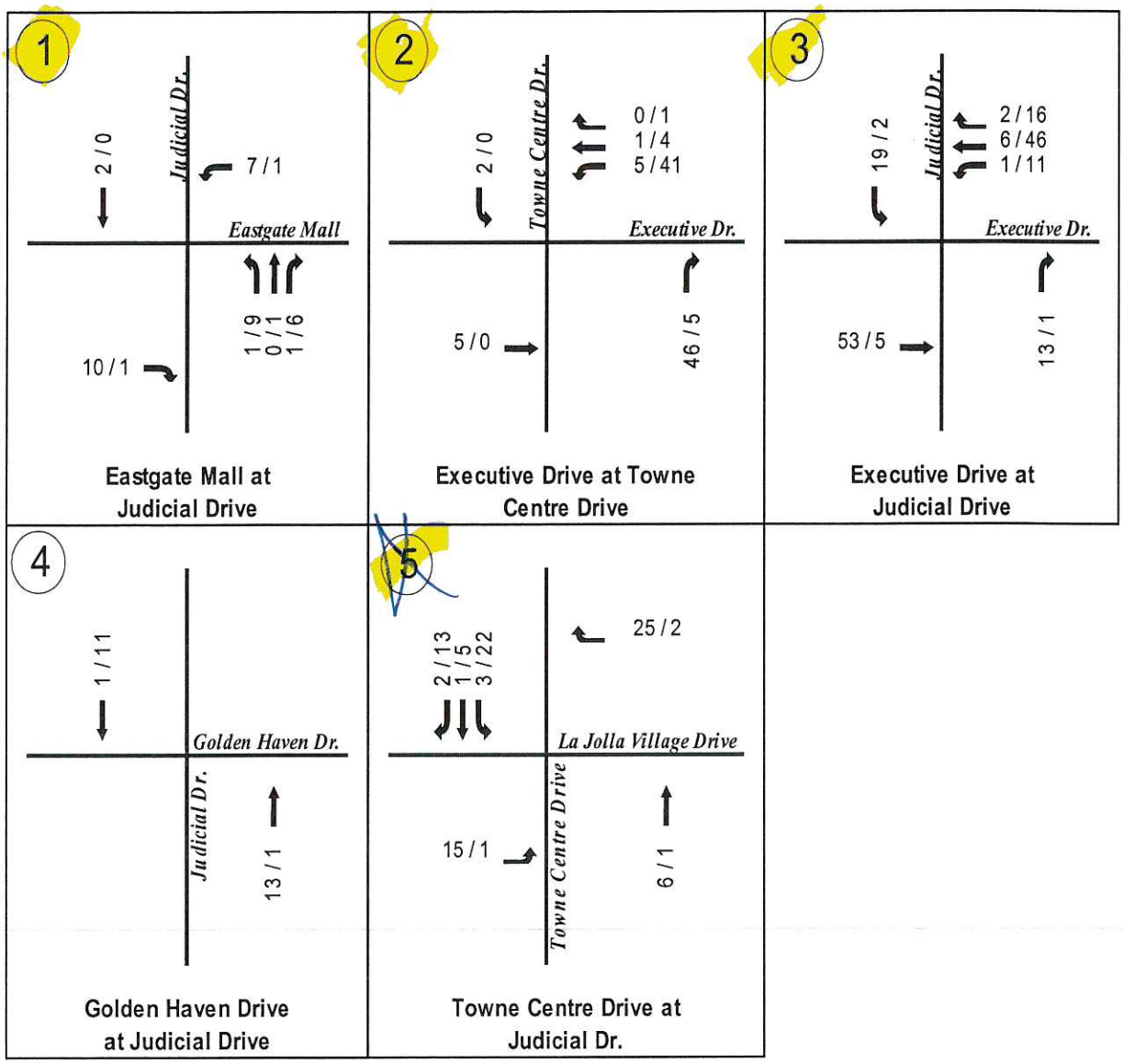


FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

11

TRAFFIC IMPACT ANALYSIS

For

LA JOLLA CROSSROADS 2

Prepared for

THE CITY OF SAN DIEGO

Final Report: July 3, 2012

TRAFFIC PLANNING & ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT
4540 Kearny Villa Road, Suite 106
San Diego, CA 92123-1573
(858) 560-4911

TABLE 3-1

Project Trip Generation

Use	Amount	*Trip	ADT	AM Peak Hour							PM Peak Hour						
				%*	#	In	:	Out	In	Out	%*	#	In	:	Out	In	Out
Multi-Family Residential	472 DU	6 /DU	2,832	8%	227	2	:	8	45	181	10%	283	7	:	3	198	85
TOTAL			2,832		227				45	181		283				198	85

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

Trip rate selected represents a development density over 20 du/acre (project density=59.5 du/ac)

DU = Dwelling Unit

FIGURE 3-2

Project Only Average Daily Traffic (Existing Roadway Network)

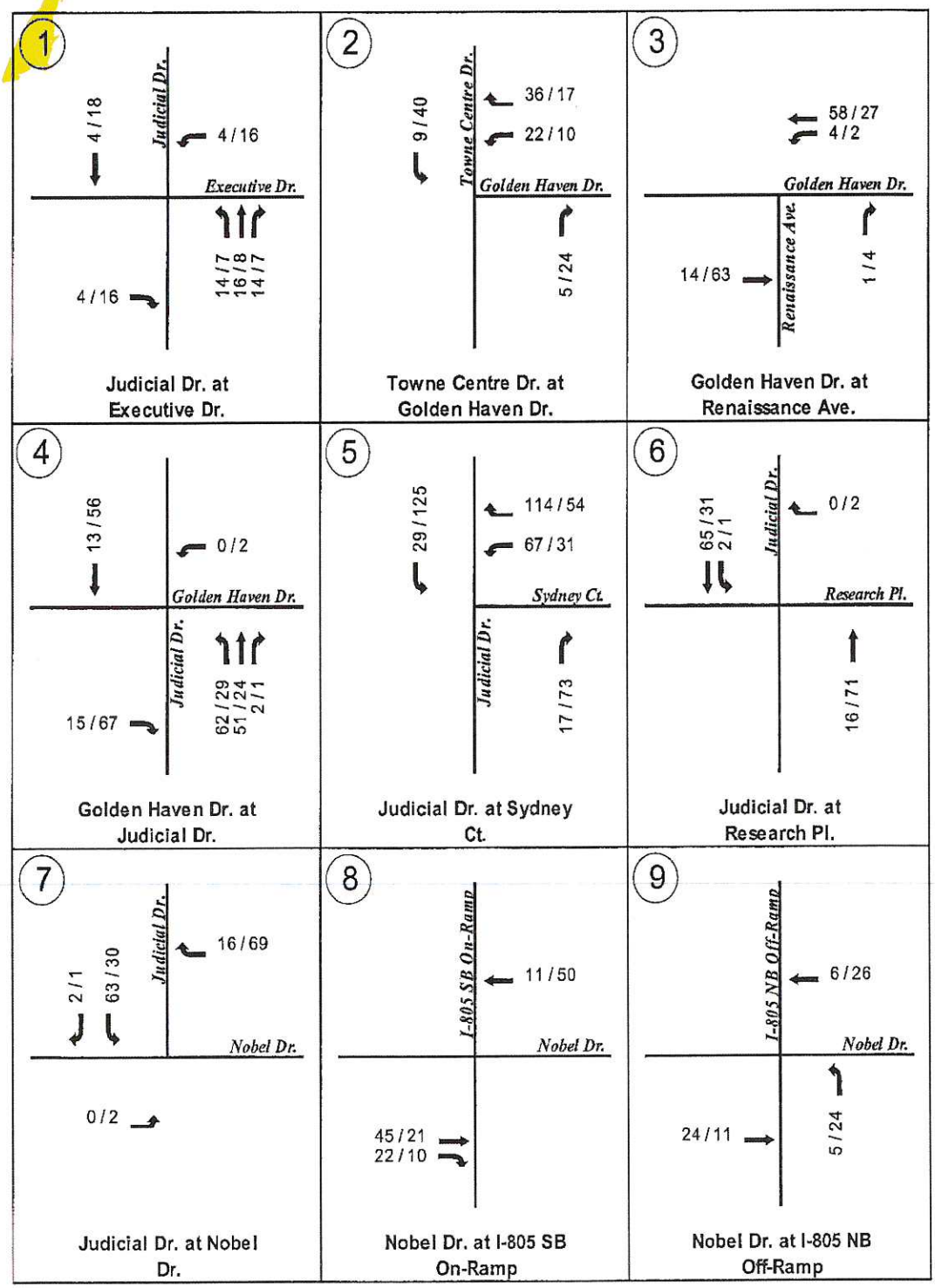


FIGURE 3-3

Project Only AM / PM Peak Hour Traffic (Existing Roadway Network)

12

TRAFFIC IMPACT ANALYSIS

For

CAMPUS POINTE MASTER PLAN

Prepared for

THE CITY OF SAN DIEGO

and

ALEXANDRIA REAL ESTATE EQUITIES, INC.

Final: March 25, 2015

TRAFFIC PLANNING & ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT
8451 Miralani Drive, Suite A
San Diego, CA 92126
(858) 560-4911

TABLE 3-1

Alexandria Campus Pointe Project Trip Generation

Use	Amount	Rate[1]	ADT	AM Peak Hour					PM Peak Hour				
				% *	#	In : Out	In	Out	% *	#	In : Out	In	Out
Existing Scientific Research	461,941 SF	8 /KSF	3,696	16%	591	9 : 1	532	59	14%	517	1 : 9	52	466
Proposed Scientific Research - Phase 1	140,000 SF	8 /KSF	1,120	16%	179	9 : 1	161	18	14%	157	1 : 9	16	141
Proposed Scientific Research - Phase 2	138,059 SF	8 /KSF	1,104	16%	177	9 : 1	159	18	14%	155	1 : 9	15	139
Total Scientific Research (Existing + Phase 1 & 2)	740,000 SF	8 /KSF	5,920	16%	947	9 : 1	852	95	14%	829	1 : 9	83	746
Change (Total - Existing)			2,224		356		320	36		311		31	280

Notes:

[1] = Source: City of San Diego Trip Generation Manual, May 2003

Total Proposed Scientific Research (Phase 1 & 2) is 278,059 SF

SF = Square Feet

FIGURE 3-2

Project Only Average Daily Traffic

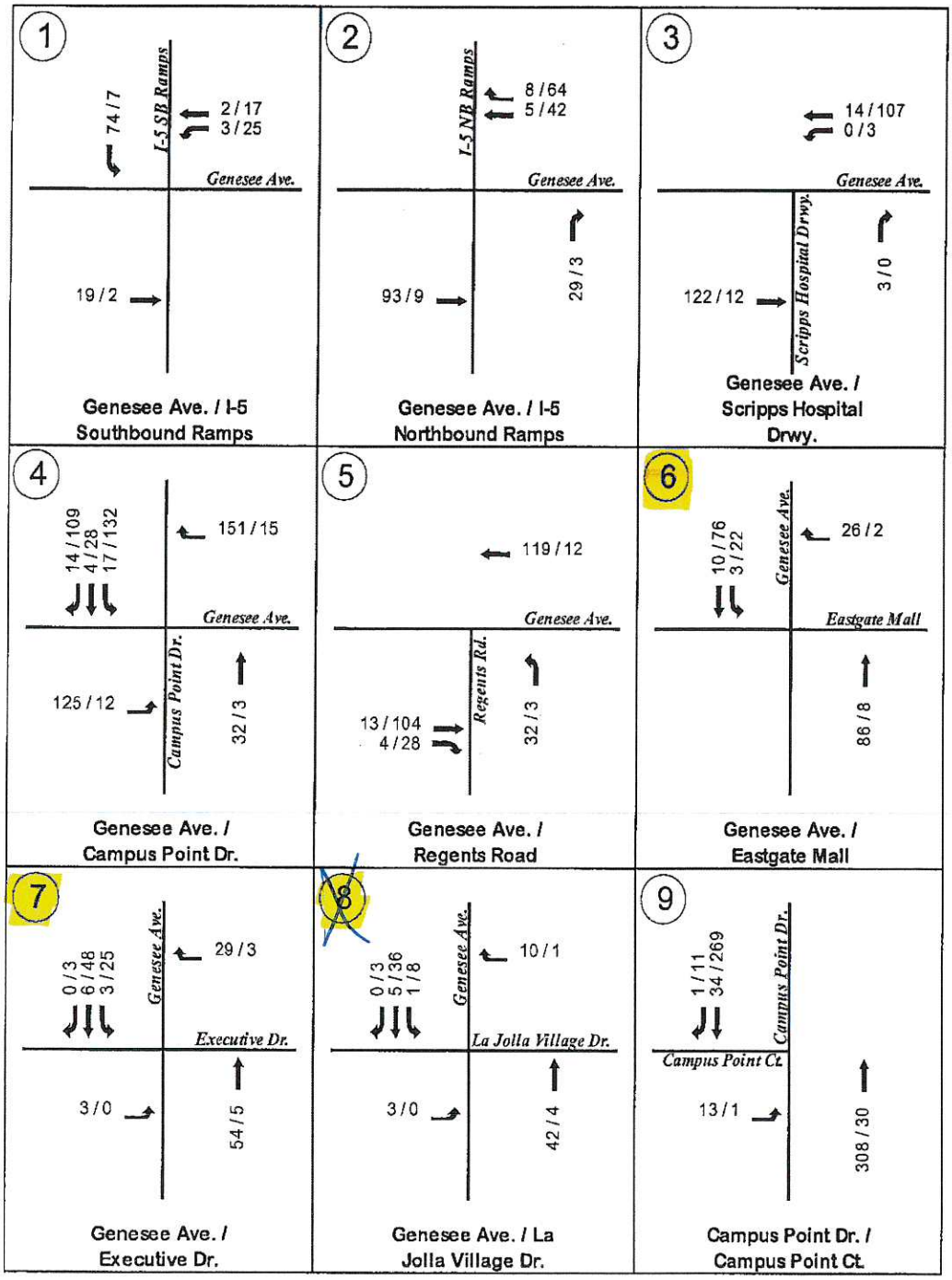


FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

13

TRANSPORTATION ANALYSIS

for

SALK INSTITUTE MASTER PLAN

Prepared for

SALK INSTITUTE FOR BIOLOGICAL STUDIES

Submittal: September 20, 2006

TRAFFIC PLANNING & ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT
4540 Kearny Villa Road, Suite 106
San Diego, California 92123-1573
(858) 560-4911

TABLE 2-1

Project Trip Generation

Future Master Plan Buildout

Use	Amount	Trip Rate	ADT	AM PEAK HOUR					PM PEAK HOUR				
				%	#	In/Out	In	Out	%	#	In/Out	In	Out
Residential Quarters	12 DU (12,000 SF)	8 trips / DU	96	8	8	2 : 8	2	6	10	10	7 : 3	7	3
Core Facility, Mechanical Room, Equipment[1]	0 SF	No New Trips											
Torrey East Science Complex	96,400 SF	8 trips / KSF	771	16	123	9 : 1	111	12	14	108	1 : 9	11	97
Day Care Facility[2]	12,000 SF	No New Trips											
Community Center	115,182 SF	8 trips /KSF	921	16	147	9 : 1	133	14	14	129	1 : 9	13	116
Greenhouses[3]	3,600 SF	No New Trips											
Total	**239,182 SF**		**1,788**		**278**		**246**	**32**		**247**		**31**	**216**

[1]The Core Facility is a housing area for Institute equipment which would serve researchers already on the Salk campus. The Mechanical Room and Equipment area are work areas containing tooling and machinery for facilities employees, as well as an area for objects which require storage.
[2]The Day Care Facility is provided as a service for employees who work on the Salk campus.
[3]Greenhouses are accessory facilities which would serve employees already on the campus.
KSF = 1,000 Square Feet

Existing to Be Demolished

Use	Amount	Trip Rate	ADT	AM PEAK HOUR					PM PEAK HOUR				
				%	#	In/Out	In	Out	%	#	In/Out	In	Out
Demolish	29,000 SF	8 trips /KSF	232	16	37	9 : 1	33	4	14	32	1 : 9	3	29

4701-TAB2-1G.wpd

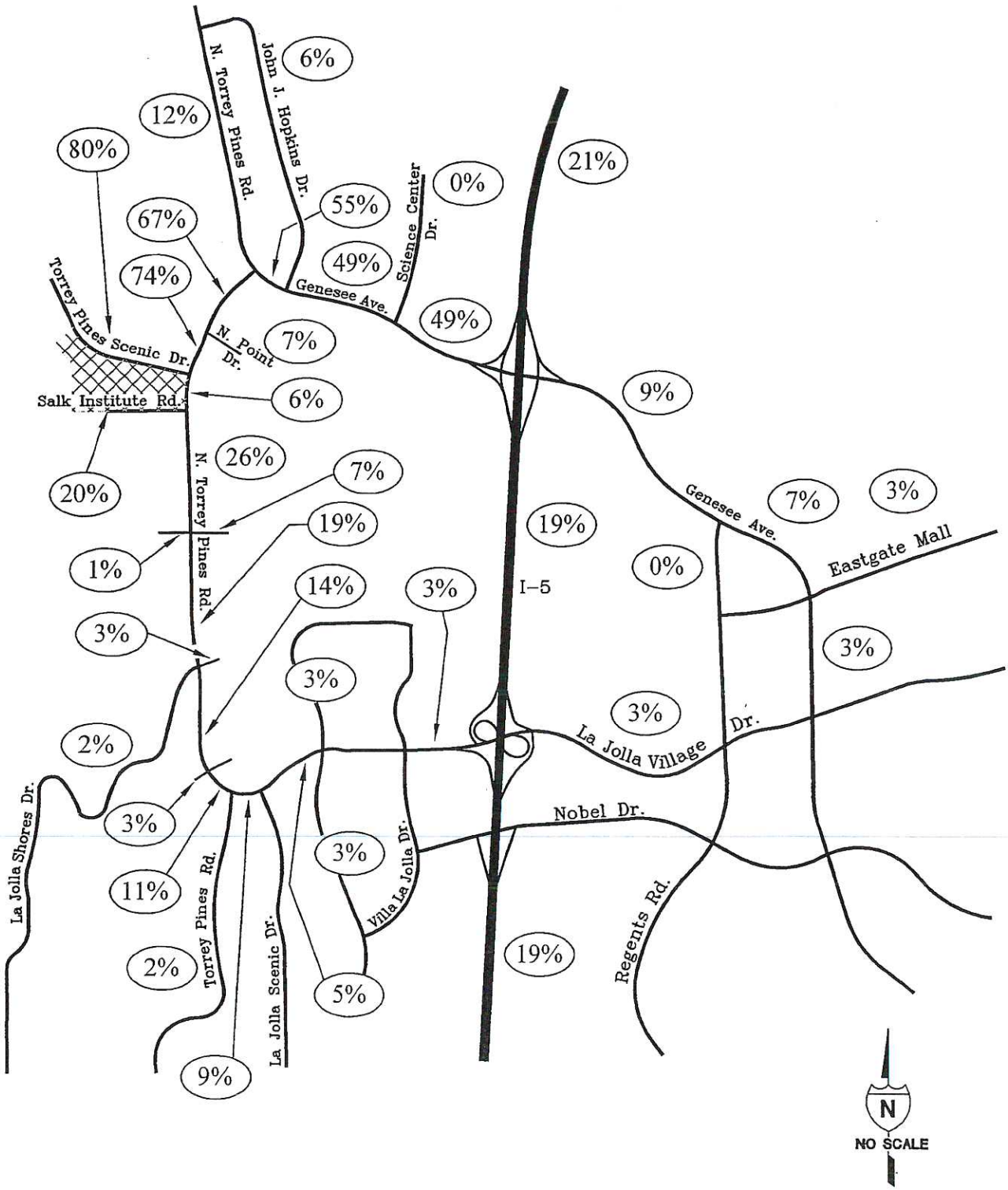


FIGURE 2-2

Project Distribution Percentages

4701-Graphics_H.dwg

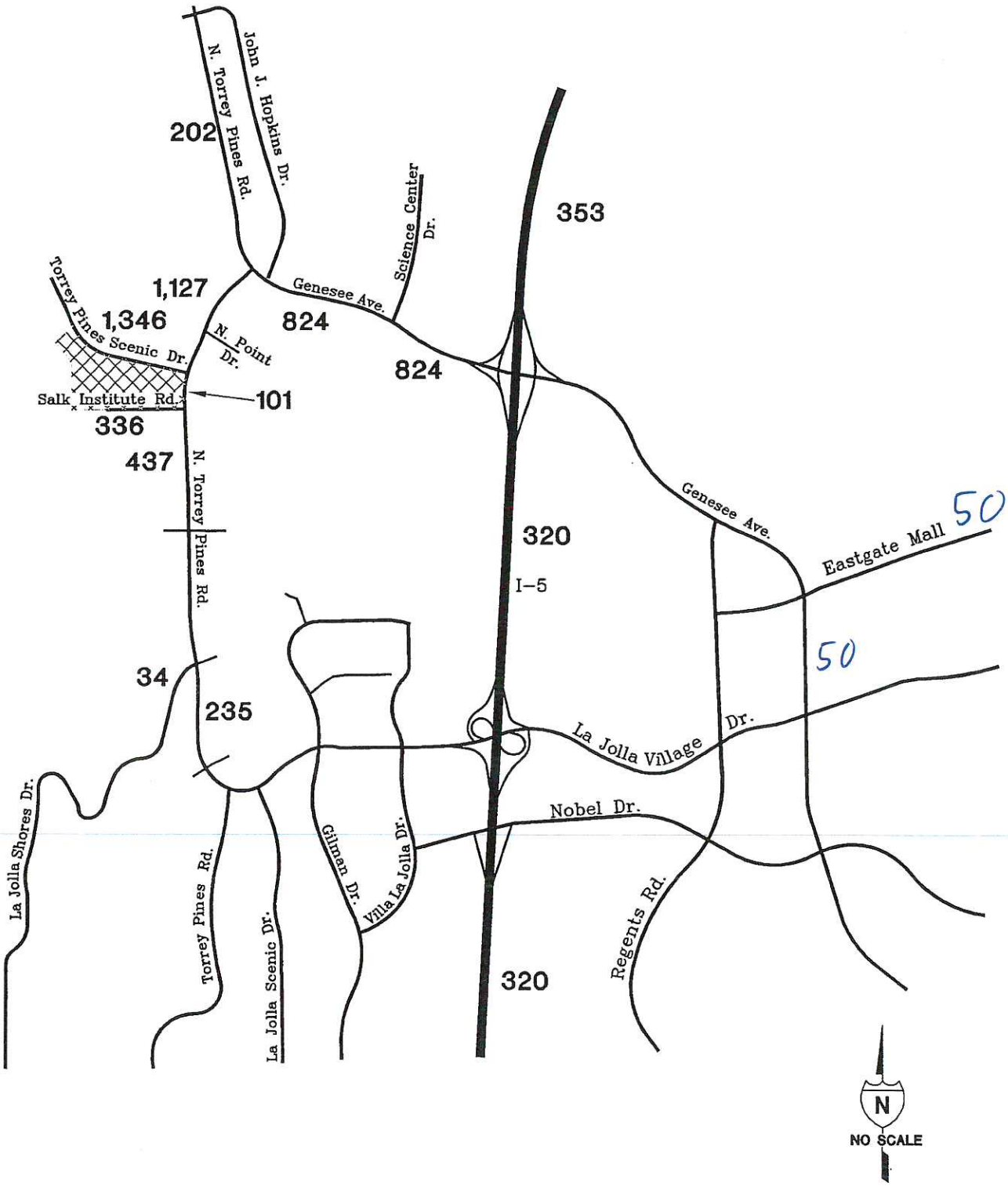
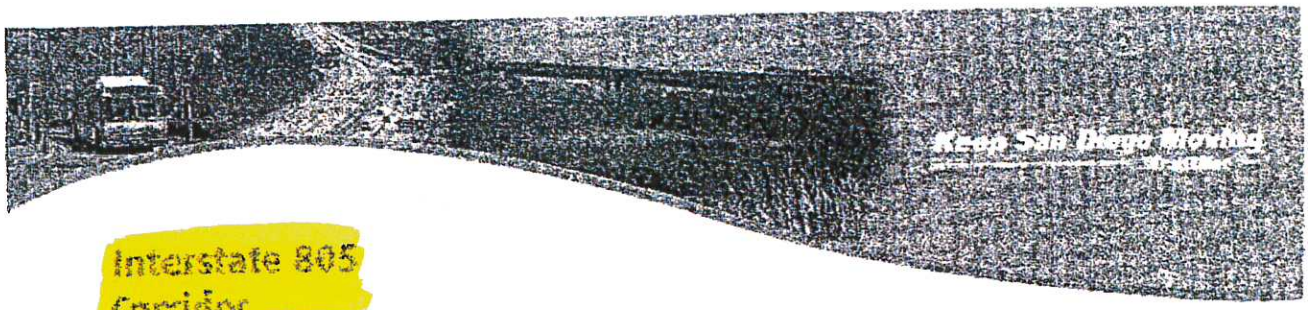


FIGURE 2-3

Project Only Average Daily Traffic

4701-Graphics_H.dwg



Interstate 805 Corridor

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Introduction 1-805 South I-805 North

I-805 North

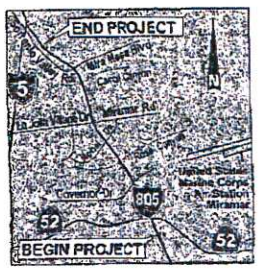
The Interstate 805 Express Lanes North Project (I-805 North) is located in the City of San Diego, on I-805 just south of State Route 52 (SR 52) to just north of the Mira Mesa Boulevard Undercrossing. The project covers a distance of approximately 4.4 miles.

The I-805 North project proposes:

- Widening the freeway to accommodate four Express Lanes from SR 52 to La Jolla Village Drive and two High Occupancy Vehicle (HOV) lanes from La Jolla Village Drive to just north of Mira Mesa Boulevard.
- *Constructing Direct Access Ramps (DAR) at Nobel Drive and Carroll* Canyon Road to permit cars and buses to easily get into the express lanes by avoiding the general purpose lanes.
- Building a Park & Ride lot at the southwest quadrant of the Nobel Drive intersection to permit carpooling and bus transfers from the proposed Bus Rapid Transit facility.
- Reconfiguring the Governor Drive southbound on-ramp to avoid the conflict with vehicles getting onto SR 52. A loop to the north side of Governor Drive will be built to allow more distance to safely merge across lanes.

The environmental document is a ND FONSI - Negative Declaration/Findings Of No Significant Impact. The project will be designed in five construction stages.

I-805 NORTH PROJECT MAP



Project Funding

The estimated cost of this project is $587 million. The first stage of this project, one HOV lane in the median in each direction and the south half of the Carroll Canyon DAR, is estimated to cost approximately $125 million.

Project Benefits

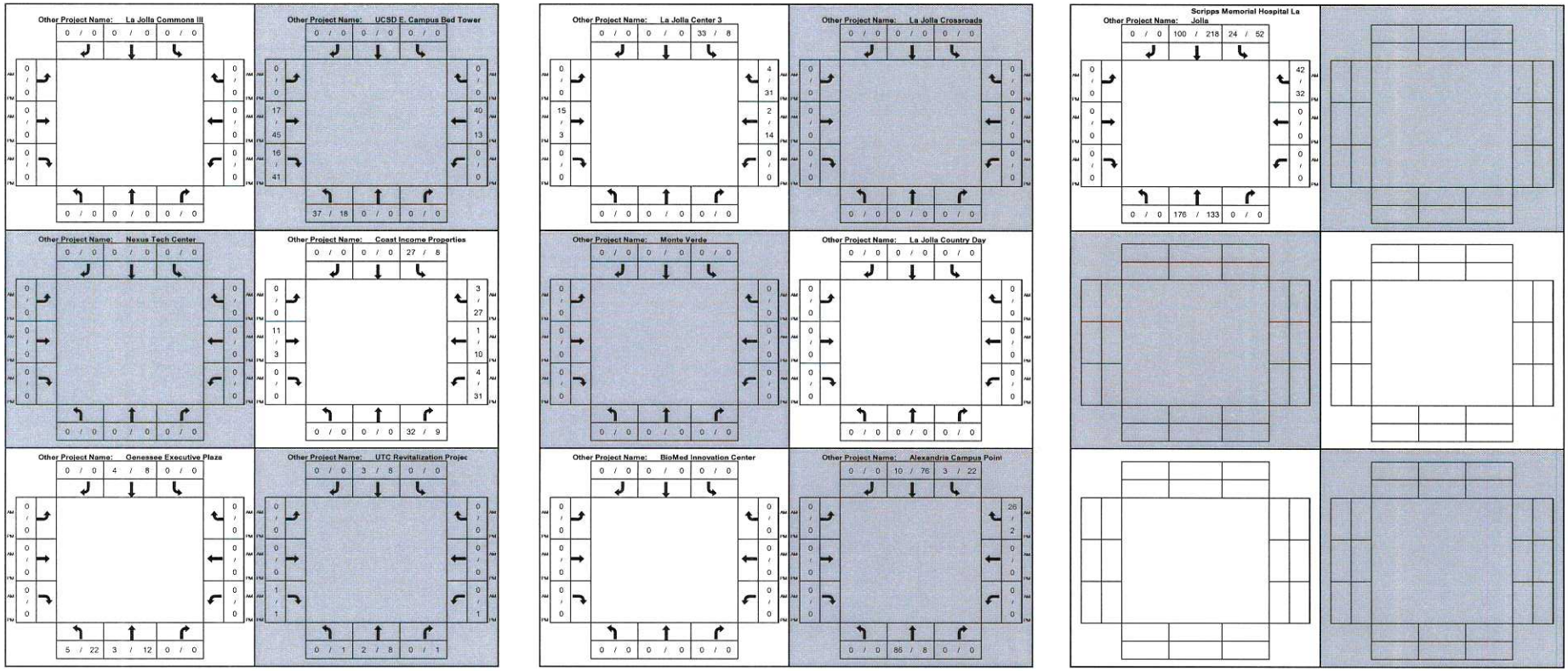
The proposed project will:

- provide a backbone of multi-modal transportation facilities
- provide facilities to enable the use of transit and encourage carpooling
- increase mobility for all users of the I-805 corridor
- provide consistency with the 2030 Regional Transportation Plan, Pathways for the Future, where feasible and in compliance with federal and state regulations
- maintain or improve current traffic levels of service and travel times within the corridor, and
- protect or enhance the human and natural environment along the I-805 project area.

Other Projects

Analyst: Caleb Northcutt
Intersection: Genesee Ave. / Eastgate Mall
Future Condition: Other Projects
Date: 11/12/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809

Intersection 1
E/W Street Name: Eastgate Mall
N/S Street Name: Genesee Ave.

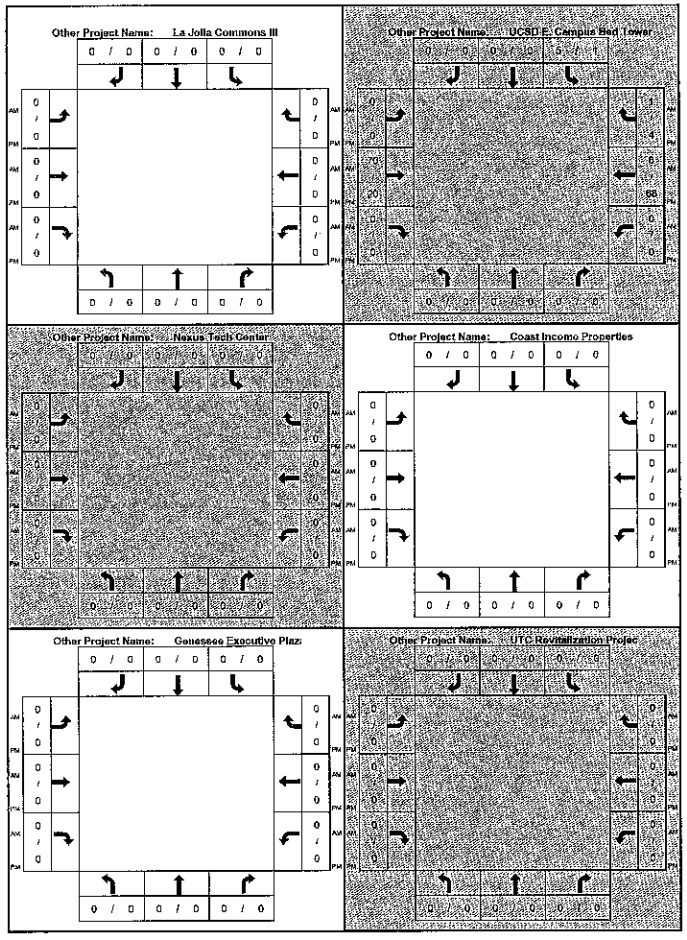


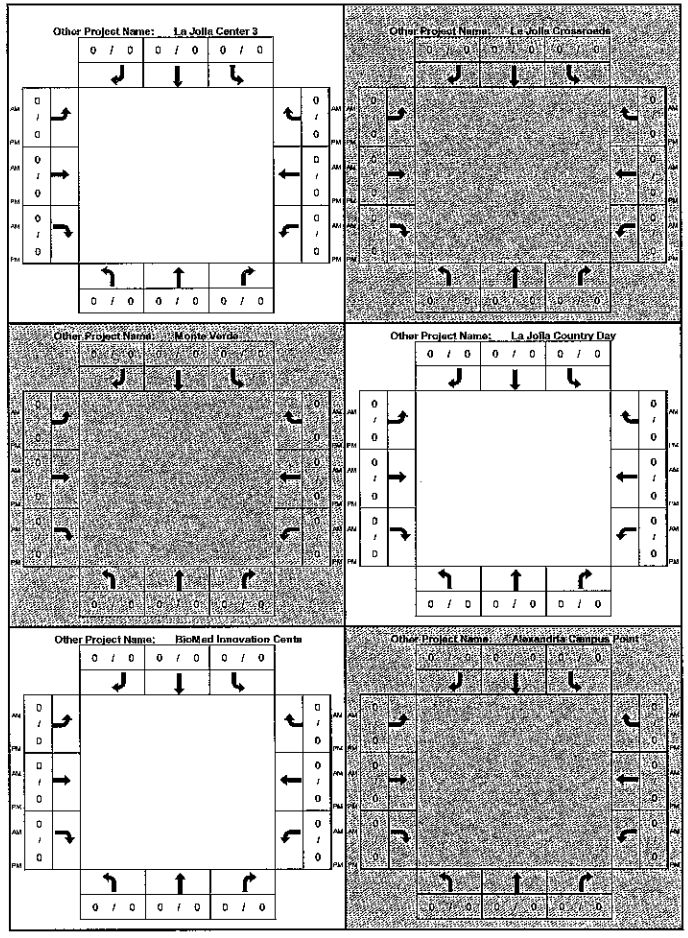
Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	42	41
NTH	267	161
NRT	32	10
SLT	87	90
STH	117	310
SRT	0	0
ELT	0	0
ETH	43	51
ERT	17	42
WLT	4	32
WTH	43	37
WRT	75	92

Other Projects

Intersection 2

Analyst:	Caleb Northcutt	E/W Street Name:	Eastgate Mall
Intersection:	Eastgate Mall / Easter Way	N/S Street Name:	Easter Way
Future Condition:	Other Projects		
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003809		



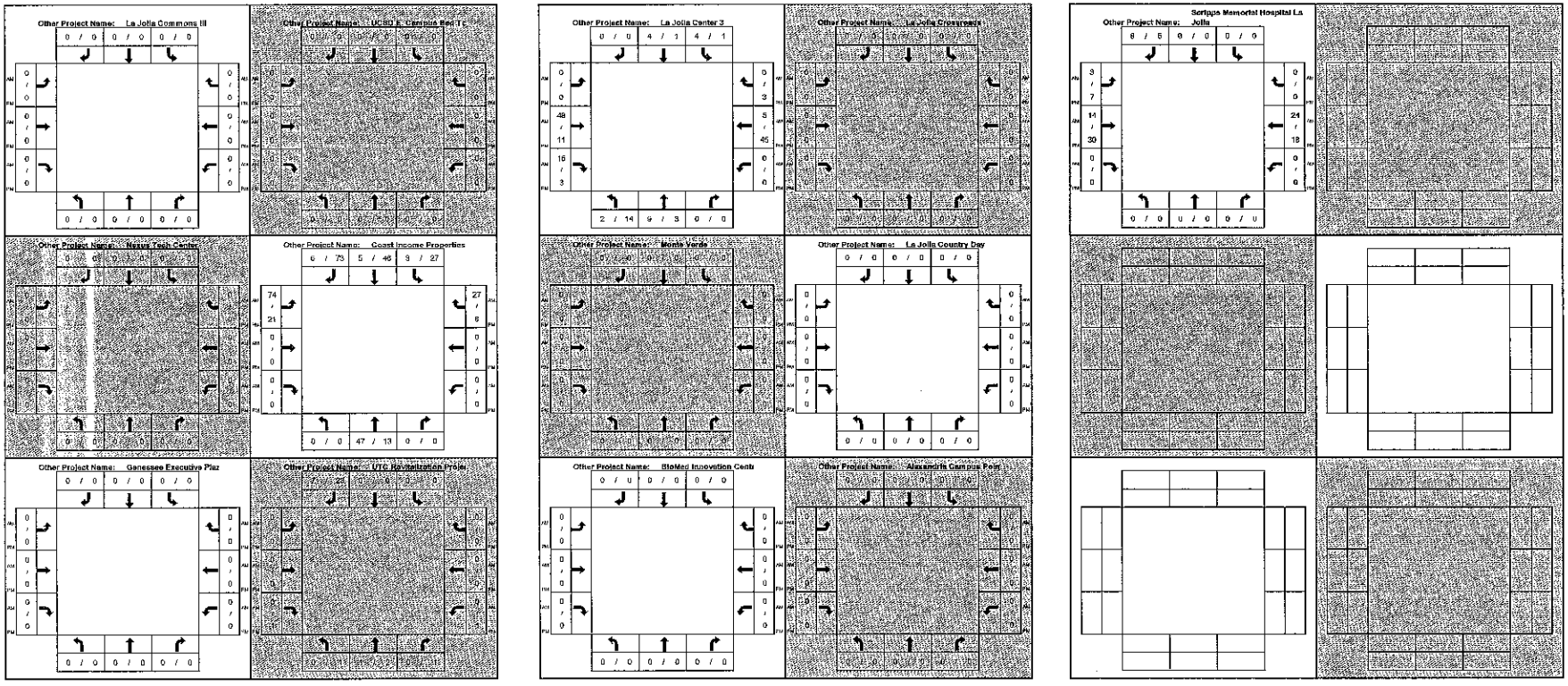


Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	0	0
NTH	0	0
NRT	0	0
SLT	5	1
STH	0	0
SRT	0	0
ELT	0	0
ETH	70	20
ERT	0	0
WLT	0	0
WTH	8	68
WRT	1	4

Other Projects

Intersection 3

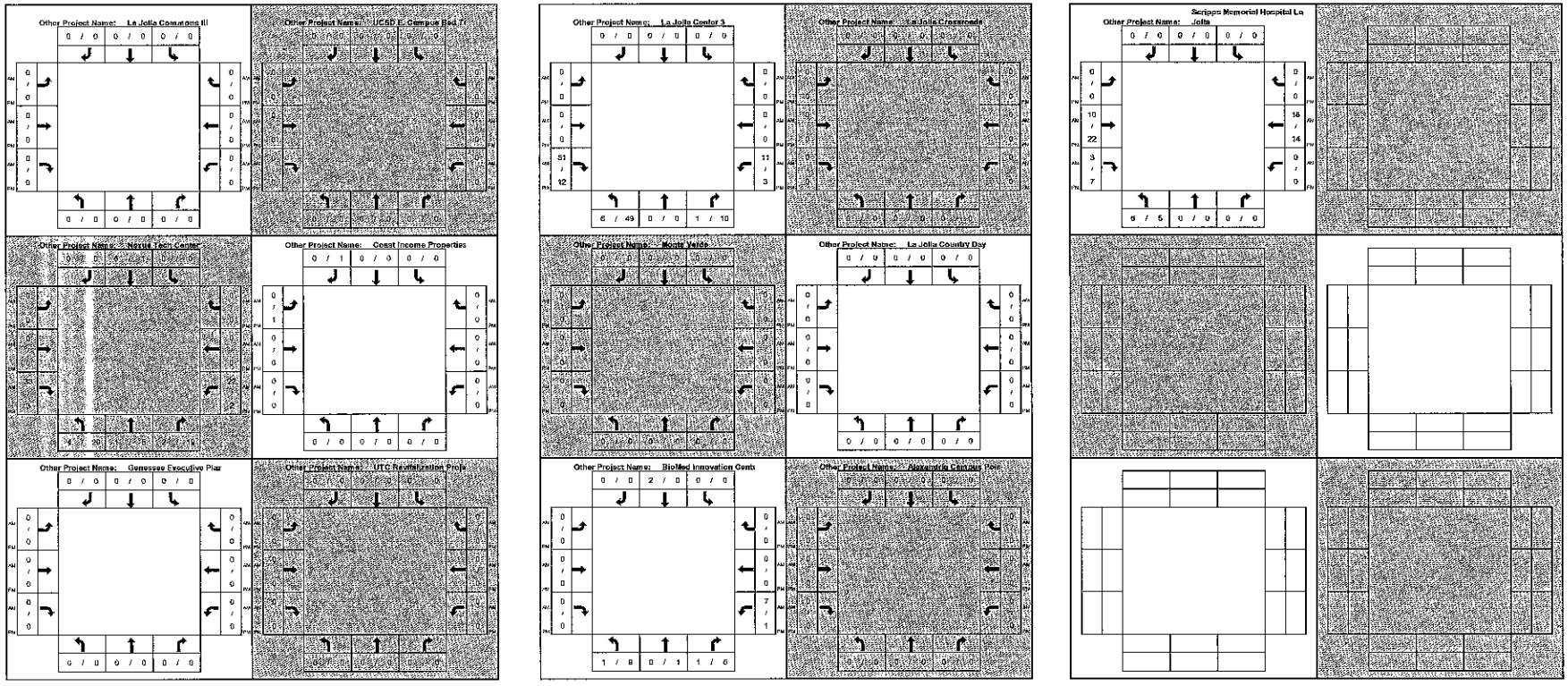
Analyst:	Caleb Northcutt	E/W Street Name:	Eastgate Mall
Intersection:	Eastgate Mall / Towne Centre Dr.	N/S Street Name:	Towne Centre Dr.
Future Condition:	Other Projects		
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003600		



Turn movement	Project Only total (v) AM	Project Only turn (v) PM
NLT	2	15
NTH	57	18
NRT	0	1
SLT	7	28
STH	9	47
SRT	21	101
ELT	77	28
ETH	82	41
ERT	15	4
WLT	0	1
WTH	26	63
WRT	27	11

Other Projects

Analyst:	Caleb Northcutt	Intersection 4	
Intersection:	Eastgate Mall / Judicial Dr.	EW Street Name:	Eastgate Mall
Future Conditions:	Other Projects	NS Street Name:	Judicial Dr.
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003809		

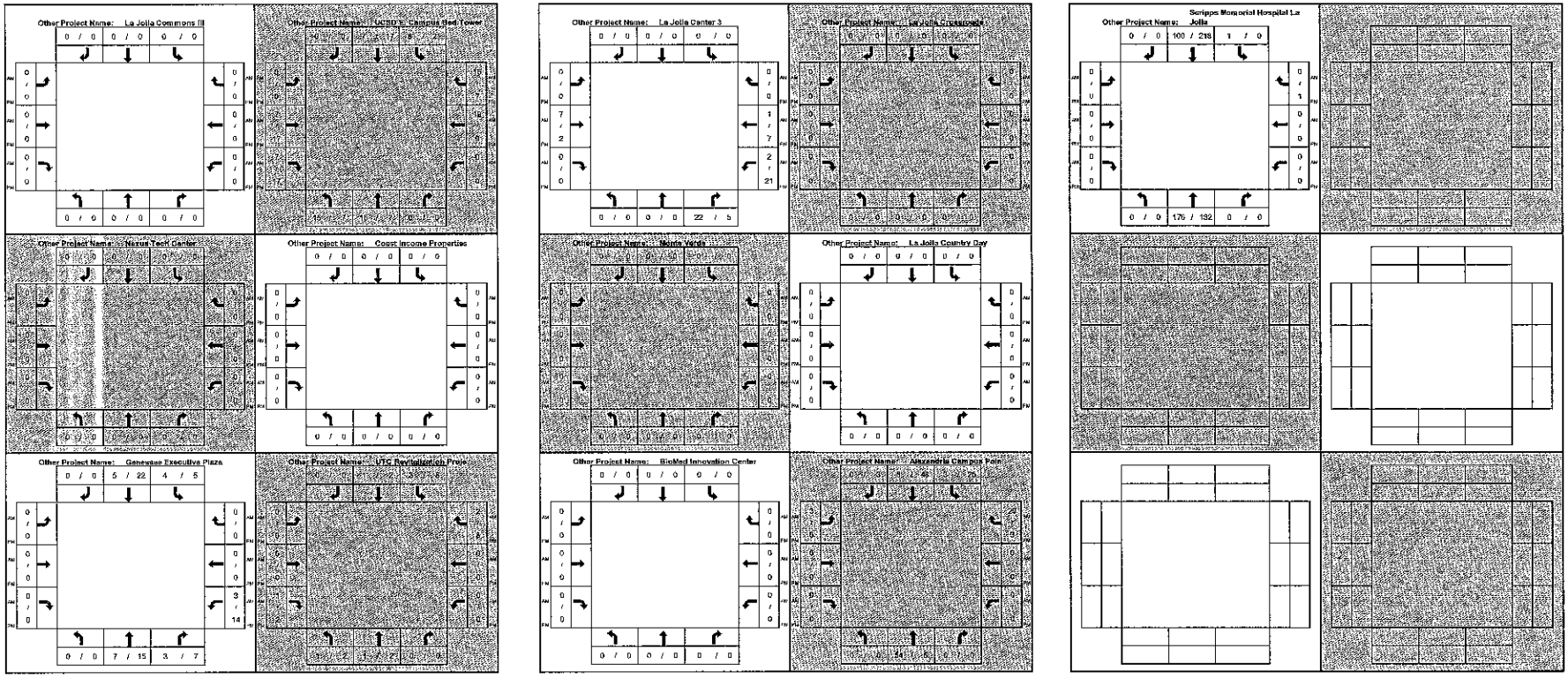


Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	17	92
NTR	1	5
NRT	4	36
SLT	0	0
STH	8	1
SRT	0	1
ELT	0	1
ETH	10	22
ERT	57	22
WLT	40	6
WTH	19	14
WRT	0	0

Other Projects

Analyst: Caleb Northrutt
Intersection: Genesee Ave. / Executive Dr.
Future Condition: Other Projects
Date: 11/12/2015
Company: Urban Systems Associates, Inc.
Project Number: 005809

Intersection 5
E/W Street Name: Executive Dr.
N/S Street Name: Genesee Ave.

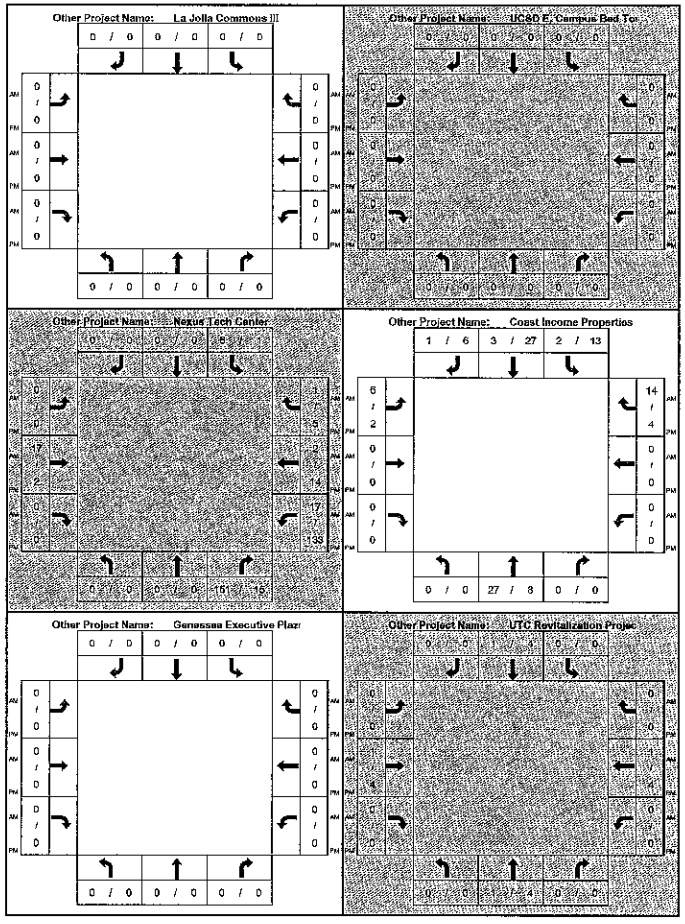


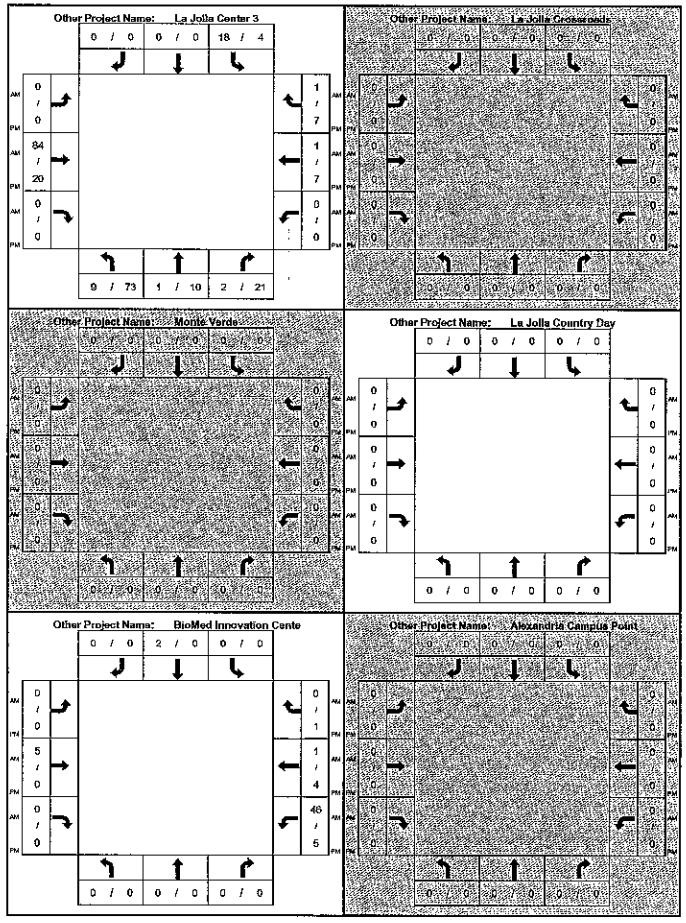
turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	18	9
NTH	253	161
NRT	25	12
SLT	19	59
STH	119	307
SRT	0	3
ELT	3	0
ETH	14	19
ERT	8	19
WLT	5	35
WTH	20	16
WRT	45	19

Other Projects

Intersection 6

Analyst:	Caleb Northcutt	EW Street Name:	Executive Dr.
Intersection:	Towne Centre Dr. / Executive Dr.	N/S Street Name:	Towne Centre Dr.
Future Condition:	Other Projects		
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003809		



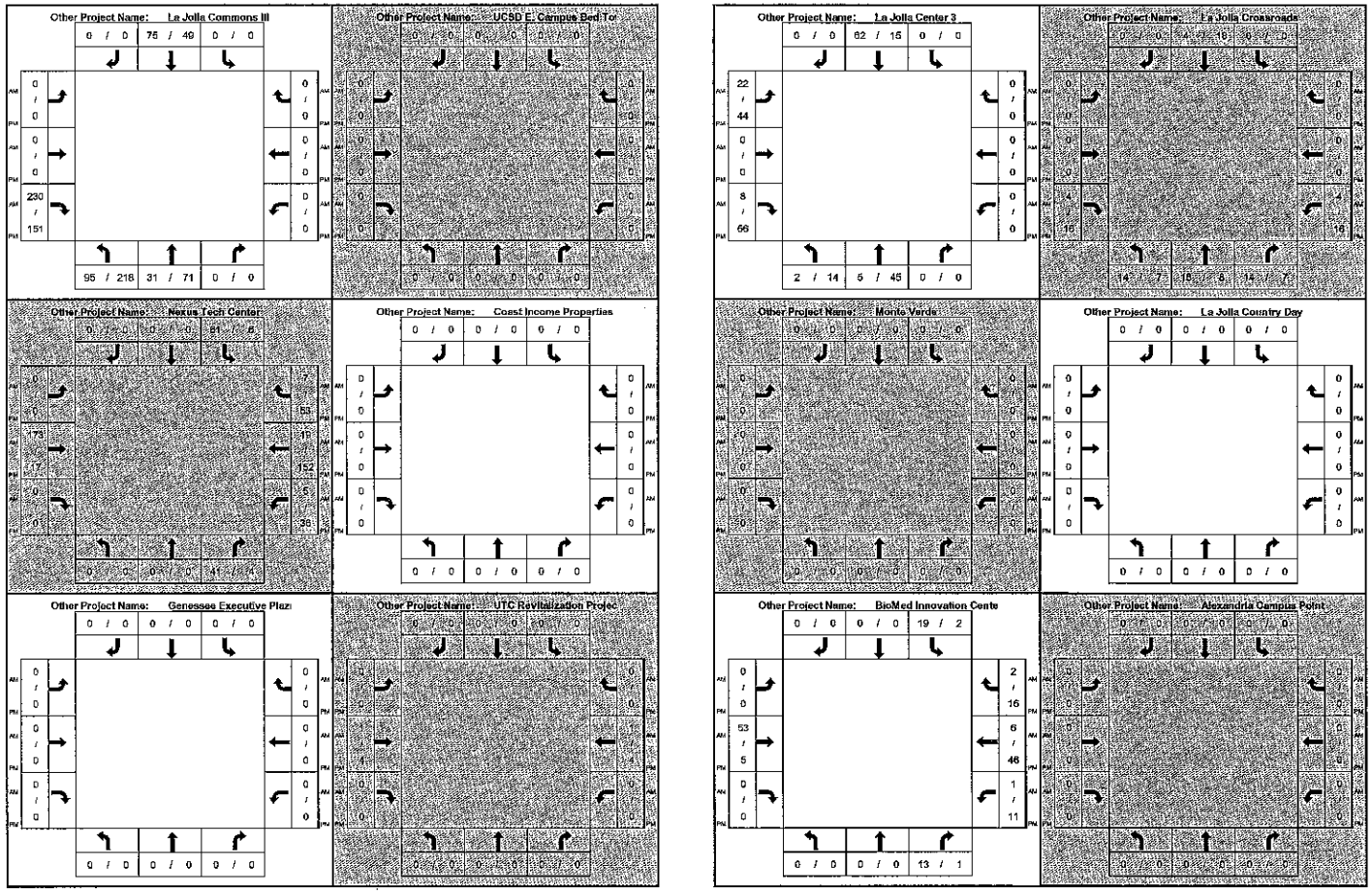


Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	9	73
NTH	29	22
NRT	153	36
SLT	26	18
STH	6	31
SRT	1	6
ELT	6	2
ETH	107	26
ERT	0	0
WLT	63	138
WTH	5	29
WRT	16	17

Other Projects

Intersection 7

Analyst:	Caleb Northcutt	E/W Street Name:	Executive Dr.
Intersection:	Judicial Dr. / Executive Dr.	N/S Street Name:	Judicial Dr.
Future Condition:	Other Projects		
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003809		

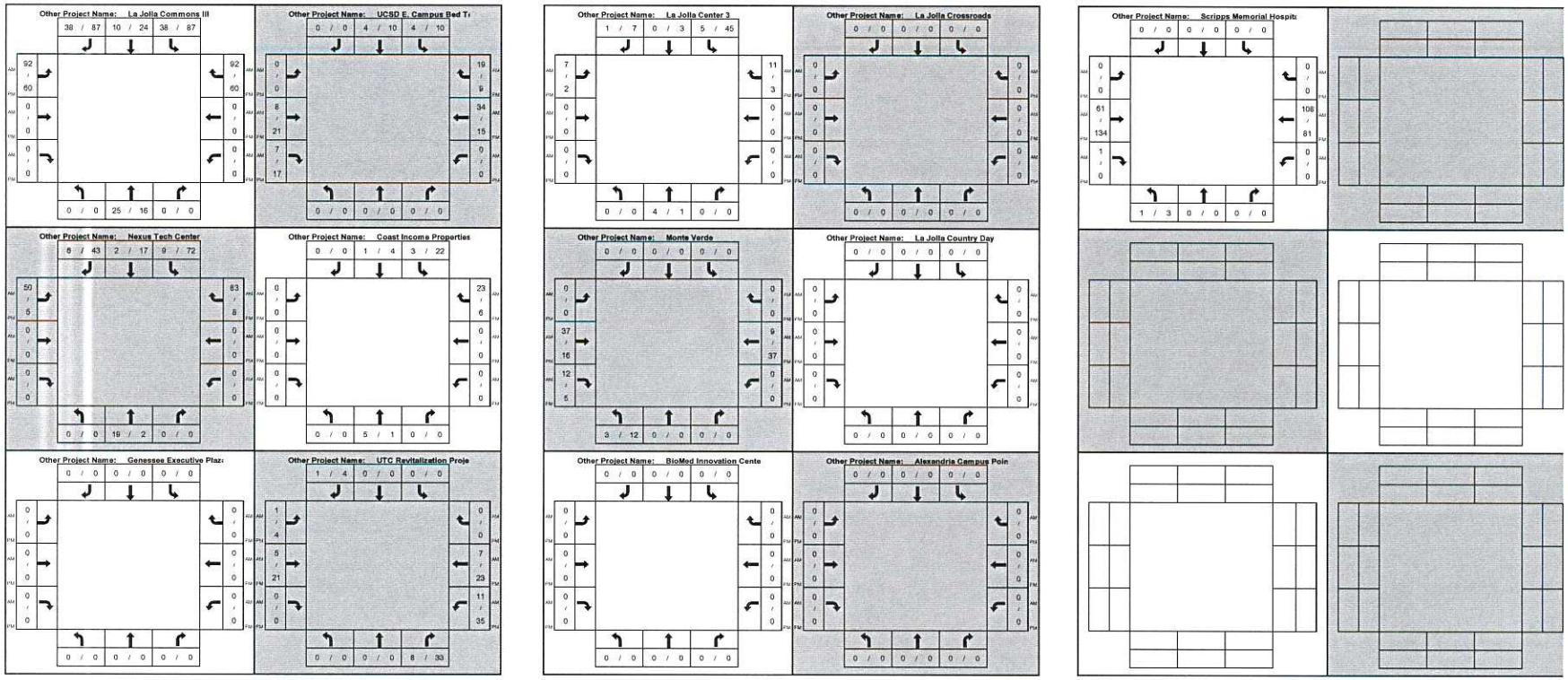


Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	111	239
NTH	52	124
NRT	68	12
SLT	80	8
STH	141	82
SRT	0	0
ELT	22	49
ETH	227	26
ERT	242	233
WLT	10	63
WTH	26	202
WRT	9	89

Other Projects

Intersection 8

Analyst:	Caleb Northcutt	E/W Street Name:	La Jolla Village Dr.
Intersection:	Towne Centre Dr. / La Jolla Village	N/S Street Name:	Towne Centre Dr.
Future Condition:	Other Projects		
Date:	11/12/2015		
Company:	Urban Systems Associates, Inc.		
Project Number:	003809		



Turn movement	Project Only turn (v) AM	Project Only turn (v) PM
NLT	4	15
NTH	53	20
NRT	8	33
SLT	59	236
STH	17	58
SRT	46	141
ELT	150	87
ETH	111	192
ERT	20	22
WLT	11	35
WTH	158	156
WRT	228	86

Cumulative Projects Only

Road	Segment	TOTAL	La Jolla Commons III	Nexus Tech Center	UCSD East Campus Bed Tower	Salk Institute	La Jolla Centre 3	Monte Verde	Bio Med	Phase 1 (2015) Scripps Memorial Hospital	La Jolla Crossroads IV	9514 Towne Centre Dr. (Coastal Income Properties)	Alexandria Campus Point	Genesee Executive Plaza	UTC Revitalization Project (Phase I) Phase I only	UTC Revitalization Project (Phase I) Total
Genesee Ave.	Eastgate Mall to Executive Dr.	2,652	0	0	0	53	0	850	0	929	0	0	600	0	220	880
Eastgate Mall	Genesee Ave. to Easter Way	3,190	709	211	640	53	531	0	0	217	0	628	178	0	23	90
	Easter Way to Towne Centre Dr.	3,178	709	211	640	0	531	0	0	217	0	669	178	0	23	90
	Towne Centre Dr. to Judicial Dr.	2,135	773	153	340	0	437	0	70	93	0	246	0	0	23	90
	East of Judicial Dr.	1,161	322	153	294	0	94	0	47	93	0	178	0	0	0	0
Towne Centre Dr.	Eastgate Mall to Executive Dr.	1,013	0	38	294	0	156	0	12	0	0	423	0	0	90	360
	Executive Dr. to La Jolla Village Dr.	5,898	3222	1053	294	0	469	0	322	0	0	246	0	0	90	360
Judicial Dr.	Eastgate Mall to Executive Dr.	2,672	1160	421	49	0	531	0	129	0	255	27	0	0	0	0
	Executive Dr. to Golden Haven Dr.	3,965	1740	287	49	0	1093	0	88	0	708	0	0	0	0	0

Appendix F

Near Term Without Project Synchro Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	171	55	52	199	533	183	1282	277	360	503	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1533	1770	1863	1554	1770	4931		3433	4955	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1533	1770	1863	1554	1770	4931		3433	4955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	190	61	58	221	592	203	1424	308	400	559	91
RTOR Reduction (vph)	0	0	50	0	0	34	0	20	0	0	13	0
Lane Group Flow (vph)	44	190	11	58	221	558	203	1712	0	400	637	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	5.9	24.5	24.5	7.2	25.8	52.4	19.1	62.5		26.6	70.1	
Effective Green, g (s)	5.9	24.5	24.5	7.2	25.8	52.4	19.1	62.5		26.6	70.1	
Actuated g/C Ratio	0.04	0.18	0.18	0.05	0.18	0.37	0.14	0.45		0.19	0.50	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	74	326	268	91	343	581	241	2201		652	2481	
v/s Ratio Prot	0.02	0.10		c0.03	0.12	c0.18	0.11	c0.35		0.12	0.13	
v/s Ratio Perm			0.01			0.18						
v/c Ratio	0.59	0.58	0.04	0.64	0.64	0.96	0.84	0.78		0.61	0.26	
Uniform Delay, d1	65.9	53.1	48.0	65.1	52.9	42.8	59.0	32.9		52.0	20.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.10	0.84		1.00	1.00	
Incremental Delay, d2	8.3	1.7	0.0	10.3	3.1	27.0	20.4	2.6		1.2	0.3	
Delay (s)	74.1	54.8	48.0	75.4	55.9	69.8	85.3	30.3		53.2	20.3	
Level of Service	E	D	D	E	E	E	F	C		D	C	
Approach Delay (s)		56.3			66.6			36.1			32.8	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	21	513	742	9	32	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3532		1660	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3532		1660	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	570	824	10	36	89
RTOR Reduction (vph)	0	0	1	0	76	0
Lane Group Flow (vph)	23	570	833	0	49	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	15.6	15.6	19.7		8.3	
Effective Green, g (s)	15.6	15.6	19.7		8.3	
Actuated g/C Ratio	0.26	0.26	0.33		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	468	937	1181		233	
v/s Ratio Prot	0.01	c0.16	c0.24		c0.03	
v/s Ratio Perm						
v/c Ratio	0.05	0.61	0.71		0.21	
Uniform Delay, d1	16.1	19.0	17.1		22.4	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.2	2.0		0.2	
Delay (s)	16.2	20.2	19.1		22.6	
Level of Service	B	C	B		C	
Approach Delay (s)		20.0	19.1		22.6	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	15.3
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	203	306	120	61	519	157	217	533	165	25	49	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3390		1770	3405		3433	3403		3433	3302	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3390		1770	3405		3433	3403		3433	3302	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	226	340	133	68	577	174	241	592	183	28	54	37
RTOR Reduction (vph)	0	42	0	0	31	0	0	29	0	0	29	0
Lane Group Flow (vph)	226	431	0	68	720	0	241	746	0	28	62	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.4	26.9		6.9	24.4		10.8	26.5		1.3	17.0	
Effective Green, g (s)	9.4	26.9		6.9	24.4		10.8	26.5		1.3	17.0	
Actuated g/C Ratio	0.12	0.35		0.09	0.31		0.14	0.34		0.02	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	415	1175		157	1070		477	1162		57	723	
v/s Ratio Prot	c0.07	0.13		0.04	c0.21		c0.07	c0.22		0.01	0.02	
v/s Ratio Perm												
v/c Ratio	0.54	0.37		0.43	0.67		0.51	0.64		0.49	0.09	
Uniform Delay, d1	32.1	19.0		33.5	23.1		30.9	21.5		37.8	24.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.2		1.9	1.7		0.8	1.2		6.5	0.1	
Delay (s)	33.5	19.2		35.4	24.8		31.8	22.8		44.3	24.2	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		23.8			25.7			24.9			28.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	286	146	134	537	36	164	9	87	4	12	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3500		1770	1863	1567	1770	1712	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3500		1770	1863	1567	1770	1712	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	318	162	149	597	40	182	10	97	4	13	13
RTOR Reduction (vph)	0	76	0	0	6	0	0	0	62	0	10	0
Lane Group Flow (vph)	140	404	0	149	631	0	182	10	35	4	16	0
Confl. Peds. (#/hr)			1			3			2			1
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases									8			
Actuated Green, G (s)	9.1	19.9		4.8	16.1		5.9	17.5	22.3	0.5	12.1	
Effective Green, g (s)	9.1	19.9		4.8	16.1		5.9	17.5	22.3	0.5	12.1	
Actuated g/C Ratio	0.15	0.32		0.08	0.26		0.09	0.28	0.36	0.01	0.19	
Clearance Time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Vehicle Extension (s)	2.0	2.7		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	257	1065		135	901		167	521	559	14	331	
v/s Ratio Prot	0.08	c0.12		c0.08	c0.18		c0.10	0.01	c0.00	0.00	0.01	
v/s Ratio Perm									0.02			
v/c Ratio	0.54	0.38		1.10	0.70		1.09	0.02	0.06	0.29	0.05	
Uniform Delay, d1	24.8	16.5		28.9	21.0		28.3	16.3	13.2	30.8	20.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.2		108.0	2.5		95.7	0.0	0.0	4.1	0.0	
Delay (s)	26.0	16.7		136.8	23.5		124.0	16.3	13.2	34.9	20.5	
Level of Service	C	B		F	C		F	B	B	C	C	
Approach Delay (s)		18.8			45.0			83.1			22.4	
Approach LOS		B			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	19.8
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	106	47	28	103	141	74	1550	367	76	475	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3353		3433	3207		3433	4922		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3353		3433	3207		3433	4922		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	118	52	31	114	157	82	1722	408	84	528	30
RTOR Reduction (vph)	0	42	0	0	107	0	0	20	0	0	3	0
Lane Group Flow (vph)	30	128	0	31	164	0	82	2110	0	84	555	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.4	21.2		3.3	20.1		7.1	89.2		7.1	89.3	
Effective Green, g (s)	4.4	21.2		3.3	20.1		7.1	89.2		7.1	89.3	
Actuated g/C Ratio	0.03	0.15		0.02	0.14		0.05	0.64		0.05	0.64	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	55	507		80	460		174	3136		174	3212	
v/s Ratio Prot	c0.02	0.04		0.01	c0.05		0.02	c0.43		c0.02	0.11	
v/s Ratio Perm												
v/c Ratio	0.55	0.25		0.39	0.36		0.47	0.67		0.48	0.17	
Uniform Delay, d1	66.8	52.4		67.4	54.1		64.6	16.1		64.7	10.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.08	0.66	
Incremental Delay, d2	5.8	0.1		1.1	0.2		0.7	1.2		0.8	0.1	
Delay (s)	72.6	52.5		68.5	54.3		65.4	17.3		70.5	6.9	
Level of Service	E	D		E	D		E	B		E	A	
Approach Delay (s)		55.5			55.7			19.1			15.3	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	218	53	103	50	30	209	858	594	40	141	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3421		1770	3339		1770	3302		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3421		1770	3339		1770	3302		1770	3429	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	229	56	108	53	32	220	903	625	42	148	35
RTOR Reduction (vph)	0	17	0	0	25	0	0	100	0	0	16	0
Lane Group Flow (vph)	80	268	0	108	60	0	220	1428	0	42	167	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.8	18.7		10.3	22.2		17.8	48.6		3.1	33.5	
Effective Green, g (s)	6.8	18.7		10.3	22.2		17.8	48.6		3.1	33.5	
Actuated g/C Ratio	0.07	0.19		0.10	0.22		0.18	0.49		0.03	0.34	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	121	644		183	746		317	1616		55	1156	
v/s Ratio Prot	0.05	c0.08		c0.06	c0.02		c0.12	c0.43		0.02	0.05	
v/s Ratio Perm												
v/c Ratio	0.66	0.42		0.59	0.08		0.69	0.88		0.76	0.14	
Uniform Delay, d1	45.1	35.5		42.5	30.5		38.2	22.8		47.7	22.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.0	1.0		3.4	0.1		5.2	6.3		42.3	0.1	
Delay (s)	55.1	36.5		45.9	30.6		43.4	29.1		90.1	23.0	
Level of Service	E	D		D	C		D	C		F	C	
Approach Delay (s)		40.6			39.1			30.9			35.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	99.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	233	543	304	14	58	29	219	339	234	171	185	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95			0.96		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3333			3349		1770	3303		1770	3492	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3333			3349		1770	3303		1770	3492	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	259	603	338	16	64	32	243	377	260	190	206	18
RTOR Reduction (vph)	0	53	0	0	29	0	0	99	0	0	6	0
Lane Group Flow (vph)	259	888	0	0	83	0	243	538	0	190	218	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	34.0	34.0			11.0		18.3	22.7		15.0	19.4	
Effective Green, g (s)	34.0	34.0			11.0		18.3	22.7		15.0	19.4	
Actuated g/C Ratio	0.33	0.33			0.11		0.18	0.22		0.15	0.19	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	588	1108			360		316	733		259	662	
v/s Ratio Prot	0.15	c0.27			c0.02		c0.14	c0.16		0.11	0.06	
v/s Ratio Perm												
v/c Ratio	0.44	0.80			0.23		0.77	0.73		0.73	0.33	
Uniform Delay, d1	26.7	31.0			41.7		39.9	36.9		41.7	35.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	4.3			0.4		9.7	4.3		8.9	0.5	
Delay (s)	27.2	35.3			42.1		49.6	41.2		50.6	36.3	
Level of Service	C	D			D		D	D		D	D	
Approach Delay (s)		33.6			42.1			43.6			42.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	102.2	Sum of lost time (s)	19.5
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	406	1143	139	367	1778	1400	146	213	318	241	53	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4576	1327	3433	1863	2755	3433	3205	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4576	1327	3433	1863	2755	3433	3205	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	427	1203	146	386	1872	1474	154	224	335	254	56	66
RTOR Reduction (vph)	0	0	78	0	49	208	0	0	36	0	53	0
Lane Group Flow (vph)	427	1203	68	386	2531	558	154	224	299	254	69	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	23.2	64.8	64.8	19.6	61.9	61.9	8.3	27.2	46.8	8.6	27.2	
Effective Green, g (s)	23.2	64.8	64.8	19.6	61.9	61.9	8.3	27.2	46.8	8.6	27.2	
Actuated g/C Ratio	0.17	0.46	0.46	0.14	0.44	0.44	0.06	0.19	0.33	0.06	0.19	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	568	2353	722	480	2023	586	203	361	920	210	622	
v/s Ratio Prot	c0.12	c0.24		0.11	c0.55		0.04	c0.12	0.05	c0.07	0.02	
v/s Ratio Perm			0.04			0.42			0.06			
v/c Ratio	0.75	0.51	0.09	0.80	1.25	0.95	0.76	0.62	0.33	1.21	0.11	
Uniform Delay, d1	55.7	26.5	21.1	58.3	39.0	37.6	64.9	51.7	34.8	65.7	46.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.0	0.8	0.3	8.9	117.4	27.2	13.4	4.8	0.1	130.1	0.1	
Delay (s)	60.6	27.3	21.4	67.3	156.4	64.9	78.3	56.5	34.9	195.8	46.6	
Level of Service	E	C	C	E	F	E	E	E	C	F	D	
Approach Delay (s)		34.8			128.4			51.0			147.4	
Approach LOS		C			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	95.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	181	103	188	224	340	95	577	99	578	1419	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1537	1770	1863	1552	1770	4961		3433	5061	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1537	1770	1863	1552	1770	4961		3433	5061	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	201	114	209	249	378	106	641	110	642	1577	40
RTOR Reduction (vph)	0	0	94	0	0	55	0	15	0	0	2	0
Lane Group Flow (vph)	21	201	20	209	249	323	106	736	0	642	1615	0
Confl. Peds. (#/hr)			9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	25.1	25.1	20.1	41.6	71.7	11.6	45.5		30.1	64.1	
Effective Green, g (s)	3.6	25.1	25.1	20.1	41.6	71.7	11.6	45.5		30.1	64.1	
Actuated g/C Ratio	0.03	0.18	0.18	0.14	0.30	0.51	0.08	0.32		0.22	0.46	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	334	275	254	553	794	146	1612		738	2317	
v/s Ratio Prot	0.01	c0.11		c0.12	0.13	0.09	0.06	0.15		c0.19	c0.32	
v/s Ratio Perm			0.01			0.12						
v/c Ratio	0.47	0.60	0.07	0.82	0.45	0.41	0.73	0.46		0.87	0.70	
Uniform Delay, d1	67.3	52.9	47.8	58.2	39.9	21.1	62.6	37.5		53.1	30.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.91		1.00	1.00	
Incremental Delay, d2	2.8	2.1	0.0	18.1	0.2	0.1	14.0	0.9		10.4	1.8	
Delay (s)	70.0	54.9	47.8	76.3	40.1	21.2	90.0	35.0		63.4	32.0	
Level of Service	E	D	D	E	D	C	F	C		E	C	
Approach Delay (s)		53.5			40.6			41.8			40.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	73	721	534	34	27	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3501		1662	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3501		1662	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	801	593	38	30	69
RTOR Reduction (vph)	0	0	5	0	59	0
Lane Group Flow (vph)	81	801	626	0	40	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	19.3	19.3	16.4		8.2	
Effective Green, g (s)	19.3	19.3	16.4		8.2	
Actuated g/C Ratio	0.33	0.33	0.28		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	577	1153	969		230	
v/s Ratio Prot	0.05	c0.23	c0.18		c0.02	
v/s Ratio Perm						
v/c Ratio	0.14	0.69	0.65		0.17	
Uniform Delay, d1	14.1	17.4	18.8		22.5	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.9	1.6		0.1	
Delay (s)	14.2	19.3	20.4		22.6	
Level of Service	B	B	C		C	
Approach Delay (s)		18.8	20.4		22.6	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	15.3
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	525	223	159	352	22	143	51	74	164	463	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.91		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3363		1770	3505		3433	3201		3433	3376	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3363		1770	3505		3433	3201		3433	3376	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	583	248	177	391	24	159	57	82	182	514	201
RTOR Reduction (vph)	0	50	0	0	5	0	0	62	0	0	41	0
Lane Group Flow (vph)	62	781	0	177	410	0	159	77	0	182	674	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.0	27.8		13.6	38.4		7.9	21.2		8.0	21.3	
Effective Green, g (s)	3.0	27.8		13.6	38.4		7.9	21.2		8.0	21.3	
Actuated g/C Ratio	0.03	0.32		0.16	0.44		0.09	0.24		0.09	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	118	1079		277	1554		313	783		317	830	
v/s Ratio Prot	0.02	c0.23		c0.10	0.12		0.05	0.02		c0.05	c0.20	
v/s Ratio Perm												
v/c Ratio	0.53	0.72		0.64	0.26		0.51	0.10		0.57	0.81	
Uniform Delay, d1	41.1	26.0		34.2	15.2		37.5	25.3		37.7	30.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	2.4		4.8	0.1		1.3	0.1		2.5	6.1	
Delay (s)	45.3	28.4		39.0	15.3		38.8	25.4		40.2	36.9	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		29.6			22.4			32.5			37.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	574	140	70	219	1	216	6	162	51	72	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3435		1770	3537		1770	1863	1565	1770	1679	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3435		1770	3537		1770	1863	1565	1770	1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	638	156	78	243	1	240	7	180	57	80	119
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	103	0	60	0
Lane Group Flow (vph)	12	772	0	78	244	0	240	7	77	57	139	0
Confl. Peds. (#/hr)						1			3			4
Confl. Bikes (#/hr)						1						1
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases									8			
Actuated Green, G (s)	0.6	25.4		5.8	31.1		14.4	23.9	29.7	4.3	13.8	
Effective Green, g (s)	0.6	25.4		5.8	31.1		14.4	23.9	29.7	4.3	13.8	
Actuated g/C Ratio	0.01	0.32		0.07	0.39		0.18	0.30	0.37	0.05	0.17	
Clearance Time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Vehicle Extension (s)	2.0	2.7		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	13	1101		129	1388		321	562	586	96	292	
v/s Ratio Prot	0.01	c0.22		c0.04	0.07		c0.14	0.00	0.01	0.03	c0.08	
v/s Ratio Perm									0.04			
v/c Ratio	0.92	0.70		0.60	0.18		0.75	0.01	0.13	0.59	0.48	
Uniform Delay, d1	39.3	23.6		35.6	15.7		30.7	19.4	16.3	36.6	29.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	205.3	2.0		5.4	0.1		8.1	0.0	0.0	6.4	0.4	
Delay (s)	244.5	25.5		41.0	15.7		38.7	19.4	16.3	43.0	29.9	
Level of Service	F	C		D	B		D	B	B	D	C	
Approach Delay (s)		28.8			21.9			29.0			32.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	19.8
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	96	81	188	266	138	82	563	60	143	1530	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3271		3433	3337		3433	5004		3433	5019	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3271		3433	3337		3433	5004		3433	5019	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	107	90	209	296	153	91	626	67	159	1700	140
RTOR Reduction (vph)	0	76	0	0	53	0	0	7	0	0	5	0
Lane Group Flow (vph)	42	121	0	209	396	0	91	686	0	159	1835	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.8	21.4		12.5	27.1		8.1	76.5		10.4	78.9	
Effective Green, g (s)	6.8	21.4		12.5	27.1		8.1	76.5		10.4	78.9	
Actuated g/C Ratio	0.05	0.15		0.09	0.19		0.06	0.55		0.07	0.56	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	85	499		306	645		198	2734		255	2828	
v/s Ratio Prot	0.02	0.04		c0.06	c0.12		0.03	0.14		c0.05	c0.37	
v/s Ratio Perm												
v/c Ratio	0.49	0.24		0.68	0.61		0.46	0.25		0.62	0.65	
Uniform Delay, d1	64.9	52.2		61.8	51.7		63.8	16.7		62.9	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.18	0.49	
Incremental Delay, d2	1.6	0.1		4.9	1.2		0.6	0.2		2.7	0.9	
Delay (s)	66.6	52.3		66.8	52.9		64.4	16.9		77.1	11.3	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		54.8			57.3			22.4			16.5	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	73	148	389	208	31	251	192	113	44	850	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3135		1770	3463		1770	3323		1770	3488	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3135		1770	3463		1770	3323		1770	3488	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	77	156	409	219	33	264	202	119	46	895	87
RTOR Reduction (vph)	0	137	0	0	10	0	0	59	0	0	5	0
Lane Group Flow (vph)	23	96	0	409	242	0	264	262	0	46	977	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.5	14.8		28.7	40.0		18.9	50.8		6.1	37.6	
Effective Green, g (s)	3.5	14.8		28.7	40.0		18.9	50.8		6.1	37.6	
Actuated g/C Ratio	0.03	0.12		0.24	0.34		0.16	0.43		0.05	0.32	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	52	389		426	1164		281	1418		90	1102	
v/s Ratio Prot	0.01	c0.03		c0.23	0.07		c0.15	0.08		0.03	c0.28	
v/s Ratio Perm												
v/c Ratio	0.44	0.25		0.96	0.21		0.94	0.18		0.51	0.89	
Uniform Delay, d1	56.8	47.1		44.6	28.2		49.5	21.2		55.0	38.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	0.8		33.1	0.2		36.9	0.1		2.0	9.0	
Delay (s)	59.0	47.8		77.7	28.4		86.4	21.3		57.0	47.6	
Level of Service	E	D		E	C		F	C		E	D	
Approach Delay (s)		48.8			58.9			50.7			48.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	59	335	241	562	167	283	192	22	20	324	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3050			3398		1770	3481		1770	3481	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3050			3398		1770	3481		1770	3481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	66	372	268	624	186	314	213	24	22	360	39
RTOR Reduction (vph)	0	334	0	0	11	0	0	6	0	0	6	0
Lane Group Flow (vph)	79	104	0	0	1067	0	314	231	0	22	393	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	13.1			45.5		26.9	46.7		3.5	23.3	
Effective Green, g (s)	13.1	13.1			45.5		26.9	46.7		3.5	23.3	
Actuated g/C Ratio	0.10	0.10			0.35		0.21	0.36		0.03	0.18	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	180	311			1205		371	1267		48	632	
v/s Ratio Prot	c0.04	0.03			c0.31		c0.18	0.07		0.01	c0.11	
v/s Ratio Perm												
v/c Ratio	0.44	0.33			0.89		0.85	0.18		0.46	0.62	
Uniform Delay, d1	54.1	53.5			38.9		48.7	27.8		61.5	48.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.7			8.2		15.5	0.1		2.5	2.4	
Delay (s)	56.0	54.3			47.1		64.3	27.9		64.0	50.8	
Level of Service	E	D			D		E	C		E	D	
Approach Delay (s)		54.5			47.1			48.6			51.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	128.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	1620	145	397	1513	381	202	65	553	1111	363	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4786	1335	3433	1863	2766	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4786	1335	3433	1863	2766	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	127	1705	153	418	1593	401	213	68	582	1169	382	342
RTOR Reduction (vph)	0	0	107	0	2	148	0	0	60	0	87	0
Lane Group Flow (vph)	127	1705	46	418	1631	213	213	68	522	1169	637	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	7.8	42.1	42.1	24.6	59.6	59.6	12.5	20.1	44.7	33.4	40.7	
Effective Green, g (s)	7.8	42.1	42.1	24.6	59.6	59.6	12.5	20.1	44.7	33.4	40.7	
Actuated g/C Ratio	0.06	0.30	0.30	0.18	0.43	0.43	0.09	0.14	0.32	0.24	0.29	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	191	1529	470	603	2037	568	306	267	883	819	943	
v/s Ratio Prot	0.04	c0.34		c0.12	c0.34		0.06	0.04	0.10	c0.34	c0.20	
v/s Ratio Perm			0.03			0.16			0.08			
v/c Ratio	0.66	1.12	0.10	0.69	0.80	0.38	0.70	0.25	0.59	1.43	0.68	
Uniform Delay, d1	64.8	49.0	35.3	54.2	35.0	27.5	61.9	53.3	40.0	53.3	43.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.6	61.4	0.4	2.8	3.4	1.9	5.5	1.1	0.7	199.4	2.3	
Delay (s)	71.4	110.4	35.7	56.9	38.5	29.4	67.4	54.4	40.7	252.7	46.1	
Level of Service	E	F	D	E	D	C	E	D	D	F	D	
Approach Delay (s)		102.1			40.3			48.4			173.7	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	93.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Appendix G

Near Term With Project Synchro Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	200	55	54	202	535	183	1282	291	374	503	82
Future Volume (vph)	40	200	55	54	202	535	183	1282	291	374	503	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1534	1770	1863	1552	1770	4925		3433	4955	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1534	1770	1863	1552	1770	4925		3433	4955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	222	61	60	224	594	203	1424	323	416	559	91
RTOR Reduction (vph)	0	0	50	0	0	60	0	21	0	0	11	0
Lane Group Flow (vph)	44	222	11	60	224	534	203	1726	0	416	639	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	6.7	25.1	25.1	7.9	26.3	51.2	20.5	62.9		24.9	67.4	
Effective Green, g (s)	6.7	25.1	25.1	7.9	26.3	51.2	20.5	62.9		24.9	67.4	
Actuated g/C Ratio	0.05	0.18	0.18	0.06	0.19	0.37	0.15	0.45		0.18	0.48	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	84	334	275	99	349	567	259	2212		610	2385	
v/s Ratio Prot	0.02	0.12		c0.03	0.12	c0.17	0.11	c0.35		0.12	c0.13	
v/s Ratio Perm			0.01			0.18						
v/c Ratio	0.52	0.66	0.04	0.61	0.64	0.94	0.78	0.78		0.68	0.27	
Uniform Delay, d1	65.1	53.5	47.5	64.5	52.5	42.9	57.6	32.7		53.8	21.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.20	0.89		1.00	1.00	
Incremental Delay, d2	2.7	3.8	0.0	7.0	3.0	23.9	10.7	2.2		2.5	0.3	
Delay (s)	67.8	57.4	47.5	71.5	55.5	66.8	79.8	31.4		56.4	21.9	
Level of Service	E	E	D	E	E	E	E	C		E	C	
Approach Delay (s)		56.9			64.3			36.4			35.3	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	570	748	9	35	80
Future Volume (vph)	21	570	748	9	35	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3532		1663	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3532		1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	633	831	10	39	89
RTOR Reduction (vph)	0	0	1	0	77	0
Lane Group Flow (vph)	23	633	840	0	51	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	16.6	16.6	20.1		8.4	
Effective Green, g (s)	16.6	16.6	20.1		8.4	
Actuated g/C Ratio	0.27	0.27	0.33		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	486	972	1175		231	
v/s Ratio Prot	0.01	c0.18	c0.24		c0.03	
v/s Ratio Perm						
v/c Ratio	0.05	0.65	0.72		0.22	
Uniform Delay, d1	16.1	19.3	17.6		23.1	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.6	2.2		0.2	
Delay (s)	16.1	21.0	19.8		23.3	
Level of Service	B	C	B		C	
Approach Delay (s)		20.8	19.8		23.3	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	15.3
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	366	120	61	519	157	224	533	165	27	49	33
Future Volume (vph)	203	366	120	61	519	157	224	533	165	27	49	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3408		1770	3405		3433	3403		3433	3301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3408		1770	3405		3433	3403		3433	3301	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	226	407	133	68	577	174	249	592	183	30	54	37
RTOR Reduction (vph)	0	33	0	0	30	0	0	29	0	0	29	0
Lane Group Flow (vph)	226	507	0	68	721	0	249	746	0	30	62	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.9	28.2		6.4	24.7		10.5	26.7		1.3	17.5	
Effective Green, g (s)	9.9	28.2		6.4	24.7		10.5	26.7		1.3	17.5	
Actuated g/C Ratio	0.13	0.36		0.08	0.31		0.13	0.34		0.02	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	432	1222		144	1070		458	1155		56	734	
v/s Ratio Prot	c0.07	c0.15		0.04	c0.21		c0.07	c0.22		0.01	0.02	
v/s Ratio Perm												
v/c Ratio	0.52	0.42		0.47	0.67		0.54	0.65		0.54	0.08	
Uniform Delay, d1	32.1	19.0		34.5	23.4		31.8	22.0		38.4	24.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.2		2.4	1.7		1.3	1.3		9.5	0.0	
Delay (s)	33.3	19.2		36.9	25.1		33.1	23.2		47.9	24.3	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		23.4			26.1			25.6			30.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	126	288	146	151	537	36	36	164	9	87	4	12
Future Volume (vph)	126	288	146	151	537	36	36	164	9	87	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.0		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.99			1.00	1.00	0.85	1.00	0.93
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3347		1770	3500			1770	1863	1566	1770	1712
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3347		1770	3500			1770	1863	1566	1770	1712
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	320	162	168	597	40	39	182	10	97	4	13
RTOR Reduction (vph)	0	74	0	0	5	0	0	0	0	60	0	11
Lane Group Flow (vph)	140	408	0	168	632	0	0	221	10	37	4	15
Confl. Peds. (#/hr)			1			3				2		
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	9.1	20.2		4.8	16.3			9.1	20.4	25.2	0.8	12.1
Effective Green, g (s)	9.1	20.2		4.8	16.3			9.1	20.4	25.2	0.8	12.1
Actuated g/C Ratio	0.14	0.31		0.07	0.25			0.14	0.31	0.38	0.01	0.18
Clearance Time (s)	4.4	6.0		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	244	1025		128	865			244	576	598	21	314
v/s Ratio Prot	0.08	c0.12		c0.09	c0.18			c0.12	0.01	c0.00	0.00	0.01
v/s Ratio Perm										0.02		
v/c Ratio	0.57	0.40		1.31	0.73			0.91	0.02	0.06	0.19	0.05
Uniform Delay, d1	26.6	18.1		30.6	22.8			28.0	15.8	12.9	32.2	22.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.2		185.4	3.2			32.8	0.0	0.0	1.6	0.0
Delay (s)	28.6	18.3		216.0	26.0			60.8	15.8	12.9	33.8	22.2
Level of Service	C	B		F	C			E	B	B	C	C
Approach Delay (s)		20.6			65.6				45.2			23.7
Approach LOS		C			E				D			C

Intersection Summary			
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	19.7
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	106	47	28	103	141	74	1560	367	76	476	27
Future Volume (vph)	30	106	47	28	103	141	74	1560	367	76	476	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3353		3433	3207		3433	4923		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3353		3433	3207		3433	4923		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	118	52	31	114	157	82	1733	408	84	529	30
RTOR Reduction (vph)	0	42	0	0	99	0	0	21	0	0	3	0
Lane Group Flow (vph)	33	128	0	31	172	0	82	2120	0	84	556	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.2	21.3		3.2	20.3		7.2	89.2		7.1	89.2	
Effective Green, g (s)	4.2	21.3		3.2	20.3		7.2	89.2		7.1	89.2	
Actuated g/C Ratio	0.03	0.15		0.02	0.15		0.05	0.64		0.05	0.64	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	53	510		78	465		176	3136		174	3209	
v/s Ratio Prot	c0.02	0.04		0.01	c0.05		0.02	c0.43		c0.02	0.11	
v/s Ratio Perm												
v/c Ratio	0.62	0.25		0.40	0.37		0.47	0.68		0.48	0.17	
Uniform Delay, d1	67.1	52.3		67.4	54.1		64.5	16.2		64.7	10.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.13	0.57	
Incremental Delay, d2	15.2	0.1		1.2	0.2		0.7	1.2		0.8	0.1	
Delay (s)	82.3	52.4		68.7	54.3		65.2	17.4		74.0	6.0	
Level of Service	F	D		E	D		E	B		E	A	
Approach Delay (s)		57.3			55.7			19.1			14.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	218	53	107	52	30	209	896	594	40	141	33
Future Volume (vph)	95	218	53	107	52	30	209	896	594	40	141	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3421		1770	3344		1770	3308		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3421		1770	3344		1770	3308		1770	3429	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	229	56	113	55	32	220	943	625	42	148	35
RTOR Reduction (vph)	0	17	0	0	28	0	0	91	0	0	15	0
Lane Group Flow (vph)	100	268	0	113	59	0	220	1477	0	42	168	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.0	18.8		10.4	14.2		17.9	50.6		4.1	36.4	
Effective Green, g (s)	15.0	18.8		10.4	14.2		17.9	50.6		4.1	36.4	
Actuated g/C Ratio	0.15	0.18		0.10	0.14		0.17	0.49		0.04	0.36	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	259	627		179	463		309	1633		70	1217	
v/s Ratio Prot	c0.06	c0.08		c0.06	0.02		c0.12	c0.45		0.02	0.05	
v/s Ratio Perm												
v/c Ratio	0.39	0.43		0.63	0.13		0.71	0.90		0.60	0.14	
Uniform Delay, d1	39.6	37.1		44.2	38.7		39.9	23.7		48.4	22.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.1		5.2	0.3		6.3	7.6		8.9	0.1	
Delay (s)	39.9	38.2		49.4	39.0		46.2	31.4		57.3	22.5	
Level of Service	D	D		D	D		D	C		E	C	
Approach Delay (s)		38.6			44.9			33.2			29.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	102.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	543	304	14	58	43	219	361	234	173	187	22
Future Volume (vph)	233	543	304	14	58	43	219	361	234	173	187	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95			0.94		1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3333			3300		1770	3312		1770	3479	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3333			3300		1770	3312		1770	3479	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	259	603	338	16	64	48	243	401	260	192	208	24
RTOR Reduction (vph)	0	54	0	0	43	0	0	83	0	0	7	0
Lane Group Flow (vph)	259	887	0	0	85	0	243	578	0	192	225	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	33.9	33.9			11.1		18.3	23.8		15.3	20.8	
Effective Green, g (s)	33.9	33.9			11.1		18.3	23.8		15.3	20.8	
Actuated g/C Ratio	0.33	0.33			0.11		0.18	0.23		0.15	0.20	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	579	1090			353		312	760		261	698	
v/s Ratio Prot	0.15	c0.27			c0.03		c0.14	c0.17		0.11	0.06	
v/s Ratio Perm												
v/c Ratio	0.45	0.81			0.24		0.78	0.76		0.74	0.32	
Uniform Delay, d1	27.5	32.0			42.4		40.7	37.2		42.2	35.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	4.8			0.4		10.6	5.0		8.9	0.4	
Delay (s)	28.1	36.8			42.8		51.4	42.2		51.1	35.8	
Level of Service	C	D			D		D	D		D	D	
Approach Delay (s)		34.9			42.8			44.7			42.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	103.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	408	1143	139	367	1778	1435	146	215	318	241	53	63
Future Volume (vph)	408	1143	139	367	1778	1435	146	215	318	241	53	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4568	1327	3433	1863	2755	3433	3205	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4568	1327	3433	1863	2755	3433	3205	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	429	1203	146	386	1872	1511	154	226	335	254	56	66
RTOR Reduction (vph)	0	0	79	0	51	207	0	0	36	0	53	0
Lane Group Flow (vph)	429	1203	67	386	2561	564	154	226	299	254	69	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	23.2	64.7	64.7	19.6	61.8	61.8	8.5	27.3	46.9	8.6	27.1	
Effective Green, g (s)	23.2	64.7	64.7	19.6	61.8	61.8	8.5	27.3	46.9	8.6	27.1	
Actuated g/C Ratio	0.17	0.46	0.46	0.14	0.44	0.44	0.06	0.20	0.33	0.06	0.19	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	568	2349	721	480	2016	585	208	363	922	210	620	
v/s Ratio Prot	c0.12	c0.24		0.11	c0.56		0.04	c0.12	0.05	c0.07	0.02	
v/s Ratio Perm			0.04			0.42			0.06			
v/c Ratio	0.76	0.51	0.09	0.80	1.27	0.96	0.74	0.62	0.32	1.21	0.11	
Uniform Delay, d1	55.7	26.5	21.2	58.3	39.1	38.0	64.7	51.6	34.7	65.7	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.0	0.8	0.3	8.9	125.7	29.3	11.7	4.8	0.1	130.1	0.1	
Delay (s)	60.7	27.3	21.4	67.3	164.8	67.3	76.3	56.5	34.8	195.8	46.7	
Level of Service	E	C	C	E	F	E	E	E	C	F	D	
Approach Delay (s)		34.9			134.9			50.6			147.4	
Approach LOS		C			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	99.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	184	103	200	250	340	95	577	100	579	1419	36
Future Volume (vph)	19	184	103	200	250	340	95	577	100	579	1419	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1538	1770	1863	1552	1770	4960		3433	5061	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1538	1770	1863	1552	1770	4960		3433	5061	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	204	114	222	278	378	106	641	111	643	1577	40
RTOR Reduction (vph)	0	0	93	0	0	53	0	15	0	0	2	0
Lane Group Flow (vph)	21	204	21	222	278	325	106	737	0	643	1615	0
Confl. Peds. (#/hr)			9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	25.3	25.3	20.6	42.3	71.7	11.4	45.5		29.4	63.6	
Effective Green, g (s)	3.6	25.3	25.3	20.6	42.3	71.7	11.4	45.5		29.4	63.6	
Actuated g/C Ratio	0.03	0.18	0.18	0.15	0.30	0.51	0.08	0.32		0.21	0.45	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	336	277	260	562	794	144	1612		720	2299	
v/s Ratio Prot	0.01	c0.11		c0.13	0.15	0.09	0.06	0.15		c0.19	c0.32	
v/s Ratio Perm			0.01			0.12						
v/c Ratio	0.47	0.61	0.07	0.85	0.49	0.41	0.74	0.46		0.89	0.70	
Uniform Delay, d1	67.3	52.8	47.6	58.2	40.1	21.1	62.8	37.5		53.8	30.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.75		1.00	1.00	
Incremental Delay, d2	2.8	2.1	0.0	22.1	0.3	0.1	15.1	0.9		13.1	1.8	
Delay (s)	70.0	54.9	47.7	80.3	40.3	21.2	90.9	29.1		66.9	32.4	
Level of Service	E	D	D	F	D	C	F	C		E	C	
Approach Delay (s)		53.4			42.2			36.7			42.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	73	727	584	37	27	62
Future Volume (vph)	73	727	584	37	27	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3501		1662	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3501		1662	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	808	649	41	30	69
RTOR Reduction (vph)	0	0	5	0	60	0
Lane Group Flow (vph)	81	808	685	0	39	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	19.6	19.6	17.4		8.3	
Effective Green, g (s)	19.6	19.6	17.4		8.3	
Actuated g/C Ratio	0.32	0.32	0.29		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	572	1144	1005		227	
v/s Ratio Prot	0.05	c0.23	c0.20		c0.02	
v/s Ratio Perm						
v/c Ratio	0.14	0.71	0.68		0.17	
Uniform Delay, d1	14.5	18.0	19.1		23.1	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	2.1	2.0		0.1	
Delay (s)	14.7	20.1	21.1		23.3	
Level of Service	B	C	C		C	
Approach Delay (s)		19.6	21.1		23.3	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	15.3
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	525	223	159	352	22	196	53	74	164	463	181
Future Volume (vph)	56	525	223	159	352	22	196	53	74	164	463	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.91		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3363		1770	3505		3433	3206		3433	3376	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3363		1770	3505		3433	3206		3433	3376	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	583	248	177	391	24	218	59	82	182	514	201
RTOR Reduction (vph)	0	49	0	0	5	0	0	62	0	0	41	0
Lane Group Flow (vph)	62	782	0	177	410	0	218	79	0	182	674	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.8	28.1		13.2	37.5		8.9	21.9		9.2	22.2	
Effective Green, g (s)	3.8	28.1		13.2	37.5		8.9	21.9		9.2	22.2	
Actuated g/C Ratio	0.04	0.32		0.15	0.42		0.10	0.25		0.10	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	147	1069		264	1486		345	794		357	847	
v/s Ratio Prot	0.02	c0.23		c0.10	0.12		c0.06	0.02		0.05	c0.20	
v/s Ratio Perm												
v/c Ratio	0.42	0.73		0.67	0.28		0.63	0.10		0.51	0.80	
Uniform Delay, d1	41.2	26.8		35.5	16.6		38.2	25.6		37.5	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	2.6		6.5	0.1		3.7	0.1		1.1	5.2	
Delay (s)	43.2	29.4		42.1	16.7		41.9	25.7		38.6	36.2	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		30.4			24.3			35.6			36.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	11	589	140	72	219	1	4	216	6	162	51	72
Future Volume (vph)	11	589	140	72	219	1	4	216	6	162	51	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00			1.00	1.00	0.85	1.00	0.91
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3437		1770	3537			1770	1863	1564	1770	1679
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3437		1770	3537			1770	1863	1564	1770	1679
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	654	156	80	243	1	4	240	7	180	57	80
RTOR Reduction (vph)	0	21	0	0	0	0	0	0	0	102	0	60
Lane Group Flow (vph)	12	789	0	80	244	0	0	244	7	78	57	139
Confl. Peds. (#/hr)						1				3		
Confl. Bikes (#/hr)						1						
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	0.6	25.7		4.2	29.8			14.6	24.4	28.6	4.2	14.0
Effective Green, g (s)	0.6	25.7		4.2	29.8			14.6	24.4	28.6	4.2	14.0
Actuated g/C Ratio	0.01	0.33		0.05	0.38			0.19	0.31	0.37	0.05	0.18
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	13	1128		94	1346			330	580	571	94	300
v/s Ratio Prot	0.01	c0.23		c0.05	c0.07			c0.14	0.00	0.01	0.03	c0.08
v/s Ratio Perm										0.04		
v/c Ratio	0.92	0.70		0.85	0.18			0.74	0.01	0.14	0.61	0.46
Uniform Delay, d1	38.8	22.9		36.7	16.1			30.1	18.6	16.6	36.2	28.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	205.3	1.8		47.0	0.1			7.3	0.0	0.0	7.4	0.4
Delay (s)	244.1	24.8		83.7	16.2			37.3	18.6	16.6	43.6	29.2
Level of Service	F	C		F	B			D	B	B	D	C
Approach Delay (s)		28.0			32.9				28.4			32.4
Approach LOS		C			C				C			C

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.3	Sum of lost time (s)	19.8
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	107
Future Volume (vph)	107
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	119
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	96	81	188	266	138	82	564	60	143	1539	129
Future Volume (vph)	38	96	81	188	266	138	82	564	60	143	1539	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3271		3433	3337		3433	5004		3433	5018	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3271		3433	3337		3433	5004		3433	5018	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	107	90	209	296	153	91	627	67	159	1710	143
RTOR Reduction (vph)	0	76	0	0	53	0	0	7	0	0	6	0
Lane Group Flow (vph)	42	121	0	209	396	0	91	687	0	159	1847	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.5	21.3		12.5	27.3		7.7	76.6		10.4	79.4	
Effective Green, g (s)	6.5	21.3		12.5	27.3		7.7	76.6		10.4	79.4	
Actuated g/C Ratio	0.05	0.15		0.09	0.20		0.06	0.55		0.07	0.57	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	82	497		306	650		188	2737		255	2845	
v/s Ratio Prot	0.02	0.04		c0.06	c0.12		0.03	0.14		c0.05	c0.37	
v/s Ratio Perm												
v/c Ratio	0.51	0.24		0.68	0.61		0.48	0.25		0.62	0.65	
Uniform Delay, d1	65.2	52.3		61.8	51.5		64.2	16.6		62.9	20.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.13	0.60	
Incremental Delay, d2	2.2	0.1		4.9	1.1		0.7	0.2		2.6	0.9	
Delay (s)	67.4	52.3		66.8	52.6		64.9	16.9		73.5	13.3	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.0			57.1			22.4			18.1	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	73	148	422	225	31	251	196	113	44	850	83
Future Volume (vph)	24	73	148	422	225	31	251	196	113	44	850	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	*0.97		1.00	*0.97		1.00	*0.97		1.00	*0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3201		1770	3541		1770	3396		1770	3561	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3201		1770	3541		1770	3396		1770	3561	
Peak-hour factor, PHF	0.95	0.95	0.95	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	77	156	435	237	33	264	206	119	46	895	87
RTOR Reduction (vph)	0	137	0	0	7	0	0	55	0	0	5	0
Lane Group Flow (vph)	25	96	0	435	263	0	264	270	0	46	977	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.1	14.7		28.9	39.5		21.1	50.0		6.2	34.7	
Effective Green, g (s)	4.1	14.7		28.9	39.5		21.1	50.0		6.2	34.7	
Actuated g/C Ratio	0.03	0.12		0.24	0.33		0.18	0.42		0.05	0.29	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	61	397		432	1181		315	1434		92	1043	
v/s Ratio Prot	0.01	0.03		c0.25	c0.07		c0.15	0.08		0.03	c0.27	
v/s Ratio Perm												
v/c Ratio	0.41	0.24		1.01	0.22		0.84	0.19		0.50	0.94	
Uniform Delay, d1	56.0	46.8		44.8	28.4		47.0	21.5		54.6	40.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.7		45.0	0.2		16.7	0.1		1.6	15.1	
Delay (s)	57.6	47.6		89.8	28.6		63.7	21.5		56.1	55.9	
Level of Service	E	D		F	C		E	C		E	E	
Approach Delay (s)		48.5			66.4			40.4			55.9	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	59	335	241	562	168	283	194	22	32	344	85
Future Volume (vph)	71	59	335	241	562	168	283	194	22	32	344	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3049			3397		1770	3481		1770	3421	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3049			3397		1770	3481		1770	3421	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	66	372	268	624	187	314	216	24	36	382	94
RTOR Reduction (vph)	0	334	0	0	11	0	0	5	0	0	15	0
Lane Group Flow (vph)	79	104	0	0	1068	0	314	235	0	36	461	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2	13.2			45.5		26.9	46.1		5.8	25.0	
Effective Green, g (s)	13.2	13.2			45.5		26.9	46.1		5.8	25.0	
Actuated g/C Ratio	0.10	0.10			0.35		0.21	0.35		0.04	0.19	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	179	309			1188		365	1233		78	657	
v/s Ratio Prot	c0.04	0.03			c0.31		c0.18	0.07		0.02	c0.13	
v/s Ratio Perm												
v/c Ratio	0.44	0.34			0.90		0.86	0.19		0.46	0.70	
Uniform Delay, d1	55.0	54.4			40.1		49.8	29.1		60.6	49.1	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.7			9.3		17.7	0.1		1.6	3.8	
Delay (s)	56.9	55.1			49.5		67.5	29.2		62.2	52.9	
Level of Service	E	E			D		E	C		E	D	
Approach Delay (s)		55.4			49.5			50.9			53.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.1	Sum of lost time (s)	19.5
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	1620	145	397	1513	384	202	65	553	1141	365	327
Future Volume (vph)	121	1620	145	397	1513	384	202	65	553	1141	365	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4786	1335	3433	1863	2766	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4786	1335	3433	1863	2766	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	127	1705	153	418	1593	404	213	68	582	1201	384	344
RTOR Reduction (vph)	0	0	107	0	2	149	0	0	60	0	87	0
Lane Group Flow (vph)	127	1705	46	418	1631	215	213	68	522	1201	641	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	7.8	41.9	41.9	24.6	59.4	59.4	12.5	20.2	44.8	33.5	40.9	
Effective Green, g (s)	7.8	41.9	41.9	24.6	59.4	59.4	12.5	20.2	44.8	33.5	40.9	
Actuated g/C Ratio	0.06	0.30	0.30	0.18	0.42	0.42	0.09	0.14	0.32	0.24	0.29	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	191	1521	467	603	2030	566	306	268	885	821	948	
v/s Ratio Prot	0.04	c0.34		c0.12	c0.34		0.06	0.04	0.10	c0.35	c0.20	
v/s Ratio Perm			0.03			0.16			0.09			
v/c Ratio	0.66	1.12	0.10	0.69	0.80	0.38	0.70	0.25	0.59	1.46	0.68	
Uniform Delay, d1	64.8	49.0	35.4	54.2	35.2	27.7	61.9	53.2	39.9	53.2	43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.6	63.8	0.4	2.8	3.5	1.9	5.5	1.1	0.7	215.0	2.3	
Delay (s)	71.4	112.8	35.8	56.9	38.7	29.6	67.4	54.3	40.6	268.2	46.0	
Level of Service	E	F	D	E	D	C	E	D	D	F	D	
Approach Delay (s)		104.3			40.5			48.3			184.4	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	97.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Appendix H

Horizon Year 2035 Factoring Worksheets

Year 2035 + Project

(Scientific Research)

Intersection 1

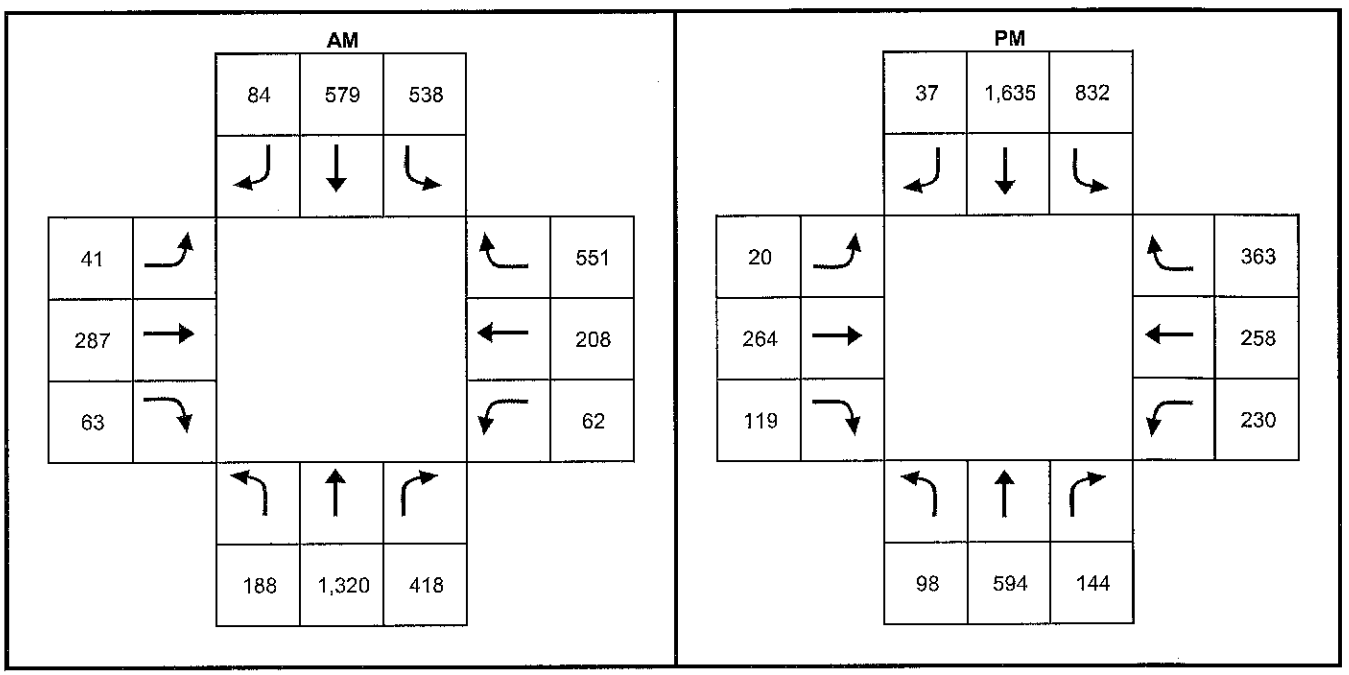
Analyst: Henryk Pedersen
Intersection: Genesee Ave. / Eastgate Mall
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Eastgate Mall
N/S Street Name: Genesee Ave.

Factored Turns

Volumes along Eastgate Mall were adjusted to be consistent with growth on Genesee Ave.

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	183	95	No Volume	No Volume	103%	188	98
NTH	1,282	577	No Volume	38,523	103%	1320	594
NRT	291	100	14,680	21,100	144%	418	144
SLT	374	579	14,680	21,100	144%	538	832
STH	503	1,419	29,512	34,000	115%	579	1635
SRT	82	36	No Volume	No Volume	103%	84	37
ELT	40	19	No Volume	38,523	103%	41	20
ETH	200	184	14,680	21,100	144%	287	264
ERT	55	103	29,512	34,000	115%	63	119
WLT	54	200	29,512	34,000	115%	62	230
WTH	202	250	No Volume	No Volume	103%	208	258
WRT	535	352	No Volume	38,523	103%	551	363



Delay	LOS
43.6	D

Delay	LOS
42.1	D

Year 2035 + Project

(Scientific Research)

Intersection 2

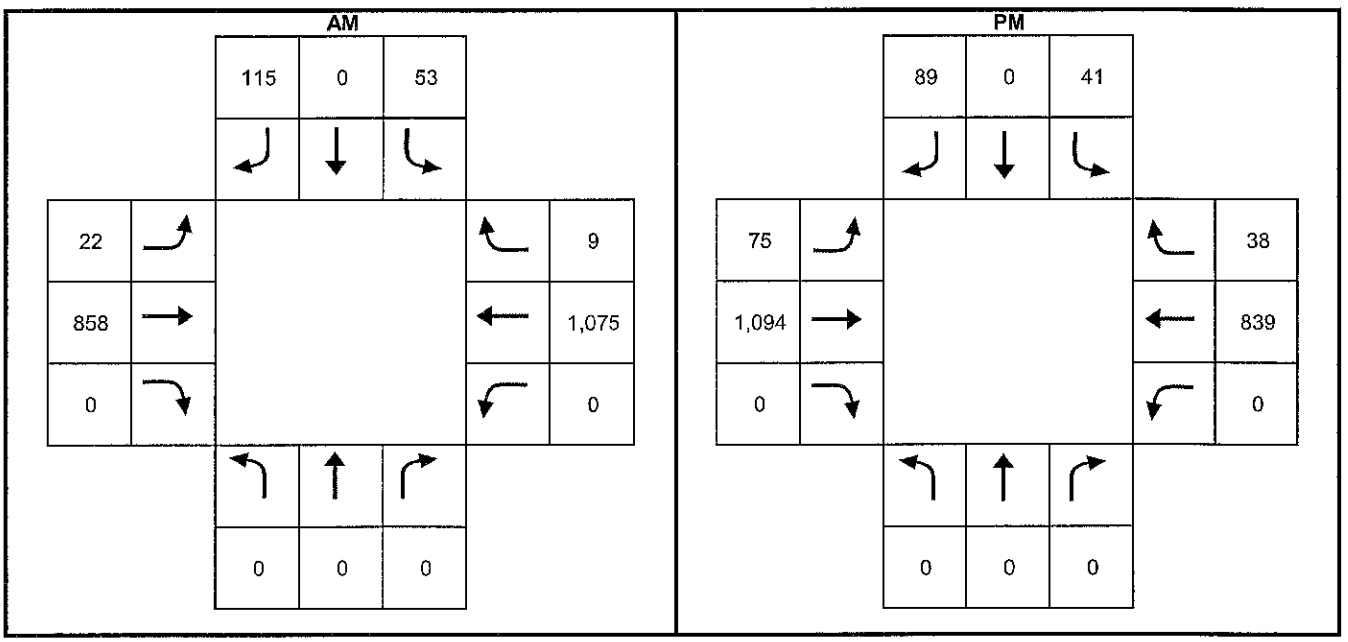
Analyst: Henryk Pedersen
Intersection: Eastgate Mall / Easter Way
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Eastgate Mall
N/S Street Name: Easter Way

Factored Turns

Volumes were manually adjusted to be consistent with growth on nearby streets

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	0	0	No Volume	No Volume	103%	0	0
NTH	0	0	No Volume	No Volume	103%	0	0
NRT	0	0	No Volume	No Volume	103%	0	0
SLT	35	27	13,886	20,900	151%	53	41
STH	0	0	No Volume	No Volume	103%	0	0
SRT	80	62	14,680	21,100	144%	115	89
ELT	21	73	No Volume	No Volume	103%	22	75
ETH	570	727	13,886	20,900	151%	858	1094
ERT	0	0	No Volume	No Volume	103%	0	0
WLT	0	0	No Volume	No Volume	103%	0	0
WTH	748	584	14,680	21,100	144%	1075	839
WRT	9	37	No Volume	No Volume	103%	9	38



Delay	LOS
24.2	C

Delay	LOS
23.6	C

Year 2035 + Project

(Scientific Research)

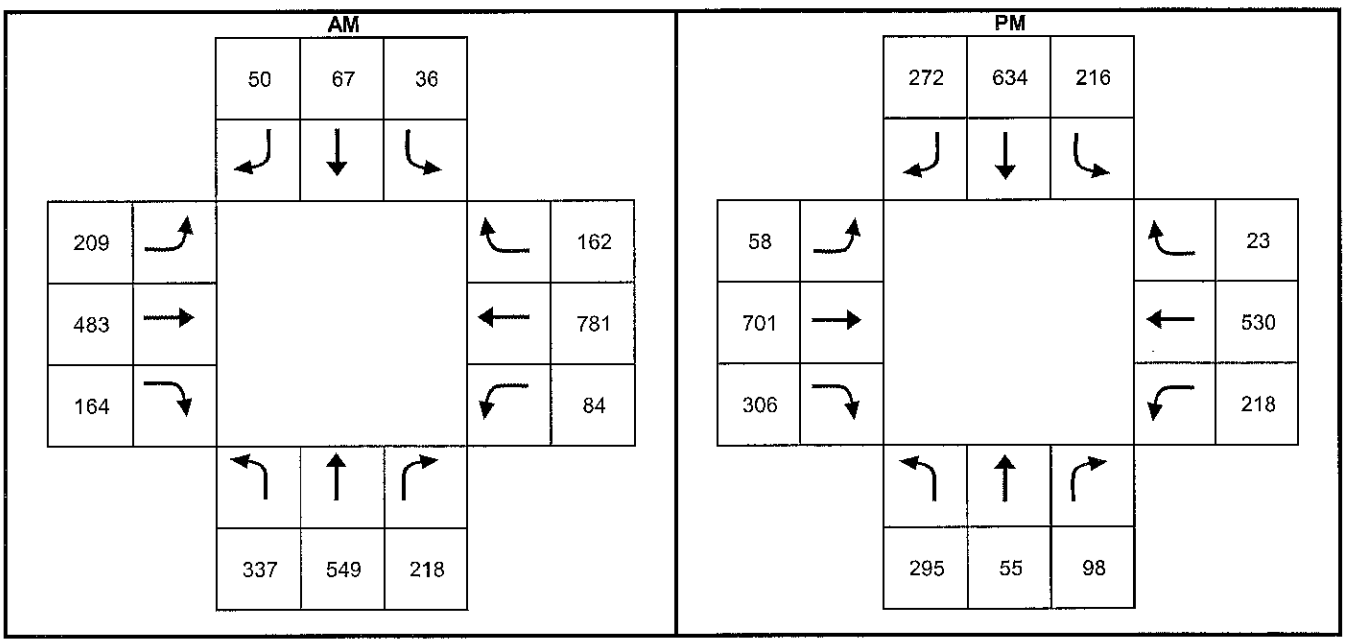
Intersection 3

Analyst: Henryk Pedersen
Intersection: Eastgate Mall / Towne Centre Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Eastgate Mall
N/S Street Name: Towne Centre Dr.

Factored Turns
Volumes were manually adjusted to be consistent with growth on nearby streets

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	224	196	13,886	20,900	151%	337	295
NTH	533	53	No Volume	No Volume	103%	549	55
NRT	165	74	11,136	14,700	132%	218	98
SLT	27	164	11,136	14,700	132%	36	216
STH	49	463	12,846	17,600	137%	67	634
SRT	33	181	13,886	20,900	151%	50	272
ELT	203	56	No Volume	No Volume	103%	209	58
ETH	366	531	11,136	14,700	132%	483	701
ERT	120	223	12,846	17,600	137%	164	306
WLT	61	159	12,846	17,600	137%	84	218
WTH	519	352	13,886	20,900	151%	781	530
WRT	157	22	No Volume	No Volume	103%	162	23



	Delay	LOS
AM	27.6	C
PM	33.8	C

Year 2035 + Project

(Scientific Research)

Intersection 4

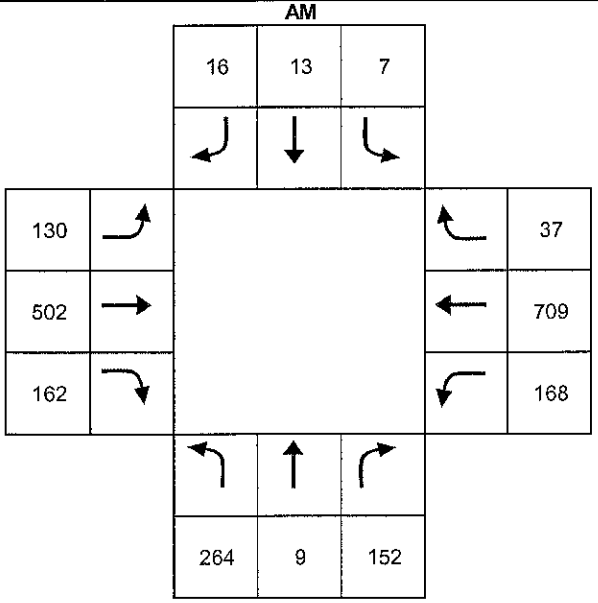
Analyst: Henryk Pedersen
Intersection: Eastgate Mall / Judicial Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Eastgate Mall
N/S Street Name: Judicial Dr.

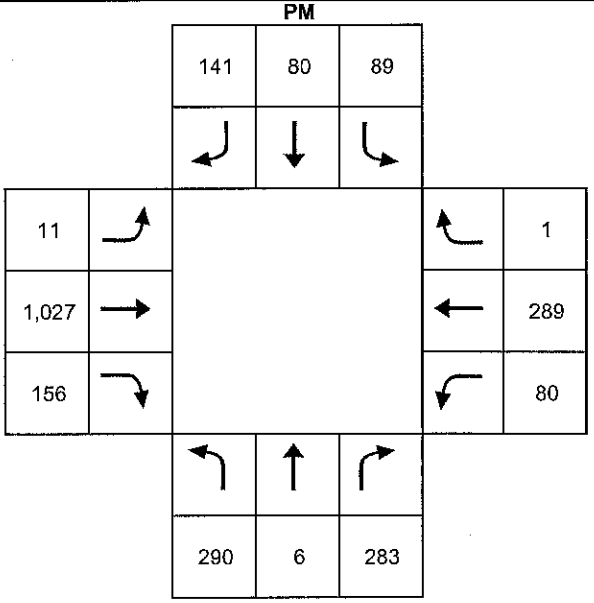
Factored Turns
Volumes were manually adjusted to be consistent with growth on nearby streets

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	200	220	11,136	14,700	132%	264	290
NTH	9	6	No Volume	No Volume	103%	9	6
NRT	87	162	9,347	16,300	174%	152	283
SLT	4	51	9,347	16,300	174%	7	89
STH	12	72	7,557	8,400	111%	13	80
SRT	12	107	11,136	14,700	132%	16	141
ELT	126	11	No Volume	No Volume	103%	130	11
ETH	288	589	9,347	16,300	174%	502	1027
ERT	146	140	7,557	8,400	111%	162	156
WLT	151	72	7,557	8,400	111%	168	80
WTH	537	219	11,136	14,700	132%	709	289
WRT	36	1	No Volume	No Volume	103%	37	1

AM



PM



Delay	LOS
44.5	D

Delay	LOS
35.1	D

Year 2035 + Project

(Scientific Research)

Intersection 5

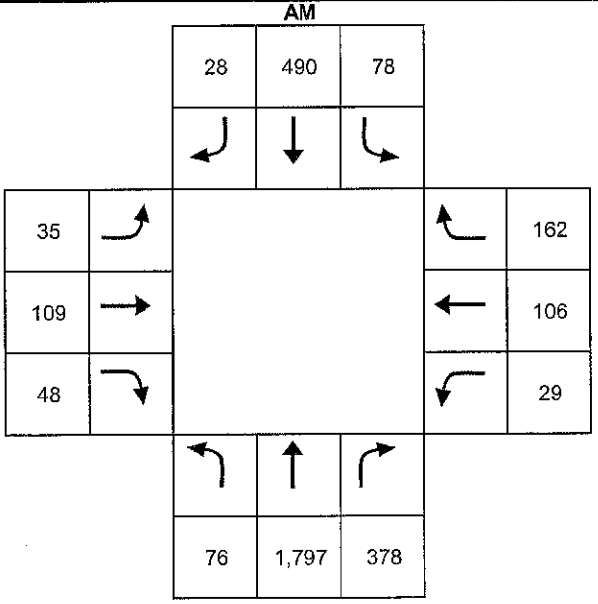
Analyst: Henryk Pedersen
Intersection: Genesee Ave. / Executive Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Executive Dr.
N/S Street Name: Genesee Ave.

Factored Turns

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	74	82	No Volume	No Volume	103%	76	84
NTH	1,560	564	29,512	34,000	115%	1797	650
NRT	367	60	No Volume	No Volume	103%	378	62
SLT	76	143	No Volume	No Volume	103%	78	147
STH	476	1,539	No Volume	No Volume	103%	490	1585
SRT	27	129	No Volume	No Volume	103%	28	133
ELT	30	38	29,512	34,000	115%	35	44
ETH	106	96	No Volume	No Volume	103%	109	99
ERT	47	81	No Volume	No Volume	103%	48	83
WLT	28	188	No Volume	No Volume	103%	29	194
WTH	103	266	No Volume	No Volume	103%	106	274
WRT	141	138	29,512	34,000	115%	162	159

AM



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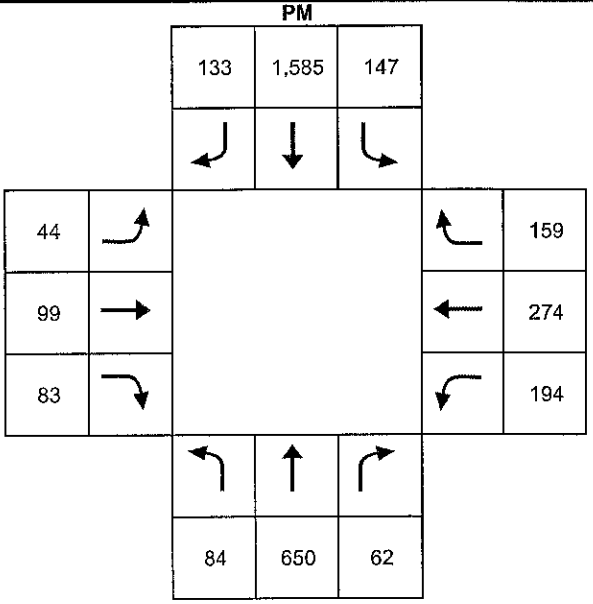


Delay	LOS
29.6	C

Delay	LOS
31.3	C

Year 2035 + Project

(Scientific Research)

Intersection 6

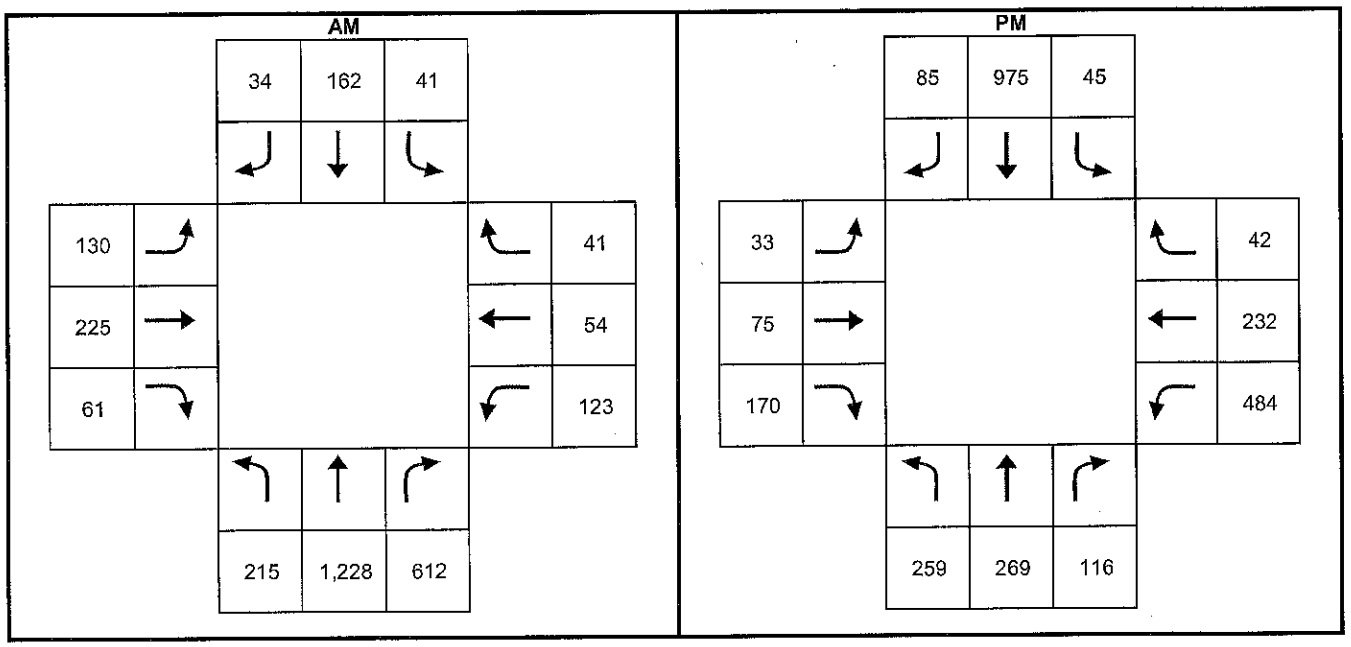
Analyst: Henryk Pedersen
Intersection: Towne Centre Dr. / Executive Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Executive Dr.
N/S Street Name: Towne Centre Dr.

Factored Turns

Volumes taken from La Jolla Commons TIA - Year 2030+Project s

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	209	251	No Volume	No Volume	103%	215	259
NTH	896	196	12,846	17,600	137%	1228	269
NRT	594	113	No Volume	No Volume	103%	612	116
SLT	40	44	No Volume	No Volume	103%	41	45
STH	141	850	23,543	27,000	115%	162	975
SRT	33	83	No Volume	No Volume	103%	34	85
ELT	95	24	12,846	17,600	137%	130	33
ETH	218	73	No Volume	No Volume	103%	225	75
ERT	53	148	23,543	27,000	115%	61	170
WLT	107	422	23,543	27,000	115%	123	484
WTH	52	225	No Volume	No Volume	103%	54	232
WRT	30	31	12,846	17,600	137%	41	42



Delay	LOS
53.2	D

Delay	LOS
78.9	E

Year 2035 + Project

(Scientific Research)

Intersection 7

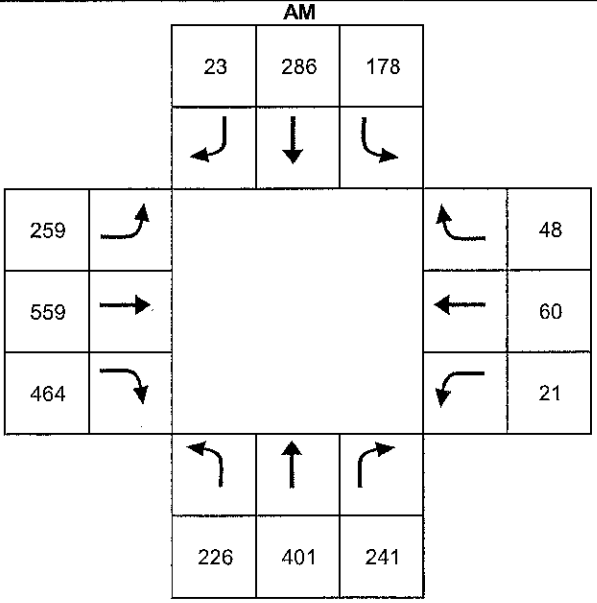
Analyst: Henryk Pedersen
Intersection: Judicial Dr. / Executive Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: Executive Dr.
N/S Street Name: Judicial Dr.

Factored Turns

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	219	283	No Volume	No Volume	103%	226	291
NTH	361	194	7,557	8,400	111%	401	216
NRT	234	22	No Volume	No Volume	103%	241	23
SLT	173	32	No Volume	No Volume	103%	178	33
STH	187	344	9,032	13,800	153%	286	526
SRT	22	85	No Volume	No Volume	103%	23	88
ELT	233	71	7,557	8,400	111%	259	79
ETH	543	59	No Volume	No Volume	103%	559	61
ERT	304	335	9,032	13,800	153%	464	512
WLT	14	241	9,032	13,800	153%	21	368
WTH	58	562	No Volume	No Volume	103%	60	579
WRT	43	168	7,557	8,400	111%	48	187

AM



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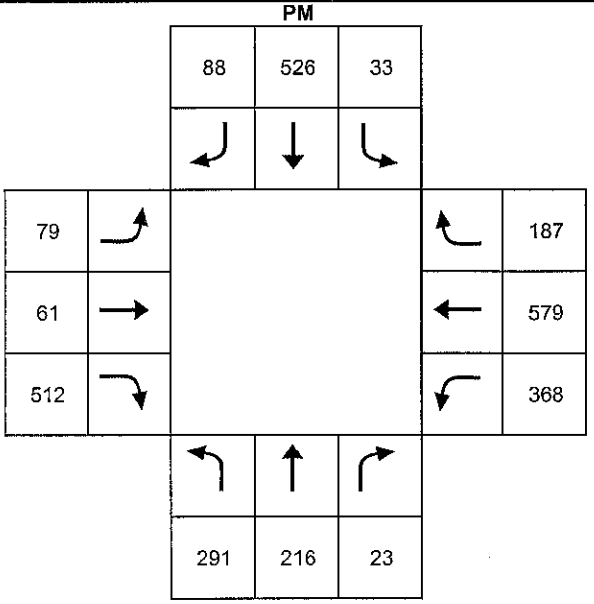


Delay	LOS
34.8	C

Delay	LOS
51.4	D

Year 2035 + Project

(Scientific Research)

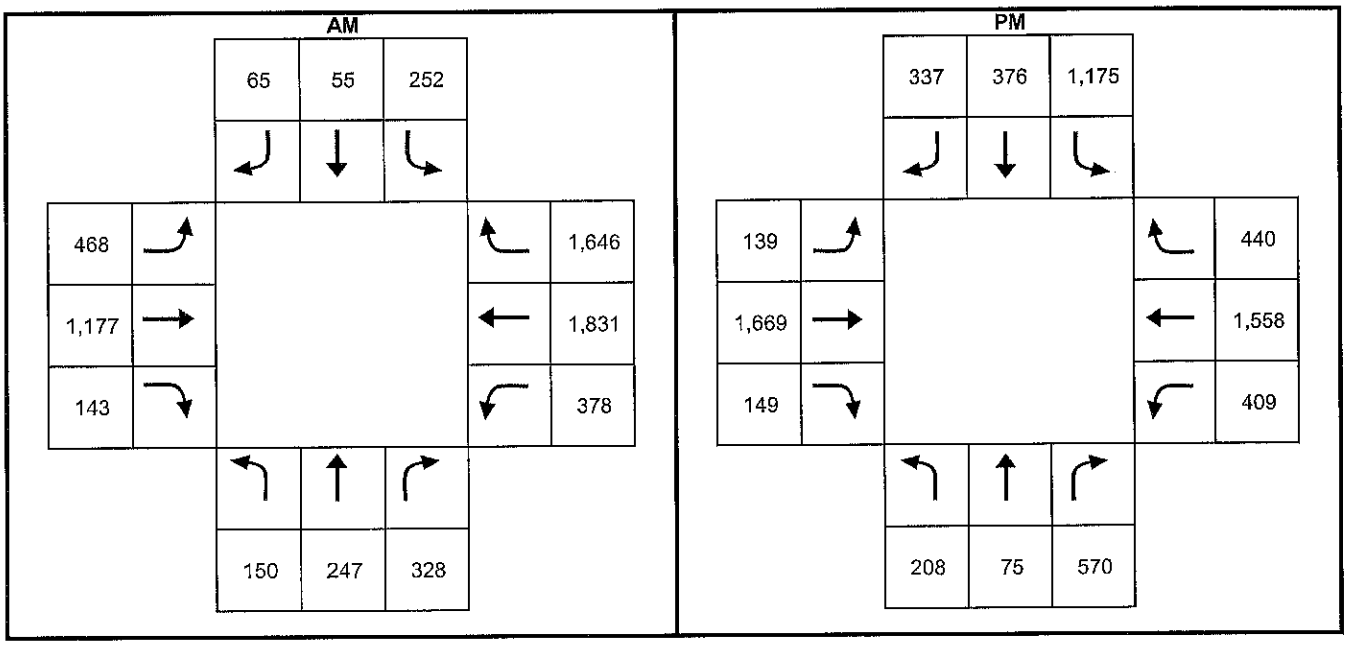
Intersection 8

Analyst: Henryk Pedersen
Intersection: Towne Centre Dr. / La Jolla Village Dr.
Future Condition: Year 2035 Plus Project
Date: 5/21/2015
Company: Urban Systems Associates, Inc.
Project Number: 003809
Intersection Control: Signalized

E/W Street Name: La Jolla Village Dr.
N/S Street Name: Towne Centre Dr.

Factored Turns

Turn Movement	Near Term+P turn (v) AM	Near Term+P turn (v) PM	NT+P ADT	BO+P ADT	Increase %	BO+P turn (v) AM	BO+P turn (v) PM
NLT	146	202	No Volume	No Volume	103%	150	208
NTH	215	65	23,543	27,000	115%	247	75
NRT	318	553	No Volume	No Volume	103%	328	570
SLT	245	1,141	No Volume	No Volume	103%	252	1175
STH	53	365	No Volume	No Volume	103%	55	376
SRT	63	327	No Volume	No Volume	103%	65	337
ELT	408	121	23,543	27,000	115%	468	139
ETH	1,143	1,620	No Volume	No Volume	103%	1177	1669
ERT	139	145	No Volume	No Volume	103%	143	149
WLT	367	397	No Volume	No Volume	103%	378	409
WTH	1,778	1,513	No Volume	No Volume	103%	1831	1558
WRT	1,435	384	23,543	27,000	115%	1646	440



Delay	LOS
78.0	E

Delay	LOS
105.8	F

Appendix I

Horizon Year 2035 Without Project Synchro Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	258	63	60	205	549	188	1320	404	524	579	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1534	1770	1863	1553	1770	4882		3433	4967	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1534	1770	1863	1553	1770	4882		3433	4967	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	287	70	67	228	610	209	1467	449	582	643	93
RTOR Reduction (vph)	0	0	57	0	0	33	0	34	0	0	11	0
Lane Group Flow (vph)	46	287	13	67	228	577	209	1882	0	582	725	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	5.9	26.3	26.3	7.5	27.9	55.1	20.0	59.8		27.2	67.1	
Effective Green, g (s)	5.9	26.3	26.3	7.5	27.9	55.1	20.0	59.8		27.2	67.1	
Actuated g/C Ratio	0.04	0.19	0.19	0.05	0.20	0.39	0.14	0.43		0.19	0.48	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	74	349	288	94	371	611	252	2085		666	2380	
v/s Ratio Prot	0.03	0.15		c0.04	0.12	c0.18	0.12	c0.39		0.17	0.15	
v/s Ratio Perm			0.01			0.19						
v/c Ratio	0.62	0.82	0.05	0.71	0.61	0.94	0.83	0.90		0.87	0.30	
Uniform Delay, d1	66.0	54.6	46.6	65.2	51.1	41.0	58.3	37.4		54.7	22.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.14	0.84		1.00	1.00	
Incremental Delay, d2	11.1	13.8	0.0	19.1	2.1	23.2	16.2	5.9		11.9	0.3	
Delay (s)	77.1	68.4	46.6	84.2	53.3	64.2	82.5	37.5		66.6	22.6	
Level of Service	E	E	D	F	D	E	F	D		E	C	
Approach Delay (s)		65.6			62.9			41.9			42.0	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	22	801	1069	9	50	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3534		1663	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3534		1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	890	1188	10	56	128
RTOR Reduction (vph)	0	0	1	0	111	0
Lane Group Flow (vph)	24	890	1197	0	73	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	21.9	21.9	23.7		9.3	
Effective Green, g (s)	21.9	21.9	23.7		9.3	
Actuated g/C Ratio	0.31	0.31	0.34		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	552	1104	1193		220	
v/s Ratio Prot	0.01	c0.25	c0.34		c0.04	
v/s Ratio Perm						
v/c Ratio	0.04	0.81	1.00		0.33	
Uniform Delay, d1	16.8	22.2	23.3		27.6	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	4.5	26.9		0.3	
Delay (s)	16.9	26.7	50.2		28.0	
Level of Service	B	C	D		C	
Approach Delay (s)		26.5	50.2		28.0	
Approach LOS		C	D		C	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	15.3
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	423	164	84	781	162	330	549	218	34	67	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3391		1770	3440		3433	3375		3433	3286	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3391		1770	3440		3433	3375		3433	3286	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	232	470	182	93	868	180	367	610	242	38	74	56
RTOR Reduction (vph)	0	39	0	0	18	0	0	42	0	0	45	0
Lane Group Flow (vph)	232	613	0	93	1030	0	367	810	0	38	85	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.6	35.4		7.7	33.5		13.1	29.6		2.1	18.6	
Effective Green, g (s)	9.6	35.4		7.7	33.5		13.1	29.6		2.1	18.6	
Actuated g/C Ratio	0.11	0.39		0.08	0.37		0.14	0.33		0.02	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	1322		150	1269		495	1100		79	673	
v/s Ratio Prot	c0.07	0.18		0.05	c0.30		c0.11	c0.24		0.01	0.03	
v/s Ratio Perm												
v/c Ratio	0.64	0.46		0.62	0.81		0.74	0.74		0.48	0.13	
Uniform Delay, d1	38.9	20.6		40.1	25.8		37.2	27.1		43.8	29.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	0.3		7.4	4.1		5.9	2.6		4.6	0.1	
Delay (s)	42.8	20.9		47.6	29.9		43.1	29.7		48.4	29.6	
Level of Service	D	C		D	C		D	C		D	C	
Approach Delay (s)		26.6			31.3			33.8			33.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	500	162	151	709	37	228	9	152	7	13	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3399		1770	3509		1770	1863	1567	1770	1693	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3399		1770	3509		1770	1863	1567	1770	1693	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	556	180	168	788	41	253	10	169	8	14	18
RTOR Reduction (vph)	0	34	0	0	4	0	0	0	106	0	15	0
Lane Group Flow (vph)	144	702	0	168	825	0	253	10	63	8	17	0
Confl. Peds. (#/hr)			1			3			2			1
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases									8			
Actuated Green, G (s)	9.6	23.6		5.8	20.3		8.9	20.6	26.4	0.6	12.3	
Effective Green, g (s)	9.6	23.6		5.8	20.3		8.9	20.6	26.4	0.6	12.3	
Actuated g/C Ratio	0.14	0.34		0.08	0.29		0.13	0.29	0.37	0.01	0.17	
Clearance Time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Vehicle Extension (s)	2.0	2.7		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	241	1139		145	1011		223	545	587	15	295	
v/s Ratio Prot	0.08	c0.21		c0.09	c0.24		c0.14	0.01	c0.01	0.00	0.01	
v/s Ratio Perm									0.03			
v/c Ratio	0.60	0.62		1.16	0.82		1.13	0.02	0.11	0.53	0.06	
Uniform Delay, d1	28.6	19.6		32.3	23.3		30.8	17.7	14.3	34.8	24.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.6	0.9		123.7	5.2		101.2	0.0	0.0	17.0	0.0	
Delay (s)	31.2	20.5		156.0	28.5		132.0	17.7	14.4	51.8	24.3	
Level of Service	C	C		F	C		F	B	B	D	C	
Approach Delay (s)		22.3			50.0			83.3			29.8	
Approach LOS		C			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	19.8
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	109	48	29	106	162	76	1787	378	78	489	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3354		3433	3193		3433	4937		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3354		3433	3193		3433	4937		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	121	53	32	118	180	84	1986	420	87	543	31
RTOR Reduction (vph)	0	40	0	0	99	0	0	18	0	0	3	0
Lane Group Flow (vph)	36	134	0	32	199	0	84	2388	0	87	571	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.8	24.3		3.3	21.8		6.8	86.3		6.9	86.5	
Effective Green, g (s)	5.8	24.3		3.3	21.8		6.8	86.3		6.9	86.5	
Actuated g/C Ratio	0.04	0.17		0.02	0.16		0.05	0.62		0.05	0.62	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	73	582		80	497		166	3043		169	3112	
v/s Ratio Prot	c0.02	0.04		0.01	c0.06		0.02	c0.48		c0.03	0.11	
v/s Ratio Perm												
v/c Ratio	0.49	0.23		0.40	0.40		0.51	0.78		0.51	0.18	
Uniform Delay, d1	65.7	49.8		67.4	53.2		65.0	19.9		64.9	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.14	0.59	
Incremental Delay, d2	1.9	0.1		1.2	0.2		0.9	2.1		1.1	0.1	
Delay (s)	67.6	49.9		68.6	53.4		65.8	22.1		74.9	6.9	
Level of Service	E	D		E	D		E	C		E	A	
Approach Delay (s)		52.9			54.9			23.5			15.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	225	61	119	52	41	215	1190	612	41	162	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.93		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3410		1770	3306		1770	3342		1770	3439	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3410		1770	3306		1770	3342		1770	3439	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	237	64	125	55	43	226	1253	644	43	171	36
RTOR Reduction (vph)	0	20	0	0	36	0	0	45	0	0	12	0
Lane Group Flow (vph)	117	281	0	125	62	0	226	1852	0	43	195	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.6	17.9		11.1	19.4		19.1	66.3		4.8	51.6	
Effective Green, g (s)	9.6	17.9		11.1	19.4		19.1	66.3		4.8	51.6	
Actuated g/C Ratio	0.08	0.15		0.09	0.16		0.16	0.56		0.04	0.43	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	143	514		165	540		284	1866		71	1494	
v/s Ratio Prot	0.07	c0.08		c0.07	0.02		c0.13	c0.55		0.02	0.06	
v/s Ratio Perm												
v/c Ratio	0.82	0.55		0.76	0.11		0.80	0.99		0.61	0.13	
Uniform Delay, d1	53.7	46.6		52.5	42.3		47.9	26.0		56.0	20.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.8	2.3		16.0	0.2		13.4	19.0		9.6	0.1	
Delay (s)	81.5	48.9		68.5	42.6		61.3	44.9		65.6	20.2	
Level of Service	F	D		E	D		E	D		E	C	
Approach Delay (s)		58.0			57.1			46.7			28.0	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	118.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	559	464	21	60	34	226	379	241	176	284	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93			0.96		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3278			3336		1770	3314		1770	3506	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3278			3336		1770	3314		1770	3506	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	288	621	516	23	67	38	251	421	268	196	316	19
RTOR Reduction (vph)	0	97	0	0	34	0	0	74	0	0	3	0
Lane Group Flow (vph)	288	1040	0	0	94	0	251	615	0	196	332	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	39.9	39.9			11.5		20.3	26.7		16.2	22.6	
Effective Green, g (s)	39.9	39.9			11.5		20.3	26.7		16.2	22.6	
Actuated g/C Ratio	0.35	0.35			0.10		0.18	0.23		0.14	0.20	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	620	1149			337		315	777		251	696	
v/s Ratio Prot	0.16	c0.32			c0.03		c0.14	c0.19		0.11	0.09	
v/s Ratio Perm												
v/c Ratio	0.46	0.91			0.28		0.80	0.79		0.78	0.48	
Uniform Delay, d1	28.7	35.2			47.3		44.8	40.9		47.1	40.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	10.3			0.5		12.3	6.1		13.5	0.9	
Delay (s)	29.3	45.4			47.8		57.0	47.0		60.6	41.2	
Level of Service	C	D			D		E	D		E	D	
Approach Delay (s)		42.2			47.8			49.7			48.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	113.8	Sum of lost time (s)	19.5
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	466	1177	143	378	1831	1611	150	245	328	248	55	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4550	1327	3433	1863	2755	3433	3206	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4550	1327	3433	1863	2755	3433	3206	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	491	1239	151	398	1927	1696	158	258	345	261	58	68
RTOR Reduction (vph)	0	0	81	0	56	189	0	0	35	0	54	0
Lane Group Flow (vph)	491	1239	70	398	2719	659	158	258	310	261	72	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	22.0	63.0	63.0	20.0	61.7	61.7	8.4	28.6	48.6	8.6	28.5	
Effective Green, g (s)	22.0	63.0	63.0	20.0	61.7	61.7	8.4	28.6	48.6	8.6	28.5	
Actuated g/C Ratio	0.16	0.45	0.45	0.14	0.44	0.44	0.06	0.20	0.35	0.06	0.20	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	539	2288	702	490	2005	584	205	380	956	210	652	
v/s Ratio Prot	c0.14	0.24		0.12	c0.60		0.05	c0.14	0.05	c0.08	0.02	
v/s Ratio Perm			0.04			0.50			0.07			
v/c Ratio	0.91	0.54	0.10	0.81	1.36	1.13	0.77	0.68	0.32	1.24	0.11	
Uniform Delay, d1	58.0	28.0	22.2	58.2	39.1	39.1	64.9	51.5	33.6	65.7	45.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.3	0.9	0.3	9.4	163.5	77.9	15.0	6.4	0.1	142.8	0.1	
Delay (s)	77.4	28.9	22.4	67.6	202.6	117.0	79.8	57.9	33.7	208.5	45.6	
Level of Service	E	C	C	E	F	F	E	E	C	F	D	
Approach Delay (s)		41.0			171.2			51.5			155.5	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	122.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	261	119	218	232	351	98	594	143	831	1635	37
Future Volume (vph)	20	261	119	218	232	351	98	594	143	831	1635	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1538	1770	1863	1556	1770	4920		3433	5063	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1538	1770	1863	1556	1770	4920		3433	5063	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	290	132	242	258	390	109	660	159	923	1817	41
RTOR Reduction (vph)	0	0	106	0	0	42	0	28	0	0	2	0
Lane Group Flow (vph)	22	290	26	242	258	348	109	791	0	923	1856	0
Confl. Peds. (#/hr)	220		9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	27.9	27.9	20.6	44.9	86.1	12.2	31.1		41.2	60.2	
Effective Green, g (s)	3.6	27.9	27.9	20.6	44.9	86.1	12.2	31.1		41.2	60.2	
Actuated g/C Ratio	0.03	0.20	0.20	0.15	0.32	0.61	0.09	0.22		0.29	0.43	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	371	306	260	597	956	154	1092		1010	2177	
v/s Ratio Prot	0.01	c0.16		c0.14	0.14	0.11	0.06	0.16		c0.27	c0.37	
v/s Ratio Perm			0.02			0.12						
v/c Ratio	0.49	0.78	0.09	0.93	0.43	0.36	0.71	0.72		0.91	0.85	
Uniform Delay, d1	67.3	53.2	45.7	59.0	37.5	13.4	62.2	50.5		47.7	35.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	0.81		1.00	1.00	
Incremental Delay, d2	3.0	9.5	0.0	37.1	0.2	0.1	11.0	4.0		12.1	4.5	
Delay (s)	70.3	62.7	45.7	96.1	37.7	13.5	83.5	45.0		59.8	40.4	
Level of Service	E	E	D	F	D	B	F	D		E	D	
Approach Delay (s)		58.0			43.0			49.6			46.8	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	1088	789	35	41	89
Future Volume (vph)	75	1088	789	35	41	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3512		1665	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3512		1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	1209	877	39	46	99
RTOR Reduction (vph)	0	0	3	0	86	0
Lane Group Flow (vph)	83	1209	913	0	59	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	23.9	23.9	22.2		9.0	
Effective Green, g (s)	23.9	23.9	22.2		9.0	
Actuated g/C Ratio	0.34	0.34	0.32		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	600	1201	1107		212	
v/s Ratio Prot	0.05	c0.34	c0.26		c0.04	
v/s Ratio Perm						
v/c Ratio	0.14	1.01	0.82		0.28	
Uniform Delay, d1	16.1	23.3	22.3		27.8	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	27.6	5.2		0.3	
Delay (s)	16.2	50.8	27.5		28.0	
Level of Service	B	D	C		C	
Approach Delay (s)		48.6	27.5		28.0	
Approach LOS		D	C		C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	15.3
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	695	306	218	530	23	242	53	98	216	634	272
Future Volume (vph)	58	695	306	218	530	23	242	53	98	216	634	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.90		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3358		1770	3514		3433	3167		3433	3365	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3358		1770	3514		3433	3167		3433	3365	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	772	340	242	589	26	269	59	109	240	704	302
RTOR Reduction (vph)	0	50	0	0	3	0	0	82	0	0	48	0
Lane Group Flow (vph)	64	1062	0	242	612	0	269	86	0	240	958	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	4.0	34.5		14.0	44.5		8.0	24.9		11.1	28.0	
Effective Green, g (s)	4.0	34.5		14.0	44.5		8.0	24.9		11.1	28.0	
Actuated g/C Ratio	0.04	0.34		0.14	0.44		0.08	0.25		0.11	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	1152		246	1555		273	784		379	937	
v/s Ratio Prot	0.02	c0.32		c0.14	0.17		c0.08	0.03		0.07	c0.28	
v/s Ratio Perm												
v/c Ratio	0.47	0.92		0.98	0.39		0.99	0.11		0.63	1.02	
Uniform Delay, d1	47.2	31.7		43.1	18.9		46.2	29.2		42.8	36.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	12.0		52.5	0.2		50.0	0.1		3.4	35.1	
Delay (s)	49.8	43.7		95.6	19.1		96.2	29.3		46.2	71.3	
Level of Service	D	D		F	B		F	C		D	E	
Approach Delay (s)		44.0			40.7			70.5			66.5	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1012	156	78	289	1	286	6	283	89	80	141
Future Volume (vph)	11	1012	156	78	289	1	286	6	283	89	80	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3468		1770	3537		1770	1863	1564	1770	1666	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3468		1770	3537		1770	1863	1564	1770	1666	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1124	173	87	321	1	318	7	314	99	89	157
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	78	0	73	0
Lane Group Flow (vph)	12	1286	0	87	322	0	318	7	236	99	173	0
Confl. Peds. (#/hr)						1			3			4
Confl. Bikes (#/hr)						1						1
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases									8			
Actuated Green, G (s)	0.7	39.9		4.6	44.3		12.7	20.0	24.6	7.7	15.0	
Effective Green, g (s)	0.7	39.9		4.6	44.3		12.7	20.0	24.6	7.7	15.0	
Actuated g/C Ratio	0.01	0.43		0.05	0.48		0.14	0.22	0.27	0.08	0.16	
Clearance Time (s)	4.4	6.1		4.4	5.6		4.4	4.9	4.4	4.4	4.9	
Vehicle Extension (s)	2.0	2.7		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	13	1504		88	1703		244	405	418	148	271	
v/s Ratio Prot	0.01	c0.37		c0.05	c0.09		c0.18	0.00	c0.03	0.06	0.10	
v/s Ratio Perm									0.12			
v/c Ratio	0.92	0.86		0.99	0.19		1.30	0.02	0.56	0.67	0.64	
Uniform Delay, d1	45.6	23.4		43.7	13.6		39.6	28.3	29.1	40.9	36.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	205.3	5.0		91.1	0.1		163.0	0.0	1.0	8.6	3.6	
Delay (s)	250.9	28.4		134.8	13.7		202.7	28.3	30.1	49.5	39.6	
Level of Service	F	C		F	B		F	C	C	D	D	
Approach Delay (s)		30.4			39.4			116.0			42.4	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	53.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	99	83	194	274	159	84	649	62	147	1576	130
Future Volume (vph)	44	99	83	194	274	159	84	649	62	147	1576	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3272		3433	3321		3433	5012		3433	5019	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3272		3433	3321		3433	5012		3433	5019	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	110	92	216	304	177	93	721	69	163	1751	144
RTOR Reduction (vph)	0	78	0	0	67	0	0	6	0	0	5	0
Lane Group Flow (vph)	49	124	0	216	414	0	93	784	0	163	1890	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Effective Green, g (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Actuated g/C Ratio	0.05	0.16		0.09	0.20		0.06	0.54		0.08	0.56	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	87	509		311	654		188	2710		259	2821	
v/s Ratio Prot	0.03	0.04		c0.06	c0.12		0.03	0.16		c0.05	c0.38	
v/s Ratio Perm												
v/c Ratio	0.56	0.24		0.69	0.63		0.49	0.29		0.63	0.67	
Uniform Delay, d1	65.1	51.9		61.8	51.6		64.3	17.5		62.8	21.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.16	0.50	
Incremental Delay, d2	4.9	0.1		5.3	1.5		0.7	0.3		2.0	0.7	
Delay (s)	70.0	52.0		67.1	53.0		65.0	17.8		74.8	11.6	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.5			57.4			22.7			16.6	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	75	170	451	215	42	259	265	116	45	975	85
Future Volume (vph)	31	75	170	451	215	42	259	265	116	45	975	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3120		1770	3445		1770	3362		1770	3493	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3120		1770	3445		1770	3362		1770	3493	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	79	179	475	226	44	273	279	122	47	1026	89
RTOR Reduction (vph)	0	157	0	0	13	0	0	34	0	0	5	0
Lane Group Flow (vph)	33	101	0	475	257	0	273	367	0	47	1110	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.5	14.8		31.4	41.7		16.7	48.0		6.2	37.1	
Effective Green, g (s)	4.5	14.8		31.4	41.7		16.7	48.0		6.2	37.1	
Actuated g/C Ratio	0.04	0.12		0.26	0.35		0.14	0.40		0.05	0.31	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	66	388		467	1207		248	1356		92	1088	
v/s Ratio Prot	0.02	c0.03		c0.27	0.07		c0.15	0.11		0.03	c0.32	
v/s Ratio Perm												
v/c Ratio	0.50	0.26		1.02	0.21		1.10	0.27		0.51	1.02	
Uniform Delay, d1	56.1	47.2		43.8	27.1		51.1	23.8		54.9	41.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	0.8		46.0	0.2		86.8	0.1		2.0	32.5	
Delay (s)	58.3	48.0		89.8	27.3		137.9	23.9		56.9	73.5	
Level of Service	E	D		F	C		F	C		E	E	
Approach Delay (s)		49.2			67.2			70.1			72.8	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	68.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	61	512	368	579	186	291	214	23	21	506	38
Future Volume (vph)	79	61	512	368	579	186	291	214	23	21	506	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3024			3390		1770	3482		1770	3498	
Flt Permitted	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3024			3390		1770	3482		1770	3498	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	68	569	409	643	207	323	238	26	23	562	42
RTOR Reduction (vph)	0	273	0	0	11	0	0	5	0	0	4	0
Lane Group Flow (vph)	88	364	0	0	1248	0	323	259	0	23	600	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.3	21.3			48.3		23.7	50.9		3.6	30.8	
Effective Green, g (s)	21.3	21.3			48.3		23.7	50.9		3.6	30.8	
Actuated g/C Ratio	0.15	0.15			0.34		0.17	0.35		0.03	0.21	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	262	448			1140		292	1234		44	750	
v/s Ratio Prot	0.05	c0.12			c0.37		c0.18	0.07		0.01	c0.17	
v/s Ratio Perm												
v/c Ratio	0.34	1.12dr			1.10		1.11	0.21		0.52	0.80	
Uniform Delay, d1	54.8	59.2			47.6		59.9	32.3		69.2	53.5	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	11.0			56.5		84.2	0.1		5.1	6.7	
Delay (s)	55.7	70.2			104.2		144.2	32.5		74.2	60.2	
Level of Service	E	E			F		F	C		E	E	
Approach Delay (s)		68.4			104.2			93.9			60.7	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	85.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	143.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	1669	149	409	1558	437	208	75	570	1145	374	335
Future Volume (vph)	139	1669	149	409	1558	437	208	75	570	1145	374	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	1757	157	431	1640	460	219	79	600	1205	394	353
RTOR Reduction (vph)	0	0	110	0	2	172	0	0	58	0	81	0
Lane Group Flow (vph)	146	1757	47	431	1684	242	219	79	542	1205	666	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	9.4	41.8	41.8	24.8	57.9	57.9	12.8	23.0	47.8	30.6	40.5	
Effective Green, g (s)	9.4	41.8	41.8	24.8	57.9	57.9	12.8	23.0	47.8	30.6	40.5	
Actuated g/C Ratio	0.07	0.30	0.30	0.18	0.41	0.41	0.09	0.16	0.34	0.22	0.29	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	230	1518	466	608	1978	552	313	306	944	750	939	
v/s Ratio Prot	0.04	c0.35		c0.13	c0.35		0.06	0.04	0.10	c0.35	c0.21	
v/s Ratio Perm			0.03			0.18			0.09			
v/c Ratio	0.63	1.16	0.10	0.71	0.85	0.44	0.70	0.26	0.57	1.61	0.71	
Uniform Delay, d1	63.6	49.1	35.5	54.2	37.2	29.4	61.7	51.1	37.8	54.7	44.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	78.7	0.4	3.1	4.9	2.5	5.4	1.0	0.5	279.2	2.9	
Delay (s)	67.8	127.8	35.9	57.3	42.0	31.9	67.2	52.1	38.3	333.9	47.4	
Level of Service	E	F	D	E	D	C	E	D	D	F	D	
Approach Delay (s)		116.5			43.0			46.5			224.3	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	111.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix J

Horizon Year 2035 With Project Synchro Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	287	63	62	208	551	188	1320	418	538	579	84
Future Volume (vph)	41	287	63	62	208	551	188	1320	418	538	579	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1535	1770	1863	1551	1770	4877		3433	4967	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1535	1770	1863	1551	1770	4877		3433	4967	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	319	70	69	231	612	209	1467	464	598	643	93
RTOR Reduction (vph)	0	0	56	0	0	31	0	39	0	0	11	0
Lane Group Flow (vph)	46	319	14	69	231	581	209	1892	0	598	725	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.7	28.7	28.7	8.0	33.0	60.8	20.5	56.3		27.8	63.7	
Effective Green, g (s)	3.7	28.7	28.7	8.0	33.0	60.8	20.5	56.3		27.8	63.7	
Actuated g/C Ratio	0.03	0.20	0.20	0.06	0.24	0.43	0.15	0.40		0.20	0.46	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	46	381	314	101	439	673	259	1961		681	2259	
v/s Ratio Prot	0.03	0.17		c0.04	0.12	c0.17	0.12	c0.39		c0.17	0.15	
v/s Ratio Perm			0.01			0.20						
v/c Ratio	1.00	0.84	0.05	0.68	0.53	0.86	0.81	0.96		0.88	0.32	
Uniform Delay, d1	68.2	53.4	44.7	64.8	46.7	35.9	57.8	40.9		54.5	24.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.23	0.82		1.00	1.00	
Incremental Delay, d2	132.7	14.1	0.0	14.1	0.5	10.8	11.0	10.2		12.0	0.4	
Delay (s)	200.8	67.5	44.7	78.9	47.2	46.7	82.0	43.8		66.4	24.7	
Level of Service	F	E	D	E	D	D	F	D		E	C	
Approach Delay (s)		78.0			49.2			47.5			43.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	858	1075	9	53	115
Future Volume (vph)	22	858	1075	9	53	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3534		1664	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3534		1664	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	953	1194	10	59	128
RTOR Reduction (vph)	0	0	1	0	111	0
Lane Group Flow (vph)	24	953	1203	0	76	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	23.1	23.1	23.0		9.4	
Effective Green, g (s)	23.1	23.1	23.0		9.4	
Actuated g/C Ratio	0.33	0.33	0.32		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	577	1154	1148		220	
v/s Ratio Prot	0.01	c0.27	c0.34		c0.05	
v/s Ratio Perm						
v/c Ratio	0.04	0.83	1.05		0.35	
Uniform Delay, d1	16.3	22.0	23.9		27.9	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	5.1	40.1		0.3	
Delay (s)	16.3	27.1	64.0		28.2	
Level of Service	B	C	E		C	
Approach Delay (s)		26.8	64.0		28.2	
Approach LOS		C	E		C	

Intersection Summary			
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	15.3
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	483	164	84	781	162	337	549	218	36	67	50
Future Volume (vph)	209	483	164	84	781	162	337	549	218	36	67	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3405		1770	3440		3433	3375		3433	3287	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3405		1770	3440		3433	3375		3433	3287	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	232	537	182	93	868	180	374	610	242	40	74	56
RTOR Reduction (vph)	0	31	0	0	18	0	0	42	0	0	45	0
Lane Group Flow (vph)	232	688	0	93	1030	0	374	810	0	40	85	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.0	34.7		7.7	33.4		14.0	29.6		2.7	18.3	
Effective Green, g (s)	9.0	34.7		7.7	33.4		14.0	29.6		2.7	18.3	
Actuated g/C Ratio	0.10	0.38		0.08	0.37		0.15	0.33		0.03	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	1302		150	1266		529	1101		102	663	
v/s Ratio Prot	c0.07	0.20		0.05	c0.30		c0.11	c0.24		0.01	0.03	
v/s Ratio Perm												
v/c Ratio	0.68	0.53		0.62	0.81		0.71	0.74		0.39	0.13	
Uniform Delay, d1	39.5	21.7		40.1	25.8		36.4	27.1		43.2	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	0.4		7.4	4.1		4.3	2.6		2.5	0.1	
Delay (s)	45.0	22.1		47.5	30.0		40.7	29.7		45.7	29.8	
Level of Service	D	C		D	C		D	C		D	C	
Approach Delay (s)		27.7			31.4			33.0			33.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	130	502	162	168	709	37	36	228	9	152	7	13
Future Volume (vph)	130	502	162	168	709	37	36	228	9	152	7	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.99			1.00	1.00	0.85	1.00	0.92
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3399		1770	3509			1770	1863	1567	1770	1693
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3399		1770	3509			1770	1863	1567	1770	1693
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	558	180	187	788	41	39	253	10	169	8	14
RTOR Reduction (vph)	0	34	0	0	4	0	0	0	0	103	0	15
Lane Group Flow (vph)	144	704	0	187	825	0	0	292	10	66	8	17
Confl. Peds. (#/hr)			1			3				2		
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	9.7	22.6		6.9	20.3			9.0	20.6	27.5	0.6	12.2
Effective Green, g (s)	9.7	22.6		6.9	20.3			9.0	20.6	27.5	0.6	12.2
Actuated g/C Ratio	0.14	0.32		0.10	0.29			0.13	0.29	0.39	0.01	0.17
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	243	1089		173	1010			225	544	611	15	292
v/s Ratio Prot	0.08	c0.21		c0.11	c0.24			c0.17	0.01	c0.01	0.00	0.01
v/s Ratio Perm										0.03		
v/c Ratio	0.59	0.65		1.08	0.82			1.30	0.02	0.11	0.53	0.06
Uniform Delay, d1	28.5	20.5		31.8	23.4			30.8	17.8	13.7	34.8	24.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	1.2		91.6	5.2			162.7	0.0	0.0	17.0	0.0
Delay (s)	31.1	21.8		123.4	28.6			193.5	17.8	13.7	51.8	24.4
Level of Service	C	C		F	C			F	B	B	D	C
Approach Delay (s)		23.3			46.0				125.2			29.9
Approach LOS		C			D				F			C

Intersection Summary			
HCM 2000 Control Delay	52.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	70.5	Sum of lost time (s)	19.8
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	16
Future Volume (vph)	16
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	18
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	109	48	29	106	162	76	1797	378	78	490	28
Future Volume (vph)	35	109	48	29	106	162	76	1797	378	78	490	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3354		3433	3193		3433	4937		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3354		3433	3193		3433	4937		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	121	53	32	118	180	84	1997	420	87	544	31
RTOR Reduction (vph)	0	39	0	0	75	0	0	19	0	0	4	0
Lane Group Flow (vph)	39	135	0	32	223	0	84	2398	0	87	571	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.8	25.1		3.3	22.6		7.3	85.6		6.8	85.2	
Effective Green, g (s)	5.8	25.1		3.3	22.6		7.3	85.6		6.8	85.2	
Actuated g/C Ratio	0.04	0.18		0.02	0.16		0.05	0.61		0.05	0.61	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	73	601		80	515		179	3018		166	3065	
v/s Ratio Prot	c0.02	0.04		0.01	c0.07		0.02	c0.49		c0.03	0.11	
v/s Ratio Perm												
v/c Ratio	0.53	0.22		0.40	0.43		0.47	0.79		0.52	0.19	
Uniform Delay, d1	65.8	49.1		67.4	52.9		64.5	20.6		65.0	12.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.05	0.67	
Incremental Delay, d2	3.7	0.1		1.2	0.2		0.7	2.3		1.3	0.1	
Delay (s)	69.5	49.2		68.6	53.1		65.2	22.8		69.8	8.2	
Level of Service	E	D		E	D		E	C		E	A	
Approach Delay (s)		52.9			54.6			24.2			16.3	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	225	61	123	54	41	215	1228	612	41	162	34
Future Volume (vph)	130	225	61	123	54	41	215	1228	612	41	162	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3410		1770	3311		1770	3346		1770	3439	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3410		1770	3311		1770	3346		1770	3439	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	237	64	129	57	43	226	1293	644	43	171	36
RTOR Reduction (vph)	0	20	0	0	36	0	0	43	0	0	12	0
Lane Group Flow (vph)	137	281	0	129	64	0	226	1894	0	43	195	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.7	18.2		10.6	18.1		19.1	68.6		3.4	52.5	
Effective Green, g (s)	10.7	18.2		10.6	18.1		19.1	68.6		3.4	52.5	
Actuated g/C Ratio	0.09	0.15		0.09	0.15		0.16	0.57		0.03	0.44	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	158	519		157	501		283	1922		50	1512	
v/s Ratio Prot	c0.08	c0.08		0.07	0.02		c0.13	c0.57		0.02	0.06	
v/s Ratio Perm												
v/c Ratio	0.87	0.54		0.82	0.13		0.80	0.99		0.86	0.13	
Uniform Delay, d1	53.6	46.7		53.5	43.8		48.3	24.9		57.8	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.1	2.2		26.8	0.3		13.6	17.1		74.2	0.1	
Delay (s)	88.7	48.9		80.2	44.1		61.9	42.0		131.9	19.9	
Level of Service	F	D		F	D		E	D		F	B	
Approach Delay (s)		61.4			64.5			44.1			39.2	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	119.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	559	464	21	60	48	226	401	241	178	286	23
Future Volume (vph)	259	559	464	21	60	48	226	401	241	178	286	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93			0.94		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3278			3296		1770	3322		1770	3495	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3278			3296		1770	3322		1770	3495	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	288	621	516	23	67	53	251	446	268	198	318	26
RTOR Reduction (vph)	0	98	0	0	48	0	0	64	0	0	5	0
Lane Group Flow (vph)	288	1039	0	0	95	0	251	650	0	198	339	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	42.5	42.5			11.7		20.3	28.3		16.5	24.5	
Effective Green, g (s)	42.5	42.5			11.7		20.3	28.3		16.5	24.5	
Actuated g/C Ratio	0.36	0.36			0.10		0.17	0.24		0.14	0.21	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	634	1175			325		303	793		246	722	
v/s Ratio Prot	0.16	c0.32			c0.03		c0.14	c0.20		0.11	0.10	
v/s Ratio Perm												
v/c Ratio	0.45	0.88			0.29		0.83	0.82		0.80	0.47	
Uniform Delay, d1	29.1	35.7			49.6		47.4	42.7		49.4	41.3	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	8.3			0.6		16.0	7.2		16.3	0.8	
Delay (s)	29.7	44.0			50.1		63.5	49.9		65.7	42.1	
Level of Service	C	D			D		E	D		E	D	
Approach Delay (s)		41.1			50.1			53.5			50.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	19.5
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	1177	143	378	1831	1646	150	247	328	252	55	65
Future Volume (vph)	468	1177	143	378	1831	1646	150	247	328	252	55	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4546	1327	3433	1863	2754	3433	3206	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4546	1327	3433	1863	2754	3433	3206	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	493	1239	151	398	1927	1733	158	260	345	265	58	68
RTOR Reduction (vph)	0	0	83	0	58	199	0	0	36	0	54	0
Lane Group Flow (vph)	493	1239	68	398	2736	667	158	260	309	265	72	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	20.9	63.1	63.1	18.8	61.7	61.7	9.2	28.7	47.5	9.6	28.8	
Effective Green, g (s)	20.9	63.1	63.1	18.8	61.7	61.7	9.2	28.7	47.5	9.6	28.8	
Actuated g/C Ratio	0.15	0.45	0.45	0.13	0.44	0.44	0.07	0.20	0.34	0.07	0.21	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	512	2291	704	461	2003	584	225	381	934	235	659	
v/s Ratio Prot	c0.14	0.24		0.12	c0.60		0.05	c0.14	0.04	c0.08	0.02	
v/s Ratio Perm			0.04			0.50			0.07			
v/c Ratio	0.96	0.54	0.10	0.86	1.37	1.14	0.70	0.68	0.33	1.13	0.11	
Uniform Delay, d1	59.2	27.9	22.1	59.3	39.1	39.1	64.1	51.4	34.4	65.2	45.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.2	0.9	0.3	14.9	167.9	83.0	7.8	6.6	0.1	97.4	0.1	
Delay (s)	89.3	28.8	22.4	74.2	207.1	122.1	71.9	58.0	34.5	162.6	45.3	
Level of Service	F	C	C	E	F	F	E	E	C	F	D	
Approach Delay (s)		44.2			175.9			50.3			124.8	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	124.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	264	119	230	258	363	98	594	144	832	1635	37
Future Volume (vph)	20	264	119	230	258	363	98	594	144	832	1635	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1538	1770	1863	1556	1770	4919		3433	5063	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1538	1770	1863	1556	1770	4919		3433	5063	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	293	132	256	287	403	109	660	160	924	1817	41
RTOR Reduction (vph)	0	0	106	0	0	42	0	28	0	0	2	0
Lane Group Flow (vph)	22	293	26	256	287	361	109	792	0	924	1856	0
Confl. Peds. (#/hr)	220		9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	28.0	28.0	21.5	45.9	87.4	12.1	29.8		41.5	59.3	
Effective Green, g (s)	3.6	28.0	28.0	21.5	45.9	87.4	12.1	29.8		41.5	59.3	
Actuated g/C Ratio	0.03	0.20	0.20	0.15	0.33	0.62	0.09	0.21		0.30	0.42	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	372	307	271	610	971	152	1047		1017	2144	
v/s Ratio Prot	0.01	c0.16		c0.14	0.15	0.11	0.06	0.16		c0.27	c0.37	
v/s Ratio Perm			0.02			0.12						
v/c Ratio	0.49	0.79	0.09	0.94	0.47	0.37	0.72	0.76		0.91	0.87	
Uniform Delay, d1	67.3	53.2	45.6	58.7	37.4	12.9	62.3	51.7		47.4	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	0.82		1.00	1.00	
Incremental Delay, d2	3.0	9.8	0.0	39.3	0.2	0.1	12.1	4.9		11.3	5.0	
Delay (s)	70.3	62.9	45.6	97.9	37.6	13.0	84.7	47.2		58.7	41.7	
Level of Service	E	E	D	F	D	B	F	D		E	D	
Approach Delay (s)		58.2			43.4			51.6			47.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	1094	839	38	41	89
Future Volume (vph)	75	1094	839	38	41	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3512		1665	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3512		1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	1216	932	42	46	99
RTOR Reduction (vph)	0	0	3	0	86	0
Lane Group Flow (vph)	83	1216	971	0	59	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	23.9	23.9	22.2		9.0	
Effective Green, g (s)	23.9	23.9	22.2		9.0	
Actuated g/C Ratio	0.34	0.34	0.32		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	600	1201	1107		212	
v/s Ratio Prot	0.05	c0.34	c0.28		c0.04	
v/s Ratio Perm						
v/c Ratio	0.14	1.01	0.88		0.28	
Uniform Delay, d1	16.1	23.3	22.8		27.8	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	29.1	8.2		0.3	
Delay (s)	16.2	52.3	31.0		28.0	
Level of Service	B	D	C		C	
Approach Delay (s)		50.0	31.0		28.0	
Approach LOS		D	C		C	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	15.3
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	701	306	218	530	23	295	55	98	216	634	272
Future Volume (vph)	58	701	306	218	530	23	295	55	98	216	634	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	*0.97		1.00	*0.97		0.97	*0.97		0.97	*0.97	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.90		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3430		1770	3588		3433	3238		3433	3436	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3430		1770	3588		3433	3238		3433	3436	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	779	340	242	589	26	328	61	109	240	704	302
RTOR Reduction (vph)	0	51	0	0	3	0	0	80	0	0	51	0
Lane Group Flow (vph)	64	1068	0	242	612	0	328	90	0	240	955	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	4.0	32.8		14.0	42.8		10.0	26.8		11.2	28.0	
Effective Green, g (s)	4.0	32.8		14.0	42.8		10.0	26.8		11.2	28.0	
Actuated g/C Ratio	0.04	0.33		0.14	0.42		0.10	0.27		0.11	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	1116		245	1523		340	860		381	954	
v/s Ratio Prot	0.02	c0.31		c0.14	0.17		c0.10	0.03		0.07	c0.28	
v/s Ratio Perm												
v/c Ratio	0.47	0.96		0.99	0.40		0.96	0.10		0.63	1.00	
Uniform Delay, d1	47.4	33.3		43.3	20.1		45.2	27.9		42.8	36.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	17.4		53.5	0.2		39.1	0.1		3.2	29.5	
Delay (s)	49.9	50.7		96.9	20.3		84.3	28.0		46.1	65.9	
Level of Service	D	D		F	C		F	C		D	E	
Approach Delay (s)		50.6			41.9			65.1			62.1	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	54.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	11	1027	156	80	289	1	4	290	6	283	89	80
Future Volume (vph)	11	1027	156	80	289	1	4	290	6	283	89	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	*0.97		1.00	*0.97			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00			1.00	1.00	0.85	1.00	0.90
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3542		1770	3612			1770	1863	1565	1770	1666
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3542		1770	3612			1770	1863	1565	1770	1666
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1141	173	89	321	1	4	322	7	314	99	89
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	78	0	73
Lane Group Flow (vph)	12	1303	0	89	322	0	0	326	7	236	99	173
Confl. Peds. (#/hr)						1				3		
Confl. Bikes (#/hr)						1						
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	0.7	38.8		5.6	44.2			12.8	20.1	25.7	7.7	15.0
Effective Green, g (s)	0.7	38.8		5.6	44.2			12.8	20.1	25.7	7.7	15.0
Actuated g/C Ratio	0.01	0.42		0.06	0.48			0.14	0.22	0.28	0.08	0.16
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	13	1493		107	1735			246	407	437	148	271
v/s Ratio Prot	0.01	c0.37		c0.05	0.09			c0.18	0.00	0.03	0.06	c0.10
v/s Ratio Perm										0.12		
v/c Ratio	0.92	0.87		0.83	0.19			1.33	0.02	0.54	0.67	0.64
Uniform Delay, d1	45.6	24.3		42.7	13.6			39.6	28.2	28.1	40.9	36.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	205.3	5.9		38.3	0.1			171.7	0.0	0.7	8.6	3.6
Delay (s)	250.9	30.3		81.1	13.7			211.3	28.2	28.9	49.5	39.6
Level of Service	F	C		F	B			F	C	C	D	D
Approach Delay (s)		32.2			28.3				120.8			42.4
Approach LOS		C			C				F			D

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	141
Future Volume (vph)	141
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	157
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	99	83	194	274	159	84	650	62	147	1585	133
Future Volume (vph)	44	99	83	194	274	159	84	650	62	147	1585	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3272		3433	3321		3433	5012		3433	5017	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3272		3433	3321		3433	5012		3433	5017	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	110	92	216	304	177	93	722	69	163	1761	148
RTOR Reduction (vph)	0	78	0	0	67	0	0	6	0	0	6	0
Lane Group Flow (vph)	49	124	0	216	414	0	93	785	0	163	1903	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Effective Green, g (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Actuated g/C Ratio	0.05	0.16		0.09	0.20		0.06	0.54		0.08	0.56	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	87	509		311	654		188	2710		259	2820	
v/s Ratio Prot	0.03	0.04		c0.06	c0.12		0.03	0.16		c0.05	c0.38	
v/s Ratio Perm												
v/c Ratio	0.56	0.24		0.69	0.63		0.49	0.29		0.63	0.67	
Uniform Delay, d1	65.1	51.9		61.8	51.6		64.3	17.5		62.8	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.15	0.52	
Incremental Delay, d2	4.9	0.1		5.3	1.5		0.7	0.3		1.9	0.7	
Delay (s)	70.0	52.0		67.1	53.0		65.0	17.8		74.1	12.0	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.5			57.4			22.7			16.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	75	170	484	232	42	259	269	116	45	975	85
Future Volume (vph)	33	75	170	484	232	42	259	269	116	45	975	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3119		1770	3450		1770	3363		1770	3493	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3119		1770	3450		1770	3363		1770	3493	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	79	179	509	244	44	273	283	122	47	1026	89
RTOR Reduction (vph)	0	158	0	0	11	0	0	32	0	0	5	0
Lane Group Flow (vph)	35	100	0	509	277	0	273	373	0	47	1110	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.1	15.1		33.7	44.7		18.7	54.6		6.3	41.8	
Effective Green, g (s)	4.1	15.1		33.7	44.7		18.7	54.6		6.3	41.8	
Actuated g/C Ratio	0.03	0.12		0.26	0.35		0.15	0.43		0.05	0.33	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	56	367		464	1201		257	1431		86	1138	
v/s Ratio Prot	0.02	c0.03		c0.29	0.08		c0.15	0.11		0.03	c0.32	
v/s Ratio Perm												
v/c Ratio	0.62	0.27		1.10	0.23		1.06	0.26		0.55	0.98	
Uniform Delay, d1	61.3	51.6		47.3	29.6		54.8	23.8		59.6	42.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.6	0.9		70.7	0.2		73.5	0.1		3.8	20.9	
Delay (s)	75.9	52.5		118.0	29.9		128.3	23.9		63.4	63.6	
Level of Service	E	D		F	C		F	C		E	E	
Approach Delay (s)		55.3			86.2			66.0			63.6	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	69.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	128.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	61	512	368	579	187	291	216	23	33	526	88
Future Volume (vph)	79	61	512	368	579	187	291	216	23	33	526	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	*0.97			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3087			3389		1770	3483		1770	3453	
Flt Permitted	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3087			3389		1770	3483		1770	3453	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	68	569	409	643	208	323	240	26	37	584	98
RTOR Reduction (vph)	0	276	0	0	11	0	0	5	0	0	9	0
Lane Group Flow (vph)	88	361	0	0	1249	0	323	261	0	37	673	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.3	21.3			49.2		23.6	48.5		6.5	31.4	
Effective Green, g (s)	21.3	21.3			49.2		23.6	48.5		6.5	31.4	
Actuated g/C Ratio	0.15	0.15			0.34		0.16	0.33		0.04	0.22	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	260	453			1149		288	1165		79	747	
v/s Ratio Prot	0.05	c0.12			c0.37		c0.18	0.07		0.02	c0.20	
v/s Ratio Perm												
v/c Ratio	0.34	1.14dr			1.09		1.12	0.22		0.47	0.90	
Uniform Delay, d1	55.5	59.8			47.9		60.7	34.7		67.6	55.3	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	9.5			53.6		89.8	0.2		1.6	14.5	
Delay (s)	56.4	69.3			101.5		150.5	34.9		69.2	69.8	
Level of Service	E	E			F		F	C		E	E	
Approach Delay (s)		67.7			101.5			98.3			69.8	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	86.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	1669	149	409	1558	440	208	75	570	1175	376	337
Future Volume (vph)	139	1669	149	409	1558	440	208	75	570	1175	376	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	1757	157	431	1640	463	219	79	600	1237	396	355
RTOR Reduction (vph)	0	0	112	0	2	176	0	0	58	0	72	0
Lane Group Flow (vph)	146	1757	45	431	1684	241	219	79	542	1237	679	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	10.2	40.4	40.4	24.8	55.7	55.7	13.0	22.4	47.2	32.6	41.7	
Effective Green, g (s)	10.2	40.4	40.4	24.8	55.7	55.7	13.0	22.4	47.2	32.6	41.7	
Actuated g/C Ratio	0.07	0.29	0.29	0.18	0.40	0.40	0.09	0.16	0.34	0.23	0.30	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	250	1467	451	608	1903	531	318	298	932	799	966	
v/s Ratio Prot	0.04	c0.35		c0.13	c0.35		0.06	0.04	0.10	c0.36	c0.21	
v/s Ratio Perm			0.03			0.18			0.09			
v/c Ratio	0.58	1.20	0.10	0.71	0.89	0.45	0.69	0.27	0.58	1.55	0.70	
Uniform Delay, d1	62.8	49.8	36.5	54.2	39.2	31.0	61.5	51.6	38.3	53.7	43.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	95.9	0.4	3.1	6.5	2.8	4.9	1.1	0.6	252.9	2.7	
Delay (s)	65.1	145.7	36.9	57.3	45.6	33.8	66.4	52.6	38.9	306.6	46.4	
Level of Service	E	F	D	E	D	C	E	D	D	F	D	
Approach Delay (s)		131.7			45.7			46.8			208.3	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	112.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	1177	143	378	1831	1646	150	247	328	252	55	65
Future Volume (vph)	468	1177	143	378	1831	1646	150	247	328	252	55	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	4.4
Lane Util. Factor	0.97	*1.00	1.00	0.97	*1.00	0.86	0.97	1.00	0.88	0.97	*1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5588	1562	3433	5285	1326	3433	1863	2754	3433	3725	1561
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5588	1562	3433	5285	1326	3433	1863	2754	3433	3725	1561
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	493	1239	151	398	1927	1733	158	260	345	265	58	68
RTOR Reduction (vph)	0	0	82	0	57	180	0	0	34	0	0	46
Lane Group Flow (vph)	493	1239	69	398	2737	686	158	260	311	265	58	22
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	22.6	65.8	65.8	20.7	64.6	64.6	13.8	30.1	50.8	8.6	24.6	47.2
Effective Green, g (s)	22.6	65.8	65.8	20.7	64.6	64.6	13.8	30.1	50.8	8.6	24.6	47.2
Actuated g/C Ratio	0.16	0.45	0.45	0.14	0.45	0.45	0.10	0.21	0.35	0.06	0.17	0.33
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	4.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	2.0
Lane Grp Cap (vph)	535	2535	708	490	2354	590	326	386	964	203	631	508
v/s Ratio Prot	c0.14	0.22		0.12	c0.52		0.05	c0.14	0.05	c0.08	0.02	0.01
v/s Ratio Perm			0.04			0.52			0.07			0.01
v/c Ratio	0.92	0.49	0.10	0.81	1.16	1.16	0.48	0.67	0.32	1.31	0.09	0.04
Uniform Delay, d1	60.3	27.8	22.6	60.3	40.2	40.2	62.2	52.9	34.5	68.2	50.8	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1	0.7	0.3	9.4	78.4	91.0	0.4	6.2	0.1	168.4	0.1	0.0
Delay (s)	81.5	28.5	22.9	69.7	118.6	131.2	62.6	59.1	34.6	236.6	50.9	33.5
Level of Service	F	C	C	E	F	F	E	E	C	F	D	C
Approach Delay (s)		41.9			116.5			48.7			173.7	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	92.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

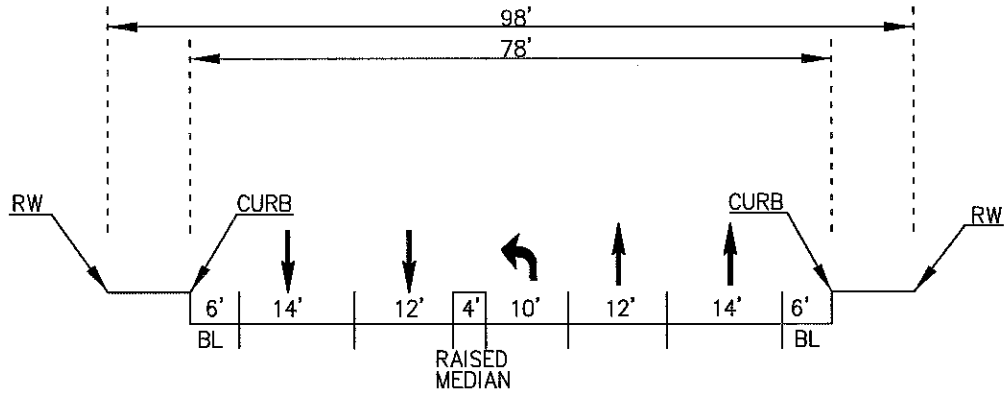
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	1669	149	409	1558	440	208	75	570	1175	376	337
Future Volume (vph)	139	1669	149	409	1558	440	208	75	570	1175	376	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	4.4
Lane Util. Factor	0.97	*1.00	1.00	0.97	*1.00	0.86	0.97	1.00	*0.95	0.97	*1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5588	1563	3433	5562	1334	3433	1863	2985	3433	3725	1547
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5588	1563	3433	5562	1334	3433	1863	2985	3433	3725	1547
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	1757	157	431	1640	463	219	79	600	1237	396	355
RTOR Reduction (vph)	0	0	108	0	2	189	0	0	57	0	0	57
Lane Group Flow (vph)	146	1757	49	431	1684	228	219	79	543	1237	396	298
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	8.8	42.3	42.3	25.5	59.7	59.7	13.1	21.8	47.3	35.6	44.0	52.8
Effective Green, g (s)	8.8	42.3	42.3	25.5	59.7	59.7	13.1	21.8	47.3	35.6	44.0	52.8
Actuated g/C Ratio	0.06	0.29	0.29	0.18	0.41	0.41	0.09	0.15	0.33	0.25	0.30	0.36
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	4.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	2.0
Lane Grp Cap (vph)	208	1630	455	603	2290	549	310	280	973	842	1130	563
v/s Ratio Prot	0.04	c0.31		c0.13	c0.30		0.06	0.04	0.10	c0.36	0.11	c0.03
v/s Ratio Perm			0.03			0.17			0.08			0.16
v/c Ratio	0.70	1.08	0.11	0.71	0.74	0.42	0.71	0.28	0.56	1.47	0.35	0.53
Uniform Delay, d1	66.8	51.4	37.5	56.3	36.0	30.3	64.1	54.7	40.2	54.7	39.4	36.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	46.6	0.5	3.4	2.1	2.3	5.9	1.2	0.4	217.6	0.3	0.5
Delay (s)	75.2	97.9	38.0	59.7	38.1	32.6	70.0	55.9	40.6	272.3	39.7	36.8
Level of Service	E	F	D	E	D	C	E	E	D	F	D	D
Approach Delay (s)		91.7			40.9			49.1			183.9	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	93.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix K

Conceptual Improvement Plan for Towne Centre Drive/ La Jolla Village Drive Southbound Right Turn Lane



JUDICIAL DR SOUTH OF EASTGATE MALL
CROSS SECTION
NO SCALE

Sephora - University Towne Center
Towne Center Dr
PROPOSED CURB
L=108'
R=30'
R=30'

Appendix L

Mitigation Year 2035 With Project Synchro Worksheets & Fair Share Calculation

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	162	38	50	160	460	141	1015	261	289	386	82
Future Volume (vph)	40	162	38	50	160	460	141	1015	261	289	386	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1533	1770	1863	1551	1770	4908		3433	4923	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1533	1770	1863	1551	1770	4908		3433	4923	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	180	42	56	178	511	157	1128	290	321	429	91
RTOR Reduction (vph)	0	0	35	0	0	41	0	25	0	0	18	0
Lane Group Flow (vph)	44	180	7	56	178	470	157	1393	0	321	502	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	6.3	23.5	23.5	7.3	24.5	46.4	16.4	68.1		21.9	73.7	
Effective Green, g (s)	6.3	23.5	23.5	7.3	24.5	46.4	16.4	68.1		21.9	73.7	
Actuated g/C Ratio	0.04	0.17	0.17	0.05	0.18	0.33	0.12	0.49		0.16	0.53	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	79	312	257	92	326	514	207	2387		537	2591	
v/s Ratio Prot	0.02	0.10		c0.03	0.10	c0.14	0.09	c0.28		0.09	0.10	
v/s Ratio Perm			0.00			0.16						
v/c Ratio	0.56	0.58	0.03	0.61	0.55	0.91	0.76	0.58		0.60	0.19	
Uniform Delay, d1	65.5	53.7	48.7	65.0	52.7	44.9	59.9	25.8		55.0	17.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.24	0.67		1.00	1.00	
Incremental Delay, d2	4.8	1.6	0.0	7.6	1.0	20.4	11.5	0.9		1.2	0.2	
Delay (s)	70.2	55.3	48.7	72.5	53.7	65.2	85.7	18.1		56.1	17.6	
Level of Service	E	E	D	E	D	E	F	B		E	B	
Approach Delay (s)		56.7			63.0			24.8			32.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	510	741	8	31	80
Future Volume (vph)	21	510	741	8	31	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3532		1658	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3532		1658	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	567	823	9	34	89
RTOR Reduction (vph)	0	0	1	0	76	0
Lane Group Flow (vph)	23	567	831	0	47	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	15.6	15.6	19.7		8.3	
Effective Green, g (s)	15.6	15.6	19.7		8.3	
Actuated g/C Ratio	0.26	0.26	0.33		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	468	937	1181		233	
v/s Ratio Prot	0.01	c0.16	c0.24		c0.03	
v/s Ratio Perm						
v/c Ratio	0.05	0.61	0.70		0.20	
Uniform Delay, d1	16.1	19.0	17.1		22.4	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.2	2.0		0.2	
Delay (s)	16.2	20.1	19.1		22.5	
Level of Service	B	C	B		C	
Approach Delay (s)		20.0	19.1		22.5	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	15.3
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	315	105	61	490	130	223	476	165	20	40	12
Future Volume (vph)	126	315	105	61	490	130	223	476	165	20	40	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3406		1770	3418		3433	3391		3433	3406	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3406		1770	3418		3433	3391		3433	3406	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	350	117	68	544	144	248	529	183	22	44	13
RTOR Reduction (vph)	0	33	0	0	26	0	0	33	0	0	10	0
Lane Group Flow (vph)	140	434	0	68	662	0	248	679	0	22	47	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	8.3	25.6		5.1	22.4		10.5	25.5		1.3	16.3	
Effective Green, g (s)	8.3	25.6		5.1	22.4		10.5	25.5		1.3	16.3	
Actuated g/C Ratio	0.11	0.35		0.07	0.30		0.14	0.35		0.02	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	1186		122	1041		490	1176		60	755	
v/s Ratio Prot	0.04	c0.13		c0.04	c0.19		c0.07	c0.20		0.01	0.01	
v/s Ratio Perm												
v/c Ratio	0.36	0.37		0.56	0.64		0.51	0.58		0.37	0.06	
Uniform Delay, d1	30.2	17.9		33.1	22.0		29.1	19.6		35.7	22.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2		5.4	1.3		0.8	0.7		3.8	0.0	
Delay (s)	30.7	18.1		38.5	23.3		29.9	20.3		39.5	22.6	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		21.0			24.7			22.8			27.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	126	278	59	114	572	36	43	147	8	83	4	4
Future Volume (vph)	126	278	59	114	572	36	43	147	8	83	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99			1.00	1.00	0.85	1.00	0.89
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3438		1770	3503			1770	1863	1567	1770	1633
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3438		1770	3503			1770	1863	1567	1770	1633
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	309	66	127	636	40	47	163	9	92	4	4
RTOR Reduction (vph)	0	22	0	0	5	0	0	0	0	60	0	11
Lane Group Flow (vph)	140	353	0	127	671	0	0	210	9	32	4	6
Confl. Peds. (#/hr)			1			3				2		
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	9.1	20.6		4.8	16.8			5.9	17.3	22.1	0.5	11.9
Effective Green, g (s)	9.1	20.6		4.8	16.8			5.9	17.3	22.1	0.5	11.9
Actuated g/C Ratio	0.14	0.33		0.08	0.27			0.09	0.27	0.35	0.01	0.19
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	255	1124		134	934			165	511	549	14	308
v/s Ratio Prot	0.08	c0.10		c0.07	c0.19			c0.12	0.00	c0.00	0.00	0.00
v/s Ratio Perm										0.02		
v/c Ratio	0.55	0.31		0.95	0.72			1.27	0.02	0.06	0.29	0.02
Uniform Delay, d1	25.0	15.9		29.0	21.0			28.6	16.7	13.6	31.1	20.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1		60.7	2.7			161.4	0.0	0.0	4.1	0.0
Delay (s)	26.3	16.0		89.7	23.6			190.0	16.7	13.6	35.1	20.8
Level of Service	C	B		F	C			F	B	B	D	C
Approach Delay (s)		18.8			34.1				132.8			23.5
Approach LOS		B			C				F			C

Intersection Summary			
HCM 2000 Control Delay	47.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	92	39	23	83	95	58	1309	342	57	357	27
Future Volume (vph)	28	92	39	23	83	95	58	1309	342	57	357	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.92		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3359		3433	3232		3433	4909		3433	5022	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3359		3433	3232		3433	4909		3433	5022	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	102	43	26	92	106	64	1454	380	63	397	30
RTOR Reduction (vph)	0	37	0	0	92	0	0	23	0	0	4	0
Lane Group Flow (vph)	31	108	0	26	106	0	64	1811	0	63	423	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.9	20.3		3.7	19.1		5.7	91.2		5.6	91.2	
Effective Green, g (s)	4.9	20.3		3.7	19.1		5.7	91.2		5.6	91.2	
Actuated g/C Ratio	0.04	0.15		0.03	0.14		0.04	0.65		0.04	0.65	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	61	487		90	440		139	3197		137	3271	
v/s Ratio Prot	c0.02	0.03		0.01	c0.03		c0.02	c0.37		0.02	0.08	
v/s Ratio Perm												
v/c Ratio	0.51	0.22		0.29	0.24		0.46	0.57		0.46	0.13	
Uniform Delay, d1	66.4	52.9		66.9	54.0		65.6	13.5		65.7	9.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.10	0.72	
Incremental Delay, d2	2.4	0.1		0.6	0.1		0.9	0.7		0.9	0.1	
Delay (s)	68.8	53.0		67.5	54.1		66.5	14.2		72.9	6.8	
Level of Service	E	D		E	D		E	B		E	A	
Approach Delay (s)		55.7			55.6			16.0			15.3	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	111	53	45	47	14	200	874	441	14	135	32
Future Volume (vph)	92	111	53	45	47	14	200	874	441	14	135	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3414		1770	3345		1770	3428	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3414		1770	3345		1770	3428	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	102	123	59	50	52	16	222	971	490	16	150	36
RTOR Reduction (vph)	0	47	0	0	14	0	0	56	0	0	20	0
Lane Group Flow (vph)	102	135	0	50	54	0	222	1405	0	16	166	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.8	15.1		3.6	10.9		13.6	37.6		0.6	24.2	
Effective Green, g (s)	7.8	15.1		3.6	10.9		13.6	37.6		0.6	24.2	
Actuated g/C Ratio	0.10	0.20		0.05	0.14		0.18	0.50		0.01	0.32	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	182	669		84	492		318	1665		14	1098	
v/s Ratio Prot	c0.06	c0.04		0.03	0.02		c0.13	c0.42		0.01	0.05	
v/s Ratio Perm												
v/c Ratio	0.56	0.20		0.60	0.11		0.70	0.84		1.14	0.15	
Uniform Delay, d1	32.2	25.2		35.2	28.1		29.0	16.4		37.5	18.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.3		7.3	0.2		5.3	4.3		291.3	0.1	
Delay (s)	34.6	25.5		42.6	28.3		34.3	20.7		328.7	18.4	
Level of Service	C	C		D	C		C	C		F	B	
Approach Delay (s)		28.8			34.4			22.5			43.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	316	62	4	32	36	108	313	166	93	47	23
Future Volume (vph)	211	316	62	4	32	36	108	313	166	93	47	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98			0.93		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3445			3242		1770	3340		1770	3346	
Flt Permitted	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3445			3242		1770	3340		1770	3346	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	234	351	69	4	36	40	120	348	184	103	52	26
RTOR Reduction (vph)	0	15	0	0	35	0	0	64	0	0	19	0
Lane Group Flow (vph)	234	405	0	0	45	0	120	468	0	103	59	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.4	15.4			7.9		6.2	17.1		6.2	17.1	
Effective Green, g (s)	15.4	15.4			7.9		6.2	17.1		6.2	17.1	
Actuated g/C Ratio	0.23	0.23			0.12		0.09	0.26		0.09	0.26	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	412	802			387		166	864		166	865	
v/s Ratio Prot	c0.13	0.12			c0.01		c0.07	c0.14		0.06	0.02	
v/s Ratio Perm												
v/c Ratio	0.57	0.50			0.12		0.72	0.54		0.62	0.07	
Uniform Delay, d1	22.4	22.0			26.0		29.1	21.1		28.8	18.5	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.6			0.1		12.4	1.0		5.1	0.1	
Delay (s)	24.3	22.6			26.1		41.5	22.1		33.9	18.5	
Level of Service	C	C			C		D	C		C	B	
Approach Delay (s)		23.2			26.1			25.7			27.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	19.5
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	1032	119	356	1620	1213	142	162	310	187	36	17
Future Volume (vph)	258	1032	119	356	1620	1213	142	162	310	187	36	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4587	1327	3433	1863	2756	3433	3339	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4587	1327	3433	1863	2756	3433	3339	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	272	1086	125	375	1705	1277	149	171	326	197	38	18
RTOR Reduction (vph)	0	0	66	0	40	222	0	0	36	0	15	0
Lane Group Flow (vph)	272	1086	59	375	2265	455	149	171	290	197	41	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	14.1	66.2	66.2	19.2	72.0	72.0	12.5	26.2	45.4	8.6	22.0	
Effective Green, g (s)	14.1	66.2	66.2	19.2	72.0	72.0	12.5	26.2	45.4	8.6	22.0	
Actuated g/C Ratio	0.10	0.47	0.47	0.14	0.51	0.51	0.09	0.19	0.32	0.06	0.16	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	345	2404	738	470	2359	682	306	348	893	210	524	
v/s Ratio Prot	0.08	0.21		c0.11	c0.49		0.04	c0.09	0.04	c0.06	0.01	
v/s Ratio Perm			0.04			0.34			0.06			
v/c Ratio	0.79	0.45	0.08	0.80	0.96	0.67	0.49	0.49	0.32	0.94	0.08	
Uniform Delay, d1	61.5	24.7	20.2	58.5	32.6	25.1	60.7	50.9	35.7	65.4	50.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.5	0.6	0.2	8.6	11.3	5.1	0.4	2.4	0.1	44.0	0.1	
Delay (s)	72.0	25.4	20.4	67.1	43.9	30.3	61.1	53.4	35.8	109.4	50.5	
Level of Service	E	C	C	E	D	C	E	D	D	F	D	
Approach Delay (s)		33.5			43.7			46.3			96.4	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	134	61	172	221	264	54	416	91	490	1109	36
Future Volume (vph)	19	134	61	172	221	264	54	416	91	490	1109	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1537	1770	1863	1551	1770	4933		3433	5054	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1537	1770	1863	1551	1770	4933		3433	5054	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	149	68	191	246	293	60	462	101	544	1232	40
RTOR Reduction (vph)	0	0	57	0	0	77	0	20	0	0	2	0
Lane Group Flow (vph)	21	149	11	191	246	216	60	543	0	544	1270	0
Confl. Peds. (#/hr)			9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	4.2	23.1	23.1	19.4	38.3	64.8	7.8	51.8		26.5	70.6	
Effective Green, g (s)	4.2	23.1	23.1	19.4	38.3	64.8	7.8	51.8		26.5	70.6	
Actuated g/C Ratio	0.03	0.17	0.17	0.14	0.27	0.46	0.06	0.37		0.19	0.50	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	53	307	253	245	509	717	98	1825		649	2548	
v/s Ratio Prot	0.01	0.08		c0.11	c0.13	0.06	0.03	0.11		c0.16	c0.25	
v/s Ratio Perm			0.01			0.08						
v/c Ratio	0.40	0.49	0.04	0.78	0.48	0.30	0.61	0.30		0.84	0.50	
Uniform Delay, d1	66.7	53.1	49.2	58.2	42.6	23.5	64.6	31.2		54.7	23.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.78		1.00	1.00	
Incremental Delay, d2	1.8	0.4	0.0	13.3	0.3	0.1	7.6	0.4		8.9	0.7	
Delay (s)	68.4	53.5	49.2	71.5	42.8	23.6	82.0	24.9		63.6	23.7	
Level of Service	E	D	D	E	D	C	F	C		E	C	
Approach Delay (s)		53.6			42.6			30.4			35.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	73	708	533	34	26	62
Future Volume (vph)	73	708	533	34	26	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3501		1661	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3501		1661	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	787	592	38	29	69
RTOR Reduction (vph)	0	0	5	0	59	0
Lane Group Flow (vph)	81	787	625	0	39	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	19.0	19.0	16.4		8.2	
Effective Green, g (s)	19.0	19.0	16.4		8.2	
Actuated g/C Ratio	0.32	0.32	0.28		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	570	1141	974		231	
v/s Ratio Prot	0.05	c0.22	c0.18		c0.02	
v/s Ratio Perm						
v/c Ratio	0.14	0.69	0.64		0.17	
Uniform Delay, d1	14.2	17.4	18.7		22.3	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.8	1.5		0.1	
Delay (s)	14.3	19.2	20.2		22.5	
Level of Service	B	B	C		C	
Approach Delay (s)		18.8	20.2		22.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	15.3
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	492	219	158	289	11	199	35	73	136	416	80
Future Volume (vph)	28	492	219	158	289	11	199	35	73	136	416	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.90		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3358		1770	3518		3433	3153		3433	3445	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3358		1770	3518		3433	3153		3433	3445	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	547	243	176	321	12	221	39	81	151	462	89
RTOR Reduction (vph)	0	50	0	0	3	0	0	61	0	0	16	0
Lane Group Flow (vph)	31	740	0	176	330	0	221	59	0	151	535	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	2.1	27.1		13.5	38.5		10.1	20.8		7.9	18.6	
Effective Green, g (s)	2.1	27.1		13.5	38.5		10.1	20.8		7.9	18.6	
Actuated g/C Ratio	0.02	0.32		0.16	0.45		0.12	0.24		0.09	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	84	1066		280	1587		406	768		317	751	
v/s Ratio Prot	0.01	c0.22		c0.10	0.09		c0.06	0.02		0.04	c0.16	
v/s Ratio Perm												
v/c Ratio	0.37	0.69		0.63	0.21		0.54	0.08		0.48	0.71	
Uniform Delay, d1	40.9	25.5		33.6	14.2		35.4	24.8		36.7	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	2.0		4.4	0.1		1.5	0.0		1.1	3.2	
Delay (s)	43.7	27.4		37.9	14.2		36.9	24.9		37.9	34.1	
Level of Service	D	C		D	B		D	C		D	C	
Approach Delay (s)		28.1			22.4			32.7			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	85.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	572	118	66	205	1	5	124	0	127	51	71
Future Volume (vph)	10	572	118	66	205	1	5	124	0	127	51	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4		4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00			1.00		0.85	1.00	0.91
Flt Protected	0.95	1.00		0.95	1.00			0.95		1.00	0.95	1.00
Satd. Flow (prot)	1770	3449		1770	3537			1770		1565	1770	1679
Flt Permitted	0.95	1.00		0.95	1.00			0.95		1.00	0.95	1.00
Satd. Flow (perm)	1770	3449		1770	3537			1770		1565	1770	1679
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	636	131	73	228	1	5	138	0	141	57	79
RTOR Reduction (vph)	0	20	0	0	1	0	0	0	0	90	0	69
Lane Group Flow (vph)	11	747	0	73	228	0	0	143	0	51	57	128
Confl. Peds. (#/hr)						1				3		
Confl. Bikes (#/hr)						1						
Turn Type	Prot	NA		Prot	NA		Prot	Prot		pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	0.5	22.4		4.2	26.6			6.9		21.0	2.8	12.7
Effective Green, g (s)	0.5	22.4		4.2	26.6			6.9		21.0	2.8	12.7
Actuated g/C Ratio	0.01	0.34		0.06	0.40			0.10		0.32	0.04	0.19
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4		4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	13	1170		112	1425			185		497	75	323
v/s Ratio Prot	0.01	c0.22		c0.04	c0.06			c0.08		c0.01	0.03	c0.08
v/s Ratio Perm										0.03		
v/c Ratio	0.85	0.64		0.65	0.16			0.77		0.10	0.76	0.40
Uniform Delay, d1	32.7	18.4		30.2	12.6			28.8		15.9	31.3	23.3
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	162.2	1.1		9.9	0.1			16.5		0.0	32.7	0.3
Delay (s)	194.9	19.5		40.1	12.6			45.3		15.9	63.9	23.6
Level of Service	F	B		D	B			D		B	E	C
Approach Delay (s)		21.9			19.3				30.7			32.7
Approach LOS		C			B				C			C

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	106
Future Volume (vph)	106
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	118
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	77	62	153	250	119	73	403	48	84	1235	127
Future Volume (vph)	38	77	62	153	250	119	73	403	48	84	1235	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3278		3433	3348		3433	4997		3433	5004	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3278		3433	3348		3433	4997		3433	5004	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	86	69	170	278	132	81	448	53	93	1372	141
RTOR Reduction (vph)	0	59	0	0	46	0	0	8	0	0	7	0
Lane Group Flow (vph)	42	96	0	170	364	0	81	493	0	93	1506	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.8	21.3		11.3	25.8		7.7	80.0		8.2	80.6	
Effective Green, g (s)	6.8	21.3		11.3	25.8		7.7	80.0		8.2	80.6	
Actuated g/C Ratio	0.05	0.15		0.08	0.18		0.06	0.57		0.06	0.58	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	85	498		277	616		188	2855		201	2880	
v/s Ratio Prot	0.02	0.03		c0.05	c0.11		0.02	0.10		c0.03	c0.30	
v/s Ratio Perm												
v/c Ratio	0.49	0.19		0.61	0.59		0.43	0.17		0.46	0.52	
Uniform Delay, d1	64.9	51.8		62.2	52.3		64.0	14.3		63.8	18.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.15	0.53	
Incremental Delay, d2	1.6	0.1		2.8	1.0		0.6	0.1		0.6	0.6	
Delay (s)	66.6	51.9		65.1	53.3		64.6	14.4		74.2	10.2	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.0			56.7			21.4			13.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	47	148	296	201	14	178	175	77	26	819	77
Future Volume (vph)	22	47	148	296	201	14	178	175	77	26	819	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.99		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3088		1770	3500		1770	3361		1770	3489	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3088		1770	3500		1770	3361		1770	3489	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	52	164	329	223	16	198	194	86	29	910	86
RTOR Reduction (vph)	0	137	0	0	6	0	0	43	0	0	7	0
Lane Group Flow (vph)	24	79	0	329	233	0	198	237	0	29	989	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	2.1	14.7		15.7	28.3		9.7	39.4		2.2	31.5	
Effective Green, g (s)	2.1	14.7		15.7	28.3		9.7	39.4		2.2	31.5	
Actuated g/C Ratio	0.02	0.16		0.17	0.31		0.11	0.43		0.02	0.35	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	41	501		306	1093		189	1461		42	1213	
v/s Ratio Prot	0.01	0.03		c0.19	c0.07		c0.11	0.07		0.02	c0.28	
v/s Ratio Perm												
v/c Ratio	0.59	0.16		1.08	0.21		1.05	0.16		0.69	0.82	
Uniform Delay, d1	43.8	32.6		37.4	23.0		40.4	15.6		43.9	26.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.0	0.3		72.9	0.2		78.6	0.1		32.7	4.5	
Delay (s)	56.8	33.0		110.3	23.2		119.0	15.6		76.5	31.4	
Level of Service	E	C		F	C		F	B		E	C	
Approach Delay (s)		35.3			73.7			58.5			32.7	
Approach LOS		D			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	33	102	178	360	100	44	71	10	24	268	102
Future Volume (vph)	22	33	102	178	360	100	44	71	10	24	268	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89			0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3107			3402		1770	3469		1770	3378	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3107			3402		1770	3469		1770	3378	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	37	113	198	400	111	49	79	11	27	298	113
RTOR Reduction (vph)	0	97	0	0	13	0	0	8	0	0	37	0
Lane Group Flow (vph)	24	53	0	0	696	0	49	82	0	27	374	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.3	10.3			20.4		3.4	19.1		1.5	17.2	
Effective Green, g (s)	10.3	10.3			20.4		3.4	19.1		1.5	17.2	
Actuated g/C Ratio	0.15	0.15			0.29		0.05	0.27		0.02	0.24	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	257	452			980		85	935		37	820	
v/s Ratio Prot	0.01	c0.02			c0.20		c0.03	0.02		0.02	c0.11	
v/s Ratio Perm												
v/c Ratio	0.09	0.12			0.71		0.58	0.09		0.73	0.46	
Uniform Delay, d1	26.2	26.3			22.6		33.0	19.3		34.4	22.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.1			2.5		5.8	0.1		45.8	0.7	
Delay (s)	26.4	26.4			25.1		38.8	19.4		80.2	23.5	
Level of Service	C	C			C		D	B		F	C	
Approach Delay (s)		26.4			25.1			26.2			27.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	19.5
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1428	123	362	1357	300	187	45	520	916	307	186
Future Volume (vph)	34	1428	123	362	1357	300	187	45	520	916	307	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4788	1335	3433	1863	2764	3433	3305	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4788	1335	3433	1863	2764	3433	3305	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	1503	129	381	1428	316	197	47	547	964	323	196
RTOR Reduction (vph)	0	0	88	0	1	122	0	0	64	0	71	0
Lane Group Flow (vph)	36	1503	41	381	1459	162	197	47	483	964	448	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	4.2	44.0	44.0	19.6	60.1	60.1	12.1	19.0	38.6	37.6	44.2	
Effective Green, g (s)	4.2	44.0	44.0	19.6	60.1	60.1	12.1	19.0	38.6	37.6	44.2	
Actuated g/C Ratio	0.03	0.31	0.31	0.14	0.43	0.43	0.09	0.14	0.28	0.27	0.32	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	102	1598	491	480	2055	573	296	252	762	922	1043	
v/s Ratio Prot	0.01	c0.30		c0.11	0.30		0.06	0.03	c0.09	c0.28	0.14	
v/s Ratio Perm			0.03			0.12			0.09			
v/c Ratio	0.35	0.94	0.08	0.79	0.71	0.28	0.67	0.19	0.63	1.05	0.43	
Uniform Delay, d1	66.6	46.7	33.8	58.2	32.8	26.0	62.0	53.6	44.5	51.2	37.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	12.2	0.3	8.2	2.1	1.2	4.3	0.8	1.3	42.2	0.5	
Delay (s)	67.3	59.0	34.1	66.5	34.9	27.2	66.3	54.5	45.8	93.4	38.4	
Level of Service	E	E	C	E	C	C	E	D	D	F	D	
Approach Delay (s)		57.2			39.5			51.4			74.2	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	205	55	54	203	535	183	1282	293	376	503	82
Future Volume (vph)	40	205	55	54	203	535	183	1282	293	376	503	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1534	1770	1863	1552	1770	4924		3433	4955	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1534	1770	1863	1552	1770	4924		3433	4955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	228	61	60	226	594	203	1424	326	418	559	91
RTOR Reduction (vph)	0	0	50	0	0	57	0	22	0	0	11	0
Lane Group Flow (vph)	44	228	11	60	226	537	203	1728	0	418	639	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	6.7	25.1	25.1	8.1	26.5	50.9	20.5	63.2		24.4	67.2	
Effective Green, g (s)	6.7	25.1	25.1	8.1	26.5	50.9	20.5	63.2		24.4	67.2	
Actuated g/C Ratio	0.05	0.18	0.18	0.06	0.19	0.36	0.15	0.45		0.17	0.48	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	84	334	275	102	352	564	259	2222		598	2378	
v/s Ratio Prot	0.02	0.12		c0.03	0.12	c0.17	0.11	c0.35		0.12	c0.13	
v/s Ratio Perm			0.01			0.18						
v/c Ratio	0.52	0.68	0.04	0.59	0.64	0.95	0.78	0.78		0.70	0.27	
Uniform Delay, d1	65.1	53.7	47.5	64.3	52.4	43.4	57.6	32.5		54.3	21.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.26	0.85		1.00	1.00	
Incremental Delay, d2	2.7	4.5	0.0	5.5	3.0	26.2	10.6	2.1		2.9	0.3	
Delay (s)	67.8	58.3	47.5	69.8	55.4	69.6	82.9	29.7		57.2	22.0	
Level of Service	E	E	D	E	E	E	F	C		E	C	
Approach Delay (s)		57.6			66.0			35.3			35.8	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	580	749	9	27	36
Future Volume (vph)	21	580	749	9	27	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3532		1683	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3532		1683	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	644	832	10	30	40
RTOR Reduction (vph)	0	0	1	0	35	0
Lane Group Flow (vph)	23	644	841	0	35	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	16.7	16.7	20.2		8.2	
Effective Green, g (s)	16.7	16.7	20.2		8.2	
Actuated g/C Ratio	0.28	0.28	0.33		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	489	978	1181		228	
v/s Ratio Prot	0.01	c0.18	c0.24		c0.02	
v/s Ratio Perm						
v/c Ratio	0.05	0.66	0.71		0.16	
Uniform Delay, d1	16.0	19.3	17.6		23.0	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.7	2.1		0.1	
Delay (s)	16.1	21.0	19.7		23.2	
Level of Service	B	C	B		C	
Approach Delay (s)		20.8	19.7		23.2	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	15.3
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	377	120	61	519	157	225	533	165	27	49	33
Future Volume (vph)	203	377	120	61	519	157	225	533	165	27	49	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3411		1770	3405		3433	3403		3433	3301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3411		1770	3405		3433	3403		3433	3301	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	226	419	133	68	577	174	250	592	183	30	54	37
RTOR Reduction (vph)	0	31	0	0	30	0	0	29	0	0	29	0
Lane Group Flow (vph)	226	521	0	68	721	0	250	746	0	30	62	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.9	28.2		6.4	24.7		10.6	26.7		1.3	17.4	
Effective Green, g (s)	9.9	28.2		6.4	24.7		10.6	26.7		1.3	17.4	
Actuated g/C Ratio	0.13	0.36		0.08	0.31		0.13	0.34		0.02	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	432	1223		144	1070		462	1155		56	730	
v/s Ratio Prot	c0.07	c0.15		0.04	c0.21		c0.07	c0.22		0.01	0.02	
v/s Ratio Perm												
v/c Ratio	0.52	0.43		0.47	0.67		0.54	0.65		0.54	0.09	
Uniform Delay, d1	32.1	19.1		34.5	23.4		31.7	22.0		38.4	24.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.2		2.4	1.7		1.3	1.3		9.5	0.1	
Delay (s)	33.3	19.3		36.9	25.1		33.0	23.2		47.9	24.3	
Level of Service	C	B		D	C		C	C		D	C	
Approach Delay (s)		23.4			26.1			25.6			30.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	126	288	146	154	537	36	43	164	9	87	4	12
Future Volume (vph)	126	288	146	154	537	36	43	164	9	87	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.99			1.00	1.00	0.85	1.00	0.93
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3346		1770	3500			1770	1863	1566	1770	1712
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3346		1770	3500			1770	1863	1566	1770	1712
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	320	162	171	597	40	47	182	10	97	4	13
RTOR Reduction (vph)	0	50	0	0	4	0	0	0	0	56	0	11
Lane Group Flow (vph)	140	432	0	171	633	0	0	229	10	41	4	15
Confl. Peds. (#/hr)			1			3				2		
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	10.7	23.0		5.9	18.7			14.7	26.3	32.2	0.6	12.2
Effective Green, g (s)	10.7	23.0		5.9	18.7			14.7	26.3	32.2	0.6	12.2
Actuated g/C Ratio	0.14	0.30		0.08	0.25			0.19	0.35	0.43	0.01	0.16
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	250	1017		138	865			344	648	667	14	276
v/s Ratio Prot	c0.08	0.13		c0.10	c0.18			c0.13	0.01	c0.00	0.00	0.01
v/s Ratio Perm										0.02		
v/c Ratio	0.56	0.42		1.24	0.73			0.67	0.02	0.06	0.29	0.05
Uniform Delay, d1	30.3	21.0		34.8	26.1			28.2	16.2	12.8	37.3	26.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.2		154.6	3.2			3.7	0.0	0.0	4.1	0.0
Delay (s)	32.0	21.3		189.5	29.4			31.9	16.2	12.8	41.3	26.9
Level of Service	C	C		F	C			C	B	B	D	C
Approach Delay (s)		23.7			63.3				25.9			28.8
Approach LOS		C			E				C			C

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.6	Sum of lost time (s)	19.8
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	106	47	28	103	141	74	1562	367	76	476	27
Future Volume (vph)	31	106	47	28	103	141	74	1562	367	76	476	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3353		3433	3207		3433	4923		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3353		3433	3207		3433	4923		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	118	52	31	114	157	82	1736	408	84	529	30
RTOR Reduction (vph)	0	42	0	0	99	0	0	21	0	0	3	0
Lane Group Flow (vph)	34	128	0	31	172	0	82	2123	0	84	556	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.4	23.3		3.2	21.1		7.2	87.2		7.1	87.2	
Effective Green, g (s)	5.4	23.3		3.2	21.1		7.2	87.2		7.1	87.2	
Actuated g/C Ratio	0.04	0.17		0.02	0.15		0.05	0.62		0.05	0.62	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	68	558		78	483		176	3066		174	3137	
v/s Ratio Prot	c0.02	0.04		0.01	c0.05		0.02	c0.43		c0.02	0.11	
v/s Ratio Perm												
v/c Ratio	0.50	0.23		0.40	0.36		0.47	0.69		0.48	0.18	
Uniform Delay, d1	66.0	50.6		67.4	53.4		64.5	17.5		64.7	11.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.04	0.72	
Incremental Delay, d2	2.1	0.1		1.2	0.2		0.7	1.3		0.8	0.1	
Delay (s)	68.1	50.7		68.7	53.5		65.2	18.8		67.7	8.1	
Level of Service	E	D		E	D		E	B		E	A	
Approach Delay (s)		53.6			55.1			20.5			15.9	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	218	53	108	52	30	209	903	594	40	141	33
Future Volume (vph)	98	218	53	108	52	30	209	903	594	40	141	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3420		1770	3344		1770	3309		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3420		1770	3344		1770	3309		1770	3429	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	229	56	114	55	32	220	951	625	42	148	35
RTOR Reduction (vph)	0	17	0	0	28	0	0	85	0	0	15	0
Lane Group Flow (vph)	103	268	0	114	59	0	220	1491	0	42	168	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.5	18.9		10.8	14.2		18.1	52.2		4.5	38.2	
Effective Green, g (s)	15.5	18.9		10.8	14.2		18.1	52.2		4.5	38.2	
Actuated g/C Ratio	0.15	0.18		0.10	0.14		0.17	0.50		0.04	0.36	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	261	615		182	452		305	1645		75	1247	
v/s Ratio Prot	c0.06	c0.08		c0.06	0.02		c0.12	c0.45		0.02	0.05	
v/s Ratio Perm												
v/c Ratio	0.39	0.44		0.63	0.13		0.72	0.91		0.56	0.13	
Uniform Delay, d1	40.5	38.3		45.2	40.0		41.1	24.2		49.3	22.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.1		4.8	0.3		6.9	7.7		5.6	0.1	
Delay (s)	40.9	39.4		49.9	40.3		48.0	31.8		54.9	22.4	
Level of Service	D	D		D	D		D	C		D	C	
Approach Delay (s)		39.8			45.8			33.8			28.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	543	304	14	58	45	219	365	234	173	188	23
Future Volume (vph)	233	543	304	14	58	45	219	365	234	173	188	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95			0.94		1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3333			3295		1770	3314		1770	3475	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3333			3295		1770	3314		1770	3475	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	259	603	338	16	64	50	243	406	260	192	209	26
RTOR Reduction (vph)	0	59	0	0	44	0	0	89	0	0	9	0
Lane Group Flow (vph)	259	882	0	0	86	0	243	577	0	192	226	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	27.6	27.6			10.9		14.9	22.5		13.8	21.4	
Effective Green, g (s)	27.6	27.6			10.9		14.9	22.5		13.8	21.4	
Actuated g/C Ratio	0.29	0.29			0.12		0.16	0.24		0.15	0.23	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	518	975			380		279	790		259	788	
v/s Ratio Prot	0.15	c0.26			c0.03		c0.14	c0.17		0.11	0.07	
v/s Ratio Perm												
v/c Ratio	0.50	0.90			0.23		0.87	0.73		0.74	0.29	
Uniform Delay, d1	27.6	32.1			37.9		38.8	33.1		38.5	30.1	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	11.7			0.3		23.7	3.9		9.6	0.3	
Delay (s)	28.5	43.8			38.2		62.5	37.0		48.1	30.5	
Level of Service	C	D			D		E	D		D	C	
Approach Delay (s)		40.5			38.2			43.8			38.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	94.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	408	1143	139	367	1778	1441	146	215	318	246	53	63
Future Volume (vph)	408	1143	139	367	1778	1441	146	215	318	246	53	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4567	1327	3433	1863	2755	3433	3205	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4567	1327	3433	1863	2755	3433	3205	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	429	1203	146	386	1872	1517	154	226	335	259	56	66
RTOR Reduction (vph)	0	0	79	0	51	207	0	0	36	0	53	0
Lane Group Flow (vph)	429	1203	67	386	2564	567	154	226	299	259	69	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	23.2	64.7	64.7	19.6	61.8	61.8	8.3	27.3	46.9	8.6	27.3	
Effective Green, g (s)	23.2	64.7	64.7	19.6	61.8	61.8	8.3	27.3	46.9	8.6	27.3	
Actuated g/C Ratio	0.17	0.46	0.46	0.14	0.44	0.44	0.06	0.20	0.33	0.06	0.20	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	568	2349	721	480	2016	585	203	363	922	210	624	
v/s Ratio Prot	c0.12	c0.24		0.11	c0.56		0.04	c0.12	0.05	c0.08	0.02	
v/s Ratio Perm			0.04			0.43			0.06			
v/c Ratio	0.76	0.51	0.09	0.80	1.27	0.97	0.76	0.62	0.32	1.23	0.11	
Uniform Delay, d1	55.7	26.5	21.2	58.3	39.1	38.2	64.9	51.6	34.7	65.7	46.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.0	0.8	0.3	8.9	126.4	30.5	13.4	4.8	0.1	139.2	0.1	
Delay (s)	60.7	27.3	21.4	67.3	165.5	68.7	78.3	56.5	34.8	204.9	46.5	
Level of Service	E	C	C	E	F	E	E	E	C	F	D	
Approach Delay (s)		34.9			135.6			51.0			154.2	
Approach LOS		C			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	100.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	185	103	204	258	356	95	577	101	580	1419	36
Future Volume (vph)	19	185	103	204	258	356	95	577	101	580	1419	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1538	1770	1863	1552	1770	4959		3433	5061	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1538	1770	1863	1552	1770	4959		3433	5061	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	206	114	227	287	396	106	641	112	644	1577	40
RTOR Reduction (vph)	0	0	93	0	0	53	0	16	0	0	2	0
Lane Group Flow (vph)	21	206	21	227	287	343	106	737	0	644	1615	0
Confl. Peds. (#/hr)			9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	25.4	25.4	20.9	42.7	71.9	11.4	45.3		29.2	63.2	
Effective Green, g (s)	3.6	25.4	25.4	20.9	42.7	71.9	11.4	45.3		29.2	63.2	
Actuated g/C Ratio	0.03	0.18	0.18	0.15	0.31	0.51	0.08	0.32		0.21	0.45	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	338	279	264	568	797	144	1604		716	2284	
v/s Ratio Prot	0.01	c0.11		c0.13	0.15	0.09	0.06	0.15		c0.19	c0.32	
v/s Ratio Perm			0.01			0.13						
v/c Ratio	0.47	0.61	0.07	0.86	0.51	0.43	0.74	0.46		0.90	0.71	
Uniform Delay, d1	67.3	52.7	47.5	58.1	40.0	21.3	62.8	37.6		54.0	30.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.76		1.00	1.00	
Incremental Delay, d2	2.8	2.1	0.0	22.5	0.3	0.1	15.1	0.9		13.8	1.9	
Delay (s)	70.0	54.9	47.6	80.6	40.2	21.4	91.9	29.4		67.8	32.8	
Level of Service	E	D	D	F	D	C	F	C		E	C	
Approach Delay (s)		53.4			42.1			37.1			42.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	73	728	601	38	27	62
Future Volume (vph)	73	728	601	38	27	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3539	3502		1662	
Flt Permitted	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	3539	3502		1662	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	809	668	42	30	69
RTOR Reduction (vph)	0	0	5	0	60	0
Lane Group Flow (vph)	81	809	705	0	39	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	19.8	19.8	17.8		8.3	
Effective Green, g (s)	19.8	19.8	17.8		8.3	
Actuated g/C Ratio	0.32	0.32	0.29		0.14	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	572	1144	1018		225	
v/s Ratio Prot	0.05	c0.23	c0.20		c0.02	
v/s Ratio Perm						
v/c Ratio	0.14	0.71	0.69		0.17	
Uniform Delay, d1	14.7	18.2	19.3		23.4	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	2.1	2.1		0.1	
Delay (s)	14.8	20.3	21.4		23.6	
Level of Service	B	C	C		C	
Approach Delay (s)		19.8	21.4		23.6	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	15.3
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	533	223	159	352	22	214	53	74	164	463	181
Future Volume (vph)	56	533	223	159	352	22	214	53	74	164	463	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.91		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3365		1770	3505		3433	3206		3433	3376	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3365		1770	3505		3433	3206		3433	3376	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	592	248	177	391	24	238	59	82	182	514	201
RTOR Reduction (vph)	0	47	0	0	5	0	0	61	0	0	41	0
Lane Group Flow (vph)	62	793	0	177	410	0	238	80	0	182	674	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.8	28.2		13.2	37.6		9.7	22.8		9.2	22.3	
Effective Green, g (s)	3.8	28.2		13.2	37.6		9.7	22.8		9.2	22.3	
Actuated g/C Ratio	0.04	0.32		0.15	0.42		0.11	0.26		0.10	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	145	1061		261	1474		372	817		353	842	
v/s Ratio Prot	0.02	c0.24		c0.10	0.12		c0.07	0.02		0.05	c0.20	
v/s Ratio Perm												
v/c Ratio	0.43	0.75		0.68	0.28		0.64	0.10		0.52	0.80	
Uniform Delay, d1	41.7	27.4		36.1	17.0		38.2	25.4		38.0	31.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	2.9		6.8	0.1		3.6	0.1		1.3	5.5	
Delay (s)	43.8	30.3		42.9	17.1		41.8	25.5		39.3	36.9	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		31.2			24.8			35.7			37.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	11	594	140	72	219	1	5	216	6	162	51	72
Future Volume (vph)	11	594	140	72	219	1	5	216	6	162	51	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00			1.00	1.00	0.85	1.00	0.91
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3438		1770	3537			1770	1863	1566	1770	1678
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3438		1770	3537			1770	1863	1566	1770	1678
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	660	156	80	243	1	5	240	7	180	57	80
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	86	0	48
Lane Group Flow (vph)	12	799	0	80	244	0	0	245	7	94	57	151
Confl. Peds. (#/hr)						1				3		
Confl. Bikes (#/hr)						1						
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	0.6	29.5		8.4	37.8			16.6	25.4	33.8	5.9	14.7
Effective Green, g (s)	0.6	29.5		8.4	37.8			16.6	25.4	33.8	5.9	14.7
Actuated g/C Ratio	0.01	0.33		0.09	0.42			0.19	0.29	0.38	0.07	0.17
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	11	1139		167	1502			330	531	594	117	277
v/s Ratio Prot	0.01	c0.23		c0.05	0.07			c0.14	0.00	0.01	0.03	c0.09
v/s Ratio Perm										0.05		
v/c Ratio	1.09	0.70		0.48	0.16			0.74	0.01	0.16	0.49	0.54
Uniform Delay, d1	44.2	25.9		38.2	15.8			34.2	22.8	18.2	40.1	34.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	304.6	1.9		0.8	0.1			7.7	0.0	0.0	1.2	1.2
Delay (s)	348.8	27.8		39.0	15.9			41.8	22.8	18.3	41.3	35.2
Level of Service	F	C		D	B			D	C	B	D	D
Approach Delay (s)		32.5			21.6				31.7			36.6
Approach LOS		C			C				C			D

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	107
Future Volume (vph)	107
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	119
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	96	81	188	266	138	82	564	60	143	1542	130
Future Volume (vph)	38	96	81	188	266	138	82	564	60	143	1542	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3271		3433	3337		3433	5004		3433	5017	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3271		3433	3337		3433	5004		3433	5017	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	107	90	209	296	153	91	627	67	159	1713	144
RTOR Reduction (vph)	0	76	0	0	53	0	0	7	0	0	6	0
Lane Group Flow (vph)	42	121	0	209	396	0	91	687	0	159	1851	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.5	21.3		12.5	27.3		7.7	76.6		10.4	79.4	
Effective Green, g (s)	6.5	21.3		12.5	27.3		7.7	76.6		10.4	79.4	
Actuated g/C Ratio	0.05	0.15		0.09	0.20		0.06	0.55		0.07	0.57	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	82	497		306	650		188	2737		255	2845	
v/s Ratio Prot	0.02	0.04		c0.06	c0.12		0.03	0.14		c0.05	c0.37	
v/s Ratio Perm												
v/c Ratio	0.51	0.24		0.68	0.61		0.48	0.25		0.62	0.65	
Uniform Delay, d1	65.2	52.3		61.8	51.5		64.2	16.6		62.9	20.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.11	0.63	
Incremental Delay, d2	2.2	0.1		4.9	1.1		0.7	0.2		2.6	0.9	
Delay (s)	67.4	52.3		66.8	52.6		64.9	16.9		72.7	14.0	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.0			57.1			22.4			18.6	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	73	148	434	230	31	251	197	113	44	850	83
Future Volume (vph)	24	73	148	434	230	31	251	197	113	44	850	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	*0.97		1.00	*0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3133		1770	3469		1770	3396		1770	3561	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3133		1770	3469		1770	3396		1770	3561	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	77	156	457	242	33	264	207	119	46	895	87
RTOR Reduction (vph)	0	138	0	0	8	0	0	57	0	0	5	0
Lane Group Flow (vph)	25	95	0	457	267	0	264	269	0	46	977	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.6	14.9		35.7	47.0		21.1	53.6		6.3	38.4	
Effective Green, g (s)	3.6	14.9		35.7	47.0		21.1	53.6		6.3	38.4	
Actuated g/C Ratio	0.03	0.12		0.28	0.36		0.16	0.42		0.05	0.30	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	49	361		489	1262		289	1409		86	1059	
v/s Ratio Prot	0.01	c0.03		c0.26	0.08		c0.15	0.08		0.03	c0.27	
v/s Ratio Perm												
v/c Ratio	0.51	0.26		0.93	0.21		0.91	0.19		0.53	0.92	
Uniform Delay, d1	61.9	52.1		45.6	28.3		53.1	24.0		60.0	43.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.7	0.9		24.9	0.2		30.8	0.1		3.2	13.1	
Delay (s)	65.6	53.0		70.5	28.5		83.9	24.1		63.1	57.0	
Level of Service	E	D		E	C		F	C		E	E	
Approach Delay (s)		54.2			54.7			50.8			57.3	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	129.1	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	59	335	241	562	169	283	195	22	36	350	102
Future Volume (vph)	71	59	335	241	562	169	283	195	22	36	350	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.97		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3051			3397		1770	3482		1770	3406	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3051			3397		1770	3482		1770	3406	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	66	372	268	624	188	314	217	24	40	389	113
RTOR Reduction (vph)	0	329	0	0	13	0	0	6	0	0	21	0
Lane Group Flow (vph)	79	109	0	0	1067	0	314	235	0	40	481	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.5	12.5			37.6		17.8	37.3		4.0	23.5	
Effective Green, g (s)	12.5	12.5			37.6		17.8	37.3		4.0	23.5	
Actuated g/C Ratio	0.11	0.11			0.34		0.16	0.34		0.04	0.21	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	199	343			1151		284	1171		63	721	
v/s Ratio Prot	c0.04	0.04			c0.31		c0.18	0.07		0.02	c0.14	
v/s Ratio Perm												
v/c Ratio	0.40	0.32			0.93		1.11	0.20		0.63	0.67	
Uniform Delay, d1	45.7	45.3			35.3		46.6	26.2		52.7	40.1	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.6			12.7		84.7	0.1		14.3	2.8	
Delay (s)	47.1	45.9			48.0		131.3	26.3		67.1	42.9	
Level of Service	D	D			D		F	C		E	D	
Approach Delay (s)		46.1			48.0			85.7			44.7	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.9	Sum of lost time (s)	19.5
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	1620	145	397	1513	386	202	65	553	1152	365	327
Future Volume (vph)	121	1620	145	397	1513	386	202	65	553	1152	365	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4785	1335	3433	1863	2766	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4785	1335	3433	1863	2766	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	127	1705	153	418	1593	406	213	68	582	1213	384	344
RTOR Reduction (vph)	0	0	111	0	2	153	0	0	61	0	87	0
Lane Group Flow (vph)	127	1705	42	418	1632	212	213	68	521	1213	641	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	9.2	38.0	38.0	23.8	53.3	53.3	13.0	19.5	43.3	38.9	45.1	
Effective Green, g (s)	9.2	38.0	38.0	23.8	53.3	53.3	13.0	19.5	43.3	38.9	45.1	
Actuated g/C Ratio	0.07	0.27	0.27	0.17	0.38	0.38	0.09	0.14	0.31	0.28	0.32	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	225	1380	424	583	1821	508	318	259	855	953	1045	
v/s Ratio Prot	0.04	c0.34		c0.12	c0.34		0.06	0.04	0.10	c0.35	c0.20	
v/s Ratio Perm			0.03			0.16			0.08			
v/c Ratio	0.56	1.24	0.10	0.72	0.90	0.42	0.67	0.26	0.61	1.27	0.61	
Uniform Delay, d1	63.5	51.0	38.2	54.9	40.8	31.9	61.4	53.8	41.2	50.5	40.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.9	112.4	0.5	3.5	7.4	2.5	4.1	1.2	0.9	131.0	1.4	
Delay (s)	65.4	163.4	38.6	58.4	48.1	34.4	65.5	55.0	42.0	181.6	41.5	
Level of Service	E	F	D	E	D	C	E	E	D	F	D	
Approach Delay (s)		147.5			47.8			48.8			129.0	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	97.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	293	63	62	209	551	188	1320	418	537	579	84
Future Volume (vph)	41	293	63	62	209	551	188	1320	418	537	579	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1535	1770	1863	1552	1770	4877		3433	4967	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1535	1770	1863	1552	1770	4877		3433	4967	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	326	70	69	232	612	209	1467	464	597	643	93
RTOR Reduction (vph)	0	0	56	0	0	31	0	39	0	0	11	0
Lane Group Flow (vph)	46	326	14	69	232	581	209	1892	0	597	725	0
Confl. Peds. (#/hr)			10			21			5			4
Confl. Bikes (#/hr)			6			6			3			5
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	4.5	28.2	28.2	7.3	31.0	59.3	20.5	57.0		28.3	64.9	
Effective Green, g (s)	4.5	28.2	28.2	7.3	31.0	59.3	20.5	57.0		28.3	64.9	
Actuated g/C Ratio	0.03	0.20	0.20	0.05	0.22	0.42	0.15	0.41		0.20	0.46	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	56	375	309	92	412	657	259	1985		693	2302	
v/s Ratio Prot	0.03	0.18		c0.04	0.12	c0.18	0.12	c0.39		0.17	0.15	
v/s Ratio Perm			0.01			0.20						
v/c Ratio	0.82	0.87	0.05	0.75	0.56	0.88	0.81	0.95		0.86	0.31	
Uniform Delay, d1	67.4	54.1	45.1	65.4	48.5	37.2	57.8	40.2		54.0	23.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.23	0.82		1.00	1.00	
Incremental Delay, d2	58.0	18.2	0.0	25.8	1.1	13.1	11.0	8.7		10.4	0.4	
Delay (s)	125.4	72.3	45.1	91.2	49.5	50.3	82.1	41.8		64.3	23.9	
Level of Service	F	E	D	F	D	D	F	D		E	C	
Approach Delay (s)		73.6			53.2			45.8			42.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	866	1069	9	54	115
Future Volume (vph)	22	866	1069	9	54	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3534		1665	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3534		1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	962	1188	10	60	128
RTOR Reduction (vph)	0	0	1	0	109	0
Lane Group Flow (vph)	24	962	1197	0	79	0
Confl. Peds. (#/hr)				4		
Confl. Bikes (#/hr)				3		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	23.1	23.1	23.0		9.4	
Effective Green, g (s)	23.1	23.1	23.0		9.4	
Actuated g/C Ratio	0.33	0.33	0.32		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	577	1154	1148		221	
v/s Ratio Prot	0.01	c0.27	c0.34		c0.05	
v/s Ratio Perm						
v/c Ratio	0.04	0.83	1.04		0.36	
Uniform Delay, d1	16.3	22.1	23.9		27.9	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	5.4	38.5		0.4	
Delay (s)	16.3	27.5	62.4		28.3	
Level of Service	B	C	E		C	
Approach Delay (s)		27.2	62.4		28.3	
Approach LOS		C	E		C	

Intersection Summary			
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	15.3
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	495	163	83	775	162	336	549	216	35	67	49
Future Volume (vph)	209	495	163	83	775	162	336	549	216	35	67	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3408		1770	3439		3433	3376		3433	3292	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3408		1770	3439		3433	3376		3433	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	232	550	181	92	861	180	373	610	240	39	74	54
RTOR Reduction (vph)	0	30	0	0	18	0	0	42	0	0	43	0
Lane Group Flow (vph)	232	701	0	92	1023	0	373	808	0	39	85	0
Confl. Peds. (#/hr)						1			1			4
Confl. Bikes (#/hr)						1			1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	9.0	34.3		7.6	32.9		14.4	29.5		3.2	18.3	
Effective Green, g (s)	9.0	34.3		7.6	32.9		14.4	29.5		3.2	18.3	
Actuated g/C Ratio	0.10	0.38		0.08	0.36		0.16	0.33		0.04	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341	1290		148	1248		545	1099		121	664	
v/s Ratio Prot	c0.07	0.21		0.05	c0.30		c0.11	c0.24		0.01	0.03	
v/s Ratio Perm												
v/c Ratio	0.68	0.54		0.62	0.82		0.68	0.74		0.32	0.13	
Uniform Delay, d1	39.4	22.0		40.1	26.2		36.0	27.1		42.6	29.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.5	0.5		7.9	4.3		3.5	2.6		1.5	0.1	
Delay (s)	44.9	22.5		48.0	30.5		39.5	29.7		44.2	29.7	
Level of Service	D	C		D	C		D	C		D	C	
Approach Delay (s)		27.9			31.9			32.7			33.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	130	501	160	168	704	37	43	229	9	151	7	13
Future Volume (vph)	130	501	160	168	704	37	43	229	9	151	7	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.99			1.00	1.00	0.85	1.00	0.92
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3400		1770	3508			1770	1863	1567	1770	1693
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3400		1770	3508			1770	1863	1567	1770	1693
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	557	178	187	782	41	47	254	10	168	8	14
RTOR Reduction (vph)	0	33	0	0	4	0	0	0	0	102	0	15
Lane Group Flow (vph)	144	702	0	187	819	0	0	301	10	66	8	17
Confl. Peds. (#/hr)			1			3				2		
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	9.7	22.6		6.9	20.3			9.3	20.8	27.7	0.6	12.1
Effective Green, g (s)	9.7	22.6		6.9	20.3			9.3	20.8	27.7	0.6	12.1
Actuated g/C Ratio	0.14	0.32		0.10	0.29			0.13	0.29	0.39	0.01	0.17
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	242	1086		172	1007			232	548	613	15	289
v/s Ratio Prot	0.08	c0.21		c0.11	c0.23			c0.17	0.01	c0.01	0.00	0.01
v/s Ratio Perm										0.03		
v/c Ratio	0.60	0.65		1.09	0.81			1.30	0.02	0.11	0.53	0.06
Uniform Delay, d1	28.7	20.6		31.9	23.4			30.7	17.7	13.7	34.9	24.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	1.2		93.8	5.1			161.8	0.0	0.0	17.0	0.0
Delay (s)	31.3	21.9		125.7	28.5			192.5	17.7	13.7	51.9	24.6
Level of Service	C	C		F	C			F	B	B	D	C
Approach Delay (s)		23.4			46.5				126.2			30.0
Approach LOS		C			D				F			C

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	19.8
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	16
Future Volume (vph)	16
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	18
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	109	48	29	106	162	76	1798	378	78	490	28
Future Volume (vph)	36	109	48	29	106	162	76	1798	378	78	490	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3354		3433	3193		3433	4937		3433	5037	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3354		3433	3193		3433	4937		3433	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	121	53	32	118	180	84	1998	420	87	544	31
RTOR Reduction (vph)	0	39	0	0	74	0	0	19	0	0	4	0
Lane Group Flow (vph)	40	135	0	32	224	0	84	2399	0	87	571	0
Confl. Peds. (#/hr)			8			1			3			8
Confl. Bikes (#/hr)			1						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.8	25.1		3.3	22.6		7.3	85.6		6.8	85.2	
Effective Green, g (s)	5.8	25.1		3.3	22.6		7.3	85.6		6.8	85.2	
Actuated g/C Ratio	0.04	0.18		0.02	0.16		0.05	0.61		0.05	0.61	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	73	601		80	515		179	3018		166	3065	
v/s Ratio Prot	c0.02	0.04		0.01	c0.07		0.02	c0.49		c0.03	0.11	
v/s Ratio Perm												
v/c Ratio	0.55	0.22		0.40	0.44		0.47	0.80		0.52	0.19	
Uniform Delay, d1	65.8	49.1		67.4	52.9		64.5	20.6		65.0	12.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.05	0.66	
Incremental Delay, d2	4.4	0.1		1.2	0.2		0.7	2.3		1.3	0.1	
Delay (s)	70.3	49.2		68.6	53.2		65.2	22.8		69.5	8.2	
Level of Service	E	D		E	D		E	C		E	A	
Approach Delay (s)		53.1			54.7			24.2			16.2	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	225	61	124	54	41	215	1227	612	41	161	34
Future Volume (vph)	133	225	61	124	54	41	215	1227	612	41	161	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3410		1770	3311		1770	3346		1770	3438	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3410		1770	3311		1770	3346		1770	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	237	64	131	57	43	226	1292	644	43	169	36
RTOR Reduction (vph)	0	20	0	0	37	0	0	43	0	0	12	0
Lane Group Flow (vph)	140	281	0	131	63	0	226	1893	0	43	193	0
Confl. Peds. (#/hr)			5						2			1
Confl. Bikes (#/hr)			3						1			
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.9	18.1		10.8	18.0		19.1	68.4		3.4	52.3	
Effective Green, g (s)	10.9	18.1		10.8	18.0		19.1	68.4		3.4	52.3	
Actuated g/C Ratio	0.09	0.15		0.09	0.15		0.16	0.57		0.03	0.44	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	161	517		160	499		283	1918		50	1507	
v/s Ratio Prot	c0.08	c0.08		0.07	0.02		c0.13	c0.57		0.02	0.06	
v/s Ratio Perm												
v/c Ratio	0.87	0.54		0.82	0.13		0.80	0.99		0.86	0.13	
Uniform Delay, d1	53.5	46.8		53.3	43.8		48.2	25.0		57.7	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.9	2.2		25.5	0.3		13.6	17.4		74.2	0.0	
Delay (s)	88.4	49.0		78.8	44.1		61.8	42.5		131.9	20.0	
Level of Service	F	D		E	D		E	D		F	B	
Approach Delay (s)		61.5			63.8			44.5			39.4	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	119.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	559	462	21	60	49	226	399	241	178	286	24
Future Volume (vph)	255	559	462	21	60	49	226	399	241	178	286	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93			0.94		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3279			3294		1770	3321		1770	3493	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3279			3294		1770	3321		1770	3493	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	283	621	513	23	67	54	251	443	268	198	318	27
RTOR Reduction (vph)	0	97	0	0	49	0	0	66	0	0	5	0
Lane Group Flow (vph)	283	1037	0	0	95	0	251	645	0	198	340	0
Confl. Peds. (#/hr)			1			3			2			2
Confl. Bikes (#/hr)												1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	42.5	42.5			11.7		20.3	28.1		16.5	24.3	
Effective Green, g (s)	42.5	42.5			11.7		20.3	28.1		16.5	24.3	
Actuated g/C Ratio	0.36	0.36			0.10		0.17	0.24		0.14	0.21	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	635	1178			325		303	788		246	717	
v/s Ratio Prot	0.16	c0.32			c0.03		c0.14	c0.19		0.11	0.10	
v/s Ratio Perm												
v/c Ratio	0.45	0.88			0.29		0.83	0.82		0.80	0.47	
Uniform Delay, d1	28.9	35.5			49.5		47.3	42.7		49.3	41.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	7.9			0.6		16.0	7.3		16.3	0.8	
Delay (s)	29.5	43.4			50.0		63.4	50.0		65.6	42.2	
Level of Service	C	D			D		E	D		E	D	
Approach Delay (s)		40.6			50.0			53.5			50.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	118.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	467	1177	143	378	1831	1648	150	246	328	253	55	65
Future Volume (vph)	467	1177	143	378	1831	1648	150	246	328	253	55	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99	0.97	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1562	3433	4545	1327	3433	1863	2755	3433	3206	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1562	3433	4545	1327	3433	1863	2755	3433	3206	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	492	1239	151	398	1927	1735	158	259	345	266	58	68
RTOR Reduction (vph)	0	0	82	0	58	190	0	0	35	0	54	0
Lane Group Flow (vph)	492	1239	69	398	2737	677	158	259	310	266	72	0
Confl. Peds. (#/hr)			1			9			6			12
Confl. Bikes (#/hr)						1			1			1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	22.0	62.9	62.9	20.1	61.7	61.7	8.6	28.6	48.7	8.6	28.3	
Effective Green, g (s)	22.0	62.9	62.9	20.1	61.7	61.7	8.6	28.6	48.7	8.6	28.3	
Actuated g/C Ratio	0.16	0.45	0.45	0.14	0.44	0.44	0.06	0.20	0.35	0.06	0.20	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	539	2284	701	492	2003	584	210	380	958	210	648	
v/s Ratio Prot	c0.14	0.24		0.12	c0.60		0.05	c0.14	0.05	c0.08	0.02	
v/s Ratio Perm			0.04			0.51			0.07			
v/c Ratio	0.91	0.54	0.10	0.81	1.37	1.16	0.75	0.68	0.32	1.27	0.11	
Uniform Delay, d1	58.1	28.1	22.2	58.1	39.1	39.1	64.7	51.5	33.5	65.7	45.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.6	0.9	0.3	9.0	168.2	89.9	12.6	6.6	0.1	152.1	0.1	
Delay (s)	77.6	29.0	22.5	67.1	207.3	129.0	77.3	58.1	33.6	217.8	45.7	
Level of Service	E	C	C	E	F	F	E	E	C	F	D	
Approach Delay (s)		41.2			176.8			51.0			162.5	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	126.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	264	119	235	266	367	98	594	144	828	1633	37
Future Volume (vph)	20	264	119	235	266	367	98	594	144	828	1633	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1538	1770	1863	1556	1770	4919		3433	5063	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1538	1770	1863	1556	1770	4919		3433	5063	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	293	132	261	296	408	109	660	160	920	1814	41
RTOR Reduction (vph)	0	0	106	0	0	41	0	28	0	0	2	0
Lane Group Flow (vph)	22	293	26	261	296	367	109	792	0	920	1853	0
Confl. Peds. (#/hr)	220		9			17			2			7
Confl. Bikes (#/hr)			5			8			3			8
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.6	28.0	28.0	21.7	46.1	87.4	12.1	29.8		41.3	59.1	
Effective Green, g (s)	3.6	28.0	28.0	21.7	46.1	87.4	12.1	29.8		41.3	59.1	
Actuated g/C Ratio	0.03	0.20	0.20	0.15	0.33	0.62	0.09	0.21		0.29	0.42	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.2		2.0	4.2	
Lane Grp Cap (vph)	45	372	307	274	613	971	152	1047		1012	2137	
v/s Ratio Prot	0.01	c0.16		c0.15	0.16	0.11	0.06	0.16		c0.27	c0.37	
v/s Ratio Perm			0.02			0.12						
v/c Ratio	0.49	0.79	0.09	0.95	0.48	0.38	0.72	0.76		0.91	0.87	
Uniform Delay, d1	67.3	53.2	45.6	58.6	37.4	12.9	62.3	51.7		47.5	36.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	0.82		1.00	1.00	
Incremental Delay, d2	3.0	9.8	0.0	41.1	0.2	0.1	12.1	4.9		11.4	5.1	
Delay (s)	70.3	62.9	45.6	99.7	37.7	13.0	84.7	47.1		58.9	41.9	
Level of Service	E	E	D	F	D	B	F	D		E	D	
Approach Delay (s)		58.2			44.0			51.5			47.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	1087	858	39	40	89
Future Volume (vph)	75	1087	858	39	40	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.9	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3512		1663	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3512		1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	1208	953	43	44	99
RTOR Reduction (vph)	0	0	3	0	86	0
Lane Group Flow (vph)	83	1208	993	0	57	0
Confl. Peds. (#/hr)				3		
Confl. Bikes (#/hr)				4		
Turn Type	Split	NA	NA		Prot	
Protected Phases	2	2	6		4	
Permitted Phases						
Actuated Green, G (s)	23.9	23.9	22.2		8.9	
Effective Green, g (s)	23.9	23.9	22.2		8.9	
Actuated g/C Ratio	0.34	0.34	0.32		0.13	
Clearance Time (s)	5.2	5.2	5.2		4.9	
Vehicle Extension (s)	3.5	3.5	3.5		2.0	
Lane Grp Cap (vph)	601	1203	1109		210	
v/s Ratio Prot	0.05	c0.34	c0.28		c0.03	
v/s Ratio Perm						
v/c Ratio	0.14	1.00	0.90		0.27	
Uniform Delay, d1	16.1	23.2	22.9		27.8	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	27.0	9.7		0.3	
Delay (s)	16.2	50.2	32.6		28.0	
Level of Service	B	D	C		C	
Approach Delay (s)		48.0	32.6		28.0	
Approach LOS		D	C		C	

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	15.3
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	699	303	216	526	23	320	55	97	215	629	270
Future Volume (vph)	58	699	303	216	526	23	320	55	97	215	629	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	*0.97		1.00	*0.97		0.97	*0.97		0.97	*0.97	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.90		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3431		1770	3588		3433	3239		3433	3436	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3431		1770	3588		3433	3239		3433	3436	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	777	337	240	584	26	356	61	108	239	699	300
RTOR Reduction (vph)	0	51	0	0	3	0	0	78	0	0	51	0
Lane Group Flow (vph)	64	1063	0	240	607	0	356	91	0	239	948	0
Confl. Peds. (#/hr)			4			4			1			1
Confl. Bikes (#/hr)			1			2						2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.2	32.8		12.0	41.6		11.0	27.8		12.2	29.0	
Effective Green, g (s)	3.2	32.8		12.0	41.6		11.0	27.8		12.2	29.0	
Actuated g/C Ratio	0.03	0.33		0.12	0.41		0.11	0.28		0.12	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	108	1116		210	1480		374	893		415	988	
v/s Ratio Prot	0.02	c0.31		c0.14	0.17		c0.10	0.03		0.07	c0.28	
v/s Ratio Perm												
v/c Ratio	0.59	0.95		1.14	0.41		0.95	0.10		0.58	0.96	
Uniform Delay, d1	48.2	33.2		44.4	20.9		44.6	27.2		41.9	35.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.4	16.8		105.9	0.2		34.0	0.1		1.9	19.4	
Delay (s)	56.6	50.0		150.3	21.1		78.7	27.2		43.8	54.7	
Level of Service	E	D		F	C		E	C		D	D	
Approach Delay (s)		50.4			57.6			62.1			52.6	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	11	1033	153	79	287	1	4	286	6	282	89	79
Future Volume (vph)	11	1033	153	79	287	1	4	286	6	282	89	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Lane Util. Factor	1.00	*0.96		1.00	*0.96			1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	0.99	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00			1.00	1.00	0.85	1.00	0.90
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3507		1770	3575			1770	1863	1564	1770	1665
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3507		1770	3575			1770	1863	1564	1770	1665
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1148	170	88	319	1	4	318	7	313	99	88
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	78	0	73
Lane Group Flow (vph)	12	1307	0	88	320	0	0	322	7	235	99	171
Confl. Peds. (#/hr)						1				3		
Confl. Bikes (#/hr)						1						
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2		1	6		3	3	8	1	7	4
Permitted Phases										8		
Actuated Green, G (s)	0.7	39.9		4.6	44.3			12.7	19.9	24.5	7.7	14.9
Effective Green, g (s)	0.7	39.9		4.6	44.3			12.7	19.9	24.5	7.7	14.9
Actuated g/C Ratio	0.01	0.43		0.05	0.48			0.14	0.22	0.27	0.08	0.16
Clearance Time (s)	4.4	6.1		4.4	5.6			4.4	4.9	4.4	4.4	4.9
Vehicle Extension (s)	2.0	2.7		2.0	3.0			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	13	1522		88	1723			244	403	416	148	269
v/s Ratio Prot	0.01	c0.37		c0.05	c0.09			c0.18	0.00	c0.03	0.06	0.10
v/s Ratio Perm										0.12		
v/c Ratio	0.92	0.86		1.00	0.19			1.32	0.02	0.57	0.67	0.64
Uniform Delay, d1	45.6	23.5		43.7	13.5			39.6	28.3	29.1	40.9	36.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	205.3	5.0		95.9	0.1			169.7	0.0	1.1	8.6	3.6
Delay (s)	250.8	28.5		139.6	13.6			209.3	28.3	30.2	49.4	39.6
Level of Service	F	C		F	B			F	C	C	D	D
Approach Delay (s)		30.5			40.8				120.0			42.4
Approach LOS		C			D				F			D

Intersection Summary			
HCM 2000 Control Delay	54.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	19.8
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	140
Future Volume (vph)	140
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	156
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	99	83	194	274	159	84	649	62	147	1588	134
Future Volume (vph)	44	99	83	194	274	159	84	649	62	147	1588	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3272		3433	3321		3433	5012		3433	5017	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3272		3433	3321		3433	5012		3433	5017	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	110	92	216	304	177	93	721	69	163	1764	149
RTOR Reduction (vph)	0	78	0	0	67	0	0	6	0	0	6	0
Lane Group Flow (vph)	49	124	0	216	414	0	93	784	0	163	1907	0
Confl. Peds. (#/hr)			4			4			1			5
Confl. Bikes (#/hr)						2			3			4
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Effective Green, g (s)	6.9	21.8		12.7	27.6		7.7	75.7		10.6	78.7	
Actuated g/C Ratio	0.05	0.16		0.09	0.20		0.06	0.54		0.08	0.56	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	5.5		4.4	5.4	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.6		2.0	3.8	
Lane Grp Cap (vph)	87	509		311	654		188	2710		259	2820	
v/s Ratio Prot	0.03	0.04		c0.06	c0.12		0.03	0.16		c0.05	c0.38	
v/s Ratio Perm												
v/c Ratio	0.56	0.24		0.69	0.63		0.49	0.29		0.63	0.68	
Uniform Delay, d1	65.1	51.9		61.8	51.6		64.3	17.5		62.8	21.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.15	0.52	
Incremental Delay, d2	4.9	0.1		5.3	1.5		0.7	0.3		1.9	0.7	
Delay (s)	70.0	52.0		67.1	53.0		65.0	17.8		74.0	12.0	
Level of Service	E	D		E	D		E	B		E	B	
Approach Delay (s)		55.5			57.4			22.7			16.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	75	169	496	237	42	259	268	116	45	972	85
Future Volume (vph)	33	75	169	496	237	42	259	268	116	45	972	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Lane Util. Factor	1.00	*0.96		1.00	*0.96		1.00	*0.96		1.00	*0.96	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3152		1770	3488		1770	3398		1770	3529	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3152		1770	3488		1770	3398		1770	3529	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	79	178	522	249	44	273	282	122	47	1023	89
RTOR Reduction (vph)	0	157	0	0	11	0	0	32	0	0	5	0
Lane Group Flow (vph)	35	100	0	522	282	0	273	372	0	47	1107	0
Confl. Peds. (#/hr)			3			2			2			1
Confl. Bikes (#/hr)			4						2			2
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.1	15.0		34.7	45.6		18.7	54.5		6.4	41.8	
Effective Green, g (s)	4.1	15.0		34.7	45.6		18.7	54.5		6.4	41.8	
Actuated g/C Ratio	0.03	0.12		0.27	0.35		0.14	0.42		0.05	0.32	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	5.3	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	3.8		2.0	3.8	
Lane Grp Cap (vph)	56	365		475	1231		256	1433		87	1141	
v/s Ratio Prot	0.02	c0.03		c0.29	0.08		c0.15	0.11		0.03	c0.31	
v/s Ratio Perm												
v/c Ratio	0.62	0.27		1.10	0.23		1.07	0.26		0.54	0.97	
Uniform Delay, d1	61.8	52.1		47.2	29.4		55.2	24.2		60.0	43.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.6	0.9		70.9	0.2		74.9	0.1		3.6	19.9	
Delay (s)	76.4	53.1		118.2	29.7		130.2	24.4		63.6	63.0	
Level of Service	E	D		F	C		F	C		E	E	
Approach Delay (s)		55.9			86.4			67.0			63.0	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	69.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	129.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	61	510	367	579	185	291	213	23	37	532	105
Future Volume (vph)	78	61	510	367	579	185	291	213	23	37	532	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Lane Util. Factor	1.00	*0.96			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3056			3390		1770	3482		1770	3440	
Flt Permitted	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3056			3390		1770	3482		1770	3440	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	68	567	408	643	206	323	237	26	41	591	117
RTOR Reduction (vph)	0	314	0	0	11	0	0	5	0	0	11	0
Lane Group Flow (vph)	87	321	0	0	1246	0	323	258	0	41	697	0
Confl. Peds. (#/hr)			2						1			4
Confl. Bikes (#/hr)						1						2
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.0	20.0			48.2		24.6	49.7		6.8	31.9	
Effective Green, g (s)	20.0	20.0			48.2		24.6	49.7		6.8	31.9	
Actuated g/C Ratio	0.14	0.14			0.33		0.17	0.34		0.05	0.22	
Clearance Time (s)	4.9	4.9			4.9		4.4	5.3		4.4	5.3	
Vehicle Extension (s)	3.3	3.3			3.3		2.0	4.4		2.0	4.4	
Lane Grp Cap (vph)	245	423			1133		301	1200		83	760	
v/s Ratio Prot	0.05	c0.10			c0.37		c0.18	0.07		0.02	c0.20	
v/s Ratio Perm												
v/c Ratio	0.36	1.08dr			1.10		1.07	0.22		0.49	0.92	
Uniform Delay, d1	56.3	59.8			48.0		59.8	33.4		67.0	54.9	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	7.7			58.5		72.6	0.1		1.7	16.2	
Delay (s)	57.2	67.5			106.5		132.4	33.6		68.7	71.1	
Level of Service	E	E			F		F	C		E	E	
Approach Delay (s)		66.3			106.5			88.1			71.0	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	86.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	144.2	Sum of lost time (s)	19.5
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1669	149	409	1558	441	208	74	570	1187	376	337
Future Volume (vph)	138	1669	149	409	1558	441	208	74	570	1187	376	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.86	0.86	0.97	1.00	0.88	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	5085	1563	3433	4784	1335	3433	1863	2765	3433	3246	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	1757	157	431	1640	464	219	78	600	1249	396	355
RTOR Reduction (vph)	0	0	111	0	2	177	0	0	58	0	69	0
Lane Group Flow (vph)	145	1757	46	431	1684	241	219	78	542	1249	682	0
Confl. Peds. (#/hr)						5			4			12
Confl. Bikes (#/hr)			1			1						2
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	10.2	40.9	40.9	24.8	56.2	56.2	12.8	22.9	47.7	31.6	41.4	
Effective Green, g (s)	10.2	40.9	40.9	24.8	56.2	56.2	12.8	22.9	47.7	31.6	41.4	
Actuated g/C Ratio	0.07	0.29	0.29	0.18	0.40	0.40	0.09	0.16	0.34	0.23	0.30	
Clearance Time (s)	4.4	5.5	5.5	4.9	5.3	5.3	4.4	5.0	4.9	4.4	5.3	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.3	4.3	2.0	5.2	2.0	2.0	4.6	
Lane Grp Cap (vph)	250	1485	456	608	1920	535	313	304	942	774	959	
v/s Ratio Prot	0.04	c0.35		c0.13	c0.35		0.06	0.04	0.10	c0.36	c0.21	
v/s Ratio Perm			0.03			0.18			0.09			
v/c Ratio	0.58	1.18	0.10	0.71	0.88	0.45	0.70	0.26	0.58	1.61	0.71	
Uniform Delay, d1	62.8	49.5	36.1	54.2	38.7	30.6	61.7	51.1	37.8	54.2	44.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	89.6	0.4	3.1	6.0	2.7	5.4	1.0	0.5	282.1	2.9	
Delay (s)	64.9	139.2	36.6	57.3	44.7	33.4	67.2	52.1	38.4	336.3	46.9	
Level of Service	E	F	D	E	D	C	E	D	D	F	D	
Approach Delay (s)		126.1			45.0			46.6			227.7	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	116.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix M

Community Plan Excerpts

UNIVERSITY COMMUNITY PLAN

University

Community Plan

Prepared by

The University Community Planning Group
and
City of San Diego Planning Department
202 C Street, MS 4A
San Diego, CA 92101

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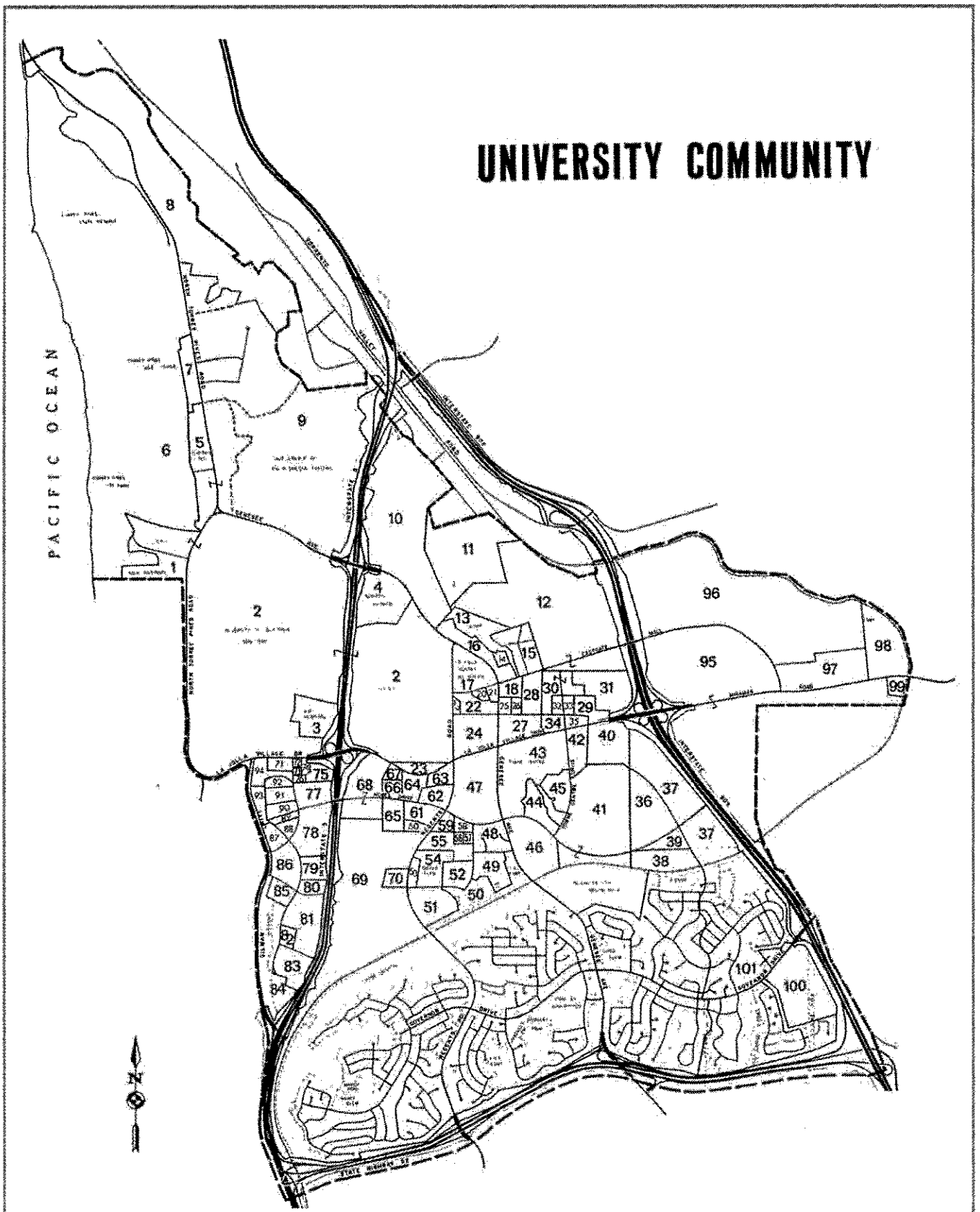

Land Use and Development Intensity Subarea Map
University Community Plan

26 FIGURE

TABLE 3
LAND USE AND DEVELOPMENT INTENSITY

Any changes to this table for properties in the Coastal Zone shall require an amendment to the Local Coastal Program

Subarea/Name	Gross Acres	Land Use and Development Intensity
1. Salk Institute	26.88	500,000 SF - Scientific Research
2. UCSD	915.00	UCSD Long Range Development Plan (110,000 ADT)
3. VA Hospital	29.95	725 Beds
4. Scripps Memorial Hospital Medical Offices	41.38	682 Beds 31,500 SF - Scientific Research 793,580 SF - Medical Office
5. Scripps Clinic	25.17	320 Beds 567,000 SF - Scientific Research 404,000 SF - Medical Office 52,000 SF - Aerobics Center
6. Torrey Pines Golf Course/ City Park/State Reserve	728.05 (1)	
7. Sheraton Hotel Lodge at Torrey Pines	11.38 6.00 (1)	400 Rooms - Hotel 175 Rooms - Hotel
8. Torrey Pines State Reserve	233.92	
9. Chevron Scallop Nuclear (Gentry) Torrey Pines Science Park Signal/Hutton Torrey Pines Business and Research Park La Jolla Cancer Research State Park	303.60 56.41 145.74 25.79 15.89 4.87 14.25	20,000 SF/AC - Scientific Research (2) Existing or approved development, Exceptions: Spin Physics - 550,000 SF Lot 10B (2.7 AC) - 15,500 SF/AC 23,000 SF/AC (2) Scientific Research Open Space
10. Campus Point	158.78	Existing or approved development, Exceptions: IVAC and SAIC – 30,000 SF/AC (3) and Lot 7 (3.6 AC) -18,000 SF/AC - Scientific Research 25.00 Open Space
11. Private Ownership City Ownership	55.93 47.48	18,000 SF/AC - Scientific Research (4) (Development intensity transferred from Subarea 37 for all of Subarea 11)
12. Eastgate Technology Park (PID) (4a)	218.50	2,356,990 SF - Scientific Research

(1) A minimum of 187 public parking spaces is to be retained on public land for golf course uses; in addition, at the adjacent Lodge at Torrey Pines, there are 40 parking spaces reserved daily for golfers and 94 parking spaces reserved during tournaments.

(2) Chevron, Scallop Nuclear, and La Jolla Cancer Research Foundation shall be required to mitigate their peak-hour trip generation rate to a level equal to or less than that which would be generated by a project of 18,000 SF/AC. Mitigation shall be achieved through a Transportation System Management (TSM) program to be approved by the City Council and the California Coastal Commission as a Local Coastal Program amendment. The proposed TSM program must specify the maximum development intensity of the project site and include supported findings. This Plan encourages the development of these parcels through a master plan.

(3) SAIC and IVAC shall be required to mitigate their peak-hour trip generation rate to a level equal to or less than that which would be generated by a project of 18,000 SF/AC. Mitigation shall be achieved through a Transportation System management (TSM) program to be approved by the City Council.

(4) This Plan encourages the development of this subarea through a master plan

(4a) ADT's from Irvine Company owned parcels 343-122-40-43, 45-52, & 60-64 Subarea 12 (PID) 90-0892) have been shifted to La Jolla Centre III Subarea 29 APN 345-012-10.

TABLE 3 (continued)
LAND USE AND DEVELOPMENT INTENSITY

Any changes to this table for properties in the Coastal Zone shall require an amendment to the Local Coastal Program.

Subarea/Name	Gross Acres	Land Use and Development Intensity
13. Open Space Easement	26.00	
14. Utility/SDGE	2.89	
15. Condominiums	25.26	365 DU
16. Apartments/Condominiums	17.95	481 DU (PRD required)
17. La Jolla Country Day School	23.98	School [5]
18. Churches	6.16	2 Institutions [5]
19. Pacific Telephone	1.66	22,480 SF
20. Fire/Police	3.20	23,400 SF
21. La Jolla Eastgate Office Park	1.97	46,000 SF
22. Neighborhood Park Jewish Community Center (CUP)	10.49	92,700 SF
23. La Jolla Village Tennis Club Condominiums	7.64	120 DU
24. Regents Park (PCD)	27.46	360 Rooms - Hotel 574 DU 30,200 SF - Neighborhood Commercial 754,000 SF - Office
25. La Jolla Bank and Trust	3.63	156,000 SF - Office
26. Park Plaza (PCD)	3.07	69,764 SF - Office
27. The Plaza (PCD)	16.85	841,300 SF - Office 8,700 SF - Restaurant
28. Chancellor Park	16.61	542,000 SF - Office
29. Goodwin/Smith, etc. [6,7] (PCD) (La Jolla Commons)	16.85	11.85 AC – Commercial 1,000,000 SF Office
La Jolla Centre III[7a] (PDP)	5.00	340,000 SF – Business Park
30. Nexus Specific Plan	22.50	Specific Plan
31. Private Ownership	23.79	20,000 SF/AC - Scientific Research
Biomed Innovation Center	7.07	35,500 SF/AC - Scientific Research
32. Devonshire Woods (PRD)	3.98	95 DU
33. La Jolla Centre II (PCD)	4.67	133,750 SF - Office 4,500 SF - Retail 3,500 SF - Athletic Facility
34. Embassy Suites (PCD)	4.90	335 Suites - Hotel 4,400 SF - Restaurant

(5) Expansion of these uses is permitted, subject to discretionary review.

(6) This Plan encourages the development of Subareas 29 and 40 through a master plan.

(7) ADT was transferred from Regents Park to La Jolla Commons (Goodwin/Smith PCD). Up to 100-400 hotel rooms may be developed in place or in combination with office square footage in accordance with the La Jolla Commons PDP. Residential use may be developed in place of or in combination with hotel and/or office use subsequent to amending the La Jolla Commons PDP and additional environmental review.

TABLE 3 (continued)
LAND USE AND DEVELOPMENT INTENSITY

Any changes to this table for properties in the Coastal Zone shall require an amendment to the Local Coastal Program.

Subarea/Name	Gross Acres	Land Use and Development Intensity
35. La Jolla Centre I (PCD) [7b]	3.17	143,400 SF - Office
36. Neighborhood Park	30.00	
37. City Ownership	87.40 14.45	18,000 SF/AC - Scientific Research (Development approval not to be granted until 1995 for Subareas 36 and 37. Development intensity for this area is reduced by transfer to Subarea 11 of 18,000 SF/AC)
38. Towne Centre Apartments (PRD)	23.79	256 DU
39. City Ownership	7 – 8	30 DU/AC
40. La Jolla Crossroads[8]	33.80	33.8 AC - Residential, 1,809 DU
41. Renaissance La Jolla (PDR & PCD)	112.96	2,500 DU 50,000 SF - Neighborhood Commercial
Open Space Easement	15.06	
42. La Jolla Gateway (PCD)7c	14.17	396,305 SF - Office
Congregation Beth Israel 7c		2,165SF – Chapel 62,931 SF – Sanctuary/Temple School
43. University Towne Centre	75.35	1,811,409 SF - Regional Commercial GLA 300 DU[9]
44. Vista La Jolla/University Pines	12.26	257 DU
45. Vista La Jolla	14.84	56 DU
46. Nobel Terrace (PRD)	41.05	716 DU
47. Costa Verde Specific Plan[8]	54.00	178,000 SF - Neighborhood/Community Commercial 2740 DU
48. La Jolla Highlands Torrey Heights La Jolla Pines Village Green	17.42	474 DU
49. Genesee Highlands Unit 2	17.87	246 DU
50. Genesee Highlands Unit 3 Open Space Easement	8.61 13.60	211 DU

(7a) ADT's from Irvine Company owned parcels 343-122-40-43, 45-52, & 60-64, Subarea 12 (PID 90-0892);345-012-09, Subarea 35 (PCD 83-0131); 345-011-15, 16-, & 23, Subarea 42 (PCD 82-0707); and 345-120-17, Subarea 67 (PRD 96-0638) have been shifted to La Jolla Centre III Subarea 29, APN 345-012-10.

(7b) ADT's from Irvine Company owned parcel 345-012-09, Subarea 35 (PCD 83-0131) have been shifted to La Jolla Centre III Subarea 29, APN 345-012-10.

(7c) ADT's from Irvine Company owned parcels 345-011-15 & 16 Subarea 42 (PCD 82-0707) have been shifted to La Jolla Centre III Subarea 29, APN 345-012-10. Congregation Beth Israel not a part of ADT Shift.

(8) After 558 ADT transferred from Subarea 47 to Subarea 40, La Jolla Crossroads, 2,602 unused ADT remain with CostaVerde Specific Plan Area.

(9) This property is subject to an approved Master Planned Development Permit (MPDP), which permits adjustment to the levels of retail and residential development (up to 300 units) within the intensity envelope for the property defined by the MPDP.

TABLE 3 (continued)
LAND USE AND DEVELOPMENT INTENSITY

Any changes to this table for properties in the Coastal Zone shall require an amendment to the Local Coastal Program.

Subarea/Name	Gross Acres	Land Use and Development Intensity
51. Genesee Highlands Unit 4	26.02	340 DU
52. Playmoor Terrace	11.89	168 DU
53. Genesee Highlands Unit 6	4.78	72 DU
54. Doyle Elementary School School Expansion	12.73 5.88	1000 Students
55. Doyle Community Park	12.63 2.97 4.29	
56.	2.50	50 DU
57.	2.11	139 DU
58. Genesee Highlands Unit 1 Whispering Pines	2.06	60 DU
59. Lincoln La Jolla	4.54	251 DU(10)
60. The Pines (PRD)	5.72	248 DU
61. (PRD)	10.08	368 DU
62. La Jolla Village Park (PRD)	12.00	333 DU
63. La Jolla Village Park (PRD)		(included in 62)
64. Fredericks La Jolla Village Park (PRD)	6.83	302 DU
65. La Jolla International Gardens (PRD)	11.43	774 DU
66. La Jolla Garden Villas (PRD)	4.08	277 DU
67. La Jolla Apartments (10a)	4.70	232 DU
68. University Center/Aventine	37.59	400 Rooms - Hotel 40,500 SF - Retail 550,000 - Office 685 DU
69. La Jolla Colony	158.50	3,594 DU
70. La Jolla Colony	7.02	72,645 SF - Neighborhood Commercial
71. La Jolla Professional Center	6.78	168,383 SF - Office/Bank 21,533 SF - Restaurant
72. Gas Station	1.06	4,900 SF
73.	1.00	3,400 SF - Bank 25,674 SF - Office
74.	2.00	97,689 SF - Office

(10) The land use designation for this property has been revised from 30-45 du/acre to 45-75 du/acre although no more than 251 units are permitted on the site which occupies 3.71 net acres.

(10a) ADT's from Irvine Company owned parcel 345-120-17, Subarea 67 (PRD 96-0638) have been shifted to La Jolla Centre III Subarea 29, APN 345-012-10.

TABLE 3 (continued)
LAND USE AND DEVELOPMENT INTENSITY

Any changes to this table for properties in the Coastal Zone shall require an amendment to the Local Coastal Program.

	Subarea/Name	Gross Acres	Land Use and Development Intensity
75.	La Jolla Village Inn	7.89	400 Rooms - Hotel
76.	Neighborhood Commercial (PCD)	1.50	16,570 SF - Neighborhood Commercial 3,500 SF - Bank
77.	Ralphs Shopping Center (PCD)	15.46	150,000 SF - Community Commercial
78.	La Jolla Village Square (PCD) Residential	27.47 2.83	1,002,000 SF - Regional Commercial 108 DU
79.	Cape La Jolla	12.10	(included in 78) Regional Commercial/52 DU
80.	The Woodlands	6.60	125 DU
81.	Woodlands/West/East Bluff/La Jolla Park Villas	34.09	679 DU
82.	Villa La Jolla Neighborhood Park	5.60	
83.	La Jolla Village Townhomes	23.21	291 DU
84.	La Jolla Village Townhomes Open Space	17.18 31.45	106 DU
85.	La Jolla Village	6.84	204 DU
86.	Villa La Jolla	18.29	548 DU
87.	J.W. Jones	10.85	456 DU
88.	Villas Mallorca	7.04	136 DU
89.	Villas Mallorca Phase II		(included in 88)
90.	Woodlands North	5.93	120 DU
91.	Cambridge	5.24	112 DU
92.	Boardwalk La Jolla	8.35	216 DU
93.	Broadmoor	10.37	156 DU
94.	The Residence Inn	8.50	288 Suites - Hotel
95.	Miramar Marine Corps Air Station	176.31	
96.		305.35	Restricted Industrial (see Table 4)
97.		43.22	Restricted Industrial (see Table 4)
98.		41.20	Restricted Industrial (see Table 4)
99.	Longpre Auto Sales	6.47	33,650 SF - Auto Sales
100.	Governor Park	55.00	913,728 SF - Office
101.	City Ownership Private Ownership	.82 15.00	15,250 SF/AC - Office Institutional Use (School, Church, etc.)

TABLE 4
DEVELOPMENT INTENSITIES - RESTRICTED INDUSTRIAL

The development intensity of this area as indicated below is based on 130 ADT/AC. Development intensities of 131 – 150 ADT/AC may be approved subject to a 25 percent increase in FBA fees.

Subareas 96, 97, 98 – Restricted Industrial (1)	
Large Industrial/Scientific Research	16,250 SE/AC
Small Industrial	9,300 SF/AC
Warehousing/Mini-storage	26,000 SF/AC
Automotive Commercial (2 and 3)	3,250 SF/AC

(1) Square footage may not exceed the Federal Government easement where applicable or that permitted by the underlying zone.

(2) Automotive commercial users are permitted only in Subarea 97.

(3) The 13.2-acre Midway Miramar site may be developed with automotive commercial at 350 ADT/AC.